FISCAL FEDERALISM IN THE UNITED STATES

Katherine Baicker
Harvard University and NBER

Jeffrey Clemens
Harvard University

Monica Singhal
Harvard University and NBER

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I. INTRODUCTION

The classic Tiebout model, first proposed over 50 years ago, remains the benchmark framework for thinking about the optimal provision of public goods in a federal system. In this model, different jurisdictions provide differing levels of public goods and individuals sort themselves into jurisdictions based on their preferences (Tiebout 1956). In a world with preference heterogeneity, decentralization solves the preference revelation problem normally faced when attempting to find the optimal level of public goods: individuals can only obtain higher levels of public goods by locating in a jurisdiction that provides them and paying the higher associated levels of taxation. Decentralization also solves the preference aggregation problem, since, in the extreme, individuals sort themselves into homogenous preference jurisdictions.

The benchmark Tiebout model predicts that individuals will sort themselves into jurisdictions in which all residents agree on the level of public goods to be provided and have the same willingness to pay for these goods. The Tiebout analysis focuses on the local jurisdiction as the relevant unit of observation and does not directly address the role of multiple local governments or national governments. In addition, the Tiebout model focuses on efficient production and allocation of public goods and does not consider distributional issues. In the strict Tiebout model, redistribution at the local level will not be feasible, since individuals will undo any effort at redistribution through their mobility decisions. Those within a jurisdiction paying higher levels of taxes for a given bundle of public goods would have an incentive to separate and move to a jurisdiction with others like them.

Although the original Tiebout paper does not explicitly consider these issues, the framework does suggest natural divisions of responsibility across levels of government. As

noted by Oates (1999), "provision of public services should be located at the lowest level of government encompassing, in a spatial sense, the relevant benefits and costs." This has generally been taken to imply that local and state governments should be responsible for the provision of local public goods. The role of the national government is then restricted to stabilizing the macroeconomy, providing national public goods, structuring intergovernmental grants to correct inter-state externalities, and redistributing income across a mobile population. Local governments would raise revenue through a benefits tax, which in practice could be implemented through a poll tax or through a property tax with zoning to assure relatively equal property values. National governments could finance national public goods through a national poll tax and achieve redistribution through the implementation of an optimal federal income tax.

Despite continued widespread use of the Tiebout model, the empirical evidence to support its main predictions is mixed (Dowding, et al. 1994). One strand of literature examines whether local public goods, amenities, and taxes are capitalized into house prices. Beginning with Oates (1969), a number of studies have documented the existence of capitalization, but estimates of the extent of capitalization vary widely (Dowding et al. 1994). A second strand of literature tests some of the direct predictions of the model. Perhaps the most basic test is the question of whether or not people appear to "vote with their feet," moving to the jurisdiction that provides the optimal bundle of goods for them. Evidence on whether the elderly move as we would expect upon retirement and whether individuals move in response to changes in amenities, such as environmental quality, is mixed.[1] In addition, some of the expected consequences of "voting with your feet" do not appear to be supported by the data. In the model, declines in mobility costs should be associated with increased heterogeneity in preferences and policies

[1] See, for example, Graves and Waldman (1991) and Farnham and Sevak (2006) for discussions of elderly migration and Greenstone and Gallagher (2008) and Banzhaf and Walsh (2008) for discussions of responses to changes in air quality and Superfund cleanup programs, respectively.

across local communities, as individuals sort into communities that more closely match their preferences. Rhode and Strumpf (2003) show that large declines in mobility costs since 1850 have instead been accompanied by decreases in heterogeneity in a wide range of measures of preference proxies and policy outcomes.

In addition, the actions of governments often appear to depart from the predictions of the Tiebout model. Many states and localities have progressive taxes, with income taxes comprising an increasing share of state revenues. The past half-century has also seen dramatic changes in the structure and financing of U.S. government programs. Government spending has grown as a share of GDP, and the composition of that spending has shifted substantially away from defense and towards social insurance programs including health and welfare. These aggregate changes have been accompanied by significant changes in program financing and in the allocation of responsibilities across different levels of government. The growing role of state governments (both as a share of GDP and as a share of government spending) and the increasing importance of intergovernmental grants are particularly pronounced.

These observations raise an important question: can the patterns we observe be reconciled with models of optimal fiscal federalism? We begin by reviewing empirical patterns over time in fiscal federalism and consider whether these patterns can be reconciled with the benchmark Tiebout framework. We then discuss the theory and evidence on four assumptions in the original Tiebout model: perfect mobility, "enough" jurisdictions, absence of spillovers and intergovernmental interactions, and perfect information. We argue that while some of the patterns and trends over time are consistent with the predictions of the benchmark model, especially when interpreted in light of the effect of constraints placed on lower levels of government by those above, there are still some facts that do not appear to be consistent with the

benchmark framework and are not easily explained by patterns of violations in the underlying assumptions.

II. Empirical Trends – In Line or At Odds With Tiebout?

IIA. Patterns and Trends in Federalism

We begin with an examination of how the financing of public programs has changed over the last half century. There have been some marked changes in the roles played by federal, state, and local governments, but many fundamental facts have changed little. In this section we highlight the big trends in spending and revenues, but also the stable patterns that may or may not be consistent with the optimal allocation of responsibilities suggested by the Tiebout framework. The absence of changes in these enduring patterns may be just as surprising if the barriers to Tiebout sorting are changing over time.

Aggregate Levels of Revenue and Expenditure

In the post-war period, total government spending has grown from 25 percent of GDP in 1950 to 36 percent in 2006, although most of this growth occurred before the 1970s (Figure 1). Revenues have, by and large, followed a similar pattern. Note that the Tiebout model has implications for neither the total size of government budgets nor the types of programs on which those funds should be spent. Rather, it suggests that local governments should be responsible for the provision of local public goods without inter-jurisdictional spillovers, while higher levels of government should be responsible for public goods with spillovers and/or economies of scale in production as well as redistribution, both through social insurance spending and through progressive taxation.

The fairly steady pattern of government growth masks two ways in which the composition of spending and revenues may have changed. First, the levels of government responsible for taxing and spending may have shifted. Second, the mechanisms through which funds are raised or the programs on which they are spent may have shifted. We therefore turn to an examination of the composition of government budgets along these dimensions.

The Size of Federal, State, and Local Governments

Over the last 50 years, there has been some devolution of spending from the federal government to states and localities (Figure 2). The size of state government in particular has grown, with state spending rising from 16 percent of government spending in 1950 to almost 24 percent in 2006. Local spending rose from 25 percent of total government spending to 29 percent over the same period. We have seen a similar devolution on the revenue side of the budget, with state-raised revenues growing from 18 percent of total revenues in 1950 to 29 percent in 2006. However, much of this devolution occurred during the 1950s and 1960s; the share of government budgets – both revenues and expenditures – controlled by the federal, state, and local governments has remained remarkably stable over the last 30 years.

The Composition of Federal, State, and Local Government Budgets

While the share of spending and revenues generated by each level of government has not changed dramatically over the last few decades, the mechanisms through which those funds are raised and the programs on which they are spent have changed substantially (Figure 3). There have also been some changes in responsibilities for program design and administration across levels of government.

The federal government has substantially increased its spending (both as a share of total spending and as a share of GDP) on social insurance programs, particularly after the introduction of Medicare and Medicaid in 1965. This increase has been accompanied by a decline in defense spending. At the same time, states have increased their spending on social insurance and income maintenance, which includes their share of the jointly financed Medicaid and welfare programs. In contrast, local spending patterns have remained largely stable, with education being the single largest component of local budgets.

The way in which this spending is financed has also changed. State governments are relying less on sales taxes (generally thought to be regressive) and more on individual income taxes (more likely to be proportional or progressive) – although this increase is from a very small base: in 1950, state-levied income taxes comprised 0.3 percent of GDP, while in 2006 they comprised 1.9 percent (Figure 4). States are also increasing their use of miscellaneous and general charges, which have risen from 0.4% of GDP (or 9.6% of state own-source revenues) in 1955 to 2.0% of GDP (or 18.8% of own source revenues) in 2006. Federal and local revenue sources, by contrast, have been more stable, although local sales taxes have risen from 0.2% of GDP in 1967 to 0.6% of GDP in 2006. While still small, localities are also beginning to use income taxes more substantially.

Perhaps more dramatic has been the increased role of intergovernmental revenues: in 1950 states got 17.4 percent of their revenues from intergovernmental (primarily federal) grants, while in 2006 that share had risen to 23.6 percent (Figure 5). During this period, federal grants to states and localities rose from 0.8 percent of GDP to 3.3 percent of GDP. This growth is substantially faster than the growth of federal spending overall, which increased from 14.8

percent to 17.0 percent over the same window. The largest component of this increase in intergovernmental transfers has been income security, including Medicaid.

Heterogeneity of State and Local Spending

In the Tiebout framework, we would expect variation in the size and composition of expenditure across jurisdictions to reflect variation in preferences of local residents. If sorting has improved over time, then we might expect to see increases in variation across areas.

However, observed shifts in the total quantity, composition, and financing of government spending have been associated with little apparent change in the variation of spending on particular public goods across jurisdictions, at least at the state level. To explore such changes we constructed coefficients of variation (CVs) across states in the total spending within each state (including spending by both state and local governments) on various public goods. We present these CVs in Table 1. The only clear patterns are the increase in variation in Health and Hospital spending (which excludes spending through state Medicaid programs) and the decrease in variation in Public Welfare spending (which is how the Census of Governments categorizes Medicaid). These patterns may largely result from shifts in the financing of health care for the poor from direct hospital subsidies towards financing through Medicaid. This is suggested by the fact that there has been essentially no change in the CV for the sum of Public Welfare and Health and Hospital spending across states.

IIB. Interpreting the Facts through the Tiebout Framework

Allocation of Responsibilities in the Federal System

The broad allocation of responsibilities across levels of government is consistent with optimal fiscal federalism in many respects. Individual and corporate income taxes are levied

primarily at the federal level, while property taxes form the largest component of own-source revenue for local governments. The federal government takes responsibility for national public goods, such as defense, while state and local governments fund local public goods, such as education, transportation, and public safety.

We observe other patterns, however, that are harder to reconcile with the benchmark model. The federal government does spend funds on goods such as health, education, and infrastructure, both directly and through intergovernmental grants, and we observe states and localities engaging in policies that appear redistributive, both on the revenue and expenditure side. There appears to be an increasing concentration of responsibility at the state level: all levels of government have experienced growth as a share of GDP, but state revenues (particularly from income taxes) and expenditures (particularly on redistributive programs like welfare and Medicaid) have grown relatively faster. Some, but not all, of this growth can be attributed to increased transfers from the federal government to state governments. In contrast, the composition of local revenues and expenditure has remained fairly stable over time.

This contrast is particularly important for evaluating the extent to which observed patterns constitute a shift towards or away from optimally implemented fiscal federalism: it would be difficult to tell a story implying the desirability of expanding the role of state-level government relative to both federal and local government. While having multiple forces at work pushing in different directions could certainly produce this result, most simple stories about changes in mobility costs or production technologies would suggest either decentralization towards states and localities or centralization towards states and the federal government.

Programs in the Budget versus Programs on the Ground

There are at least two important caveats when interpreting the budgetary figures in the context of the Tiebout model. First, it is possible that some observed patterns are in fact suboptimal departures from Tiebout that are (at least partially) undone in practice by individuals or other levels of government. Under this hypothesis, government policies are captured in budget figures but are not reflected in the desired outcomes "on the ground." Feldstein and Wrobel (1998), for example, argue that attempts by states to redistribute income through state income taxes are fully reflected in pre-tax wages. Local governments may also attempt to undo policies set by state governments: the large body of literature on school finance equalization programs suggests that while state-imposed equalization measures do have some effect on the level and distribution of local school resources, they are often at least partially undone by off-setting changes in local budgets (or even state spending, when the equalizations are court-imposed).[2]

Second, observed patterns in state and local balance sheets may mask the true incidence of responsibility if some of that activity is required by higher levels of government. If the federal government requires all states to spend funds on low-income transfer programs, for example, then the observation that states are engaging in this type of redistribution is not inconsistent with Tiebout, since it cannot be undone through mobility. We return to a discussion of the evolving role of intergovernmental unfunded mandates and regulatory burden below.

[2] See Downes and Shah (1996), Fernandez and Rogerson (1999), and Hoxby (2001), Murray, Evans, and Schwab (1998), Card and Payne (2002), Fischel (1989), Cullen and Loeb (2001), Baicker and Gordon (2005), Gordon (2004)).

III. THEORY AND EVIDENCE ON THE TIEBOUT ASSUMPTIONS

The implications of the Tiebout model rely on a number of strong assumptions. In this section, we examine whether violations in these assumptions could help to explain the observed empirical patterns and departures from the Tiebout predictions. Note that many of the issues we consider here are discussed in more detail in other papers in this volume.

IIIA. Mobility

> *Assumption: "Consumer-voters are fully mobile and will move to that community where their preference patterns, which are set, are best satisfied." (Tiebout 1956)*

A key assumption in the Tiebout model is the assumption of costless mobility. Mobility is the mechanism through which preferences are revealed and the efficient level of public goods provision is achieved. Mobility also limits the ability of state and local governments to engage in redistribution. In this section, we examine the empirical evidence on mobility and discuss the implications of limits to mobility in the context of the Tiebout framework.

Empirical Evidence on Mobility

While transportation and communication costs declined substantially during the last half century (Rhode and Strumpf 2003),[3] the evidence on changes in mobility itself is more mixed. Data from the decadal Census and the annual Current Population Survey (CPS) make it possible to track two unique mobility concepts: the fraction of individuals living in their state of birth, and the fraction that have moved in recent years.

[3] Rhode and Strumpf (2003) document large declines in mobility costs from 1850 until the present day. The Tiebout model predicts that this should result in increased heterogeneity in preferences and policies across communities. However, using three datasets (US municipalities, Boston municipalities, US counties), the authors find the opposite. Cross-community heterogeneity in measures of policy outcomes, such as local and school taxes per capita, electoral outcomes, and school spending, has declined significantly, as has heterogeneity in a number of preference proxies, such as age, education, and income.

When we examine lifetime interstate mobility (the share not still residing in their state-of-birth), we find that mobility has increased in the post-war period, although the increases are fairly modest (Table 2a). Census data imply, for example, that 63.2% of households resided in the household head's state of birth in 1960, while this number had fallen to 60.1% by 2000.[4] These increases appear to be driven by the highly educated (college / college plus); mobility for those with lower levels of education declined by this measure.

Looking at the fraction of people to have moved in recent years generally also suggests declines in mobility. Census data show that the fraction of households to have moved in the previous five years declined from 47.8% in 1960 to 44.1% in 2000 (Table 2b). CPS data allow us to examine both the share moving in the last year and more detail on how far they have moved (Table 2c) Within-county moves declined substantially (from 13% to 7% of households), while out-of-county moves declined much less (from 2.9% to 2.7% for same-state different-county moves, and from 2.7% to 2.5% for out-of-state moves). The small decline in out-of-state moves masks considerable heterogeneity across the population, with such moves declining significantly among households headed by persons aged 25-45 (the most frequently moving subset of the population), increasing substantially in percent terms among those headed by persons aged 45-65, and declining among the elderly. The general decline in recent moves (primarily those within-county) pervades across a variety of demographic groups, including all age groups, education groups, and those above and below median household income. Perhaps more salient is the fact that out-of-state moves are relatively rare for all groups over age 35.

The absence of a clear increase in mobility makes it difficult to draw strong conclusions about the implications of declining transportation costs for the expected degree of Tiebout-style

[4] This is consistent with Rhode and Strumpf (2003), who report increases in this mobility measure between 1940 and 1960.

sorting across communities. It is highly suggestive, however, that declining mobility costs have not unlocked a pent up desire for sorting on the basis of preferences for local public goods. This implies, in turn, that Tiebout-sorting is not as important as once thought as a feature of the fiscal-federalism landscape. On the other hand, declines in transportation costs may have been offset by increases in other constraints on mobility. For example, increases in the home-ownership rate over this time period have made moving more costly for many households. Similarly, to the extent that job match quality has become more location- specific over time, workers may have become less inclined to change communities. We have also seen an increasing frequency of dual earner households, who may be more constrained in their location decisions.

Implications of Limits to Mobility in the Tiebout Framework

If individuals face moving costs, then we would expect to see within-jurisdiction heterogeneity in equilibrium. When a jurisdiction is heterogeneous, the theoretically ideal tax is a Lindahl tax, charging people based on the value of the benefits they receive. If preferences for additional spending are positively correlated with income (which would follow, for example, from public goods being a normal good and declining marginal utility of income), then we should observe higher income individuals being charged more for a given level of public goods.

Therefore, in order to truly test the predictions of the Tiebout framework with limits to mobility, we need to consider the distribution of both taxes and financed benefits (as explored in more detail in an accompanying paper). In some cases, the tax-benefit link is built directly into the structure of the program. User fees are a small-scale example of this kind of linkage (although the non-excludability of fully public goods limits explicit user fees). A pure tax-benefit link explanation would suggest that this is consistent with Tiebout only if the distribution of financed benefits has also shifted toward goods that benefit higher income households. The

aggregate pattern of expenditure actually suggests the reverse: the fastest growing component of state expenditure is welfare and other transfer programs. That said, there is a substantial increase in the use of general charges at both the state and the local level, consistent with a user-fee financing structure.

When mobility is limited, insurance programs at the state or local level can also be sustained in equilibrium. With perfect mobility, an individual could choose to locate in a jurisdiction with low insurance coverage and move to a jurisdiction with generous insurance coverage after experiencing a negative shock. As a result, states should not be able to offer such programs to their residents. However, if mobility is limited, individuals will value and will be willing to pay for insurance in equilibrium. Note that progressive tax systems and transfer programs can also be thought of as a form of insurance in this context: individuals will be willing to be net payers because they know that they may one day become net beneficiaries.

The insurance value of transfer programs may be particularly pronounced if mobility declines with the time spent in a given location (also explored in another paper in this volume). This would be expected, for example, to the extent to which moving involves costs that rise with time spent in the location, such as the loss of social networks or location-specific information. In this setting, offering attractive insurance and transfer programs may allow jurisdictions to attract forward looking individuals who know that they will be less likely to move after their initial location decision. The results in Table 2 provide suggestive evidence consistent with this hypothesis: the fraction of individuals who have moved within the last year declines with age for all types of moves.

Limits to mobility also mean that state and local governments could engage in direct redistribution, since individuals will exit the jurisdiction only when their gains from doing so

exceed the costs of moving. If states have a different social welfare function than the federal government they might choose a tax and transfer system which re-allocates income across individuals within the jurisdiction. These factors could help to explain the use of sales taxes and individual income taxes by state and local governments.

The results on mobility also shed light on observed trends over time. Although mobility costs have decreased dramatically, we do not observe strong evidence for a large accompanying increase in actual mobility. Therefore, the fact that it does not seem that departures from Tiebout in government budgets are diminishing over time is perhaps not surprising.

IIIB. Jurisdictional Choice and Preference Aggregation

> *Assumption: "There are a large number of communities in which the consumer-voter may choose to live." (Tiebout 1956)*

In the extreme version of the Tiebout model, voters sort themselves into jurisdictions in which all residents have homogenous preferences over public goods spending. In this framework, preference aggregation is not an issue: all voters in the jurisdiction would vote for the same level of all types of public goods. However, if there are limits to the number of jurisdictions, individuals will not necessarily be able to find a jurisdiction that perfectly matches their preferences on all dimensions. This will result in within-jurisdiction preference heterogeneity. Limits to mobility are likely to increase this preference heterogeneity, as discussed above. The political process through which preferences are aggregated then becomes relevant.

Preference Aggregation in Practice: Evidence from Voting

In this section, we assume a median voter framework and examine turnout of different demographic groups across elections and jurisdictions. In practice, there may be factors other than turnout that influence government decisions, such as actions by lobby groups or politician preferences. We abstract from those issues here and focus solely on the voter turnout margin.

We document three systematic patterns in the data. First, there is large variation in voter turnout across types of elections (national vs. local, for example). Second, there are some demographic groups that are over-represented relative to population share while others are under-represented. Third, and somewhat surprisingly, voter demographic composition appears to be quite similar across types of elections, despite the large differences in turnout.

Voter Turnout across Elections and Jurisdictions

Our first source of voter turnout data in federal elections comes from self-reported voting in the November supplement to the Current Population Survey (CPS). We use published tables from derived from these data by the U.S. Census Bureau.[5] Two unsurprising patterns emerge from the data (Figure 6a). First, turnout is far from one hundred percent, even in closely contested presidential elections. Second, turnout is systematically lower in even-numbered non-presidential election years. These patterns hold if we look at official vote counts rather than implied turnout from the CPS data.

We next examine voter turnout at the state and local level. We provide some illustrative examples, not a comprehensive picture of turnout across all state and local elections – in large part because of data limitations. We focus on California as a case study. On the state level, we observe the same pattern in aggregate turnout as we did on the federal level: elections held

[5] Please see http://www.census.gov/hhes/www/socdemo/voting/index.html for further details. Add caveat here about self-reports and accordance with actual turn-out: http://elections.gmu.edu/voter_turnout.htm

during presidential years have substantially higher turnout than those held at other times (Figure 6b).

Last, we examine turnout in city elections. We choose a non-federal election year and focus on elections for mayor, an important city-wide office. Table 3 shows turnout for all mayoral elections in Los Angeles County in the year 2005. We deliberately choose a non-federal election year. According to the 2005 American Community Survey, 53.2% of the population of Los Angeles County was eligible to vote based on age and citizenship. We therefore adjust the city population figures to reflect the share that are voting eligible, assuming that the county-wide average applies for each city. In all cases, the voter turnout is below state-level turnout in state special elections and in some cases falls below 15%.

Voter Characteristics

Turnout may affect government policies if voters are a non-random sample of the population. For example, if high income individuals vote disproportionately, then we could get less redistributive policies than we would otherwise. Turnout may also be relevant for understanding the empirical facts presented above: if different preferences are being expressed at different levels of government, then this could be reflected in differences in policies pursued at the local, state, and national levels.

We begin with an examination of voter characteristics in federal elections across presidential and non-presidential years using the CPS data. Obtaining information on turnout by demographic groups at the local level is more challenging. We present data from the 1987 General Social Survey, in which individuals were asked about their voting behavior in the 1980 and 1984 presidential elections as well as their voting behavior in local elections.

Table 4 presents various demographic groups as a share of actual voters and as a share of potential voters. A comparison of these figures provides a measure of how over or under-represented the group is relative to its eligible vote share and how this varies depending on whether the election is in a presidential year. We find that younger individuals, particularly those 18 to 24, are under-represented, while the elderly are over-represented. Those that are married with a spouse present are over-represented, and men are slightly under-represented. Whites are slightly over-represented, while other races, particularly Hispanics, are under-represented. In general, these gaps are slightly exaggerated in non-presidential election years relative to presidential election years. Some of the most striking patterns are turnout by education. We find a clear pattern: increased education is associated with greater turnout relative to eligible vote share. While it is not obvious which particular policies this group would favor, their preferences seem likely to be over-represented relative to their share of the population.

We next examine how voter characteristics vary across local and federal elections. To the best of our knowledge, there is no comprehensive data source on voting in local elections linked to individual demographics. We use data from the 1987 General Social Survey (GSS), which asks respondents about voting in presidential elections as well as voting in local elections. As with the CPS data, these analyses rely on self-reported measures of voting.[6] We define two binary variables: voting in presidential elections equals one if the respondent reports having voted in both the 1980 and 1984 elections, and voting in local elections equals one if the respondent reports "vot[ing] in all" local elections. We restrict the sample to those 25 and over to ensure that all respondents were of voting age in the 1980 election. Using these measures,

[6] There are differences in the breakdown of the "actual voters" in Presidential elections between the GSS and the CPS. For example, the "married with spouse" group represents 68% of voters in the GSS sample but only 62% and 60% of the voters in the Presidential elections for which we report CPS data. This is probably due primarily to the fact that the GSS numbers are a) from the 1980s and b) for people aged 25+, keeping the numbers from being directly comparable.

68% of the eligible population (those who are citizens) votes regularly in Presidential elections, while 40% of the eligible population votes regularly in local elections (Table 5). We should note that voting tends to be overstated in the GSS relative to the CPS. For example, in the GSS sample the implied turnout rate in the 1984 Presidential election would have been 75% among citizens aged 25+. CPS data imply turnout of 69% for an equivalently defined population.

Since we are primarily interested in understanding whether the composition of voters varies across national and local elections, we report the share of the total voting population comprised by a given demographic category. For example, married individuals comprise 68.33% of all voters in national elections and 70.67% of all voters in local elections.

The composition of voters is strikingly similar across national and local elections. The only exception to this pattern is age: younger voters form a smaller share of all voters in local elections (relative to national), and the elderly form a larger share. There are at least two caveats when interpreting these results. Although the questions about national and local voting were asked in different parts of the survey, we might expect a correlation in reporting bias across individuals' self reports about voting in presidential and local elections. Another limitation of the data is that the jurisdiction that corresponds to "local" is not specified. Nevertheless, the results do not support the idea that the composition of the electorate or the identity of the median voter differs dramatically across jurisdictions. King (1981) compares presidential and local voters using data from a nationwide survey conducted in 1967 and finds generally similar results.[7]

[7] Related literature, such as Rockoff (2010) examines responses to fiscal incentives in heterogeneous communities, suggesting that some sub-populations are disproportionately influential.

Voter Turnout and Departures from Tiebout

Overall, these results indicate that the turnout margin is important when thinking about preference aggregation. Observed policies may therefore be skewed towards the preferences of those demographic groups with disproportionately high turnout. However, we see generally see only small differences in the composition of the electorate across different types of elections, whether they be congressional versus Presidential or national versus local. This suggests that differences in turnout are unlikely to explain observed differences in the policies pursued at the local, state and national levels.

However, even in the absence of variation on the turnout margin, a lack of perfect sorting could result in inefficient levels of public goods provision by local jurisdictions and create a rationale for intervention by higher levels of government. A useful context in which to consider these issues is that of school finance. Households with and without children will, for example, have very different preferences over school spending. In a median voter framework, this could lead to inefficient outcomes with the majority exploiting the minority: a majority of parents could shift part of the costs of the schools to non-parents, or a majority of non-parents could undermine school funding. This generates a potential rationale for state intervention.

It is less clear whether such intervention would be successful: Gordon (2004) found no significant medium- to long-run impact of federal compensatory education grants on instructional spending (the category of spending mandated by the grants) because of off-setting changes in local behavior. Similarly, Baicker and Staiger (2005) find that when the federal government attempts to allocate additional resources to low-income hospitals, states intervene to recapture a significant share of those resources and divert them to other uses.

Thus, while observed voting patterns may not conform to traditional median voter models, it does not appear that there is a widening schism between the median voter at different jurisdictional levels – again consistent with the relative stability of departures from Tiebout over time.

IIIC. Intergovernmental Interactions

> *Assumption: "The public services supplied exhibit no external economies or diseconomies between jurisdictions." (Tiebout 1956)*

The Tiebout world is one comprised of many competing local jurisdictions; the model largely abstracts from the existence of multiple levels of government and the possibility of interactions across levels of government. We first review the implications of allowing economies or diseconomies of scale in production or inter-jurisdictional spillovers in the Tiebout framework. These extensions suggest natural ways in which state or federal governments might act to improve the efficiency of public goods provision, and their implications for optimal fiscal federalism are fairly straightforward.

However, the policies we see in reality suggest much more complex intergovernmental interactions: federal and state governments act in a variety of ways to dictate or incentivize certain types of spending at lower jurisdictional levels. This is important from a Tiebout perspective, since spending or revenues may appear at one level of government even though they are in fact controlled by a higher level of government. For example, state spending on redistribution programs that are in fact mandated by federal policy can be thought of as redistribution at the federal level, rather than at the state level. We provide evidence on the ways

in which the regulatory environment can affect the policies pursued by governments and discuss whether this can help to reconcile the observed facts within the Tiebout framework.

Production Process of Public Goods

The Tiebout model abstracts from the public goods production process. The optimal level of production, rather than provision, of public goods is dictated in part by this process. National defense is best produced, well, nationally (Oates, 1972). Economies of scale may also shift responsibilities from local to state governments: it may not be efficient for each local government to incur the fixed costs needed to produce a given set of public goods. Other public goods may have (dis)economies of scale that emerge on closer analysis – for example, each state may be best able to design a welfare program that meets the needs of its own population. Mobile voters may therefore choose to allocate responsibilities for programs across level of governments in a different way than they would if there were no variation in the production technology across these levels. Note that this hypothesis provides a potential explanation for observing aggregate deviations from the Tiebout predictions but does not explain variation in program generosity across jurisdictions: these should still be undone by mobility.

Correction of Inter-jurisdictional Externalities

The Tiebout framework can also be extended to take inter-jurisdictional spillovers into account. If some of the benefits of public goods provided in a particular jurisdiction have positive spillovers to other jurisdictions, then these public goods will be underprovided under a decentralized system relative to the social optimum. No state government, for example, has incentives to invest optimally in an inter-state highway system, since much of the benefit will be captured by other jurisdictions. Education and health may also be underprovided, since the

productivity effects of these early investments may accrue to other jurisdictions if individuals move and work in other jurisdictions as adults.

To correct this underprovision, higher levels of government can engage in direct provision of the relevant goods. They can also set subsidies (or taxes) such that lower levels of government face a price that incorporates the positive (or negative) externalities that its spending exerts on neighboring jurisdictions (Oates, 1999; Besley and Coate, manuscript). In practice, these subsidies can often take the form of matching grants.

Correction of inter-jurisdictional externalities may therefore provide a partial explanation for observing state and federal governments spending funds on goods which the model would suggest should be the sole responsibility of more local governments. A large share of intergovernmental grants from federal to state and local governments are comprised of goods for which we might expect there to be substantial inter-jurisdictional spillovers (health, education, transportation). The complex web of regulation and intergovernmental grants that we observe (and discuss below), however, does not seem entirely consistent with this kind of internalization of externalities.

Non-budgetary Allocation of Authority/Responsibility: Regulations and Mandates

Budgetary accounting may not adequately capture the real distribution of responsibility for spending – just as who nominally pays a tax doesn't necessarily align with who bears the incidence. Higher levels of government may enact laws or impose regulations that force lower levels to spend more or differently than they would have otherwise. These may show up on the balance sheet of the lower level of government but not represent the expression of local preferences – making observed changes over time in spending patterns across levels of

government an imperfect proxy for changing roles and responsibilities.[8] When the federal government requires state governments to maintain a certain level of spending on welfare, for example, the distributional implications may be the same as if the federal government financed the program itself even though the spending and associated revenues appear in state budgets.

This "indirect" spending can take several forms. The now-defunct Advisory Commission on Intergovernmental Relations (ACIR) outlines the many ways in which federal actions dictate state spending (ACIR, 1994): Statutory "direct order" mandates that require specific spending (such as requiring state to make all voting places accessible to the disabled); Requirements that states must meet in order to receive federal aid – including both requirements for matching spending (as in Medicaid) or other conditions (such as having a drinking age of 21 to qualify for federal highway funds); Statutory preemption of state rights to regulation or action (which may make impose indirect costs or preclude revenue sources); Other provisions such as restrictions on bonds or taxes, imperfect enforcement of law, or creation of liability exposure. States can impose costs on localities as well, of course, such as law enforcement requirements or employment provisions.

Unfortunately there is limited systematic evidence on the magnitude of this indirect spending generated by federal (or state) choices. A series of reports issued by the ACIR examined costs imposed by the federal government, but with inconsistent coverage and methodological consistency that is hard to evaluate. It identified 12 mandates enacted in the 1960s, 22 in the 1970s and 27 in the 1980s (Figure 7; ACIR 1992). The rate of enactment of federal preemption statutes increased at a similar pace. There has also been a general decline in

[8] To the extent that higher levels of government are attempting to correct interjurisdictional spillovers we might expect to see joint financing of social programs through Pigouvian taxes or matching grants. This also raises the question, discussed in more detail below, of whether it appears that the interests of these different levels of government are aligned.

broad block grants relative to restricted categorical grants (Figure 8). The costs imposed vary widely but can be substantial. EPA estimated that of the $26.5 billion (in 1996 dollars) imposed by environmental mandates in 1972, $9.1 billion (34%) was borne by state and local governments; while of the $147.9 billion imposed in 2000, $37 billion (25%) was borne by states and localities (Committee on Governmental Affairs, 1995). Ray and Conlan (1996) attempt a standardized estimate of the mandated state and local expenditures arising from 14 federal mandates for the period 1983 to 1994, suggesting a total of $10.85 billion (in 1992 dollars).

Amid mounting discontent over the burden that unfunded federal mandates were imposing on state budgets, in 1995 Congress enacted the Unfunded Mandate Reform Act as part of the Contract With America. (Anderson and Constantine, 2005). UMRA requires, in part, that CBO evaluate the cost imposed on lower levels of government by proposed legislation and enacts procedural hurdles to passing such bills if the costs exceed $50 million (1996 dollars) in any of the first 5 years (CBO, 2009). From 1996-2005, CBO examined 700 intergovernmental mandates and determined that 64 imposed costs in excess of the threshold, 5 of which were subsequently enacted (CBO, 2006). The cost accounting under UMRA is far from comprehensive, however: certain categories are excluded, and provisions such as amendments to existing laws are not necessarily included. Even within this limited scope, UMRA's enforcement is patchy – Members must actively raise a point of order, after which the House can vote to consider the provision even if it violates UMRA (CBO, 2009).

Beyond mandated activities, a number of social insurance and transfer policies observed on state budgets are heavily incentivized by the federal government. While each state has its own unemployment insurance program, for example, the system exists in large part because of pressure applied by the federal government in the 1930s. Specifically, it threatened to impose a

tax on those states that did not create a UI program in order to overcome the externality imposed by businesses sorting across states based on tax rates. Much of the observed devolution of responsibility for public programs in the post-war period appears most prominently in budget categories such as welfare and health care where states and localities are not mandated to take certain actions, but rather where the federal match rate is so high (and is potentially conditional on program features) that it induces much greater state spending. For example, during the late 1980s and early 1990s there was a substantial increase in the income-based eligibility floor for Medicaid for children in particular. Some states had voluntarily extended the Medicaid eligibility up the income distribution, so the increase in the federal floor was differentially binding and would, all else equal, reduce heterogeneity. Even though these expansions are an equalizing force in eligibility, that may not translate consistently to increases in enrollment, as states have some control over out-reach, hurdles to enrollment, etc. that substantially affect take-up conditional on eligibility (Card and Shore-Sheppard, 2004).

School finance equalization measures are another interesting hybrid: while some equalizations result in local funds passing through the state budget en route to other districts, and would thus show up in budget accounting as intergovernmental expenditures, other equalizations make spending by a district expensive enough (in terms of the share of local revenues raised that would be redistributed to other districts) that they reduce their spending overall or mandate spending above a certain level – neither of which would show up in state budgets (Hoxby).

Although it is not obvious how to apportion spending into that which is purely voluntary and that which is compelled or driven by outside policies, it is clear that there are large categories of state and local spending that are heavily influenced by provisions at higher levels of government. In particular, the existence and growth of redistributive programs at the state level

may be at least partially explained by federal rules and incentives. This explanation is less able to provide a rationale for observed dispersion in program generosity across jurisdictions or for the use of redistributive tax systems, which are generally not subject to federal oversight.

IIID. Informational and Agency Problems

> *Assumption: "Consumer-voters are assumed to have full knowledge of differences among revenue and expenditure patterns and to react to these differences." (Tiebout 1956)*

The Tiebout framework assumes that all individuals are fully aware of the relevant features of each jurisdiction when they are making their jurisdictional choice. Interpreted slightly more broadly, this assumption also suggests that there should be no agency problems between voters and governments, since individuals are fully informed about the feasible set of policies as well as the actions taken by government agents. The Tiebout framework also abstracts from other types of informational problems, such as uncertainties in the public goods production process.

If voters are not fully informed, this could affect the Tiebout framework in the same way as limits to mobility or finite jurisdictions: individuals may not locate in the jurisdiction which is the best match for them, resulting in within-jurisdiction preference heterogeneity in equilibrium. Lack of information may also allow suboptimal deviations from Tiebout to persist. Feldstein and Wrobel (1998), for example, argue that state systems of redistribution do not actually achieve redistribution but may continue to exist as a result of fiscal illusion on the part of voters, politicians, or both.

If politicians are self-interested, constraints on voter information can also result in agency problems. The classic Leviathan model of government (Brennan and Buchanan, 1980) posits that government agents may seek to maximize their budgets rather than the utility of voters.

Decentralization and the resulting competition between governments can help minimize this type of capture, and so voters may prefer a system with greater decentralization than they otherwise would. However, it is not immediately obvious why this would predict the increased concentration of responsibility at the state level but not at the local level observed in the data. In addition, we might have expected the need for "excess" decentralization to diminish over time with the advent of technologies that have improved access to information and transparency.

It is also possible that agency problems (or voters' perceptions of agency problems) may differ at different levels of government and over time. Survey results from the American National Elections Studies suggest that while 50% of people reported that they had the most confidence in the federal government in 1968, that share had declined to 30% in 1996 (Farnsworth, 1999). This shift came mainly from those placing the greatest confidence in state government (which increased from 20% to 37%), while those with the greatest faith in local governments remained relatively constant at around 30%. Interestingly, these reported changes do seem to correlate (though not perfectly) with changes in allocation of total government expenditure across different levels of government over this period.

Finally, individuals and governments might not have perfect information on the public goods production process. Government entities may be experimenting and acquiring knowledge about how best to produce public goods – a process fostered by decentralization. As Supreme Court justice Louis Brandeis noted in 1932, "It is one of the happy incidents of the federal system that a single courageous State may, if its citizens choose, serve as a laboratory; and try novel social and economic experiments without risk to the rest of the country."

Successful methods of public service delivery can then be replicated by other jurisdictions. In some cases, policy experimentation at the local level may lead the adoption of

similar policies at the national level. Health care is a prime example of this state-level experimentation, with federal-level policy-makers now considering the adoption of a health insurance exchange following the lead of the Massachusetts Connector. As above, the strict Tiebout model only allows localities to vary the methods by which goods are provided; experimentation that leads to some localities providing greater redistribution than others should be undone by mobility, unless there are other limits to Tiebout sorting.

IV. CONCLUSION

Tiebout's model has been the conceptual framework through which economists have analyzed fiscal federalism for half a century. While the broad allocation of responsibilities across levels of government appears consistent with Tiebout, the empirical evidence also suggests a number of persistent departures from the predictions of the benchmark model. For example, states and localities appear to be increasingly involved in redistribution, both through taxes and redistributive expenditures, and there has been an overall movement towards more concentration of responsibility at the state level, partially driven by large increases in intergovernmental grants.

These findings naturally beg the question: can observed departures from Tiebout be explained by violations in the Tiebout assumptions? The two assumptions that generally receive the most attention are that mobility is costless and there are "enough" jurisdictions to allow individuals to sort into a jurisdiction that matches their preferences. It is clear that these assumptions do not hold literally. It is less clear, however, that violations in these assumptions alone would generate the patterns we observe in the data.

Notably, the last decades have seen increasingly complex maneuvering seen between federal, state, and local governments as higher level governments attempt to influence the distribution of resources across localities through subsidies, taxation, and regulation. Looking at the budget figures alone may therefore give a misleading picture of the true Tiebout incentives at work. Further research into these increasingly important mechanisms could significantly improve our understanding of the determinants of the distribution of local and national resources.

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FIGURES

Figure 1: Aggregate Spending and Revenues

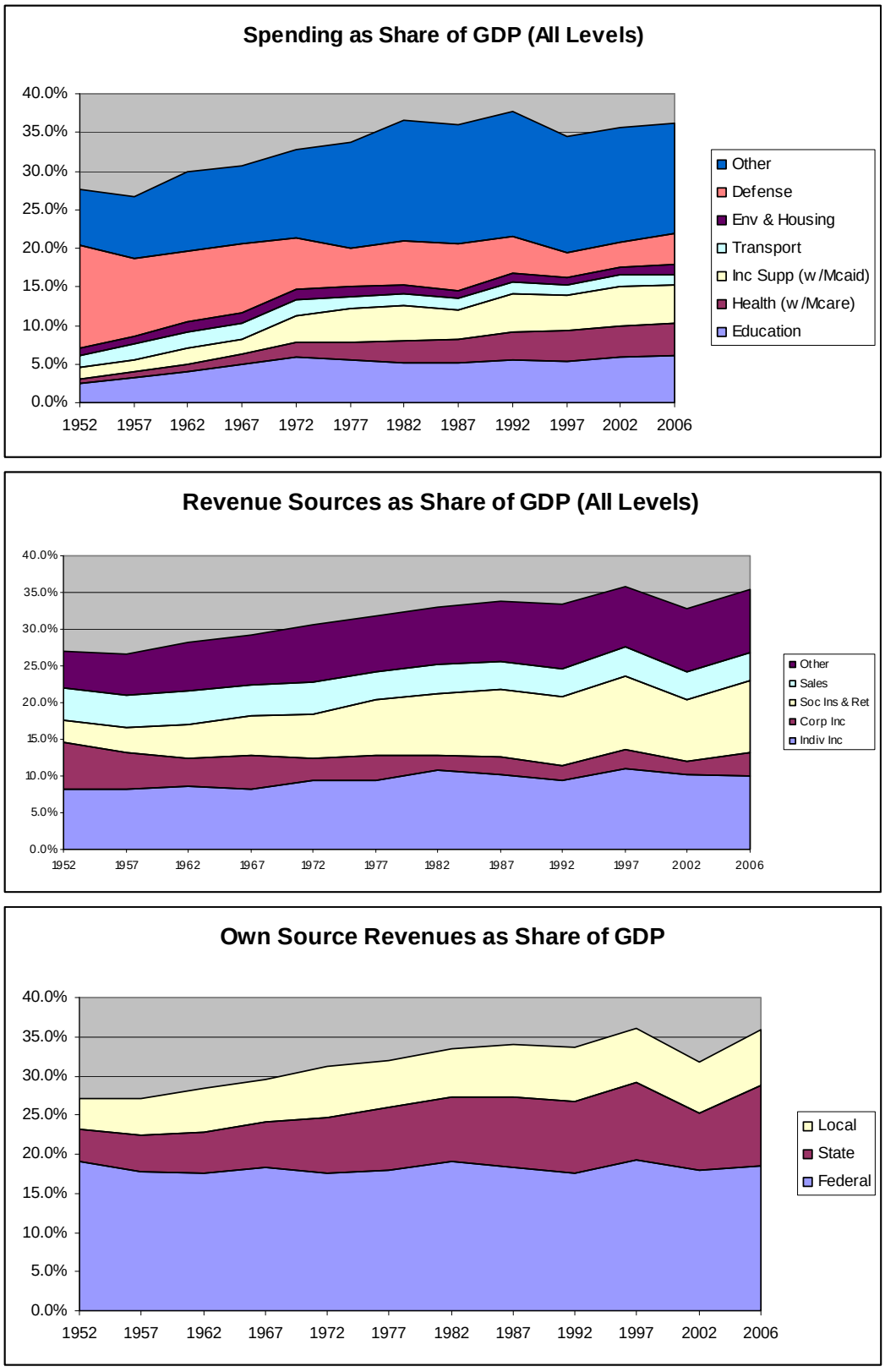
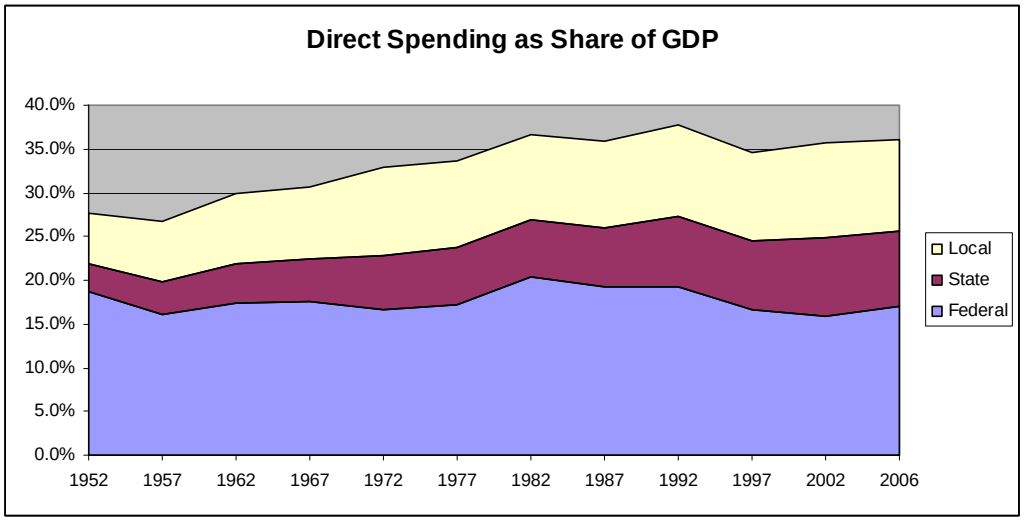
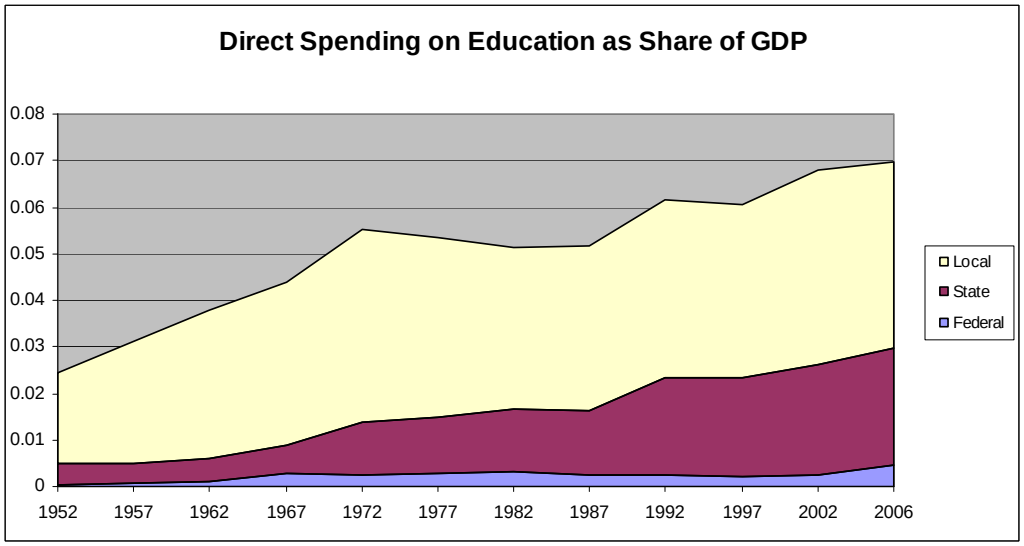


Figure 2: Spending by Level of Government





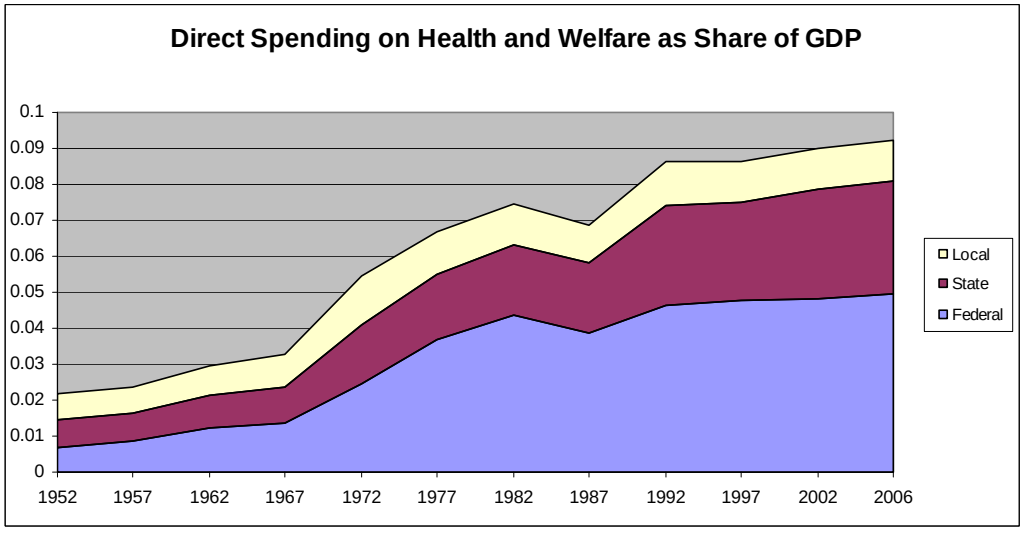


Figure 3: Spending by Category

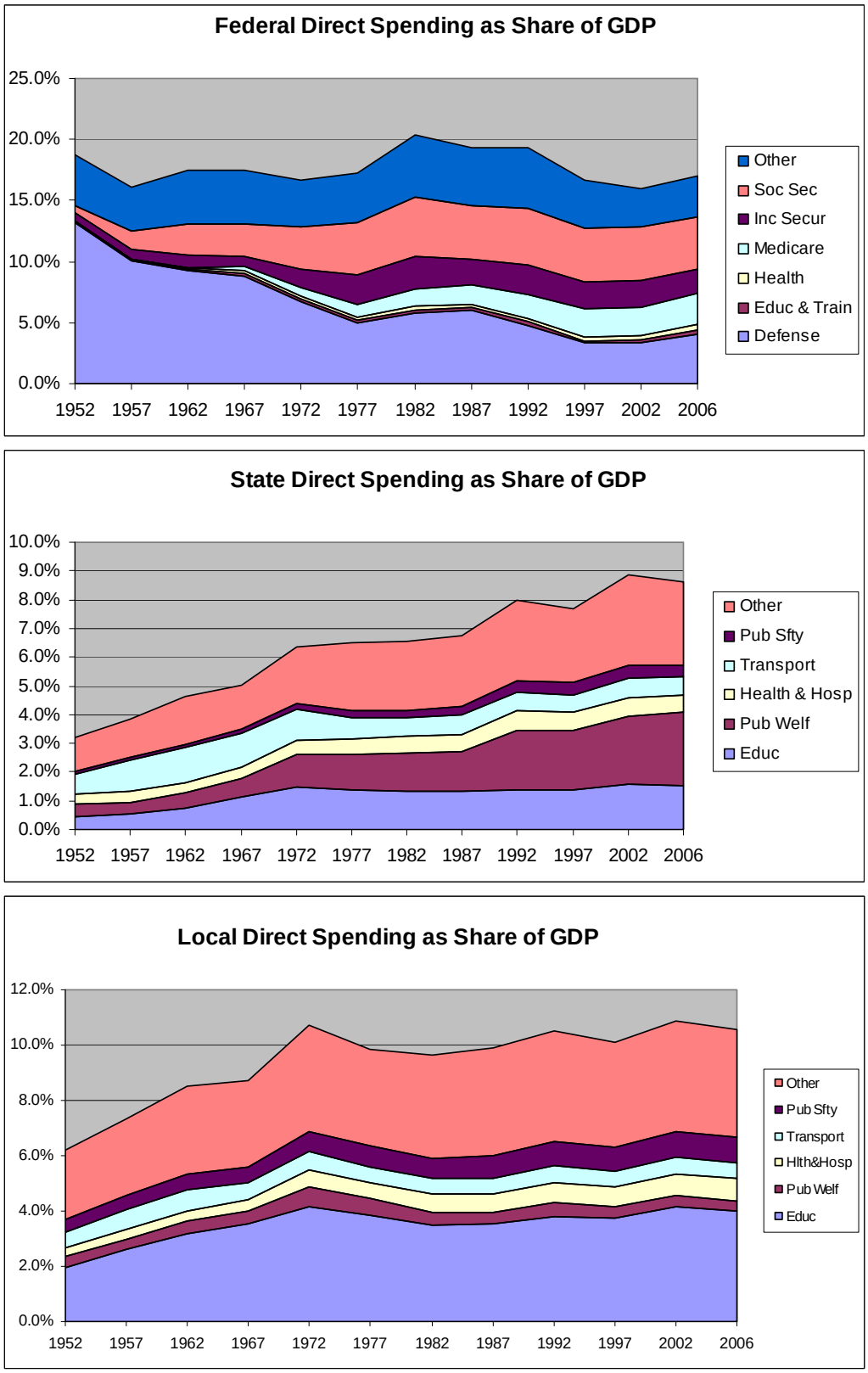


Figure 4: Revenue Sources

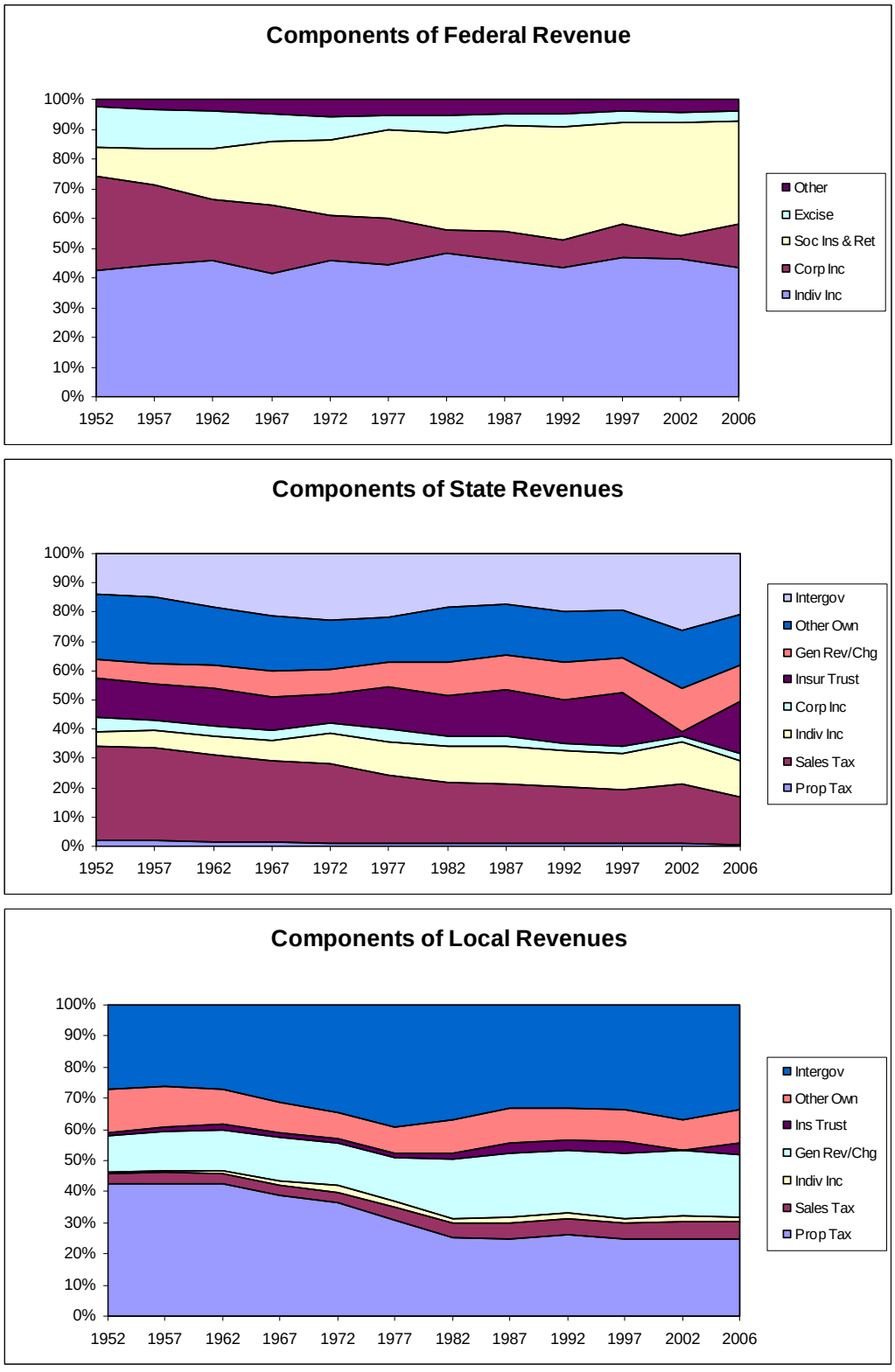
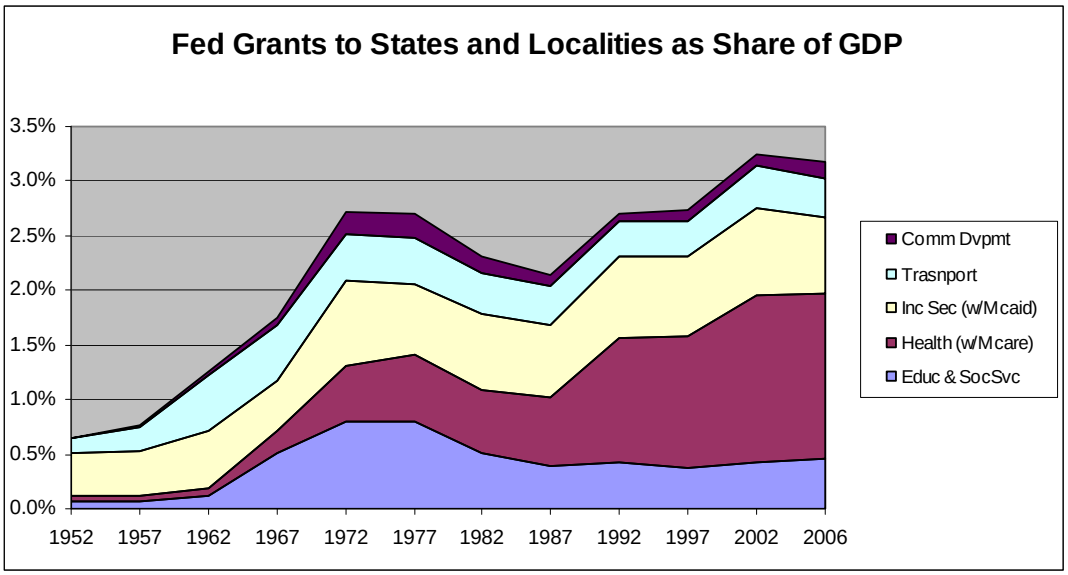
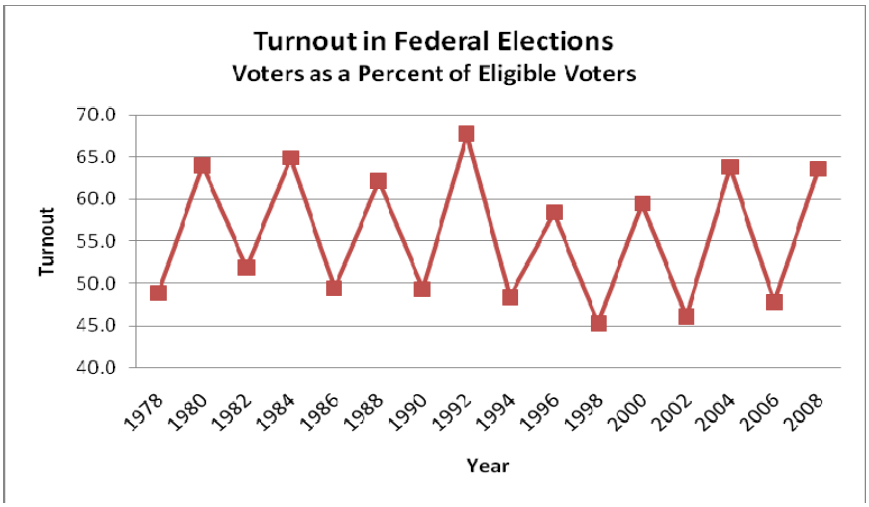


Figure 5: Federal Intergovernmental Grants



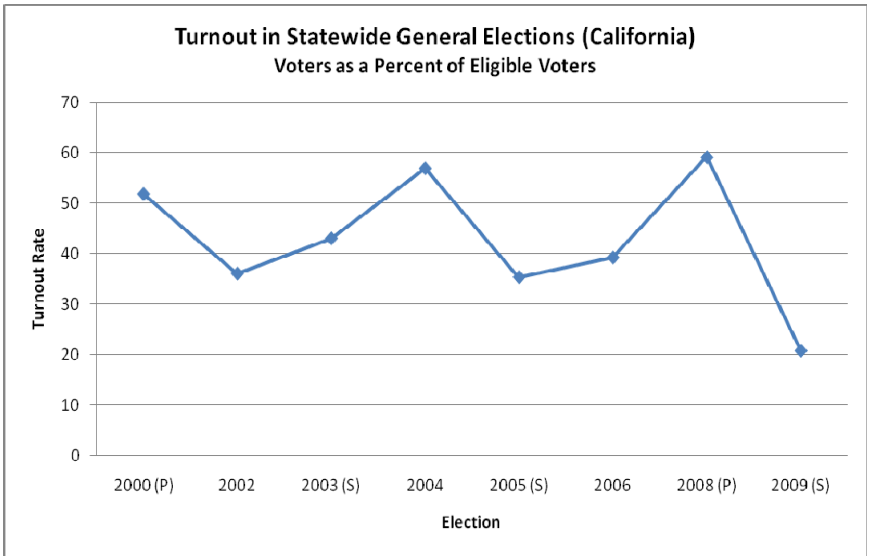
Notes: Note that state intergovernmental expenditures are between 28 and 35% of total state spending since 1977, but are not broken down by functional category.

Figure 6a



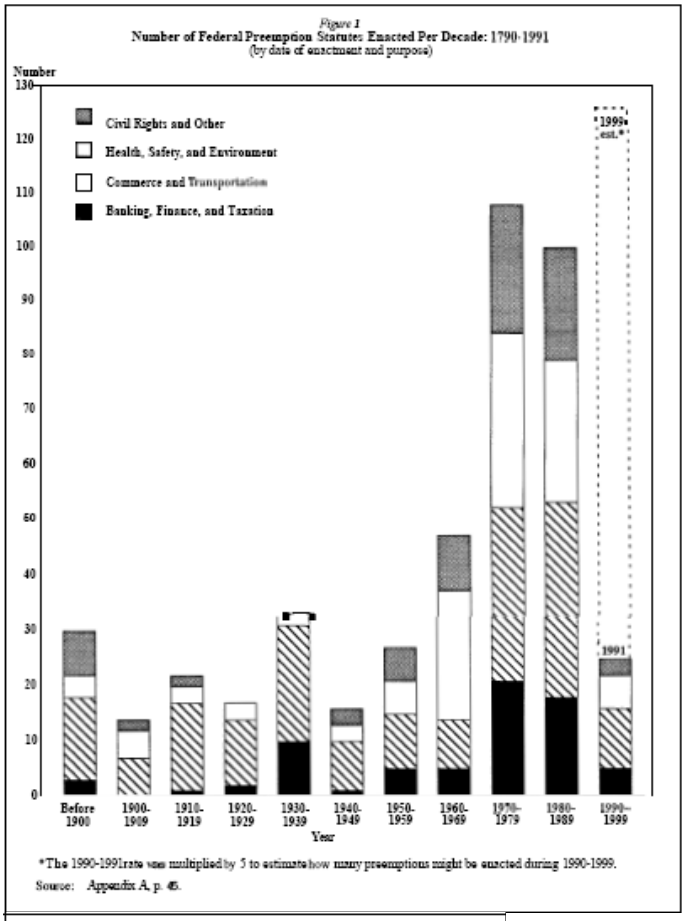
Source: November supplement to the Current Population Survey (CPS)

Figure 6b



P=presidential year; S=state special election. Source: http://www.sos.ca.gov/elections/sov/historical-voter-reg/hist-voter-reg-and-part-general-elections-1910-2009.pdf

Figure 7: Growth of regulation and pre-emption



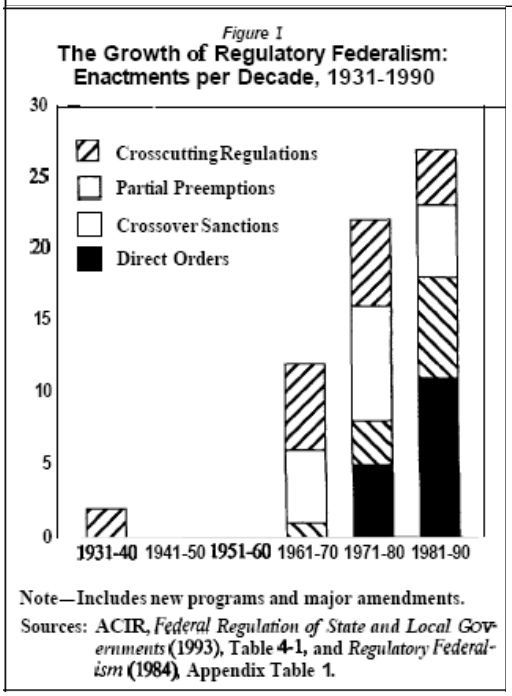


Figure 8: Increase in grant restrictions and mandates

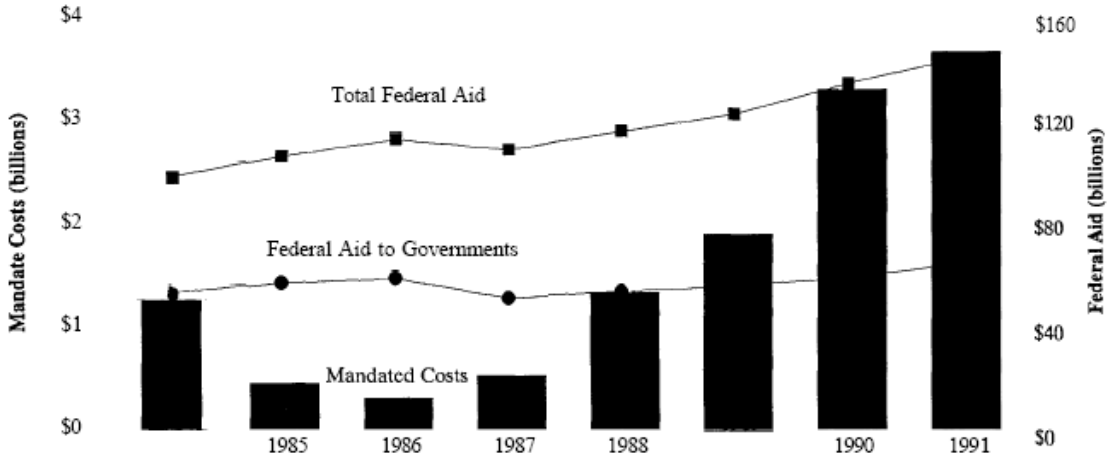
Table 4-3
Categorical and Block Grant Programs and Federal Outlays for Broad-Based and Other Grants Selected Years FY 1975-1991

Type of Grant	1975	1978	1981	1984	1987	1989	1991e
Number of Grant Programs							
Block Grant	4	4	4	12	13	14	14
Categorical	422	492	534	392	422	478	543
Total	426	496	538	404	435	492	557
Outlays for General Purpose, Broad-Based, and Categorical Grants Billions of Dollars							
General Purpose	$7.0	$9.6	$6.8	$6.8	$2.1	$2.3	$2.4
Broad-Based	4.6	11.5	10.0	13.0	13.1	12.7	14.5
Categorical	38.2	56.8	77.9	77.8	93.2	106.9	141.7
Total	49.8	77.9	94.7	97.6	108.4	122.0	158.6
Outlays for General Purpose, Broad-Based, and Categorical Grants Percentage of Total							
General Purpose	14.1%	12.3%	7.2%	7.0%	1.9%	1.8%	1.5%
Broad-Based	9.2	14.7	10.6	13.3	12.1	10.4	9.2
Categorical	76.7	73.0	82.2	79.7	86.0	87.6	89.4

e—estimate

Source: U.S *Advisory* Commission on Intergovernmental Relations, ***Characteristics of Federal Grant-in-Aid Programs*** *to State and Local Governments:* ***Grants*** *Funded* ***FY*** *1991* (Washington, DC, **1992**), pp. 1 and 5.

Figure 5-1
Trends in Federal Aid and Mandate Burdens, 1984-1991



*Mandate costs include only those laws passed between 1983 and 1989 with Congressional Budget Office cost estimates.

Source: ACIR computation from Table 5-9

TABLES

Table 1

Coefficients of Variation by Category of Spending
(Calculated Across States for the Sum of State and Local Government Spending within the State)

year	Total Expenditure	Direct Expenditure	Transport.	Environment and Housing	Public Safety	Education	Health and Hospitals	Public Welfare	Health and Welfare
1957	0.156	0.156	0.339	0.348	0.238	0.204	0.255	0.439	0.268
1962	0.150	0.150	0.359	0.335	0.276	0.196	0.300	0.403	0.271
1967	0.201	0.201	0.526	0.281	0.342	0.224	0.299	0.366	0.258
1972	0.199	0.199	0.452	0.304	0.397	0.178	0.379	0.323	0.281
1977	0.178	0.178	0.414	0.288	0.418	0.147	0.290	0.343	0.234
1982	0.254	0.255	0.424	0.506	0.359	0.206	0.347	0.331	0.247
1987	0.303	0.303	0.487	0.376	0.429	0.240	0.424	0.331	0.270
1992	0.215	0.212	0.437	0.339	0.350	0.181	0.417	0.273	0.236
1997	0.200	0.197	0.406	0.342	0.280	0.178	0.415	0.274	0.245
2002	0.179	0.179	0.414	0.273	0.229	0.151	0.432	0.283	0.255

Table 2a

Census Mobility by Demographic Characteristics: (Percent of Households Who No Longer Live in Their State of Birth)

	1960 Census					2000 Census				
Total Mobility			36.8					39.9		
	Age 25-35	Age 35-45	Age 45-55	Age 55-65	Age 65-75	Age 25-35	Age 35-45	Age 45-55	Age 55-65	Age 65-75
Total Mobility	35.7	37.4	36.6	37.5	36.9	37.2	38.5	40.6	43.1	42.3
Above Median Income	36.5	39.7	40.2	42.1	41.9	39.5	40.8	42.7	46.4	47.8
Below Median Income	34.5	32.8	31.6	33.7	35.8	34.5	34.4	36.5	38.9	39.0
College Plus	47.8	51.3	48.9	51.5	53.0	49.5	50.6	51.1	55.8	55.5
Some College	40.1	45.4	45.7	47.7	44.5	35.7	38.9	41.3	46.5	49.1
High School	32.0	35.7	37.9	42.2	43.8	27.7	29.7	31.2	35.5	37.0
Dropout	33.1	33.5	33.2	34.2	34.3	27.7	28.7	28.6	32.7	34.2
Married with Spouse Present	34.6	36.6	36.2	37.7	37.9	36.9	38.8	40.4	43.0	43.5
No Spouse Present	43.1	42.2	38.0	37.0	35.7	37.4	38.1	40.9	43.2	41.0

Table 2b

Census Mobility by Demographic Characteristics: (Percent of Households Who Have Moved in the Last Five Years)

	1960 Census					2000 Census				
Total Mobility			47.8					44.1		
	Age 25-35	Age 35-45	Age 45-55	Age 55-65	Age 65-75	Age 25-35	Age 35-45	Age 45-55	Age 55-65	Age 65-75
Total Mobility	78.9	52.9	38.0	30.0	25.8	77.4	50.4	34.3	26.9	20.8
Above Median Income	78.7	52.1	36.4	28.1	23.4	78.3	49.1	31.7	24.8	19.8
Below Median Income	79.1	54.4	40.3	31.7	26.3	76.4	52.6	38.9	29.5	21.4
College Plus	88.3	62.9	41.2	31.7	28.1	86.5	54.8	34.2	28.7	22.9
Some College	82.9	56.7	40.1	31.4	27.2	77.3	50.6	35.2	28.8	22.2
High School	77.4	49.7	36.7	31.6	27.0	69.5	45.7	32.1	24.0	19.2
Dropout	75.5	51.6	37.8	29.5	25.4	71.4	51.9	37.6	27.2	20.4
Married with Spouse Present	79.2	51.9	36.6	28.6	24.7	75.0	46.0	28.4	23.0	18.3
No Spouse Present	76.8	58.4	43.1	33.2	27.1	79.8	56.5	42.8	32.6	23.5

Table 2c

CPS Mobility by Age and Income (Percent of Households Who Have Moved in the Last Year)

	1964 CPS						2004 CPS					
	Age 25-35	Age 35-45	Age 45-55	Age 55-65	Age 65-75	Total	Age 25-35	Age 35-45	Age 45-55	Age 55-65	Age 65-75	Total
Total												
Moved within County	22.1	12.8	8.5	6.7	5.3	13.0	15.0	8.0	4.8	3.3	2.5	7.7
New County within State	5.8	2.6	2.0	1.1	1.0	2.9	5.1	2.4	1.6	1.4	0.9	2.7
Moved out of State	5.9	2.7	1.2	1.1	1.0	2.7	4.7	2.4	1.9	1.7	0.8	2.5
Above Median Inc.												
Moved within County	19.1	9.1	7.0	5.4	2.5	10.9	13.4	7.3	3.8	2.4	2.1	6.4
New County within State	5.4	2.2	1.8	1.0	0.6	2.8	5.0	2.3	1.6	1.5	0.5	2.6
Moved out of State	4.8	2.7	1.2	0.7	0.9	2.4	4.2	2.0	1.5	1.5	0.4	2.2
Below Median Inc.												
Moved within County	27.2	20.4	10.9	7.9	5.8	15.0	16.7	9.0	6.5	4.3	2.8	9.0
New County within State	6.6	3.5	2.4	1.3	1.1	3.0	5.3	2.7	1.7	1.3	1.2	2.9
Moved out of State	7.8	2.8	1.2	1.4	1.0	2.9	5.3	2.8	2.6	1.8	0.9	2.9

Source: Census and CPS, various years

Table 3: Local voting

City	Population	VEP	Total Votes	Votes/Pop
Azusa (3/8/2005)	47,074	24,620	3957	16.1%
Carson (3/8/2005)	93,805	49,060	10825	22.1%
Gardena (3/8/2005)	59,733	31,240	6647	21.3%
La Verne (3/8/2005)	33,316	17,424	4168	23.9%
Los Angeles (3/8/2005)	3,849,378	2,013,225	411604	20.4%
Monrovia (3/8/2005)	38,006	19,877	3731	18.8%
Redondo Beach (3/8/2005)	67,346	35,222	9757	27.7%
San Dimas (3/8/2005)	35,714	18,678	2678	14.3%
Compton (4/19/2005)	95,701	50,052	6215	12.4%
Los Angeles (5/17/2005)(runoff)	3,849,378	2,013,225	493084	24.5%
Redondo Beach (5/17/2005)(runoff)	67,346	35,222	8823	25.0%
Baldwin Park (11/8/2005)	78,568	41,091	8649	21.0%
El Monte (11/8/2005)	123,162	64,414	10001	15.5%
Hawthorne (11/8/2005)	85,438	44,684	8057	18.0%
Palmdale (11/8/2005)	138,790	72,587	18157	25.0%

Source: California election data, 2005

Table 4: Characteristics of Voters

Variable	Year	18 to 24 years	25 to 44 years	45 to 64 years	65 to 74 years	75 years and over
Share of Actual Voters	2008	9.5%	32.3%	38.7%	10.8%	8.7%
	2006	5.7%	29.4%	42.4%	12.2%	10.4%
	2004	9.3%	34.1%	37.6%	10.3%	8.7%
	2002	5.3%	31.5%	40.0%	12.8%	10.5%
Share of Potential Voters	2008	12.5%	34.3%	35.6%	9.5%	8.1%
	2006	12.4%	35.2%	35.2%	9.1%	8.2%
	2004	12.6%	36.2%	34.1%	9.0%	8.1%
	2002	12.6%	37.4%	32.8%	9.0%	8.1%

Variable	Year	Married with Spouse Present	Male	White alone	Black alone	Asian alone	Hispanic (of any race)
Share of Actual Voters	2008	59.5%	46.3%	83.2%	12.3%	2.6%	7.4%
	2006	64.4%	46.9%	85.7%	10.3%	2.2%	5.8%
	2004	61.9%	46.5%	84.8%	11.1%	2.2%	6.0%
	2002	66.6%	47.0%	86.3%	10.9%	2.1%	5.3%
Share of Potential Voters	2008	54.0%	48.0%	82.2%	12.1%	3.4%	9.5%
	2006	54.4%	47.8%	82.4%	12.0%	3.3%	8.6%
	2004	55.6%	47.8%	84.4%	11.3%	2.3%	6.6%
	2002	55.9%	47.6%	85.7%	11.2%	2.4%	6.4%

		Less than 9th grade	9th to 12th grade, no diploma	High school graduate	Some college or associate's degree	Bachelor's degree	Advanced degree
Share of Actual Voters	2008	2.0%	4.9%	27.3%	31.6%	22.4%	11.8%
	2006	2.2%	4.8%	27.4%	29.6%	23.0%	13.0%
	2004	2.4%	5.7%	28.5%	31.0%	21.1%	11.3%
	2002	2.7%	5.5%	28.8%	29.5%	21.6%	12.0%
Share of Potential Voters	2008	3.3%	7.8%	31.7%	29.6%	18.5%	9.0%
	2006	3.6%	8.5%	32.3%	28.6%	18.0%	8.9%
	2004	3.9%	9.1%	32.3%	28.7%	17.4%	8.6%
	2002	4.2%	9.5%	33.5%	28.4%	16.4%	8.0%

Source: Current Population Survey, various years

Table 5: Voters in National vs. Local Elections

	National	Local
Married	68.33	70.67
Age		
25 to 44	45.38	38.11
45 to 64	30.55	32.61
65+	24.06	29.29
Have Children	40.57	40.94
Race		
White	84.45	85.5
Black	14.13	13.08
Other	1.42	1.42
Education		
HS Dropout	20.37	22.18
HS	31.48	32.61
Some College	21.92	20.22
College +	26.23	25
Male	TBA	TBA

Source: GSS, 1987