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FINANCIAL OPTIONS USED FOR FINANCING SELECTED
PUBLIC INVESTMENTS IN THREE WASHINGTON STATE
COMMUNITIES, 1930-1965

Nelson L. Bills

The past few decades have seen significant absolute and relative increases in numbers of urban residents. The process of city or community growth, however, has been exceedingly uneven in the sense that only a proportion of those villages and towns that stood on the threshold of urbanization and sustained population growth have emerged as cities. Some communities have experienced dramatic population increases while others have barely sustained themselves in terms of population, or at best have realized modest population gains. Finally, significant numbers of small communities have been faced with relatively large population declines.

Changes in the level and socioeconomic composition of the population in small communities have confronted local government with decisions pertaining to investments in public services. However, the investment process in small areas does not appear to be well described in the economic literature.¹ Particularly, studies which compare the financial arrangements made for funding relatively long sequences of capital expenditures in rural communities that have had various rates of population change are missing from the literature.

The objectives of this paper are to (1) describe capital expenditures made by municipal governments for selected public services in three Washington State communities that, respectively, gained, lost, and maintained a stable population over a 36-year period (1930-1965), and (2) contrast intercommunity

differences in options used for funding capital expenditures in each community.

THE COMMUNITIES

The analysis was directed towards three Washington State Communities—Kent, Roslyn, and Dayton. Each community contained approximately 2,000 residents in 1930. These particular communities were selected on the basis of population trends over the intervening 36-year period (1930-1965).² Kent, located about 20 miles from Seattle, had a population of 2,320 in 1930 but emerged as an urbanized area (Table 1). In the 1930-1965 period, Kent's population increased to 11,639 (approximately four times the 1930 level). Kent's population increases can be largely attributed to intensive industrial growth in the community's larger region—the Seattle metropolitan area.

Roslyn had a 1930 population of 2,063 but realized persistent population declines over the 1930-1965 period (Table 1). In 1965, Roslyn's population stood at 1,225. Losses in Roslyn's population can be primarily attributed to declines in employment opportunities in local coal mines. The town was founded in the late 1800's when coal deposits were discovered nearby. Coal production in the Roslyn area reached a maximum in the mid-1920's and was terminated in the early 1960's.

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¹ Prior research on capital expenditures by local units of government has generally concentrated on an explanation of intercommunity differences in levels of capital expenditures for a single or limited number of years. For example, Taylor [4] investigated relationships between capital expenditures and rates of population growth between 1920 and 1930 for those U. S. cities with a 1930 population between 30,000 and 300,000. Hansen [3] analyzed capital expenditures in 27 municipalities in East Flanders, Belgium that had realized population increases between 1956 and 1960. Both analysts confined themselves to a relatively short time frame and made no distinction between population growth and population decline.

² See Bills [1] for discussion of capital expenditures in each community as they related to population changes stemming from migration and annexation of adjacent land parcels.

Table 1. TOTAL POPULATION AND RATES OF POPULATION CHANGE FOR KENT, ROSLYN AND DAYTON, WASHINGTON, 1930-65*

Community	Total population					Population change			
	1930	1940	1950	1960	1965	1930-40	1940-50	1950-60	1960-65
	<u>No.</u>	<u>No.</u>	<u>No.</u>	<u>No.</u>	<u>No.</u>	<u>Pct.</u>	<u>Pct.</u>	<u>Pct.</u>	<u>Pct.</u>
Kent	2,320	2,586	3,278	8,385	11,639	11	27	156	39
Roslyn	2,063	1,743	1,537	1,285	1,225	-16	-12	-16	-5
Dayton	2,528	3,026	2,979	2,950	3,050	20	-2	-1	3

*Source: Washington State Office of Program Planning and Fiscal Management [6].

Dayton contained 2,528 residents in 1930 and realized modest population increases and decreases over the 1930-1935 period. The overall population increase was 522 (about 20 percent). The community's relative population stability corresponds closely with the stability of the local economy. Dayton is a county-seat town, situated in southeastern Washington. The local economy is oriented towards the production of wheat, peas, and asparagus. A local cannery, Dayton's single industry, has provided a seasonal source of nonfarm employment for local residents since 1934.

SELECTED PUBLIC SERVICES

Study was limited to those services that most municipalities in Washington State provide to local residents and constitute a large share of local community capital expenditures. Capital expenditures for the following municipal services were included: general government, police and fire protection, libraries, parks, water, sewer, streets and garbage collection.

CAPITAL EXPENDITURES DATA

Data pertaining to capital expenditures for each service were obtained from city records in each town and annual audit reports prepared from municipal records by the Washington State Auditor's Office. Reports from weekly newspapers were used as a supplemental data source. Expenditures for each year

were weighted by the American Appraisal Company's Index of Construction Costs [5] so that year to year variations in capital outlays could be expressed in real or constant dollar terms (1959 = 100).³

SOURCE OF FUNDS

Capital expenditures were allocated among the following fund sources: (1) local improvement districts (LID) that place tax assessments on limited parcels of a community's property, (2) intergovernmental transfers representing funds made available to communities by other units of government, (3) revenue and/or general obligation bonds sold in the open market, and (4) donations from private citizens and organizations.⁴ Approximately 67 percent of total capital expenditures made by each of the three city governments could be attributed to these four sources of funds (Table 2). The residual expenditures were funded via "other" sources, e.g., current revenues, accruals, investment earnings, or short-term city indebtedness.⁵

METHOD OF FINANCING

Each case community utilized a distinctly different array of financial options for financing capital expenditures during the 36-year period (Table 2). Kent, the growth community, funded over 50 percent of total capital expenditures by assuming increased bonded indebtedness. Intergovernmental

³ The use of an index of construction costs as a price deflator places emphasis on year-to-year differences in the supply cost of capital goods and services. Alternative and equally acceptable results could have been achieved by accounting for yearly variations in each community's ability to pay for goods and services.

⁴ A study conducted by the Bureau of Governmental Research, University of Washington [2] provides a detailed description of each funding mechanism employed by municipal governments in Washington State as specified by statutory requirements from the State legislature.

⁵ Despite the fact that "other" revenue sources for capital expenditures were of major importance in each community, city records showing capital outlays could not be used to further disaggregate expenditures by funding source.

Table 2 . TOTAL REAL CAPITAL EXPENDITURES BY SOURCE OF FUNDS IN KENT, ROSLYN AND DAYTON, WASHINGTON, 1930-65 (1959 = 100)

Source of Funds	All case communities		Kent		Roslyn		Dayton	
	Thou. dol.	Pct.	Thou. dol.	Pct.	Thou. dol.	Pct.	Thou. dol.	Pct.
Local Improvement								
Districts	1,166.3	12	1,122.2	14	--	--	44.1	3
Intergovernmental								
Transfers	1,369.9	14	802.2	10	287.8	56	280.9	18
Bonded Indebtedness .	4,139.2	41	4,010.6	51	11.6	2	114.9	7
Donations	52.9	a	20.4	a	10.6	2	21.9	1
Other ^b	3,265.4	33	1,939.5	25	207.2	40	1,117.7	71
Total	9,991.7	100	7,895.0	100	517.2	100	1,579.5	100

^aLess than 1 percent.

^bSurpluses from current operations, accruals, investment earnings, short term indebtedness, and other miscellaneous sources.

transfers, while substantial in absolute terms, were a relatively unimportant overall source of community investment capital. The formation of and assessment upon local improvement districts accounted for 14 percent of total expenditures during the study period. Donations constituted less than 1 percent (about \$20,000) of the total. Finally, about one-quarter of total investment funds in Kent were derived from "other" revenue sources.

The declining community (Roslyn) on the other hand, financed 96 percent of all capital expenditures between 1930 and 1965 with intergovernmental transfers and "other" sources of revenue (Table 2). The local improvement district was not used as a funding mechanism in Roslyn. Increases in bonded indebtedness accounted for only 2 percent of total expenditures compared with 51 percent in the growth case. While intergovernmental transfers were a relatively insignificant source of funds in the growing case, well over 50 percent of all capital expenditures by the Roslyn city government originated from this source.

The stable community (Dayton) exhibited still a third funding pattern. Like Roslyn, sources of funds over the 36-year period studied were dominated by intergovernmental transfers and "other" fund sources (Table 2). Together, less than 15 percent of total expenditures were funded by the formation of local improvement districts, increased bonded indebtedness, and donations. However, the Dayton community can be contrasted with Roslyn inasmuch

as intergovernmental transfers were less important than "other" sources of funds (71 percent of the total) during the study period.

DISTRIBUTION OF EXPENDITURES BY PUBLIC SERVICE

Tables 3 and 4 show the absolute and relative distribution of total real capital expenditures among each public service and each source of funds for the 1930-1965 period. Water, street and sewer services accounted for the largest proportion of total capital expenditures in each community. Capital expenditures for water services comprised 47 percent (about \$3.7 million) of the total in the growth case—Kent. Kent's sewer and street expenditures were a smaller proportion of the total (25 and 16 percent, respectively). In the declining case (Roslyn), however, streets accounted for 56 percent, while sewer facilities accounted for only 1 percent of total capital expenditures over the 36-year period.

In relative terms, Dayton (the stable community) and Kent allocated a similar proportion of total expenditures to street and sewer services (Table 4). The share of total expenditures devoted to police and fire protection was comparable in all three communities, but Dayton (the stable community) allocated relatively more expenditures to general government, library, and park services.

The importance of each funding service varied considerably for particular public services. The local

Table 3. DISTRIBUTION OF REAL CAPITAL EXPENDITURES BY SERVICE AND SOURCE OF FUND FOR KENT, ROSLYN AND DAYTON, WASHINGTON, 1930-1965 (THOUSANDS OF DOLLARS)

Source of Funds	Total Expenditures	General Government	Police and Fire Protection	Library	Parks	Water	Streets	Sewer	Garbage Collection
Total expenditures									
Kent	7,895.0	182.3	467.2	113.5	122.9	3,695.7	1,233.5	2,047.3	33.3
Roslyn	517.2	--	35.8	5.3	18.2	163.6	287.3	7.2	--
Dayton	1,579.5	75.0	108.2	63.5	120.8	462.0	310.2	412.1	27.7
Total improvement districts									
Kent	1,122.2	--	--	--	--	282.5	228.1	611.6	--
Roslyn	--	--	--	--	--	--	--	--	--
Dayton	44.1	--	--	--	--	--	1.9	42.2	--
Intergovernmental transfers									
Kent	802.2	--	--	--	--	--	697.6	104.6	--
Roslyn	287.8	--	--	--	8.9	116.5	162.4	--	--
Dayton	280.9	32.1	--	7.0	15.7	113.5	95.2	17.3	--
Bonded indebtedness									
Kent	4,010.6	--	173.9	76.9	--	2,670.9	--	1,089.1	--
Roslyn	11.6	--	11.6	--	--	--	--	--	--
Dayton	114.9	--	--	--	--	114.9	--	--	--
Donations									
Kent	20.4	--	6.0	--	14.4	--	--	--	--
Roslyn	10.6	--	7.7	--	2.9	--	--	--	--
Dayton	21.9	--	--	16.4	5.5	--	--	--	--
All other sources^a									
Kent	1,939.5	182.3	287.3	36.5	108.5	742.5	307.4	242.0	33.2
Roslyn	207.2	--	16.5	5.3	6.3	47.1	124.9	7.2	--
Dayton	1,117.7	42.9	108.2	40.1	99.6	233.5	213.1	352.7	27.7

^aSurpluses from current operations, accruals, investment earnings, short-term indebtedness, and other miscellaneous sources.

improvement district (LID) was used exclusively for expenditures on water, street, and sewer services in Kent and Dayton (the growth and stability cases).⁶ Eight percent of total capital expenditures for sewer facilities came from LID's, in comparison with 4 and 3 percent for water and street facilities, respectively, in the growth case (Table 4). Only 3 percent of total expenditures in the stable community were accounted for by sewer expenditures financed with LID. Street expenditures funded with LID constituted less than 1 percent (about \$2,000) of total expenditures in Dayton during the 1930-1965 period (Tables 3 and 4).

Intergovernmental transfers were limited to street and sewer expenditures in the growth community (see Kent in Table 3). Intergovernmental transfers were used to finance more services in Roslyn and Dayton. In Roslyn (the decline case), transfers from state and Federal governments on behalf of local water and sewer facilities accounted for 54

percent of total real capital expenditures during the 1930-1965 period (Table 4). Transfers were used to finance expenditures for general government, libraries, parks, water, streets and sewer facilities in the stable community (Dayton). Like the declining community (Roslyn), the bulk of expenditures financed by intergovernmental transfers were for water and street services in Dayton.

Bonded indebtedness was not used on a large scale in the declining or stable case (Roslyn or Dayton). Roslyn used a single bond issue to fund a portion of expenditures made for police and fire protection during the study period. Dayton limited bonded indebtedness to capital expenditures for water services. Bonded indebtedness was a primary source of investment funds for the growing community (Kent) during the period. Overall, bonded indebtedness represented the funding source for over 51 percent of total capital expenditures in Kent between 1930 and 1965. Bond issues were used to

⁶Concentration of LID expenditures in these services reflects statutory requirements imposed upon cities and towns in Washington State. The LID is confined by law to finance capital improvements which especially benefit particular property within the city. Water, street, and sewer facilities are among the few public services which provide a reasonably clear relationship between benefits received from the service and property ownership.

Table 4 PERCENTAGE DISTRIBUTION OF REAL CAPITAL EXPENDITURES BY SERVICE AND SOURCE OF FUNDS FOR ROSLYN, KENT AND DAYTON, WASHINGTON, 1930-65

Source of Funds	Total Expenditures	General Government	Police and Fire Protection	Library	Parks	Water	Street	Sewer	Garbage Collection
	Percent								
Total expenditures									
Kent	100.0	2.3	5.9	1.4	1.5	46.8	15.6	25.9	0.5
Roslyn	100.0	0	6.9	1.0	3.5	31.6	55.5	1.4	0
Dayton	100.0	4.7	6.8	4.0	7.6	29.3	19.6	26.2	1.7
Total improvement districts									
Kent	14.2	0	0	0	0	3.6	2.9	7.7	0
Roslyn	0	0	0	0	0	0	0	0	0
Dayton	2.8	0	0	0	0	0	0.1	2.7	0
Intergovernmental transfers									
Kent	10.1	0	0	0	0	0	8.8	1.3	0
Roslyn	55.6	0	0	0	1.7	22.5	31.4	0	0
Dayton	17.8	2.0	0	0.4	1.0	7.2	6.0	1.1	0
Bonded indebtedness									
Kent	50.8	0	2.2	1.0	0	33.8	0	13.8	0
Roslyn	2.2	0	2.2	0	0	0	0	0	0
Dayton	7.3	0	0	0	0	7.3	0	0	0
Donations									
Kent	0.3	0	0.1	0	0.2	0	0	0	0
Roslyn	2.1	0	1.5	0	0.6	0	0	0	0
Dayton	1.3	0	0	1.0	0.3	0	0	0	0
All other sources ^a									
Kent	24.6	2.3	3.6	0.5	1.4	9.4	3.9	3.1	0.4
Roslyn	40.1	0	3.2	1.0	1.2	9.1	24.1	1.4	0
Dayton	70.8	2.7	6.8	2.5	6.3	14.8	13.5	22.3	1.7

^aSurpluses from current operations, accruals, investment earnings, short-term indebtedness, and other miscellaneous sources.

finance investments in police and fire protection, libraries, water, and sewer facilities (Table 3).

A substantial proportion of total expenditures were not accounted for by intergovernmental transfers, local improvement districts, bonded indebtedness or donations. Tables 3 and 4 show the absolute and relative amounts of total expenditures by function that were funded through residual or "other" revenue sources in Kent, Roslyn and Dayton. This funding source was used for all services included for study (Table 3). Kent relied upon unspecified revenue sources for only 25 percent of total capital expenditures over the 36 year period, primarily for expenditures made in behalf of police and fire protection, water and street services (Tables 3 and 4). Similarly, expenditures financed by residual revenue sources in Roslyn were primarily on behalf of water and street services (Table 4). Dayton's dependence upon "other" revenue sources (71 percent of expenditures for all services) cuts across all functional

service categories included for study. Expenditures for water, street and sewer services that were financed by residual revenue sources comprised 50 percent of total expenditures made in the stable community (Dayton) during the 1930-1965 period.

SUMMARY AND IMPLICATIONS

This paper was directed towards a description and analysis of options used to finance public capital expenditures in communities that experienced varying rates of population change over a 36-year period (1930-1965). The description and analysis was confined to case comparisons of a selected set of services provided by three incorporated towns in Washington State.

Data presented in the case comparisons show that each community used substantially different options for financing public capital expenditures. The growth community made relatively more use of

special property assessments and bonded indebtedness to secure municipal investment capital. In contrast, over 50 percent of total capital expenditures in the declining case (Roslyn) were accomplished with intergovernmental transfers while a single bond issue accounted for only 2 percent of total expenditures. The stable community, on the other hand, financed a larger proportion of total expenditures (18 percent) with outside financial assistance than did the growth community but relied upon "other" revenue sources, i.e., operating surpluses, accruals, investment earnings, short-term credit, and miscellaneous sources to finance over 71 percent of all capital expenditures between 1930-1965.

Levels of public capital expenditures in small areas bear directly upon the quality and quantity of public services available to local residents. Therefore, results obtained in this study have implications for policy makers at the local, state and Federal levels

who were concerned with upgrading or increasing the levels of public services in small areas. The results must be interpreted with care because the study was confined to three observations, i.e., cases of community growth, decline and stability. Growing communities, the data suggest, are willing and able to make capital expenditures that require increases in bonded indebtedness. On the other hand, communities that are confronted with declining or stable populations may use entirely different strategies for financing capital expenditures. In particular, communities that are realizing persistent population losses may primarily confine themselves to those capital expenditures which can be largely underwritten with outside financial assistance, i.e., transfers of funds from other units of government. Communities with stable populations may also avoid expenditures which entail large increases in bonded indebtedness but depend more heavily upon sources of investment capital that include operating surpluses, accruals and short-term credit.

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