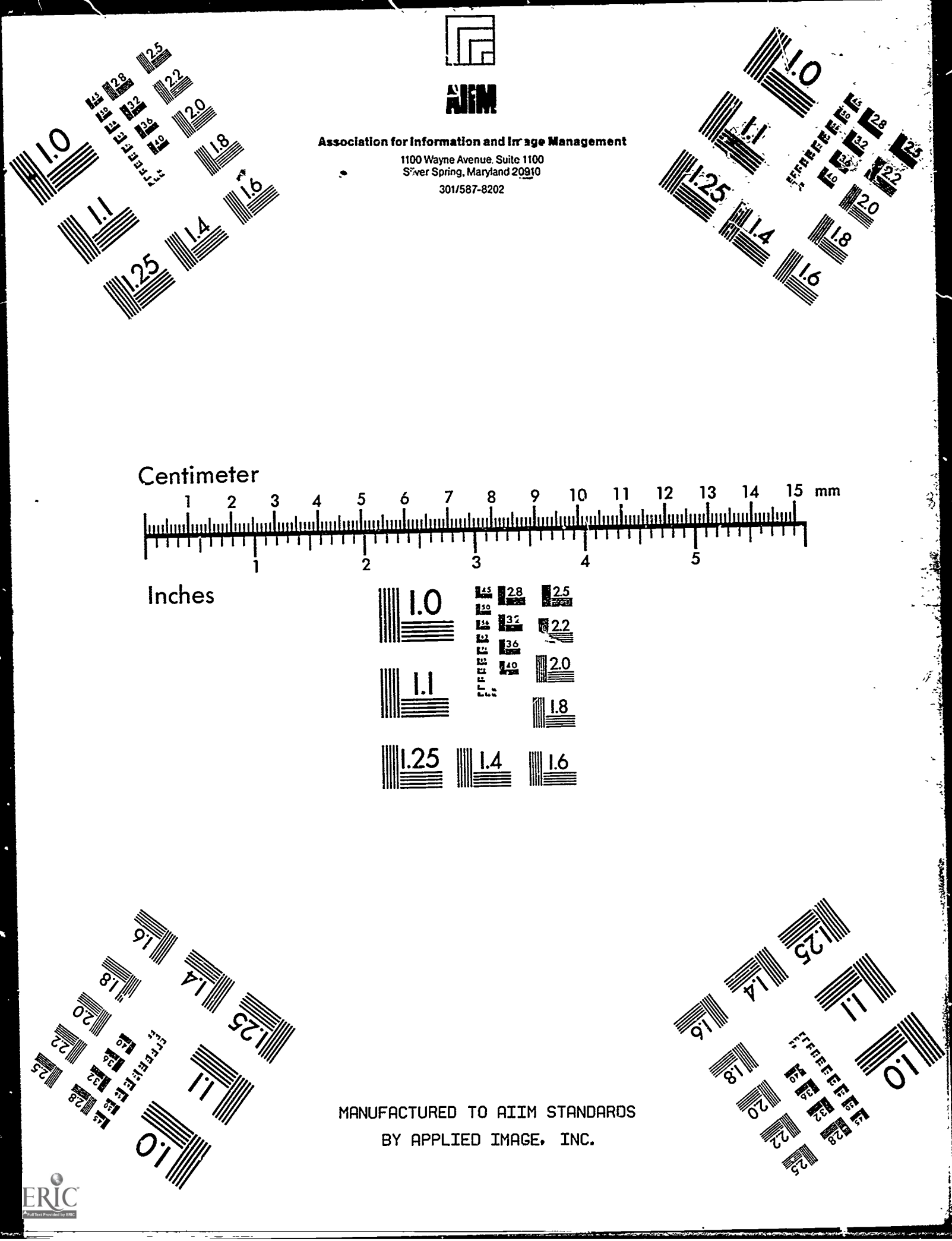
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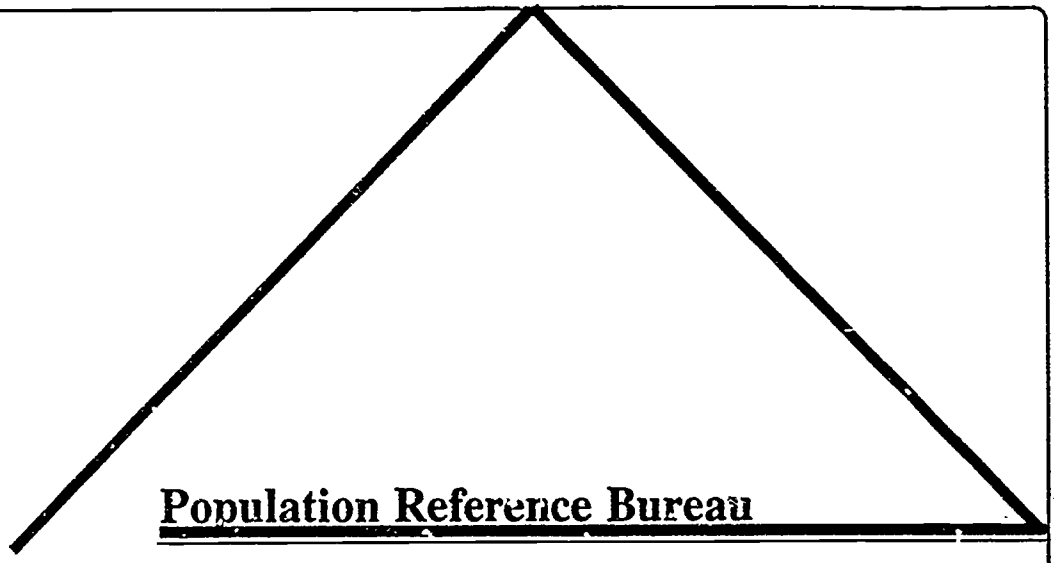
ABSTRACT

The deterioration of industries in rural America in the 1980s has placed rural youth in a difficult situation. Those who remain in rural areas face a scarcity of good jobs, while those who leave face competition for employment against better-educated metropolitan youth. A study was conducted to: (1) examine the educational experiences of both metro and nonmetro youth by their senior year in 1980; (2) analyze what had happened to these same seniors six years later in terms of education, income, and occupational status; and (3) determine the impact of migration on the senior class of 1980. Using the data file of the High School and Beyond survey conducted by the U.S. Department of Education, the study determined that metropolitan youth had several advantages over nonmetropolitan youth by their senior year in high school. The 1980 data show that metro seniors were more likely to (1) have well-educated parents; (2) have taken a curriculum that better prepared them for college; and (3) score higher on tests of cognitive skills. Follow-up data from 1986 show that metro seniors tended to: (1) continue formal education; (2) have higher incomes and earnings; and (3) be more likely to work in white-collar jobs than nonmetro seniors. The difference in occupational status was evident at nearly all levels of education. Rural youth have diminished opportunities which have often made a successful transition to adulthood more difficult. Data tables are included in the appendix. (ALL)



Beyond High School:
The Experience of Rural and Urban Youth in the 1980s

by
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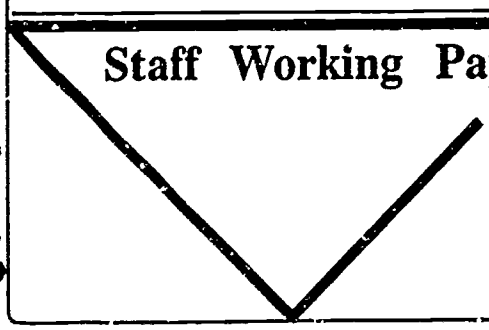

March 1990

BEYOND HIGH SCHOOL:
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EXECUTIVE SUMMARY

BEYOND HIGH SCHOOL: THE EXPERIENCE OF RURAL AND URBAN YOUTH IN THE 1980s

The 1980s saw the deterioration of several industries important to rural America. This phenomenon particularly affected rural young people, leading to high levels of migration to urban areas. The exodus was especially high among young, well-educated rural adults.

Using information in a national data file of 11,000 high school seniors in 1980, we compared the experiences of seniors attending metropolitan schools with those of nonmetropolitan seniors. In addition, we used data for nonmetropolitan seniors to compare the post-high school experiences of seniors who had migrated from their hometowns by 1986 with those of seniors who had not migrated.

Data from 1980 show that metro youth had several advantages over nonmetro youth by their senior year in high school. Among the highlights:

- The parents of metro seniors were better educated than those of nonmetro seniors--19 percent of metro seniors in 1980 had parents with at least a bachelor's degree, compared with 12 percent of nonmetro seniors.

- Metro seniors were more likely to take a curriculum designed to prepare them for college. Two-fifths (42 percent) of metro seniors were enrolled in an academic or college preparatory program, compared with one-third (33 percent) of nonmetro seniors. Metro seniors were also more likely to complete a variety of advanced math and science courses.

- Metro seniors scored higher on a variety of tests measuring cognitive skills and abilities.

The 1986 data show that the advantages metro seniors had over nonmetro seniors continued in the years following high school. Included in the findings:

- Metro seniors were better educated by 1986; 73 percent continued their formal education after high school, compared with only 64 percent of nonmetro seniors.

- Metro seniors had slightly higher mean income and earnings than nonmetro seniors. For example, nonmetro seniors' mean income in 1985 was 96 percent that of metro seniors.

- Metro seniors were more likely than nonmetro seniors (61 to 50 percent) to hold white-collar jobs. By contrast, nonmetro seniors were more likely (29 to 22 percent) to hold blue-collar jobs.

The relative lack of economic opportunities for young people in rural areas made nonmetro seniors more likely than metro seniors to leave their home communities. In 1986, only 31 percent of nonmetro seniors still lived in their hometowns, compared with 39 percent of metro seniors.

Nonmetro seniors who had left their hometowns by 1986 had higher educational attainment, higher incomes and were more likely to be in white-collar jobs compared to those who stayed. Moreover, the migrant/nonmigrant differences often were greater than those between metro and nonmetro seniors. Some of the results:

- Sixty-eight percent of migrants continued their education after high school, compared to 55 percent of nonmigrants.

- Twenty-one percent of migrants--the same percentage as metro seniors--attained at least a bachelor's degree; only 13 percent of nonmigrants did the same.

- The 1985 mean income for nonmigrants was 79 percent that of migrants.

- Migrants were more likely than nonmigrants (53 to 42 percent) to hold white-collar jobs; nonmigrants were more likely (35 to 27 percent) to have blue-collar jobs.

In addition, 1980 data show that the nonmetro seniors who eventually left their hometowns had better educated parents, better academic preparation for college, and higher test scores than those who stayed behind.

These results indicate that rural youth had great hurdles in making a successful transition to adulthood during the 1980s. While many of rural America's "best and brightest" left to compete against better-educated metropolitan youth for good jobs, those who stayed behind faced a scarcity of good jobs in weak labor markets.

BEYOND HIGH SCHOOL:
THE EXPERIENCE OF RURAL AND URBAN YOUTH IN THE 1980s

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Section 1
INTRODUCTION

Background Information

Economically, the 1980s were not kind to rural* America. One prominent study characterized the recent period by saying, "In the 1980s, downturns in several industries important to rural areas (agriculture, mining and energy, and manufacturing) coincided, turning what would normally be local or regional problems into a widespread rural decline of national proportions."[1]

The most recent statistics indicate that people living outside metropolitan areas have lower incomes, higher poverty rates, higher unemployment, and lower educational attainment than metropolitan residents. Furthermore, the lower educational attainment and higher unemployment of rural residents do not account entirely for their high poverty rates.[2]

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*In this paper, we will use the terms "rural," "nonmetropolitan," and "nonmetro" interchangeably unless otherwise noted. Similarly, the terms "urban," "metropolitan," and "metro" will be used interchangeably for the purposes of this paper.

Another line of research is reflected in several recent studies indicating that economic advancement among young adults has slowed since the 1950s and 1960s, and a significant proportion of young adults seems to be losing ground economically.[3] In addition, the research literature identifies educational attainment and employment opportunities as key determinants of a successful transition from adolescence to adulthood.[4] Studies clearly show that rural youth differ from urban youth in their educational preparation, and that labor markets in rural areas were weaker than those in urban areas during the 1980s.

Rural America's economic problems have caused out-migration among its young people. While an increasing number of people of all ages, races, and educational levels left rural areas in the 1980s, the level of out-migration was particularly high among young, well-educated adults.[5] These developments have placed rural youth in a difficult situation. Those who remain in rural areas face a scarcity of good jobs while those who leave find themselves competing for employment against better-educated metropolitan youth.[6] All this has made the transition to adulthood particularly hard for rural youth in the 1980s.

The above information suggests that in the 1980s, people who had grown up in rural areas paid some kind of "price" in terms of the educational and economic opportunities which lead to a successful transition to adulthood. This implies two things. First, rural youth, upon reaching adulthood, have fared less well

economically than urban youth. Second, in order to become successful, most of the "best and brightest" among rural youth left their home communities to find economic opportunities.

With the relative lack of opportunities for young adults in rural areas, rural youth face the prospect of either leaving their hometowns or staying and accepting these limited opportunities. For many rural areas, this situation means either a loss or a waste of valuable human resources.

This paper documents the costs of growing up in rural America, using survey data from the 1980s. After describing the methods used in the analysis, this report will focus on three areas. First, it will examine the educational experiences of both metro and nonmetro youth by their senior year in high school in 1980. Second, it will analyze what had happened to these same 1980 seniors six years later, in terms of education, income, and occupational status. Finally, the paper will examine the impact of migration on the senior class of 1980, concentrating on differences in 1986 between nonmetro seniors who left their hometowns and those who stayed. We hope this report will serve as a foundation for additional research which will analyze the reasons for the differences noted here.

Methodology

For this study we used the High School and Beyond (HS&B) data file, which follows a nationally representative sample of over 11,000 respondents who were high school seniors in 1980. The National Center for Educational Statistics of the U.S.

Department of Education conducted the 1980 survey, as well as follow-up surveys in 1982, 1984, and 1986. Despite some attrition from the initial sample, weights have been appropriately recalculated to provide an accurate reflection of the national population of over 3 million high school seniors in 1980. For this study we used only those respondents (9,373 in all) who participated in each of the four interviews.

The HS&B data set is extremely useful for this analysis because it allows for comparison of the respondents by the location of the high schools they attended in 1980--that is, whether the schools were located in metropolitan or nonmetropolitan areas. The Census Bureau defines "metropolitan" as either a central city or suburban county in a Metropolitan Statistical Area (MSA). It considers all areas lying outside MSAs as "nonmetropolitan."

It should be noted that figures reflecting the metro area population often mask important differences between central cities and suburbs. In some cases, students from rural areas are doing better than those from central cities. However, central cities and suburban areas have been combined here because the focus is on rural areas.

We refer to students who were seniors at a high school located in a metropolitan area in 1980 as metro seniors throughout this document. Similarly, those who were seniors at a nonmetropolitan school in 1980 are referred to as nonmetro seniors for the remainder of the report.

The data set contains individual and family background data for 1980 and many demographic and socioeconomic measures for each subsequent interview--1982, 1984, and 1986. We use 1980 data on the students' high school experiences, including type of high school program, coursework, College Board tests taken, and scores on a set of cognitive tests to ascertain the differences between metro and nonmetro students. Parents' education is also examined. This is done to determine if metro and nonmetro students begin the transition process on roughly equal footing. From the 1986 survey we examine educational attainment and occupational status (February 1986), as well as income and earnings (1985), to determine differences between those students who graduated from a rural high school and those graduating from an urban one. Finally, we examine the impact of migration, using the data to compare those nonmetro seniors who had left their communities by 1986 with those who stayed behind.

Section 2
1980 EDUCATION EXPERIENCES

In this section we examine a number of key variables which reflect the educational experiences and characteristics of rural and urban high school seniors in 1980. Educational experiences play a key role in the youth-to-adult transition process, since they lay a foundation for building the skills necessary for career development.

Parents' Education

Past research has shown that the educational climate at home is important to a young person's educational attainment; this is the case even when controlling for family background. According to this research, families stressing education motivate children in those families to attain a lot of schooling. Such families are willing to make an investment in the resources necessary for their young to attain a high level of education.[7] Although such a climate can exist regardless of family background, it seems most likely to occur among those families with well-educated parents.

Indeed, parents with a high level of schooling are likely to stress the importance of education in developing the skills necessary to compete successfully in the workplace. Such parents would therefore prefer to see their children gain as much education as possible. Parents with less education, on the other hand, may not stress education's value as strongly as their more educated counterparts. Therefore, the educational level of

parents is one indicator of their children's likely level of educational attainment, and by extension, the ultimate success of the young's transition to adulthood.

Table 1 shows the educational attainment of the parents of 1980 high school seniors. As defined here, parents' education is that of the parent with the higher educational level. In general, metropolitan seniors were more likely to have college-educated parents than nonmetropolitan seniors. Seniors attending metropolitan high schools in 1980 were 1.5 times more likely (19 to 12 percent) to have parents with at least a bachelor's (four-year) degree as those seniors who went to nonmetropolitan schools. At the other end of the educational spectrum, nearly half (46 percent) of nonmetro seniors had parents with at most a high school education, compared with one-third (35 percent) of metro seniors. To the extent that educated parents tend to encourage students to attain a high level of education, and to the extent that education translates into getting a good job, the parental environment of metropolitan seniors provided them with an early advantage over their nonmetropolitan counterparts.

Curriculum and Coursework

The type of overall curriculum students take in school, their course work in academic subject areas, and their enrollment in remedial or advanced programs can help determine the skills they eventually take with them to the job market. These skills, in turn, determine whether they will become productive members of the work force. Tables 2 through 5 provide information on several types of academic experiences during high school.

Table 2 shows that roughly one-quarter of both metropolitan and nonmetropolitan seniors (24 and 25 percent, respectively) were enrolled in a vocational program in 1980. However, important metro/nonmetro differences are seen in the other two types of programs examined in this table. Slightly more than two-fifths (42 percent) of metro seniors were enrolled in an academic-college preparatory curriculum, compared to one-third (33 percent) of nonmetropolitan seniors. On the other hand, two-fifths (43 percent) of nonmetro seniors were enrolled in a general program compared to one-third (33 percent) of metro seniors. If enrollment in a college preparatory program provides better preparation for higher education, then these data indicate another advantage metropolitan seniors had over nonmetropolitan seniors.

Table 3 provides data on the mean years of course work 1980 seniors took between grades 10-12 in six subject areas: mathematics, English, foreign languages, history (social studies), science, and vocational and business courses. Generally, metropolitan seniors took slightly more coursework in most of the academic subject areas than nonmetro seniors. For example, metro seniors in 1980 averaged 2.1 years of math between grades 10-12, compared with 1.9 years of math for nonmetro seniors. In vocational/business subjects, on the other hand, nonmetro seniors took more coursework than metro seniors--2.6 to 2.3 years, respectively. Overall, metropolitan seniors in 1980 seem to have taken slightly more coursework in the subjects which prepare students for post-secondary education.

Table 4 shows the percentage of 1980 seniors taking a variety of advanced math and science courses, which include five math courses (Algebra I and II, Geometry, Trigonometry, and Calculus) and two science courses (Physics and Chemistry). We find metro seniors were more likely that nonmetro seniors to have taken each of the courses listed. Completion of advanced math and science courses indicates better preparation for higher education and for the challenges of an increasingly technological job market, and the above data suggest metro seniors were better prepared to take advantage of the new technology.

Finally, Table 5 looks at the percentage of high school seniors who were ever enrolled in remedial or advanced programs in English and math. The tables show metro/nonmetro differences, for the most part, to be slight. In fact, the difference was more than one percentage point in just one instance--advanced English; 30 percent of metro seniors had been in such a program, compared to only 24 percent of nonmetro seniors.

Test Scores

Early results of the high school experiences outlined in the previous section can be seen in the test scores of seniors. Probably the best indicators are mean scores on the two major standardized tests used as part of the college admissions process: the Scholastic Aptitude Test (SAT) and American College Test (ACT). Unfortunately, we do not have a perfect metro/nonmetro breakdown (as designated by the Census Bureau) of SAT or ACT scores. The HS&B datafile, however, does provide us

with two indicators of what high school might have wrought: (1) an item on whether a person has taken the SAT or ACT and (2) scores on a series of timed tests measuring students' cognitive abilities.

Since most colleges require either the SAT or ACT scores for admission, students taking either test are in a better position to go on to college immediately after high school. Under that assumption, metro seniors have a slight advantage over their nonmetro counterparts. While 60 percent of metro seniors had taken either the SAT or ACT by 1980, only 57 percent of nonmetro seniors did the same.

Table 6 shows the mean scores for a battery of cognitive tests administered by the National Center for Education Statistics, U.S. Department of Education (NCES), and the University of Chicago's National Opinion Research Center (NORC). The tests were: (1) Vocabulary, in which students matched synonyms; (2) Reading, which asked students questions on short, 100-200 word passages; (3) Mathematics, in which students had to determine which of two quantities was greater, whether they were equal, or whether there was insufficient data to make a determination; (4) Picture Number, which involved recalling associations of numbers with pictures of familiar things; (5) Mosaic Comparisons, which asked for detection of small differences between pairs of otherwise identical patterns; and (6) Three-Dimensional Visualization, in which students had to visualize the shape that a flat piece of metal (represented by a

line drawing) would assume when folded along specified lines. Scoring for each test was done through use of a formula equal to the number of correct answers subtracted by a fraction of the number of incorrect answers. (Items not attempted did not count either way toward the final score.) The cognitive tests measured the development of mental skills important for post-secondary education and success in higher level jobs.

As Table 6 shows, the mean formula scores were slightly lower for nonmetro students than for metro students on each of the six tests. The mean scores for nonmetro students ranged from 90 percent (on vocabulary) to 99 percent (on picture number) of those for metro students. These results suggest that nonmetro seniors may have been slightly less prepared to master the skills which ultimately would have improved their prospects in higher education or the job market.

Section 3
THE CLASS OF 1980 SIX YEARS LATER: ANALYSIS OF THE 1986 DATA

Data from 1980 show that metropolitan youth had certain advantages over their nonmetropolitan counterparts by their senior year of high school. Given this advantageous position, we would expect metro seniors' success relative to nonmetro seniors to have continued in the succeeding years. In fact, given the relatively poor performance of rural labor markets in the 1980s, one might expect metro youth to have fared better than nonmetro youth even if they had no differences coming out of high school.

The 1986 HS&B data is useful for analyzing the post-high school experiences of these 1980 seniors. By 1986, most individuals who were high school seniors in 1980 had completed their formal education and started on careers. Therefore, we can begin to see accurate reflections on how their transitions to adulthood have been progressing in terms of education, income, and occupational status. The tables in this section compare 1980 metro and nonmetro seniors on several of these characteristics.

1986 Education, Income, and Occupational Status

Table 7 shows the educational attainment of 1980 metropolitan and nonmetropolitan seniors as of February 1986. By then, the data indicate that nearly three-quarters (73 percent) of metro seniors had continued their formal education after high school while less than two-thirds (64 percent) of nonmetro seniors did the same. Metro seniors were also more likely than nonmetro seniors to have graduated from college; by 1986, 21

percent had at least a four-year degree, compared to only 18 percent of nonmetro seniors.

We want to remind the reader that our sample includes only those young people who were high school seniors in 1980. To the extent that rural youth dropped out of high school before their senior year, and that they did it at a higher rate than urban youth, the results here underestimate the real differential between rural and urban youth during the 1980s.

In fact, data derived from the Census Bureau's Current Population Survey from the late 1970s--the time when the 1980 seniors were in high school--show that nonmetro students did drop out of school at higher rates than metro students. For example, as of October 1978, 9.7 percent of 16- and 17-year-olds in nonmetro areas had dropped out (that is, neither were in school nor had a high school diploma), compared with 8.3 percent of 16- and 17-year-old metro youth.[8] Thus, our results concerning the relative educational performance of metro and nonmetro high school seniors do underestimate the true differential between rural and urban youth.

Table 8 shows the 1985 mean income and earnings of 1980 metro and nonmetro seniors. Income includes any money coming into the household--including such sources as child support, public assistance, or inheritance. Earnings refer to income from wages, salaries, or self-employment.[9] Whether we look at income or earnings (including and excluding the spouse's),[10] we find those who came from nonmetro schools had slightly lower amounts

than those coming from metro schools. For example, the mean income in 1985 for nonmetro seniors ($16,974) was 96 percent that for metro seniors ($17,739).

It should be noted that the data in Table 8 reflect only one year's income and compare people who are all very early in their careers when differentials between individuals are small. As these people move along their career paths, one would expect differences among individuals to become larger. This fact is probably responsible for our findings (not shown) that metro seniors with a 4-year degree earned less than their less educated counterparts in 1985. Among nonmetro seniors, those with some post-secondary education earned less than those with just a high school diploma.

Table 9 illustrates the above point. Analyzing year-round, full-time workers, the table shows that for both men and women, expected average lifetime earnings (defined as earnings expected between ages 18 and 64) increase for men and women with more education. For example, men with 16 years of education (the equivalent of a four-year college degree) can expect to earn 34 percent more over their lifetimes, on average, than men with only 12 years of education--approximately $1.65 million to $1.2 million.[11] Similarly, the anticipated lifetime earnings of women with 16 years of schooling are $1 million, 33 percent higher than those of women with 12 years of education ($750,000).

The table also shows, however, that for the first few work years, the relationship between earnings and education is not so

apparent. For example, from age 18 through age 23 (that is, the years between their senior year and the 1986 survey), men who attain a college degree expect to earn $55,600; this is only 65 percent of those of men who never attain more than 12 years of education ($85,200). Similarly, women with 16 years of education can expect to earn less between ages 18 and 23 than women with 13-15 years of schooling (equivalent to some college education without a degree)--$71,000 to $87,500.

These results from 1979 data show that while education does not necessarily show a high dividend immediately, it ultimately does pay over the course of one's working life. In the first few years after high school, those who have not gone on to further schooling are most likely to have started on lifetime career paths. As those in college complete their education, though, their earnings begin to overtake those of their less educated counterparts.

Table 10 shows the occupational status of 1980 seniors as of February 1986. We find metro seniors to be more likely than their nonmetro counterparts to be in the higher status, white-collar jobs. Three-fifths (61 percent) of metro seniors held white-collar jobs, compared with only half (50 percent) of nonmetro seniors. Metro seniors were also more likely to land in professional and managerial occupations; 29 percent of metro seniors held these types of jobs, compared with only 24 percent of the nonmetro seniors. Conversely, nonmetro seniors were more likely than metro seniors (29 to 22 percent) to work at blue-

collar jobs. The two groups were equally likely to be in service jobs, and nonmetro seniors were more likely to be farm workers--although only 3 percent held farm jobs in 1986.

The educational attainment patterns of metro and nonmetro seniors may account for their differences in occupational status, so we examined occupational status while controlling for level of education. Table 11 shows that metropolitan seniors remained more likely than nonmetropolitan seniors to be in white-collar jobs--even when we controlled for education. For example, four-fifths (84 percent) of metro seniors with at least a four-year degree held white-collar employment, compared to just over three quarters (77 percent) of their nonmetro counterparts. In addition, metro seniors, regardless of educational attainment, were slightly more likely to hold jobs in the professional and managerial fields; the differences ranged from 2 to 4 percentage points. Nonmetropolitan seniors were also more likely than metropolitan seniors to be employed in the blue-collar professions--craftsmen, operatives, and laborers. In February 1986, for example, 45 percent of nonmetro seniors with a high school education or less were employed in blue-collar jobs, compared with 37 percent of metro seniors with the same level of education.

Section 4
THE IMPACT ON MIGRATION ON NONMETRO SENIORS

Data in the previous section show that the advantages metro youth had over nonmetro youth in their senior year of high school continued over the first six years after their class graduated. Educational attainment, income, and occupational status for metro seniors was higher than that for nonmetro seniors; the income and occupational differences remained after educational attainment was taken into consideration.

The relative lack of economic opportunities for nonmetro seniors has made them more likely to leave their home communities. In this section we compare the outcomes of nonmetro seniors who remain in the community where they were enrolled in high school in 1980 to those who had left by 1986.

As expected, metro youth were more likely than nonmetro youth to have remained in their home community six years after their senior year. While 39 percent of seniors attending metro high schools in 1980 were still living in their hometowns six years later, only 31 percent of those who went to nonmetro high schools were doing the same. We should note here that the nonmetro seniors who left their communities did not necessarily head for metropolitan areas--HS&B had no indicators to measure this for 1986. Still, even if nonmetropolitan seniors decided to leave their home communities for other nonmetropolitan areas, their departure in itself implies both a lack of opportunities in their hometowns and a willingness to look elsewhere for such

opportunities. Moreover, the fact that nonmetro youth were more likely than their metro counterparts to leave their home communities suggests a lack of faith many nonmetro seniors have in their hometowns' ability to provide the opportunities necessary for a smooth transition to adulthood.

Nonmetro Seniors--Those Who Left vs. Those Who Stayed

As we mentioned earlier, the lack of meaningful economic opportunities in rural areas has led to a high level of out-migration for rural youth, particularly among the well-educated.[12] We also mentioned that while these well-educated youth competed for opportunities in metropolitan areas, those people staying behind faced a scarcity of good jobs. Tables 12 through 15 compare the experiences of nonmetropolitan migrants with those of nonmigrants through February 1986 in terms of education, income and earnings, and occupational status. If the migration from rural communities reflects a "brain drain" of young people searching for better opportunities, then we would expect migrants from nonmetro areas to be better educated, have more income, and have better jobs than nonmigrants.

Table 12 shows the educational attainment of 1980 seniors attending nonmetropolitan schools by whether or not they had left their hometown by February 1986. The table shows migrants to be better educated than nonmigrants. Two-thirds (68 percent) of all nonmetro seniors moving out of their hometowns continued their formal education in some way after high school, compared with just over half (55 percent) of those who stayed behind.

Moreover, 21 percent of migrants had completed a four-year program by 1986 (this was the same percentage as that of metro seniors), compared with only 13 percent of nonmigrants.

Table 13 shows the mean 1985 incomes and earnings of 1980 nonmetro seniors, again by their mobility status as of 1986. The table shows those who migrated had higher incomes and earnings than those who stayed behind. Moreover, the differences among nonmetro seniors (that is, between migrants and nonmigrants), in most cases, were even greater than those between metro and nonmetro seniors. For example, nonmigrants' mean 1985 income was 79 percent that of migrants ($14,298 to $18,101); the mean income for nonmetro seniors as a whole was 96 percent that of metro seniors.

Table 14 compares the occupational status in 1986 of nonmetro seniors who left their communities with that of seniors who stayed. The table shows a majority (53 percent) of migrants held white-collar jobs, compared to only two-fifths (42 percent) of nonmigrants. The discrepancy is even greater upon studying only the professional and managerial jobs. More than a quarter (28 percent) of migrants held professional or managerial jobs in 1986; less than one-fifth (17 percent) of nonmigrants held similar employment. By contrast, nonmetro seniors remaining in their hometowns were more likely than those who left to be in blue-collar jobs. In 1986, 35 percent of nonmigrants were in blue-collar occupations, compared with 27 percent of the migrants. There was virtually no difference regarding the

relative likelihood of migrants and nonmigrants working in farm and service jobs.

The greater likelihood of those who left than of those who stayed to hold higher status (white-collar) occupations suggests greater opportunities for such work in metro areas--opportunities which, in turn, may have caused many in nonmetro areas to leave their hometowns to seek better jobs in cities.

Table 15 looks at the migrant-nonmigrant differences in occupational status when controlled for educational attainment. For the most part, the patterns found in Table 14 held. For example, a majority (56 percent) of nonmetro seniors who migrated and had some post-secondary education (but not a bachelor's degree) held white-collar jobs; over one-quarter (28 percent) were in the professional and managerial positions. In contrast, a minority (46 percent) of those who had remained in their home communities were in white-collar jobs, and less than one-fifth (15 percent) held professional and managerial jobs. There was an exception, though; a greater percentage of migrants with a four-year degree than of similarly educated nonmigrants (12 to 9 percent) were in blue-collar jobs. (Migrants, however, were more likely to be craftsmen.) Still, nonmetro seniors who stayed in their hometowns generally were more likely to be blue-collar workers--regardless of educational attainment.

The above data indicate that, as expected, those 1980 nonmetro seniors who left their home communities have attained certain advantages over those who stayed, regardless of

educational attainment. This suggests that rural youth who left their hometowns did so in search either (1) greater access to educational opportunities elsewhere and/or (2) the employment opportunities of which well-educated people can take advantage. It might also reflect the disillusionment many nonmetro seniors had with their hometowns' ability to provide opportunities.

Why the difference between migrants and nonmigrants in terms of these 1986 outcome variables? Studying past research on migration can explain much of this. Migration is a very selective process, as persons at different stages in the life cycle have different responses to negative (push) and positive (pull) factors at both origin and destination. Such responses, in turn, influence who will migrate. For example, migrants tend to be positively selected (that is, better educated and of higher socioeconomic status than nonmigrants) when perceived opportunities elsewhere provide the major motivating factor.[13] Moreover, the transitory period from youth to adulthood is a time which provides a person with a high propensity to migrate. This process of "positive selection" may explain the gap between nonmetro migrants and nonmigrants.

We can illustrate this positive selection of nonmetro migrants by comparing their high school experiences with those of nonmetro nonmigrants. Remember, the advantageous position metro seniors had over nonmetro seniors in 1986 was a continuation of those advantages these metro seniors had in 1980. Therefore, we would expect that the advantages nonmetro migrants had over nonmigrants in 1986 continued those enjoyed in 1980.

Table 16 shows the highest level of education for parents of the 1980 nonmetro seniors. Parents of migrants tended to be better educated than those of nonmigrants. For example, a majority (57 percent) of nonmetro seniors who eventually left their hometowns had at least one parent with some formal education after high school, compared to less than half (47 percent) of those who stayed.

Tables 17 through 20 show the actual high school experiences of future nonmetro migrants and nonmigrants. According to Table 17, nonmetro migrants were more likely to have taken a program which would prepare them for college. One-third (36 percent) of migrants were enrolled in an academic/college preparatory program, compared with less than one-fourth (23 percent) of nonmigrants. Nonmigrants were more likely to have enrolled in a general or vocational curriculum. Table 18 shows that migrants, as a group, had completed slightly more coursework than nonmigrants in several academic subject areas. For example, migrants averaged 2.0 years of math between grades 10 and 12, compared to 1.8 years for nonmigrants. Table 19 shows that a greater percentage of future migrants than of nonmigrants had taken advanced math and science courses; the differences ranged from 5 to 18 percentage points for the courses listed. Table 20 shows that future migrants were more likely than nonmigrants to have enrolled in advanced English and math programs; nonmigrants were more likely to have enrolled in remedial programs.

In addition, nonmetro seniors who eventually left their hometowns fared better on the early indicators of post-high school success (that is, test scores) than those who stayed behind. For example, nonmetro migrants in 1986 were more likely to have taken the SAT or ACT than nonmigrants--61 to 46 percent. The percentage of nonmetro migrants taking the SAT, in fact, was virtually the same as that for all metro seniors (60 percent). Table 21 shows the formula scores on the battery of cognitive tests and indicates that migrants had scored better on each test than nonmigrants. The nonmigrant scores ranged from 82 to 94 percent those of migrants.

The above results indicate that nonmetro seniors who had left their hometowns by 1986 seem to have been better prepared than those who stayed behind to face the challenges of this technological age. This preparation--in terms of parents' education, high school experiences, and test scores, seems to have contributed to the continuation of these advantages six years later. We should remember, however, that the advantages accumulated by their senior year of high school may not totally explain why migrants had more education, higher incomes, and higher occupational status than nonmigrants. Better opportunities in education and employment in metro areas--or wherever the nonmetro migrants relocated--likely played a role in the relative migrant/nonmigrant situation found in 1986 as well.

Section 5
SUMMARY

Data from 1980 show that metropolitan youth had several advantages over nonmetropolitan youth by their senior year in high school. Metro seniors were more likely to have well-educated parents, to have taken a curriculum which would better prepare them for college, and to have taken the major standardized tests (SAT, ACT) important in the college admission process. Moreover, as data from 1986 show, the advantages metro seniors had in high school likely continued in the post-high school years. Metro seniors tended to be better educated, to have higher incomes and earnings, and were more likely to work in white-collar jobs than nonmetro seniors; the metro/nonmetro difference in occupational status was evident at nearly all levels of education.

Also, nonmetro seniors were more likely than their metro counterparts to leave their home communities, and data on the nonmetro seniors suggest that those who left had greater success in their transition to adulthood. Generally, nonmetro seniors who migrated from their hometowns had attained more education, had higher incomes, and were more likely to hold high status employment than nonmigrants. Like the corresponding metro/nonmetro difference, the occupational difference between migrants and nonmigrants remained when educational attainment was controlled. Analysis of the 1980 data suggest that these differences between migrants and nonmigrants likely had their

origins by the students' senior year in high school, like those between metro and nonmetro seniors.

These results imply that rural youth have indeed paid a price in the 1980s for having grown up in rural communities; this price takes the form of 'mini ' pportunities. Studies indicate that experience' ar' che critical period when young adults leave school and e labor force can have important consequences for the remainder of a person's life.[14] Thus, a relative lack of opportunities for rural youth often has made a successful transition to adulthood more difficult.

NOTES

1. U.S. Department of Agriculture, Rural Economic Development in the 1980s: Preparing for the Future (Washington, D.C.: Economic Research Service, 1987) page v.

2. William O'Hare, "The Rural Poor and the Economic Transformation of Rural America," Paper presented at the annual meeting of the Rural Sociological Association, Athens, Georgia, 22 August 1988.

3. Frank Levy, Dollars and Dreams (New York: Russell Sage Foundation, 1987); and U.S. Senate, Committee on the Budget, Wages of American Workers in the 1980s, report prepared by the Staff, September 1988, Committee Print S.Prt. 100-124.

4. K. Clark and L. Summers, "The Dynamics of Youth Unemployment," in The Youth Labor Market Problem: Its Nature, Causes, and Consequences, Richard Freeman and D.A. Wise, eds. (Chicago: University of Chicago Press, 1982) pp. 199-234; and Dennis P. Hogan, Transitions and Social Change: The Early Lives of American Men (New York: Academic Press, 1981).

5. William O'Hare, "The Rise of Poverty in Rural America," Population Trends and Public Policy, No. 15 (Washington, D.C.: Population Reference Bureau, Inc., July 1988) p. 2.

6. Linda L. Swanson and Margaret A. Butler, "Human Resource Base of Rural Economies," in Rural Economic Development in the 1980s: Preparing for the Future, U.S. Department of Agriculture (Washington, D.C.: Economic Research Service, 1987).

7. Peter M. Blau and Otis Dudley Duncan, The American Occupational Structure (New York: John Wiley and Sons, 1967) pp. 319-320.

8. U.S. Bureau of the Census, Current Population Reports, Series P-20, No. 346, School Enrollment--Social and Economic Characteristics of Students: October 1978 (Washington, D.C.: U.S. Government Printing Office, 1979) p. 13.

9. U.S. Bureau of the Census, Current Population Reports, Series P-60, No. 159, Money Income of Households, Families, and Persons in the United States: 1986 (Washington, D.C.: U.S. Government Printing Office, 1988) p. 168.

10. The HS&B data set allowed for the separation of earnings of individuals from those of their spouses, which enabled the calculation of mean earnings both including and excluding the spouse's earnings. The data set, however, did not permit such separation of income; therefore, all calculations of mean incomes include any income of spouses.

APPENDIX

TABLE 1
HIGHEST LEVEL OF EDUCATION FOR PARENTS
OF 1980 SENIORS
by metro/nonmetro status of high school attended

PARENTS' LEVEL OF EDUCATION	ALL SENIORS	METROPOLITAN	NONMETROPOLITAN
HIGH SCHOOL OR LESS	38%	35%	46%
SOME POST-SECONDARY EDUCATION	45	46	42
4-YEAR DEGREE OR MORE	17	19	12
TOTAL (Weighted N--thousands)	100% (2,721)	100% (1,897)	100% (823)

Source: High School and Beyond, 1986.

TABLE 2
TYPE OF HIGH SCHOOL PROGRAM FOR 1980 SENIORS
by metro/nonmetro status of high school attended

TYPE OF PROGRAM	ALL SENIORS	METROPOLITAN	NONMETROPOLITAN
ACADEMIC/COLLEGE PREP.	39%	42%	33%
GENERAL	36	33	43
VOCATIONAL	25	24	25
TOTAL (Weighted N--thousands)	100% (2,987)	100%* (2,051)	100%* (935)

*Subtotal percentages do not sum to total due to rounding.

Source: High School and Beyond, 1986.

TABLE 3
MEAN AMOUNT OF COURSE WORK TAKEN BY 1980 SENIORS
IN SPECIFIED COURSE AREAS, GRADES 10-12
by metro/nonmetro status of high school attended

	MEAN NUMBER OF YEARS		
COURSE AREA	ALL SENIORS	METROPOLITAN	NONMETROPOLITAN
MATHEMATICS	2.1	2.1	1.9
ENGLISH	2.9	3.0	2.9
FOREIGN LANGUAGES	0.8	0.9	0.7
HISTORY/SOCIAL STUDIES	2.3	2.3	2.3
SCIENCE	1.7	1.8	1.7
VOCATIONAL/BUSINESS	2.4	2.3	2.6

Source: High School and Beyond, 1986.

TABLE 4
PERCENTAGE OF 1980 SENIORS HAVING TAKEN
SELECTED ADVANCED MATH AND SCIENCE COURSES
by metro/nonmetro status of high school attended

COURSE	ALL SENIORS	METROPOLITAN	NONMETROPOLITAN
ALGEBRA I	81%	82%	78%
(Weighted N--thousands)	(3,001)	(2,062)	(939)
ALGEBRA II	52%	54%	46%
(Weighted N--thousands)	(2,926)	(2,018)	(908)
GEOMETRY	59%	63%	51%
(Weighted N--thousands)	(2,937)	(2,021)	(916)
TRIGONOMETRY	29%	32%	23%
(Weighted N--thousands)	(2,826)	(1,949)	(877)
CALCULUS	9%	10%	8%
(Weighted N--thousands)	(2,732)	(1,877)	(855)
PHYSICS	22%	23%	21%
(Weighted N--thousands)	(2,784)	(1,916)	(868)
CHEMISTRY	40%	42%	36%
(Weighted N--thousands)	(2,868)	(1,969)	(899)

Source: High School and Beyond, 1986.

TABLE 5
PERCENTAGE OF 1980 SENIORS EVER ENROLLED IN SELECTED COURSES OR PROGRAMS
by metro/nonmetro status of high school attended

COURSE OR PROGRAM	ALL SENIORS	METROPOLITAN	NONMETROPOLITAN
REMEDIAL ENGLISH	29%	29%	30%
(Weighted N--thousands)	(2,978)	(2,050)	(928)
REMEDIAL MATH	29%	28%	29%
(Weighted N--thousands)	(2,975)	(2,048)	(926)
ADVANCED ENGLISH	28%	30%	24%
(Weighted N--thousands)	(2,975)	(2,049)	(926)
ADVANCED MATH	24%	24%	23%
(Weighted N--thousands)	(2,967)	(2,046)	(922)

Source: High School and Beyond, 1986.

TABLE 6
MEAN FORMULA SCORES FOR 1980 SENIORS ON
SELECTED COGNITIVE TESTS
by metro/nonmetro status of high school attended

COGNITIVE TEST	ALL SENIORS	METRO	NONMETRO	NONMETRO AS % OF METRO
VOCABULARY (max.--27.0)	10.4	10.7	9.6	90%
READING (max.--20.0)	8.9	9.1	8.6	95%
MATHEMATICS (max.--32.0)	15.7	16.0	15.0	94%
PICTURE NUMBER (max.--15.0)	11.2	11.2	11.1	99%
MOSAIC COMPARISONS (max.--89.0)	44.6	45.3	43.0	95%
VISUALIZATION IN 3-D (max.--16.0)	5.8	6.0	5.5	92%

Source: High School and Beyond, 1986.

TABLE 7
EDUCATIONAL ATTAINMENT OF 1980 SENIORS—FEBRUARY 1986
by metro/nonmetro status of high school attended

EDUCATIONAL ATTAINMENT	ALL SENIORS	METROPOLITAN	NONMETROPOLITAN
HIGH SCHOOL OR LESS	30%	27%	36%
SOME POST-SECONDARY EDUCATION	50	52	46
BACHELOR'S (4-YEAR) DEGREE OR MORE	20	21	18
TOTAL	100%	100%	100%
(Weighted N--thousands)	(3,035)	(2,087)	(948)

Source: High School and Beyond, 1986.

TABLE 8
1985 MEAN INCOME AND EARNINGS OF 1980
METROPOLITAN AND NONMETROPOLITAN SENIORS

	METRO	NONMETRO	NONMETRO AS % OF METRO
INCOME (including spouse's)	$17,739	$16,974	96%
EARNINGS			
--including spouse's	$16,844	$16,234	96%
--excluding spouse's	$11,968	$10,750	90%

Source: High School and Beyond, 1986.

TABLE 9
EXPECTED EARNINGS IN 1979, MEN AND WOMEN
LIFETIME (AGES 18 TO 64) AND AGES 18 TO 23
YEAR ROUND, FULL-TIME WORKERS
by years of school completed

(Figures in thousands of 1985 dollars)

	LESS THAN 12 YRS	12 YRS	13 TO 15 YRS	16 YRS	17 OR MORE YRS
MEN					
Lifetime	$ 999	$1,231	$1,366	$1,646	$1,778
Ages 18-23	$ 66	$ 85	$ 76	$ 56	$ 50
WOMEN					
Lifetime	$ 591	$ 750	$ 847	$1,001	$1,130
Ages 18-23	$ 57	$ 66	$ 88	$ 71	$ 48

Source: U.S. Bureau of the Census, Current Population Reports, Series P-20, No. 139, Lifetime Earnings for Men and Women in the United States: 1979.

TABLE 10
OCCUPATIONAL STATUS OF 1980 METROPOLITAN AND NONMETROPOLITAN SENIORS--FEBRUARY 1986

OCCUPATIONAL CATEGORY	METROPOLITAN	NONMETROPOLITAN
WHITE-COLLAR	61%	50%*
Professional/Technical	19	16
Managers/Administrators	10	8
Sales Workers	8	6
Clerical Workers	24	19
BLUE-COLLAR	22%*	29%
Craftsmen	12	13
Operatives	7	11
Laborers	4	5
SERVICE WORKERS	12%	13%
FARM WORKERS	0%	3%
NOT WORKING	5%	6%
TOTAL	100%	100%*
(Weighted N--thousands)	(2,069)	(936)

* Subtotal percentages do not sum to their total due to rounding.

Source: High School and Beyond, 1986.

TABLE 11
OCCUPATIONAL STATUS OF 1980 METROPOLITAN AND NONMETROPOLITAN SENIORS—FEBRUARY 1986
by educational attainment in 1986

OCCUPATIONAL CATEGORY	HIGH SCHOOL OR LESS		SOME POST-SECONDARY EDUCATION		4-YEAR DEGREE OR MORE	
	METRO	NONMETRO	METRO	NONMETRO	METRO	NONMETRO
WHITE-COLLAR	42%	30%	61%*	54%	84%	77%
Prof./Tech.	4	3	16	17	45	41
Mgrs./Admin.	7	5	11	8	14	14
Sales Workers	5	4	9	7	9	9
Clerical Workers	26	18	26	22	16	13
BLUE-COLLAR	37%	45%*	21%	23%	7%	12%
Craftsmen	18	18	11	12	5	7
Operatives	13	19	6	7	1	4
Laborers	6	9	4	4	1	1
SERVICE WORKERS	14%	13%	14%	15%	6%	7%
FARM WORKERS	1%	3%	0%	3%	0%	1%
NOT WORKING	7%	9%	4%	5%	3%	2%
TOTAL	100%*	100%	100%	100%	100%	100%*
(Weighted N--thous.)	(556)	(335)	(1,075)	(430)	(439)	(170)

* Subtotal percentages do not sum to their total due to rounding.

Source: High School and Beyond, 1986.

TABLE 12
EDUCATIONAL ATTAINMENT OF 1980 NONMETROPOLITAN SENIORS—FEBRUARY 1986
by mobility status in 1986

EDUCATIONAL ATTAINMENT	ALL NONMETROPOLITAN SENIORS	MIGRANTS	NONMIGRANTS
HIGH SCHOOL OR LESS	36%	32%	45%
SOME POST-SECONDARY EDUCATION	46	47	42
BACHELOR'S (4-YEAR) DEGREE OR MORE	18	21	13
TOTAL (Weighted N--thousands)*	100% (948)	100% (647)	100% (285)

* Weighted N subtotals do not sum to total due to missing data on migration.

Source: High School and Beyond, 1986.

TABLE 13
1985 MEAN INCOME AND EARNINGS OF 1980
NONMETROPOLITAN SENIORS
by mobility status in 1986

	MIGRANTS	NONMIGRANTS	NONMIGRANT AS % OF MIGRANT
INCOME (including spouse's)	$18,101	$14,298	79%
EARNINGS			
--including spouse's	$17,298	$13,811	80%
--excluding spouse's	$11,062	$ 9,989	90%

Source: High School and Beyond, 1986.

TABLE 14
OCCUPATIONAL STATUS OF 1980 NONMETROPOLITAN SENIORS—FEBRUARY 1986
by mobility status in 1986

OCCUPATIONAL CATEGORY	MIGRANTS	NONMIGRANTS
WHITE-COLLAR	53%	42%*
Professional/Technical	19	11
Managers/Administrators	9	6
Sales Workers	6	7
Clerical Workers	19	19
BLUE-COLLAR	27%*	35%*
Craftsmen	14	11
Operatives	8	16
Laborers	4	7
SERVICE WORKERS	13%	13%
FARM WORKERS	2%	4%
NOT WORKING	5%	6%
TOTAL	100%*	100%
(Weighted N--thousands)	(638)	(282)

* Subtotal percentages do not sum to their total due to rounding.

Source: High School and Beyond, 1986.

TABLE 15
OCCUPATIONAL STATUS OF 1980 NONMETROPOLITAN SENIORS—FEBRUARY 1986
by educational attainment and mobility status in 1986

OCCUPATIONAL CATEGORY	HIGH SCHOOL OR LESS		SOME POST-SECONDARY EDUCATION		4-YEAR DEGREE OR MORE	
	MIGRANTS	NONMIGRANTS	MIGRANTS	NONMIGRANTS	MIGRANTS	NONMIGRANTS
WHITE-COLLAR	32%	28%	56%*	46%*	77%*	78%
Prof./Tech.	4	2	18	11	42	38
Mgrs./Admin.	5	6	10	4	16	11
Sales Workers	4	4	7	9	7	12
Clerical Workers	19	16	22	23	13	17
BLUE-COLLAR	43%*	48%*	21%	28%	12%	9%
Craftsmen	20	15	12	11	8	0
Operatives	16	24	6	11	3	6
Laborers	8	10	3	6	1	3
SERVICE WORKERS	13%	12%	16%	16%	8%	6%
FARM WORKERS	2%	4%	2%	5%	1%	3%
NOT WORKING	9%	8%	4%	5%	2%	4%
TOTAL	100%*	100%	100%*	100%	100%	100%
(Weighted N--thous.)	(206)	(127)	(301)	(119)	(132)	(36)

* Subtotal percentages do not sum to their total due to rounding.

Source: High School and Beyond, 1986.

TABLE 16
HIGHEST LEVEL OF EDUCATION FOR PARENTS
OF 1980 NONMETROPOLITAN SENIORS
by mobility status in 1986

PARENTS' LEVEL OF EDUCATION	ALL NONMETRO SENIORS	MIGRANTS	NONMIGRANTS
HIGH SCHOOL OR LESS	46%	43%	53%
SOME POST-SECONDARY EDUCATION	42	43	39
4-YEAR DEGREE OR MORE	12	14	8
TOTAL (Weighted N--thousands)#	100% (823)	100% (581)	100% (228)

*Subtotal percentages do not sum to total due to rounding.

#Weighted N subtotals do not sum to total due to missing migration data.

Source: High School and Beyond, 1986.

TABLE 17
TYPE OF HIGH SCHOOL PROGRAM FOR 1980 NONMETROPOLITAN SENIORS
by mobility status in 1986

TYPE OF PROGRAM	ALL NONMETRO SENIORS	MIGRANTS	NONMIGRANTS
ACADEMIC/COLLEGE PREP.	33%	36%	23%
GENERAL	43	40	47
VOCATIONAL	25	23	29
TOTAL	100%*	100%*	100%*
(Weighted N--thousands)#	(935)	(638)	(282)

*Subtotal percentages do not sum to total due to rounding.

#Weighted N subtotals do not sum to total due to missing migration data.

Source: High School and Beyond, 1986.

TABLE 18
MEAN AMOUNT OF COURSE WORK TAKEN BY 1980 NONMETROPOLITAN SENIORS
IN SPECIFIED COURSE AREAS, GRADES 10-12
by mobility status in 1986

	MEAN NUMBER OF YEARS		
COURSE AREA	ALL NONMETRO SENIORS	MIGRANTS	NONMIGRANTS
MATHEMATICS	1.9	2.0	1.8
ENGLISH	2.9	3.0	2.9
FOREIGN LANGUAGES	0.7	0.7	0.6
HISTORY/SOCIAL STUDIES	2.3	2.3	2.3
SCIENCE	1.7	1.8	1.6
VOCATIONAL/BUSINESS	2.6	2.6	2.8

Source: High School and Beyond, 1986.

TABLE 19
PERCENTAGE OF 1980 NONMETROPOLITAN SENIORS HAVING TAKEN SELECTED ADVANCED MATH AND SCIENCE COURSES
by mobility status in 1985

COURSE	ALL NONMETRO SENIORS	MIGRANTS	NONMIGRANTS
ALGEBRA I	78%	81%	72%
(Weighted N--thousands)	(939)	(642)	(281)
ALGEBRA II	46%	48%	39%
(Weighted N--thousands)	(908)	(619)	(274)
GEOMETRY	51%	55%	41%
(Weighted N--thousands)	(916)	(626)	(274)
TRIGONOMETRY	23%	26%	18%
(Weighted N--thousands)	(877)	(598)	(265)
CALCULUS	8%	10%	5%
(Weighted N--thousands)	(855)	(581)	(260)
PHYSICS	21%	22%	16%
(Weighted N--thousands)	(868)	(589)	(265)
CHEMISTRY	36%	41%	23%
(Weighted N--thousands)	(899)	(616)	(267)

Weighted N subtotals do not sum to totals due to missing migration data.

Source: High School and Beyond, 1986.

TABLE 20
PERCENTAGE OF 1980 NONMETROPOLITAN SENIORS EVER ENROLLED IN SELECTED COURSES OR PROGRAMS
by mobility status in 1986

COURSE OR PROGRAM	ALL NONMETRO SENIORS	MIGRANTS	NONMIGRANTS
REMEDIAL ENGLISH	30%	29%	32%
(Weighted N--thousands)	(928)	(633)	(281)
REMEDIAL MATH	29%	27%	33%
(Weighted N--thousands)	(926)	(632)	(279)
ADVANCED ENGLISH	24%	25%	20%
(Weighted N--thousands)	(926)	(633)	(278)
ADVANCED MATH	23%	24%	20%
(Weighted N--thousands)	(922)	(630)	(277)

Weighted N subtotals do not sum to total due to missing migration data.

Source: High School and Beyond, 1986.

TABLE 21
MEAN FORMULA SCORES FOR 1980 NONMETROPOLITAN SENIORS ON SELECTED COGNITIVE TESTS
by mobility status in 1985

COGNITIVE TEST	ALL NONMETRO SENIORS	MIGRANTS	NONMIGRANTS	NONMIGRANT AS % OF MIGRANT
VOCABULARY (max.—27.0)	9.6	10.2	8.4	82%
READING (max.—20.0)	8.6	9.1	7.6	84%
MATHEMATICS (max.—32.0)	15.0	15.7	13.4	86%
PICTURE NUMBER (max.—15.0)	11.1	11.4	10.6	94%
MOSAIC COMPARISONS (max.—89.0)	43.0	44.3	40.1	91%
VISUALIZATION IN 3-D (max.—16.0)	5.5	5.8	5.0	86%

Source: High School and Beyond, 1986.

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Appendix 16

END

U.S. Dept. of Education

Office of Education
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Improvement (OERI)

ERIC

Date Filmed

March 29, 1991