

APPENDIX

Regression Equations and Basic Data Used in Deriving the 1975 Projections of State and Local Government Expenditures for Structures and Equipment

The following model was used as the basis for the projections, with all data on a national income and product accounts basis:

	R^2	Period
(1) $E = R + U$		
(2) $R = PT + PrT + OT + FG$		
(3) $\log PT = -3.507 + 1.679 \log PT$	0.992	60-65
(4) $\log PrT = .353 + .793 \log WS_E$	.9995	50-65
(5) $WS_E = WS_{EP} \times P$		
(6) $\log WS_{EP} = 2.341 + .029t$ ($t=0$ for 1960)	.998	56-65
(7) $OT = -7.18 + .0533 GNP$	.996	51-65
(8) $\log FG = .911 + .0499t$ ($t=0$ for 1962) for Assumption A	.997	60-65
$FG = 9.15 + 1.15t$ ($t=0$ for 1963) for Assumption B	.995	62-65
(9) $SEQ_C = Sc + EQ_C$		
(10) $SEQ_C = .414 + .287 EQ_C$	.994	54-65
(11) $Ec = E + I_E$		
(12) $\log I_E = -1.419 + 1.714 \log I_{GNP}$	.985	53-65
(13) $EQ_C = 1.458 + .115t$ ($t=0$ for 1961)	.991	58-65
(14) $Sc = SE_C - EQ_C$		
(15) $NC_C = Sc - Oc$		
(16) $Oc = .168 + .013t$ ($t=0$ for 1960)	.611	55-65
(17) $\log I_E = -1.267 + 1.624 \log I_{GNP}$	.947	59-65
(18) $\log I_{EQ} = 1.632 + .185 \log I_{GNP}$	.728	58-65
(19) $S = Sc \times I_E$		
(20) $EQ = EQ_C \times I_{EQ}$		
(21) $SE = S + EQ$		
(22) $NC = S - Oc$		
(23) $O = .165 + .019t$ ($t=0$ for 1960)	.626	56-65

The notations used in the above equations follow:

- (1) E State and local government expenditures, in billions of current dollars.
- R State and local government receipts, in billions of current dollars.
- U State and local government surplus or deficit, in billions of current dollars.
- (2) PT State and local government personal taxes, in billions of dollars.
- PrT State and local government property taxes, in billions of dollars.
- OT State and local government taxes other than personal and property, in billions of dollars.
- FG Federal grants-in-aid to State and local governments, in billions of dollars.
- (3) PI National personal income, in billions of dollars.
- (4) WS_E State and local government wages and salaries for education, in billions of dollars.
- (5) WS_{EP} State and local government wages and salaries for education per schoolage person (ages 5-21, inclusive).
- P Schoolage population (ages 5-21, inclusive).
- (7) GNP Gross national product, in billions of dollars.
- (9) SEQ_C State and local government purchases of structures and equipment, in billions of 1958 dollars.
- Sc State and local government purchases of structures, in billions of 1958 dollars.
- EQ_C State and local government purchases of equipment, in billions of 1958 dollars.
- (11) I_E Implicit price deflator for State and local government expenditures, represented by the implicit price deflator for goods and services purchased by these governments (1958=100).
- (12) I_{GNP} Implicit GNP price deflator (1958=100).
- (15) NC_C State and local government purchases of new construction, in billions of 1958 dollars.
- Oc State and local government purchases of "other" structures than new construction, in billions of 1958 dollars.
- (17) I_S Implicit price deflator for State and local government expenditures for structures (1958=100).
- (18) I_{EQ} Implicit price deflator for State and local government expenditures for equipment (1958=100).
- (19) S State and local government expenditures for structures, in billions of current dollars.
- (20) EQ State and local government expenditures for equipment, in billions of current dollars.
- (21) SE State and local government expenditures for structures and equipment, in billions of current dollars.
- (22) NC State and local government expenditures for new construction, in billions of current dollars.
- (23) O State and local government expenditures for "other" structures than new construction, in billions of current dollars.