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EDUCATIONAL EXPENDITURES AND SCHOOL EFFICIENCY

There is a tendency today to overemphasize the importance of expenditures to educational efficiency. High expenditures are frequently interpreted to mean good schools, and low expenditures the contrary. Such assumptions are far from trustworthy, for states may have either inferior schools at high cost or superior schools at moderate expense.

Sometimes the importance attached to educational expenditures reaches surprising proportions, as in the following statement of the National Education Association:

Education Pays

> The volume of economic activity in the various states rises or falls with the level of educational expenditure.[1]

The implication seems to be that economic activity within a state depends upon the amount of money spent for schools. Wealthy states can and do spend more for education than poor states, but to attribute their wealth to this fact is to confuse cause and effect. Expensive schools will not make a poor state rich: they will neither increase its natural resources nor transform it into a highly industrialized community.

The usual method of evaluating a public service is first to analyze the scope and quality of benefits and then to determine whether the value of the service is commensurate with the cost involved. But many educational benefits cannot be analyzed at the state level, rendering this method only partially applicable to the evaluation of state school systems. Instead of analyzing benefits directly it is necessary to measure them indirectly by use of general statistical criteria.

1/ NEA Handbook, August, 1946, p. 296. Based upon Education: An Investment in People, United States Chamber of Commerce, 1944-1945.

School expenditures are one of these general criteria of evaluation. But they are only one, and if used alone for appraisal purposes it is obvious that the usual method of measuring the efficiency of a public service is reversed. Expenditures are then assumed to represent the quality of benefits, and hence, in a sense, to constitute benefits. Such an assumption provides a direct incentive to increase the cost of education without necessarily obtaining compensating improvements in performance. When expenditures are used in evaluating schools they should always be employed in combination with other criteria of measurement, and greatest weight should be placed upon non-expenditure factors.

The minor significance of expenditures to educational efficiency has been well expressed by Luther H. Gulick in a study of schools in New York State,[2/] who came to the following conclusions.

> The quality of education is not directly controlled by the cost, except possibly at the bottom end of the cost scale.
>
> The highest quality of education can be attained without extravagant expenditures.
>
> High expenditures do not automatically produce high-grade education.

The same findings are contained in this study, which illustrates the fallacy of emphasizing expenditures in the evaluation of state school systems. School expenditures are compared with other factors reflecting the quality of education to bring out that relationship between the two is frequently remote. Although not an evaluation of state school programs, the study shows plainly that school costs, in themselves, do not tell whether an educational system is good or bad. [3/]

2/ The Regents Inquiry, Education for American Life, New York: The McGraw-Hill Book Company, Inc., 1938, p. 143.

3/ A secondary purpose of the study is to provide statistical and other data which may be useful in analyzing education conditions for individual states. This information is contained in an appendix.

INFORMATION AVAILABLE FOR EVALUATING STATE SCHOOL SYSTEMS

A good education system depends largely upon certain fundamental factors, such as the competence of teachers and the adequacy of buildings, equipment, and courses of study. Schools should be accessible to rural as well as urban children, and students should be guided toward vocations for which they are fitted by aptitude and intelligence.

These fundamental factors, or benefits, are not readily expressed in statistical terms and so are not adapted for evaluating educational systems at the state level. It is consequently necessary to employ other types of criteria to measure the quality of state school systems. These criteria include per pupil expenditures, average teachers' salaries, rates of school attendance, and illiteracy rates. Indirectly, and to a degree, these reflect the extent to which the fundamental requirements of a good school system are realized. At best, however, they are very general guides to efficiency.

SIGNIFICANCE AND LIMITATIONS OF PER PUPIL EXPENDITURES

Per pupil expenditures are probably the type of cost data most frequently employed for comparing educational expenditures between states. As commonly derived, and as used in this study, they represent the annual expenditures of primary and secondary schools for all purposes except interest on debt, reduced to the cost per pupil in average daily attendance.

Since these expenditures indicate, in broad terms, the amount of money spent for such educational needs as instruction, school facilities, and other purposes essential to the educational program, they have a bearing upon school efficiency. But as a criterion of measurement they have distinct limitations which should be recognized when they are used for appraisal purposes.

In the first place, per pupil expenditures vary among the states according to differences in wealth and living costs. Costs of living, in

general, tend to be higher in industrial than in rural states, particularly if large metropolitan areas exist. Similarly, variations in perpupil expenditures are normal and do not necessarily mean corresponding differences in the quality of education. Teachers' salaries are usually the major element of school expenditures. That these salaries vary considerably between large cities and agricultural areas, and between wealthy and poor communities, is to be expected.

Per pupil expenditures are only a very general guide to efficiency. They do not indicate whether funds have been wisely allocated to the various essentials of the educational program. Analysis of a school system might show that, although competent instruction and adequate facilities are emphasized, little attention is given to selecting courses of study which fit the needs of all students, or to vocational guidance. If proportionate attention is not given to these needs, funds spent for other purposes fail in some degree in the accomplishment of their objective. A good school system requires a balanced program in which all essentials are given appropriate attention. A relatively inexpensive program may realize this aim more fully than a costly one.

ATTENDANCE RATES AS AN INDEX OF EDUCATIONAL EFFICIENCY

Attendance rates reflect direcly the degree to which educational benefits are realized quantitatively; that is, in terms of the proportion of persons receiving an education. But they also offer indirect evidence concerning other benefits.

Three factors of school attendance are considered in this study:

1. The percentage of children between the ages of 7 and 15 years attending school.
2. The number of high school graduates per 100 enrolled elementary and secondary school pupils.
3. The number of college students per 100 enrolled elementary and secondary school pupils.

These factors are termed attendance factors in this study, and the rates for them attendance ratings.

Children in School Attendance

The proportion of children between 7 and 15 years of age attending school suggests the extent to which compulsory education laws are in effect and enforced. It may also reflect the adequacy and accessibility of school facilities, particularly at the elementary level, for attendance rates are strongly conditioned by these factors. To some degree this proportion is an index to the sentiment of the general public toward education. But since all people should recongize the need of education at this age level it is not of great significance in this respect except in a negative sense in states where attendance rates are low.

It might be expected that there would be a close relationship between school attendance at these ages and illiteracy, but as can be seen in Appendix VIII this is not true in many instances. Several states with favorable attendance rates have high rates of illiteracy, probably attributable in part to an influx of unschooled persons from other states or foreign countries. When accompanied by low rates of school attendance at the elementary level high illiteracy rates are indicative of an inadequate educational program, but otherwise they probably reflect migratory factors.

High School Graduates

The proportion of high school graduates is a significant index of educational efficiency. A high ratio, particularly in states with large rural populations, indicates that secondary school facilities are adequate and that they are accessible to farm as well as city dwellers. Students of this group have usually passed the age of compulsory education to continue their schooling voluntarily. A favorable ratio of high school graduates

means that a relatively large section of the public recognizes the importance of high school training and appreciates the value of education.

Public interest in education is not likely to be confined to matters of attendance and graduation. Without much doubt it extends to the educational program itself, embracing such essentials as competent instruction, adequate study courses, and other requirements of a good school system. A high proportion of high school graduates for a state therefore indicates an educational program of general effectiveness.

College Students

These same considerations apply in states which show a favorable ratio of college students. Since a college education involves financial sacrifice on the part of many parents and students this factor would seem to be of greater significance than the ratio of high school graduates. But the proportion of persons obtaining an education at the college level is conditioned to some extent by differences among the states in wealth and in the accessibility of college facilities. In New York State, for example, more than one-half the population resides in a single large city which offers extensive college opportunities at a relatively low cost. Special conditions encourage a higher ratio of college students in some states than in others.

The success of instructors in influencing students to continue their education to higher levels is a mark of teaching ability, for it indicates that educators have interested students in their school work and convinced them of the advantages of further education. Hence a high ratio of high school graduates reflects back favorably upon the quality of elementary instruction, and a high proportion of college students carried the same implications for the quality of high school instruction.

COMPARISON OF EXPENDITURES AND ATTENDANCE RATES

Per pupil expenditures, to be a satisfactory general criterion of evaluation, would have to reflect with reasonable accuracy the quality of all educational benefits. They fail to meet this requirement for rates of school attendance. There is a tendency, to be sure, for these rates to drop as expenditures become lower, but a close correlation between attendance and costs for states generally is found only in states having unusually low expenditures. Among the other states there are too many exceptions for generalization.

Since, indirectly, attendance rates reflect other educational benefits, this lack of relationship with expenditures suggests similar conditions for benefits generally. Some states appear to obtain greater value for their educational dollar than others.

Appendix I contains data for all states on per pupil expenditures and attendance rates at the three levels of education. The states, listed in the order of importance for these expenditures, are divided into three groups of 16 states each, representing the upper, intermediate, and lower expenditure brackets. For convenience these divisions are referred to as Groups I, II, and III, respectively.

Figures are for the school year 1939-1940, which for the purpose of this study are preferable to those of later years because of abnormal war and postwar trends. It is emphasized, however, that the figures do not represent current conditions and do not constitute an evaluation of state educational programs.

The number of college students by state, as ordinarily derived, is compiled from the enrollment figures of institutions of higher learning. These figures include students from outside the state but not those who leave their home state to attend college elsewhere. The figures used in this study are estimates which include only the number of students from a state, regardless

of whether they attend locally or in other states. It is assumed that the proportion of native and outgoing students to the total enrollment figure was the same for each state in 1939-1940 as derived for 1938-1939 in a study made by the United States Office of Education.4/

As assembled in Appendix I the data are rather too detailed for general findings, but comparisons between individual states bring out points of interest. Despite lower expenditures, California has a higher rating for each attendance factor than New York. Ohio, at about 71 per cent of the cost, has higher attendance ratings for all factors than New Jersey. Utah, at 50 per cent of the cost, outranks New York for two attendance factors and closely approximates it for the third.

Table I is derived from Appendix I to show the general relationships between the upper, intermediate, and lower groups of states. Only the highest and lowest expenditures and attendance ratings are shown for each group:

TABLE I

DEGREE OF VARIATION IN ATTENDANCE RATINGS FOR UPPER, INTERMEDIATE, AND LOWER EXPENDITURE GROUPS

Group and Expenditure Range	Range of Attendance Ratings	Percentage of Children Aged 7-15 in School	Proportion of High School Graduates 1/	Proportion of College Students 1/
Group I ($157-$96)	Highest	97.5	6.7	9.6
	Lowest	90.4	3.1	5.2
Group II ($92-$74)	Highest	97.7	6.3	9.3
	Lowest	92.1	2.6	3.7
Group III ($69-$31)	Highest	96.1	4.9	7.1
	Lowest	62.6	2.3	2.6

1/ Number per 100 enrolled pupils in elementary and secondary schools.

A general relationship between expenditures and attendance is indicated by the decline in both when the highest and lowest ratings are considered separately. But there is little difference between the highest attendance ratings for Groups I and II in relation to the variation in expenditures.

It is significant that the highest attendance ratings for Group III

4/ Residence and Migration of College Students, Pamphlet No. 98, 1945.

are not only very superior to the lowest Group II but to those of Group I as well:

	Children in School	High School Graduates	College Students
Group III - highest ratings	96.1	4.9	7.1
Group II - lowest ratings	92.1	2.6	3.7
Group I - lowest ratings	90.4	3.1	5.2

From this tabulation it is apparent that states having relatively low expenditures may compare favorably for attendance with high-expenditure states. Table II, also derived from Appendix I, illustrates more completely the extent to which this may be true among the states. In this table the lowest attendance ratings of the four states having the highest expenditures are compared with equivalent or better ratings of the other 44 states. The 12 remaining high-expenditure states of Appendix I are considered to comprise Group I in this comparison. The symbol (-) is used to denote ratings which compare unfavorably on this basis.

The ranges in per pupil expenditures are as follows:

Four highest-expenditure states	$131 to $157
Group I[a/]	96 to 115
Group II	74 to 92
Group III	31 to 69

Only one state of Group III, North Dakota, compares favorably on this basis for a majority of attendance factors, indicating that below a certain point expenditures are related to attendance. But 21 of the 28 states comprising Groups I and II compare favorably for two or more attendance factors, a condition which would not be found if expenditures were closely related to attendance for the upper and intermediate groups.

The following tabulation shows the percentage of states of Groups I and II which are comparable with the four high-expenditure states:

	7-15 Year Age Group	High School Graduates	College Students
Group I	67%	83%	75%
Group II	38	69	62

a/ Includes the 12 remaining high-expenditure states.

TABLE II: COMPARISON OF LOWEST ATTENDANCE RATINGS OF THE FOUR STATES HAVING HIGHEST EXPENDITURES WITH EQUAL OR BETTER RATINGS OF OTHER STATES.

	State	Per Pupil Expenditures	Children Aged 7-15 Years in School	High School Graduates	College Students
	New York	$157	96.9	4.8	9.4
	California	142	97.5	5.8	9.6
	New Jersey	136	96.6	5.1	5.6
	Nevada	131	96.4	4.8	7.9
	Lowest Ratings of Four States		96.4	4.8	5.6
Group I States	Illinois	115	96.4	5.6	8.6
	Massachusetts	115	97.1	6.0	6.7
	Connecticut	109	97.5	5.6	-
	Delaware	109	-	5.0	6.2
	Montana	109	96.4	5.9	7.6
	Wyoming	109	96.8	5.7	5.6
	Rhode Island	105	97.2	-	-
	Washington	105	96.9	6.2	7.8
	Minnesota	100	-	5.6	6.5
	Oregon	97	-	6.7	8.7
	Arizona	96	-	-	-
	Ohio	96	97.1	5.7	7.2
Group II States	Colorado	92	-	5.1	7.7
	Michigan	92	96.9	-	6.0
	Pennsylvania	92	96.8	4.9	-
	New Hampshire	91	-	5.2	5.6
	Wisconsin	91	-	5.9	6.3
	Indiana	86	96.7	5.4	-
	Iowa	86	-	5.8	-
	South Dakota	86	-	5.7	6.1
	Vermont	85	-	-	-
	Maryland	84	-	-	6.0
	Kansas	83	-	6.0	7.3
	Missouri	80	-	-	-
	Idaho	78	96.8	5.6	6.2
	Utah	78	97.7	6.0	9.3
	New Mexico	76	-	-	-
	Nebraska	74	96.4	6.3	6.1
Group III States	North Dakota	69	-	4.9	7.1
	Texas	66	-	-	5.7
	Maine	64	-	-	-
	West Virginia	64	-	-	-
	Oklahoma	63	-	-	5.8
	Florida	58	-	-	-
	Louisiana	57	-	-	-
	Virginia	48	-	-	-
	Kentucky	47	-	-	-
	Tennessee	44	-	-	-
	Georgia	42	-	-	-
	North Carolina	41	-	-	-
	South Carolina	40	-	-	-
	Alabama	36	-	-	-
	Arkansas	31	-	-	-
	Mississippi	31	-	-	-

Symbol (-) indicates lower rating than lowest of the four high-expenditure states.

Source: See Appendix I.

A degree of relationship between expenditures and attendance is indicated by the drop in percentage figures from Group I to Group II. Several more states of Group I than of Group II compare favorably for all three factors. But except for attendance of children between the ages of 7 and 15 years, more Group II states compare favorably than do not.

The situation with respect to Nebraska is of interest. Although the state is 32nd in expenditures it outranks 20 of the 31 states having higher costs for two or more attendance factors. Nebraska was rated as one of the 12 best states for education in an evaluation of state school systems made in 1946. (See Appendix X)

To summarize, a consistent relationship between per pupil expenditures and attendance rates is indicated only for states having unusually low costs. Of the four states with highest expenditures, California alone shows a high rating for all three attendance factors, and even in the case of this state nine others with lower expenditures have equal or better ratings for high school graduates. In some instances one state may achieve better ratings than another for certain attendance factors at approximately one-half the cost.

CONCLUSION

This study, as has been stated, is not an evaluation of state school systems. Such an evaluation has been recently made, however, by John W. Studebaker, United States Commissioner of Education, in which per pupil expenditures and five other criteria related to attendance were used as the basis of measurement. The six criteria were weighted equally and the states rated as (1) best, (2) above average, (3) below average, and (4) poorest. (See Appendix X)

Among the states having moderate expenditures, Nebraska and Utah are rated as best and Idaho is rated as above average. Of the high-expenditure

states, Arizona is rated as poorest, and Delaware and Rhode Island are rated below average.

It should be noted in this evaluation that minor significance is given to the expenditure factor, which was weighted at only 16 2/3 per cent. Main reliance should be placed upon attendance rates and related information in the appraisal of state school systems. To do otherwise overemphasizes the expenditure factor, resulting in a distorted picture of educational benefits, and encourages higher costs for schools than are commensurate with the quality of services attained. Legislators should consider these points in their planning of educational appropriations.

EXPLANATION OF APPENDIX TABLES

Detailed tables prepared for this study are contained in the appendix. Some of the tables furnish basic material for text treatment, but many are inserted as supplementary information for use in making further analyses of state school systems where these may be desired.

Several of the tables consider the relationships between average teachers' salaries and other criteria of school evaluation. These salaries, which are based upon the annual payments to supervisors and principals as well as to teachers, are usually the major element of school costs and so, in most states, are correlated fairly closely with per pupil expenditures. There are a number of exceptions, however, to this general condition. (Appendix XI)

Appendixes II and III provide a comparison between teachers' salaries and attendance rates similar to that shown for per pupil expenditures. The results serve to emphasize the conclusion reached in the text that expenditure data are of very limited value in the appraisal of state school systems.

High turnover rates for teaching personnel are often attributed to low salaries. Appendix IV indicates that there is a basis for such an assumption, for 71 per cent of the states with salaries above the national average have low or average turnover rates, as against only 39 per cent of the states which have salaries below the national level. Here too, however, there are numerous exceptions to any generalization. Four high-salary states also have high rates of turnover, and seven low-salary states have low turnovers.

Appendix V is taken from a study made in 1932 by the National Education Association. Five factors of educational efficiency were considered in this study:

1. The amount of attendance, in terms of both the proportion of persons between the ages of 5 and 17 years in school attendance and the number of days attended during the school year.

2. Holding power, or the degree of success attained by the educational system in holding children in school between the ages of 14 and 17 years. This is the age period during which there is the greatest tendency to leave school.

3. Average teachers' salaries.

4. Value of school property.

5. Literacy of native-born persons beyond the age of 10 years.

The states are listed in this table according to the percentage of urban population and rated from 1 to 48 for each factor to indicate the relative standing of each state in relation to the others. The Association points out that the study does not attempt to set up a single measure of state school efficiency, and the table should not be interpreted as an evaluation of state school systems.

In a few states, notably California, there is a close relationship between high salaries and favorable standings for attendance, holding power, and literacy. Correlation is also shown between low salaries and unfavorable standings for most of the southern states. But among many states there is little or no relationship. In Utah and Iowa, for example, relatively low salaries are accompanied by comparatively good standings for the other three factors, and in Pennsylvania and Maryland the opposite situation is found. In several other states correlation is shown only for one or two of the three factors.

Appendix VI, also taken from the study of the National Education Association, shows the relationship between salaries and the education of teachers for the 29 states for which information was available. In several states the degree of correlation is very close, and in 19 of them the differences in rank between the two factors are five points or less. In the other ten states the variation is from six to thirteen points.

The trend of teachers' salaries from 1936 to 1944 is shown in Appendix VII. All states experienced increases during this period, the range being from 13 to 83 per cent. Thirty-seven states show a rise of 30 per cent or more. Large percentage increases among the low-salary states indicate a trend toward bringing the salary levels of the states into closer conformity.

Appendix VIII presents data for illiteracy of adults and army rejections for illiteracy. In Appendix IX are shown the percentage of urban population and the per capita income for each state in 1940. These factors may or may not appear to be related to educational efficiency, depending somewhat upon the state in question. They are included as supplementary information which may have a bearing upon the educational system in certain instances.

Appendix X is the evaluation given state school systems in 1946 by John W. Studebaker, United States Commissioner of Education. Appendix XI ranks the states from 1 to 48 for each factor of evaluation used in this study and also for other related factors considered in appendix tables. The purpose of this table is to show the relative position of any state with respect to these various factors.

The tables included in the appendix can be useful in analyzing educational situations and problems of individual states. Using Idaho as an example, the state outranks eight of the high-expenditure states for attendance of children from 7 to 15 years of age, six for high school graduates, and five for college students. (Appendix I) It ranks 10th, 14th, and 16th among the states for these three factors, respectively, although it is 29th in expenditures. (Appendix XI) The states rates well for literacy. (Appendix VIII)

In 1944 Idaho held approximately the same relative position (30th) for teachers' salaries as in 1940. (Appendix VII). Yet is is rated as having an educational system above average in the Studebaker evaluation. (Appendix X) It was one of two states in the lower group for percentage of urban population to have a rank of above average in this evaluation. (Appendix IX) Apparently, an unusually large rural population tends to affect educational efficiency adversely. That Idaho is an exception testifies to the success of its people in attaining high educational standards regardless of unfavorable factors.

The facts suggest plainly that although Idaho may have limited funds available for school purposes and encounters special problems with respect to its large rural population it has been able to provide good schools. The people of this state, apparently, get a comparatively high return for their educational expenditures.

APPENDIX

APPENDIX I: COMPARISON OF PER PUPIL EXPENDITURES WITH SCHOOL ATTENDANCE FOR SCHOOL YEAR 1939-1940

State	Per Pupil Expenditures[1]	Percentage of Children Aged 7-15 Years Attending School	Proportion of High School Graduates[2]	Proportion of College Students[2]
New York	$157	96.9	4.8	9.4
California	142	97.5	5.8	9.6
New Jersey	136	96.6	5.1	5.6
Nevada	131	96.4	4.8	7.9
Illinois	115	96.4	5.6	8.6
Massachusetts	115	97.1	6.0	6.7
Connecticut	109	97.5	5.6	5.4
Delaware	109	96.3	5.0	6.2
Montana	109	96.4	5.9	7.6
Wyoming	109	96.8	5.7	5.6
Rhode Island	105	97.2	4.5	5.2
Washington	105	96.9	6.2	7.8
Minnesota	100	95.9	5.6	6.5
Oregon	97	96.0	6.7	8.7
Arizona	96	90.4	3.1	5.3
Ohio	96	97.1	5.7	7.2
Colorado	92	95.9	5.1	7.7
Michigan	92	96.9	4.1	6.0
Pennsylvania	92	96.8	4.9	4.4
New Hampshire	91	96.0	5.2	5.6
Wisconsin	91	95.9	5.9	6.3
Indiana	86	96.7	5.4	4.8
Iowa	86	95.7	5.8	5.5
South Dakota	86	95.4	5.7	6.1
Vermont	85	95.7	4.1	4.6
Maryland	84	94.8	4.1	6.0
Kansas	83	96.3	6.0	7.3
Missouri	80	93.7	4.5	7.3
Idaho	78	96.8	5.6	6.2
Utah	78	97.7	6.0	9.3
New Mexico	76	92.1	2.6	4.7
Nebraska	74	96.4	6.3	6.1
North Dakota	69	94.1	4.9	7.1
Texas	66	92.4	4.1	5.7
Maine	64	96.1	4.5	3.6
West Virginia	64	94.3	3.8	3.8
Oklahoma	63	95.2	3.8	5.8
Florida	58	91.7	3.3	3.9
Louisiana	57	90.2	3.3	5.0
Virginia	48	91.1	3.4	3.7
Kentucky	47	62.6	2.7	3.6
Tennessee	44	88.6	2.6	3.3
Georgia	42	88.9	2.4	3.0
North Carolina	41	92.6	3.4	3.2
South Carolina	40	91.6	2.6	3.4
Alabama	36	90.6	2.3	2.6
Arkansas	31	87.2	2.6	2.7
Mississippi	31	86.7	2.3	2.6

1. Based upon pupils in average daily attendance, 1939-1940.

2. Number per 100 pupils enrolled in elementary and secondary schools. Source: U. S. Office of Education, Biennial Surveys of Education in the United States, Statistics of State School Systems, 1938-1940 and 1941-1942, pp. 28, 60, and 70; and Residence and Migration of College Students, Pamphlet No. 98, 1945, pp. 11 and 13; U.S. Department of Commerce, Statistical Abstract of the United States, 1944-1945, pp. 226, 227, and 240.

APPENDIX II: COMPARISON OF AVERAGE TEACHERS' SALARIES WITH SCHOOL ATTENDANCE FOR SCHOOL YEAR 1939-1940

State	Average Teachers' Salaries	Percentage of Children Aged 7-15 Years Attending School	Proportion of High School Graduates[1]	Proportion of College Students[1]
New York	$2,604	96.9	4.8	9.4
California	2,351	97.5	5.8	9.6
New Jersey	2,093	96.6	5.1	5.6
Massachusetts	2,037	97.1	6.0	6.7
Connecticut	1,861	97.5	5.6	5.4
Rhode Island	1,809	97.2	4.5	5.2
Washington	1,706	96.9	6.2	7.8
Illinois	1,700	96.4	5.6	8.6
Delaware	1,684	96.3	5.0	6.2
Maryland	1,642	94.8	4.1	6.0
Pennsylvania	1,640	96.8	4.9	4.4
Ohio	1,587	97.1	5.7	7.2
Michigan	1,576	96.9	4.1	6.0
Nevada	1,557	96.4	4.8	7.9
Arizona	1,544	90.4	3.1	5.3
Indiana	1,433	96.7	5.4	4.8
Utah	1,394	97.7	6.0	9.3
Colorado	1,393	95.9	5.1	7.7
Wisconsin	1,379	95.9	5.9	6.3
Oregon	1,333	96.0	6.7	8.7
Minnesota	1,276	95.9	5.6	6.5
New Hampshire	1,258	96.0	5.2	5.6
Montana	1,184	96.4	5.9	7.6
West Virginia	1,170	94.3	3.8	3.8
Wyoming	1,169	96.8	5.7	5.6
Missouri	1,159	93.7	4.5	5.2
New Mexico	1,144	92.1	2.6	3.7
Texas	1,079	92.4	4.1	5.7
Idaho	1,057	96.8	5.6	6.2
Iowa	1,017	95.7	5.8	5.5
Kansas	1,014	96.3	6.0	7.3
Oklahoma	1,014	95.2	3.8	5.8
Florida	1,012	91.7	3.3	3.9
Louisiana	1,006	90.2	3.3	5.0
Vermont	981	95.7	4.1	4.6
North Carolina	946	92.6	3.4	3.2
Virginia	899	91.1	3.4	3.6
Maine	894	96.1	4.5	3.6
Tennessee	862	88.6	2.6	3.3
Nebraska	829	96.4	6.3	6.1
Kentucky	826	62.6	2.7	3.7
South Dakota	807	95.4	5.7	6.1
Georgia	770	88.9	2.4	3.0
North Dakota	745	94.1	4.9	7.1
Alabama	744	90.6	2.3	2.6
South Carolina	743	91.6	2.6	3.4
Arkansas	584	87.2	2.6	2.7
Mississippi	559	86.7	2.3	2.6

1. Number per 100 pupils enrolled in elementary and secondary schools.

Source: Office of Education, Biennial Surveys of Education in the United States, Statistics of State School Systems, 1939-1940 and 1941-1942, pp. 16, 60, and 70; Residence and Migration of College Students, Pamphlet No. 98, 1945, pp. 11 and 13. Department of Commerce, Statistical Abstract of the United States, 1944-1945, pp. 226, 227, and 240.

APPENDIX III: COMPARISON OF LOWEST ATTENDANCE RATINGS OF THE FOUR STATES HAVING THE HIGHEST SALARIES WITH EQUAL OR BETTER RATINGS OF OTHER STATES

State	Average Teachers' Salaries	Children Aged 7-15 Years in School	High School Graduates	College Students
New York	$2,604	96.9	4.8	9.4
California	2,351	97.5	5.8	9.6
New Jersey	2,093	96.6	5.1	5.6
Massachusetts	2,037	97.1	6.0	6.7
Lowest Ratings of Four States		96.6	4.8	5.6
Connecticut	1,861	97.5	5.6	-
Rhode Island	1,809	97.2	-	-
Washington	1,706	96.9	6.2	7.8
Illinois	1,700	-	5.6	8.6
Delaware	1,684	-	5.0	6.2
Maryland	1,642	-	-	6.0
Pennsylvania	1,640	96.8	4.9	-
Ohio	1,587	97.1	5.7	7.2
Michigan	1,576	96.9	-	6.0
Nevada	1,557	-	4.8	7.9
Arizona	1,544	-	-	-
Indiana	1,433	96.7	5.4	-
Utah	1,394	97.7	6.0	9.3
Colorado	1,393	-	5.1	7.7
Wisconsin	1,379	-	5.9	6.3
Oregon	1,333	-	6.7	8.7
Minnesota	1,276	-	5.6	6.5
New Hampshire	1,258	-	5.2	5.6
Montana	1,184	-	5.9	7.6
West Virginia	1,170	-	-	-
Wyoming	1,169	96.8	5.7	5.6
Missouri	1,159	-	-	-
New Mexico	1,144	-	-	-
Texas	1,079	-	-	5.7
Idaho	1,057	96.8	5.6	6.2
Iowa	1,017	-	5.8	-
Kansas	1,014	-	6.0	7.3
Oklahoma	1,014	-	-	5.8
Florida	1,012	-	-	-
Louisiana	1,006	-	-	-
Vermont	981	-	-	-
North Carolina	946	-	-	-
Virginia	899	-	-	-
Maine	894	-	-	-
Tennessee	862	-	-	-
Nebraska	829	-	6.3	6.1
Kentucky	826	-	-	-
South Dakota	807	-	5.7	6.1
Georgia	770	-	-	-
North Dakota	745	-	4.9	7.1
Alabama	744	-	-	-
South Carolina	743	-	-	-
Arkansas	584	-	-	-
Mississippi	559	-	-	-

Symbol (-) indicates lower rating than lowest of the four high-salary states.
Source: See Appendix II.

APPENDIX IV: COMPARISON OF TEACHERS' SALARIES FOR 1939-1940 WITH TURNOVER RATES IN NORMAL YEAR

State	Average Teachers' Salaries	Percentage of Teacher Turnover in Normal Year[1]
New York	$2,604	6
California	2,351	10
New Jersey	2,093	7
Massachusetts	2,037	5
Connecticut	1,861	3
Rhode Island	1,809	a
Washington	1,706	10
Illinois	1,700	5
Delaware	1,684	13
Maryland	1,642	9
Pennsylvania	1,640	4
Ohio	1,587	10
Michigan	1,576	15
Nevada	1,557	22
Arizona	1,544	14
Indiana	1,433	5
Utah	1,394	9
Colorado	1,393	15
Wisconsin	1,379	21
Oregon	1,333	14
Minnesota	1,276	15
New Hampshire	1,258	10
Montana	1,184	11
West Virginia	1,170	10
Wyoming	1,169	14
Missouri	1,159	25
New Mexico	1,144	19
Texas	1,079	10
Idaho	1,057	19
Iowa	1,017	18
Kansas	1,014	12
Oklahoma	1,014	10
Florida	1,012	5
Louisiana	1,006	10
Vermont	981	22
North Carolina	946	10
Virginia	899	3
Maine	894	15
Tennessee	862	10
Nebraska	829	14
Kentucky	826	11
South Dakota	807	20
Georgia	770	25
North Dakota	745	20
Alabama	744	8
South Carolina	743	15
Arkansas	584	9
Mississippi	559	15
National Average	1,441	10

1. Percentage of total number of classroom teachers, principals, and supervisors.
a. Not available.

Source: United States Office of Education, Biennial Surveys of Education in the United States, Statistics of State School Systems, 1939-1940 and 1941-1942, p. ? Hearings before A Subcommittee of the Committee on Education and Labor, United States Senate, Seventy-Eighth Congress, First Session, on S. 637, p. 28.

APPENDIX V: STANDING OF THE STATES ON FIVE FACTORS RELATED TO SCHOOL EFFICIENCY, 1930

States	Rank of the States for 1930 in: Amount of Attendance	Holding Power	Teachers' Salaries	Value of School Property	Literacy
1	2	3	4	5	6
Rhode Island	22	45	18	13	25
Massachusetts	2	17	4	8	13
New York	3	16	1	1	16
New Jersey	8	35	3	3	24
Illinois	7	23	8	9	21
California	6	1	2	2	7
Connecticut	9	40	5	4	15
Michigan	1	12	13	5	17
Ohio	5	7	6	7	27
Pennsylvania	20	33	9	15	22
Maryland	27	46	14	31	34
New Hampshire	10	22	21	20	23
Washington	21	3	12	21	6
Indiana	13	10	16	22	28
Wisconsin	14	21	19	10	19
Utah	12	2	20	28	4
Delaware	18	29	11	14	33
Florida	39	34	41	26	39
Oregon	28	5	10	17	5
Missouri	15	37	24	25	31
Colorado	30	15	17	16	26
Minnesota	17	24	22	12	12
Texas	40	32	37	36	35
Maine	4	18	35	30	30
Louisiana	42	44	36	39	47
Iowa	11	14	29	27	14
Kansas	26	11	27	29	20
Nevada	19	4	15	6	1
Nebraska	24	13	30	19	11
Arizona	35	31	7	35	18
Tennessee	38	36	38	44	40
Oklahoma	36	20	31	37	32
Montana	16	9	25	18	3
Vermont	25	26	33	33	29
Virginia	37	42	43	41	42
Wyoming	29	8	23	11	2
Georgia	46	48	46	48	43
Kentucky	41	41	40	46	37
Idaho	33	6	26	32	9
Alabama	45	39	44	42	45
West Virginia	32	38	32	34	36
North Carolina	43	43	42	38	44
New Mexico	34	30	28	40	41
South Carolina	48	47	45	43	48
Arkansas	44	28	47	45	38
South Dakota	23	19	34	23	8
Mississippi	47	27	48	47	46
North Dakota	31	25	39	24	10

Source: National Education Association, Research Bulletin, May, 1932, p. 126.

APPENDIX VI: RELATIONSHIP BETWEEN EDUCATION AND SALARIES OF TEACHERS

State	Year to which training data apply	Per Cent of teachers having 2 or more years of training beyond high school	Average annual salary of teachers, supervisors, principals, in 1929-30	Rank on training	Rank on salaries
1	2	3	4	5	6
Arizona	1928	90	1587	6	6
Arkansas	1930-31	42	673	27	28
Connecticut	1931-32	83	1812	8	3
Delaware	1931-32	82.5	1570	9	7
District of Columbia	1931-32	98.6	2269	1	1
Georgia	1929-30	36	684	28	27
Idaho	1931-32	89	1200	7	13
Illinois	1929-30	65	1630	15	4
Indiana	1931-32	95	1466	3.5	10
Iowa	1928-29	49	1094	21.5	15
Kentucky	1929-30	48.3	896	23	24
Louisiana	1929	73	941	13	20
Massachusetts	1930	94	1875	5	2
Michigan	1931	80	1534	10	9
Mississippi	1930-31	43.4	620	25	29
Missouri	1930	70	1235	14	12
Nebraska	1929-30	50.9	1077	20	16
New Mexico	1930-31	56	1113	18	14
North Carolina	1930-31	74.3	873	12	25
North Dakota	1929-30	52	900	19	23
Pennsylvania	1931-32	97.1	1620	2	5
South Dakota	1931	45	956	24	19
Tennessee	1929-30	43	902	26	22
Texas	1930	77.5	924	11	21
Vermont	1931-32	34	963	29	18
Virginia	1929-30	57.5	861	16	26
Washington	1931-32	95	1556	3.5	8
West Virginia	1930-31	49	1023	21.5	17
Wisconsin	1930-31	76.5	1399	17	11

Source: National Education Association, Research Bulletin, May, 1932, p.121.

APPENDIX VII: TREND OF AVERAGE ANNUAL TEACHERS' SALARIES FOR SCHOOL YEARS 1935-1936 TO 1943-1944[1]

	1935-36	1937-38	1939-40	1941-42	1942-43	1943-44	Per Cent Increase 1944 over 1936
United States	1,283	1,374	1,441	1,507	1,590	1,728	35
Alabama	606	707	744	787	925	1,009	67
Arizona	1,399	1,535	1,544	1,653	1,760	1,903	36
Arkansas	504	571	584	678	756	845	68
California	1,776	2,201	2,351	--	2,373	2,616	47
Colorado	1,248	1,294	1,393	1,417	1,462	1,600	28
Connecticut	1,679	1,862	1,861	1,932	2,271	2,019	20
Delaware	1,555	1,623	1,684	1,741	1,796	1,932	24
Florida	905	1,003	1,012	1,130	1,219	1,390	54
Georgia	587	715	770	806	901	923	57
Idaho	943	1,087	1,057	1,115	1,115	1,379	46
Illinois	1,369	1,608	1,700	1,807	1,817	2,018	47
Indiana	1,294	1,375	1,433	1,505	1,606	1,833	42
Iowa	875	932	1,017	1,061	1,061	1,289	47
Kansas	855	903	1,014	1,021	1,258	1,313	54
Kentucky	787	835	826	936	1,014	1,158	47
Louisiana	793	982	1,006	1,086	1,149	1,427	80
Maine	798	860	894	1,000	1,031	1,158	45
Maryland	1,455	1,564	1,642	1,713	1,786	2,069	42
Massachusetts	1,834	2,009	2,037	2,049	2,225	2,219	42
Michigan	1,499	1,586	1,576	1,671	1,843	2,016	34
Minnesota	1,120	1,185	1,276	1,288	1,457	1,567	40
Mississippi	571	479	559	517	654	790	38
Missouri	1,048	1,134	1,159	1,223	1,253	1,410	35
Montana	1,073	1,077	1,184	1,224	1,326	1,453	35
Nebraska	772	813	829	854	933	1,159	50
Nevada	1,521	1,465	1,557	1,644	1,644	1,876	23
New Hampshire	1,207	1,258	1,258	1,293	1,394	1,366	13
New Jersey	1,864	2,006	2,003	2,157	2,269	2,353	26
New Mexico	984	1,090	1,144	1,190	1,296	1,456	48
New York	2,414	2,322	2,604	2,618	2,697	2,726	13
North Carolina	735	897	946	1,019	1,121	1,342	83
North Dakota	648	684	745	750	929	1,059	63
Ohio	1,522	1,506	1,587	1,747	1,881	1,912	26
Oklahoma	783	1,027	1,014	1,120	1,270	1,429	83
Oregon	1,154	1,286	1,333	1,430	1,532	1,809	57
Pennsylvania	1,549	1,593	1,640	1,724	1,745	1,972	27
Rhode Island	1,664	1,756	1,809	1,830	1,944	2,042	23
South Carolina	637	734	743	820	902	973	53
South Dakota	711	752	807	844	1,047	1,158	63
Tennessee	718	726	862	880	963	1,062	48
Texas	941	1,013	1,079	1,091	1,224	1,329	41
Utah	1,177	1,324	1,394	1,454	1,680	1,792	52
Vermont	917	952	981	1,001	1,045	1,165	27
Virginia	810	864	899	1,047	1,151	1,308	61
Washington	1,369	1,746	1,706	1,920	1,989	2,099	53
West Virginia	1,091	1,096	1,170	1,265	1,279	1,508	38
Wisconsin	1,280	1,307	1,379	1,428	1,581	1,705	33
Wyoming	1,023	1,053	1,169	1,145	1,137	1,471	44

1. Includes salaries of supervisors, principals, and teachers of elementary and secondary public schools.

Source: United States Office of Education, Biennial Surveys of Education in the United States, Statistics of State School Systems 1939-1940 and 1941-1942, p. 16. National Education Association of the United States, NEA Handbook, August, 1946, p. 302.

APPENDIX VIII: THE STATES LISTED IN THE ORDER OF RANK FOR ADULTS WITHOUT SCHOOLING AND ARMY REJECTIONS FOR EDUCATIONAL DEFICIENCY

State	Percentage of Adults without Schooling[1]	State	Percentage of Army Rejections for Educational Deficiency[2]
Iowa	0.6	Arizona	0.5
Idaho	0.9	Oregon	0.7
Nebraska	1.0	Illinois	1.1
Oregon	1.0	Utah	1.1
Kansas	1.1	South Dakota	1.3
South Dakota	1.2	Montana	1.4
Washington	1.2	Nevada	1.5
Indiana	1.3	Washington	1.6
Minnesota	1.4	Minnesota	1.7
Utah	1.5	Nebraska	1.7
Montana	1.6	Michigan	1.8
Vermont	1.6	Wisconsin	1.8
Wisconsin	1.7	Colorado	1.9
Missouri	1.9	Idaho	1.9
Wyoming	1.9	Vermont	1.9
Ohio	2.0	Kansas	2.0
Maine	2.1	Massachusetts	2.1
North Dakota	2.1	Pennsylvania	2.1
Colorado	2.3	Wyoming	2.2
Michigan	2.4	New York	2.3
New Hampshire	2.4	Connecticut	2.5
California	2.5	Ohio	2.5
Oklahoma	2.5	Delaware	2.7
Illinois	2.7	Iowa	2.9
Maryland	2.8	New Jersey	3.3
Nevada	2.9	Rhode Island	3.4
Delaware	3.3	Indiana	3.6
West Virginia	3.7	Missouri	3.6
Arkansas	3.9	California	4.6
Florida	4.0	Maine	4.8
Kentucky	4.1	North Dakota	4.9
Massachusetts	4.1	New Hampshire	5.2
Pennsylvania	4.1	Oklahoma	7.4
Tennessee	4.2	West Virginia	8.0
New Jersey	4.3	New Mexico	9.0
Connecticut	4.7	Kentucky	10.4
Rhode Island	5.2	Florida	11.7
Texas	5.3	North Carolina	12.5
Virginia	5.4	Maryland	13.3
New York	5.6	Texas	13.6
North Carolina	5.8	Louisiana	13.9
Georgia	6.5	Arkansas	15.1
Mississippi	6.6	Virginia	15.2
Alabama	6.7	Tennessee	17.2
South Carolina	7.9	South Carolina	17.3
Arizona	8.9	Georgia	17.8
New Mexico	10.7	Alabama	21.9
Louisiana	12.8	Mississippi	21.9

1. Percentage of persons 25 years old and over with no years schooling completed, 1940
2. Percentage of each 100 Selective Service rejections due to educational deficiency, not including mental deficients, for period from April, 1942, through December, 1943.

Source: United States Bureau of the Census, 16th Census of the United States, 1940, Characteristics of the Population, p. 78. United States Office of Education, State-w Planning of Veterans' Education, Bulletin 1945 No. 4, p. 64.

APPENDIX IX THE STATES LISTED IN THE ORDER OF RANK FOR URBAN POPULATION AND PER CAPITA INCOME 1940

State	Population	State	Per Capita Income Payments
Rhode Island	91.6	Delaware	$896
Massachusetts	89.4	New York	863
New York	82.8	Nevada	836
New Jersey	81.6	Connecticut	827
Illinois	73.6	California	805
California	71.0	New Jersey	803
Connecticut	67.8	Massachusetts	766
Ohio	66.8	Illinois	726
Pennsylvania	66.5	Rhode Island	715
Michigan	65.7	Maryland	712
Maryland	59.3	Michigan	649
New Hampshire	57.6	Ohio	643
Utah	55.5	Washington	643
Florida	55.1	Pennsylvania	628
Indiana	55.1	Wyoming	605
Wisconsin	53.5	Oregon	579
Washington	53.1	Montana	574
Colorado	52.6	New Hampshire	546
Delaware	52.3	Indiana	541
Missouri	51.8	Colorado	524
Minnesota	49.8	Vermont	521
Oregon	48.8	Wisconsin	516
Texas	45.4	Maine	509
Iowa	42.7	Minnesota	509
Kansas	41.9	Missouri	505
Louisiana	41.5	Iowa	485
Maine	40.5	Utah	480
Nevada	39.3	Arizona	473
Nebraska	39.1	Florida	471
Montana	37.8	Virginia	450
Oklahoma	37.6	Idaho	440
Wyoming	37.3	Nebraska	433
Virginia	35.3	Kansas	422
Tennessee	35.2	Texas	413
Arizona	34.8	West Virginia	398
Georgia	34.4	South Dakota	376
Vermont	34.3	North Dakota	368
Idaho	33.7	Louisiana	357
New Mexico	33.2	New Mexico	356
Alabama	30.2	Oklahoma	356
Kentucky	29.8	Tennessee	317
West Virginia	28.1	North Carolina	316
North Carolina	27.3	Georgia	315
South Dakota	24.6	Kentucky	308
South Carolina	24.5	South Carolina	286
Arkansas	22.2	Alabama	268
North Dakota	20.6	Arkansas	252
Mississippi	19.8	Mississippi	202

Source; United States Department of Commerce, Statistical Abstract of the United States, 1944-1945, p. 14. United States Department of Commerce, Survey of Current Business, August 1945, p. 13.

APPENDIX X: RATINGS OF THE STATES FOR EDUCATION ACCORDING TO JOHN W. STUDEBAKER, UNITED STATES COMMISSIONER OF EDUCATION

Best States	Above-average States
California	Colorado
Connecticut	Idaho
Illinois	Indiana
Massachusetts	Iowa
Montana	Kansas
Nebraska	Michigan
New Jersey	Nevada
New York	Pennsylvania
Ohio	South Dakota
Oregon	Wisconsin
Utah	Wyoming
Washington	

Below-average States	Poorest States
Delaware	Alabama
Maine	Arizona
Maryland	Arkansas
Minnesota	Florida
Missouri	Georgia
New Hampshire	Kentucky
North Carolina	Louisiana
North Dakota	Mississippi
Oklahoma	New Mexico
Rhode Island	South Carolina
Vermont	Tennessee
Virginia	Texas
West Virginia	

Note: The following six factors were weighed equally in computing each state's rank: (1) expenditure per pupil per year; (2) average number of school years completed by pupils; (3) average length of the school term; (4) percentage of children under 18 enrolled in school; (5) percentage of those enrolled actually attending; (6) percentage of pupils who reach high school.

Source: Studebaker, John W., United States Commissioner of Education, How Good Are the Schools in Your State? The American Magazine, April, 1946.

APPENDIX XI: RANK OF STATES FOR FACTORS AFFECTING EDUCATIONAL EFFICIENCY[1]
(Page 1)

State	Per Pupil Expenditures	Average Teachers' Salaries	Attendance 7-15 Years	High School Graduates	College Students
Alabama	46	45	41	47	47
Arizona	15	15	42	40	29
Arkansas	47	47	46	42	46
California	2	2	2	9	1
Colorado	17	18	24	20	8
Connecticut	7	5	2	14	28
Delaware	7	9	19	22	16
Florida	38	33	38	38	36
Georgia	43	43	44	46	45
Idaho	29	29	10	14	16
Illinois	5	8	15	14	5
Indiana	22	16	13	18	33
Iowa	22	30	27	9	27
Kansas	27	31	19	4	10
Kentucky	41	41	48	41	38
Louisiana	39	34	43	38	32
Maine	35	38	21	27	40
Maryland	26	10	31	30	20
Massachusetts	5	4	5	4	13
Michigan	17	13	7	30	20
Minnesota	13	21	24	14	14
Mississippi	47	48	47	47	47
Missouri	28	26	34	27	30
Montana	7	23	15	7	9
Nebraska	32	40	15	2	18
Nevada	4	14	15	25	6
New Hampshire	20	22	22	19	24
New Jersey	3	3	14	20	24
New Mexico	31	27	37	42	38
New York	1	1	7	25	2
North Carolina	44	36	35	36	44
North Dakota	33	44	33	23	12
Ohio	15	12	5	11	11
Oklahoma	37	31	30	34	22
Oregon	14	20	22	1	4
Pennsylvania	17	11	10	23	35
Rhode Island	11	6	4	27	30
South Carolina	45	46	39	42	42
South Dakota	22	42	29	11	18
Tennessee	42	39	45	42	43
Texas	34	28	36	30	23
Utah	29	17	1	4	3
Vermont	25	35	27	30	34
Virginia	40	37	40	36	40
Washington	11	7	7	3	7
West Virginia	35	24	32	34	37
Wisconsin	20	19	24	7	15
Wyoming	7	25	10	11	24

1. The states are ranked from 1 to 48 according to their ratings for each factor, with the lower figure indicating the better rank. In cases where the ratings for a factor are the same for two or more states the ranks are also identical.

Source: See Appendixes I to V.

APPENDIX XI: RANK OF STATES FOR FACTORS AFFECTING EDUCATIONAL EFFICIENCY
(Page 2)

State	Adults Without Schooling	Army Educational Rejections	Teacher Turnover	Per Capita Income	Urban Population
Alabama	44	47	10	46	40
Arizona	46	1	28	28	35
Arkansas	29	42	11	47	46
California	22	29	14	5	6
Colorado	19	13	32	20	18
Connecticut	36	21	1	4	7
Delaware	27	23	27	1	19
Florida	30	37	4	29	14
Georgia	42	46	46	43	36
Idaho	2	13	39	31	38
Illinois	24	3	4	8	5
Indiana	8	27	4	19	14
Iowa	1	24	38	26	24
Kansas	5	16	26	33	25
Kentucky	31	36	24	44	41
Louisiana	48	41	14	38	26
Maine	17	30	32	23	27
Maryland	25	39	11	10	11
Massachusetts	31	17	4	7	2
Michigan	20	11	32	11	10
Minnesota	9	9	32	23	21
Mississippi	43	47	32	48	48
Missouri	14	27	46	25	20
Montana	11	6	24	17	30
Nebraska	3	9	28	32	29
Nevada	26	7	44	3	28
New Hampshire	20	32	14	18	12
New Jersey	35	25	9	6	4
New Mexico	47	35	39	39	39
New York	40	20	8	2	3
North Carolina	41	38	14	42	43
North Dakota	17	31	41	37	47
Ohio	16	21	14	12	8
Oklahoma	22	33	14	39	31
Oregon	3	2	28	16	22
Pennsylvania	31	17	3	14	9
Rhode Island	37	26	a	9	1
South Carolina	45	45	32	45	45
South Dakota	6	5	41	36	44
Tennessee	34	44	14	41	34
Texas	38	40	14	34	23
Utah	10	3	11	27	13
Vermont	11	13	44	21	37
Virginia	39	43	1	30	33
Washington	6	8	14	13	17
West Virginia	28	34	14	35	42
Wisconsin	13	11	43	22	16
Wyoming	14	19	28	15	32

a. Not available.