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MEASUREMENT OF STATE EFFORT TO SUPPORT PUBLIC EDUCATION.

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A NEW FORMULA FOR MEASURING STATE EFFORT TO SUPPORT PUBLIC EDUCATION WAS PRESENTED IN THIS PAPER. THE MEASURE USED FOR EXPENDITURES RELATED TO CURRENT EXPENDITURES OF PUBLIC ELEMENTARY AND SECONDARY SCHOOLS FOR GENERAL CONTROL, INSTRUCTIONAL SERVICE, OPERATION, MAINTENANCE, AND FIXED CHARGES AT STATE, INTERMEDIATE, AND LOCAL LEVELS OF ADMINISTRATION. PERSONAL INCOME, DEFINED AS THE MEASURE OF CURRENT INCOME RECEIVED FROM ALL SOURCES DURING THE CALENDAR YEAR BY THE RESIDENTS OF EACH STATE, WAS USED FOR FISCAL ABILITY. THREE DIFFERENT MEASURES FOR ALLOCATION FACTORS WERE USED FOR EACH STATE--(1) A CONSTANT EQUAL TO THE NATIONAL AVERAGE PERCENT OF INCOME DEVOTED TO EDUCATION, (2) ASSUMED ALLOCATION PROPORTIONAL TO THE RATIO OF PUBLIC SCHOOL CHILDREN TO TOTAL POPULATION IN A STATE, AND (3) THEORETICAL DIVISION OF A STATE'S TOTAL FISCAL ABILITY BETWEEN SCHOOLS AND ALL OTHER PURPOSES (INCLUDING FEEDING, CLOTHING, AND HOUSING THE TOTAL POPULATION OF THE STATE) IN PROPORTION RESPECTIVELY TO PUBLIC SCHOOL ATTENDANCE AND TOTAL POPULATION. THE THREE MEASURES OF EFFORT OBTAINED FOR EACH STATE WERE ADJUSTED PROVIDING A NATIONAL AVERAGE INDEX OF "1" FOR EACH OF THE THREE INDEXES. INDEXES LARGER THAN 1 REVEALED THAT A STATE WAS EXERTING GREATER THAN THE NATIONAL AVERAGE AND CONVERSELY, INDEXES OF LESS THAN "1" INDICATED THAT A STATE WAS NOT EXERTING UP TO THE NATIONAL AVERAGE. THE RESULTS SHOWED THE MEASURES OF EFFORT VARY GREATLY ACCORDING TO THE DEFINITION OF EFFORT. THIS PAPER WAS PREPARED FOR THE ANNUAL MEETING OF THE COMMITTEE ON EDUCATIONAL FINANCE, NATIONAL EDUCATION ASSOCIATION (CHICAGO, APRIL 6, 1965). (HW)

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States' financial effort for education, which includes the effort of local school districts, has been of direct concern in congressional meeting rooms and to those who direct the course of our nation. The congressional interest in measures of effort has been reflected in reports to various committees (Hirsch, 1959:6) and within the context of federal aid considerations.

The continuing discussion of federal aid to states for public educational purposes has been evident for some time. Indeed, proposals have been and are now before Congress requesting federal support for education or for general governmental purposes. The School Construction Act of 1956, the School Support Act of 1959 (Murray-Metcalf) and the School Systems Act of 1961 (Morse) all required states to continue making a "satisfactory effort" to support their public schools. In each case the proposal required that a penalty factor be placed in effect if the state fell below a certain level of effort.

The issue, moreover, is still very much alive. An attempt was made recently by Representative Edith Green of Oregon to introduce an effort amendment to HR 2361, 89th Congress, at the time the measure was being heard by the House Committee on Education and Labor. Although her amendment failed, there is still ample opportunity for it to be re-introduced before the expected final passage of the measure. If the concept of effort is to play an increasingly important role in legislative and executive considerations and is to continue to show an increased likelihood of approval, it is imperative that the question be

reexamined in depth. Judgments are being made of how states perform and an index of effort may become an integral part of federal aid programs. It is urgent that the implications of alternate effort indices be probed.

An attempt has been made thus far in this paper to indicate the poignancy and vitalness of improving the measures of educational effort. One of the major purposes of this presentation is to stimulate discussion in school finance circles as to what constitutes adequate state financial effort. To this end:

1. A review will be made of some of the literature relating to effort.
2. A new formulation for effort will be presented.
3. The component parts of this effort index will be examined to clarify the alternate data selections which may be made.
4. Some prepared statistical data of a comparative nature will be presented.

A Historical Note

Let no one think that questions related to effort are of recent vintage alone. For this is not the case, and there is no attempt to distinguish the work herein as a new creation. Rather, an attempt will be made to examine the effort question in its historical context, to draw from that background, and to develop a frame of reference which may be of greater significance to our present social and political situation.

As early as 1926, state financial effort to support public schools was defined as "the percentage of a state's economic power which it annually spends for education" (Norton, 1926:61). By this statement,

Norton meant that effort was the quotient of the total expenditures of a state and its "economic power" where economic power was a preformulated combination of wealth and income.

Leslie Chism (1939) utilized the yield from a "model tax plan" and two alternate tax-raising procedures as measures of fiscal ability. These were combined with various measures of educational need of states to form an ability measure to be utilized in determinations of effort.

Effort was defined by another group of investigators as "the quotient of current expenditures per weighted census unit divided by an estimated revenue per unit of educational need" (Mort, Lawler & Assoc., 1939:12). This notion of effort persisted in 1952 (Norton and Ruetter, 1952:255) and perhaps even to the present time.

The Effort Formulation

In addition to effort-measurement considerations already mentioned, the concept of effort has become increasingly significant to writers in the field of educational finance. This concept is being used as an aid for comparing the educational programs of various states. Benson in his school finance textbook charted the relationship between expenditure per pupil and income per capita for the state (Benson, 1961:59-65). Thus, the traditional concept of effort could easily be expressed by the algebraic equation:

$$(1)\quad \text{EFFORT} = \frac{\text{Expenditure}}{\text{Fiscal Ability}}$$

Differences arise in measures of effort from the various means of determining values for the numerator and denominator of the fraction.

This clear formulation of effort, however, sharpens the focus on the question of whether each state should be expected to devote the same portion of fiscal ability to public educational purposes. This issue was recognized as early as 1939:

> The use of the same percentage for all states of the yield of these selective taxes for the support of any one of the social functions of government, such as education, may not be entirely justified. (Mort, 1939:48)

Of course, in this discussion Mort was referring to need—such things as the amount, nature and distribution of children—rather than to various kinds of impediments to utilization of fiscal ability. He considered a weighted ADA reflecting cost differentials between elementary and secondary, urban and rural, and other factors. These factors have been considered in most works prior to this time by an often arbitrary choice of weighting factors to be multiplied by ADA and census data and applied to expenditure and fiscal ability as a so-called "need" factor. Thus, the variable percentage allocation factor which Mort referred to was readily engulfed in and made a part of expenditure and fiscal ability data. For this reason, there has been little previous consideration of altering the mathematical formulation of effort. Conceptually, effort has continued to be thought of as a quotient of educational expenditures and some measure of fiscal ability of states, where these measures may be modified slightly by the assignment of various weightings.

Several recent research reports concerned with educational finance are of significance to this discussion, and lead to a consideration of the reexamination of traditional effort formulations. James in some recent work (1963) recognized the importance of considering various governmental and situational impediments to the utilization of local

fiscal ability. These same impediments would undoubtedly be present to a similar or greater extent at state government levels.

In a recent research report, Lindman (1964) examined the relationship between total populations and public school children and demonstrated wide differences between localities in this ratio. He contended that local communities have different burdens placed upon their potential expenditures in the public sector of the economy. His thesis was that it is necessary to recognize demographic composition and characteristics of a community in order to make assumptions as to which portion of the public-sector fiscal ability might be allocated for educational purposes. In turn, this assumption may be extended to considerations of the combined state and local expenditures for public education. In short, is there an ideal allocation of resources?

Once attention is directed to the complexity of the question, myriad additional factors might be proposed as variables to be considered in determining the ideal allocation. In recognition of this, a modification of the traditional effort formulation is proposed as follows:

$$(2)\ \text{EFFORT} = \frac{\text{Expenditure}}{\text{Allocation Factor X Fiscal Ability}}$$

In this formulation, various situational impediments inhibiting the utilization of fiscal ability for education may be algebraically combined into an allocation factor.

In the pages that follow, an examination will be made of the three major components of the effort formulation.

Expenditure

It is quite clear that an endless discussion could transpire as to the items which should be included as educational expenditures in the consideration of a state's educational effort. Rather than examine the issue in such detail, an attempt will be made to identify the kinds of questions which must be answered in the computation of a state's expenditure.

Initially, it must be acknowledged that innumerable expenditures within state and local governments which are not normally considered educational expenditures per se may quite logically be included as components of a state's educational program. Should funds be counted as educational expenditures for such items as adult education and library services, which are normally considered as separate and discrete from education? What educational benefits are part of the public recreation program, and what portion of the costs may be considered as educational expenditures?

Are expenditures for parochial and other private schools to be considered educational expenditures of a state in determining the effort? Is Rhode Island, for example, to be considered as putting forth a relatively small effort in relation to its fiscal ability, when the residents of that state have other educational demands on their available resources? It is possible that a judicious choice of an allocation factor may be made which will reflect these alternate educational costs.

Various administrative expenses constitute another area of concern. Perhaps all agree that the expenses of county school departments and state departments of education should not be included in the total expenditure. It should be borne in mind, however, that there are

tremendous variations on these items. In a recent committee print of the Committee on Education and Labor of the House of Representatives, it was pointed out that expenditures for state departments vary from a low of about two hundred thousand dollars a year to about fourteen million dollars a year (Committee on Education and Labor, 1965:63). Related to this is the question of retirement expenditures. These expenditures easily may become obscured by complex accounting procedures. If the employers' contribution is made from the local school district, this item is displayed in the budget under "fixed charges." Alternately, if the state pays the employers' contribution it generally is not included in the educational expenditures of the state.

Most authorities agree that federal payments to local and state governments ought not to be considered expenditures of those governments in formulations of state effort. What has been considered less frequently, however, is the difference between the so-called voluntary expenditure and the expenditures required for qualification for federal matching programs. Should only voluntary (nonfederal matching) state and local expenditures be considered or should all expenditures of state and local governments be examined? Specifically, should state or local expenditures used as required matching amounts for federal funds be included as part of a state's expenditures in the determination of state effort?

There are even difficulties relative to various items included as direct educational expenditures and considered within the educational budget. Should the costs of health services be included as expenditures? What about the cost of school lunches paid for by the parents of the child? Are there not considerable accounting difficulties in making

interstate comparisons when, for example, Louisiana has substantial state support for school lunches? Another perplexing but related area is the question of whether funds utilized for so-called community services ought to be included.

Once the dilemma of current expenditure items is solved, another consideration is brought to mind—the inclusion or exclusion of capital outlay costs. Most statistical examinations of expenditures prefer to ignore this category of cost. Perhaps the prime reason is the difficulty of assigning these expenditures to a given year. Would it be possible, feasible and desirable to prorate and then assign these capital outlay costs?

These considerations point out all too clearly the need for the development of an improved system for making cost analyses of state and local educational expenditures. It is imperative to recognize the extent of uniformity that exists between the accounting procedures used in states, and to make appropriate adjustments of these expenditures when they are not uniform, in order that comparable expenditure totals be produced. Consider, in passing, whether differences exist between states—or for that matter, between districts—on the criteria utilized in determining whether various replacement items are to be included as maintenance costs, or listed as capital outlay expenditures.

A final question related to this area will be presented for consideration. Is it necessary to adjust the expenditures for wide differences in the cost of living or are such adjustments satisfactorily considered in the examination of "fiscal ability" in the denominator of the fraction? No definite answer can be presented, but the contention

is made herein that the close relationship between relative expenditure levels and fiscal ability will adjust for cost-of-living factors.

In this study, current expenses of education utilized by the National Education Association in their studies (National Education Association, 1962:137,146) will be examined as the measure of expenditure. Their data relates only to current expenditures of public elementary and secondary day schools for general control, instructional service, operation, maintenance, and fixed charges at state, intermediate, and local levels of administration. The use of this measure, however, in no way implies that other measures might not be more feasible in other times and places. Indeed, the author recognizes the necessity for including the costs of other items under the category of educational expenditures but is limited by considerations of time in this initial examination.

Fiscal Ability

In view of the other comments made at this conference in which the measurement of ability was discussed at full length, it does not seem necessary to prolong an extensive examination of the same issues in this presentation. However, it is essential to the understanding of this paper that a clear choice of alternate formulations for the measurement of fiscal ability be presented. Perhaps the key decision over time has been the determination as to whether the single measure index of ability should be used or whether a multiple index can be derived.

The history of school finance is dotted with various attempts at deriving multiple indices of fiscal capacity. Worthy of note are the diverse indices of tax-paying ability which have been proposed. Many of these indices are still in use in several states today. Colorado has

a relatively simple index which averages income and property tax data; some states have more complex measures utilizing various economic indicators. Before multiple indices are to be used for evaluating fiscal capacity and drawing relationships between states, the nature of the assumptions implicit in the acceptance of such procedures should be clearly delineated. This is especially true in regard to indices based on the so-called "model tax plan." Acceptance of such indices assumes that an ideal procedure for raising taxes can be derived. This is not substantiated in the literature of economics. Whether it is possible to present a meaningful rationale for the use of multiple indices which are external to a model tax plan is also doubtful. Perhaps various fiscal capacity measures can be statistically combined by utilizing one or another of the multivariate techniques.

Relative to the use of a single measure of financial ability, discussions have centered around the alternate acceptance of the economic concepts of stock and flow. In short, should a measure which represents the yearly flow of funds such as "income" be used as the measure of financial ability or, alternately, should the choice be a measure which is representative of the total stock of accrued fiscal capacity such as "wealth" or "property valuation"? The issue has been discussed on many fronts, with the apparent conclusion evidencing the practical realities of data collection in our time. Property valuations are more easily obtained for local school districts than for states. Additionally, there is a problem of determining true assessment ratios in making interstate comparisons. On the other hand, the lack of coterminality of local school districts with census tract units has

made it difficult to utilize income data in the examination of these districts. Thus, a pattern has been reasonably well established of using property valuation as a measure of fiscal capacity in intrastate comparisons and of using income as a measure in the examination of fiscal capacities between states.

An additional indication of the many recommended modifications of this practice is suggested by a 1959 report of the Educational Policy Commission of the National Education Association. This report stated:

> An illuminating index of capacity of a state to support education is the income left to its people after payments for personal taxes (Federal income tax) and for the basic necessities for food, clothing and shelter. This residual income may be divided by the number of school-age children in the state in order to find the total personal income available per child for all additional expenditures of every kind, public and private. (National Education Association, 1959:15-18)

One might be troubled about the procedure used by the Educational Policies Commission of subtracting a fixed allowance of $800 per person for food, clothing and shelter in all states. This does not take into consideration the cost-of-living differences between states. The fixed allowance simply does not represent comparable real purchasing power in Mississippi and California or New York.

In this study, personal income as determined by the Department of Commerce (1963) will be used as the measure of fiscal capacity. They define their data as the measure of current income received from all sources during the calendar year by the residents of each state.

Allocation Factor:

There will be no attempt in this section to identify the mulitude of situational constraints which may be placed upon and inhibit the

fiscal ability of a state. Rather, three allocation factors will be developed, and statistical comparisons will be made between the states on the basis of each. It will be a function of this study to test alternative allocation factors to determine the sensitivity of the effort indicator. All three of the effort comparisons will utilize the same measures of expenditure and fiscal ability--namely the two identified earlier.

Each index is a quotient in the form of equation (2) and derived by the choice of the allocation factor. Thus the general form of the index written symbolically is:

$$(3) \quad \text{Ind} = \frac{E}{QI}$$

Where: Ind = the effort index
E = expenditure
I = fiscal ability
and Q = allocation factor

In Index 1, the allocation factor is a constant equal to the national average percent of income devoted to education. This assumes that all states should be expected to spend the same proportion of their income (fiscal ability) on education.

In Index 2, the allocation is assumed proportional to the ratio of public school children to total population in a state. This assumes that the percent of the state's fiscal ability which is "expected" to be devoted to public education should be proportional to the percent of public school children in the total population of a state.

In Index 3, the allocation factor is based upon the theoretical division of a state's total fiscal ability between schools and all other purposes (including feeding, clothing and housing the total population of the state) in proportion respectively to public school attendance and total population. This index is derived from the work of Lindman (1964) and differs from the

second effort index in the way that ability is considered to be divided between public education and all other purposes. Thus, the three indices are as follows:

$$(4)\quad \text{Ind}_1 = \frac{E}{Q_1 I}$$

where: $Q_1 = \frac{\Sigma E}{\Sigma I}$

ΣE, ΣI = corresponding national totals

$$(5)\quad \text{Ind}_2 = \frac{E}{Q_2 I}$$

where: $Q_2 = \frac{\Sigma E}{\Sigma I} \cdot \frac{A}{N} \cdot \frac{\Sigma N}{\Sigma A}$

N = total population of a state
A = total public elementary and secondary school enrollment of a state

ΣN, ΣA = corresponding national totals

$$(6)\quad \text{Ind}_3 = \frac{E}{Q_3 I}$$

where: $Q_3 = \frac{C \cdot A}{CA+N}$

$$C = \frac{\Sigma E}{\Sigma I - \Sigma E} \cdot \frac{\Sigma N}{\Sigma A}$$

It would be useful to obtain comparability between the effort indices. Thus each index was adjusted mathematically with appropriate constants representing national data so that the national average index is one (1) for each of the three indices. If the index is larger than one, a state is considered to be exerting greater than national average. An index smaller than one would reflect an effort less than the average nationally.

The three indices developed have been applied to the states for the year 1960 by Carlson (1965). Results of the application of these indices are shown in Tables 1 and 2 (pages 19 and 22). Table 1 presents the

individual scores and ranking of each of the fifty states under each index. Columns 3, 5 and 7 in Table 1 show the ranking of the states. It is interesting to note that there is little change evident from Index 2 to Index 3.

Index 1, because of the way it was derived, is unaffected by the ratio of population to public school attendance. Indices 2 and 3 are related functions of N/A; the higher the ratio of N/A, the higher their measured effort. This bears a relationship to how states fare on the various indices. Consider Mississippi (N/A: 3.84) and Rhode Island (N/A: 6.41). The three indices rank Mississippi 8th, 28th, and 25th with scores of 1.236, .956, and .956 respectively. Table 1 shows Rhode Island has ranks of 48, 15 and 15 with scores of .823, 1.062, and 1.056 respectively. On the other hand, Maine, which comes closest to the national average of N/A, obtains the same scores and ranks from all three indices.

As a basis for comparing the indices an analysis has been prepared which shows the relationship between index results and four situational factors (Table 2). For each of the four factors shown in Table 2 the twelve highest and twelve lowest states were determined; the average values and ranks of each index were then found for each group of twelve states. Thus, in Table 2, what is shown is how each index measures the upper and lower quartile among the states for each factor listed. In turn, index scores will be examined for each of the four factors and speculative hypotheses will be presented.

In the case of the first factor, per capita income, it appears that Index 1 strongly "favors" those states whose per capita income is low. Also factors 2, 3, and 4 are favored by Indices 2 and 3. That is, each of these two indices has a greater positive relationship to percent enrollment increase, percent enrollment in private schools, and percent urban population.

Factor 2, percent increase in enrollment, shows consistent results among the three indices. In all three cases states with a high percent of increase

received smaller effort measures. The differences are less with indices 2 and 3, however. The results may reflect the fact that as school enrollment increases rapidly, educational finances tend to lag. In addition capital outlay expenses which are not included in this analysis would be greater in states with rapid enrollment increases. If the expenditures increase more slowly than enrollment population and income, the result is that effort measures suffer. Thus, based upon this factor, indices 2 and 3 seem to be preferable.

Relative to the third factor, Index 1 shows opposite results from indices 2 and 3, the former giving highest effort to the states with the highest relative public school enrollment. This is probably due to the fact that a state with many private school children needs to spend relatively less of its income for its fewer children in public schools. This might be construed by some as an influence favoring indices 2 and 3.

Although the result of the relationship from Factor 4 is perhaps incidental, it should be noted that indices 2 and 3 favor urban states to a slight degree. An interpretation of these results will be left to the judgment of more astute observers and those more politically involved.

Conclusions:

The necessity of recognizing the full policy implications inherent in the selection of an index of state financial effort has been pointed out in this paper. Far too often, measures of effort are presented either for comparative study or for legislative use without a recognition of factors which are being emphasized by the use of that plan, or without recognition of alternate effort indices which might be derived. The effort formulation which has been presented in this paper gives clear indication of alternative choices which might be made in the development of an effort index.

It is interesting to note that Index 2 is very similar to many of the effort measures which have been a part of previous federal aid proposals. The main variation between those proposals and Index 2 is that the legislative proposals drew a relationship between the number of public school children and the children of school age, while Index 2 draws a relationship between public school children and total population of a state. Thus, the federal proposals recognize educational burdens associated with private school children, but fail to take cognizance of burdens associated with total population. The possibility is highlighted of revamping effort formulas presently under federal consideration to the similar effort index, Index 2.

There is a need for further conceptual work before the implementation of action programs utilizing effort formulations. In this study an attempt has been made to bring to the fore some of the issues involved in the building of measures of effort. The testing of alternative allocation factors demonstrated the great sensitivity of the effort indicator. There is a need to concentrate on this type of analysis; as long as effort formulations are a major factor in the allocation of funds, caution should be exercised in the selection of the components of these indices.

Further study needed. All three components of the effort index are highly complex. The difficulty of selecting what is to be included in the three elements (expenditure, fiscal ability, allocation factor) is compounded by inadequate accounting systems, difficulties in measuring fiscal ability, and highly complex interactions between men. The governmental structures which hamper the derivation and evaluation of effort indices are the following:

1. the lack of adequate cost function and associated educational benefits for various noneducational governmental services closely related

to education, such as public libraries

2. the need for more sophisticated school accounting systems which give indication of the full costs of specific educational subprograms

3. the need for continued study of sociological and political arrangements which impede or aid achievement of full access to fiscal resources.

References

Benson, Charles S. (1961). The Economics of Public Education. Boston: Houghton Mifflin Co.

Carlson, Bruce M. (1965). "A Comparison of Indexes of State Effort to Support Public Schools." Unpublished Masters thesis, University of California, Los Angeles.

Chism, Leslie L. (1936). The Economic Ability of the States to Finance Public Schools. New York: Teachers College, Columbia University.

Committee on Education and Labor, House of Representatives (1965). Education Goals for 1965. Washington, D.C.: U.S. Government Printing Office.

Department of Commerce, Office of Business Economics (1963). Personal Income by States. Washington, D.C.: U.S. Government Printing Office.

Hirsch, Werner Z. (1959). Analysis of the Rising Costs of Public Education. Study Paper No. 4 for use of the Joint Economic Committee. Washington, D.C.: U.S. Government Printing Office.

James, H. Thomas, Thomas, J. Alan and Dyck, Harold (1963). Wealth Expenditures and Decision-Making in Education. Stanford, California: Stanford University Press.

Lindman, Erick L. (1964). State School Support and Municipal Government Costs. Los Angeles: University of California.

Mort, Paul R., Lawler, Eugene S., and Associates (1939). Principles and Methods of Distributing Federal Aid for Education. Washington, D.C.: U.S. Government Printing Office.

National Education Association (1959). National Policy and the Financing of Public Schools. A report by the Educational Policies Commission. Washington, D.C.: National Education Association.

National Education Association (1962). Financing the Public Schools. Washington, D.C.: National Education Association.

Norton, John K. (1926). The Ability of the States to Support Education. Washington, D.C.: National Education Association.

Norton, John K. and Reutter, E. Edmund Jr. (1952). "Federal Participation in the Financing of Education," Problems and Issues in Public School Finance. New York: Teachers College, Columbia University.

TABLE I

SCORES AND RANKS OF THE EFFORT OF THE FIFTY STATES BY THREE INDEXES, 1960*

State (1)	Index 1 Score (2)	Index 1 Rank (3)	Index 2 Score (4)	Index 2 Rank (5)	Index 3 Score (6)	Index 3 Rank (7)
Alabama.....	1.121	15	.936	32	.942	29
Alaska.....	.794	50	.803	48	.803	48
Arizona.....	1.180	9	1.021	19	1.027	19
Arkansas.....	1.082	22	.918	35	.923	36
California.....	1.120	16	1.108	10	1.108	10
Colorado.....	1.074	24	.963	26	.966	24
Connecticut.....	.839	43	.898	39	.880	42
Delaware.....	.825	45	.915	36	.913	37
Florida.....	.904	37	.908	37	.908	38
Georgia.....	1.026	27	.859	46	.864	46
Hawaii.....	.852	41	.781	50	.784	50
Idaho.....	1.120	17	.929	33	.934	32
Illinois.....	.825	46	.937	31	.933	33
Indiana.....	1.026	28	.974	23	.976	23
Iowa.....	1.153	13	1.070	13	1.074	13
Kansas.....	1.098	19	1.006	20	1.009	20
Kentucky.....	.892	39	.865	45	.866	45
Louisiana.....	1.428	1	1.352	1	1.355	1
Maine.....	.904	38	.905	38	.904	39
Maryland.....	.887	40	.929	33	.928	34

* From Carlson (1965:18-20).

TABLE I (continued)

State (1)	Index 1 Score (2)	Index 1 Rank (3)	Index 2 Score (4)	Index 2 Rank (5)	Index 3 Score (6)	Index 3 Rank (7)
Massachusetts....	.804	49	.968	24	.964	26
Michigan.....	1.098	20	1.065	14	1.065	4
Minnesota.....	1.240	6	1.265	2	1.247	2
Mississippi.....	1.236	8	.956	28	.965	25
Missouri.....	.825	47	.874	43	.873	44
Montana.....	1.239	7	1.162	6	1.164	5
Nebraska.....	.938	33	.942	29	.942	30
Nevada.....	.907	36	.789	49	.793	49
New Hampshire....	.836	44	.964	25	.960	28
New Jersey.....	.938	34	1.091	12	1.086	12
New Mexico.....	1.249	5	1.036	18	1.042	18
New York.....	.983	30	1.174	3	1.169	3
North Carolina...	1.063	25	.883	42	.888	41
North Dakota.....	1.161	12	1.048	16	1.052	16
Ohio.....	.916	35	.940	30	.939	31
Oklahoma.....	1.090	21	.957	27	.961	27
Oregon.....	1.270	4	1.163	4	1.167	4
Pennsylvania.....	.943	32	1.116	8	1.110	8
Rhode Island.....	.823	48	1.062	15	1.056	15
South Carolina...	1.109	18	.873	44	.880	43

TABLE I (concluded)

State (1)	Index 1 Score (2)	Index 1 Rank (3)	Index 2 Score (4)	Index 2 Rank (5)	Index 3 Score (6)	Index 3 Rank (7)
South Dakota.....	1.168	11	1.047	17	1.051	17
Tennessee.....	1.007	29	.892	41	.895	40
Texas.....	1.051	26	.980	22	.982	22
Utah.....	1.300	3	.988	21	.998	21
Vermont.....	1.081	23	1.163	5	1.161	6
Virginia.....	.848	42	.806	47	.807	47
Washington.....	1.169	10	1.103	11	1.105	11
West Virginia....	1.132	14	.920	34	.926	35
Wisconsin.....	.978	31	1.114	9	1.110	9
Wyoming.....	1.361	2	1.117	7	1.124	7

TABLE II

INDEX RESULTS COMPARED WITH STATES GROUPED BY FOUR FACTORS*

	Factor	Group	Index 1 Average Score	Index 2 Average Score	Index 3 Average Score
I.	Per Capita Income	High 12	.931	.974	.972
		Low 12	1.125	.961	.966
		Difference	-.194	.013	.006
II.	Per Cent Enrollment Increase 1950-1960	High 12	.936	.929	.928
		Low 12	1.063	.948	.951
		Difference	-.127	-.019	-.023
III.	Per Cent Enrollment in Private Schools	High 12	.934	1.069	1.064
		Low 12	1.090	.909	.915
		Difference	-.156	.160	.149
IV.	Per Cent Urban Population	High 12	.968	.993	.991
		Low 12	1.089	.881	.884
		Difference	-.121	.112	.107

* Data from Carlson (1965:43-45)