

**Municipal Corporations, Homeowners, and
the Benefit View of the Property Tax**

by

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§1. Introduction and Overview.

The local property tax is so widely criticized by scholars and reformers that its persistence requires some explanation. I will argue in this essay that it survives because voters in most municipalities regard its revenue as largely earmarked for activities that benefit their major asset, their homes. In combination with municipal zoning and the “vote with your feet” discipline proposed by Charles Tiebout (1956), the local property tax is both a benefit tax and an efficient tax, at least when compared to taxes used to fund the same services collected at the state or national level. (As Richard Musgrave reminded us at the conference, a “benefit tax” and an “efficient tax” are not the same thing, but I will in this essay use the term “benefit tax” when applied to the local property tax to mean one whose revenues are earmarked for services that benefit those who pay it and one that has no deadweight loss.)

To pursue this claim, I will modify the Tiebout model by adding to it something Tiebout himself wanted to avoid: politics. The politics I add is not that of the political science department, but of the finance department. In my view, homeowners are the major stockholders—the risk-bearing, residual claimants—of modern municipal corporations. Homeowners want local officials, their board of directors, to choose the mix of spending, taxes, and land-use regulations that maximizes the value of their homes. This choice has the benign effect of making the local property tax into a fee for service and an efficient form of taxation—really just the revenue of the municipal corporation. Voters will accept an increase in this fee for specific services if the value of the service redounds to their net benefit. The benefit can be indirect and remote, but they will still accept the tax and spending package if potential buyers of their property are interested in it.

Caroline Hoxby (1999) has shown in a more rigorous model than will be found here that this decision process amounts to a benefit-cost criterion. Voters are pleased that their home values rise if the schools and bike-paths are improved (even if they don’t have kids or ride bikes), but they are displeased by the reduction in their homes’ values from the increased local taxes. If the appreciation effect exceeds the depreciation effect, they approve the decision or reward their elected representatives for having made it. If the net is negative, they oppose the proposal.

Capitalization of local taxes, spending decisions, and zoning laws in the value of owner-occupied homes is a well-worn result in public economics. I seek in this essay to take capitalization out of the sideshow of the Tiebout model and make it the main event. Charles Tiebout proposed that geographically-limited public goods need not suffer from the free-rider problem that afflicts decisions about public goods at the state and national level. Tiebout supposed that municipal managers offer a menu of public services, and potential residents select the prix-fix menu that best fits their demands. Wallace Oates (1969) added property taxes to this model by showing that taxes and spending were capitalized in home values, thereby demonstrating that residents were aware of the fiscal differences that underlay Tiebout's model. Bruce Hamilton (1975) closed the model by adding fiscal zoning, which guarantees that new development will pay its own way.

In previous work I added to this scholarship chiefly by incorporating local decisions about business firms in it (Fischel 1975) and by arguing that Hamilton's model of zoning is realistic (Fischel 1985; 1992). Zoning is a much more flexible tool to shape development than most economists give it credit for. In my present work—this essay and a book-in-progress on which it is based—I take a still wider view and inquire into the nature of local government. I submit that it is best viewed as a municipal corporation whose dominant shareholders own residences within the precincts of the corporation. Municipalities can be analyzed with the same economic lens through which economists view business corporations if we keep in mind that their owners' circumstances are different. In particular, the shareholders of municipal corporations cannot diversify their holdings in the same way that business corporation shareholders do, and so residents have to participate more actively in defense of their major asset, their homes.

By the same token, local governments are much different from state and national governments. The difference derives primarily from the fact that voters at the municipal level know that taxes and services affect their home's value. It is this difference that makes property taxes a benefit tax at the local level and a source of deadweight loss at the state or national level.

To make this case, I must persuade the reader that local governments possess corporate powers sufficient to regulate their internal affairs; that homeowners, rather than other interest groups, dominate in local politics; and that capitalization is widespread and fully reflects anticipated events. It would also help if I could point to some empirical evidence that a public

service provided at the local level is more efficiently provided than at the state level. The service I have in mind is public schools. We have, courtesy of the state courts, endured a natural experiment in school funding that offers evidence that local funding yields better-quality schools.

In undertaking this effort I am both confirming and betraying the original Tiebout model. I perceive all of the virtues of a decentralized system of local government, but unlike Tiebout I do not try to dispense with politics. To the contrary, I revel in it. It allows me to invoke the model of corporate governance and thereby insert a rational, conscious actor in a model that is otherwise puzzling in its ignorance of supplier motivation.

§2. Free Riding with Richard Musgrave and Charles Tiebout.

On a warm day in May of 1994 I took a seat on a bus next to Richard Musgrave. The bus was taking attendees of the American Law and Economics Association meeting to a dinner at a winery a few miles from Stanford University. Our conversation turned at some point to the Tiebout model, about which I had often written. Musgrave volunteered a recollection I had not heard before. He said that Charles Tiebout had been a graduate student at Michigan and had taken his course in public finance. Musgrave remembered that Tiebout had come up with the idea that is forever associated with his name during a seminar. However, he also recalled that Tiebout had presented it in a joking manner, as if it was not to be taken seriously.

And Musgrave evidently did not take it too seriously. There is only a passing mention of it in Musgrave's monumental work, *The Theory of Public Finance* (1959, p. 132), published a few years after Tiebout left Michigan. (I must concede, though, that even passing mention in this enormously influential work is a pretty good compliment.) Richard and Peggy Musgrave did devote a few pages to Tiebout's model in their textbook, but their fifth (and final) edition dismisses it as "unrealistic" in most situations (1989, p. 453).

Why had Tiebout joked about his theory? My first thought about this did little to honor either Musgrave or Tiebout. The date of their paths crossing had to have been about 1952. Musgrave was working on *The Theory of Public Finance* at Michigan. His book emphasizes that the central principle that distinguishes public from private finance is the free rider problem. Musgrave had been the first to identify its essential role in a 1939 article, "The Voluntary Exchange Theory of Public Economy." In that article, he showed that such a theory, advanced by some European

economists of the late nineteenth century, was untenable because of human nature. People would not voluntarily reveal their valuation for public goods if the goods could be consumed regardless of whether they paid. Paul Samuelson embedded this pessimistic assumption in his seminal article, “The Pure Theory of Public Expenditures” (1954), whose title Tiebout evoked in his own 1956 article, “A Pure Theory of Local Expenditures.”

Tiebout’s model, we later learned, pointed to the possibility that a large class of public goods, those provided by local governments within a geographically distinct jurisdiction, might not be subject to the free rider problem. Preference revelation for local public goods might be taken care of by households choosing to live in a particular community. If communities offered distinct types and levels of public services, households could “vote with their feet” rather than in the ballot box. Foot voting could overcome the free rider problem and the consequent need for a political allocation of public goods.

Young Tiebout (age 28 in 1952) thus had a pretty good answer to Musgrave’s problem. So when Musgrave told me that he had offered his theory in a joking manner, it occurred to me that Tiebout might have deliberately assumed the mask of the court jester. Court jesters, at least in Shakespeare's plays, could get away with telling unwelcome truths to kings by embedding their insights in humor. Tiebout was telling Musgrave that half of his kingdom was missing. Local public spending, which comprised about half of non-defense expenditures, did not suffer from the free-rider problem that Musgrave had identified as the key issue in public economics. The “Voluntary Exchange Theory of Public Economy,” which Musgrave had thought he'd demolished in 1939, had been resurrected by a saucy graduate student.

But however satisfying this theory was to my literary imagination, it did not ring true. I knew both from my reading of his work and from the accounts of his former students that Musgrave was entirely tolerant of the ideas of others and encouraged independent thought. I filed Musgrave’s recollection in my larder of I-bet-you-didn’t-know stories.

§3. Tiebout Swam Against the Twentieth-Century Tide.

In 1998-99 I spent a sabbatical year at the University of Washington in Seattle. Dick Morrill, an emeritus professor of the university’s geography department, mentioned to me that Charlie Tiebout had spent the last years of his short career there. I was working on a book, *The*

Homevoter Hypothesis, during my sabbatical, and Tiebout's theory figured large in it. I thought it might add some interest if I got some biographical details about him.

After I got back to Dartmouth in the summer of 1999, I called other economists who had known him. For sport, I plugged "Charles M. Tiebout" into a web search-engine. Plenty of working papers and syllabi turned up. And there was an address for one Charles M. Tiebout, *Jr.* Turns out he lives in Seattle about two miles from where I lived during my sabbatical. Mentally kicking myself for not undertaking this search while I was still in Seattle, I called him up. His wife referred me to her brother-in-law, Bruce Tiebout, also in the Seattle area, who she said was the better source of information about his late father.

Charles Mills Tiebout was born on October 12, 1924, and grew up in Greenwich, Connecticut, a suburb of New York City. He was the second child of Harry Morgan and Ethel Mills Tiebout. Harry was a psychiatrist and was famous as the first of his profession to endorse the methods of Alcoholics Anonymous. ("Bill W.," the co-founder of AA, was one of his patients.) Charlie's older brother, Harry, Jr., was a professor of the philosophy of religion at the University of Illinois. Wallace Oates, whose 1969 article popularized the phrase "Tiebout hypothesis" (Dick Netzer had used the phrase in his 1966 book) told me that he had never met Tiebout, but he once met by chance his younger sister, Sally, who lived in Princeton in the 1960s and 70s. (Her husband, Philip Worn, told me they moved there in part for the public schools.) Both Sally and Harry, Jr., are deceased.

Tiebout entered Wesleyan University in 1942, but he dropped out after a year and joined the Navy. He did not go overseas. While stationed in Chicago he met and married Elizabeth Gray. After the war, Betty and Charlie moved back to Middletown, Connecticut, where he completed his undergraduate degree at Wesleyan in 1950. He was active in student affairs and won academic honors as an undergraduate.

After Wesleyan, Tiebout earned his PhD in economics at the University of Michigan. His 1957 doctoral dissertation was about regional multipliers—an application of a Keynesian model to subnational areas—and was done under the supervision of Daniel Suits. It contains nothing about public finance or voting with one's feet. Tiebout published his famous 1956 article in the *Journal of Political Economy* as an assistant professor of economics at Northwestern, where he had taken a job in 1954. According to Charles Leven, who knew him at Northwestern, Tiebout

delighted in proving to the Chicago-school editors of the *JPE* that there was an economic model in which government worked as well as private enterprise. He was not a political conservative.

Following Bruce Tiebout's leads, I talked with other people who had known his father well. Almost all of them mentioned that Charlie had a wonderful sense of humor that was almost always on display. Humor seemed to be his *modus vivendi*, an impression heightened, Bruce suggested, by his father's slight resemblance to the comedian, Bob Hope. Many of Tiebout's contemporaries have stories about his capers and practical jokes. Yoram Barzel told of his being at a conference at which a dance band was the evening entertainment. There being no women in attendance, Tiebout convinced his male tablemate to dance with him. Bruce Tiebout told me that his father's Christmas cards were famous. After moving to Los Angeles in 1958 to take a job at UCLA, he sent as his card a photograph of his family on the beach. The three young children are smilingly reading economics texts, while Charlie and Betty are reading comic books with looks of exaggerated concentration.

So what Musgrave saw as a humorous presentation was probably exactly that—not a court-fool's cover, as I initially imagined. Tiebout apparently could find humor in almost anything. And that's the point. A sense of humor either requires or provides an unconventional way of looking at the world. In the 1950s, it required an unconventional disposition for an economist to conceive of local government as a solution to any interesting problem.

Local government as an institution had peaked around 1900 (Hardy Wickwar 1970, p. 51). At the turn of the last century, important people—social reformers as well as business people—actively participated in local government. Most taxation and spending was local. Serious scholars addressed local government problems with a sophistication that can take us aback. Alfred Marshall's *Principles*, the economics text that held sway from 1890 to the Great Depression, contains a discussion of local government that is very Tiebout-like (1920, pp. 655-63). For example, Marshall distinguishes “onerous” from “beneficial” taxes, the latter stemming from local government's ability to deliver benefits connected to local taxes. (I learned of Marshall's treatment from a footnote in Oates's 1969 article.)

By mid-century, most of these insights were forgotten. The leading theorists in public economics focussed on a unitary, national government. Subunits were a special and not-too-interesting case. The first edition of Samuelson's introductory text treats local government in an

altogether condescending way (1948, pp. 180-84). He offers nothing to suggest that their functions would not best be assumed by the national government. Samuelson wasn't alone. The fragmentation of local government was almost uniformly decried by academics and other commentators in the 1950s (Jon Teaford 1997, p. 85).

Local government's decline in the estimation of intellectuals corresponded to the rise of national government in the real world. The problems of national defense and macroeconomic stabilization—world wars and nationwide depression—increasingly informed political economy from 1915 onward. (Wars promoted fiscal centralization in other centuries, too [Wickwar 1970, p. 5; Randall Holcombe 1999].) Keynesianism, which was made popular by Samuelson's influential text, urged a major role for the central government. In his wide-ranging survey of fiscal federalism, Wallace Oates (1999, p. 1142) noted that centralization of governments reached its worldwide high point in the 1950s. Tiebout's insight swam against both intellectual and political tides.

§4. Tiebout's Model Required Modification.

Tiebout did not publish or even suggest an empirical test of his 1956 hypothesis. Perhaps for this reason, it did not get much attention until Oates published his 1969 study showing that intermunicipal differences in local government taxes and spending were reflected in house prices. It is probably more accurate to call it the Tiebout-Oates hypothesis for that reason. Citations to Tiebout's 1956 article in the 13 economics journals in the JSTOR browser averaged less than one-half per year before 1969. After 1969, citations to it jumped to more than two per year, usually also citing Oates's study. (There are many more citations in other journals, but the Social Science Citation Index does not go back to 1956.)

Tiebout's article had other important gaps. He did not even mention property taxation in his model, though, to be fair, he was responding to Musgrave's and Samuelson's theories of expenditure determination—why it could not be determined voluntarily—not taxation. And it was not until Bruce Hamilton (1975; 1976) introduced zoning into Tiebout's model that one could answer the criticism of Buchanan and Goetz (1972), among others, that the poor would endlessly chase the rich around the metropolitan area in a Tiebout model.

In a reprise of his model published in a conference-volume organized by James Buchanan, Tiebout (1961) did explore local tax issues, and zoning and capitalization are mentioned in passing (p. 94). However, that article has had little influence. (Buchanan shortly thereafter advanced “An Economic Theory of Clubs” [1965], of which Tiebout’s model of local government might be regarded as a primary example, but there is no mention in it of Tiebout’s articles. Club theory and the Tiebout hypothesis have largely had separate intellectual developments.) Two concise journal articles also deal with local government issues (Tiebout 1960; Tiebout & Houston 1962), and an article promoting a decentralized approach to metropolitan governance, co-authored with Vincent Ostrom and Charles Warren (1961), remains highly regarded in political science and is worth the attention of economists, as well.

The larger part of Tiebout's research focused on regional economic development, and he achieved considerable success in this area as a scholar and as a high-level consultant. He devoted much of his professional time at the University of Washington, to which he had moved in 1962, to its distinguished geography department. The department maintains a Tiebout website listing his publications, and the Western Regional Science Association has a dissertation prize in his memory.

His research in regional science, however, had almost no connection with his 1956 article. The fame of the “Tiebout hypothesis” is primarily among social scientists with an interest in local government and fiscal federalism. His name appears in a whopping 1500 articles in the ISI citation indexes between 1975 and 1999. Of the most recent 100 citations (as of August, 1999, covering less than a year), all are to his 1956 article.

Tiebout died in Seattle from a sudden heart attack on January 16, 1968, at age 43. His wife survived him by 31 years, and his three children, Charles, Jr., Bruce, and Carol, still live in the Seattle area. If I could offer but one contribution to his memory, let it be to induce economists to pronounce his name correctly: It is “TEE-bow,” the unstressed syllable sounding like the bow of cellos and arrows.

§5. The Supply Side of Tiebout’s Model Needs Politics.

The many citations to Tiebout’s work should not be taken as evidence of approval by the academic community. A good fraction of the articles that address the Tiebout-Oates model do so

to find fault with it. Many simply overlook Hamilton's zoning insight (e.g., Truman Bewley 1981) or, if they do not, they rail against its implications for the distribution of wealth (e.g., Gary Miller 1981), even though capitalization moots both intramunicipal and intermunicipal differences in fiscal advantages (Hamilton 1976).

A more insightful group of critics faults the model for not saying anything about the supply side (Epple & Zelenitz 1981; Vernon Henderson 1985). Who were the local government managers who supplied the various services for which households migrated to the community? Tests of the model by Oates and others focus almost entirely on the demand side of the model. Capitalization of differences in taxes and service levels showed that homebuyers were aware of differences among communities. But it said almost nothing about how communities formed and how they were run. There was no politics, none of Albert Hirschman's (1970) "voice" in this model of entry and exit.

This oversight was not accidental in Tiebout's original article. He wanted to show how public goods could be allocated without politics. Musgrave and Samuelson pointed to the innate failure of a nonpolitical approach. Tiebout hoped to make his mark by showing that politics was not necessary in the case of local public goods.

Tiebout did, however, make a brief pass at the supply question. Municipal managers were assumed to be nonpolitical. They simply offered a set of services, and people then selected a community. He proposed no desire for profit maximization. The constraint on managers' behavior was simply that they attract enough residents to stay solvent. Tiebout (1956, pp. 417, 420) referred to Armen Alchian (1950) in arguing that deliberate profit maximization by managers was not necessary for them to achieve the *effect* of profit maximization and, hence, the least-cost level of public services. A competitive process analogous to biological natural selection would ensure that the surviving firms' objectives would appear to be profit maximizing. This would occur even when managers were radically uncertain about future market conditions. (Alchian, incidentally, was responsible for bringing Tiebout to UCLA in 1962.)

But, as many scholars have concluded, Tiebout's model still seems to require politics to ensure that its municipal managers will not behave inefficiently. I concur. The evolutionary process of winnowing out unprofitable firms that Alchian suggested as a substitute for profit

maximization seems less applicable to municipalities. Cities seldom go out of business, and new towns and cities are created only episodically.

Moreover, the uncertainties of the market, which led Alchian to propose his evolutionary theory, seem less important for local public services. It takes less entrepreneurial guesswork to know the demands of community residents for municipal services. Unlike corporate shareholders, resident “owners” of municipal corporations are the consumers of the product. Tiebout actually suggests as much in a brief aside about “a city manager who follows the preferences of the older [meaning the previously established] residents of the community” (p. 419). How the manager is instructed by these residents is not specified; no voting mechanism is offered.

I think that the behavior of political actors is the key to understanding the Tiebout-Oates model. It also offers an explanation for why the local property tax is a benefit tax. In the balance of this essay, I will offer an overview of the book I started in Seattle, the Tiebout clan’s hometown. The book is titled *The Homevoter Hypothesis*, and it shows why Tiebout’s model is more plausible if it is approached not as an answer to the free rider problem (though it is), but as a question of corporate governance.

§6. Municipal Corporations Have Homeowning Shareholders.

The central idea of the *Homevoter Hypothesis* is that homeowners control the doings of local government. They do so not because of public spirit (though they are no more deficient in this respect than others), but because homes are their major asset—indeed, usually their only asset (Tracy, Schneider & Chan 1999). They know that what local governments do on the taxation, spending, and regulatory fronts affects the value of their homes. Moreover, adverse decisions on these fronts are not insurable. Thus political activity of the least glamorous type is the only way they have to protect their net worth.

“Homevoter” is my neologism, but the idea in economics at least can be traced to Jon Sonstelie and Paul Portney (1978; 1980) and to Jan Brueckner’s several articles (1982; 1983; Brueckner & Joo 1991). Each of their articles supposes that local voters choose actions that will maximize the value of their property. The novelty that I propose is to emphasize the unique

position of homeowners in local government and to work out its implications for a wide range of government activity.

In his influential book about American corporate history, Mark Roe summarizes the distinctive features of the governance of American business corporations as “distant shareholders, a board of directors that has historically deferred to the CEO, and powerful, centralized management” (1994, p. ix). I submit that the characteristics of municipal corporations are quite different. Their shareholders, as I conceive them, are resident homeowners, so they are anything but distant. They elect municipal “boards of directors,” who are in quite hands-on in their treatment of municipal managers. Although state and national government managers may resemble William Niskanen’s (1971) independent bureaucrats, local government managers have far less power and, perhaps as a result, less pay than their business counterparts.

It is tempting to assume that the governance differences between business and municipal corporations occur because the latter are governments. But municipalities are a lot different in their governance structure than American state and national governments. The federal and state governments have constitutions informed by fear of power. They have strictly separate executive and legislative branches. An independent judiciary is available to second-guess both of the others. The legislatures in all states but Nebraska are bicameral, another way to temper democratic action (Saul Levmore 1992).

The governance of municipalities is much different. A majority of modern cities elect a council, which then hires a city manager, whose tenure is at their sufferance, just as in business corporations. (School districts have a similar governance structure.) Indeed, the modern council-manager form of government was originated in the 1910s as a way to emulate business corporations. Its chief advocate, Richard S. Childs, specifically analogized the city council to a corporate board of directors and the city manager to a chief executive officer (John East 1965, pp. 36, 67). While many other cities still have a separately elected mayor and council, in practice the line between executive and legislative function is fuzzy. Unlike state governors, most mayors actually vote on city councils, and their executive powers are often shared with a professional administrator (Renner & DeSantis 1993, p. 63). Modern cities do not have bicameral legislatures. Many have charters that they can rewrite on their own, and amendments are often put to the

voters (Neil Littlefield 1962). In stark contrast to their “creators,” the states, municipal corporations are designed to get things done.

§7. Voting Rules Must Address Both Forms of Majoritarianism.

The most important difference between municipal and business corporations is that the voting rule for the municipal shareholders is one person, one vote. (That cities are legally “creatures of the state” is hardly a distinction, since business corporations are likewise created by state laws.) Businesses have the option of choosing almost any method of voting, and most have some version of one share, one vote (Frank Easterbrook & Daniel Fischel 1983, p. 399). I will call the municipal method “shareholder” voting and the business method, “share” voting.

In respect to voting, municipalities look like state and national governments. The U.S. Supreme Court ruled in the 1960s that state governments had to apportion their legislatures on the per capita rule. In its 1967 decision, *Avery v. Midland County*, 390 U.S. 474, the Court held that local governments had to abide by the same principle. (The deviation at issue in *Avery* was the county’s granting more votes to rural residents, who were most affected by its services, not more votes to owners of larger properties.) This decision is regarded by most people as the source of the principle that municipalities must apportion votes by resident, although the courts have permitted voting by acre or value of land in districts that provide nothing but water (Richard Briffault 1993).

I am not convinced that the municipal voting rule was simply imposed upon localities by higher governments. Municipalities never, as far as I can tell, tried any version of share voting, even when they were viewed as indistinguishable from other corporate forms. Municipalities often disfranchised tenants in the early 1800s and reserved the right to vote on bond issues to property owners and taxpayers into the 1900s. (Disfranchising tenants was not entirely done for plutocratic reasons: Before secret balloting was adopted around 1880, smallholders feared that large property owners would coerce their tenants to vote contrary to their interests [John Wallis 1999, p. 29; Lionel Fredman 1968, p. 3].) The critical fact, though, is that municipalities never gave *more than* one vote per resident. Disproving a negative is always dicey, but I found no evidence of anything like share voting in the nineteenth-century municipal histories of Charles Adrian and Ernest Griffith (1976), Ernest Griffith (1938), Hendrick Hartog (1983), Eric Monkkonen (1988; 1995), Mary Ryan (1997), or Jon Teaford (1975; 1979).

The American business corporation, which was legally indistinguishable from municipal corporations throughout most of the 1800s, started its life in the post-Revolutionary period with the presumption that voting would be by shareholder, not by share (Pauline Maier 1993, p. 64, Brett King 1996). One vote per shareholder was the common-law rule to be imposed in the absence of statute. However, this model soon diverged toward voting by shares, though there were many intermediate schemes through most of the nineteenth century, such as a cap on the number of votes of any one shareholder (Colleen Dunlavy 1999). The dominance of share voting was achieved only by 1890, when interstate charter competition by New Jersey and then Delaware led others to embrace this method for business corporations (Maier 1993).

In order to understand the modern municipal corporation, it is worth considering why share voting was not adopted. The hazard that share voting is intended to avoid in business corporations is that smallholders might otherwise use their votes to transfer wealth from the largeholders. Share voting is generally regarded as an incentive-compatible rule for business corporations (Grossman & Hart 1988). It avoids the excess of majoritarianism that we most often associate with political decisions.

There is another side to majoritarianism, however. In business corporations, it is thought to be necessary to have some external rules to protect minority shareholders from self-dealing by the largeholders. (This hazard is typically discussed under the rubric of “freeze-outs” that leave minority stockholders out of some value-enhancing corporate transaction [Brett King 1996].) The problem of majoritarianism does not go away under share voting. In order to attract small investors, largeholders have to assure the small fry that their interests will not be forsaken when a major corporate action is undertaken. This was apparently an anxiety in early American business corporations, and it was one of the reasons that many adopted the shareholder or the mixed shareholder/share voting schemes (Dunlavy 1999). (I must admit here that the history of voting in early American corporations, both business and municipal, is misty, not least because, as Pauline Maier documents, post-Revolutionary Americans were thoroughly ambivalent about corporations of all types.)

Protection of minority shareholders in modern business corporations is sometimes taken care of under legal rules, chiefly the appraisal remedy, in which the majority shareholders buy out the minority at an externally-approved price. The more important protection for smallholders in

business corporations is the ability to spread their assets among different companies (Easterbrook & Fischel 1991, p. 134). And because of investors' ability to diversify, business corporations that have to raise capital repeatedly will care about their reputations. A reputation for disregarding the interests of minority shareholders will be penalized by the market. As capital markets became more efficient over the 1800s, it seems reasonable to suppose that shareholder voting was less necessary to protect the smallholders of business corporations.

§8. Risk-Averse Homeowners Prefer Shareholder Voting.

The ability of smallholders to spread risks is one of the major differences between business and municipal corporations. Homeowners have all of their eggs in one municipal basket, and so it should not be surprising that they would not be willing to accede to share voting, where their interests are at risk of being trampled by largeholders. Unlike business corporations, municipal corporations raise much of their capital by assessing resident shareholders via property taxes. Owners of smaller amounts of capital (individual homes and small businesses) would be reluctant to join a municipality in which the largeholders could dictate the terms of taxation. The smallholder's assets in municipalities are immobile and not easily diversified against such risks.

Of course, allocating votes on a per capita basis leaves municipal largeholders exposed to the political risks that business corporations forestall by share voting. In local government, these hazards are addressed by state constitutional rules requiring uniformity of taxation, assessment, and service provision. Constitutional and judicial rules limiting the range of activities that local governments can undertake and protecting the rights of property owners likewise address the intramunicipal transfer problems. Judicial supervision of municipalities is also promoted by Dillon's Rule, which in its heyday restricted the permissible range of activities to those specifically authorized by the state (Joan Williams 1986).

The foregoing rules are sometimes decried as leading to the "powerlessness" to the cities (Gerald Frug 1980). As Eric Monkkonen (1988; 1995) has established, however, the rules were adopted in the heyday of local government, the late nineteenth century, at the behest of local governments themselves. Limiting the range of local activities was a means of protecting investments in municipalities, investments desired by most local voters. Surrendering some freedom of action made it possible to attract investment to a corporate entity that might otherwise be tempted to redistribute wealth from largeholders to smallholders.

I do not want to argue that the state-constitutional rules that limit municipal activities and rulemaking are perfect in their protection of largeholders. Economists have pointed out the underpricing of services by municipal utilities, a problem that arises from allocating equal votes to the resident shareholders (Sam Peltzman 1971; Christopher Timmins 1999). I simply want to suggest that the democratic voting rule must be evaluated in light of how the opposite rule—share voting—might work. The majoritarian problem under share voting becomes one of protecting smallholders, and there is reason to believe that this is more severe in municipal than in business corporations.

Some location-specific risk in municipalities has been reduced for owners of commercial property and rental units by corporate ownership and by REITs (real estate investment trusts). By being able to diversify ownership shares, these arrangements reduce their owners' exposure to majoritarian risks. But owner-occupied housing remains fully exposed to location, industry and cyclical risks, despite the best efforts of Case, Shiller and Weiss (1993) to promote the formation of home-value insurance markets. In such a setting, buyers of homes have reason to be wary of a governance structure that would allow owners of large amounts of property to exploit smallholders. (Why not share voting with an appraisal remedy, in which municipal largeholders must buy out the smallholders at the market price? This amounts to private eminent domain, which any resident is leery of because of the consumers' surplus of living in one's own home.)

§9. Why Do Private Governments Vote by Share?

The obvious counter to my explanation for municipal corporate voting is the governance structures of condominiums and similar residential community associations. Their votes are normally allocated more like business corporations, yet these are the very private corporations that most resemble local governments (Robert Ellickson 1982). Their governance seems to run counter to my suggestion that democratic voting in local government is an evolutionary winner, not simply something imposed by states and courts.

Yet when looked at more closely, condominium governance does not just allocate votes by square footage or value of unit (analogous to share voting). The same governance rules—the CC&Rs (covenants, conditions and restrictions)—also specify rules for assessments (taxes) and supermajority voting rules that forestall opportunistic transfers by the big owners against the small (Barzel & Sass 1990). Condominium rules don't just protect the few-but-rich from the

many-but-poor. The network of governance works both ways to protect both the large and the small investor.

The reason such elaborate rules can be used in residential community associations is that they deal with a more limited and foreseeable set of issues than municipalities. Private community associations do not control much undeveloped land. Indeed, during the development process, the developer is careful to retain a majority of voting shares, lest she find her early buyers adopting rules that frustrate her plans (Uriel Reichman 1976). Private community-association rules do not contemplate major changes in land use. Such entities don't educate children or put people in jail. In such a circumscribed setting, the optimal governance structure is different from the ideal for municipal corporations, which have plenary powers to tax, take property, spend money, and regulate behavior. To put it another way, the municipal corporation controls a larger fraction of residents' assets—their life and liberty as well as their real property—and so allocating votes on the basis of real-property ownership is less appropriate.

§10. Zoning Is to Municipalities What Property Law is to Business Corporations.

A critical point of disagreement about the applicability of the Tiebout model is whether zoning is a sufficient constraint to protect the property-tax base from congestion by newcomers. In their wide-ranging survey of local taxation theory, Mieszkowski and Zodrow (1989) conceded that Hamilton (1975) had shown that the Tiebout model is theoretically sound as long as communities can undertake “perfect zoning,” but they dismissed this as empirically dubious. I wrote a comment (Fischel 1992) that argued that zoning is indeed capable of doing the things that Hamilton suggested. The main point of the comment was to note the protean nature of zoning laws. They do not stop a regulating lot size or housing type. The entire configuration of development is up for grabs. If creative developers do find loopholes, they are not difficult to close. Mieszkowski and Zodrow, I argued, greatly underestimated the power of zoning in the affairs of nearly all American cities. (I avoided noting that their hometown of Houston is the only sizable jurisdiction in the United States that does not have zoning, lest they retort that my own experience as chair of a small New England town's zoning board has colored my outlook.)

Rather than review the institutional powers of zoning (as I have in Fischel 1998 *ELE*), I will explore in this section zoning's relationship to the capitalization of local public actions in home values. It is important to understand that the existence of capitalization implies a critical

precondition. Many studies have found that high public-school test-scores are capitalized in the value of owner-occupied housing within the school district (Sandra Black 1998; Li & Brown 1980). This implies that access to schools in that community is not free. Since access to schools is typically governed by residence in the community, it follows that capitalization is evidence of an inelastic supply of developable sites in the community. This implies in most cases that someone besides the private owners of land has to give the go-ahead to develop additional housing units in the community.

Zoning and related land use controls generate this community-wide inelasticity. To see why, consider the analogous stock-market condition. When stock-market followers learn, for example, that a drug company is about to get FDA approval for its new treatment for cancer, the news is quickly translated into higher prices for the ownership of this stock. This could not happen if owners could not exclude others from obtaining their shares without the current owners' permission. Furthermore, the existing owners retain the right to limit the issuance of new stock in most corporations. They will approve it if the issuance will raise the value of their ownership shares by, for example, obtaining funds (at a lower cost than borrowing) to acquire more capital to produce the new drug.

The ability to exclude potential stockholders is analogous to a local government's ability to exclude new residential development. At one level, of course, simple ownership of property allows each individual homeowner to exclude potential occupants. This is analogous to the individual stockholder's ability to exclude potential buyers of her shares. More critical for my purposes is the collective ability by homeowners to control net additions to the number of housing units in the community, just as stockholders can collectively control (via voting or via their elected board of directors) net additions to the number of ownership shares.

Collective control is necessary because some desirable characteristics of the community are subject to congestion by additional residents. If a local public project—a park, for instance—is subject to crowding that lowers its value as more people use it, the local government must be able to limit net additions to the area in order for the benefits of the park to be reflected in existing home values. Zoning and other strands in the web of land use controls are a way of doing that.

Zoning changes the property tax from a tax on real-estate capital to a tax on land. As such it represents a backdoor adoption of the program of Henry George (Fischel 1998 *LVT*). I bring this up here to respond to Vernon Henderson's (1995) theoretical comparison of local tax regimes. He showed that rational voters would choose a land tax, which has no deadweight loss, over a property tax. My response is that the voters have converted the property tax into a land tax by means of zoning. By making the supply of any given class of housing (or other use) perfectly inelastic unless the developer passes fiscal muster, rational municipal corporations make housing capital into a factor like land.

§11. Zoning Is the Most Important Municipal Function.

An extensive literature on the Tiebout model is dedicated to discovering how it can work without the public land-use controls that I have described (Epple & Platt 1998; William Wheaton 1993). The idea is to develop a model of voluntary sorting according to households' demands for public services. The mechanism proposed is that income and price elasticities of demand for local services and housing will do the job of intermunicipal sorting without resort to land use constraints. If these models have a correct vision of reality, then public land-use controls are unnecessary. Zoning is thus a mere adornment, a kind of pacifier for the overly anxious.

These studies sound to me like arguments that sports referees are really unnecessary. After all, we see players in pick-up basketball games successfully play the game by exercising self-restraint and agreeing to call their own fouls. In fact, however, no organized basketball league at any level plays without a referee. The reason is that when the stakes are important to the players, everyone agrees that referees are necessary. Theories about referee redundancy are exploded by the expenditure of considerable sums by rational people to hire them.

Zoning and related land-use controls constitute the most jealously guarded activities undertaken by local governments. This attitude is not the product of lack of imagination or experimentation on the part of municipal leaders. Many other areas of municipal activity have been dropped when it appeared that they were not in the voters' interests. Cities that once provided municipally-produced gas and electricity have dropped it in favor of private production. Jails and landfills are privatized when it is expedient. The 1950s Lakewood Plan in California demonstrated that cities were willing to have another level of government—in that case, Los Angeles County—provide most of their municipal services. The one thing that no city was

willing to surrender to the county was zoning. Indeed, the major reason for the Lakewood Plan was to allow cities to incorporate so as to control their own zoning, since Los Angeles County was too permissive of high-density development (Richard Cion 1966; Gary Miller 1981, p. 86).

The Lakewood attitude was not confined to California. I spent the academic year 1998-99 in Seattle. Between 1990 and 1999, ten new cities formed from unincorporated areas within King County, of which Seattle is the largest city. This extraordinary number of incorporations was of sufficient interest to me that I organized a graduate student seminar at the University of Washington to study new-city formation. Every source that students and I examined confirmed that the desire by homeowners to form a smaller community to control their own land-use was a driving force common to all of the incorporations. Jon Teaford's histories of twentieth-century municipal formation show that this motive has arisen in many other parts of the country (1979; 1997, p. 15).

Sociologists have suggested that cities and suburbs can be characterized as "growth machines," to use the term first deployed by Harvey Molotch (1976). Prodevelopment elites are said to be barely ruffled by growth controls and other municipal manifestations of homeowners' muscle (Warner & Molotch 1995). My thesis is not entirely inconsistent with this view. Developers do have influence in local affairs. But in most jurisdictions, it is the influence of applicants and salesmen. They need to get the approval of local officials. Those officials are responsive to voters whose local economic stake is in the value of their homes and only indirectly (via additions to the tax base) in the value of new development.

Nor can developers sweep away opponents with the aid of the courts. Builders' "right to develop" in the teeth of opposition from municipalities has been tenuous at least since the U.S. Supreme Court put its seal of approval on zoning in *Euclid v. Ambler*, 272 U.S. 365 (1926). Other judicial doctrines that might protect developers have been anesthetized for almost as long (Robert Ellickson 1977). The resurgent "regulatory takings" doctrine offers what I think is a useful tool to discipline local zoning's excesses (Fischel 1995), but there is little evidence that state courts have grasped this possibility. As a result, local officials know that it is by the sufferance of resident homeowners that developers get their projects done. The nearby homeowners must be persuaded that the development does not leave them worse off, and the homeowning taxpayers must likewise be satisfied with the fiscal impact.

As a final observation on the primacy of zoning, I turn to the famous land-use case of *Southern Burlington County NAACP v. Mount Laurel Township*, 336 A.2d 713 (N.J. 1975), 456 A.2d 390 (N.J. 1983). In that case, the New Jersey Supreme Court ordered the state's 567 local governments to stop using their zoning as a shield against low-income housing development. To enforce its original 1975 decree, the court in 1983 set up a judicial panel that served as a rezoning board. If a builder could establish that he would build the requisite affordable housing in a given community, the judges would order that a building permit be issued, local zoning laws notwithstanding.

This remedy was sufficiently upsetting that the state legislature set up an alternative zoning review board, the Fair Housing Commission. It replaced the judicial panels, but in practice the commission has largely subverted the court's purposes. When plaintiffs went back to court to overturn this sham compliance, legislators urged Governor Thomas Kean not to reappoint the state's Chief Justice if he didn't uphold the new legislation. Although there is no record of a specific quid pro quo, Chief Justice Wilentz affirmed the legislative response in *Hills Development Co. v. Township of Bernards*, 510 A.2d 621 (NJ 1986), shortly after Governor Kean stretched his political capital to induce legislators to approve the chief justice's reappointment (Kirp, Dwyer & Rosenthal 1995, pp. 137-43; John Payne 1997.) Other state courts have favorably noted the *Mount Laurel* doctrine, but none has yet dared imitate its wholesale attack on the institution of local zoning. No other institution matters so much to local homeowners.

To supplement my institutional (some might say "anecdotal") evidence about the importance of zoning, I once undertook a survey of empirical studies that asked the question, "Do Growth Controls Matter?" (Fischel 1990). (The better title would have been, "Does *Zoning* Matter?" but the sponsor of my research, the Urban Land Institute, was specifically interested in growth controls, which are straightforward extensions of modern zoning laws.) Many econometric studies had examined whether zoning classifications by themselves affect land values. While early studies gave some ambiguous evidence on this (e.g., Crecine, Davis & Jackson 1967), more recent econometric evidence makes it clear that zoning classifications have a significant and large effect on land values (e.g., Pollakowski & Wachter 1990). This finding could not hold if zoning were something that developers could easily cut through with a telephone call to city hall.

Other studies have shown that ratcheting up zoning's stringency redirects development in intended ways (James Thorson 1997) and has the predictable effect of raising home prices in the area (Katz & Rosen 1987). And to take a cue from George Zodrow, who suggested (perhaps tongue in cheek) that the number of academic studies on the subject is itself evidence for tax competition, I suggest that the ubiquity of law-school courses on land-use regulation is a vote for zoning's potential to alter land values. Lawyers are not reputed to study intensively activities that bring them no profit.

§12. The Median Voter Rules in Local Governments.

I hope to have persuaded the reader that local governments are different from the states in their governance structure. They look more like business corporations once we recognize the differences in circumstances between the business and municipal shareholders. In this section I explain why local governments differ from state governments in their political model.

The median voter model of politics, which is the social-science name for majority rule, was first elaborated by Howard Bowen (1943). It has been subjected to an extensive set of statistical tests in the economics literature, and most of these tests have involved samples of local governments. The consensus as I read it is that the median voter model holds up quite well in comparison with its alternatives.

Thomas Borcherting and Robert Deacon (1972) and Ted Bergstrom and Robert Goodman (1973) were among the first to test whether the median-income voter actually got the level of public goods that Bowen hypothesized. Their results, appropriately hedged and qualified, indicated that the median voter approach worked surprisingly well. The level of public services seems to have been set "as if" a referendum among the voters had been held on every issue, even in jurisdictions in which referenda are never held.

The evidence since then is overwhelmingly in favor of the median voter at the local level. Robert Inman (1978) examined 58 Long Island school districts and similarly found that the median voter worked quite well in predicting differences in school spending. Ted Bergstrom, Dan Rubinfeld, and Perry Shapiro (1982) found a similar result for Michigan school districts: Decisions by plebiscites closely matched those by locally elected representatives. Political-scientist Gary Miller (1981, p. 32) found in his detailed study of Los Angeles County that it was

the voters, not the elites, who were the final arbiters of municipal incorporations. Other studies were reviewed by Randall Holcombe (1989), who found the results sufficiently persuasive that he proposed the median voter as an appropriate benchmark for all government decisions, the analog to perfect competition in private markets.

Critics of the median-voter model note that few jurisdictions vote directly on public services. We have representative government in all but small New England towns. Even most town meetings are attended by only a small fraction of the eligible voters, and voters usually decide a carefully limited range of issues. It is well established that voter participation is generally lower in purely local elections than in national elections (Verba & Nie 1972, p. 31).

Low political participation however, could also be a sign of satisfaction by adult residents who, in nearly all cases, deliberately chose to live in a particular town. A national study of cities by Eric Oliver (1999) has shown that more homogenous communities, both rich and poor, have lower rates of participation in voting and other local political activity than cities with heterogeneous populations. Oliver argues that the lower participation in homogenized communities is caused by having less conflict to be resolved. Tiebout-sorting among preferred communities seems to induce lethargy in local politics. (Oliver deplors this condition, and I might, too, if I did not entertain the notion that political participation has an opportunity cost.)

Focus on average voting rates at the local level is also misleading. Joseph Zimmerman (1999) finds that New England town-meeting attendance varies very much by the importance of the issues, as it has since their colonial inception (Bruce Daniels 1978, p. 58). This applies as well to other forms of local government. A serious controversy can easily double or triple the participation rate at the local level, while it seldom does more than make a slight jiggle in the state and national voting rates. Just counting the average participation rate overlooks the potential for an active citizenry to discipline elected officials. Easterbrook and Fischel (1983, p. 415) make the same argument in defense of voting in business corporations. Average participation in stockholder meetings is low, but it can rise dramatically when an important issue, such as a takeover, is on the table.

§13. Homeowners Are More Active Stockholders than Renters.

I have proposed to remedy Tiebout's omission of a political sector by inserting homeowners as the prime movers of the model, and this section defends my focus on homeowners and its neglect of renters. The largest and most active group of voters in all but a few cities consists of homeowners. National data indicate that about 67 percent of all households are in owner-occupied units. Even that understates the pervasiveness of homeownership as an institution. A study by Jim Berkovec and Peter Zorn (1998) concluded that between 80 and 90 percent of Americans own a home at some time in their lives.

Nearly every study has shown that renters participate in local affairs in disproportionately low numbers compared to homeowners. In a national survey, 77 percent of homeowners said they voted in at least one local election during the period 1984-1992, while only 52 percent of the renters did (DePasquale & Glaeser 1999, p. 362). Evidence from individual cities confirms the national data. Pamela Moomau and Rebecca Morton (1992, p. 179) found from an examination of a New Orleans referendum on homestead tax-exemptions that homeowners know and vote their interests. In contrast, they found that renters don't participate much even when there appear to be gains to them from doing so. (The referendum lowered taxes for owner-occupants, thus shifting more of the tax burden to the rental sector.) And studies of apartment-rent variation among communities find that renters do not appear to pay close attention to the quality of local public services (Carroll & Yinger 1994), in contrast to the overwhelming evidence that homeowners do (Martinez-Vazquez & Sjoquist 1988).

Low renter participation in politics is not confined to municipal governance structures. Most private homeowners associations, such as condominium and "planned communities," do not enfranchise renters in their governance structures. It is especially interesting, then, that the progressive-minded developers of Columbia, Maryland, one of the largest and most successful of the recent privately-developed communities, did enfranchise tenants. However, as Lynne Burkhardt (1981, p. 27) documented, renters' participation in community affairs in Columbia remained much lower than that of owner-occupied units. Asset ownership matters.

§14. Rent Control Is the Exception that Proves the Rule.

If renters are the small and uninterested electorate that I have characterized them, why, my friends from New York City ask me, do we have rent control? That policy certainly serves renters who already live in the city, even as it denies those not there access to the cheaper units

(since with the lower rents, tenant turnover is much reduced). I choose to turn the question on its head and ask, why don't most cities have rent control?

Stringent rent-control is rare except in places like New York City, which in 1980 had 7.8 percent of the nation's rental stock and a supermajority (75 percent) of renter-voters. As of 1980, a high point for rent control, only ten percent of all rental units in the U.S. were subject to rent control (mostly in New York City), and about half of those ordinances allowed landlords to charge market-rate rents when units became vacant (Kenneth Baar 1983, p. 826). As of 1990, a little more than 200 municipalities had rent-control ordinances (Edgar Olsen 1991, p. 931). Although some states have constitutional constraints that prevent local governments from adopting rent control, 200 still seems like a tiny fraction of the more than 25,000 local governments possessing police-power authority under which rent control could be adopted.

Rent control's scarcity is a political puzzle. Even in the suburbs, renters greatly outnumber landlords. A local politician seeking votes could tip the balance in his favor by promising to enact rent control and related tenant-security legislation whose effect is to transfer at least some of the value of apartments from their nominal owners to the current tenants. It could be, of course, that landlords offer something even more valuable than votes to politicians: cash for their campaigns. But the jingle of that voice is muted in smaller communities, in which the positions of the candidates are pretty clear to everyone. Yet rent control is nearly absent in small communities even in states where its adoption is entirely a matter of local option.

Rent control is rare, I submit, because it is usually bad for homeowners. There are two effects they might worry about. Rent control almost always results in some physical deterioration of buildings because owners have less incentive to maintain their structures if rents are low. Some excess depreciation is offset by informal tenant contributions and by the force of habitability laws, but the consensus is that the net effect of rent control on building quality is negative (Joseph Gyourko 1990; Moon & Stotsky 1993). Because this neighborhood blight might spill over to owner-occupied homes, homeowners have reason to oppose rent control.

Another reason that homeowners don't like rent control is that it shifts the burden of taxation from apartment owners to homeowners (Anthony Downs 1983, p. 141). Although moderate rent controls (those that allow rents to rise to market levels upon vacancy) do not seem to reduce apartment house values by much, stringent rent control in Berkeley and Santa Monica clearly did

so (Michael St. John 1990). Such reductions in value can have insidious consequences. A *New Yorker* profile of Robert Moses, New York's highway builder of the 1950s, noted that his infamous demolition of the East Tremont neighborhood in the Bronx to make way for the Cross Bronx Expressway was, in a strictly financial sense, perfectly rational. The apartment houses of East Tremont, in which thousands of tenants lived, were cheaper to purchase because they were subject to rent control, and their landlords were eager to be rid of them (Robert Caro 1998, p. 48). As this example suggests, the reductions in value of apartments by rent control mean that owners of other properties must shoulder more of the local tax burden.

§15. Proposition 13's Effects Demonstrate the Commonwealth of Property Taxation.

At a Public Choice Society meeting a few years ago, Tom Nechyba asked one of those deliberately naïve questions that made me think about a familiar institution in a different light: If local voters are so concerned about their property's value, why do they choose to tax it? Why would you tax the thing you love?

The answer, I think, is that you know that everyone else loves it, too. Property taxation makes homeowners interested in the value of *other people's* property as well as their own, assuming that the tax rate (including the assessment) cannot be varied by a local majority for any subset of taxpayer-voters. Such uniformity criteria are present in every state constitution (Gillette & Baker 1999, p. 549).

Uniform property taxation makes the local property-tax base a commonwealth. This is a quaint way of saying that it is an incentive-compatible tax. It lines up other voters' incentives to make political decisions that are consistent with each voter's desire to maximize the value of his own home. Voters will want to adopt policies that maximize the total tax base and forgo short-run transfers that political power would otherwise facilitate. A formal model that encompasses the main idea behind this principle was developed by Edward Glaeser (1996). (For an alternative approach to why property taxes are used locally, see Thomas Nechyba [1997].)

My foregoing explanation for the scarcity of rent control is consistent with the incentive-compatibility of the property tax. Homeowners are reluctant to allow rent control because it imposes a financial burden on other owners of property—landlords—that results in a reduction in the tax base and thus an increase in the tax-price faced by homeowners. The commonwealth

effect unites owners of dissimilar property—rentals and owner-occupied—against a policy that would reduce aggregate land values.

Events following Proposition 13, the 1978 voter initiative in California, indirectly demonstrate the commonwealth effect of the property tax. Proposition 13 rolled back tax assessments on individual properties to their 1975 values and allowed them to rise by no more than 2 percent per year or, if they were sold, to market value, after which they again got on the slow, two-percent assessment escalator. The maximum tax rate applied to these underassessed values was one percent, which has made the statewide effective tax rate actually only about one half of one percent (O'Sullivan, Sheffrin & Sexton 1995).

The 1978 voter initiative was immediately followed by an epidemic of rent-control statutes in California (Kenneth Baar 1983; Jeffrey Chapman 1981). The effect of Proposition 13's assessment limits and low rate meant that almost all homeowners in California became insulated from an important commonwealth-effect of the property tax. After Proposition 13, virtually every homeowners' tax payment was always at the constitutional maximum. Rent control became a more attractive policy, since it did not result in higher property taxes for homeowners. It wasn't that homeowners' thought rent control was a great idea; it was just that one of the more powerful reasons to oppose it had disappeared with Proposition 13. Thus the purveyors of rent control faced less opposition, since landlords, the most vigorous opponents of rent control, could no longer appeal to the interests of homeowners. Landlords' wealth was now less congruent with homeowners' wealth.

The conventional explanation for rent control after Proposition 13 was that landlords did not lower rents in response to reduced taxation, as Howard Jarvis, the leader of Proposition 13, had once promised. This is implausible. It assumes that, prior to Proposition 13, advocates for rent control believed that the level of property taxes determined rent levels. I never heard of a rent-control advocate who thought that rents were determined by anything but the greed of landlords. Moreover, Jarvis's claim was publicly contested by apartment-owner associations. Jarvis made many claims that were palpably untrue—he said schools would not be harmed by Proposition 13, even though the tax cut exceeded total expenditures on education at the time.

Rent control did not take hold everywhere in California, but that is because the commonwealth effect, which was attenuated by Proposition 13, is only one reason homeowners

might oppose rent control. The blighting effect of run-down apartments on nearby homes is still there. The removal of one of these political stays on rent control seems likely to have accounted for the spike in rent control after Proposition 13.

California's experience with Proposition 13's limits offers another indirect support for the compatibility of property taxation with efficient land use. After the 1978 initiative, municipalities could not rely much on property taxation. Under a 1950s era law, one percentage point of the state's sales tax is rebated to the municipality within which the sale was consummated. Sales taxes became a major source of municipal revenues after Proposition 13. This leads to potentially inefficient incentives for land-use decisions.

The majority within a community (who do not live near the land at issue) might approve a shopping center with large adverse effects on nearby home values instead of a more neighborly office complex. A property-tax regime would give more points to the office complex because it did not devalue nearby homes and thus reduce the property tax base. The shopping center, if it were taxed on the basis of property, might have a lower net fiscal benefit when its adverse spillover effects were factored in.

There is evidence that cities in California became much more interested in sales-tax revenues after Proposition 13 undermined property taxation (Lewis & Barbour 1999). The San Francisco Chronicle (May 20, 1998) told how a southern California city chose a large retail store over a more neighborhood-friendly research center because the store generated more sales taxes. The devaluing effect of the store on nearby residences was easier for most voters to ignore, I suspect, because the loss in value had little effect on the majority's own tax burdens.

§16. Big Cities, Like Big Businesses, Are Less Subject to Shareholder Control.

Much of the controversy about the applicability of the median voter model can be resolved by noting that the size of the jurisdiction seems to make a difference (William Hoyt 1999). A number of different studies shed light on this. Geoffrey Turnbull and Peter Mitias (1999) compared the median voter model's predictions with an open set of alternative explanations for government tax and expenditure patterns. They found that the median voter model dominated others in a sample of municipalities, but when applied to large counties and state governments in

the same region as the municipalities (the upper Midwest), no particular model consistently explained spending variations.

Other evidence about the influence of jurisdiction size comes from Howard Bloom and Helen Ladd (1982). They asked whether budgets of Massachusetts towns and cities were opportunistically increased after property assessments were raised. The median voter model would predict that an increase in property assessments would simply cause tax rates to decrease, which would keep revenues constant. Most of the model's competitors would say bureaucrats or special interests would take advantage of the apparent windfall and spend more.

Bloom and Ladd found evidence for both ideas. In bigger cities, legislative councils did take some liberties with the nominally larger tax base and spend more, but in small towns, taxes rates were dutifully cut. In small towns, the voters get what they want. A similar result was found by Dennis Holtz-Eakin and Harvey Rosen (1989). Their study of capital budgeting in New Jersey municipalities found that suburban and rural jurisdictions behaved as if governed by the rational median voter. The smaller towns used appropriate discount rates and time horizons, while large cities did not. And even Romer, Rosenthal and Munley (1992), the first two of whom had cast doubt on the median voter model (Romer & Rosenthal 1979), found that the median voter model worked rather well in smaller New York State school districts, but not (as they expected) in the larger, urban districts.

Municipal corporations thus seem to be analogous to their business counterparts. In large business corporations, the stockholders have relatively little power. They are rationally ignorant and likely to sell their shares rather than protest adverse management decisions. Exit prevails over voice. But in small corporations, particularly the “close corporation,” the stockholders are quite powerful.

§17. Wards Promote Homeowner Interests in Bigger Cities.

Unlike businesses, the action in American cities is in the smaller jurisdictions. Only about a quarter of the 1990 U.S. population lived in a city whose population exceeded 100,000 (Eric Monkkonen 1995, p.3). That statistic actually peaked in 1930. Part of the trend is due to migration out of central cities to suburbs, but part of it is caused by the creation of new cities out

of unincorporated county territory, especially in the West. Even if it is true that the median voter doesn't rule in big cities, that is of declining importance for most Americans.

But I actually think the distinction is oversold. Big cities have adjusted their political institutions in order to give residents—read homeowners in most places—more voice in local decisions. The chief method is ward representation on city councils. Each ward election involves fewer voters than an at-large election, and the geographic contiguity of wards makes it more likely that homeowners will find a common voice. More than two-thirds of American cities over 50,000 in population have ward or mixed (some ward, some at-large) city council representation (Renner & DeSantis 1993, p. 68). Smaller cities are more likely to have purely at-large councils. In addition, large cities are more likely to have voter initiative provisions (*id.*, p. 69), which augments the power of voters.

Large, ward-based cities behave like smaller cities. Siting unwanted uses such as group homes becomes everywhere more difficult in ward-based cities than in those of similar population with at-large councils (James Clingermayer 1994). Clingermayer (1993) also found that early zoning laws were adopted most frequently in cities with ward representation, which is consistent with the greater influence in ward-based systems of homeowners, who occupy the apex of the zoning pyramid.

The ward system got a boost from the Civil Rights movement. Federal enforcement of the Voting Rights Act of 1964 often involved requiring cities—first in the South, later everywhere—to abandon at-large voting (David Hudson 1998, p.90). Ward-based systems made it more likely that African-Americans would get representation on city councils. And it has results. Evidence from Atlanta indicates that black neighborhoods were no longer peppered with unwanted commercial development once ward representation was adopted and blacks were elected to city council (Hinds & Ordway 1986). A survey of 1400 cities by Mark Schneider and Paul Teske (1993, p. 732) found that cities with ward representation were less prodevelopment than those which elected councils at-large.

The problems of inefficiently-large organization are more important for the stockholders of municipal corporations than for business corporations. Wayward managers in large businesses are disciplined by the market. Exiting by shareholders causes stock prices to drop, and that makes managers vulnerable to takeovers and cuts their access to capital markets (Henry Manne

1965). Similar external discipline of poorly performing municipal managers is unlikely. If home values drop, no white knight is going to buy up the community and turn it around. With a large fraction of their wealth at risk, homeowners need to protect their investment by improved monitoring devices and by structural reforms such as ward representation and open-meeting laws.

§18. Capitalization Is Everywhere.

I have argued that municipalities have lives that are independent of the state, despite the “creature” theory; that their land-use regulations have real bite; that the median voter model prevails in most localities; and that the median voter is, in most municipalities, a homeowner. The next step is to show that the median voter has reason to believe that local events affect her major asset, so that she has a pocketbook reason to pay attention to local affairs.

The primary economic evidence that homebuyers are aware of fiscal and public service differences among communities is, of course, capitalization. Wallace Oates (1969) was the first to make this point and to provide the econometric evidence. Using a 1960 sample of northern New Jersey communities, Oates concluded that “if a community increases its tax rates and employs the receipts to improve its school system, the coefficients indicate that the increased benefits from the expenditure side of the budget will roughly offset (or perhaps even more than offset) the depressive effect of the higher tax rates on local property values” (1969, p. 968).

Oates's study has been replicated in scores of articles (e.g., Raymond Reinhard 1981; Bradbury, Case & Mayer 1998). Home values have been shown to be remarkable barometers for a wide variety of local public events, including proximity to landfills, risk of mortality from air pollution, discovery of earthquake faults, location in an historic district, crime rates, having homeowners as neighbors, adoption of growth controls, traffic levels, and even the classic example of a nuisance, hog farms. Capitalization studies are now an undergraduate exercise, and it is difficult to interest journal editors in new studies without a major twist.

An objection to my focus on home values is that some of the benefits and costs of local decisions may be reflected in wage rates of people who work there (Jennifer Roback 1982). Wage capitalization, however, is not persuasive at the level of local government. Wage differentials arise mainly between widely separated labor markets, which are usually thought to

be metropolitan areas. Workers are mobile within metropolitan areas, so a real-wage difference between communities would cause both employers and employees to adjust quickly. (Wage gradients that reflect the cost of commuting can exist within metropolitan areas, but commuting seldom reflects differences in municipal policies.) The key to understanding the property tax is that the composition of its base is subject to detailed, local regulation by municipalities whose borders do not change. Differences in property values can persist for a long time between adjacent municipalities.

§19. Is Capitalization Consistent with the Tiebout-Hamilton Model?

At the conference, John Yinger brought up a theoretical objection to capitalization, which he and others have raised before (Epple, Zelenitz & Vissher 1978; Yinger 1982; Ross & Yinger forthcoming). He argues that if the Tiebout-Hamilton model worked as claimed, there should be *no* capitalization. The key to this result is the assumption of a perfectly elastic supply of municipalities. Municipal incorporations, annexations, and disincorporations should be easy, and this ease should undermine capitalization in the same way that free entry and exit undermines economic profits of business corporations. After all, if one municipality discovers a combination of public services and taxes that is especially attractive to homeowners, other municipalities should form that imitate that successful combination. Poorly managed municipalities should go out of business. In the long run, differences in home values associated with public services and taxes ought to be as rare as true economic profits among competitive business corporations.

In reality, municipal incorporations are episodic—though not unheard of, as I noted in an earlier section—and dissolutions are even more rare (McConnell & Picker 1993). Boundary changes are also few, as Epple and Romer (1989) demonstrated. So although municipalities are numerous, they are not so elastic in supply as to cause capitalization to disappear. There may be good reasons that municipal incorporations and dissolutions are made considerably more difficult than business incorporation and bankruptcy. Homeowners' risk-averse desire for fiscal stability might outweigh the advantages of highly elastic boundaries.

At any rate, within a fixed-boundary framework, capitalization is evidence that homebuyers value those communities that provide a better mix, and it provides voters in all communities with long-term incentives to monitor the performance of their elected officials (Caroline Hoxby 1999). Inflexible boundaries do come at a cost, though, since there is some evidence that large-

area municipalities cause zoning to be monopolistically restrictive (Lou Rose 1989; James Thorson 1996). Restrictions on incorporations by state agencies also enable established municipalities to raise taxes without increasing service levels (Martin & Wagner 1978).

It is also important that my claim for local-government efficiency is *comparative*. Municipal corporations are efficient compared to a more centralized system of taxation and provision of services. They are not more efficient than any system of public finance one might think of. Most scholars who endorse the Tiebout approach have viewed it in a comparative framework. The great public policy question presented by Tiebout and Oates and Hamilton is not, can we think of a decentralized system that beats all others, but can we find in realistic types of decentralization some economic virtues that cannot be found in the more centralized systems that we are actually likely to encounter?

§20. How Complete Is Capitalization?

The major response by economists who are skeptical of the primacy of homeowners is that capitalization is incomplete. If only 20 percent of variations in tax rates and indicators of school quality are capitalized in home values, then 80 percent of the necessary incentives are missing. Homeowners cannot be relied on to make efficient decisions with such opaque signals from the property market.

One retort is that 20 percent is better than nothing. If the state government takes over the taxation and spending functions of local governments, the property-value incentive to participate and monitor local activity goes from 20 percent to zero. But it is true that, if a low value for capitalization is accepted, there is less of an argument for local control. The mechanism for allocating public goods shifts from the interests of residential property-owners to the collective wisdom of the state's voters and elected officials.

The extent of fiscal capitalization within local housing markets was addressed in a detailed and econometrically sophisticated study called *Property Taxes and Housing Values: The Theory and Estimation of Intra-jurisdictional Property Tax Capitalization* by John Yinger, Howard Bloom, Axel Borsch-Supan, and Helen Ladd (1988). They found a Boston-area sample in which there were property-tax differences *within* the same community. By looking at differences in tax burdens on otherwise similar homes within the same community, they did not have to worry

about the differences in community services, since all members of the same town got the same services.

But why, the alert reader asks, did the members of the same town not pay the same taxes on similar houses? Uniformity of taxation of the same class of property within the same jurisdiction is the constitutional rule in every state, including Massachusetts. The answer, and the source of the data for the study, was that up to about 1970, many Massachusetts communities had practiced a form of “welcome stranger” property-tax assessment. Assessments on preexisting homes were seldom adjusted for inflation in market value, but newly-built or greatly expanded older homes were assessed at full market value. The buyer of the newly built home was the “stranger” who paid more than his fair share of taxes, for which he was “welcomed” by public officials and other community residents.

This informal and illegal (but widespread) practice created a situation in which older homes often paid only a fraction of what newer but otherwise comparable homes were paying. Homes in the same community were getting the same services but were paying substantially different amounts in taxes. Prodded by a judicial decision in the early 1970s, the Massachusetts legislature required local assessors to revalue all properties at full market value.

After state-ordered reassessment arrived, the old homes in each community had to pull their fiscal weight, and tax bills rose, while newer homes, which had been overassessed, got a tax break. This created the opportunity to measure capital gains and losses among the same houses that sold before and after assessment reform. Total taxes and public services did not change within a given community. Only the distribution of tax liabilities changed. From this sample, the Yinger group could see how much home values had changed solely as a result of property tax increases and decreases. The messy econometric problems of comparing taxes in different communities were evaded.

The Yinger study found that there had been capitalization of tax advantages in underassessed homes in every community, but much less than they expected originally. In their best sample, only about twenty percent of the previous tax differences (which were wiped out by reassessment) had been reflected in the price of housing. A \$300 annual tax break for a favored (older) property should have resulted in a \$10,000 premium over a disfavored (newer) home,

using the Yinger group's infinite time horizon and a 3 percent discount rate. But in fact it yielded, in their preferred sample, only about a \$2,000 value differential.

§21. Capitalization of *Anticipated* Taxes Is Nearly 100 Percent.

The reason for incomplete capitalization in the Yinger had nothing to do with the failure of participants in the housing market to notice tax differentials. On reflection, the authors concluded that participants in the housing market had anticipated, well before the court decision, that the tax differentials would not be permanent (Yinger et al. 1988, p. 125). Homebuyers did not necessarily know that there would be a statewide mandate to reassess at market value. They simply did not think that such blatantly unfair and illegal assessment differentials would last for long, and they were right. At the conference, Johnny Yinger readily acknowledged that the study of which he was lead author was perfectly consistent with full capitalization, noting that his team pointed this out in several places in their book. I have raised the issue here because I have often heard other economists misread their results to mean that capitalization is very low.

A subsequent study from California demonstrated that a property tax differential that is expected to last a finite number of years will be 100 percent capitalized. A clever study by A. Quang Do and C.F. Sirmans (1994) looked at homes in San Diego County in the 1980s that had been built by developers who had agreed to the terms of a “Mello-Roos” bond. This special bond (named for its legislative sponsors, not for laid-back marsupials) was designed to assist growing California communities that were strapped by the rate and assessment constraints of Proposition 13.

Proposition 13’s limitations made it difficult to provide for new schools in growing communities after 1978. Because Proposition 13 did not allow the older homes to be taxed more, the new homes had to bear the entire burden of building new schools through special taxes to finance the Mello-Roos bonds. But kids from the older homes in the same district could attend these new schools just like everyone else.

Mello-Roos bonds were a logical extension of the “welcome stranger” aspect of Proposition 13. They were paid for by a tax on the new homes, not the old ones, but the public services within the taxing jurisdiction were the same for all. Do and Sirmans found that the housing value differences between old and new housing fully capitalized the differences in taxes at a 4 percent

rate of interest applied over the 25 year life of the Mello-Roos bond. Because 4 percent is quite close to most other estimates of the real interest rate at the time, I take this study as evidence that a fully-anticipated tax differential will, in an active local housing market, be fully capitalized.

The reason for the difference between Do and Sirman's result and that of the Yinger study is that in California, the ultimate source of the tax differential was Proposition 13, an amendment to the California Constitution that has proved immutable since it was approved in 1978. Thus the homebuyers in Do and Sirmans' California sample could look at a \$700 difference in taxes between two otherwise identical houses—one in the Mello-Roos district, and the other outside of it but in the same school district—and figure the difference in present value terms over 25 years, which amounted to about \$13,500. They thus paid \$13,500 less for the new home than they would for an otherwise similar home outside the Mello-Roos district.

This is the same sort of calculation that homebuyers can make when examining homes in different jurisdictions outside of California. Oded Palmon and Barton Smith (1998) argue that Yinger et al. set the capital-cost of housing too low, which led the latter to expect more capitalization than they found. Using a Houston-area sample of special taxes for planned communities whose service levels were identical, Palmon and Smith found that anticipated differences in tax liabilities among the different communities were nearly 100 percent capitalized.

I conclude from these studies that persistent property tax differences among homes within the same housing market will be fully capitalized. Less than full capitalization can usually be explained by two factors: Potential homebuyers may not expect the current annual differences in taxes to last very long (as in the Massachusetts case examined by Yinger), or relevant differences among the communities, such as school quality, are known to buyers and sellers but not to econometricians.

§22. Surveys Suggest Both Ignorance and Efficiency.

Tiebout's model is not monopolized by economists. Political scientists have examined it, as well. Rather than view it through the capitalization lens, they have used surveys to ask residents about their experience in choosing a community. In particular, they have wondered how homebuyers know to gravitate, Tiebout-style, to the better school districts. Information that

allows homebuyers to compare communities' public services is abundant. Real estate salespeople provide it upfront in booklets and websites about schools and amenities and on the listing sheet for individual properties. The question, however, is whether homebuyers actually use such information.

The direct evidence seems surprisingly slim. Teske, Schneider, Mintrom and Best (1993) surveyed residents of Long Island, New York, suburbs to test their awareness of fiscal differences. They asked respondents to rank their own town's tax rate and spending per pupil with two others nearby and found that only 21 percent got the rankings right. Teske and company argued in defense of the Tiebout model that the glass was half full: When the sample was winnowed of people less likely to care about schools, their awareness score rose to near half. In a related study, Schneider, Teske, Marshall and Roch (1998) found that low-income parents seem able to select schools on the basis of educational quality, even though the parents' objective knowledge of school differences was limited.

Kenneth Bickers and Robert Stein (1998) did a telephone survey of households in the Houston area. They found that recent movers, and especially those with children, gravitated towards schools with higher test scores, even though most respondents could not rank their school's scores accurately. Homebuyers, as opposed to renters, were especially savvy in ferreting out the higher-scoring school districts. Bickers and Stein speculate that homebuyers do not rely on formal data as much as on "informational heuristics" to locate preferred schools. Heuristics involve things like looking for neighborhoods whose residents are likely to demand better schools, such as, to use their examples, academics, Jews, or wealthy people. ("Forget the Boston area school guide; just give me Paul Samuelson's address.")

§23. How Exit Promotes Voice at the Local Level.

Although the aforementioned political scientists have taken the Tiebout model seriously, most others are not receptive to the idea that voting with one's feet is a satisfactory substitute for the ballot box. The dichotomy was best expressed by Albert Hirschman in his 1970 book, *Exit, Voice and Loyalty*. "Exit" captures Tiebout's remedy: If your community is unsatisfactory, leave. It is the same remedy adopted by most small shareholders of business corporations. "Voice" is the political response: If the schools get bad, head for the school board meeting and the voting booth, not to the hills. While Hirschman promoted a balanced view of these remedies, he is

skeptical of economists' emphasis on exit, in part because it forestalls the ability to redistribute wealth, at least in the international context (Hirschman 1978).

I think there is a misunderstanding here on both sides, that of the Tiebout-admiring economists and the Tiebout-skeptical political scientists, at least when considering local governments. "Exit" from a local government is regarded as being equivalent to selling stocks in a business corporation, the usual way by which stockholders who are unhappy with management's decisions can exit the corporation. The latter discipline only works if the sale results in a lower price for the stock, which leaves inefficient managers with less-valuable stock options, makes them vulnerable to hostile takeovers, and reduces their ability to raise new capital.

The exit discipline—selling the stock—hurts the seller as well as the wayward managers, insofar as the price is made lower upon leaving. But most business stockholders have diversified portfolios, so the hurt is seldom acute, and the capital loss is likely to be offset by capital gains elsewhere. Examination of managerial effort by stock-pickers uncovers potential buy orders as well as sell orders.

The owner of a home, by contrast, has a very large fraction of her wealth tied up in the property. To sell it at a loss has much greater consequences than selling the stock of an incompetently managed company. Owners of homes cannot diversify their portfolios by spreading out ownership of their asset among more risk-neutral investors. There's actually a proposal by Andrew Caplin et al. (1997) to create a market in housing equity, which would allow some diversification by owner-occupants, but even though I gave the book a favorable review, I think such markets are unlikely to develop soon.

As a result of this enormous concentration of wealth in one asset, people who buy houses are more careful about it than almost any other episodic transaction, save, perhaps, getting married. Such care is reflected in the evidence that public benefits and costs are capitalized in the value of owner-occupied housing. But this creates what may seem like a paradox: Evidence of Tiebout-mobility from the capitalization studies is actually support for the idea that, once you buy the house, you are stuck with it, and you then have an incentive to exercise as much voice as you can to protect and enhance its value. "Exit"—unwillingness by prospective homebuyers to enter—promotes "voice" (political participation) by would-be homesellers. (Calling an entry

forgone an “exit” should be no more unsettling to economists than calling a benefit forgone a “cost.”)

It is rare for homeowners to move just because taxes or public services have become unsatisfactory. One reason for this is that the knowledge that taxes have become unexpectedly high or schools are worse than anticipated is seldom limited to the homeowner in question. Because the new knowledge is likely to be public, moving in response to bad news is more difficult. The seller would most likely get a lower price for her house than otherwise. This reduction in wealth—the bank doesn't reduce your mortgage obligation just because taxes go up—is apt to make it more difficult to move. (Bruce Hamilton [1976] used this to explain why the “flight to the suburbs” could not be purely the result of unexpectedly higher taxes in big cities. When people say they must move because they cannot afford higher property taxes, they mean that they’ve suffered a capital loss and must adjust their consumption accordingly.)

Reduced mobility as a result of capitalization has a distinct upside: It makes homeowners—the dominant municipal stockholders—eager to organize to prevent the unhappy events that reduce their home values. Denise DePasquale and Edward Glaeser (1999) concluded from a national survey that homeowners were in fact much more conscientious citizens and that they were more effective in providing community amenities. They attributed it, as I do, to the “immobility” that homeownership imposes. Once you're stuck having made the purchase, your only protection against community decline is watchfulness and activism. No one (yet) sells insurance against the risk of community decline.

The prospect of being stuck with a large asset makes those who are mobile into very careful shoppers, and this makes the housing market an unexpectedly accurate indicator of community qualities. This resolves the seeming paradox of voice being promoted by exit. They are not really contradictory disciplines. After the house has been purchased, the best hope of maintaining or improving one's investment is “voice,” involvement in the political process. The capital loss that the owner might suffer upon exit in fact is what encourages so much voice by homeowners in local government, and it is what makes buyers of homes so eager to be informed about local conditions.

§24. Local and State Funding Can Both Be Efficient.

I have attempted to distinguish local from state governments by the ability of the owners of municipal corporations—resident homeowners—to capitalize the long-run benefits and costs of public actions. Capitalization provides both motivation and information that is unavailable at the state level. For this reason, one would expect that services would be provided more efficiently at the local level.

The trouble with simply comparing local with state performance is that the split between them for most services is largely endogenous. Many services are provided both at the local and state level, and the division may have evolved for reasons that are perfectly efficient. An example may be taken from the history of road finance during the 1870-1930 period, which is described in a fine article by Hal Barron (1992).

Rural roads in 1870 were financed largely by local property taxes, with special assessments to adjacent property owners to pay for improvements. This promoted a distinctly local outlook. Farmers—the dominant rural landowners and voters—initially resisted efforts by bicyclists (in the 1880s) and then automobile interests (by 1920) to improve roads. Farmers shipped their crops by rail, and they saw no reason to subsidize nonlocal roads. Only when the tax base to fund through-roads was shifted to state gasoline taxes and automobile registration fees was it possible to overcome local resistance.

But even after this shift, and to the present day, entirely local roads such as residential streets are still financed by local property taxes or local assessments. If one could now evaluate whether local property-tax funding or statewide gasoline-tax funding worked better, the answer would surely be indeterminate. The reason for the indeterminacy is that the taxes were long ago rationally divided between the two types of jurisdictions, each one funding the type of road it was most interested in.

Although American public education began as an entirely local affair, its funding has long been shared by both state and local governments (Ellwood Cubberly 1919; Morton Keller 1994). The trend since World War II has largely been towards more state funding. The reasons for the growth of state funding are complex. Some had to do with local fiscal capacity, some had to do with the spillover benefits of education. Most of these changes were the result of complex

political compromises between state and local interests (Benson & O'Halloran 1987). Like the partial centralization of road financing, the partial centralization of school financing would be difficult to evaluate. One would expect that a mix of efficiency and redistributive concerns would motivate each state's outcomes. It would be difficult to sort the redistributive effects from the efficiency (spillover benefit) effects because, as a largely theoretical literature argues, redistributive benefits may also be efficiency enhancing (Roland Benabou 1996; Fernandez & Rogerson 1996).

§25. Judicial School-Finance Reform Is a Natural Experiment.

I submit that the evolutionary process of dividing local and state funding for education was upset by the entry of the state courts into the school finance issue. In *Serrano v. Priest*, 96 Cal. Rptr. 601 (1971), the California Supreme Court ruled that local funding as it is normally practiced in most states was unconstitutional. Although *Serrano* did not specifically preclude property-tax financing for education, it did attack differences in spending that were related to local property tax base differences. In a 1976 decision (135 Cal. Rptr. 345), the court upheld a lower-court remedy whose effect was to equalize and centralize the funding of almost all public school expenditures.

In a 1989 article, I argued that the *Serrano* decision made it rational for voters to vote for Proposition 13, the initiative that slashed local property taxes by more than half, and whose chief effect has been to starve education in California (O'Sullivan, Sheffrin & Sexton 1995; Peter Schrag 1998). I later found (Fischel 1996) that the *Serrano* decision had made it nearly impossible for the state legislature to respond to the property tax revolt, which is consistent with my earlier suspicion that Proposition 13 was caused by the court decision. It is not my purpose to rehash those arguments, which I think have stood up pretty well in the scholarly community (Silva & Sonstelie 1995; Fernandez & Rogerson 1999). My purpose here is to point out that the *Serrano* decision was highly contagious across the nation. It quickly affected nearly all political decisions in other states concerning centralization of school funding.

There is little doubt that *Serrano* influenced both courts and legislatures in other states. I document some examples in Fischel (1998 wp), and I have since uncovered more. New Mexico almost immediately capitulated in 1972 to *Serrano*-style plaintiffs after its courts indicated, without a final decision, that they would rule for the plaintiffs (David Coulton 1996). School

financing became almost completely centralized, and soon thereafter local property taxes were capped by legislative action in response to local dissatisfaction with them. Thus the *Serrano*-Proposition 13 scenario was carried out in New Mexico with neither a court ruling nor a voter initiative.

Many other states carried out stealth-*Serrano* reforms. Massachusetts in 1978 adopted a more centralized financing reform in response to a court suit that was withdrawn after the legislature capitulated to Governor Dukakis's plan (Bruce Perlstein 1981, p. 569). Michigan in 1972 was induced by the threat of a court decision to adopt a more centralizing plan (Ellwood Hain 1974). School finance centralization in Kansas was entirely guided by a lower court, whose judge held periodic conferences with the governor and key legislators (Charles Berger 1998). Maine's decision to adopt a statewide property tax to fund education in 1973 was motivated entirely by the threat of a *Serrano*-style decision (Norton Grubb 1974).

I have not surveyed every state, but in every article I have found that examined the contextual background of a major state financing reform since 1970, the threat or reality of a *Serrano*-style decision has lurked in the background and shaped the resulting legislation. The *Serrano* precedent was especially powerful because an influential state court had ruled for the plaintiffs despite lack of support from the language of the state constitution from which the judges supposedly derive their authority. Like-minded judges in other states were freed from constitutional language and history that would have inhibited their participation in financial decisions that had previously been solely the province of the legislature. This is conceded even by legal scholars who admire the decisions in articles that examine the decisions' constitutional origins (Jonathan Banks 1992; Molly McUsic 1991; Peter Teachout 1997; Julie Underwood 1994). After *Serrano* and a few other decisions that emulated it, every state legislature had reason to believe that it had a new partner—the state courts and the activist lawyers who brought the suits—in formulating school finance policies. As a well-traveled team of school-finance consultants observed, “Even where litigation has not occurred or has not succeeded, the prospect of litigation has prompted revisions of state funding policies” (Augenblick, Meyers & Anderson 1997, p. 63).

One might argue that this new regime of school finance reform was not entirely exogenous, and so my contention that there was a sea-change in the 1970s is undermined. Equality of school

spending is surely a widely-shared goal. But so are local control of education, parental choice, and fiscal accountability. Legislatures formerly balanced these goals until trumped by the courts. The remedy typically sought by the litigants—replacement of local property taxes by state funds—has almost invariably been a loser both in legislatures and in voter referenda (Campbell & Fischel 1996; Paul Carrington 1973).

The exceptions that prove this rule are those voter initiatives that have limited local property taxes after court-imposed school-finance centralization has taken effect. Once the state is required to equalize school funding, property taxes in effect become statewide taxes, and all of their undesirable features come to the fore. It was perfectly rational for California voters to limit property taxes once *Serrano* had been implemented. Proposition 13's enduring popularity despite its starvation of the public sector is consistent with this view. I have not examined other property-tax revolts in the same detail, but there is some evidence that statewide tax limitations imposed by voters in Massachusetts were partly responses to court-induced centralization of school funding (Fischel 1998 wp).

§26. Test-Scores Declined with *Serrano*-Inspired Centralization.

The upshot of the new, *Serrano*-induced political climate was that previous trends in school funding became moot. The evolving mix of state funding to supplement local expenditures and equalize fiscal burdens was skewed by *Serrano* and its progeny towards purely redistributive goals with a particular focus. Rather than being categorical grants that focussed on low-income students or districts with identifiable problems, the new reform movement was a broad attack on local property-tax funding itself (Joseph Henke 1986, pp. 5-12). These goals have largely undermined the efficiency advantages of local property-tax financing of education. The reason is that the court-ordered (or court-threatened) reforms were largely based on the inequalities of either property-tax rates or property tax bases rather than inequalities of personal income or family background.

Attempts to comply with or forestall these decisions undermined the efficiency advantages of local school funding in two ways. One was that most equalization attempts penalized successful districts (Caroline Hoxby 1997). Districts whose schools are attractive have, other things equal, higher tax bases. The relationship is causative: Better schools attract more families, thus bidding up house prices. By penalizing that relationship, *Serrano* and its successors attenuated the

feedback mechanism at the local political margin. Homeowning voters, particularly those without children currently in school, have less reason to vote for efficient school spending if much of the benefit (higher home values) is taken away by statewide funding formulae.

The other factor that undermined the efficiency advantages of local funding was simply the increased role for the state. Even if local incentives can be preserved at the appropriate margin, a larger state role in funding increases the power of teachers unions and other rent-seeking forces (Eric Hanushek 1986; Caroline Hoxby 1996). By influencing rule-making at the state level, teachers unions can divert more resources to their own ends, which sometimes differ from efficient provision of education.

The *Serrano*-shift thus offers something close to a natural experiment in the efficiency of local property tax funding for education. There is considerable debate about whether the *Serrano*-style decisions have raised or lowered average school spending in various states (Murray, Evans & Schwab 1998; Manwaring & Sheffrin 1997; Silva & Sonstelie 1995). But there is very little debate about whether the centralization of school funding that has stemmed from *Serrano* has improved school performance. The evidence is almost all negative.

Cross-section studies of states find that average scores on the NAEP (Fuchs & Reklis 1994), the SAT (Graham & Husted 1993; Southwick & Gill 1997) and the Armed Forces Qualifying Test (Sam Peltzman 1996) are lower in states with more centralized funding. Cross-sections are less persuasive in the present context because at least some part of current state financing resulted from pre-*Serrano* era political decisions by states, a process that was, I argue, less inefficient than court-induced centralization. However, states that have greatly centralized their funding since 1970 have seen average SAT scores—adjusted for participation rates and other demographic differences that affect scores—drop compared to states that did not centralize as much (Sam Peltzman 1993; Husted & Kenny 2000). The Husted and Kenny study is especially persuasive in showing that centralization and, to a lesser extent, equalization of expenditure lowers a state's average SAT scores in the 1972-1992 period. (There is some encouraging evidence both in Husted and Kenny and in a working paper by Card and Payne [1997] that the very poorest students may benefit from centralization, but that gain seems overwhelmed by the overall reduction in public school quality that centralization apparently brings.)

Although fault can be found with any of these state comparison studies, the impressive thing about them is the paucity of positive evidence on the test-score front. There are scores of articles in social science journals that evaluate individual state spending in terms of their compliance with court orders. One would expect at least one story in which school funding was centralized and average test scores went up as a result. The complete absence of such studies in an environment in which they would be extremely welcome suggests that the news is nowhere good.

§27. Conclusion.

My assignment in this essay was to review the evidence for the “benefit” view of the property tax. My prolixity is caused by my conviction that property taxes cannot be examined in isolation from the institution that is most dependent upon it. The benefit view is sustained primarily by the view that local governments are fundamentally different from state governments. The Musgrave-Samuelson model of public finance, in which expenditures and tax revenues cannot be conditionally linked, applies to the higher governments. The states are too large and too open to migration for this model to apply very well to them, though I would not deny that interstate mobility of both residents and businesses should be an important factor in analyzing their behavior.

The Tiebout-Oates-Hamilton model of local government finance implies a system fundamentally different. I have in this essay promoted the idea that this difference can best be understood by drawing an analogy between municipal and business corporations. The corporate-finance analogy makes the governance of municipalities more coherent. The overconcentration of assets in owner-occupied housing turns homeowners into watchful shareholders —“homevoters” is my neologism—because they have no other way to protect their largest financial asset. Tiebout-mobility thus produces the activity that Tiebout himself wanted to avoid: active local politics. Without the existence of potential homebuyers who judge communities as well as room decor, it is difficult to understand why local voters have any interest in the mundane affairs of municipalities. Only with this interest does capitalization make much sense, and only with a high rate of capitalization can local governments be trusted to respond to the demand for local public goods more effectively than large-area governments.

Rational political actors are the key difference between the view I present here and that of much of the local public economics literature, as represented in this volume by the excellent essay by George Zodrow. If I am wrong about the ability of homevoters to adjust local institutions to their demands, Zodrow's view is the more persuasive. If local voters or their representatives cannot think holistically about taxes, zoning, and spending—if they just do one, then the other without thinking about the necessary connections—then Zodrow's elegant models of tax incidence seem more relevant than my eclectic analogies, stories and references to other peoples' econometric studies.

My point is to sharpen what might otherwise look like fuzzy lines between the approaches represented in this volume. Zodrow and I do not disagree on economic method or even much about evidence, and he points out that at many junctures his model is congruent with my view. The key difference is that I think local political actors—voters and their elected officials—are reasonably attentive to how well their local institutions function. They don't sit idly by while dysfunctional taxes or land-use policies reduce the value of their assets.

It is always a little deflating to close with a disclaimer, but my enthusiasm for local government might make it a good idea. My arguments on behalf of the rationality of local government are made under the assumption that there is an operating federal system of the sort described by Wallace Oates (1972). National governments are needed to provide national defense and other interstate public services, redistribute income and wealth, and coordinate interstate spillovers. State governments are necessary to provide regional public goods and to deal with intermunicipal spillovers. My main point in this essay is that local governments can be entrusted to know their own interests. State and national policy makers need not dissipate their energies trying to do things that locals are able to do for themselves. And it cautions that efforts to centralize these activities, whether it be local schools, roads, or land use, are likely to be encounter resistance, and for good reason. Local self-governance is an ongoing project, and economists would do well to attend to the many ways by which ordinary people try to manage this age-old and arguably noble experiment.

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