Chapter 2

Education Outcomes

There is a commonly held perception that children in urban public schools exhibit a pattern of academic failure that leads to dropping out of school and later, failure to obtain and maintain a livelihood. This chapter uses nationally representative data and statistical analyses to test this perception.

Chapter 1 reviewed previous research and contextual data suggesting that students in urban public schools—and especially those in urban schools with high concentrations of disadvantaged students—would be expected to compare less favorably on achievement, educational attainment, and on indicators of economic status than students from other schools. This chapter examines the available data for each of these three areas. Further, given that urbanicity is confounded with poverty, it explores whether the urbanicity of a school continues to be related to student outcomes when the higher concentration of poverty in urban schools is considered. The analysis uses data on a battery of indicators of achievement, attainment, and economic outcomes, and these data are subjected to statistical tests to determine the relationship between these outcomes and urbanicity, controlling for poverty and in combination with poverty.

The approach used for the analysis in this chapter will serve as a model for the chapters that follow. Students in national surveys are grouped according to the urbanicity and the level of poverty concentration in the schools they attended, using comparable definitions of urbanicity and poverty concentration. In the achievement section, poverty is measured as the percent of students receiving free and reduced price lunch, while in the attainment and economic outcomes sections, which use data from older surveys, it is measured as the percentage identified as "disadvantaged" by a school administrator.

The data for each outcome measure were subjected to a series of statistical tests using analysis of variance

(see chapter 1 and appendix B) to determine specifically:

1) how the performance of urban students, overall, compared to suburban or rural students;

2) how the performance of students in schools with higher poverty concentrations compared to students in schools with lower poverty concentrations;

3) how the performance of students from urban schools compared if the concentration of poverty in their schools was considered; and finally

4) how the performance of students in urban schools with the highest poverty concentrations compared to those in similar schools in suburban and rural areas, and whether they suffered any additional penalty on achievement tests, in attaining education, and in achieving economic well-being that was related to the interaction, or compounding effect, of an urban and a high poverty setting.

The results of this last test are expressed by the phrase *greater than predicted* when the difference between urban high poverty and other high poverty schools is larger than would be predicted from the combined effects of urbanicity and poverty concentration, or *no different than predicted* when the difference can be explained by these two main effects.

Chart 2.1 summarizes the results of the analyses of education outcomes, grouped into three sections—student achievement, educational attainment, and economic outcomes. The indicators of student achievement are mathematics and reading test composite scores for 8th- and 10th-grade students, and the overall change in 10th graders' mathematics scores from 1980 to 1990. Rates of on-time high school

completion and postsecondary degree attainment are presented as milestones of educational attainment. The economic outcomes selected include the extent of engagement in economic activities (work or school) 4 years after graduating high school; and the economic activities and unemployment and poverty rates of young adults 7 to 15 years after graduating high school at ages 25-32, a time that is crucial to developing their careers.

Summary of This Chapter's Findings

- Students in urban public schools compared less favorably than students in suburban schools on all education outcomes, and they compared less favorably than students in rural schools on about half of the indicators of academic achievement, educational attainment, and economic status.

- After accounting for differences in school poverty concentration, the outcomes of urban students compared unfavorably to those in one or both other locations on the following: 8th-grade achievement, high school completion, early engagement in productive activities, unemployment, and living in poverty. Their outcomes were the same as suburban and rural students on 10th-grade achievement, postsecondary completion, and on engagement in productive activities later in their careers.

- Students from high poverty urban schools performed less favorably than those from high poverty rural schools on 8th-grade achievement and high school completion rates. They had higher unemployment rates than did those from suburban high poverty schools. However, the great majority of students from urban high poverty schools still graduated high school on time (66 percent), and were more likely than not to be employed or attending school full time (73 percent) several years after graduating.

- Young adults who had attended high poverty urban schools were much more likely to be living in poverty later in life than those who had attended high poverty schools in other locations.

Even so, the vast majority of these students were living above the poverty line (74 percent).

- School poverty concentration is consistently related to lower performance on every education outcome measured.

Students from urban public schools have less favorable outcomes on most of the areas examined, compared with students attending public schools elsewhere. Yet when achievement, educational attainment, and engagement in productive activities are examined at two points in time, urban students generally compare less favorably relative to suburban and rural students at the earlier point in time, but perform the same as other students at the later point. When differences in poverty concentration are taken into account, urban 8th graders score lower than suburban or rural 8th graders on achievement tests, but by 10th grade, they score the same as their peers in other locations. Similarly, urban students are less likely to finish high school on time, but they complete postsecondary degrees at the same rate as others, when poverty concentration is considered. Urban students are also less likely than suburban students to be working or in school 4 years after graduating high school, but by 7 to 15 years later—a key period in their career development—are just as economically active as others.

Some measurement and selection issues may affect these results. For instance, high schools are larger than middle schools and draw from larger, more heterogeneous catchment areas, which may dilute relationships between school location and student outcomes. Furthermore, 8th-grade students who have dropped out of school by 10th grade are not in the pool of students tested in 10th grade. Finally, the cohort of young adults for whom economic activity and completion of higher education is measured includes those who obtained their high school degrees later than scheduled, which may have allowed them to catch up, thereby reducing differences observed at the earlier points in time.

The higher poverty and unemployment rates of young adults who had attended urban schools, measured after they had a chance to establish themselves 7 to 15 years

after they would normally have graduated from high school, does suggest that urban students are more likely to have periods of marginal economic existence than students from schools in other locations. The size of the gap between students from urban schools and others on these two indicators is large. It should be noted that this study did not account for differences by location in labor markets at the time of the surveys. If the survey respondents were living in areas with higher poverty and unemployment rates at the time their progress was measured, these factors would also affect the respondents' status.

Students who attended schools that were both urban **and** had a high concentration of poor or disadvantaged students were at a much higher risk of living in poverty later in life than others. Compared with students from schools in rural areas with similarly high proportions of poor or disadvantaged students, they performed less well on 8th-grade achievement tests and were less likely to complete high school. Moreover, they had higher unemployment rates than those from similar suburban schools. But on the other indicators of achievement, attainment, and economic success, students from urban high poverty schools performed comparably to those from high poverty schools in other locations. In fact, high poverty schools in all locations were similar on half of the indicators, including again,

those at a later point in the life course. This suggests the possibility that the effects of high poverty concentration may diminish over time for certain aspects of these students' lives. The relationship between poverty and the outcomes presented here may be underestimated by the less accurate measure of poverty used in older surveys from which some of the data were drawn.

In no case were the outcomes of students in urban high poverty schools different than predicted: the less favorable outcomes observed for these students could be predicted from the combined effects of an urban setting and a high poverty setting. Thus, there was no evidence that they may have suffered any additional penalty related to the interaction, or compounding effect, of the two.

This chapter focuses on how the outcomes of students from urban high poverty schools differed from those of their counterparts in other locations. The evidence that these students achieve less, attain less education, and fare less well economically than other students is consistent with prior research and the demographic, health, and community risk factors outlined in chapter 1. However, as mentioned previously, the great majority of these students still graduated high school on time (66 percent) and, several years later, were more likely than not to be employed or in school (73 percent) and living above the poverty line (74 percent).

CHART 2.1—SUMMARY OF RESULTS: EDUCATION OUTCOMES				
INDICATOR	Are Urban Schools Different?	Are High Poverty Schools Different?*	Are Urban Schools Different after Accounting for Poverty Concentration?	Are Urban High Poverty Schools Different from Other High Poverty Schools? Are Urban High Poverty Schools Different than Predicted?
I. STUDENT ACHIEVEMENT				
8th-Grade Composite Score	Yes, urban lower than suburban and rural	Yes, high poverty lower than most others	Yes, urban lower than others	Yes, same as suburban, lower than rural high poverty No different than predicted
10th-Grade Composite Score	Yes, urban lower than suburban, same as rural	Yes, high poverty lower than all others	No, urban same as others	No, same as other high poverty No different than predicted
1980-1990 Change in 10th-Grade Math Score	Yes, urban lower than others in 1980, lower than suburban in 1990	NA	NA	NA
II. EDUCATIONAL ATTAINMENT				
High School Completion	Yes, urban lower than suburban and rural	Yes, high poverty lower than all others	Yes, urban lower than others	Yes, lower than rural, same as suburban high poverty No different than predicted

INDICATOR	Are Urban Schools Different?	Are High Poverty Schools Different?*	Are Urban Schools Different After Accounting for Poverty Concentration?	Are Urban High Poverty Schools Different From Other High Poverty Schools? Are Urban High Poverty Schools Different Than Predicted?
Postsecondary Degree Attainment	Yes, urban lower than suburban, same as rural	Yes, high poverty lower than most others	No, urban same as others	No, same as other high poverty No different than predicted

III. ECONOMIC OUTCOMES				
Early Productive Activity	Yes, urban lower than suburban, same as rural	Yes, high poverty lower than all others	Yes, urban lower than suburban	No, same as other high poverty No different than predicted
Later Productive Activity	Yes, urban lower than suburban, same as rural	Yes, high poverty lower than most others	No, urban same as others	No, same as other high poverty No different than predicted
Unemployment	Yes, urban higher than suburban and rural	Yes, high poverty lower than all others	Yes, urban higher than others	Yes, higher than suburban, same as rural high poverty No different than predicted
Poverty	Yes, urban higher than suburban and rural	Yes, high poverty higher than all others	Yes, urban higher than others	Yes, higher than other high poverty No different than predicted

*Poverty at the school level is measured by the percentage of students receiving free or reduced-price lunch in the student achievement section and the percentage identified as "disadvantaged" by school administrators in the educational attainment and economic outcomes section.

Student Achievement

Student achievement is a primary measure of school success. Parents and school officials alike interpret test scores as a reflection of whether students, as well as the educational system, are performing satisfactorily (Special Study Panel on Education Indicators 1991).

The challenge in measuring educational achievement nationally is to measure achievement consistently across diverse populations of students throughout the country, who are exposed to a wide range of teaching quality and practices, school resources, and curricula. National assessments have been developed to enable nationwide comparisons of the performance of students who are educated in widely different circumstances.

This section discusses the findings from two such longitudinal surveys (surveys that follow the same individuals over time), which contain national assessments as part of the survey. First, the mathematics and reading test scores of 8th graders in 1988 and 10th graders in 1990 are presented from an assessment administered as part of the National Education Longitudinal Study of 1988 (NELS:88). Then, the performance of the same 10th graders in math in 1990 is compared to that of 10th graders in 1980, who were assessed in a comparable test as part of the High School and Beyond Study (HS&B), to determine if the performance of students in urban, suburban, and rural schools has changed over the decade.

The analysis of the measures of student achievement addressed in this section will be presented in a standard order. First, the average scores of public school students in urban locations will be compared to their counterparts in suburban and rural locations. Second, the average scores of students who attended schools with high concentrations of poverty will be compared to those who attended schools with lower concentrations of poverty. Third, the students are grouped according to the urbanicity and the level of

poverty in their schools, in order to make comparisons between students attending schools with similar concentrations of poor students (measured as those receiving free or reduced price lunch). Finally, students from urban high poverty schools are compared to students from high poverty schools in other locations.

In this analysis, statistical tests are performed to determine whether the differences in the average scores of the groups being compared are statistically significant, rather than due to chance. All differences that are reported are statistically significant.

Findings

- Urban 8th graders scored lower on achievement tests than suburban or rural 8th graders, even when the higher poverty concentration of urban public schools was taken into account.

- Urban 10th graders scored the same as rural 10th graders, but scored lower than suburban 10th graders. However, this was not related to an urban location; rather, it was due to the higher poverty concentration in urban areas.

- Students in urban high poverty schools achieved at about the same level as would be predicted from the combination of an urban and high poverty setting. In fact, in urban high poverty schools, 8th graders scored about the same as those in suburban high poverty schools, and 10th graders scored about the same as those in rural high poverty schools and suburban schools with the highest and next to highest levels of poverty concentration. However, 8th graders in urban high poverty schools scored lower than those in rural locations.

- The concentration of poverty in a school had an important relationship to achievement—as the proportion of poor students in a school

increased, student performance on achievement tests in both 8th and 10th grades and in every location generally decreased.

- Between 1980 and 1990, the mathematics achievement of students in public schools in every location increased moderately. However, there were no meaningful differences in the amount of increase across locations. Urban students scored lower in mathematics than both suburban and rural students in 1980, but lower than only suburban students in 1990.

Academic Achievement of 8th Graders

Are urban schools different? In 1988, the academic achievement of 8th graders in urban public schools lagged behind that of their peers in suburban and rural schools (figure 2.1). In a national test of math and reading achievement, students scored a mean of 49.5 overall, but urban 8th graders scored 47, or at the 38th percentile, while suburban students scored 51 (at the 54th percentile), and rural students scored 49 (at the 46th percentile).[2]

Are high poverty schools different? Students in schools with high poverty concentrations also achieved at lower levels than students in most other schools. Students in schools with the highest concentration of poverty scored an average of 45 (at the 31st percentile), while

students in schools with the lowest concentration of poverty scored 53 (at the 62nd percentile) (figure 2.2).

Are urban schools different after accounting for poverty concentration? The low performance of urban students cannot be attributed to the poverty concentration of their schools alone. They still would have performed less well, on average, than students in other areas, even if their school had the same level of poverty concentration as schools in other areas.

Is 8th-grade student achievement in urban high poverty schools lower than predicted? Students in urban schools with high concentrations of poverty had lower composite scores than students in similar schools in rural

**Figure 2.1
Average standardized test
composite scores of 8th-grade students,
by urbanicity: 1988**
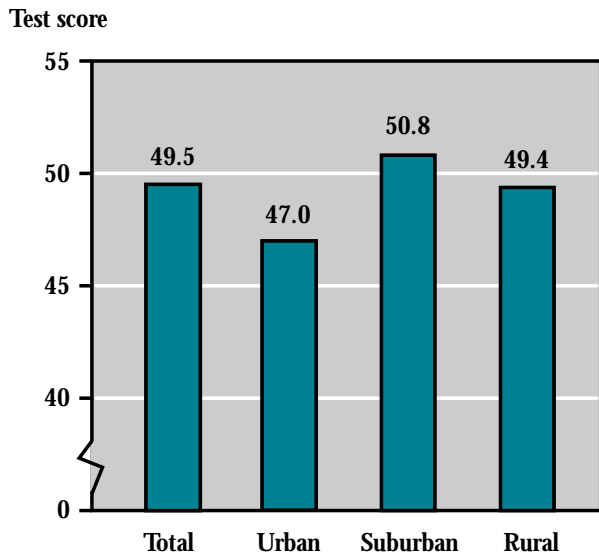
Test score

	Total	Urban	Suburban	Rural
	49.5	47.0	50.8	49.4

SOURCE: U.S. Department of Education, National Center for Education Statistics, National Education Longitudinal Study of 1988, Base Year Survey.

**Figure 2.2
Average standardized test
composite scores of 8th-grade students,
by school poverty concentration: 1988**

Test score

School poverty concentration (percent): 0 to 5, 6 to 20, 21 to 40, Over 40
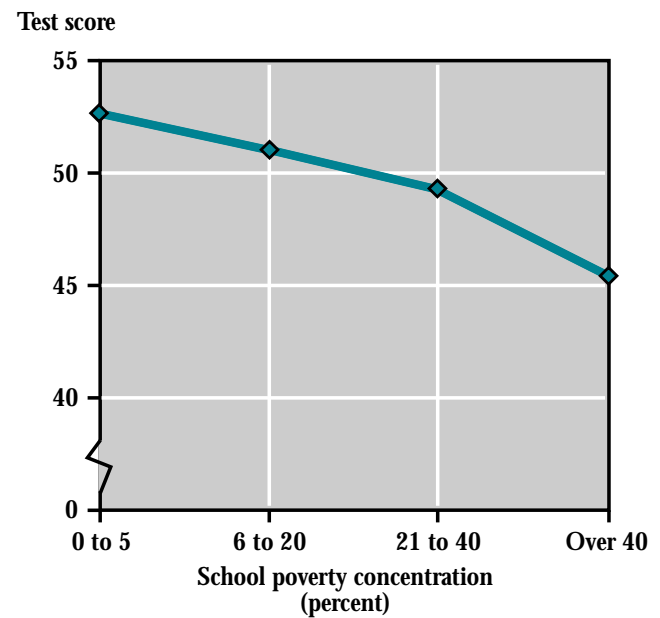
SOURCE: U.S. Department of Education, National Center for Education Statistics, National Education Longitudinal Study of 1988, Base Year Survey.

settings, but their scores were not statistically different from those in suburban settings (figure 2.3). Students in urban high poverty schools scored an average of 44, compared with an average of about 46 for students in suburban and rural high poverty settings. However, the lower scores of students in urban high poverty schools were not lower than predicted from the combined effect of the school's urban location and poverty concentration.

[2]As part of NELS:1988, the academic skills of a nationally representative sample of 8th-grade students were assessed. Tests of achievement were administered in mathematics and reading, and the number correct scores were standardized and rescaled to a mean of 50 and a standard deviation of 10. The standardized test composite is the equally weighted mean of the standardized reading and mathematics scores, restandardized to a mean of 50 and a standard deviation of 10. Because of missing data, the sample analyzed here has a weighted mean of 49.5. Percentiles were then identified for each subgroup based on the entire distribution.

Figure 2.3
Average standardized test composite scores of 8th-grade students,
by urbanicity and school poverty concentration: 1988
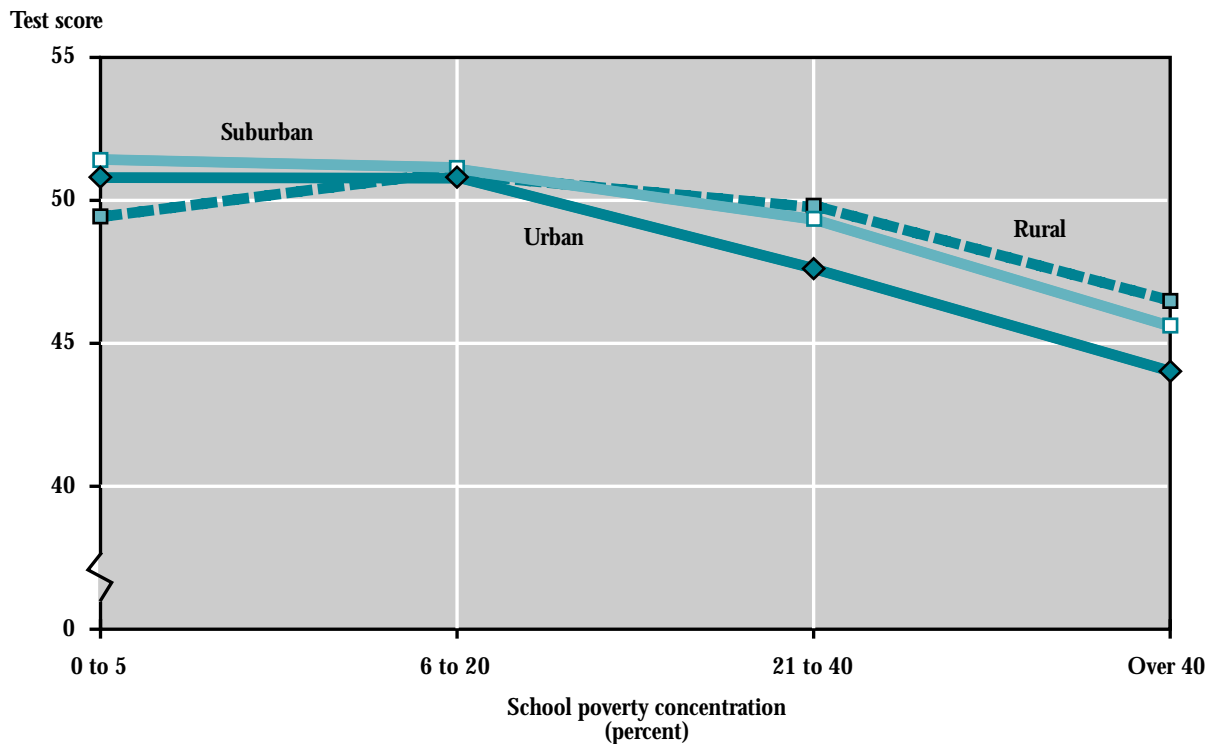
SOURCE: U.S. Department of Education, National Center for Education Statistics, National Education Longitudinal Study of 1988, Base Year Survey.

Academic Achievement of 10th Graders

Does the difference in achievement observed for urban 8th graders remain in 10th grade? This section presents evidence from the first follow-up of the same nationally representative survey, NELS:88—but 2 years later in 1990 when most of the 1988 8th graders were in 10th grade. However, not all of the same 8th graders were in this 10th-grade sample because some may have moved out of the country, dropped out of school, or repeated a grade. In addition, this 10th-grade sample has been "freshened" with 1990 10th graders who were not in the 8th-grade sample in 1988 to make it nationally representative of all public school 10th graders in 1990. Again, the indicator presented is an overall average test composite score calculated from mathematics and reading test scores.[3]

Are urban schools different? Urban 10th graders scored lower than their suburban counterparts on tests of achievement in mathematics and reading (figure 2.4). They had a composite test score of about 49, while suburban students had an average score of 51. Urban scores were no different than rural scores.

Are high poverty schools different? As with 8th graders, 10th-grade achievement was related to the concentration of poverty in the school (figure 2.5). Students in schools with the highest concentration of poverty had the lowest level of achievement (scoring 45 on average), whereas those in schools with the lowest poverty concentration scored an average of 53. Just like the 8th graders, the 10th graders in high poverty

Figure 2.4
Average standardized test composite scores of 10th-grade students, by urbanicity: 1990
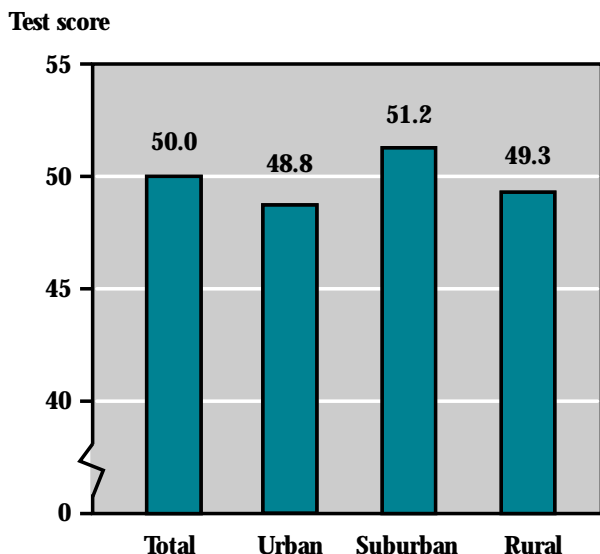
Test score

Total	Urban	Suburban	Rural
50.0	48.8	51.2	49.3

SOURCE: U.S. Department of Education, National Center for Education Statistics, National Education Longitudinal Study of 1988, First Follow-up Survey, 1990.

Figure 2.5
Average standardized test composite scores of 10th-grade students, by school poverty concentration: 1990

Test score

School poverty concentration (percent)
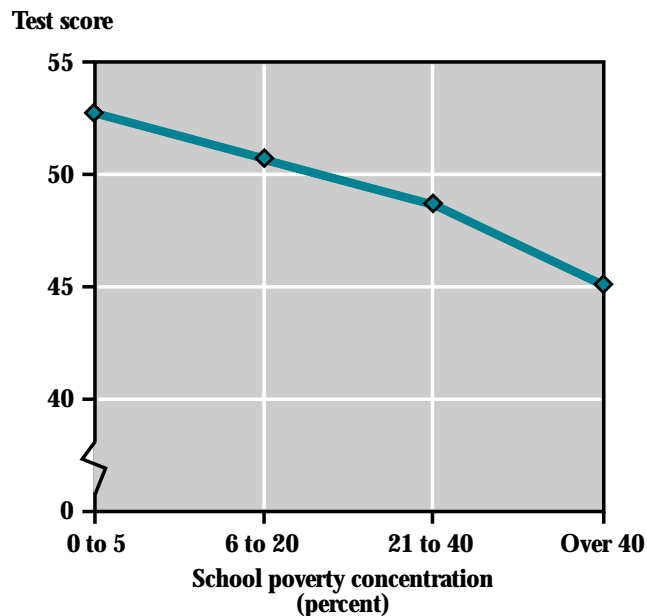
SOURCE: U.S. Department of Education, National Center for Education Statistics, National Education Longitudinal Study of 1988, First Follow-up Survey, 1990.

schools scored at a much lower percentile (the 30th) than students in low poverty schools (the 62nd).

Are urban schools different after accounting for the poverty concentration of the school? The difference between urban and suburban 10th graders on overall achievement observed in figure 2.4 did not hold after taking into account the differences in the concentration of poverty in urban compared with suburban schools. Thus, the lower performance of urban 10th graders is related to the higher concentration of poverty in urban schools.

Is 10th-grade student achievement in urban high poverty schools lower than predicted? Students in urban high poverty schools performed as predicted on achievement tests. In fact, they performed no differently than students

in high poverty schools in suburban or rural areas. Students in high poverty schools in every location scored an average of 45 on overall achievement tests. For urban and rural students, this was the lowest score among 10th graders in each location. Even though in figure 2.6 it also appears to be the lowest score for suburban students, the difference between students in suburban schools with the highest poverty concentration and those with the next highest level was not statistically significant.

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[3]As part of the first follow-up survey of NELS:88, the academic skills of a nationally representative sample of 10th-grade students were assessed. Tests of achievement were administered in mathematics and reading, and the number correct scores were standardized and rescaled to a mean of 50 and a standard deviation of 10. The standardized test composite is the equally weighted mean of the standardized reading and mathematics scores, restandardized to a mean of 50 and a standard deviation of 10. Percentiles were then identified for each subgroup based on national distributions.

**Figure 2.6
Average standardized test composite scores of 10th-grade students, by urbanicity and school poverty concentration: 1990**
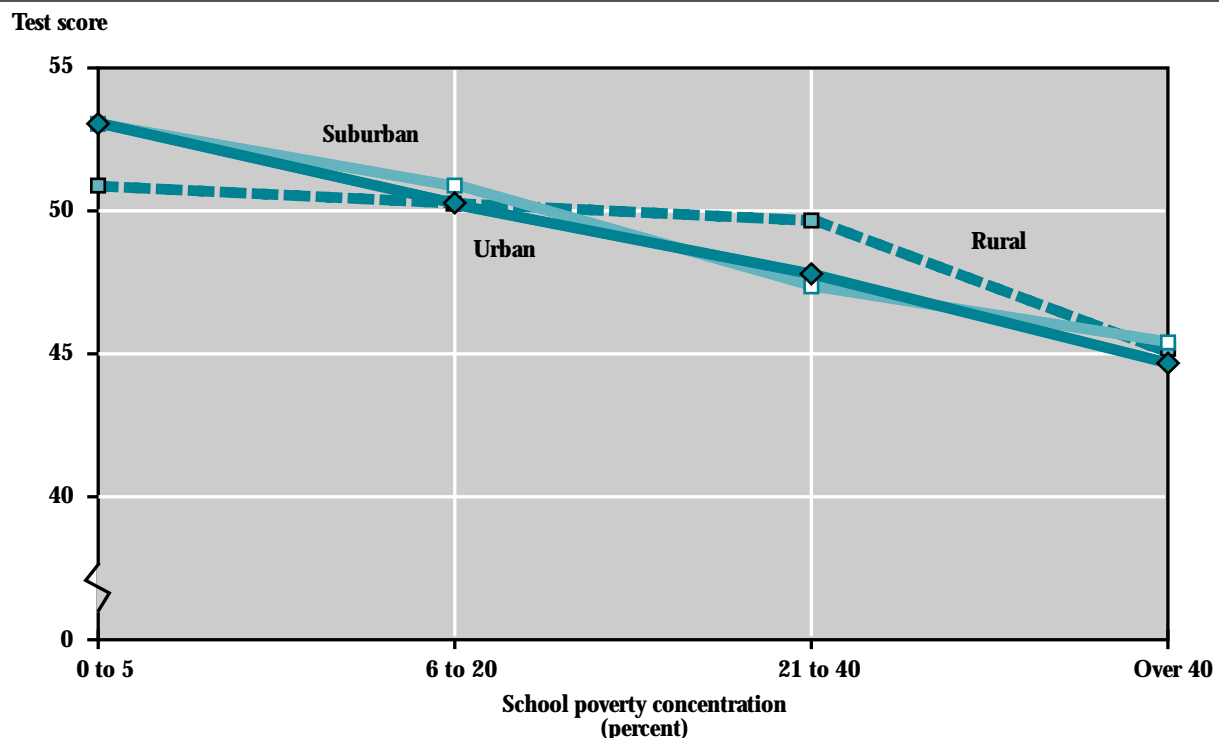
SOURCE: U.S. Department of Education, National Center for Education Statistics, National Education Longitudinal Study of 1988, First Follow-up Survey, 1990.

# Did 10th-Grade Achievement Change Between 1980 and 1990?

The previous section compared the achievement of urban 10th graders with their suburban and rural counterparts. The discussion in this section turns to whether differences in achievement by school location have changed over the decade of the 1980s.

The source of data is a mathematics test given to a nationally representative sample of public high school sophomores in 1980 (from the HS&B Base Year Survey), which has been equated to the test given to the 1990 sample of sophomores from the NELS:88 First Follow-up Survey. (A composite score of mathematics and reading achievement, used in the preceding analysis, is unavailable for both groups of sophomores.) The 10th graders' average number of correct responses is compared according to the location of their school.[4] Since the definitions of poverty used in the two surveys were not comparable, comparisons could not be made by school poverty concentration.

Overall, sophomores in 1990 were able to correctly answer about two more items than sophomores in 1980 (figure 2.7). Students in all three locations improved their performance over the decade and exhibited similar levels of improvement. Urban 10th graders answered fewer items correctly than did their suburban or rural counterparts in 1980. By 1990, urban students again answered fewer items correctly than suburban students, but there was no significant difference between their performance and that of rural students. Urban students in **1990** performed at about the same level as suburban students had in **1980**.

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[4]The data presented in this section are the estimated number of correct items on the mathematics assessments of two surveys: the 1980 HS&B Survey and NELS, 1990. The two assessments had enough items in common for them to be equated. Also, the number of correct items is used in this analysis, rather than standardized scores, to preserve the observed differences in the two groups. Standardizing each group's scores to have a mean of 50 and a standard deviation of 10 would obscure such observed differences.

Figure 2.7
Average number correct in mathematics for 10th-grade students, by urbanicity: 1980 and 1990
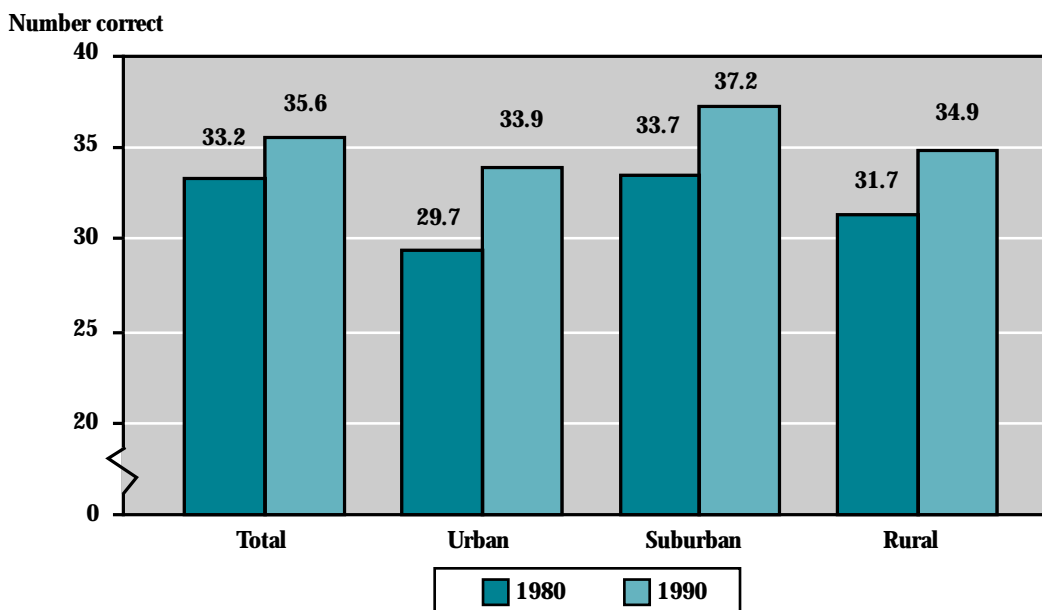
SOURCE: U.S. Department of Education, National Center for Education Statistics, High School and Beyond, Base Year Survey, 1980, and the National Education Longitudinal Study of 1988, First Follow-up Survey, 1990.

Educational Attainment

One of the most basic outcome measures of an education system is the educational attainment—that is, the amount of education or credentials attained—of the students who pass through the system. The level of education that students complete has a strong and direct impact on their employment and earnings potential.

It has been well documented that rates of employment are higher and more stable for those with higher educational attainment. While 70 percent of men ages 25–34 who did not complete high school were employed in 1991, 85 percent of men of this same age group who had completed high school were employed. Higher rates of employment were found among those who attended college: 89 percent of those with 1–3 years of college were employed, as were 92 percent of those with 4 or more years of college. In addition, the employment rates of college graduates remained stable during downturns in the economy over the last two decades, whereas they have declined for those with less education (U.S. Department of Education 1992).

Earnings are also strongly related to the level of education attained. Individuals who have completed high school and college earn more than those who have not. For example, white and black male high school graduates ages 25–34 earned about 27 percent more in 1990 than those who had not completed high school. In 1990, white and black males who had completed a college education earned 42 and 66 percent more, respectively, than those who had completed no more than a high school degree. The differential returns to education are even more dramatic for females (U.S. Department of Education 1992).

Educational attainment is related to the availability of opportunities, as well as the academic abilities, financial resources, and persistence of the individual. In this report, two measures of educational attainment are presented at two stages of completion that have a bearing on future opportunities. These measures are 1) the rate at which sophomores complete high school on time, from the HS&B survey; and 2) the rate at which young adults complete any postsecondary degree, from the National Longitudinal Survey of Youth (NLSY). The measure of school poverty used in this section is the percentage of students in the school who are reported to be "disadvantaged" by school administrators, since this is the measure available in these two surveys.

The analysis described here will follow the same order as it did in the achievement section. First, measures of student attainment will be presented by urbanicity, followed by the level of concentration of disadvantaged students in the school, and by both characteristics combined. The statistical analysis presented in the previous section will be used to determine how the urbanicity and concentration of disadvantaged students in the school, separately and combined, are related to the educational attainment of students in those schools.

Findings

- Urban public school students were less likely to graduate from high school on time than suburban or rural students. This was related to the location of the school apart from the higher concentration of disadvantaged students in urban areas.

- Urban students were less likely to complete a postsecondary degree than suburban students. However, the differences appear to be related to the concentration of disadvantaged students in public schools in urban areas, rather than location.

- Students from urban schools with the highest proportion of disadvantaged students graduated from high school on time at rates that were lower than those in similar rural schools, but at rates that were not statistically different from similar suburban schools. They obtained higher education degrees at about the same rates as those from suburban and rural schools with the same high level of disadvantaged students.

High School Completion

Traditionally, one yardstick used to measure the outcomes of education has been students' completion of high school. This section looks at "on-time graduation" from high school, which is measured by the proportion of the high school sophomore class of 1980 who graduated with their class in 1982. The source of data for the measure is the HS&B Third Follow-up Survey.

A small, but significant, proportion of students complete high school beyond the traditional graduation age. In fact, some do not complete until their late 20s. However, these students are not considered to be on-time graduates in the measure of completion used here.

Are urban schools different? Almost 82 percent of the students in the sophomore class of 1980 attending

public schools graduated on time with their classmates (figure 2.8). However, a smaller proportion of students in urban schools graduated on time compared with students in suburban or rural schools. Only 74 percent of students from urban schools graduated on time compared with 84 percent of students in suburban schools and 83 percent of students in rural schools.
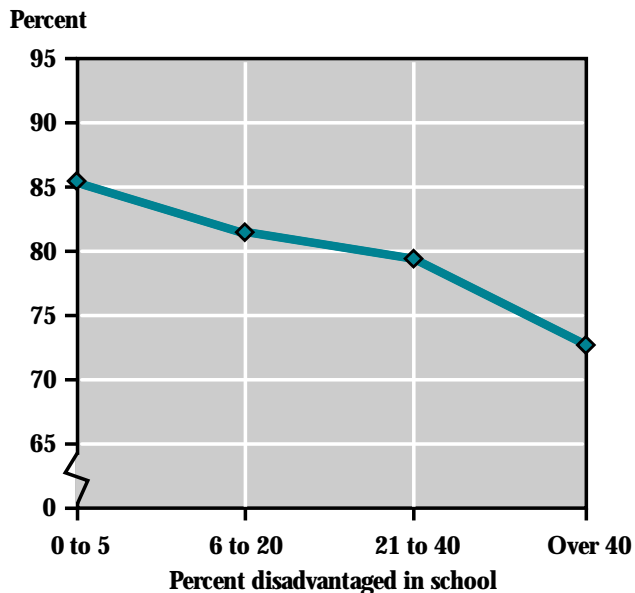
Are schools with high concentrations of disadvantaged students different? Students from schools with fewer disadvantaged students were more likely to graduate on time than students from schools with large proportions of disadvantaged students. Only 73 percent of students in the most disadvantaged schools graduated on time compared with 80 percent or more of students in other schools (figure 2.9).

**Figure 2.8
Percentage graduating on time
among the sophomore class of 1980,
by urbanicity**
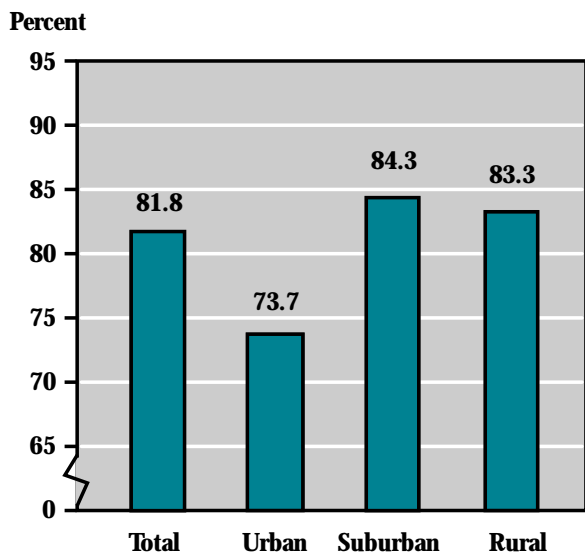
**Figure 2.9
Percentage graduating on time
among the sophomore class of 1980,
by percent disadvantaged in school**

SOURCE: U.S. Department of Education, National Center for Education Statistics, High School and Beyond Study, Third Follow-up, 1986.
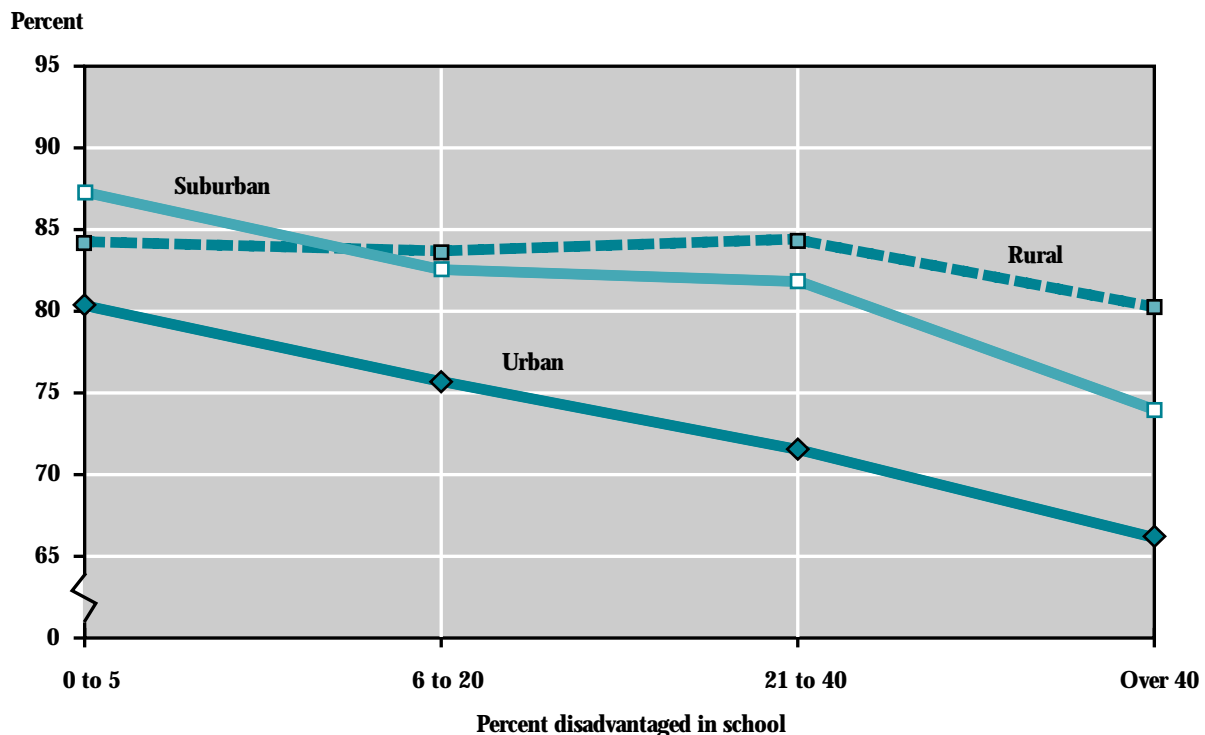
SOURCE: U.S. Department of Education, National Center for Education Statistics, High School and Beyond Study, Third Follow-up, 1986.

Are urban schools different after accounting for concentrations of disadvantaged students in the school? An urban school location continues to be related to the lower on-time graduation rates of its students, even after accounting for the higher concentration of disadvantaged students in urban schools.

Were students in urban schools with the highest concentrations of disadvantaged students less likely to graduate than predicted? In figure 2.10, students in urban schools with the highest concentration of disadvantaged students appear to have the lowest rates of on-time graduation. However, their rates of graduation are significantly lower than only those of rural students, and are not statistically different from those of suburban students in similar schools. Sixty-six percent of urban students graduated on time compared with 74 percent of suburban and 80 percent of rural students in schools with similarly high concentrations of disadvantaged students. The combination of the schools' urban location and high proportions of disadvantaged students is not related to any additional risk of not graduating on time for these students. In fact, their graduation rates are no lower than what would be predicted from the separate effects of urbanicity and high concentrations of disadvantaged students added together.

Figure 2.10
Percentage graduating on time among the sophomore class of 1980,
by urbanicity and percent disadvantaged in school

SOURCE: U.S. Department of Education, National Center for Education Statistics, High School and Beyond Study, Third Follow-up, 1986.

Postsecondary Degree Attainment

The next level of education a student may attain after high school is postsecondary education. Students' ability to enter a postsecondary institution and complete a degree depends upon their ability to finance their education and on their academic achievement and high school completion. Given urban students' lower levels of achievement and high school completion rates and disadvantaged students' inadequate financial resources, one would expect that those who had attended urban high schools with high proportions of disadvantaged students would have lower average postsecondary completion rates.

This section presents data from the National Longitudinal Survey of Youth (NLSY) on the percentage of students who had attended public high schools in urban, suburban, and rural areas and who had completed a bachelor's degree or more by 1990. (Those who completed an associates degree are not included in this measure.) This nationally representative sample of students was first interviewed in 1979 at ages 14–21 and reinterviewed in 1990 at ages 25–32, at which time information on their highest level of educational attainment

was obtained. These young adults were enrolled in high school in the late 1970s and early 1980s.

During the time that these students entered and completed postsecondary education, changes in the attainment of postsecondary education were evident nationwide. Although higher proportions of students were entering colleges and universities, some data suggest that smaller proportions were completing degrees. Financial and academic difficulties among this broader pool of college entrants may explain their lower completion rates (Knepper 1990). It is likely that the large age span of students in the following analysis masks these trends.

Are urban schools different? By 1990, 26 percent of the sampled youth ages 25–32 had completed a bachelor's degree or above. A smaller percentage of former urban and rural high school students than suburban students had completed a degree by 1990: 23 percent of former urban students and 22 percent of rural students had completed a degree, compared with 30 percent of former suburban students (figure 2.11).

Figure 2.11
Percentage of young adults completing a postsecondary degree by 1990, by high school urbanicity
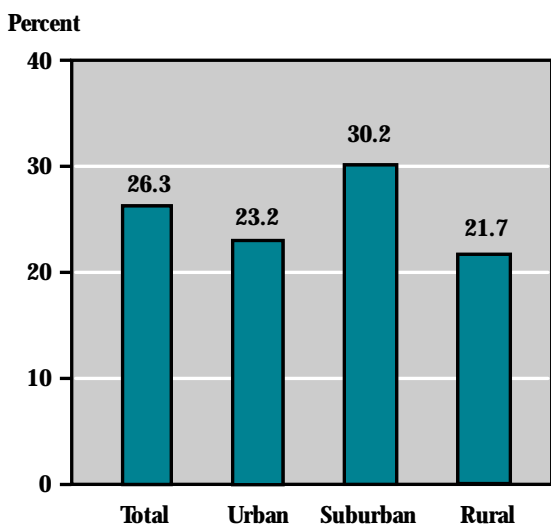
SOURCE: U.S. Department of Labor, National Longitudinal Survey of Youth, 1990.

Figure 2.12
Percentage of young adults completing a postsecondary degree by 1990, by percent disadvantaged in high school
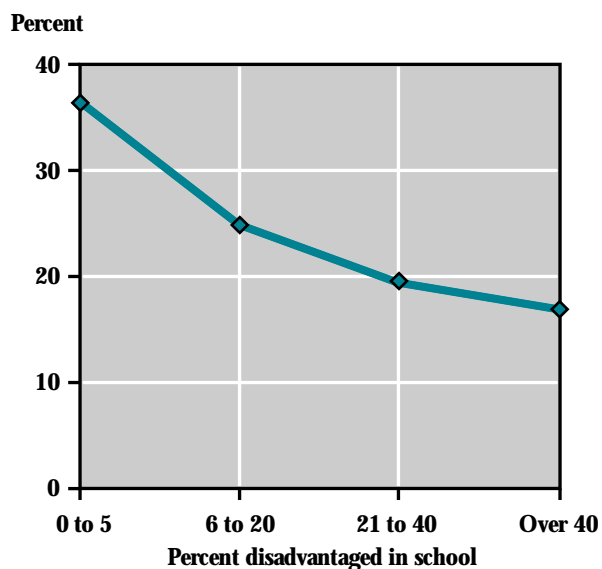
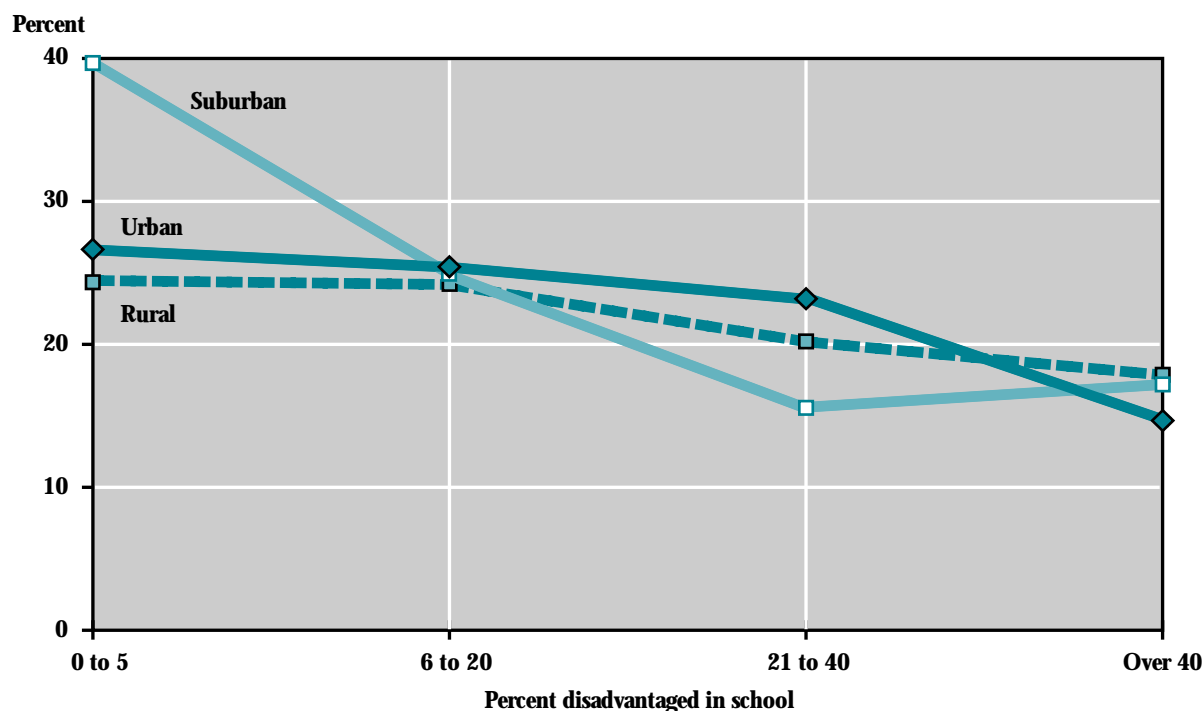SOURCE: U.S. Department of Labor, National Longitudinal Survey of Youth, 1990.

Are schools with high concentrations of disadvantaged students different? The concentration of disadvantaged students in a high school was related to the likelihood that students from that school would complete a postsecondary degree. Thirty-six percent of high school students from schools with the lowest concentration of disadvantaged students had completed a degree, while less than half that percentage from schools with the highest concentration had done so (figure 2.12). No significant differences existed between the postsecondary completion rates of students in schools with the highest and next to highest concentrations of disadvantaged students.

Are urban schools different after accounting for differences in the concentration of disadvantaged students in the school? The differences in postsecondary completion rates seen in figure 2.11 by high school location disappeared when the differences in the concentration of disadvantaged students in schools in each location were considered. That is, the differences by urbanicity are related to differences in the proportion of students who are disadvantaged in urban, suburban, and rural schools.

Were students in urban schools with the highest concentration of disadvantaged students less likely to complete a postsecondary degree than predicted? About 15 percent of young adults who had attended urban schools with high concentrations of disadvantaged students had completed a postsecondary degree, a rate no different than for those who had attended suburban and rural schools with similarly disadvantaged populations (17 and 18 percent, respectively) (figure 2.13). There is no evidence to suggest that an urban setting combined with a high concentration of disadvantaged students was related to any additional penalty regarding postsecondary attainment.

The analysis by school location revealed that suburban high school students were more likely to complete a college degree than were urban and rural students (figure 2.11). However, when the average completion rates for each location were analyzed by the concentration of disadvantaged students in the school, it was apparent that only suburban students who came from schools with the lowest percentage of disadvantaged students had higher completion rates (figure 2.13). Students who had attended other suburban schools completed a degree at a similar rate as their urban and rural peers.

Figure 2.13
Percentage of young adults completing a postsecondary degree by 1990,
by high school urbanicity and percent disadvantaged in high school

SOURCE: U.S. Department of Labor, National Longitudinal Survey of Youth, 1990.

Economic Outcomes

An individual's productivity, employment prospects, and risk of falling into poverty are often linked to the quality and extent of their schooling. To address this linkage, the analysis in this section will determine, first, whether students who emerge from urban public schools are more likely to be unproductive, unemployed, or living in poverty than those from suburban or rural schools, and second, whether students from urban schools with the highest concentration of disadvantaged students have less desirable economic outcomes than predicted.

It has been well-documented that people who have less education or who come from disadvantaged circumstances have more difficulty finding and sustaining employment, and that their earnings, on average, are lower than others. (See introduction to educational attainment section.) The last section demonstrated that students from urban public schools are least likely to graduate from high school on time or to obtain a higher education degree compared to students from public schools in other locations. Therefore, one would expect urban students, on average, to have poorer economic outcomes. In this analysis, students who attended urban and other high schools are followed to find out how they fared economically later in life.

All of the data reported in this section are from longitudinal surveys (which follow the same people through time). The economic outcomes of two groups of students who attended urban public high schools are compared with those who attended rural and suburban schools. The first outcome presented is the percentage of 1980 high school sophomores who were employed or enrolled in school full time in 1986—four years after the age at which most of them would have graduated from high school. Even though most people at this age do not settle into the types of jobs they will hold through most of their lives, this is an early indicator of economic productivity. It differs from standard measures of productivity in that the focus is on full-time activities, rather than on full-time and part-time activities. These data are from the HS&B Third Follow-up Survey.

The second group examined are young adults aged 25–32 in 1990—7 to 15 years after most would have graduated from high school. By this time, individuals are usually engaged in activities that are more likely to reflect lifetime employment patterns. Data for this group are drawn from the National Longitudinal Survey of Youth (NLSY). The three economic outcomes that are presented here are the percentage of young adults who are employed or attending school full time, the percentage who are unemployed, and the percentage who are living in poverty. The measure of school poverty used in this section is the percentage of students in the school who are reported to be "disadvantaged" by school administrators, since this is the measure available in these two surveys.

In this section, the analysis will follow the same order as it did in the previous sections. First, the indicators of economic outcomes will be presented by urbanicity, then by the concentration of disadvantaged students in the high school they attended, and then by both characteristics combined. As in previous sections, a statistical analysis is conducted to determine how the urbanicity and concentration of disadvantaged students in the school, both separately and combined, are related to the economic outcomes of students who have been educated in those schools.

Findings

- Young adults who had attended urban public schools were less likely than their suburban counterparts, but no different than their rural counterparts, to be productively engaged full time in work or school both 4 years after and 7 to 15 years after most had completed high school. An urban high school location was related to this outcome for students who had been out of school for

4 years, but not for those who had been out 7 to 15 years, even after accounting for the concentration of disadvantaged students in urban areas.

- Former students of urban public high schools were more likely to be unemployed and living in poverty later in life than those who had attended either rural or suburban high schools, even after accounting for the higher concentration of disadvantaged students in urban areas.

- Young adults who had attended an urban public high school with the highest percentage of disadvantaged students had higher poverty rates later in life, but no lower rates of productive activity, than those who had attended similar schools in other locations. Former urban students had unemployment rates that were higher than their suburban counterparts, but the same rates as those who had attended similar rural schools.

Early Productive Activities

The first economic outcome that will be examined is a measure of participation in productive activities 4 years after most students would have graduated from high school. This measure indicates whether students from urban schools are less likely than others to be involved in full-time productive activities (defined here as employment or enrollment in school full time, which differs from standard measures of productivity in that part-time work or school is not considered).[5] Early engagement in these activities is related to later economic returns, such as steady employment and higher earnings. Therefore, this indicator is both an outcome and a predictor of future economic well-being. The data used here are from the HS&B Third Follow-up Survey.

Are urban schools different? More than 60 percent of those surveyed were either enrolled in school or employed

full time in 1986 (figure 2.14). Those who had attended urban public high schools as sophomores in 1980 were less likely to have been either employed or in school in 1986 than those who had attended suburban schools (57 compared with 64 percent); however, they had about the same rates of participation as those who had attended rural schools (59 percent).

Are schools with high concentrations of disadvantaged students different? The concentration of disadvantaged students in the high school attended was also related to the likelihood of full-time participation in economic or educational activities 4 years after high school. Those who had attended high schools with the highest concentrations of disadvantaged students were much less likely to be enrolled or employed full time than other students. Forty-eight percent of students who had attended these

Figure 2.14
Percentage of young adults employed or attending school full time, 4 years after high school, by high school urbanicity: 1986
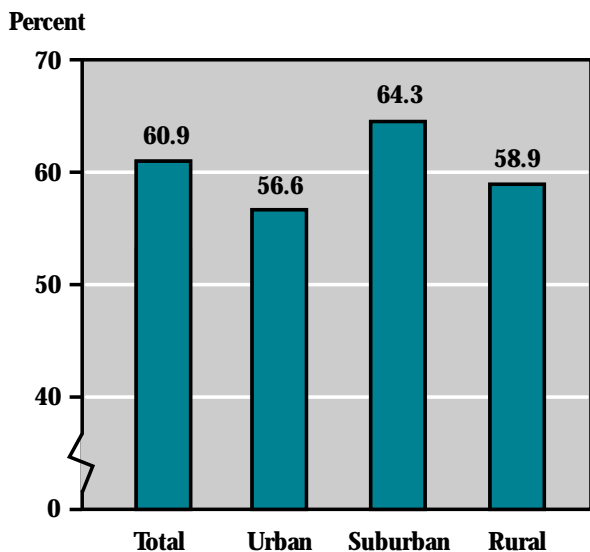
Percent

SOURCE: U.S. Department of Education, National Center for Education Statistics, High School and Beyond Study, Third Follow-up Survey, 1986.

Figure 2.15
Percentage of young adults employed or attending school full time, 4 years after high school, by percent disadvantaged in high school: 1986
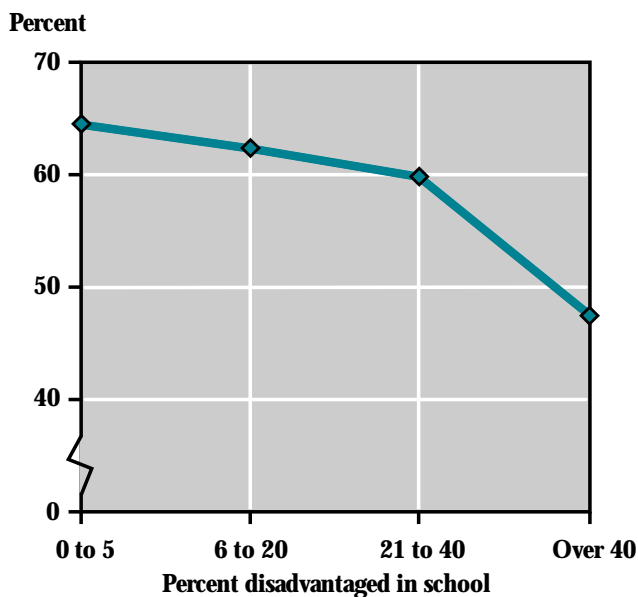
Percent

Percent disadvantaged in school

SOURCE: U.S. Department of Education, National Center for Education Statistics, High School and Beyond Study, Third Follow-up Survey, 1986.

schools were engaged in full-time economic or educational activities, compared with 60 to 64 percent of students in other schools (figure 2.15).

Are urban schools different after accounting for differences in the concentration of disadvantaged students in the school? The difference between urban and suburban students' rates of participation in full-time economic or educational activities remains when the higher concentration of disadvantaged students in urban schools is taken into account. Therefore, an urban school location is related to this outcome independent of the higher concentration of disadvantaged students found in urban schools.

Were students from urban high schools with the highest concentrations of disadvantaged students less likely than predicted to be employed or enrolled in school full time 4 years after high school? Less than half of students who had attended an urban high school with the highest concentration of disadvantaged students were employed or enrolled in school full time 4 years later (figure 2.16). However, this level of activity could be predicted from the combined effects of urbanicity and high poverty concentration. These students were about as active as those who had attended schools in suburban or rural areas with similarly disadvantaged populations.

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[5]"Employment" is defined as working for pay full time or on active duty in the armed forces and not enrolled in college full time. An additional 10 percent of this group were employed part time, enrolled in school part time, or both, but these activities have been excluded from consideration. Expanding the analysis to include these activities produces similar results as for full-time employment or enrollment.

Figure 2.16
Percentage of young adults employed or attending school full time, 4 years after high school, by high school urbanicity and percent disadvantaged in high school: 1986
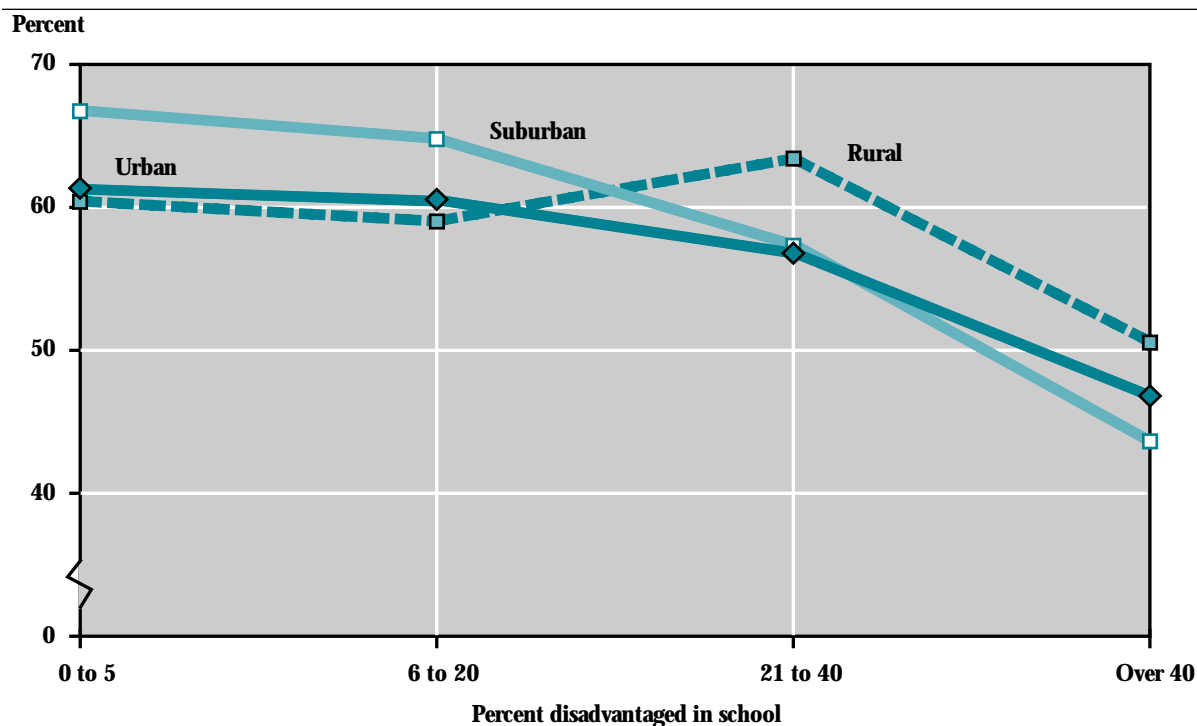
SOURCE: U.S. Department of Education, National Center for Education Statistics, High School and Beyond Study, Third Follow-up Survey, 1986.

Later Productive Activities

While the previous section examined productive activities 4 years after a student typically leaves high school, this section examines the productive activities of young adults after they have established patterns of activity that are more reflective of the ones they will have during their prime working years. The measure of participation in productive activities used here is the percentage of young adults ages 25–32 who were employed or attending school full time in 1990, 7 to 15 years after they typically would have finished high school. In 1990, these young adults were asked whether they were engaged in productive economic or educational activities full time. The NLSY is the source of data for this and the remaining economic indicators in this chapter. The urbanicity and proportion of disadvantaged students of the schools these young adults attended have been identified.

Are urban schools different? In 1990, 84 percent of young adults ages 25–32 were working at a job or enrolled in school full time. Young adults who had attended urban public schools were less likely to be employed or attending school (82 percent) than their counterparts who had attended suburban schools (86 percent); however, they were just as likely to be engaged in these activities as former rural students (82 percent) (figure 2.17).

Are schools with high concentrations of disadvantaged students different? Young adults were generally less likely to be engaged in productive activities if they had attended high schools with higher concentrations of disadvantaged students. Seventy-six percent of young adults who had attended high schools with the highest concentration of disadvantaged students were

**Figure 2.17
Percentage of young adults employed
or attending school full time,
by high school urbanicity: 1990**
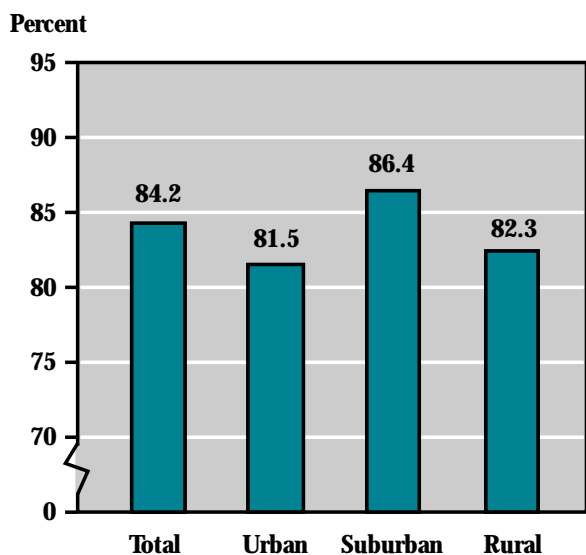
Percent

**Figure 2.18
Percentage of young adults employed
or attending school full time,
by percent disadvantaged in high school: 1990**
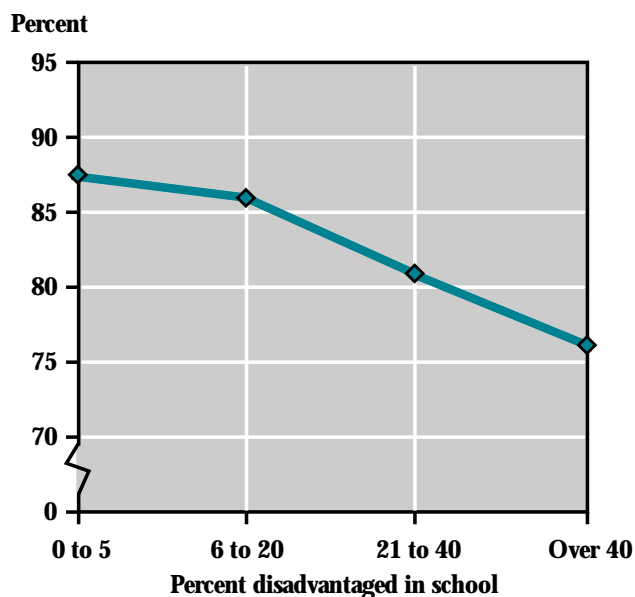
Percent



Percent disadvantaged in school

working or enrolled in school full time, compared with 88 percent of their counterparts who had attended schools with less than 5 percent of the students disadvantaged (figure 2.18).

Are urban schools different after accounting for differences in the concentration of disadvantaged students in the school? The difference between the participation rates of former urban and suburban high school students disappeared after taking into account differences in the concentration of disadvantaged students in their high schools. The location of the school, then, was not related to later economic outcomes apart from differences by urbanicity in the proportion of disadvantaged students in the school.

Were young adults from urban schools with the highest concentration of disadvantaged students less likely than

predicted to be employed or enrolled in school 7 to 15 years after high school? In figure 2.19, young adults who had attended urban high schools with the highest concentration of disadvantaged students appear to be the least likely of any group to be working or attending school full time. However, their rates of participation are no different than predicted given the combined effects of urbanicity and a high proportion of disadvantaged students in the school. Moreover, the difference between their rates of participation in productive activities and those of young adults who attended suburban and rural schools with similarly disadvantaged populations are not statistically significant due to large sampling error. Seventy-three percent of these former urban students were engaged in these activities, compared with 81 percent of those who attended suburban schools and 76 percent of those who attended rural schools with similar levels of disadvantaged students (figure 2.19).

Figure 2.19
Percentage of young adults employed or attending school full time
by high school urbanicity and percent disadvantaged in high school: 1990
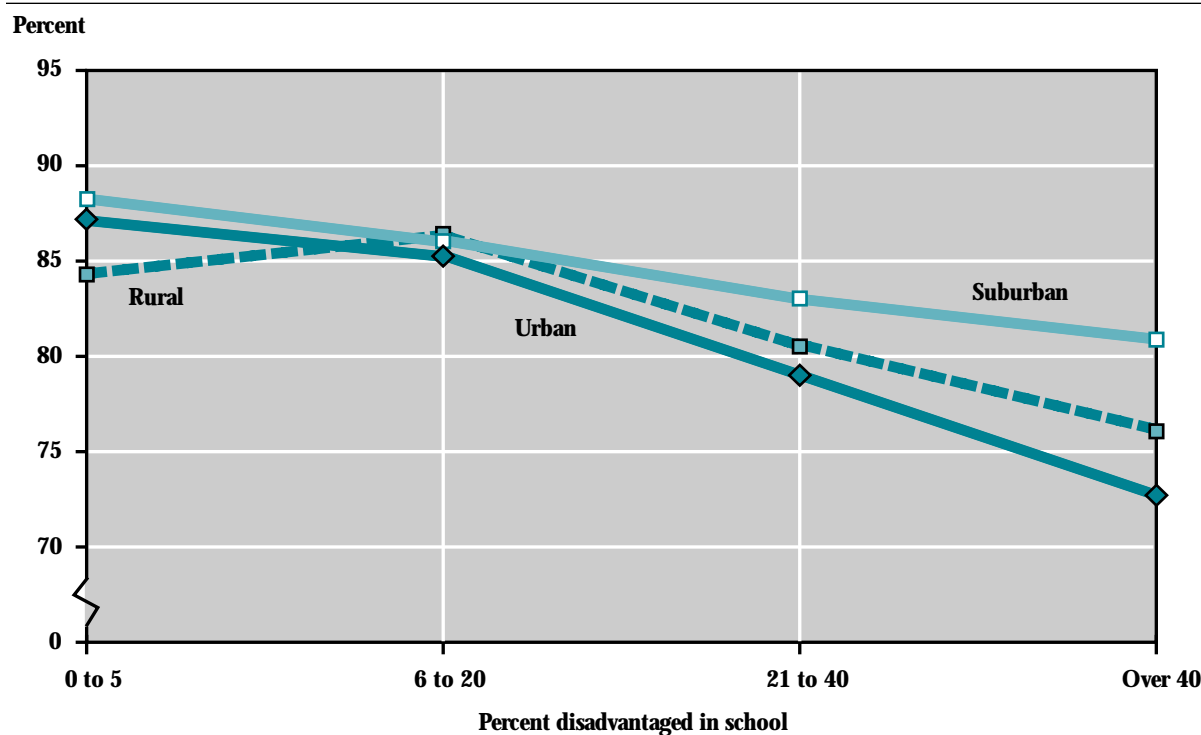
SOURCE: U.S. Department of Labor, National Longitudinal Survey of Youth, 1990.

Unemployment

The unemployment rate indicates the portion of the labor force that wish to be employed but are unable to find work.[6] The period during which the youth followed by the NLSY came of age and entered the labor market—the late 1970s through the 1980s—coincided with a period of higher overall unemployment, which disproportionately affected young, less educated, and minority populations (Freeman 1991). This section will examine the unemployment rates of young adults, ages 25–32, according to the urbanicity of the high school they attended in the late 1970s and early 1980s, rather than their place of residence at the time of the follow-up survey in 1990. Although the unemployment rates reported in 1990 were affected by the job markets in places where the young adults were residing in 1990, it was not possible to account for this effect in the following analysis.

Are urban schools different? In 1990, about 4 percent of young adults ages 25–32 were unemployed overall. But young adults who had attended public high schools in urban areas had an average unemployment rate of close to 6 percent, while those from suburban and rural schools had lower average unemployment rates of about 3 and 4 percent, respectively (figure 2.20).[7]

Are schools with high concentrations of disadvantaged students different? The unemployment rates of young adults generally increase with the proportion of disadvantaged students in the high school they attend. Young adults who had attended the schools with the highest concentrations of disadvantaged students were at least twice as likely to be unemployed as those from schools with lower levels of disadvantaged students (almost 8 percent unemployed compared with 2 to 4 percent from other schools) (figure 2.21).

Are urban schools different after accounting for differences in the concentration of disadvantaged students in the school? The urbanicity of the high school attended continues to be related to the unem-

Figure 2.20
Percentage of young adults unemployed, by high school urbanicity: 1990

Percent

Total	3.6
Urban	5.8
Suburban	2.6
Rural	4.0
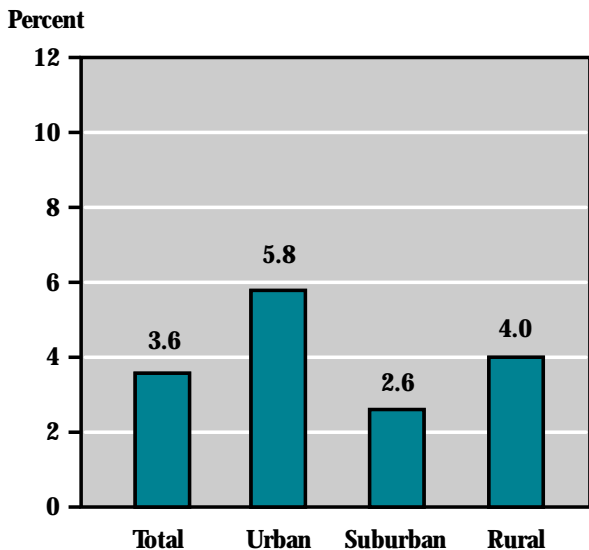
SOURCE: U.S. Department of Labor, National Longitudinal Survey of Youth, 1990.

Figure 2.21
Percentage of young adults unemployed, by percent disadvantaged in high school: 1990

Percent

Percent disadvantaged in school

0 to 5	6 to 20	21 to 40	Over 40
2.1	3.4	3.8	7.6
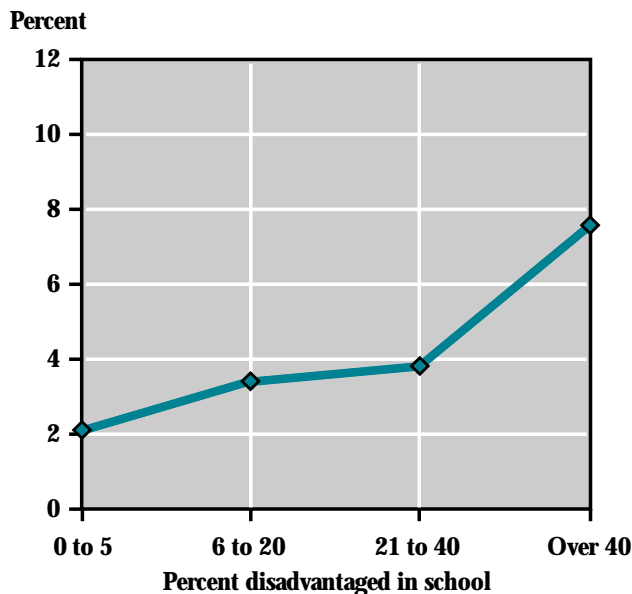
SOURCE: U.S. Department of Labor, National Longitudinal Survey of Youth, 1990.

ployment rates of young adults, even when differences by location in the proportion of disadvantaged students in the high school are considered. Young adults who had attended urban schools would still have higher unemployment rates, even if their schools had the same proportion of disadvantaged students as schools in other areas.

Were young adults from urban schools with the highest concentration of disadvantaged students more likely than predicted to be unemployed 7 to 15 years after high school? Young adults who had attended a high school located in an urban area with the highest levels of disadvantaged students had an average unemployment rate of 11 percent, which was more than twice the rate (5 percent) for those who went to similar schools in suburban areas (figure 2.22). The difference between the unemployment rates of those who had attended schools in urban and

rural areas with similarly high proportions of disadvantaged students appears large in the figure; however, it is not statistically significant. Although the urban unemployment rate of 11 percent is high, it is no higher than predicted from the combination of the unemployment rates observed separately for young adults from all urban schools and from all schools with high concentrations of disadvantaged students. There is no evidence to suggest that there was any additional unexplained unemployment for young adults who attended these schools that was related to the combination of the school's urban setting and highly disadvantaged population.

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[6]"Unemployed" is defined as looking for work or on temporary layoff and not enrolled in school full time.

[7]The difference between urban and rural here is significant at the 90 percent confidence interval, rather than at the 95 percent confidence interval.

**Figure 2.22
Percentage of young adults unemployed,
by high school urbanicity and percent disadvantaged in high school: 1990**
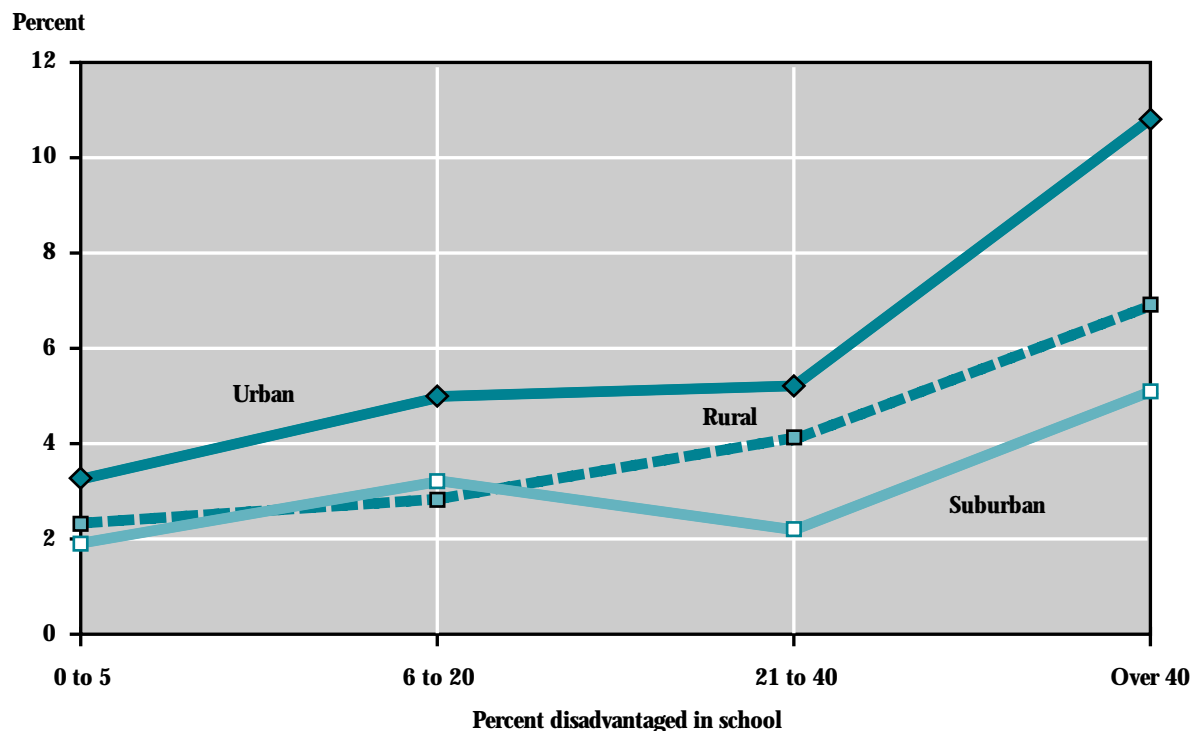
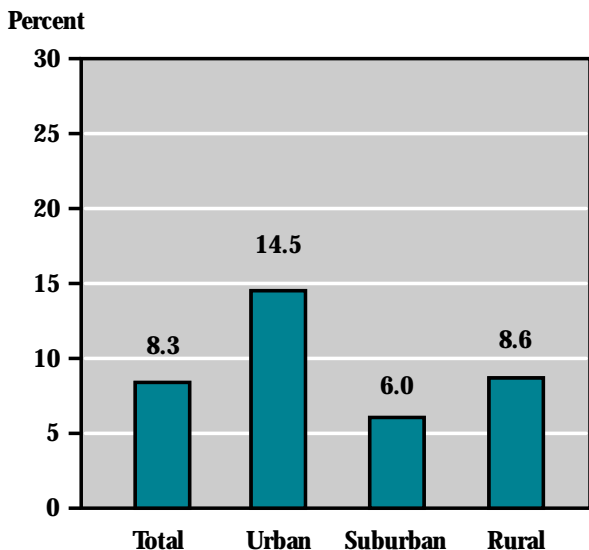SOURCE: U.S. Department of Labor, National Longitudinal Survey of Youth, 1990.

Poverty Status

The average real earnings of young adults, in general, and of high school dropouts, in particular, declined between 1979 and 1988. This combined with higher levels of unemployment, as mentioned previously, drove many young adults in their prime into poverty by 1991 (Panel on High-Risk Youth 1993). Overall levels of poverty are affected by broad economic and demographic trends, but certain segments of the population are at higher risk for living in poverty than others.[8] Using data from the NLSY, this section addresses whether young adults 25–32 who attended public high school in urban areas in the late 1970s and early 1980s were more likely to be living in poverty in 1990, when they were in their prime years of life, than those who attended suburban or rural high schools.

Are urban schools different? In 1990, 8 percent of young adults 25–32 were living below the poverty line. Young adults who had attended urban public high schools were much more likely to be living in poverty (15 percent) than their counterparts who had attended suburban or rural high schools (6 and 9 percent, respectively) (figure 2.23).
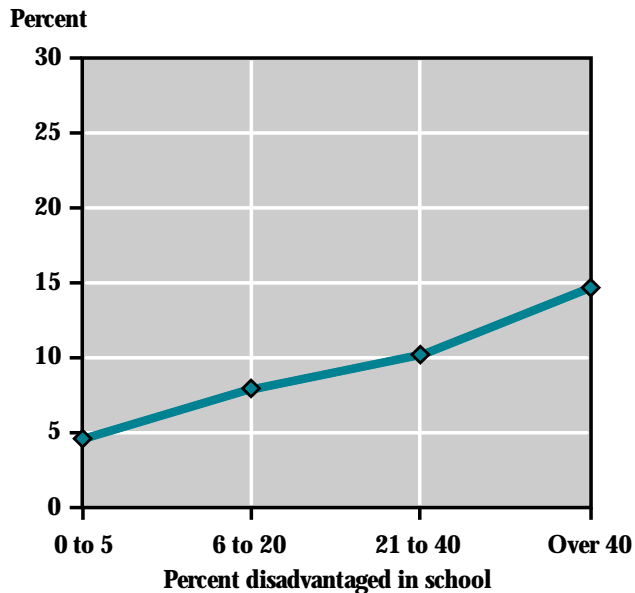
Are schools with high concentrations of disadvantaged students in the school different? Young adults who had attended a high school with the highest concentrations of disadvantaged students were three times as likely to be living in poverty in 1990 (15 percent) as their counterparts who had attended schools with the lowest concentration of disadvantaged students (5 percent) (figure 2.24).

**Figure 2.23
Percentage of young adults living in poverty,
by high school urbanicity: 1990**

SOURCE: U.S. Department of Labor, National Longitudinal Survey of Youth, 1990.

**Figure 2.24
Percentage of young adults living in poverty,
by percent disadvantaged in high school: 1990**

SOURCE: U.S. Department of Labor, National Longitudinal Survey of Youth, 1990.
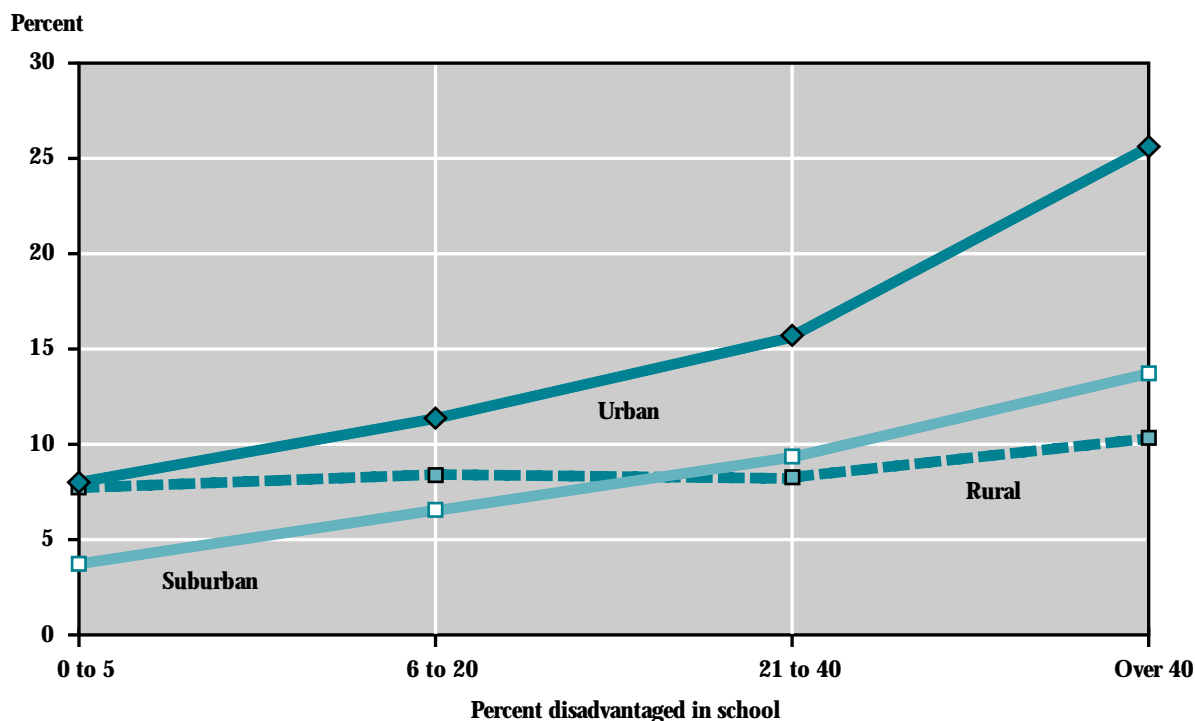
Are urban schools different after accounting for differences in the concentration of disadvantaged students in the school? Students who had attended urban high schools were more likely to be living in poverty later in life, even after the proportion of disadvantaged students in their schools was taken into account.

Were young adults from urban schools with the highest concentration of disadvantaged students more likely to be living in poverty 7 to 15 years after high school than predicted? One out of four young adults who had attended urban high schools with the highest proportions of disadvantaged students were living below the poverty line in 1990. This contrasts with one

out of seven young adults who had attended similar schools in suburban locations, and one out of 10 from rural locations (figure 2.25). One out of 27 students from suburban schools with the lowest level of disadvantaged students ended up living in poverty. The poverty rate in the prime of life for students from urban schools with high concentrations of disadvantaged students, though higher than other schools, is no higher than predicted from the additive effect of high concentrations of disadvantaged students and the urban location of the high schools.

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[8]In addition to employment and earnings, family size and the age of the householder (in one- and two-person families) has an impact on the calculation of poverty status.

Figure 2.25
Percentage of young adults living in poverty,
by high school urbanicity and percent disadvantaged in high school: 1990