



Monthly Review

F E D E R A L R E S E R V E B A N K O F S T . L O U I S

Volume XXXII

JUNE 1, 1950

Number 6

Education and Economic Development

One-room country schools, exclusive academies, big city public schools and great universities all have something in common at this time of year. Across the nation, in thousands of communities, Commencement Exercises are marking the end of another academic year. In the Eighth District, some 83,000 young men and women will graduate from high school and another 11,000 will finish college in 1950. And, whether from a rocky red clay playground in the Ozarks, the green campus of "Ol' Miss," or the long corridors of a St. Louis high school, the average graduate will go out looking for a job.

Millions of words will have been directed at these graduates telling them that the future belongs to them. Their opportunities and their responsibilities will have been dressed up in all styles of oratory. And practically every educator will wonder how well his training has equipped his pupils to fit into the community—as good citizens and as workers.

The American school system—both its public and private segments—is charged with a double responsibility. It is given the function of educating youth in the broadest sense—in the three R's, in American and Western cultural traditions, in citizenship and its responsibilities. But most Americans also believe that the school has the responsibility for training for economic life—education for a job.

This double duty imposed on the American school system brings it into close relationship with the problems of economic development. It is often stated

that an informed and intelligent electorate is the greatest bulwark of a democracy. It might also be said that the state of economic development in a nation reflects the educational development of the people. In fact, development of human resources precedes development of other resources.

The district has lagged behind many other sections of this nation in the development of its human resources. On the average, the district's people have not attained the educational level characteristic of other regions—either in terms of years of training or in the quality of education. In part, this reflects a less-than-adequate school system. In turn, the less-than-adequate schools are the result of relatively low district income. And, to bring the point full circle, the low income level holds back the improvement we would like to see in the schools.

This all means that we of this district are not taking full advantage of our greatest resource—our people. It is important that we understand just how much this resource has been neglected in the past and how necessary it is to correct this condition for the future growth of this district.

EDUCATIONAL LEVEL

According to the 1940 Census, the district had a slightly smaller proportion of people with no formal schooling than did the nation. But it also had appreciably smaller proportions that had graduated from high school or had attended college.

Data in this article are derived principally from "The Forty-Eight State School Systems" published by the Council of State Governments; "The Biennial Survey of Education in the United States" published by the Federal Security Agency; and the annual reports of the various State Departments of Education.

A tabulation of the population 25 years of age or more in 1940 showed 3.2 per cent of district residents with no formal schooling as against 3.8 per cent for the nation. But less than one in ten district residents had graduated from high school as compared with about one in seven in the country as a whole. And only 7 per cent of the district's people had some college training in contrast to 10 per cent for the nation.

Taking as separate units the portions of the seven states lying within the district proper, we find district Missouri, Tennessee and Indiana running somewhat ahead of the district average in high school graduates or persons with some college training per 100 people. But in none of these cases was the national average exceeded. And obviously the other state portions showed up worse than the district average.

It is expected that the new Census will show improvement in the district ratios. The GI education program alone should raise the number of those with more training. Higher income levels should also have permitted longer school periods. The fact that the general level of education in the district has been raised is important in itself. But it must be remembered that these developments have been nationwide and the relative educational level of the district may or may not have improved.

EDUCATIONAL PLANT AND PERSONNEL

In the seven district states (complete state figures), there are more than 42,000 publicly supported schools. Most of these are elementary schools—almost 37,000 of them. Half of the schools are in the one-teacher class; in fact, about one-fourth of all such schools in the nation are found in these seven states. In 1948, enrollment in all public elementary and secondary schools in the seven-state area was 4.5 million.

Despite the fact that the district's school system apparently does not compare too favorably with that of other sections, it still is big business, in the aggregate. Value of fixed assets of public elementary and secondary schools in the seven district states runs over \$1 billion. Employment (of all types) totals about 220,000 persons. Except for the food products group, none of the major manufacturing groups recognized by the Census employs in this seven-state area as many people as the public schools. The annual public school payroll in the area during the 1948-49 year was close to \$600 million. The fact that several of the manufacturing groups have larger annual payrolls than the public schools reflects the low pay scale characteristic of the schools.

QUALITY OF EDUCATION

There are few established standards by which to judge schools. National pride leads us to believe that our system is superior to any other—at least for our objective of education for everyone. Certainly, judging by the world standing of the United States and its level of social and economic welfare, the products of our schools have done well.

It is possible to make some comparisons of school quality within the American school system. The yardsticks that are used do not permit absolutely firm conclusions, but seem to be reasonably reliable indicators. By those yardsticks, the district's schools do not show up very favorably.

After this general statement, a few qualifications are in order. The first is obvious and is mentioned merely for the record. In the comparisons which follow, averages are used. Such averages conceal variations. Thus the fact that a particular state ranks low on the average does not mean that all of its schools rank low. It may well have some schools that are far better than the best in states with higher average ranking. It also may have some that are worse than those in lower ranking states.

Secondly, it should be remembered that this district is a low income area. It has difficulty in finding adequate funds to support its public schools. There is no intention here to admonish the public authorities or the people of the district for failure to provide better schools. Rather it probably can be argued that we are making a greater effort relative to financial ability to support our schools than are many richer sections. Several studies have shown that the general public financial effort in poor income states tends to be relatively greater than in high income states. We are in the position of the relatively poor family making substantial sacrifices to educate its children—able to help them work their way through a state college, but not able to afford an expensive private school.

It should also be remembered that this district has a heavy Negro population (particularly in the delta sections). Whatever the arguments for or against segregation, the presence of segregation throughout much of the district is a fact. It is also a fact that two school systems cost more than one. And when funds are limited this means less effective use of available money per pupil.

One further point—a qualification pointing in a different direction—needs to be made here. Many of the comparisons which follow are in terms of full states. Previous **Review** articles have cautioned readers that the use of full state averages usually produces a more favorable picture for this district than if data for district portions of states

are used. This caution would seem to apply to the school picture as well as to others.

Potential School Enrollment—In order to perform their function of educating people, schools obviously must get children into the classroom. How well they do in terms of realizing their “market” potential—that is, the proportion of school-age children that are enrolled in schools—is one criterion by which schools may be evaluated. And, by this yardstick, the district schools do fairly well.

The principal market, so to speak, can be measured in terms of the number of school-age people in an area. Usually this is regarded as being those between the ages of 5 and 17. In 1947, 205 out of each 1,000 persons in the United States were in this age bracket. In the seven district states, the average was 214 per 1,000, ranging from 178 in Illinois to 278 in Mississippi. (In addition to Mississippi, three other district states had large potentials: Arkansas—261, Kentucky—253, and Tennessee—242.)

Actual vs. Potential Enrollment—Some states do better than others in realizing their potential. Just how much better is not easy to determine because enrollment data are not always comparable and because of variations in beginning-age requirements. Also, public school enrollment figures give only part of the picture. Relatively more children attend non-public schools in some states than in others.

In terms of public schools alone, enrollment in the district states represents about the same proportion of school-age population as it does nationally. Five of the district states (Arkansas, Indiana, Mississippi, Missouri and Tennessee) have a larger-than-national percentage of their school population enrolled. Nationally, 816 of each 1,000 children between the ages of 5 and 17 were enrolled in 1948, and in the seven-state area it was 818 per 1,000. In Illinois the proportion was 753 per 1,000 and in Kentucky it was 787 per 1,000 school-age population. In each of these states, nonpublic school enrollment is an important factor, particularly in Illinois.

Facilities.—In part, the quality of the school plant determines the quality of education that pupils receive. One comparative measure used is the value of facilities per pupil in average daily attendance. This is not a precise measure since wide variations exist in costs as well as in basic plant and equipment required in different parts of the country. But it is an indication.

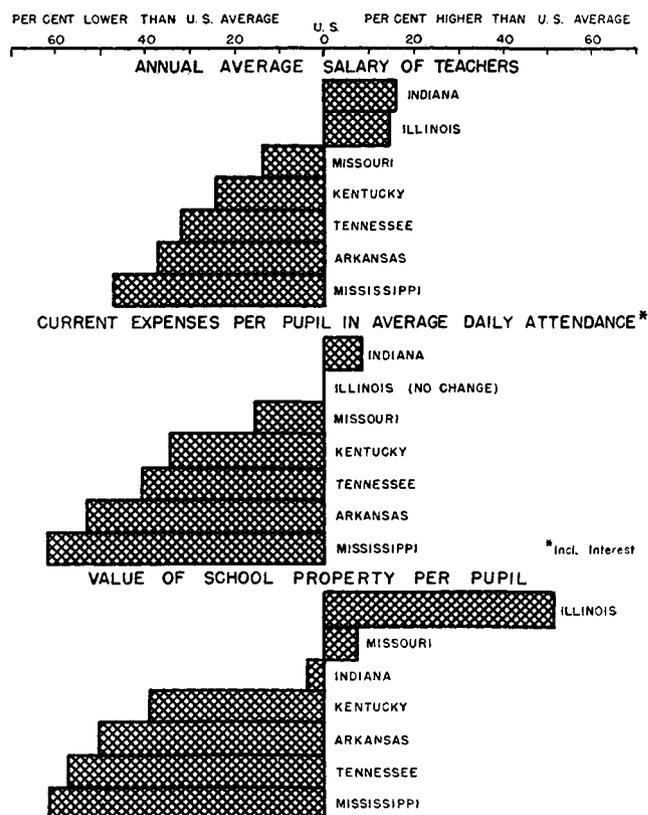
In 1948, most of the district states had less than the national average amount invested in elementary and secondary school property. Illinois and Missouri were the only states with a larger-than-average

investment per pupil in average daily attendance. When allowance is made for the indebtedness outstanding, the net investment in Indiana also ranked higher than average.

The picture with respect to current expenditures is essentially the same as that for capital investment in facilities. In 1948, an average of \$5.43 per pupil in average daily attendance was spent by all elementary and secondary schools in the United States for textbooks and teaching supplies. Only one district state—Illinois—spent more than that amount, while in the other district states these expenditures ranged from \$1.75 in Arkansas to \$4.95 in Missouri. Total current expenditures (including interest) per pupil in attendance are generally lower than average in the district states, the exceptions being Illinois and Indiana. Five of the seven states rank in the lowest one-third of all states, while Illinois and Indiana rank in the middle one-third.

In the past decade, expenditures per pupil have increased considerably, reflecting not only increased prices but also attempts by the states to improve their school facilities. Expenditures per pupil in 1948 were more than twice as large as in 1938 in each of the district states except Illinois. But, des-

SCHOOL SYSTEMS IN THE 8th DISTRICT STATES COMPARED WITH THE AVERAGE FOR THE U. S. 1947-1948



SOURCE: The Forty Eight State School Systems

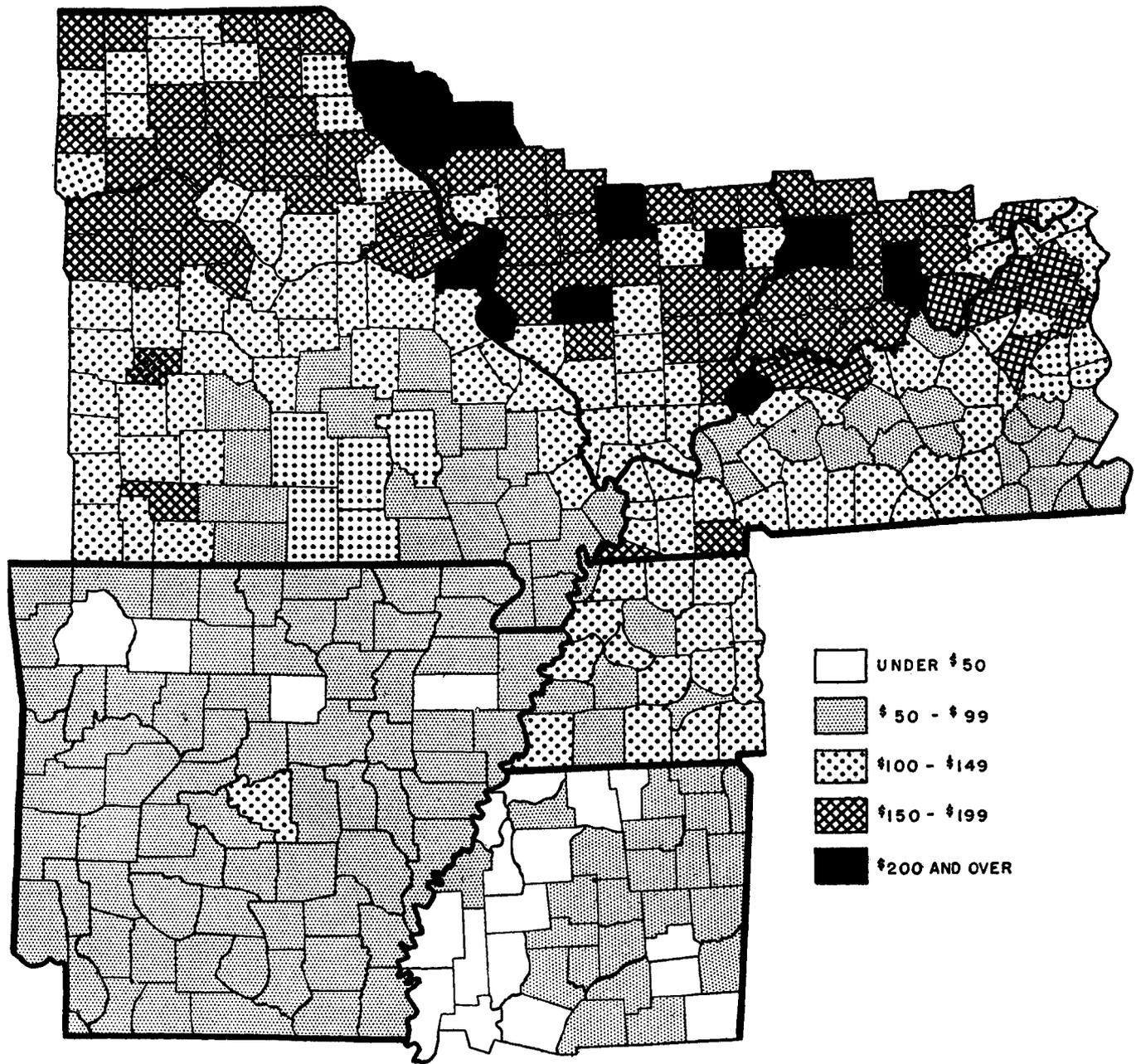
pite larger outlays, Indiana was the only district state that ranked nearer the top of the list in 1948 than a decade earlier.

Expenditures in the Eighth District portions of these states are shown on the map. They are expressed in terms of current expenditures per pupil enrolled in grammar and high schools and hence are

not comparable with the statewide figures referred to earlier which are adjusted for average daily attendance of pupils.

In the district proper, expenditures per pupil enrolled in 1948 ranged from \$50 in the Mississippi counties to \$177 in the district portion of Indiana—and averaged \$114 per pupil enrolled.

ANNUAL SCHOOL EXPENDITURES PER PUPIL ENROLLED 1947 - 1948



SOURCE: Data on expenditures and enrollment were obtained from the annual reports of the various State Departments of Education. Average expenditures per pupil enrolled were computed by the Federal Reserve Bank. Figures for Indiana are for townships only.

Instructional Staff — In 1948 there were about 155,000 teachers in public elementary and secondary schools in the district states. In order to obtain teaching positions, some were required to have college degrees, some could teach after partially completing a four-year college course and some were permitted to occupy their position without any training beyond the high school level.

As a result of varying requirements among local communities in these states, there are vast differences in the professional qualifications of the people employed as teachers. None of the states has the national average proportion of teachers with college degrees, although in Indiana and Missouri the proportion with Masters degrees is considerably larger than average. These two states, too, are the only district states with a smaller-than-average number of elementary and secondary school teachers who have no college training. In the other states, from 5 per cent (Kentucky) to 24 per cent (Mississippi) of the teachers in 1948 had completed no college work.

The quality of the teaching staff is influenced by the level of salaries paid to teachers. This is particularly true in a period such as the past few years when income opportunities in the teaching profession are relatively less attractive than those in other lines. High salary scales are no guarantee that teaching vacancies will be filled with good teachers, of course. But the higher the salary scale, the better the chance of getting the best teachers available.

In district states, salaries of elementary and secondary school teachers average considerably less than that for the nation. Illinois and Indiana are the only exceptions. In contrast to a national average of \$2,440 in 1948, average salaries in this seven-state area ranged from under \$1,300 in Mississippi to \$2,825 in Indiana. Four of the district states are among the seven lowest paying states in the nation. Current salaries are substantially larger than they were ten years ago but, except in Indiana, the increases have not been sufficient to improve relative ranking.

FINANCING THE SCHOOLS

The point was made earlier that a poor region has to make relatively greater effort to finance its schools than does a rich region. High income does not automatically produce high quality schools, but it certainly makes the financing of schools easier. And low income is a definite barrier to good schools.

The potential load on educational facilities (proportion of population 5-17 years old) is relatively greater in this district than in the nation. And the potential load is greater in the southern part of the

district where income runs lower than in the northern part.

Dividing total personal income in the United States by average daily attendance at public elementary and secondary schools yields a figure for 1947 (latest data available) of about \$9,000. This, of course, is not the amount of money available for schools—it is merely a ratio to be used for comparisons. Dividing the personal income of each district state by average school attendance gives comparative ratios — and a rough indication of financing problems. (While schools are financed mainly by taxes on wealth—real estate, usually—rather than income, income level and wealth correlate highly.)

In only one district state—Illinois—was the ratio higher than that for the nation in 1947. (Again it should be stressed that full state figures show the district proper as better off than it actually is. Per capita income in Seventh District Illinois runs almost two-thirds more than that of Eighth District Illinois.) The Mississippi ratio was one-third the national. In Arkansas it was less than half as large, and in Kentucky and Tennessee just about three-fifths as large as the national average.

Even with the low income level in the district, it does channel the same proportion of income into its schools as does the nation. In the 1947-48 school year, public elementary and secondary school revenues from state and local sources were equivalent to 2.3 per cent of total individual income. This ratio held for Arkansas and Mississippi—the two lowest income states in the nation—and was exceeded in Indiana and Tennessee.

Sources of Revenue—Most school funds are derived from property taxes levied at the community (school district) or county level. Nationally, 60 per cent of 1947-48 school revenues came from this source. The district states show considerable variation in this respect—primarily because some district states supply a much greater proportion of school funds from statewide taxes than do others. For example, only one-sixth of the funds for Illinois public schools came from the state government in 1947-48. In Arkansas, two-thirds of the funds were so provided.

Federal money represents a minor portion — a little more than 1 per cent—of the schools' receipts. It is even smaller than this in all district states except Arkansas.

THE ROLE OF EDUCATION IN REGIONAL DEVELOPMENT

If a region's income status is a factor that determines the quality of its schools, the reverse relationship also exists. That is, the income level attained

in a community is influenced by the quality of the region's educational system. Thus, how well schools do their job is affected by economic progress in the community and, at the same time, the extent to which economic development takes place is affected by the work done by the schools.

The educational system has an important role to play in aiding the region's development. Its influence is both direct and indirect. A strong and expanding economy requires the extension of educational opportunities to more and more people. At the same time, it requires that the average level of people's skills be pushed steadily upward. To assist in this process should be one of the objectives of the educational system.

Regional development requires leaders with sufficient vision to realize the opportunities, and the deficiencies, of the community. Leadership of this type should develop within the area. A region should not have to depend on outside sources for its men with vision and inspiration sufficient to discover the area's potentialities. The development of people of this quality can be an important contribution of the educational system.

One fundamental prerequisite for economic progress in a region is the desire for progress. Where people are content with a standard of living that is relatively low, there is little prospect that improvements will be made. Many forces influence people's desires. One of these is the extent of their knowledge of something better than their current mode of life. The greater their knowledge, the greater their dissatisfaction with things as they are—and the stronger their desire for improvement. Thus, schools contribute to a region's economic betterment by helping to stimulate people to want improvement in their economy.

The educational system also can aid directly as well as indirectly in a region's attempts to raise its relative economic level. Through research programs directed toward the solution of area problems, colleges and universities can be of major assistance to their communities. Such activities make it possible for a region to have the benefit of skilled technicians whose research not only may point the way toward productive effort but also may prevent the expenditure of time and energy on projects that are not adapted to the community.

There is some evidence that colleges and universities in the district states are spending more than the average amount on organized research programs. In 1946, a little less than 10 per cent of the expenditures of colleges and universities in the United States were in this field. Except in Missouri and

Tennessee, the proportion was that large, or larger, in each of the district states.

Closely related to research programs is another contribution that schools can make to regional development. There is a need for statistical and factual reports concerning local areas. Properly proposed, this type of study could form the basis for long-range planning. Extension activities also broaden the sphere of influence of schools and make for real progress in the community. In this region, colleges and universities devote a considerable amount of time and money to this type of work—more than the average, in terms of expenditures, in most states.

THE FUTURE

In this district, as elsewhere in the nation, the outlook is for an increasing educational load. Assuming that population increases here are equivalent to those predicted for the nation as a whole, enrollment in public elementary and secondary schools in the region will be more than one-third larger in 1960 than in 1948. That would mean 6 million pupils enrolled in the district states in 1960 and 2.4 million pupils in the district proper.

Facilities in many areas already are overburdened and difficulty is experienced in obtaining qualified teachers. Considerable expansion will be required even to enable these states to maintain their present relative standing. And even more expansion will be necessary if the quality of our schools is to be brought nearer the national average.

According to estimates by school authorities in the district states in 1948, as reported by the Council of State Governments, a total of 25,000 additional classrooms will be needed in the five years to 1953. Another 25,000 classrooms would be required for replacement. The aggregate cost of this construction was estimated at more than \$800 million.

The actual future requirements, and the cost of meeting them, may be more or less than these figures indicate. But there is little doubt that a substantial expansion will be necessary, even if the region hopes to do no more than hold its present position relative to other states. If something better than "standing still", in relation to other regions, is desired, it will require even larger outlays.

Investment in educational facilities produces a return to the community. The return may not be directly measured in terms of dollars of income. But a region that is attempting to improve its economy can ill afford to neglect the development of its major resource.

**Gertrude Canning
Weldon A. Stein**