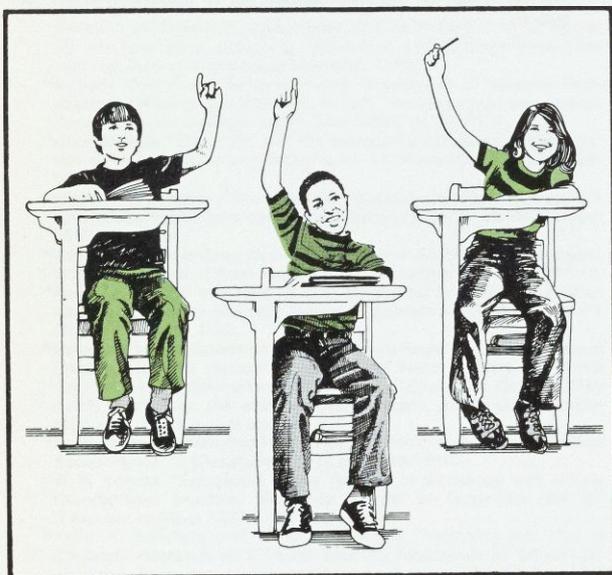


## Educational Inventory: Where Does the Southeast Stand?

Gene Wilson and Gene Sullivan



With its improving educational infrastructure, the Southeast is about to catch up with national norms of educational attainment. Those age groups most likely to enter new industries and jobs have shown especially dramatic improvement, enhancing the competitiveness of the region's work force.

Potential economic development of a region hinges heavily both on people and natural resources—but people are its crucial asset. As important as natural resources are, they remain unproductive until men and women acquire sufficient knowledge, skills, and capabilities to harness them. In fact, a resourceful population often can compensate for major deficiencies in other assets in fostering an area's economic development.

Like other resources, the population can be developed to enhance its potential contribution to a region's economy. Given the all-important role of people in economic development, it seems ironic that some regions have paid so little attention to the process of human development, which includes education and training.

Within the United States, the Southeast historically has lagged seriously in improving its human resources. A number of reasons account for the neglect of educational development, but probably the most important relates to the past perception of the economic payoff to resources invested in education. In an economy where for several centuries the masses were employed in hand labor such as chopping timber, harvesting tobacco, and picking cotton, the economic returns to education seemed slim at best. Most people had few incentives to take advantage of the formal schooling that was offered. Thus, school attendance was readily abandoned when any opportunity for productive employment was available, and especially when education involved out-of-pocket costs for cash-scarce households.

For most individuals, those decisions may have been a rational response to the economy

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that persisted in the Southeast until the outbreak of World War II. Yet such rational choices have proven to be short-sighted in light of the rapid economic changes that have emerged within the region since that time. The jobs that accompanied the subsequent industrialization and urbanization of the Southeast demanded capabilities acquired through formal education. Unfortunately, much of the native work force was ill-prepared to make the transition from the low-skilled tasks to which many had been involuntarily restricted or to which they had unwittingly limited themselves.

Although emphasis on education rose with postwar awareness of its new importance, attempts to attract or create industries requiring skilled employees allegedly have continued to be hampered by the relatively poor education in the region. Today, the belief is widespread that desirable future economic development depends on elevating the educational level of the work force. Hence, there is urgent interest in the education of the Southeast's population and how it compares with that of other regions.

This article will attempt to inventory the region's educational assets, generally divided into two categories: the educational infrastructure and the educational attainment of the population. The latter possibly determines economic potential and the former may be important in determining future economic development.

Have educational conditions changed in the region in recent decades? If so, how dramatically? How do the educational systems of southern states compare with those of other regions? Are higher educational opportunities readily available? What is the educational level of the population? These are only a few of the questions that must be answered to understand the region's potential for economic development.

## Education

In its broadest sense, education includes any intentional or inadvertent transfer of knowledge or skill either verbally, pictorially, in written form, or via computer. For education to have occurred, at least one person must have increased his or her human skills. A more restrictive view of education, and the one adopted here, would be the purposeful transfer of knowledge or skills through a designed process, that is, formal education. This is similar to manufacturing processes in which inputs are utilized to produce some output. In this instance, human resources and capital are combined to turn out individuals with enhanced knowledge and skill.

## The Infrastructure

**Human Resources.** The most important input of the educational process is almost certainly the teacher, who both transfers acquired knowledge to students and directs the learning process with related materials such as books. In the past 60 years, the number of teachers in the Southeast has increased by 312 percent, and by 146 percent since 1950 alone. While this surge accompanied an increase in the student population, the growth rate in teachers far exceeded that of enrollment (see Table 1) and also has surpassed the national rate of growth. The faster relative gain in the Southeast was at least partly attributable to its low starting position compared with the rest of the nation.

As might be expected, the Sixth District's teacher distribution is related directly to the number of students in different states. Almost half of the Southeast's elementary and secondary schoolteachers work in Florida and Georgia. Mississippi claims the smallest share of teachers,

**Table 1.** Numbers of Teachers and Pupils, Southeast and United States, 1920-1980

## Number of Public School Teachers

	1920	1930	1940	1950	1960	1970	1980
Alabama	12,558	17,130	19,405	21,612	28,810	33,026	41,300
Florida	6,819	10,960	13,189	16,957	46,210	62,419	78,300
Georgia	15,921	19,071	22,846	24,380	37,191	44,007	56,500
Louisiana	8,966	12,173	14,830	15,652	30,026	35,469	42,700
Mississippi	11,962	15,138	14,773	15,627	19,784	22,533	26,300
Tennessee	13,277	18,331	20,147	22,202	29,861	35,450	41,400
Sixth District	69,503	92,803	105,190	116,430	191,882	232,904	286,500
United States	679,533	854,263	875,477	913,671	1,651,310	2,061,115	2,194,000

Pupils Enrolled, Elementary  
(in thousands)

	1920	1930	1940	1950	1960	1970	1980
Alabama	543	562	586	556	609	570	522
Florida	243	301	292	353	768	1,016	1,064
Georgia	683	633	612	571	748	800	759
Louisiana	349	377	374	400	542	616	548
Mississippi	531	543	521	447	452	389	360
Tennessee	611	558	540	539	629	649	600
Sixth District	2,960	2,974	2,925	2,866	3,748	4,040	3,853
United States	20,898	21,347	18,832	19,464	27,602	32,574	28,304

Pupils Enrolled, Secondary  
(in thousands)

	1920	1930	1940	1950	1960	1970	1980
Alabama	58	61	100	124	179	236	243
Florida	23	45	77	97	225	412	532
Georgia	63	81	126	147	201	299	336
Louisiana	42	58	99	84	151	227	245
Mississippi	30	52	73	81	115	146	155
Tennessee	47	70	108	120	182	251	268
Sixth District	263	367	583	653	1,053	1,571	1,779
United States	3,390	4,407	6,601	5,752	8,485	13,300	13,840

Total Pupils Enrolled  
(in thousands)

	1920	1930	1940	1950	1960	1970	1980
Alabama	601	623	686	680	788	806	765
Florida	266	346	369	450	993	1,428	1,596
Georgia	746	713	738	718	949	1,099	1,095
Louisiana	391	435	473	484	693	843	793
Mississippi	561	595	594	528	567	535	515
Tennessee	658	628	648	659	811	900	868
Sixth District	3,223	3,340	3,508	3,519	4,801	5,611	5,632
United States	24,288	25,678	25,433	25,216	36,087	45,874	52,144

Source: *Statistical Abstract of the United States*, various years.

**Table 2.** Pupil/Teacher Ratios, Sixth-District States

	1920	1930	1940	1950	1960	1970	1980
Alabama	47.9	36.4	35.4	31.5	27.4	24.1	18.5
Florida	39.0	31.8	28.0	26.5	21.5	22.9	20.4
Georgia	46.9	37.4	32.3	29.5	25.5	25.0	19.4
Louisiana	43.6	35.8	31.9	30.9	23.1	23.8	18.6
Mississippi	46.9	39.3	40.2	33.8	28.7	23.7	19.5
Tennessee	49.6	34.3	32.2	29.7	27.2	25.4	21.0
United States	46.4	36.0	33.4	30.2	25.0	24.1	19.9

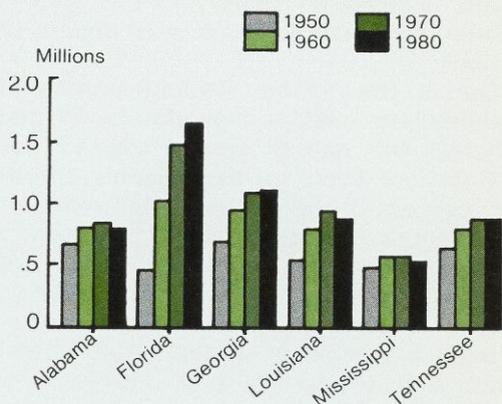
Source: Calculated from Table 1.

with only 9 percent of the District's total, but student enrollments also are lowest there. Thus, in spite of the strong population growth in Florida and Georgia and much less vigorous growth in Mississippi, current pupil-teacher ratios are similar for each District state.

The pupil-teacher ratio is considered a measure of the quality of education. The fewer students per teacher, presumably the more individualized the instruction can be. In both the South and the nation, such ratios have fallen in recent decades. In Mississippi, for example, the pupil-teacher ratio fell from 28.7 in 1960 to 19.5 in 1980. During the past 60 years, the Southeast's average ratio fell from over 46 students per teacher to a current level of 20 (see Table 2). In 1980, District states ranged from a ratio of 18.5 in Alabama to 21 in Tennessee.

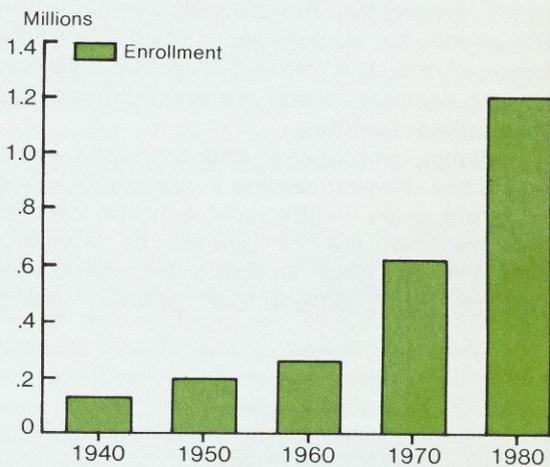
**Human Capital.** While the population of teachers has continued to increase over the years, student enrollment trends have begun to change course (see Chart 1). Enrollment in secondary schools has started to fall in the South, just as elementary enrollments begin to increase after years of decline. Only Florida maintained its growth in the number of elementary students from 1970 to 1980, largely as a result of significant in-migration. For that 10-year period, District enrollment fell 4.6 percent in elementary schools while rising 13.2 percent in secondary schools. For the nation, however, enrollment during the same period fell 13 percent in elementary schools and rose only 4 percent in secondary schools. (Table 3 shows that private school enrollments declined in both number and share of the total from 1964 to 1978.)

**Chart 1.** Elementary and Secondary School Enrollment Sixth-District States



Source: Statistical Abstract of the United States

**Chart 2.** College Enrollment in Sixth District



Source: Southeastern Regional Council for Education Improvement (Fall 1983).

Within the last half-century, the Southeast's accomplishments in higher education have more closely resembled its accomplishments at the elementary and secondary levels. As recently as 40 years ago, only 119,000 students (less than one percent of the population) were enrolled past secondary school; today District enrollments exceed 1.3 million, or 4 percent of the population as compared with 5 percent at the national level (see Chart 2). Reflecting

the South's lagging educational development in earlier years, growth rates in college enrollments accelerated sharply in the 1960s and continue to exceed rates in most regions of the country.

During the 1970s, student enrollment at southeastern colleges expanded by 59 percent, whereas the rate of growth was 43 percent nationwide. Even so, the region's enrollment (10 percent of the nation's total) remains proportionately smaller than its 13 percent share of the college age population. College enrollments as proportions of total population are higher in other regions. Although the region attracts a number of students from elsewhere, many of its residents also go outside the South to attend college. However, in spite of relatively large gains in recent decades, the Southeast still has a way to go to reach parity with the rest of the country.

**Physical Capital.** A prominent and important trend has been the general decline in numbers of schools within the region. Three factors appear to be responsible: the growing urbanization of the region, the economies of scale afforded by larger schools, and the end of racially segregated school systems, which eliminated many dual educational facilities.

Alabama, Mississippi, and Louisiana experienced the sharpest decline in number of schools in recent years. In the most extreme case, the total number fell 29 percent in Mississippi from 1969 to 1982. In that same period every District state experienced school closures

except Florida, whose rapid economic growth and large population gains led to a 14 percent increase in schools.

Through the first half of the twentieth century, southeastern facilities for higher education were relatively sparse and generally perceived to be of low quality compared with northern colleges. In 1942, for example, the Sixth District counted 188 institutions of higher education, of which 52 percent were in Georgia and Tennessee (see Table 4). At that time even elementary education was thought in some quarters to be of doubtful benefit, and so advanced education was generally considered unnecessary.

Southern state legislatures appeared indifferent toward higher education through the first half of this century. Beginning in the 1950s, however, elevating educational levels became a prime concern as a new generation of political leaders sought to stimulate southern economic growth. The number of educational institutions expanded, often in response to the states' varying paces of population growth. For example, by 1962, Florida had added greatly to its facilities for higher education while the educational emphasis of other southern states remained relatively unchanged. But from 1962 to 1982, every District state except Mississippi sharply increased the number of educational institutions: Alabama by 107 percent; Florida, 63 percent; Georgia, 63 percent; Louisiana, 45 percent; and Tennessee, 70 percent.

In summary, the educational infrastructure of the Southeast has changed significantly in recent years, converging toward national norms. The number of institutions of higher education

**Table 3.** Private School Enrollments

	Private School Enrollments (in thousands)		Percent of Public School Enrollments	
	1964	1978	1964	1978
Alabama	34	25	4.1	3.3
Florida	99	121	8.6	8
Georgia	30	27	2.9	2.5
Louisiana	162	115	21.2	14.3
Mississippi	22	17	3.8	3.5
Tennessee	36	38	4.2	4.4
Southeast	383	343	7.4	6.2
United States	6900	4058	17	9.8

Source: *Statistical Abstract of the United States.*

**Table 4.** Number of Institutions of Higher Education

	1942	1952	1962	1972	1982
Alabama	26	26	29	51	68
Florida	14	18	52	64	85
Georgia	50	51	49	61	80
Louisiana	18	20	22	23	32
Mississippi	32	38	44	41	42
Tennessee	48	46	47	62	80
Sixth District	188	199	243	302	379

Source: *Statistical Abstract of the United States.*

**Table 5.** Results of Scholastic Aptitude Tests

	Numbers Tested		Scores			
			Verbal		Math	
	1971-72	1981-82	1971-72	1981-82	1971-72	1981-82
Alabama	4,404	2,990	419	463	441	501
Florida	21,845	37,879	458	426	483	463
Georgia	33,243	34,226	405	394	429	429
Louisiana	3,958	2,743	456	470	484	505
Mississippi	1,678	845	413	479	438	509
Tennessee	5,200	4,725	479	480	508	519
Southeast	70,328	83,408	438	452	464	488
United States	1,027,001	963,416	453	426	483	467

Source: Southeastern Regional Council for Educational Improvement, *SEIS Data Profiles* (Fall 1983).

doubled between 1942 and 1982. Clearly, numbers of schools alone do not necessarily indicate the quantity or quality of education. Yet in an area such as the Southeast, where accessibility to higher education has been limited in the past, increasing numbers of facilities have provided greater opportunities for the population as a whole to attend college.

The average pupil-teacher ratio in elementary and secondary schools has been halved from over 46 students per teacher in 1920 to 20 by 1982. Although the number of public schools has declined, schools have grown in size and have reaped certain economies of scale in the process. Larger, diverse schools adhering more closely to national standards have become the rule within the region. Thus, current educational infrastructure appears to be superior to its historical counterpart.

## Educational Attainment

Available methods for measuring the educational level of the public are controversial. A lack of uniform testing from one area to another is a major problem of current measurement techniques. Scores from tests administered to students are less than satisfactory because of differences between areas in the types of tests used and compositions of groups tested. The Scholastic Aptitude Test administered to senior high school students is one of the most standardized tests available. The average scores

are not reliable indicators, however, since varying proportions of students take the tests in each area. Table 5 suggests that score fluctuations from period to period could well be due to changes in the proportions of the total of students tested. Even if average scores are useful indicators of students' educational levels, a snapshot of such tests reveals little about the adult population that makes up the majority of the work force.

Because of its availability for the general population, the median years of school completed is the educational indicator selected for use in this analysis. In 1950, only Florida's residents could claim a median of school years completed equivalent to the nation's (9.6 years). Other southeastern states varied from 7.6 years in Louisiana to 8.4 in Tennessee. By 1980, however, every state in the Southeast had reached a median of at least 12.1 years, in comparison with a national average of 12.5 (see Table 6).

In the past, remarkable educational level differences have existed between the sexes. Only in the last 20 years has the southern male's median years of school completed caught up with the female's. Typically, the male left school earlier, as a result of greater work opportunities or perhaps because of a lower opinion of the value of further education. The loss of a higher proportion of the more educated males through migration to other regions also may

**Table 6.** Median School Years Completed

	1950	1980
Alabama	7.9	12.1
Florida	9.6	12.4
Georgia	7.8	12.3
Louisiana	7.6	12.3
Mississippi	8.1	12.1
Tennessee	8.4	12.2
United States	9.6	12.5

Source: U. S. Bureau of the Census, *Census of Population: 1940, 1950, 1960, 1970, 1980. Vol. 1: Characteristics of the Population.*

have been a factor. Educational disparity persisted until the 1960s, when the average educational level of males reached a par with that of females. Since that time, formal educational attainment of the two groups has remained approximately equivalent.

A more precise measure of the population's educational attainment is available from the 1980 Census. For the adult population age 25 or older, Table 7 compares the population of southeastern states by grades of schooling completed. The proportions of population at the various educational levels are similar for most District states. Again, the exception is Florida, whose populace has attained consistently higher educational levels. Over two-thirds of the state's adult residents have completed high school, in contrast to only 54 to 58 percent for the other states.

In comparing the Southeast with other regions and the nation, we find smaller proportions of southeastern residents at each educational level. For example, 60 percent of southern adults have completed high school compared with 66 percent for the nation. One interesting point is that southern adults now compare favorably with those of the Mid-Atlantic and East North Central states in the proportion that have completed at least three years of college. Immigration of college-educated individuals from other regions probably has helped elevate the South's position in this comparison.

For the region's population above age 25, distinct gradations of educational attainment exist. The median years of school completed by older citizens is relatively low vis-a-vis younger age groups (see Charts 3a and 3b). For

**Table 7.** Grade Completed as a Percent of the Population

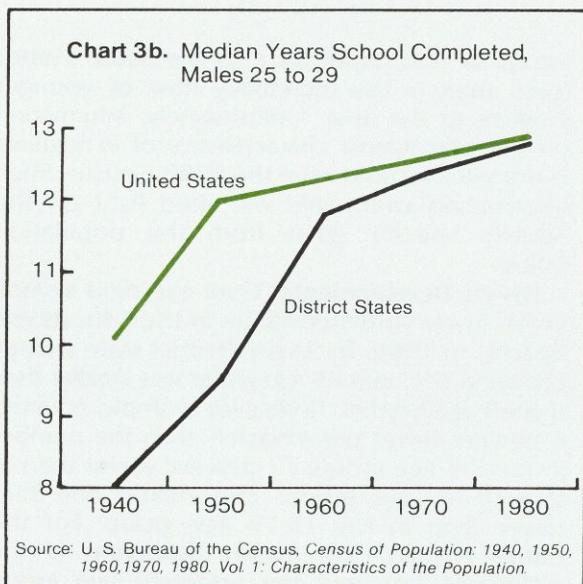
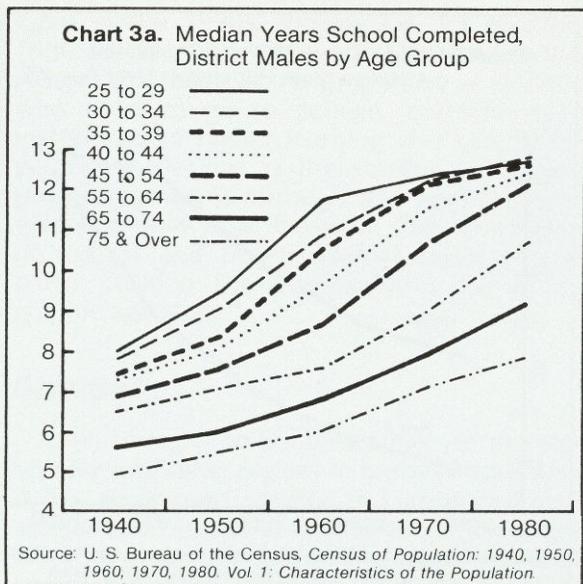
	8 or Less	9-11	12	13-15	16+
Alabama	100	75.6	56.7	25.1	12.6
Florida	100	82.5	67.2	32.0	14.7
Georgia	100	75.9	56.5	28.2	15.3
Louisiana	100	75.6	58.0	26.2	13.4
Mississippi	100	73.4	55.1	26.5	13.0
North Carolina	100	75.9	55.3	27.6	13.4
South Carolina	100	74.7	54.0	27.5	14.2
Tennessee	100	72.4	55.4	23.7	11.9
New England	100	84.7	70.7	34.8	19.3
Mid-Atlantic	100	81.8	66.0	29.9	17.1
East North Central	100	83.2	67.0	29.6	14.5
Pacific	100	86.4	74.2	41.6	19.5
Southeast	100	76.9	59.0	27.9	13.8
United States	100	81.6	66.3	31.9	16.3

Source: National Center for Education Statistics, *Digest of Education Statistics 1982 to 1983-84.*

those segments of the population under 45, the medians in 1980 were similar and were approximately equivalent to the national level. This fact is significant, for it means that those individuals most likely to enter new industries or undertake newly created jobs have achieved formal educational levels largely comparable to the national average. In years of formal schooling, at least, the younger portion of the southeastern work force approximates that of other areas of the country.

## Related Factors

**Legacy of the Past.** The educational situation in the South today reflects historical developments in the region. The plantation culture common in the nineteenth century fostered a predominantly rural society. Education was regarded as a luxury restricted to members of the upper class, whose sons and daughters frequently attended schools outside the region; relatively little support existed for public education for the masses. But in the last half of the nineteenth century, a growing movement of educational development swept across the country, engulfing the South somewhat belatedly. By the turn of the century, the U.S.



literacy rate was estimated at 89 percent while in southern states it ranged from a low of 60 percent in Louisiana to 78 percent in Georgia and Tennessee (see Table 8).

Because of this lag, southeastern states have faced major difficulties in closing the gap between their educational levels and those of the country as a whole. Although in recent years the South has more rapidly improved in several indicators than have other regions, the gains

**Table 8. Literacy Rates\* of Adults Age 25 & Over (in percent)**

	1900	1930	1960	1980
Alabama	65	86	96	98
Florida	77	92	97	99
Georgia	78	90	96	98
Louisiana	60	85	94	98
Mississippi	66	85	95	98
Tennessee	78	92	97	98
United States	89	95	98	99

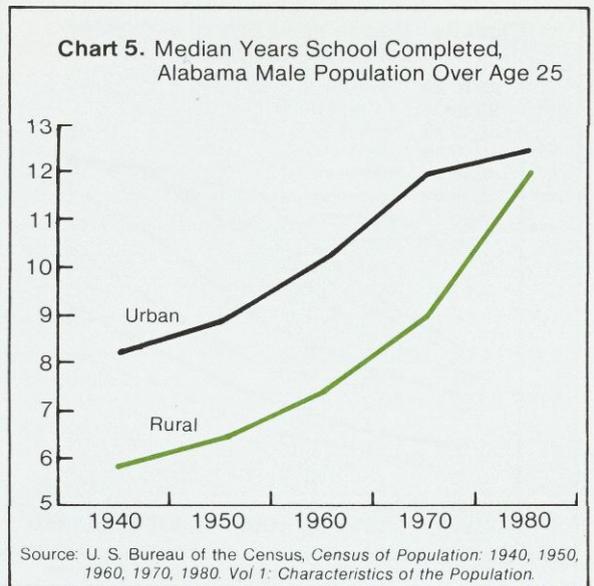
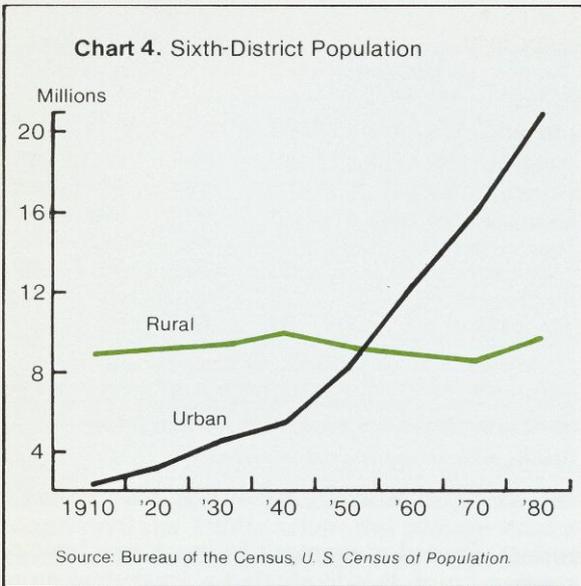
\*Literacy rates shown refer to the basic ability to read and write. Although perhaps more meaningful, functional literacy rates were not used because of the difficulty of defining this term and the lack of historical data.

Source: *Statistical Abstract of the United States*

reflect upward movement from a lower base or starting point. It is likely that a great deal more effort will be required to maintain these relative gains in the future. In-migration from regions with higher educational levels has, no doubt, been a source of some past improvements, but such gains will dwindle as the South's educational level approaches equality with other regions'. At that time, advances will be increasingly dependent upon improvements in educating the resident population.

**Urban-Rural Distribution.** A major factor in the development of the educational infrastructure has been the distribution of population between the urban and rural sectors (see Chart 4). In the first half of this century, the rural population substantially exceeded the urban population (residents in towns with 2,500 or more people) in every District state except Florida. Not until the 1950s and 1960s did the proportion of the urban population surpass the rural share for most states. Mississippi remains the only southern state with a larger rural than urban population, and even there the two groups are equalizing rapidly.

Interestingly, rapid educational gains also accompanied this rural-to-urban population shift. Traditionally in the United States—and especially in the South—a considerable disparity has prevailed between educational levels of urban and rural residents. The levels for the male population in Alabama, shown in Chart 5, are illustrative of the urban-rural relationship for other southern states. Only rather recently have differences begun to narrow. While median



years of schooling completed by both groups of males is increasing, the rate of increase in rural education has been considerably sharper since 1970. Some of this rural gain may have occurred because of the speed up in migration of the less well-educated to the cities as well as the reverse flow of former urban dwellers into rural areas surrounding towns and cities. The educational level of both groups is likely to converge before the end of the 1980s.

In-migration also has influenced median educational levels in the South. Because of the flow of retirees into the Southeast, especially Florida, the region's population of residents over 60 years of age exceeds the national average. Approximately 17 percent of the Southeast's population is over 60 compared with 15 percent nationally. This is a considerable change since 1950, when only 11 percent of the region's population was over 60 compared with 12 percent for the nation.

Median educational levels of older population groups probably have been elevated by the influx of retirees. The precise impact on statewide education levels is difficult to ascertain, however, since in-migration is concentrated in certain geographical areas and comprises a diverse mixture of retirees, including both individuals originally from the South and nonsoutherners who have been educated outside the region. Of course, elderly in-migrants

are of far less importance to the South's labor force than is the increasing flow of younger workers to the area. Unfortunately, information on the educational characteristics of in-migrants is not yet available from the 1980 Census. Such information eventually will shed light on the South's specific gains from the population influx.

**Future Developments.** Over the next several years, fewer students will be in the educational system. In 1980, for every District state except Louisiana the under-5 age group was smaller than the 5-9 age bracket. Florida, for example, counted 8 percent fewer pre-schoolers than the number in the 5-9 age group, 17 percent fewer than in the 10-14 age group, and nearly one-third fewer than in the 15-19 age group. For the entire District, the major distinction is the difference between the under-10 age group and the 10-19 age population: the former was 15 percent smaller than the latter at the last census.

However, population projections of the National Planning Association indicate that the 0-4 age group will experience a resurgence of growth until 1990, when a decline will begin once more. Even with this renewed growth, numbers are not projected to reach the level of the current population in the 15-19 age group. Thus, high school enrollments are expected to drop from the present volume and to bulge

again in the 1990s, though still not regaining 1980 levels in either the Southeast or the U.S. Assuming stability in the proportion of students who elect to go to college, enrollments in institutions of higher learning also can be expected to decline as the smaller age groups progress upwards through the system. Some evidence does exist, however, that enrollments of foreign and non-traditional students may partly cushion the decline from the demographic age shift.

### Summary

Even though the Southeast has yet to catch up fully with other regions in terms of education, it has progressed rapidly and improved considerably. Educational attainment of the population as measured by median years of school completed now indicates that the younger

groups (under 45 years) have achieved formal schooling levels equivalent to the nation's. Over time, the Southeast seems likely to shed its traditional position of inferiority in the nation and among other regions in the formal educational level of its population. Because this improvement has already occurred within younger groups—those most likely to enter new industries and jobs—the Southeast's work force is becoming competitive with most other regions'. With sufficient resources, effort, and attention devoted to education and with the attraction of residents with above-average education from other regions, the Southeast may look to solid educational achievements in the future.

*(The authors wish to thank Joy Lanier for her valuable research assistance.)*