ECONOMICS OF DIRECT LEGISLATION*

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This paper develops a theory of direct legislation to explain (i) why some issues are resolved by popular vote and others by elected representatives, and (ii) why citizens vote on some ballot propositions and abstain on others. Evidence is provided by a new data set describing 871 California propositions. The main findings are the following. "Good government" issues were usually resolved by legislative measures and distributional issues by initiatives. Citizen-initiated legislation was more common when representatives were unresponsive to the electorate. Voter turnout was higher on distributional propositions than good government propositions. Voter participation on ballot measures has been increasing over time.

I. INTRODUCTION

Law-making by citizen vote rather than by elected representatives is an increasingly important part of the American political system. The passage of California's tax-limitation Proposition 13 in 1978 reverberated across the country, heralding a conservative shift in the electorate that remains today. Several states have recently considered allowing initiative legislation, and debate on national referendums continues [Cronin, 1989].

This paper provides an economic analysis of direct legislation, building on the work of political scientists [Butler and Ranney, 1978; Magleby, 1984]. The discussion is centered on two questions: (i) why are some laws enacted by popular vote and others by elected representatives, and (ii) why do citizens vote on some ballot issues and abstain on others? The heart of the study is an extensive new data set containing information on 871 California ballot propositions, a nearly complete listing of all statewide measures from 1912 through 1989.

Citizen-initiated direct legislation arose during the Progressive movement of the early 1900s. The Progressives believed government officials tended to serve business interests rather than the electorate as a whole. The initiative device allowed voters to bypass their representatives and was intended to curb government corruption and give voters a means to dislodge entrenched legislators [Key and Crouch, 1939]. Present-day initiatives tend to

address tax and moral issues rather than "good government" issues. Critics take this to be a sign that the device is functioning poorly or is obsolete [New York Senate Research Service, 1979]. What is lacking is a cogent explanation of the pattern of issues addressed by initiatives—without this it is difficult to evaluate the merits of the cases for and against direct legislation. A theory of representation is provided to answer question (i)—it describes how a hypothetical efficient legislature acts as a filter for issues, resolving efficiency matters and avoiding distributional matters, and suggests some normative conclusions when compared with the data.

A theory of voting is provided to answer question (ii). Why some people vote and others abstain is poorly understood [Matsusaka and Palda, 1990]. Following Downs [1957], the theory stresses the role of information in the turnout decision. It describes how rational citizens choose whether or not to acquire information about an issue, and yields testable implications about voter participation. In particular, turnout is predicted to be high for distributional issues, low for efficiency issues, and rising over time as the electorate becomes more educated and informed.

The format of the paper is the following. Section II develops a theoretical framework, focusing on the role of information and the nature of proposed legislation. Economic tools are used to describe how a legislature chooses which issues to address and how a citizen decides what information to acquire and whether or not to vote. Section III describes the data sources and construction of the data set. The core of the paper is Section IV, where the evidence is presented. Section V draws some conclusions and suggests extensions.

II. THEORY

Limited information is a central fact of political decision-making. When deciding how to vote on a proposed law, elected representatives and citizens face some uncertainty about its consequences. The severity of the problem varies from issue to issue: a proposition "to increase taxes on the rich" is probably not as difficult for most people to evaluate as is a proposition "to rearrange the jurisdictions of state courts." However, it is generally the case that individuals cannot tell whether or not a proposed law is in their interest unless they gather additional information about the details of the legislation, how it would be implemented,

and how it would affect the rest of the community. There is abundant evidence that it takes time for the electorate to become sufficiently informed to vote. Surveying the polling literature, Lee [1978, p. 110] concludes, "voters who cast a ballot on initiative measures often make up their minds how to vote on the eve of the election." Similarly, Cronin [1989, pp. 70–71] reports, "Surveys taken several weeks before an election generally indicate consider- able voter confusion. However, they also show voters tend to postpone their decisions on ballot issues until just before the election, *after* they have decided how they will vote on candidates."

The theory postulates that although individuals cannot imme- diately determine whether or not a proposed law is in their interest, they can discern the nature of an issue, in particular, its *divisive- ness*. The divisiveness of an issue is the extent to which it involves trading off the interests of one group for another. Given a law that can either be passed or rejected, one outcome is better for a majority of the population and one outcome is better for a minority of the population (by definition). Let δ_i be the fraction of the population in the minority for issue i (clearly, $0 \leq \delta_i \leq 0.5$). The variable δ_i is a convenient index for the divisiveness of an issue. For legislation with $\delta_i \approx 0$, everyone benefits from one outcome and suffers from the other, for example, anticorruption laws. Legisla- tion that trades off the welfare of one large group for another, for example, a tax law or a restriction on abortion, has $\delta_i \approx 0.5$. Issues with $\delta_i \approx 0$ sometimes are called "efficiency" issues below to reflect that they involve Pareto-comparable outcomes. Issues with $\delta_i \approx 0.5$ are sometimes called "distributional" issues.

As a matter of terminology, the outcome favorable to a majority of the population is called the *majority-favorable* outcome, and the outcome favorable to a minority is called the *minority- favorable* outcome. These terms apply to the favorable outcomes of the population as a whole and not necessarily to the set of voters. The minority-favorable outcome may receive more votes than the majority-favorable outcome if individuals in the majority group abstain from voting in large numbers.

To repeat, it is assumed that an individual can observe δ_i costlessly for each proposed law, but requires additional informa- tion to determine which outcome he prefers. Put differently, a person can easily see whether an issue is intended to redistribute or create an efficiency, but sorting out exactly how he will be impacted by the redistribution or which outcome in fact is efficient is more difficult. The following examples show what δ_i means in practice.

They describe actual initiatives that appeared on the ballot in California; the years they appeared are given in parentheses.

Example I. Political Campaign Reform (1974, 1988)

These initiatives proposed to limit contributions to candidates, prevent existing war chests from being carried over into the new year, prohibit or provide for taxpayer support of state and local campaigns, prohibit fundraising in nonelection years, prohibit the transfer of campaign funds from one candidate to another, or limit campaign spending. No doubt the sponsors had numerous motives, but broadly the initiatives were intended to provide "good government." As such, they were efficiency issues ($\delta_i \approx 0$): if the good government outcome was chosen, everyone would benefit (except a few bad politicians); and if the bad government outcome was chosen, everyone would suffer. It was easy for a person to note that $\delta_i \approx 0$, but it was difficult to determine whether it was a vote "for" or "against" that would lead to good government. To understand which outcome was efficient, an individual not only had to understand the legal details of the initiative but also had to have a feel for the empirical effects of campaign contributions on electoral outcomes and political behavior. Do unlimited contributions allow even a poor man to run for office or restrict all but the richest? Is campaign spending a wasteful zero-sum exercise, or does it transmit valuable information? Do candidate-to-candidate money transfers lead to corruption or move contributor funds to their most productive uses? All of these questions were extremely relevant for determining what was the good government outcome; the volume of economic and political science research seeking to answer them attests to the high cost of such information [Palda, 1991].

Example II. Reapportionment (1926, 1948, 1960, 1962, 1982, 1984)

These initiatives proposed to redraw the state's Assembly, Senate, and congressional district boundaries, or to change the way the lines were drawn. Because political power is zero sum, an increase in one person's power results in an equal loss in someone else's power. Reapportionment is fundamentally distributional in nature, and the number of gainers is expected to be about equal to the number of losers ($\delta_i \approx 0.5$). However, while this much was clear to the voter, it was nevertheless costly for him to determine which particular districting plan increased his power. It required

studying existing and proposed legislative maps in conjunction with the state's demographics and estimating under which plan his interests would be given the most representation.

Example III. Regulation of Automobile Insurance (1988)

These four initiatives proposed various regulations on automobile insurance: rate reductions, prohibition of insurance plans based on geographical territories, establishment of a computerized price-comparison system, permission for banks to sell insurance, limitations on noneconomic (for example, pain-and-suffering) accident claims, limitations on lawyers' contingency fees, elimination of discrimination and antitrust exemptions in the insurance industry, and establishment of a no-fault insurance system. They were mixed issues, neither purely efficiency nor purely distributional. Efficiency considerations arose from the possibility that insurance companies were earning collusion rents due to antitrust exemptions and that efficiency would be improved with rate regulation. Distributional considerations arose from the chance that the industry was perfectly competitive so regulation would result in the subsidization of metropolitan drivers by other drivers in the state. Here again the nature of the decision was readily seen but without understanding the technicalities of the actual proposals and how the industry operated, it was difficult for a person to determine which outcome was in his best interest.

Law-Making by Representatives or Direct Vote

This section explains how in a well-functioning political system efficiency issues are decided by representatives and distributional issues are decided directly. Such a pattern reflects the optimal breakdown of decision-making as well as the self-interested desires of representatives to be reelected.

The political system is assumed to operate in the following way. First, an issue arises exogenously. Second, the issue is presented to the elected legislature which decides either to resolve or ignore it. Third, the issue is settled: if the legislature resolves it, the outcome supported by a majority of its members is selected; if the legislature ignores it, it becomes an initiative, and the outcome chosen by a majority of the voters is selected.

The assumption that the legislature has first crack at each issue is not much of an abstraction. In fact, most groups interested in the passage of a law bring it before the legislature before beginning the expensive initiative process. It is cheaper to lobby a

few assemblymen than ten million voters. In California total expenditures gathering signatures and campaigning for initiatives averaged $1.2 million per initiative on the June 1988 ballot and $4.5 million on the November 1986 ballot. Campaign spending alone on the June 1986 "Deep Pockets" initiative exceeded $9.8 million [Price, 1988].

There are several reasons to expect the legislature to resolve low δ_i issues and leave high δ_i issues for initiatives. First, note that an argument can be made that from a social point of view the legislature should try to select the majority-favorable outcome for each issue; such a resolution satisfies utilitarian criteria, for example. A crucial part of a representative's job is determining what outcome is favored by a majority population. To help him do this, he has access to a tremendous amount of information: paid staffers, expert witnesses, opinions from business and community leaders, and thoughts from constituents at large. However, none of these sources are perfect, and some may conflict—nothing guarantees he can correctly determine the population's majority-favorable outcome. An example where it is notoriously difficult to determine what sort of legislation the people want is the issue of abortion in the wake of the *Webster* decision. Opinion polls give widely varying results depending on the wording of questions [Ladd, 1989]. Polling methodology is only half the problem: quite often the electorate itself is unsure what it wants. In a study of 38 California ballot propositions over 1960–1982, Magleby [1984] found that over half of the issues that initially had over 60 percent support eventually were defeated, indicating a dramatic shift in attitudes as the populace became more informed.

The key thing to note is that a representative's information is most reliable for issues with low δ_i. To see this, think of a legislator's information as a random poll of opinions from a subset of the population. On average, $1 - \delta_i$ of the people will recommend the majority-favorable outcome, and δ_i the minority-favorable outcome. When $\delta_i \approx 0$, everyone has the same ordering of outcomes and a representative can be confident the winner of his poll is the majority-favorable outcome and hence the best choice. When $\delta_i \approx 0.5$, the population is heterogeneous with respect to outcomes; a representative's poll will be divided, and he will be less certain that what seems like the best outcome to him and his advisors coincides with the population's best outcome.

By this reasoning, representatives should decide low δ_i issues

where they can be confident they are reflecting the will of the people, and hesitate to decide high δ_i issues. As a result, a well-functioning system should be characterized by a preponderance of distributional initiatives.

The electorate's desire to have laws made by the appropriate body might be enough to induce representatives to resolve low δ_i issues and pass on high δ_i issues. Conveniently, there are additional reasons to expect representatives to behave in this way. Suppose that representatives act to maximize their probabilities of reelection and are held responsible by their constituents for the laws they pass. A representative thus does not want to vote for laws that are likely to anger a large fraction of his district. Consequently, a legislator tries to avoid two kinds of issues, those that hurt him even if he votes for the majority-favorable outcome, that is, which have substantial minorities, and those for which he is likely to accidently vote for the minority-favorable outcome, that is, for which it is hard to gauge the preferences of constituents. High δ_i issues exhibit both these properties.

For example, suppose that a legislature has full information about the preferences of the population: in this case it always implements the majority-favorable outcome. When $\delta_i = 0$, such votes earn the representatives no enemies and lots of friends. When $\delta_i = 0.5$, no matter which way a representative votes he hurts half the population—he is damned if he does and damned if he doesn't. High δ_i issues are "too hot to handle." The fact that representatives have only limited information about constituent preferences accentuates their distaste for distributional legislation. As noted above, the risk of mistakenly believing the minority-favorable outcome is the majority-favorable outcome is increasing in δ_i.

There is one more reason to expect representatives to avoid divisive issues. Alesina and Cukierman [1990] argue that it may be in the long-run interests of politicians to take ambiguous stands on issues in order to disguise their ideologies. They are likely to be most interested in hiding their ideologies on divisive issues. Refusing to act on an issue is one way of being ambiguous.

To sum up, the desire of representatives to do the right thing and retain their offices reinforce each other and make legislators increasingly unlikely to address an issue as its divisiveness increases. The empirical prediction is that laws passed by representatives are primarily concerned with efficiency, while initiative legislation is predominantly distributional.

Voting or Abstaining on Ballot Propositions

This section describes how a citizen's decision to vote or abstain is affected by the divisiveness of a ballot proposition and the cost of acquiring information about it. It is traditional to begin a theory of voting with the assumption that a person votes if the benefit exceeds the cost, where the cost includes time and travel expenditures, peer group attitudes and pressure, the weather, and so on. To sideskirt some tertiary voting cost issues, this paper concentrates on abstentions of citizens in the voting booth.

Over the sample period 22.9 percent of Californians who went to the polls declined to cast a vote on any given ballot proposition. Once a person has a ballot in hand, his cost of voting is basically zero. Because he cannot be made worse off by voting for his favorable outcome, the only reason he abstains on a given proposition is if he does not know what his favorable outcome is. The appropriate question is then why is a person informed enough to vote on certain issues but not others?

A bit of notation eases the exposition. Let $v_i = v(h_i)$ be the probability a person votes on proposition i and h_i his information about the measure. From the previous paragraph, $v' > 0$, that is, as a person becomes more informed, he is more likely to vote. The theory is fleshed out by explaining how a person's information varies with an issue's cost of information, c_i, and divisiveness δ_i.

Individuals acquire information as long as the marginal benefit exceeds the marginal cost (Part III of Downs [1957] is a careful discussion of information in the context of voting). Some information can only be acquired at a substantial cost, while other information may be costly to avoid (television commercials, for example). As the cost of acquiring information falls, individuals should become more informed: $\partial h / \partial c < 0$.

There are two reasons to expect a person to be more informed about distributional issues than efficiency issues. The first reason is that political agents are more likely to provide information for high δ_i issues than low δ_i issues. Much of a person's political information is subsidized by political organizations. Political action committees, political parties, businesses, and politicians advertise, mail information to homes, organize rallies, and stage public relations events that provide low-cost information to individuals. It is safe to say that people also get a lot of their information from work and socializing; a survey of California voters in 1979 revealed that over 70 percent talked with others about ballot propositions [Magleby, 1984].

Holding constant information, the probability that the majority-favorable outcome wins is decreasing in δ_i. Given limited resources for providing information, political agents invest their effort where it is most productive. They maximize their impact by directing their attention to high δ_i issues where there is not an overwhelming favorite and where swinging a few votes one way or another may affect the election result. As a consequence, subsidized information should be in greater supply for high δ_i issues, and people are expected to have more information about them. In the notation, $\partial h / \partial \delta_i > 0$.

The second reason is that individuals prefer to acquire information about distributional issues rather than efficiency issues if the costs are the same. Put differently, uninformed citizens tend to free ride on the votes of informed citizens for low δ_i issues. The basic intuition can be seen from the extremes. When $\delta_i = 0$, the majority-favorable outcome is certain to win; and everyone wants this to happen. Because well-informed people will make the right choice, there is no need for the uninformed to participate. When $\delta_i = 0.5$, the election is close; and the marginal citizen's vote may be necessary to protect his interests. One of the reasons a legislature avoids distributional legislation is that its chance of mistakenly choosing the minority-favorable outcome increases as δ_i rises. When deciding by direct vote, citizens are also more likely to implement minority-favorable outcomes as δ_i increases. However, in contrast to representatives, this possibility should increase citizen participation on distributional measures and reduce it on efficiency measures. Again, this implies that $\partial h / \partial \delta_i > 0$.

In short, the theory predicts that the amount of information acquired is decreasing in c_i and increasing in δ_i. Because $v_i = v(h_i) = v(h(c_i, \delta_i))$, the probability of voting can be written as $v(c_i, \delta_i)$, which is decreasing in its first and increasing in its second argument. The main implication is that participation is higher on distributional propositions than on efficiency propositions.

III. Description of the Data

The data are statewide ballot propositions in the United States. There is not yet a standard vocabulary for direct legislation, so it pays to define the terms used. The legal decisions a state makes take the form of either a *statute* (a law) or a *constitutional amendment*. Both kinds of decisions can be made either by elected

representatives (the legislature) or by direct vote of the people. A proposed statute or constitutional amendment that is approved or rejected by a vote of the citizens of a state rather than by their representatives is called a ballot *proposition* or *measure*. In most cases approval is by majority vote, but some states have supermajority rules. The U. S. Constitution does not provide for direct law-making at the federal level.

Propositions differ in the way they come to the ballot. In a number of states, citizens can qualify propositions for the ballot by petition, that is, by collecting the signatures of a given number of registered voters. When a decision is placed on the ballot in this way, it is called an *initiative*. Acts of the legislature also can be placed on the ballot by petition and possibly nullified, called a *referendum*.[1] Some states require that certain acts of the legislature be placed on the ballot for popular approval, called a *legislative* measure or a *referred* measure. There are additional types of direct legislation—the indirect initiative and the advisory referendum, for example—but this taxonomy captures the main variations.

The data were hand-collected by the author. The main data set describes and indicates the success of 871 ballot measures in the state of California from 1912 through 1989. Included is a complete list of all 208 statewide initiatives and 39 referendums since the initiative and referendum were adopted in 1911. The data were collected from the state's official election returns, *Statement of Vote* [1912–1988], Key and Crouch [1939], Crouch [1950], Eu [1989], and various issues of the *California Journal*.[2]

Two limited initiative-only data sets are also considered to check for generality. One data set contains all 152 North Dakota initiatives since the state adopted the device in 1914 to 1989. The data were collected from electoral information provided by the office of the North Dakota Secretary of State and various histories of the state. The other data set contains a cross-section of initiatives that appeared on state ballots in 1978. It was compiled from Illinois Legislative Council [1982], New York Senate Research Service [1979], the other sources mentioned above, and various issues of *Public Opinion*. Looking across states can suggest whether California is atypical. There is no reason to prefer 1978

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1. "Referendum" is frequently used as a generic term for direct legislation, a usage I have tried to avoid to prevent confusion.

2. Data on legislative measures were unavailable for the following elections: November 1915 (nine of eleven measures), July 1919 (two of three measures), and 1949 special elections, and the 1924 (all measures) and 1938 (nineteen measures) general elections.

over another year other than that these data were convenient to collect.

To test the theory, the propositions had to be classified by δ_i. In the first stage each measure was assigned to one of fourteen well-defined categories or to a residual "unclassified" category. In a substantial number of cases the ballot descriptions were supplemented with historical information when making a classification. The categories are listed in Table I. This classification method does not admit much ambiguity. The California Secretary of State performed a similar breakdown of initiatives using a twenty-category system that substantially overlapped the classifications used here; see the Appendix for a comparison.

In the second stage the categories were aggregated into three broad classes according to whether they were high, medium, or low δ_i issues. A distributional proposition (high δ_i) was one in which a large group of people were likely to be unhappy no matter what the outcome. Included in this class were "preference" issues regarding alcohol, drugs, gambling, obscenity, discrimination, and rights; "power" issues regarding voting rights and reapportionment; and "transfer" issues involving taxes and government payments to individuals.

An efficiency proposition (low δ_i) had few distributional consequences and was instead addressed to questions of good government. For these issues most people could expect their payoffs to move in the same direction. In this class were civil service issues, election procedures, matters of how the government and its political subdivisions are administered, and the extent of the state's power in general and vis-à-vis local governments.

A third class of propositions arguably had efficiency and distributional consequences. These mixed measures concerned regulation of business, labor, occupations, and the environment, and government spending on projects (as opposed to outright transfers) like highways, water facilities, schools, parks, prisons, state buildings, and education. Proponents of regulation frequently argue that it is in the public interest, but the line of work initiated by Stigler and Friedland [1962], Stigler [1971], and Peltzman [1976] gives many reasons to believe that there is a strong distributional element in regulation. Public works also lie in the hazy ground between public good and private payoff.

It is worth keeping in mind that reasonable people can disagree over the classification of propositions. A list of all 208 California initiatives and their classifications is available from the

TABLE I
ISSUE CLASSIFICATIONS AND MEAN VOTING PERCENTAGES

Distributional	Initiative		Legislative	
	VPCT-I	N	VPCT-I	N
Alcohol and narcotics	85.8	17	80.3	2
Discrimination, obscenity, religion, and rights	87.0	13	89.7	2
Gambling, racing, and sports	84.5	11	77.0	5
Government transfers	87.3	10	81.2	43
Legal procedures, punishments, litigant rights	81.3	6	74.7	9
Reapportionment and voting rights	78.6	9	76.4	12
Taxes	82.2	29	78.2	99
Mixed	Initiative		Legislative	
	VPCT-I	N	VPCT-I	N
Business and labor regulation	82.6	34	72.3	21
Environmental and consumer regulation	86.4	13	70.4	5
Government spending on public projects and education	80.1	17	80.1	121
Efficiency	Initiative		Legislative	
	VPCT-I	N	VPCT-I	N
Election procedures	80.2	8	70.4	20
Civil service	81.6	5	77.7	12
Government administration	72.4	6	71.3	103
Government powers and procedures, subdivisions	66.8	13	69.4	120
Unclassified	Initiative		Legislative	
	VPCT-I	N	VPCT-I	N
Unclassified	88.7	11	74.8	33

Note. VPCT-I is the average number of votes cast divided by the number of ballots. N is the number of propositions. Initiative and legislative refer to the source of the proposition. Propositions that appeared in special elections and referendums are omitted.

author. Admittedly there are a few ambiguous cases. Examples are the attempts in 1920 and 1922 to restrict the use of the initiative for tax purposes. Proponents of these measures were maneuvering to preempt proponents of the single tax, so one could plausibly argue that these initiatives were about taxes and should have been

classified as distributional initiatives. Still, they were classified as efficiency initiatives, relating to the administration of elections. Other propositions, like aid to disabled veterans, were plainly distributional in nature, but it was well-known that they were supported by a large fraction of the population. Such measures were nevertheless classified as distributional because systematically incorporating this kind of public expectation is problematic.

Multiple-issue initiatives present another problem. Since 1948 California law requires that a measure concern only one issue, but multiple-article propositions like the 1982 Victims' Bill of Rights still appear. One of the 1988 insurance initiatives was over 100 pages long! Fortunately, we have been spared the worst: a 1948 omnibus initiative was struck from the ballot by the California Supreme Court as an attempt to replace rather than amend the constitution. These problems are minor on the whole: the results are robust with respect to the ambiguous classifications.

IV. EVIDENCE

Which Issues Are Decided by Initiatives

Section II argues that efficiency issues are likely to be decided by the legislature while distributional issues are resolved by initiative. A simple prediction of the theory is that distributional issues outnumber efficiency issues on initiatives.

Table II reports how many initiatives of each type appeared on the ballot in California. In the table, D, M, and E stand for distributional, mixed, and efficiency issues, respectively. Legislative measures are not included in the table for reasons discussed below.

Before 1966, California signature requirements were the same for initiative statutes and amendments; since 1966 it is easier to put a statute on the ballot than a constitutional amendment (the current requirements are 5 percent and 8 percent of the total votes cast in the previous gubernatorial election, respectively). Constitutional amendments have some minor advantages from a petitioner's point of view in that they cannot be overturned by the California Supreme Court and are more difficult for the legislature to alter. Because the choice between statute and amendment is up to the petitioner, there has been a tendency to legislate by amendment, and the line between them is blurred. Distinguishing between the two sheds no additional light, so they are grouped together in all reported results.

TABLE II
NUMBER OF CALIFORNIA INITIATIVES BY TYPE

	D-issues	*M*-issues	*E*-issues	All issues
1912–1919	15	8	7	30
1920–1929	16	11	6	35
1930–1939	16	10	9	36
1940–1949	10	7	1	20
1950–1959	7	4	1	12
1960–1969	6	2	0	9
1970–1979	11	8	3	22
1980–1989	17	16	5	44
1912–1989	98	66	32	208

Note. The table lists the number of initiatives of each type that appeared on the California ballot each decade. Column headings indicate type: D is distributional, M is mixed, and E is efficiency. See Table I for a more detailed breakdown of issue types. When columns do not sum to the total, it indicates unclassified initiative. For example, there were two unclassified initiatives in 1920–1929.

The numbers fall in the predicted pattern. Over the entire period distributional initiatives outnumbered efficiency initiatives, 98 to 32. The pattern also holds in all eight subperiods, indicating that the totals are not driven by a few outlier years. In addition, the number of mixed initiatives was between the number of distributional and efficiency initiatives overall and in every subperiod. The large number of mixed initiatives in the 1980s was partially a consequence of the recent tendency of business to combat hostile regulatory initiatives by proposing more moderate alternative legislation [Ainsworth, 1990; McKenna, 1990]. For example, the 1988 general election ballot contained three industry-sponsored insurance initiatives in addition to the original (and winning) proposition. The number of initiatives thus overstates the number of issues.

One might wonder if the California situation is atypical. Tables III and IV present the same information for North Dakota and for a cross-section of states in 1978. For North Dakota the number of distributional initiatives, 69, was greater than the number of efficiency initiatives, 47, overall. The pattern also holds in all but the first three subperiods. The evidence on mixed initiatives is ambiguous: they were exceeded by distributional initiatives overall and in seven of eight subperiods, but they were also exceeded by efficiency initiatives overall and in half the subperiods.

TABLE III
NUMBER OF NORTH DAKOTA INITIATIVES BY TYPE

	D-issues	*M*-issues	*E*-issues	All issues
1915–1919	2	0	5	7
1920–1929	8	2	12	24
1930–1939	16	9	20	45
1940–1949	14	6	1	22
1950–1959	10	3	3	17
1960–1969	6	4	4	15
1970–1979	4	5	1	11
1980–1989	9	0	1	11
1912–1989	69	29	47	152

Note. The table lists the number of initiatives of each type that appeared on the North Dakota ballot each decade. Column headings indicate type: *D* is distributional, *M* is mixed, and *E* is efficiency. See Table I for a more detailed breakdown of issue types. When columns do not sum to the total, it indicates unclassified initiatives. For example, there was one unclassified initiative in 1980–1989.

TABLE IV
NUMBER OF STATE INITIATIVES BY TYPE IN 1978

	D-issues	*M*-issues	*E*-issues	All issues
Alaska	0	3	0	3
Arkansas	1	0	0	1
California	3	1	0	4
Colorado	0	0	1	1
Florida	1	0	0	1
Idaho	1	0	0	1
Michigan	5	1	0	6
Missouri	1	1	0	2
Montana	2	1	0	3
Nebraska	0	1	1	2
Nevada	1	0	0	1
North Dakota	1	2	1	4
Oklahoma	0	0	1	1
Oregon	3	3	1	7
South Dakota	1	2	0	3
Washington	1	0	0	1
All states	21	15	5	42

Note. The table lists the number of initiatives of each type that appeared on a given state's ballot in 1978. Column headings indicate type: *D* is distributional, *M* is mixed, and *E* is efficiency. See Table I for a more detailed breakdown of issue types.

The statewide data for 1978 also are consistent with the theory: 21 to 15 to 5 in the whole sample and for 10 of the 16 states individually (albeit weakly in most cases). The number of efficiency initiatives is greater than distributional initiatives for only three states. Relatively few states are included because only 23 states permit initiatives,[3] and some of these are so restrictive as to render the initiative useless. For example, in Illinois the courts have restricted the use of the initiative to amendments of an uncontroversial clause of the state constitution.

It is evident from Tables II–IV that the use of the initiative has diverged from what the Progressives intended. This finding is not new. For example, New York Senate Research Service [1979, p. 23] reports: ". . . a look at all the 23 initiative states and the hundreds of ballot questions forces the conclusion that the popular initiative no longer revolves around such 'good government' issues as judicial reform, the merit system, government reorganization, government efficiency, and the like. Good government causes have yielded to other concerns, such as the prominently emergent issues of tax proposals entailing shifts in tax burdens among classes of taxpayers, rigorous fiscal restraints, and highly contentious measures calculated to regulate other people's behavior and morals"—to which it might be added that it is doubtful that the initiative in California *ever* revolved around good government issues.

The objections to direct legislation seem to center on the use of the initiative to resolve distributional issues. The preceding quote suggests a general disapproval of any distributional legislation. However, a glance at Table I makes it clear that the bulk of distributional legislation originates in the legislature—especially in the transfers and taxes categories—and common sense says that distributional legislation will appear regardless of whether or not the initiative device is available. The question is whether such issues will be resolved by the people directly or by their elected representatives. And as far as this question goes, there is no conclusive argument, let alone evidence, that representatives are better-suited to settle distributional issues.

One of the objectives of this paper is to establish the logical foundations for the contrary argument: the legislature is poorly suited to decide many distributional issues. The evidence in Tables II–IV is consistent with the theoretical argument, but it is open to

3. Initiative states are primarily in the west; 17 of 24 (71 percent) of the states west of the Mississippi allow it compared with only 5 of 26 (19 percent) east of the Mississippi [Magleby, 1984].

alternative explanations. In particular, it may be that most initiatives were distributional simply because most political questions were distributional. Without knowing the frequency different types of issues arise, the propensity of the legislature to act cannot be inferred.

An approximation for the issues resolved by the legislature is referred measures. These propositions appeared on the ballot because the constitution requires that all constitutional amendments and nontrivial bond issues be referred to the voters. There was usually little opposition to these measures (except when they involved pay raises for the legislators): 68.3 percent of them passed compared with 44.4 percent of initiatives. The electorate tended to defer to its elected representatives on referred measures, treating them almost as formalities. This suggests that they were not placed on the ballot to have the electorate settle the issues, but in order to reduce the temptation for legislators to exceed their jurisdictions on particularly important decisions. In the study of direct legislation it is a common belief that initiatives and referred measures are fundamentally different [Lee, 1978].

Table V reports what fraction of distributional, mixed, and efficiency issues in California were resolved by initiative rather than referred by the legislature. Roughly corresponding to Table II, each cell lists the percentage of ballot propositions that originated as initiatives (that is, the number of initiatives divided by the sum of initiatives and legislative measures). For example, in 1912–1919, 60.0 percent of the distributional issues were initiatives, while 40.0 percent were referred by the legislature. In parentheses beneath each percentage is the number of times each issue appeared either as an initiative or as a legislative proposition. The penultimate column gives the *t*-value for the test of the difference in means between the distributional and efficiency percentages, and the last column lists the number of legislative statutes nullified by referendum (*N*) and the total number of referendums.

The theory developed in Section II predicts that the probability an issue is decided directly rather than by representatives is highest for distributional issues and lowest for efficiency issues. The table makes it clear that distributional issues were more likely to be decided by initiative than efficiency issues. For the sample as a whole 34.3 percent of distributional issues were placed on the ballot by initiatives compared with 10.7 percent of efficiency issues. The difference is statistically positive at better than the 1 percent

TABLE V
PERCENTAGE OF ISSUES DECIDED BY INITIATIVES IN CALIFORNIA

	D-issues	M-issues	E-issues	All issues	t-value $H_0: D - E = 0$	Laws nullified by referenda
1912–1919	60.0	42.1	20.6	38.0	3.22	$N = 8$
	(25)	(19)	(34)	(79)		11
1920–1929	41.2	40.9	20.0	35.2	1.87	$N = 6$
	(34)	(22)	(30)	(88)		11
1930–1939	39.4	38.1	18.2	29.1	2.03	$N = 7$
	(33)	(21)	(44)	(103)		11
1940–1949	38.5	50.0	2.6	23.5	3.57	$N = 0$
	(26)	(14)	(39)	(85)		1
1950–1959	24.1	20.0	2.6	12.8	2.52	$N = 0$
	(29)	(20)	(38)	(94)		1
1960–1969	17.1	8.3	0.0	9.4	2.65	$N = 0$
	(35)	(24)	(30)	(96)		0
1970–1979	26.8	21.6	6.0	15.8	2.67	$N = 0$
	(41)	(37)	(50)	(139)		0
1980–1989	35.4	29.1	19.2	32.6	1.54	$N = 4$
	(48)	(55)	(26)	(135)		4
1912–1989	34.3	30.2	10.7	24.2	6.94	$N = 25$
	(271)	(212)	(291)	(819)		39

Note. The primary entries are the number of initiatives divided by the sum of initiatives and legislative propositions expressed as a percentage. The sum of initiatives and legislative propositions are in parentheses beneath the percentages. The *t*-value is for the test that the difference in the means of *D*-issues and *E*-issues is zero. All measures are omitted from the November 1915, June 1919, June 1933, and 1949 special elections and the 1924 and 1938 general elections.

level ($t = 6.94$). The distributional percentage exceeded the efficiency percentage in all cells and significantly so in all but 1980–1989. Overall the percentage of mixed issues decided by initiatives, 30.2, was between the distributional and efficiency percentages. It also fell between them in seven of eight subperiods and was never significantly outside their bounds. Most measures were placed on the ballot by the legislature, 75.8 percent over the entire sample.

The results in Tables II–V support the theory. What do they imply about the Progressives' "theory" of initiatives? Recall that the Progressives largely viewed the initiative as an anticorruption device. They used it to pass laws regarding outside auditors for government agencies, nonpartisan elections, open primaries, terms of office, compensation of officials, and so on. Although the Progressives envisioned a more limited role for initiatives than prescribed by the theory in Section II or indicated by the evidence,

the two approaches are not incompatible. Initiatives may be used both to efficiently divide decision-making authority and to provide the electorate with a counterbalance to bad representatives.

When formulated in this way, the theory predicts that initiatives are more likely to be used for good government issues when elected representatives become corrupt or fail to respond to the population's desires. Tables II, III, and V show that both the absolute number of efficiency initiatives and the fraction of efficiency issues arising from initiatives were highest in the prewar decades. In California the number of good government initiatives in the 28 prewar years, 22, was more than twice the number in the subsequent 49 years, 10. In North Dakota there were 37 efficiency initiatives before the war and only 10 thereafter. The pattern is consistent with the history of the period; it was a time of bad government when reformers broke the stranglehold of big business (the Southern Pacific Railroad in California) on state government and consolidated their gains.

Corroborating evidence is provided by the referendum data in the last column of Table V. When the voters nullify laws passed by the legislature, they send a clear signal that their elected representatives are not performing adequately. It can be seen that 21 laws were reversed by the voters in the prewar period, consistent with the other evidence that it was a bad government period. Then a period of calm set in for fully 40 years. There were no referendums, and no more than 6.0 percent of efficiency issues in any decade were placed on the ballot by initiatives. Interestingly, the fraction of good government issues originating on initiatives shot up to 19.2 percent in the 1980s, and four laws were nullified by referendums. The way direct legislation was used in the 1980s suggests that it was a decade of bad government, much like the prewar years.

Voter Participation, Issue Divisiveness, and Information Cost

The implication of Section II is that $v(c_i, \delta_i)$ is decreasing in c_i and increasing in δ_i. The probability of voting should be correlated with the number of votes cast. However, votes cast is not a good proxy for v in California because it has a strong upward time trend. When the first initiatives appeared in 1912, the voting age population of California was 1.6 million and 707,000 people went to the polls. By 1988 the state had 19.1 million eligible voters of whom 14.0 million were registered and 10.2 million cast votes.

A good proxy for v_i is the turnout percentage, labeled $VPCT_i$, defined to be the number of votes cast on proposition i divided by

the number of votes that could have been cast (more on this below). The percentage of people who abstain is then $1 - \text{VPCT}_i$. The expected voting percentage, $E[\text{VPCT}_i]$, is simply

$$(1) \qquad\qquad E[\text{VPCT}_i] = v(c_i, \delta_i).$$

Because v is increasing in δ_i, the expected voting percentage is increasing in δ_i: average turnout is expected to be higher for distributional initiatives than for efficiency initiatives. Because v is decreasing in c_i, a fall in information cost should increase the average turnout percentage. A reduction in cost leads to more information acquisition, less ignorance, and less abstention.

Equation (1) suggests the test presented in Table VI. The initiative and legislative measure samples are split into nine subsamples, and the average VPCT_i for each is computed. Initiatives and legislative measures are distinguished because the electorate is likely to treat them differently as noted above. In order to isolate the effects of information costs, VPCT_i is defined to be the

TABLE VI
SIMPLE MEANS OF VPCT-I FOR CALIFORNIA

	Initiatives				Legislative measures			
	D	M	E	All	D	M	E	All
1912–1929	76.6	74.1	65.2	73.9	68.0	62.7	59.8	62.8
(Press)	(1.7)	(1.8)	(1.8)	(1.2)	(1.5)	(1.4)	(0.9)	(0.8)
	N = 31	N = 19	N = 13	N = 65	N = 30	N = 24	N = 51	N = 106
1930–1959	83.8	79.8	72.1	80.6	75.2	70.3	66.8	69.6
(Radio)	(1.5)	(2.1)	(2.6)	(1.2)	(1.0)	(1.6)	(0.7)	(0.6)
	N = 31	N = 20	N = 11	N = 64	N = 53	N = 34	N = 107	N = 209
1960–1989	90.9	91.4	88.9	90.8	84.5	86.1	80.5	83.4
(Television)	(0.8)	(0.6)	(1.0)	(0.4)	(0.5)	(0.4)	(0.5)	(0.3)
	N = 33	N = 25	N = 8	N = 73	N = 89	N = 89	N = 97	N = 292
1912–1989	83.9	82.7	73.5	82.1	78.7	78.6	70.6	75.1
	(1.0)	(1.3)	(2.0)	(0.7)	(0.7)	(0.9)	(0.6)	(0.4)
	N = 95	N = 64	N = 32	N = 202	N = 172	N = 147	N = 255	N = 607

Note. The top entry in each cell is the average VPCT-I. VPCT-I is defined to be total votes cast (for and against) on a proposition as a percentage of total ballots cast. Standard deviations of the mean are in parentheses beneath the estimate. The number of observations are beneath the standard errors. Propositions that appeared in special elections and referendums are omitted. Tests for the difference in means: $t_{12}^I = 1.00$, $t_{23}^I = 3.58$, $t_{45}^I = 1.56$, $t_{56}^I = 2.10$, $t_{78}^I = -0.55$, $t_{89}^I = 2.12$, $t_{14}^I 3.18$, $t_{25}^I = 2.10$, $t_{36}^I = 2.21$, $t_{47}^I = 4.33$, $t_{58}^I = 5.43$, $t_{69}^I = 6.00$, $t_{12}^L = 2.62$, $t_{23}^L = 1.79$, $t_{45}^L = 2.60$, $t_{56}^L = 2.00$, $t_{78}^L = -2.73$, $t_{89}^L = 9.27$, $t_{14}^L = 4.03$, $t_{25}^L = 3.60$, $t_{36}^L = 5.96$, $t_{47}^L = 8.71$, $t_{58}^L = 9.59$, $t_{69}^L = 16.16$.

number of votes cast on a proposition as a percentage of all ballots cast in the election; this particular measure is labeled VPCT-I. Every observation of VPCT-I is less than one, which indicates that some ballots were spoiled and, more important, that people in the booth did not vote on some measures even when they had already paid the time and effort costs of going to the polls. The average VPCT-I for the fifteen initial classifications is reported in Table I for both initiatives and legislative measures.

Along the δ_i dimension the samples are split into *D*-issues, *M*-issues, and *E*-issues as above. Longitudinally the samples are split into three subperiods, 1912–1929, 1930–1959, and 1960–1989. It is commonly believed that the ability of the electorate to acquire political information has increased over the last 70 years due to the introduction and proliferation of radio and television and the increase in the level of education. The second subperiod was chosen to capture the advent of radio, and the third to match the introduction of television. In practice, these dividing lines are somewhat blurry so an effort was made to balance the number of initiatives in each time subsample as well. The cost of information presumably was highest in the press period, declined when radio was introduced, and fell further with the advent of television. This is the favored interpretation of the time period effects in the following discussion, but strictly speaking, the possibility that they capture other time trends cannot be ruled out.

Propositions that appeared on special election ballots were dropped because special elections featured no prominent national or statewide races. The *t*-value for the hypothesis that the means of cells *i* and *j* are the same is t_{ij}. The central cells are numbered from one to nine in the order a page is read starting from the upper left; cell 1 is Press-*D*, cell 2 is Press-*M*, cell 4 is Radio-*D*, and so on. The superscript *I* refers to initiatives and *L* to legislative measures.

From equation (1), the prediction of the theory is that VPCT-I is higher for distributional issues than for efficiency issues, and the percentage for mixed issues lies somewhere between the other two. One can see that the nine central cells and the row and column margin cells conform to this pattern with only one exception for both initiatives and legislative measures. The average VPCT-I on distributional initiatives was 83.9 percent; turnout was 10.4 percent lower for efficiency initiatives. For legislative propositions, participation averaged 78.7 percent for distributional issues and only 70.6 percent for efficiency issues. These differences are

statistically significant at the 1 percent level (the *t*-values are 4.60 for initiatives and 8.71 for legislative measures).

For initiatives, participation in 1912–1929 averaged 73.9 percent; it jumped 6.7 percent in 1930–1959 and 10.2 percent more in 1960–1989. Both differences are significant at the 1 percent level (the *t*-values are 3.98 and 8.18, respectively). The pattern is the same for legislative measures; press period turnout averaged 62.8 percent, radio period turnout averaged 69.6 percent, and television period turnout averaged 83.4 percent; both differences are significant at the 1 percent level (the *t*-values are 7.09 and 21.16, respectively).

In the central cells, the average VPCT-I for distributional issues was greater than the average for efficiency issues in all three time periods for both initiatives and legislative measures. The differences are significant in every case except the 1960–1989 initiatives ($p = 0.133$); this may simply be a sample size problem (the E cell has only eight observations). The time period differences are statistically significant in all the central cells.

For both samples, mixed issue turnout exceeded distributional issue turnout in 1960–1989, although the difference cannot be statistically distinguished from zero for initiatives ($p = 0.584$). The anomalous cell, mixed issues in the television period, is consistently anomalous. It suggests that the electorate's view of regulation and environmental issues has changed in the last decade or two. Apparently, people are now more inclined to view such issues as distributional in nature and are less willing to delegate decisions on them to others.

A difference between the two samples is that turnout is higher for initiatives. In the central cells the smallest difference was 5.3 percent, and the largest 11.4 percent. Voters were decidedly less informed about legislative measures. However, the magnitudes of the increments are basically the same, indicating a general disinterest in legislative measures rather than a proposition-specific effect.

Table VI does not account for secondary factors that may be shifting across time and issues. For example, the order in which propositions appeared on the ballot might be important (initiatives were more likely to be placed at the end of the ballot in 1960–1989). To adjust for contextual variables, a regression is estimated of the form,

(2) $$\text{VPCT}_i = \sum_{j=1}^{9} \gamma_j D_{ji} + \gamma_0 X_i,$$

where D_{ji} is a dummy for initiative i in cell j and X_i is a vector of contextual variables. The predicted VPCT$_i$ for each cell can be computed using the regression estimates in (2) evaluated at the mean X_i. This procedure gives the average for each cell controlling for other variables. The regressions are reported in Table VII.

The first two variables in the X_i vector are dummies for general elections (as opposed to primary elections) and presidential election years. Over the entire sample, 90.1 percent of initiatives appeared

TABLE VII
NINE CELL REGRESSIONS (EQUATION (2))

	VPCT-I Initiatives	VPCT-I Legislative	VPCT-II Initiatives	VPCT-II Legislative
Cell 1	77.35	71.48	30.67	30.04
	(2.74)	(1.52)	(2.99)	(1.80)
Cell 2	75.85	67.13	28.98	28.91
	(3.15)	(1.64)	(3.43)	(1.94)
Cell 3	65.64	63.75	22.86	25.39
	(3.26)	(1.41)	(3.56)	(1.67)
Cell 4	83.07	76.42	40.36	38.05
	(2.56)	(1.17)	(2.80)	(1.39)
Cell 5	78.98	72.33	37.02	36.72
	(2.78)	(1.32)	(3.03)	(1.56)
Cell 6	71.43	69.00	31.68	32.45
	(3.18)	(1.05)	(3.47)	(1.25)
Cell 7	90.82	85.27	45.80	46.91
	(2.15)	(0.91)	(2.35)	(1.08)
Cell 8	91.30	86.02	42.03	45.93
	(2.50)	(0.92)	(2.72)	(1.09)
Cell 9	88.33	81.83	37.82	44.38
	(2.97)	(0.91)	(3.23)	(1.08)
Dummy = 1 if general election	1.34	−0.51	15.60	12.22
	(2.08)	(0.78)	(2.27)	(0.92)
Dummy = 1 if presidential election year	2.35	1.99	10.19	8.53
	(1.17)	(0.50)	(1.28)	(0.59)
Number of measures on the ballot	−0.027	0.066	0.207	0.186
	(0.074)	(0.046)	(0.081)	(0.055)
Position of measure on ballot	−0.138	−0.345	−0.069	−0.195
	(0.077)	(0.043)	(0.084)	(0.051)
N	187	574	187	574
$\bar{R}^2$	0.56	0.73	0.55	0.62

Note. These regressions are used to construct the numbers in Tables VIII and IX. Standard errors are in parentheses beneath coefficient estimates. Whether the dependent variable is VPCT-I or VPCT-II and whether the sample is initiatives or legislative measures is indicated at the head of each column. All fitted values are between 0 and 100 percent.

in general elections, and 50.0 percent during presidential election years; the numbers for legislative measures were 83.7 percent and 47.5 percent, respectively. The third element of the X_i vector is the number of propositions on a ballot. Completing a ballot with dozens of propositions and a full slate of representative races may be fatiguing. This measure controls for the possibility that drop-off is the result of voters becoming weary while completing long ballots rather than information limitations. It is possible that measures listed near the end of the ballot have a higher drop-off so the fourth control is the ballot position of the proposition. Other researchers have found mixed evidence on this [Magleby, 1984]. The number of propositions on a ballot ranged from 1 to 48; the mean position of initiatives was 12.4 and of legislative measures 10.1.

The central cell regressions have 187 observations for the initiative sample and 574 for the legislative sample. The respective $\bar{R}^2$'s are 0.56 and 0.73 indicating a high degree of explanatory power. All fitted turnout percentages are between 0 and 100 percent. In the X_i vector, the coefficient on the general election dummies is positive for initiatives and negative for legislative measures, but insignificant in either case. The presidential election dummies are significantly positive in both cases at the 5 percent level; proposition abstention was about 2 percent lower in presidential election years. Evidently, voters were more informed about ballot measures in presidential election years but not in general elections. This suggests that the excitement of presidential campaigns spilled over, creating a general interest in political issues. Participation was not affected by the number of issues on the ballot, but the ballot position of a proposition had a significant negative effect that was stronger for legislative measures. Each lower position reduced the votes cast on an initiative by 0.138 percent while it reduced votes on a legislative measure by 0.345 percent. People did tire as they moved down the ballot, but were more willing to persist for initiatives than legislative measures.

The mean estimated $VPCT_i$ are presented in Table VIII. The central cells contain predicted voting percentages for regression (2) with nine cell dummies. The row and column margin averages are computed from regressions with three dummies, $D\text{-}M\text{-}E$ for the bottom rows and Press-Radio-Television for the columns. F-statistics for the hypothesis that the dummy coefficients differ are reported for the central cells; they are analogs to the t-values

TABLE VIII

MEANS OF VPCT-I FOR CALIFORNIA ESTIMATED FROM REGRESSION (2)

	Initiatives				Legislative measures			
	D	M	E	All	D	M	E	All
1912–1929 (Press)	77.4	75.9	65.6	74.6	69.8	65.4	62.1	65.2
1930–1959 (Radio)	83.1	79.0	71.4	79.8	74.7	70.6	67.3	70.1
1960–1989 (Television)	90.8	91.3	88.3	90.4	83.6	84.3	80.1	82.4
1912–1989	83.8	83.0	74.1		78.0	77.4	71.8	

Note. Each entry is the average VPCT-I. VPCT-I is defined to be total votes cast (for and against) on a proposition as a percentage of total ballots cast. Propositions that appeared in special elections, were referendums, or were unclassified are omitted. Tests for the difference in means: $F_{12}^I = 0.46$, $F_{23}^I = 14.70$, $F_{45}^I = 3.99$, $F_{56}^I = 7.91$, $F_{78}^I = 0.06$, $F_{89}^I = 1.01$, $F_{14}^I = 8.95$, $F_{25}^I = 1.53$, $F_{36}^I = 3.81$, $F_{47}^I = 15.63$, $F_{58}^I = 27.31$, $F_{69}^I = 22.65$, $F_{12}^L = 7.74$, $F_{23}^L = 5.73$, $F_{45}^L = 10.66$, $F_{56}^L = 8.80$, $F_{78}^L = 0.77$, $F_{89}^L = 24.45$, $F_{14}^L = 13.42$, $F_{25}^L = 11.09$, $F_{36}^L = 23.87$, $F_{47}^L = 76.00$, $F_{58}^L = 133.55$, $F_{69}^L = 238.69$.

reported in Table VI. Propositions listed in special elections and unclassified measures are omitted.

Adjusting for these variables does not change the basic story. All voting percentages remain in the predicted relations except that mixed issue turnout exceeded distributional issue turnout in 1960–1989. The magnitude of this inconsistency was trivial, 0.5 percent for initiatives and 0.7 percent for legislative measures, and statistically insignificant ($p = 0.802$ for initiatives and $p = 0.381$ for referred measures). Over the entire period average turnout on distributional issues exceeded average turnout on efficiency issues by 9.7 percent for initiatives and 6.2 percent for legislative propositions, both statistically significant at the 1 percent level ($F = 28.44$ and $F = 59.13$, respectively). VPCT-I for mixed issues was between the average for distributional and efficiency issues in both samples. The time series magnitudes generally fall relative to Table VI, but are still significant at the 1 percent level; the move from press to radio increased the average voting percentage by 5.2 percent for initiatives ($F = 10.80$) and 4.9 percent for legislative measures ($F = 29.75$), and television added another 10.6 percent ($F = 37.58$) and 12.3 percent ($F = 345.83$), respectively.

Regression (2) is also estimated with a different specification of voting percentage, VPCT-II. This turnout measure is the number of votes cast on an initiative as a fraction of registered voters. It

captures both ballot drop-off and abstentions due to failure to go to the polls. The measure VPCT-I implicitly controls for idiosyncratic *voting* costs (as distinct from information acquisition costs) like the breakdown of a person's car on the way to the polls or development of an illness on election day. If idiosyncratic costs are important, the patterns of Tables VI and VIII may be swamped by other determinants of turnout and difficult to detect using VPCT-II.

The results are presented in Table IX which is constructed in the same way as Table VIII except for the use of VPCT-II. The central cell regressions (2) are in Table VII. The central cell regression has an $\bar{R}^2$ of 0.55 for initiatives and 0.62 for legislative propositions. This decline from Table VIII is expected because voting costs are not parameterized in the estimation of (2). Nevertheless, the decline in overall explanatory power is modest; issue and information cost effects appear to be important in the overall participation decision not just the within-poll decision. The general election and presidential election year dummies are all significantly positive; the former increased turnout by 15.6 percent on initiatives and 12.2 percent on legislative measures; the latter increased turnout by 10.2 percent on initiatives and 8.5 percent on legislative measures. The voter who was drawn to the polls by important elections was more interested in initiatives than referred measures. Somewhat surprisingly, ballot length appeared to

TABLE IX

MEANS OF VPCT-II FOR CALIFORNIA ESTIMATED FROM REGRESSION (2)

	Initiatives				Legislative measures			
	D	M	E	All	D	M	E	All
1912–1929 (Press)	53.4	51.7	45.6	51.3	45.9	44.7	41.2	43.4
1930–1959 (Radio)	63.1	59.7	54.4	60.4	53.9	52.5	48.3	50.7
1960–1989 (Television)	68.5	64.7	60.5	66.0	62.7	61.8	60.2	61.4
1912–1989	61.7	59.7	52.9		56.7	56.2	52.1	

Note. Each entry is the average VPCT-II. VPCT-II is defined to be total votes cast (for and against) on a proposition as a percentage of registered voters. Propositions that appeared in special elections, were referendums, or were unclassified are omitted. Tests for the difference in means: $F^I_{12}= 0.48$, $F^I_{23}= 4.44$, $F^I_{45}= 2.24$, $F^I_{56} = 3.33$, $F^I_{78} = 3.21$, $F^I_{89} = 1.70$, $F^I_{14} = 21.60$, $F^I_{25} = 8.51$, $F^I_{36} = 7.41$, $F^I_{47} = 6.47$, $F^I_{58} = 3.79$, $F^I_{69} = 2.52$, $F^L_{12} = 0.37$, $F^L_{23}= 4.45$, $F^L_{45} = 0.81$, $F^L_{56} = 10.35$, $F^L_{78} = 0.94$, $F^L_{89} = 2.37$, $F^L_{14} = 25.19$, $F^L_{25} = 17.81$, $F^L_{36} = 30.69$, $F^L_{47} = 54.25$, $F^L_{58} = 43.11$, $F^L_{69}= 147.44$.

increase participation on a given proposition. Each additional measure added about 0.2 percent to turnout. It may be that long ballots increased the chance a citizen found an issue important to him and that when this happened he was likely to become informed about the other issues. The ballot position coefficient is negative for both and significantly so in the legislative proposition sample.

The average voting percentages match the theoretically predicted pattern in all cells. Overall, turnout was 8.8 percent higher on distributional initiatives than on efficiency initiatives ($F = 21.28$) and 4.6 percent higher on referred distributional measures than on referred efficiency measures ($F = 28.27$). These numbers are smaller than, but comparable with those in Table VIII. This means only that information costs were distributed independently of idiosyncratic voting costs. The mixed issue average is less than the distributional average in the 1960–1989 period when turnout is measured VPCT-II, unlike the case when VPCT-I is used.

The time averages move in the same direction, but the magnitudes change. The move from 1912–1929 to 1930–1959 increased initiative turnout by 5.2 percent measured by VPCT-I and 9.1 percent measured by VPCT-II. The move from 1930–1959 to 1960–1989 increased initiative participation 10.6 percent by VPCT-I and only 5.6 percent by VPCT-II. The numbers for legislative measures are 4.8 percent and 7.3 percent for the first step and 12.5 percent and 10.7 percent for the second. It seems that the decline in voting costs outpaced the decline in information costs in the early period and conversely in the later period. Put differently, the press-radio move increased the number of people going to the polls, while the radio-television move increased the average voter's information.

A second kind of test concerns the variance of the voting percentage, $V[VPCT_i]$. If each person votes with probability v, $V[VPCT_i] = v(c_i,\delta_i)(1 - v(c_i,\delta_i))$. Differentiating and solving provide the following two testable implications:

$$(4)-(5) \qquad \frac{\partial V}{\partial \delta_i} = (1 - 2v)\frac{\partial v}{\partial \delta_i} \quad \text{and} \quad \frac{\partial V}{\partial c_i} = (1 - 2v)\frac{\partial v}{\partial c_i}.$$

The signs of (4) and (5) depend on the sign of $1 - 2v$. From (1) and Table VI, $E[VPCT_i] = v > 0.5$ for all cells. Under the assumption that $v > 0.5$, $1 - 2v < 0$, and (4) is negative and (5) positive.

These implications are tested by splitting the samples into nine subsamples as in Table VI, computing the variance of each

TABLE X
VARIANCES OF VPCT-I FOR CALIFORNIA

	Initiatives				Legislative measures			
	D	M	E	All	D	M	E	All
1912–1929 (Press)	90.8	58.9	40.2	91.1	66.5	44.9	45.0	61.9
1930–1959 (Radio)	66.4	84.7	74.1	88.1	49.0	87.4	54.6	71.1
1960–1989 (Television)	19.6	8.2	8.7	13.8	19.3	13.3	20.6	24.2
1912–1989	91.6	100.5	132.0	111.4	77.3	126.8	106.9	117.2

Note. Each entry is the variance of VPCT-I. VPCT-I is defined to be total votes cast (for and against) on a proposition as a percentage of total ballots cast. Propositions that appeared in special elections, were referendums, or were unclassified are omitted. Tests for the difference in means: $F^I_{12} = 0.65$, $F^I_{23} = 0.68$, $F^I_{45} = 1.28$, $F^I_{56} = 0.87$, $F^I_{78} = 0.42$, $F^I_{89} = 1.05$, $F^I_{14} = 1.37$, $F^I_{25} = 0.70$, $F^I_{36} = 0.54$, $F^I_{47} = 3.39$, $F^I_{58} = 10.28$, $F^I_{69} = 8.56$, $F^L_{12} = 0.68$, $F^L_{23} = 1.00$, $F^L_{45} = 1.78$, $F^L_{56} = 0.63$, $F^L_{78} = 0.69$, $F^L_{89} = 1.55$, $F^L_{14} = 1.36$, $F^L_{25} = 0.51$, $F^L_{36} = 0.82$, $F^L_{47} = 2.54$, $F^L_{58} = 6.56$, $F^L_{69} = 2.65$.

subsample, and comparing cell variances. The implication of (4) is that the variance of distributional issues is less than the variance of efficiency issues. The prediction of (5) is that variances decrease over time. The evidence is presented in Table X.

The support for (4) is mixed but not absent. In the initiative sample the variance of turnout on distributional issues, 91.6, is less than the variance on efficiency issues, 132.0, and the difference is statistically significant ($p = 0.093$). The pattern holds in only the 1930–1959 period. For the legislative proposition sample, the variance on distributional issues is also less than the variance on efficiency issues, 77.3 compared with 106.9. The difference is significantly different from zero in this case as well ($p = 0.011$). The pattern holds in two of three periods.

The decline in longitudinal variance (5) is more evident. Turnout variance fell over time in the initiative sample and the first and last period differences are significant at 1 percent ($F = 6.60$). For legislative measures the variances in the first two periods cannot be statistically distinguished ($p = 0.214$), but the 1960–1989 variance was significantly less than the variances in both of the first two periods at better than the 1 percent level ($F = 2.56$ and $F = 2.94$, respectively). The central cell variances mirror this pattern: variances between the first two periods cannot be distinguished, while the 1960–1989 variances are significantly

less for all issue types in both the initiative and legislative measure samples.

V. CONCLUSION

This paper outlines an economic theory of direct legislation. The role of direct legislation in a political system with both representatives and direct law-making and the voting behavior of citizens on direct laws are both examined. There are two main conclusions.

First, in a complete political system elected representatives act as a "filter" for issues, resolving those with Pareto-comparable outcomes and leaving the distributional ones to the citizens. Evidence from California and other states indicates that initiative legislation was primarily directed toward the resolution of issues involving personal opinions and the distribution of wealth. "Good government" initiatives were rare, but appeared to play an important role in periods when representatives were unresponsive to popular desires or simply were corrupt. In the model this division of decision-making is efficient: a small group of experts can determine the best outcome of an efficiency issue, but the preferences of the population as a whole are needed to choose the best outcome of a divisive issue. There is an ancient debate running back at least to Aristotle whether the best form of democracy is representative or direct. The theory suggests that the best form is a combination of representative and direct democracy.

Second, voter participation in direct legislation varied systematically with the issue involved. When a ballot proposition involved a wealth transfer or a matter of opinion turnout was high, but when it had few distributional consequences many citizens chose to free ride on informed citizens and abstained. Here again, this behavior on the part of the electorate theoretically is both rational and efficient; additional information acquisition is pointless from the individual and social point of view if there already are enough informed voters to make the right decision. The data reveal that voter participation on ballot measures has increased over time, possibly attributable to growth of the media and a more educated population. It remains to explain why some measures pass and others fail.

APPENDIX: COMPARISON OF CLASSIFICATIONS

	a	b	c	d	e	f	g	h	i	j	k	l	m	n
A	17	—	—	—	—	—	—	—	—	—	—	—	—	—
B	—	3	—	—	1	—	—	(4)	—	(2)	—	—	—	3
C	—	—	11	—	—	—	—	—	—	—	—	—	—	—
D	—	—	—	11	—	—	—	—	—	—	—	—	—	1
E	—	2	—	—	4	—	—	—	—	—	—	—	—	—
F	—	—	—	—	—	7	—	—	—	—	(2)	—	—	—
G	—	—	—	—	—	—	30	—	—	—	—	—	—	—
H	—	—	—	—	(1)	—	—	28	2	—	—	—	—	4
I	—	—	—	—	—	—	—	1	12	—	—	—	—	—
J	—	—	—	—	—	—	(1)	4	4	7	—	—	—	2
K	—	—	—	—	—	—	—	—	—	—	8	—	—	—
L	—	—	—	—	(1)	—	—	(2)	—	—	—	4	2	2
M	—	—	—	—	—	—	—	(5)	—	(1)	(1)	—	(4)	2
N	—	—	—	—	—	—	—	6	—	—	—	—	—	6

Title in This Paper	Title by California SOS
A. Alcohol and Narcotics	a. Prohibition, Alcohol, and Drugs
B. Discrimination, Obscenity, Religion, and Rights	b. Moral Issues
C. Gambling, Racing, and Sports	c. Gambling
D. Government Transfers	d. Social and Welfare Aid, Pensions
E. Legal Procedures, Punishments, Litigant Rights	e. Courts, Law and Order
F. Reapportionment and Voting Rights	f. Reapportionment
G. Taxes	g. Taxation
H. Business and Labor Regulation	h. Fiscal Matters, Government Regulation, Health, Medicine, Science, Labor Issues
I. Environnmental and Consumer Regulation	i. Environmental Issues, Energy
J. Government Spending—Public Projects, Education	j. Education
K. Election Procedures	k. Elections, Campaign Reform
L. Civil Service and Government Administration	l. Elected Officials and Civil Service
M. Government Powers, Subdivisions	m. Municipal Government
N. Unclassified	n. Miscellaneous

The Appendix compares the classifications used in this paper with the classifications of the California Secretary of State (SOS) as published in Eu [1989] for the initiative sample. Row-X column-y lists the number of initiatives classified as issue type X in this paper that were classified as issue type y in SOS. For example, A-a is 17, indicating that 17 initiatives were classified as "Alcohol and Narcotics" in this paper and "Prohibition, Alcohol, and Drugs" in SOS. The classifications are conceptually different, but entries along the diagonal should be viewed as roughly consistent. It can be seen that the classifications used in this paper do not differ dramatically with SOS classifications. Entries for issues that would not be consistent at a broader three-class D-M-E level are in parentheses. For example, J-i is 4 (not in parentheses) because issues classified as "Government Spending on Public Projects and

Education" in this paper and "Energy, Environmental Issues" in SOS are both considered "mixed" issues. Thus, the sum of nonparenthetical entries is the total number of initiatives for which this paper's and SOS classifications are consistent at the three-class level (162). Not counting SOS "miscellaneous" category, only nineteen entries are inconsistent.

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