PROPERTY TAXATION AND COASTAL ZONE RESOURCE USE: CALIFORNIA'S SOUTH COAST, 1919-71

by

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The long-standing interest of students of public finance in the impact of state and local tax systems on economic development has evolved into a predominating view which minimizes the influence of local taxes on the area distribution of economic activity. We wish to suggest that this concensus is based on a poorly specified theoretical base and, consequently, to offer a new approach -- one that emphasizes capital formation and the implicit rental price of capital, as derived from neo-classical theory. An approach based on the rental price of capital provides a measure for weighing the impact of the differential rate structures of local taxing agencies -- counties, cities, and special districts -- on the allocation of capital among various uses and local areas.

In this paper, we apply this model to the local taxation of property in a significant coastal zone, California's "South Coast", over an extended period of time, 1921-71. Areas within a coastal zone can be seen as competing for resources, one of the most significant of which is, of course, capital. Physical capital, structures and equipment, provides services to capital users which are essential to all the economic activities of the coastal zone, whether those users provide residential housing, extend services to tourists, extract oil, or engage in manufacturing. Thus, competing governmental units, through policies of taxation which affect the cost of capital, can shape the area location of coastal zone activities by manipulating the cost of capital. The two major coastal zone political units within the South Coast competing for resources are Santa Barbara and Ventura counties. Hence, in application of our tax model, we compare, below, the impact of property taxes levied by counties, cities, and school districts on capital costs in various "functional" areas of Santa Barbara and Ventura counties,

based on sets of annual series of property tax rates and assessment ratios.

I

The form of the neoclassical model adopted here is one of cost minimization which is general enough to represent differing market structures. For any given output price (P) and quantity (Q), we assume that the capital user will select that combination of factor input paths that minimize the discounted value of all contractual outlays, for the services of labor, capital, and taxes. Thus, cost at time zero is defined as:

$$(1) \quad C_o = \int_0^{\infty} (WL_t + qI_t + T_t)e^{-tr}\, dt$$

where W = wage rate
L = labor input
q = price of capital goods
I = gross investment
T = total direct taxes
r = discount rate

To evaluate the effects that taxes have on capital formation, we minimize equation (1), subject to the production function:

$$(2) \quad Q_t = Q(L_t, K_t),$$

where K_t represents the stock of capital in existence at end of period t. Capital is defined with the identity:

$$(3) \quad K_t \equiv I_t + (1-\delta)K_{t-1}$$

where δ is the real replacement rate.

Direct taxes are defined to consist of (a) local property taxes, (b) federal corporate income taxes, and (c) state corporate income levies. Minimizing the cost function (1) under neo-classical conditions yields an expression which modifies the now familiar rental price of capital to account for income and property taxation at all levels of government. Thus under our

formulation, the rental price of capital becomes:

$$(2)\quad c = q(r + \delta)R_1 + qR_2$$

were c = implicit rental price of capital
R_1 federal and state income tax factor[1]
R_2 property tax factor.

R_2 is defined as:

$$R_2 = \alpha P$$

where P is the rate of property taxation levied on some proportion (2) of the money value of capital stock.

II

To provide the basis for comparisons of tax policy in Santa Barbara and Ventura counties, we selected pairs of large districts, one member from each county, in which the functional structure of property holding was similar.[2] For each district, we acquired data on property tax rates (by all taxing authorities) and assessment ratios, 1921-1971, and then developed annual series for effective rates of property taxation. To compare the property tax impact within each functional pair of districts, we focused upon the difference in capital costs between corresponding districts:

$$DC_i = (CS_i) - (CV_i)$$

where (CS_i) and (CV_i) are the level of rental cost of capital in Santa Barbara and Ventura counties, respectively, for each pair (i) of districts. But,

$$DC_i = q\left[(RS_i)_2 - (RV_i)_2\right]$$

where $(RS_i)_2$ and $(RV_i)_2$ are the property tax factors for each pair (i) of districts. The values for DC_i are displayed for each functional pair in Table 1.[3]

The most striking result is that, until very recently, regardless of comparable areas examined, property taxes bore less heavily on capital costs in Santa Barbara than in Ventura County, despite Ventura County's popular image as a pro-growth polity. The clear suggestion is that the relative growth performance of Santa Barbara and Ventura counties over the last half-century must be explained in marketplace terms, perhaps in terms of relative proximity to the Los Angeles metropolitan center, rather than in terms of public policy.

However, during the 1960's, rapidly increasing tax rates in Santa Barbara more than off-set declining assessment ratios to reverse the relative positions of the two counties, with respect to the impact of taxes on capital costs to those providing tourist-related services and to oil producers. While the property taxation of residential retirement property and industrial property remained more favorable in Santa Barbara, Santa Barbara's relative cost advantage declined during the 1960's. Prior to the early 1960's, Santa Barbara tax policy followed a consistent course of providing relative capital costs advantages to all coastal zone users under consideration. In the 1960's, however, Santa Barbara reversed that policy which had previously compensated to some degree for the advantages enjoyed by Ventura County from its locational situation. While the relatively heavy taxation of oil property appears readily justifiable in terms of forcing oil firms to internalize certain environmental diseconomies, this study focuses attention on the likelihood that Santa Barbara has recently placed a competitive disadvantage on tourism-related services whose expansion might well enhance the coastal zone's economic health without incurring significant diseconomies.

TABLE I

DISTRICTS

YEAR	TOURISM	HIGH INCOME	OIL	INDUSTRIAL
1919	0.0010	-0.0040	-0.0057	-0.0043
1920	0.0040	-0.0033	-0.0052	-0.0034
1921	0.0040	-0.0037	-0.0044	-0.0037
1922	0.0043	-0.0062	-0.0096	-0.0060
1923	-0.0077	-0.0125	-0.0158	-0.0125
1924	-0.0015	-0.0048	-0.0080	-0.0050
1925	-0.0026	-0.0067	-0.0102	-0.0065
1926	-0.0027	-0.0057	-0.0102	-0.0061
1927	-0.0031	-0.0059	-0.0102	-0.0055
1928	0.0119	0.0094	0.0109	0.0098
1929	-0.0070	-0.0049	-0.0099	-0.0044
1930	-0.0036	-0.0039	-0.0090	-0.0047
1931	-0.0026	-0.0059	-0.0096	-0.0051
1932	-0.0039	-0.0075	-0.0107	-0.0066
1933	-0.0053	-0.0081	-0.0097	-0.0075
1934	-0.0053	-0.0074	-0.0074	-0.0068
1935	-0.0042	-0.0065	-0.0063	-0.0057
1936	-0.0023	-0.0064	-0.0072	-0.0057
1937	-0.0036	-0.0065	-0.0078	-0.0062
1938	-0.0052	-0.0072	-0.0078	-0.0065
1939	-0.0032	-0.0070	-0.0077	-0.0066
1940	-0.0064	-0.0075	-0.0079	-0.0073
1941	-0.0045	-0.0063	-0.0067	-0.0058
1942	-0.0034	-0.0067	-0.0059	-0.0062
1943	-0.0034	-0.0057	-0.0045	-0.0057
1944	-0.0026	-0.0050	-0.0036	-0.0042
1945	-0.0043	-0.0057	-0.0059	-0.0056
1946	-0.0047	-0.0069	-0.0076	-0.0072
1947	-0.0043	-0.0062	-0.0078	-0.0070
1948	-0.0052	-0.0073	-0.0084	-0.0081
1949	-0.0042	-0.0051	-0.0066	-0.0067
1950	-0.0051	-0.0064	-0.0093	-0.0075
1951	-0.0064	-0.0069	-0.0096	-0.0075
1952	-0.0055	-0.0068	-0.0115	-0.0071
1953	-0.0070	-0.0079	-0.0082	-0.0082
1954	-0.0072	0.0095	-0.0052	-0.0090
1955	-0.0078	0.0095	-0.0037	-0.0074
1956	-0.0078	0.0094	-0.0036	-0.0071
1957	-0.0070	-0.0047	-0.0036	-0.0061
1958	-0.0073	-0.0041	-0.0034	-0.0055
1959	-0.0046	-0.0043	-0.0054	-0.0068
1960	-0.0062	-0.0066	-0.0069	-0.0085
1961	-0.0046	-0.0060	-0.0060	-0.0081
1962	-0.0046	-0.0061	-0.0064	-0.0067
1963	-0.0020	-0.0029	-0.0037	-0.0039
1964	-0.0017	-0.0032	-0.0044	-0.0040
1965	-0.0022	-0.0026	-0.0036	-0.0034
1966	0.0030	-0.0020	-0.0011	-0.0030
1967	0.0010	-0.0042	-0.0021	-0.0041
1968	0.0010	-0.0040	-0.0011	-0.0030
1969	0.0022	-0.0024	0.0056	-0.0018
1970	0.0027	-0.0021	0.0016	-0.0040
1971	0.0033	-0.0014	0.0045	0.0091

Notes

[1]For the definition of R_1 and an evaluation of the impact of property taxation on the rental price of capital when the area under scrutiny is sufficiently large to require analysis of varying state income tax structures, see W. Elliot Brownlee, Jr., and W. Douglas Morgan, "The Rental Price of Capital and State-Local Tax Impact: A Cross Sectional View," unpublished manuscript.

[2]The pairs of districts are best identified by the Assessors' tax code. Accordingly, the districts chosen, by function, were:

	Santa Barbara	Ventura
Tourism	2-001	02-00
High Income	69-001	5-01 (through 1946) 5-03 (from 1947-)
Oil	63-001	91-01
Industrial	66-001	5-01

[3]In calculating values for DC_i we made the simplifying assumption that the price of capital goods was uniformly unity.