RACE, SUBURBS AND LOCAL EXPENDITURES ON FAMILIES[*]
Preliminary Findings

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The racial and ethnic diversity of U.S. suburbs has increased over the past decade. According to a Brookings Institution study, racial and ethnic minorities made up 19 percent of suburban populations in 1990 and 27 percent in 2000. (Frey 2001) This change in housing patterns could have significant implications for racial inequality in economic status. For example, by most indicators, suburban schools tend to outperform central city schools. As blacks and Latinos move to suburban communities, we might expect to see improvements in educational achievement. Suburban communities also offer amenities such as parks and recreation services that may not be available in central city communities or, if available, may be overtaxed and overused.   Preliminary results from the Moving to Opportunity Program suggest that relocation of poor female-headed families from poor central city neighborhoods to suburban communities with higher average incomes does have a positive impact on school performance and health of young children. (Ludwig, Ladd and Duncan 2001; Katz, Kling and Leibman 2001)

However, the benefits of suburban life may not accrue to its new residents if an their arrival signals the end of political support for parks and recreation or other productive local public goods. Alesina, Baquir and Easterly (1999) argue that racial diversity can lower total spending on public goods like education and park and recreation services. Under the median voter theorem, the preferences of the median voter determine the type of public good provided. If a large fraction of the population has preferences that are quite different from those of the median voter, they will vote to spend less on the public good and allocate more of their resources to private consumption. Alternatively, the majority racial group might be less willing to spend on goods and services if it perceives that the primary beneficiaries are of a different racial and ethnic background. (Alesina et al 1999; Poterba 1997) If an increase in diversity leads to a decrease in suburban amenities, the move to the suburbs might have little impact of the economic status of racial and ethnic minorities. [1]

Poterba (1997) finds that public school expenditures per pupil decrease as the percentage of elderly increases and that this reduction is larger if the elderly population is of a different race than the school population. Alesina et al (1999) find that the share of a city's budget allocated to productive public goods (roads, education, sewerage and trash pickup) decreases as ethnic diversity increases.

This paper examines the impact of racial and ethnic diversity and of income inequality on local expenditures in California suburban communities. California offers

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[1] Admittedly, the link between expenditures on economic status is subject to debate. Empirical studies of the school outcomes have failed to find a statistically significant relationship between per pupil expenditure and scores on standardized tests.

an interesting case study for several reasons. One, California metropolitan areas tend to include a large number of small independent cities and school districts.   Two, the racial and ethnic diversity is more complex than in the rest of the country. There are communities with black majorities and a growing population of Latinos. There are communities with Asian majorities where Non-Hispanic whites are the minority group. This variation in racial composition should shed light on the extent to which the findings of Poterba (1997) and Alesina et al (1999) reflect the specific history of the black and white racial tensions.

This paper focuses on expenditures other than those for public education.[2] Initially, I examine expenditures on parks and recreation services. Parks and recreation budgets include a variety of services of youth including youth activity centers, summer parks programs and after school programs. Funding for these programs comes from a combination of local sources and competitive intergovernmental grants and thus is more likely to reflect local preferences than are programs funded through intergovernmental grants allocated on the basis of demographic composition. Future work will include expenditures on libraries and community centers.

My findings differ from those of earlier studies. Although there are racial and ethnic differences in per capita parks and recreation expenditure, there is no evidence that an increase in racial diversity reduces the level of expenditures or the share of a city's budget devoted to parks. Indeed, an increase in racial diversity increases spending on parks and recreation for a sub-sample of cities.

Data on City Expenditures

There are three sources of data on local public expenditures. The most used is the US Census Bureau's Census of Governments. The Census of Governments reports budget data for only cities with populations greater than 25,000, which limits its usefulness for studying suburban governments. A second limitation is the level of aggregation. The census of governments disaggregates local expenditures into highways, police protection, fire protection, parks and recreation, housing and community service, waste management, and interest of debt and does not distinguish capital expenditures from operating expenditures. It is not possible to subtract user fees and charges. Finally, one of the other features of this census is the prevalence of 0 entries for some budget categories. Zero entries appear to be linked to the existence of special districts for parks and recreation, but information about special districts is not included in the census report.

A second data source for California cities is a new report compiled by the California state controller's office. This report includes budget data for all California cities, regardless of size. Again, the level of aggregation limits the ability to segregate all expenditures on children and families. However, it is possible to separate capital expenditures from operating expenditures. The controllers report also includes information on revenues by source, but there appear to be inconsistencies in the reporting of revenues across cities.

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[2] In a separate paper, O. Ajilore and C. Conrad examine the impact of racial and ethnic diversity on per pupil school expenditure.

For example, some cities appear to only report revenues derived from user fees. Other cities appear to include intergovernmental grants earmarked for that purpose. The state controller's report does give information about the existence of special districts. For example, for budget items such as libraries and parks and recreation, the report identifies whether or not the service is provided by the city and, if provided, how -- with paid city employees, city volunteers, a contract with a public provider; a contract with the private sector, or wholly or in part by other local agency.

A third data source is the published city budget. The principal limitation of this data source is the expense of collecting and collating the information. In addition, there are variations across cities in the methods of reporting expenditure that make it difficult to guarantee consistency. In most cases, the city budget the most detailed source of information about expenditures for families and children, but this is not guaranteed. I have been collecting budgets from towns in Alameda County and Los Angeles County for over a year, but have less than twenty usable observations.

The city budgets do provide information on the aggregate categories reported in the state controller and the Census of Government Reports. Local public expenditures on families and children fall into four broad categories: (i) programs run by the police department or under the general heading of public safety, including school crossing guards and DARE; (ii) programs run by the parks and recreation, including after school programs, summer camps, sports leagues, youth activity centers; (iii) libraries and (iv) social service programs, including low-income housing programs, etc. Because programs like DARE and school crossing guards represent a tiny portion of public safety budgets, it is impossible to separate out these expenditures when using either the state controller data or the Census of Government data. In contrast, a major portion of parks and recreation budgets represent expenditures on families and children. (Seniors are the other major constituency.) Hence, for the state controller and Census data, I assign all of the parks and recreation budget to families and children. Libraries and social service programs tend to be a county function in California. [3] The analysis in this paper is currently limited to data from city budgets, but will include county expenditures on libraries, allocated based on branch location, in the near future. Social services such as housing are problematic. Where cities do report expenditures on housing programs, they frequently offset the expenditure with reported revenues. (Indeed, some cities appear to earn a profit on housing programs.)

Table One compares data from the three sources for the cities for which we have data from the published city budgets. The city budget data reports expenditures on families and children based on our detailed analysis of each category of expenditure. It includes public safety programs and some social service programs. User fees, such as tuition charged for after school programs or day care fees, have been subtracted from the reported expenditures. Where possible, programs targeted at seniors have been excluded. The government census data and the state data report parks and recreation expenditure. The most striking visual difference across the columns is the number of cities with no

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[3] Richer cities and towns tend to supplement the budgets of their local library branch.

data available from the Census of Governments. As noted above, the census only reports data for cities with populations over 25,000. Agoura Hills and South Pasadena fall just below this cut-off. For cities where there is data available from all three sources, the variations can sometimes be explained by differences in the included category of expenditures. For example, for Livermore, the city budget figure includes a stand-alone public library. With this budget item excluded, the per capita expenditure would be $94, an amount in reasonable proximity to the $88 reported in the Census of Government's column. With the library included, the per capita expenditures in Livermore are $138. Livermore, on the other hand, does not have a stand-alone parks and recreation department. The discrepancy between the state controller's per capita expenditure and the Census of Government per capita expenditure may reflect differences in reporting expenditures in this case.

Table One: Comparison of Data Sources

CITY	Total Expenditures			Family Expenditures			As % of Total Budget		
	City Budget	Govt Census	State (total)	City Budget	Govt Census	State (total)	City Budget	Govt. Census	State
Agoura Hills	11053980	NA	8822135	1270048	NA	1236003	11.49%	NA	12.33%
Albany	14822446	NA	16230962	1637000	NA	1623429	11.04%	NA	8.91%
Claremont	33396298	34022000	26680463	2430530	2531000	3274652	7.28%	7.44%	10.40%
Dublin	52127559	40361000	38053246	3498689	2743000	5254412	6.71%	6.80%	13.81%
Livermore	52516020	201859000	85285162	10170150	6471000	1163252	19.37%	3.21%	1.33%
Newark	26783200	87090000	30220187	4873300	2514000	7531711	18.20%	2.89%	9.34%
Palmdale	137972350	272085000	46897192	8694980	0	3710134	6.30%	0	7.76%
Palos Verdes Estates	15792485	NA	10479992	1327170	NA	561136	8.40%	NA	5.35%
Piedmont	12307578	NA	13029180	1831648	NA	2403831	14.88%	NA	15.36%
Rolling Hills	1690900	NA	1221078	24900	NA	8130	1.47%	NA	0.63%
San Dimas	26274323	26829000	13278161	3718704	0	1904198	14.15%	0.00%	11.73%
South Pasadena	15582754	NA	18334261	1675279	NA	665610	10.75%	NA	3.01%
Walnut	12477190	62704000	12798383	2112530	0	2155204	16.93%	0.00%	16.49%
Mean	31753622	103564286	24717723	3328071	2037000	2422439	11.31%	3.39%	8.96%

NA- not available

Table One A – Per Household Expenditure

City	Population	Households	Per Household Expenditure		
			City Budget	Government Census	State Controller
Agoura Hills	20537	6874	61.84	NA	60.18
Albany	16444	7011	99.55	NA	87.90
Claremont	33998	11281	71.49	74.4	96.31
Dublin	29973	9325	116.7	91.52	175.31
Livermore	73345	26123	138.66	88.23	15.86
Newark	42471	12992	114.74	59.19	177.34
Palmdale	116670	34285	74.53	0	31.8
Palos Verdes Estates	13340	4993	99.49		42.06
Piedmont	10952	3804	167.2		219.49
Rolling Hills	1871	645	13.31		4.35
San Dimas	34980	12163	106.31	0	54.44
South Pasadena	24292	10477	68.96		27.40
Walnut	30004	8260	70.41	0	71.83
Mean	34529	11403	92.56	52.23	82.70

For this paper, we will use data from the California State Controller's office. The Census of Government sample, by restricting itself to cities of over 25,000, eliminates many rich communities with low indices of racial diversity. [4] The city budget data provides too small a sample and appears to have a sample bias toward small, rich cities. In addition, I limit this analysis to urban communities, to cities and towns within consolidated metropolitan statistical areas. (In this iteration, I have included the San Francisco-Oakland-San Jose and Los Angeles-Long Beach-Riverside-San Bernardino CMSAs. Because I focus on suburbs and edge cities, I excluded central cities with populations greater than 500,000.)

Demographics of California's Suburbs

Table Two describes the demographics of California's suburban communities. The data is from the 2000 Decennial Census of the Population. Overall, white non-Hispanics represent slightly more than half of the population, but they are over-represented in the smallest cities. Asian Americans are over represented in medium sized cities (50,000-75,000) and African Americans are over represented in communities with between 75,000 and 100,000 residents. The edge cities (Anaheim, Riverside, and Santa Ana), those with populations greater than 200,000, are dominated by Hispanics.

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[4] According to 2000 census data, the average median household income for cities with less than 25000 residents was 73064 and for cities with greater than or equal to 25000 residents was $57,631. The mean diversity index for the small cities was 0.39 with a minimum value of 0.06. The mean diversity index of cities with 25000 or more residents was 0.52 with a minimum value of 0.14.

Table Two: Demographics of California Cities

Race/Ethnicity	All Cities	Cities with Population less than 25000; Greater than 2000	Cities with Populations Between 25000 and 50000	Cities with Populations between 50000 and 75000	Cities with Populations between 75000 and 100000	Cities with Populations Greater than 100000 and less than 200000	Cities with Populations Greater than 200000
White only	64.3	72.2	66.1	58.5	49.6	56.6	52.3
Black only	4.6	3.0	3.8	4.8	11.4	8.9	3.9
American Indian only	0.7	0.7	0.7	0.7	0.8	0.8	1.1
Asian only	11.9	9.5	10.7	17.6	13.9	13.1	8.8
Pacific Islander only	0.3	0.2	0.4	0.3	0.7	0.3	0.4
Other race	13.7	9.8	14.0	13.7	19.0	17.0	28.6
Multiracial	4.3	3.8	4.3	4.5	4.8	5.0	4.9
Hispanic	28.5	21.0	29.7	28.7	37.4	33.7	53.7
White, Non Hispanic	51.9	63.5	52.8	45.9	34.3	42.8	31.3
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Number of cities	253	82	66	42	18	35	3

Source: US 2000 Decennial Census

Table Three describes the distribution of households by income in different sized cities. The smaller cities have a higher concentration of households with incomes over $200,000. Those with incomes less than 15000 are disproportionately located in the larger communities.

Table Three – Income Distribution by City Size

Income Category	All Cities	Cities with between 2000 and 25000	Cities with population between 25000-50000	Cities with populations between 50000-75000	Cities with Populations between 75000 & 100000	Cities with Populations greater than 100000 but less than 200000	Cities with populations greater than 200000
Less than 10000	6.4	6.3	6.0	6.2	7.4	7.2	7.5
10,000-15,000	4.5	4.5	4.3	4.6	5.4	4.8	5.4
15000-25000	9.7	9.6	9.3	9.8	11.0	10.1	11.9
25000-35000	9.8	9.1	9.7	9.9	11.6	10.8	13.7
35000-50000	14.0	12.8	14.0	14.3	15.9	15.5	17.5
50000-75000	19.3	17.5	19.5	19.7	20.6	21.1	20.9
75000-100000	12.5	11.3	13.2	13.5	12.4	13.2	11.0
100000-150000	12.4	12.4	13.5	13.3	10.2	11.3	8.5
150000-200000	4.7	5.7	5.0	4.5	2.8	3.3	1.9
200000 and above	6.8	10.7	5.7	4.3	2.5	2.7	1.8
Median Income		71360	61162	58841	49842	52442	44060

Source: US 2000 Decennial Census

Distribution of Expenditures by City Size, Race, and Income

The mean per household expenditure on parks and recreation is $158 for cities with populations between 2000 and 500000. The median per household expenditure is $128. Table Four reports the mean per household expenditure by city size.

Table Four

City Size	Proportion with Own Parks	Mean Per Household Parks and Recreation	Median Per Household Parks and Recreation Expenditure	Mean Share of City Budget Spent on Parks	Median Share of City Budget Devoted to Parks and Recreation
2000- 10000	.72	$147	$52	6.7	5.3
10000-25000	.84	$214	$139	6.5	5.3
25000-50000	.80	$152	$126	7.2	6.6
50000-75000	, 69	$131	$118	5.7	5.2
75000-100000	.83	$136	$130	6.5	5.8
100000-200000	.77	$126	$113	5.4	4.7
Above 200000	.67	$153	$144	3.1	2.7
ALL CITIES	.78	$158	$128	6.4	5.6
ALL CITIES with Own Parks		$179	$141	7.1	6.2

To compare the expenditure per household on parks and recreation by ethnicity, we calculated a weighted average for each group for the state. Table Five reports the results. Per household expenditures are greatest for Asian American households and lowest for black households.

Table Five

Racial/Ethnic Group	Per Person Expenditure
White	55.5
Black	47.0
American Indian	49.1
Asian	58.9
Pacific Islander	53.1
Other Races	44.2
One or more races reported	52.5
Hispanic	45.8
White, Non-Hispanic	57.4

Table Six describes a weighted average of expenditures by household income. Per household expenditures on parks and recreation increase as household income increases. The increase in expenditure is especially steep above incomes of 150,000.

Table Six

Income Category	Per Household Expenditure on Parks and Recreation
Less than 10000	128.0
10,000-15,000	126.0
15,000-25,000	125.8
25,000-35,000	127.7
35,000-50,000	130.2
50,000-75,000	131.0
75,000-100000	132.8
100000-150000	138.1
150000-200000	145.1
200000 and higher	166.5

There are variations in per household and per capita expenditures on parks and recreation across cities, across racial groups and across income categories. Poor families tend to live in areas with lower per household expenditures on parks and recreation than the areas where rich families live. Per household expenditures on parks and recreation are lower, on average, for black and Latino households than for white or Asian households.

Determinants of Per Household Expenditures on Parks and Recreation

Post Proposition 13, California cities have little control over the size of their budgets, but they do have control over the allocation of the budgets among competing purposes. The per household expenditure on parks and recreation is likely to be function of (i) the city's budget constraint (captured here by the property tax base); (ii) the size of the city's population; and (iii) the preferences of its citizenry. An increase the property tax base should increase all categories of expenditures including parks and recreation. An increase in the city's population may decrease per household expenditure on parks and recreation, ceteris paribus because of economies of scale in the provision of parks.

As discussed above, the preferences of the citizenry is likely to be a function of the ethnic and racial composition of the population as well as its age structure and income. To measure ethnic diversity, I use an index developed by Lieberman (1969). It measures the probability that two persons picked at random in the population will be of a different race. I use a similar measure for income diversity. The index of income diversity measures the probability that two persons picked at random will come from a different income category.

Table Eight reports the results of a regression analysis of the determinants of per capita expenditures on parks and recreation. As expected the coefficient on property tax per household is positive and statistically significant. The sign of the coefficient on natural logarithm of population is negative, as expected, but not statistically different from zero. Surprisingly, the age structure of the population appears to have no effect on per household expenditure.

Table Eight

Variable	Mean	All Cities	All Cities with Own Parks	Cities with Populations Greater than 25000
Natural log of property tax base per household	5.39	0.65*** (0.09)	0.61*** (.11)	0.28** (.13)
Natural log of population	10.42	-.102 (.08)	0.149* (.09)	.12 (.14)
Natural log of median household income	10.94	0.23 (0.21)	0.39* (0.22)	0.82*** (.29)
Operates Own Parks	0.83	0.56*** (.18)		0.45** (.19)
Index of ethnic diversity	0.48	2.15*** (.51)	2.18*** (.56)	0.61 (.63)
Index of income diversity	0.86	8.12** (3.16)	8.12** (3.5)	7.44 (7.42)
Constant		-8.72** (4.13)	-9.17** (4.54)	-14.16 (8.17)
Adj. R Squared		0.23	0.18	0.13
N	234	234	194	152

Contrary to predictions, an increase in ethnic diversity does not decrease expenditure on parks and recreation. The impact of an increase in ethnic diversity on park expenditures per household is sensitive to sample specification. For the full sample, an increase in ethnic diversity increases per pupil expenditure. For a sample that excludes communities of less than 25000, an increase in ethnic diversity has no effect on park expenditures per household.

The impact of income diversity is also sensitive to sample specification. In the full sample, an increase in income diversity has a positive and significant effect on park expenditure per household. In a sample that excludes smaller communities, an increase in income diversity has no effect on park expenditures per household.

Determinants of Share of City Budget Devoted to Parks and Recreation

Table Nine reports the results of a regression analysis of the determinants of the share of local budgets devoted to parks and recreation. Again, the principal finding is that an increase in ethnic diversity does not decrease willingness to spend on parks and recreation.

Table Nine

Variable	Mean	All Cities	All Cities with Own Parks	Cities with Populations Greater than 25000
Natural log of median household income	10.95	.026*** (.009)	0.024** (.010)	0.040** (.014)
Foreign Born	0.33	.021 (.025)	.022 (.027)	0.05** (.027)
Index of ethnic diversity	0.47	.003 (.026)	-.012 (.03)	-.029 (.033)
Index of income disparity	0.85	0.213 (.134)	0.12 (.17)	-.19 (.42)
Proportion of households with children under 18	37.2	-.000 (.000)	-.000 (.000)	-.000 (.000)
Own park	0.78	.033*** (.007)		.020** (.01)
Adj R Squared		.097	.02	.11
N		250	195	161

Discussion

Preliminary findings suggest results quite different from those of earlier studies. Racial diversity does not appear to reduce expenditures on productive public goods. Specific results are summarized below.

- The distribution of expenditures on parks and recreation favor high-income families.

- Expenditures on parks and recreation are lower for African Americans and Latinos.

- The racial difference in per household expenditure appears to be driven by differences in the property tax base. Holding the property tax base fixed, the racial composition of the town does not affect per household expenditure. Table four reports the findings from a preliminary regression analysis of per household expenditure.

- Ethnic diversity in a community increases total expenditures on park and recreation, holding constant population and property tax base. [5]

These results are still preliminary, but potentially quite significant. The results could be interpreted as an indication of the declining significance of race in California. Or, they might indicate that racial dynamics are fundamentally different when more than two groups are competing for status and resources. These are issues I'd like to explore in the future. Aside from my theoretical interest in racial dynamics, these results provide reasons for optimism about the impact of housing desegregation on racial inequality in economic status.

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[5] We have experimented with several different measures of racial diversity. This result appears to be robust.

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