VIII

EDUCATION
AND ECONOMIC MOBILITY

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Most Americans believe that the road to achieving the American Dream passes through the schoolhouse door. This chapter examines evidence of the returns to schooling in the American economy, changes in the average level of education by various groups of Americans during the twentieth century, and the role of education and family background in promoting economic mobility.

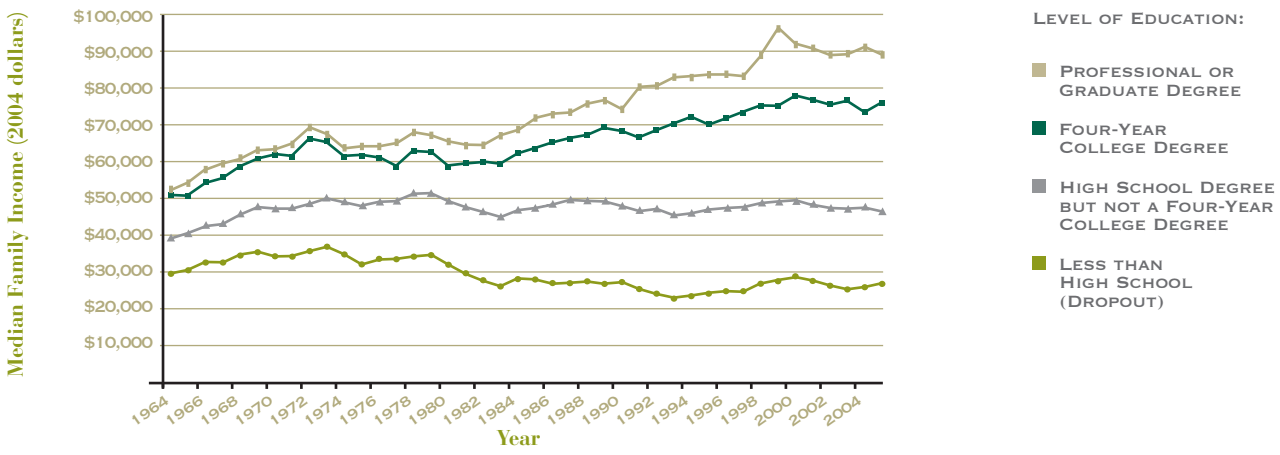
RISING EDUCATION LEVELS, INCREASING GAPS

Figure 1 shows the median annual family income since the mid-1960s of high school dropouts, high school graduates, college graduates, and those with an advanced degree.[1] The figure shows striking differences in income by level of education. Completion of each degree from high school, to college, to professional or graduate leads to greater income. The gaps between each level of education are substantial—the gap between a high school degree and a college degree was over $29,000 in 2005.

Equally interesting is the pattern of income changes over time. Although those with a high school degree earn considerably more than those without a high school degree, the income of both groups has been more or less stagnant since at least the early 1980s. By contrast, those with a college degree, despite a few brief periods of decline or stagnation, increased their income by one percent per year over the period while those with graduate or professional degrees did even better.

The strong correlation between education and income supports the belief held by most Americans that getting an education is a good way to get ahead. No wonder, then, that the educational attainment of Americans increased dramatically over the course of most of the twentieth century.

FIGURE 1 **Median Family Income of Adults Ages 30–39 with Various Levels of Educational Achievement, 1964–2005**



Note: All men and women ages 30–39, including those with no personal income, are included in these estimates.
Source: Brookings tabulations of data from the Annual Social and Economic Supplement to the CPS, 1965–2006.

However, the educational attainment was not uniform. Figure 2, based on an extensive analysis of educational trends during the twentieth century by Claude Fischer and Michael Hout of the University of California at Berkeley, shows the years of schooling completed by Americans at the 80th percentile, the median, and the 20th percentile of the education distribution.[2] At every level, years of schooling rose continuously for the first seven decades of the twentieth century.

But note that the median, after two decades of catching up with the top 20 percent before World War II, fell well below the top 20 percent over the three decades following the war and the century ended as it began—with big gaps between the top and the middle and bottom of the distribution.

The increase in educational attainment during much of the twentieth century is also reflected in high school graduation rates for all demographic groups. As indicated in Figure 1, although the economic return to achieving a high school degree has been stagnant for the past 30 years, a high school degree provides a substantial boost to income. The panels in Figure 3 show changes during the twentieth century in the percentage of men and women and various ethnic groups who graduated from high school.

A striking feature of both panels is the impressive increases in high school graduation rates among all demographic groups. Unfortunately, however, blacks and Hispanics made only modest progress in closing the gap between themselves and both whites and Asians.

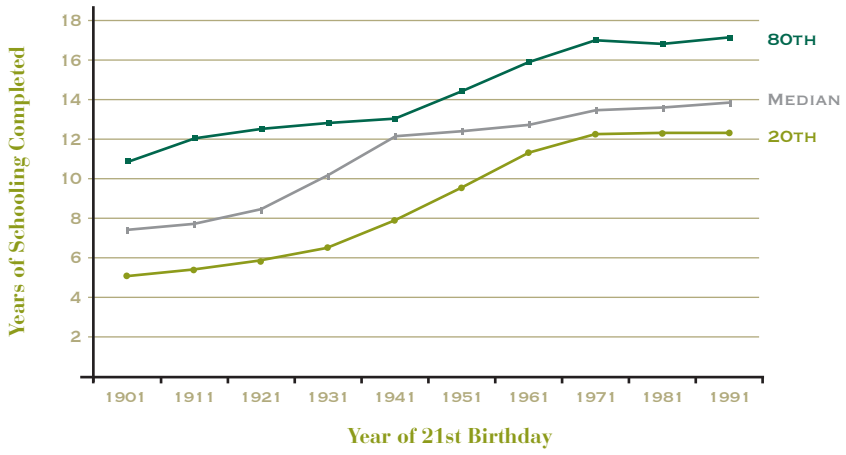
Figure 4 shows that the growth in college graduation rates is similar in many respects to the growth in high school graduation rates, albeit at a much lower level: in 2000, about 25 percent of Americans had a college degree while 85 percent had a high school degree. Whites and Asians have opened a large gap between themselves and both blacks and Hispanics. These gaps appeared early in the century and expanded during the course of the century. Thus, despite the fact that blacks and Hispanics made good progress in increasing their college graduation rates, they did not increase rapidly enough to keep up with whites and Asians. By 1970, the share of whites who graduated from college was twice the share of blacks and Hispanics, while Asians were three times as likely to earn a college degree. Since 1970, both gaps, but especially the gap between Asians and all the other groups, have opened even further.

EDUCATION AND ECONOMIC MOBILITY ACROSS GENERATIONS

If, as shown in Figure 1, education contributes so substantially to income, it seems reasonable to expect that it could also contribute to economic mobility across generations. Moreover, it might be expected that education would, as ironically as it might seem, be a barrier to mobility—or at least an important factor in accounting for why some groups get or stay ahead while others are left behind.

To understand the relationship between educational attainment and economic mobility, we consider two key questions.

FIGURE 2 **Years of Schooling Completed by Adults at the 20th, 50th, and 80th Percentiles, 1900–2000**



Source: Fischer and Hout, 2006, p. 11.

First, does educational attainment contribute to economic mobility? That is, do adult children earn more than their parents? If so, are those with more education more likely to surpass their parents' income than those with less education?

Second, does education contribute to relative economic mobility? That is, does educational attainment help the second generation move up the income scale relative to the position occupied by others in their generation?

Figure 5, based on the Panel Study of Income Dynamics (PSID), tracks the mobility of adult children by comparing their income at roughly age 40 with that of their parents at about the same age.[3] In the three decades between measurement of the parents' income (averaged over the period 1967–1971) and that of their adult children (averaged over selected years between 1995 and 2002), median family income grew by 29 percent, after adjusting for inflation.[4] It follows that there was likely to be substantial income mobility between generations over the period. After all, somebody had to get that additional money.

The bar graphs in Figure 5 show that many adult children, regardless

FIGURE 3

High School Graduation Rates by Gender and Ethnic Group

Source: Fischer and Hout, 2006, p. 13.

FIGURE 4

College Graduation Rates by Gender and Ethnic Group

Source: Fischer and Hout, 2006, p. 15.

of whether they have a college degree and regardless of their parents' income quintile, had higher median family incomes than their parents.

Clearly, there was significant economic mobility across these two generations—mobility that was made possible largely by economic growth during the period.

In addition, more of those with a college education in each quintile exceeded their parents' income than did those without a college education.[5] As shown by the "All" bars, 74 percent of adult children with a college degree had incomes greater than their parents, while 63 percent of adult children without a college education had incomes greater than their parents.

Both adult children with and without college degrees were more likely to exceed their parents' income if their parents were lower in the income distribution as shown in Figure 5. In the case of adult children with a college education, for example, 96 percent of adult children with parents in the bottom quintile exceeded their parents' income, but only 57 percent of those with parents in the top quintile exceeded their parents' income. Those in the middle three quintiles fell between 79 and 86 percent.[6]

Figure 5 shows there was substantial upward mobility between the parental generation of the 1960s and 1970s and their adult children and that this mobility was more likely to occur if parents had lower income and if their children attained a college education. From these findings it follows that both education and family background played a role in accounting for the degree of mobility between generations.

Education and Relative Mobility

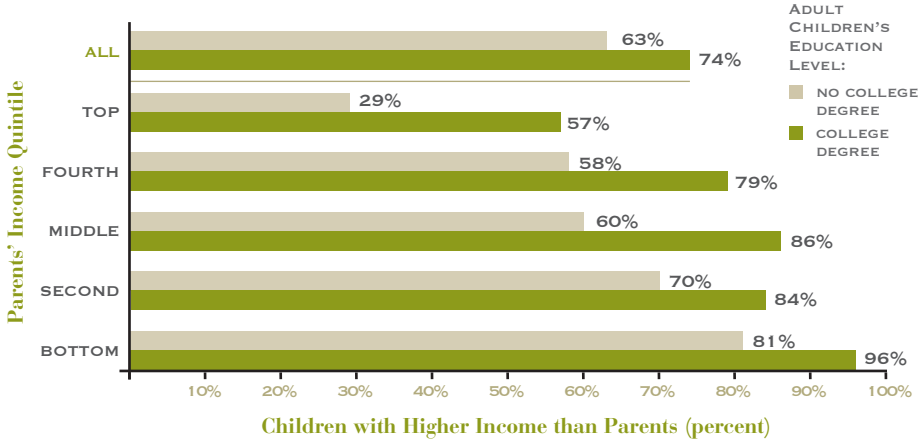
Besides affecting whether adult children earn more than their parents, educational attainment affects how adult children move up or down the income distribution relative to their peers.

To understand this relative movement, we divide the distributions of parental income and adult child income into quintiles of equal size based on family income. We then count the number of adult children from each parental income quintile who land in each of the five quintiles defined by the incomes of adult children in their generation. Figure 6, based on the PSID, shows the income quintile location of adult children relative to the income quintile location of their parents. Separate charts are presented for adult children with and without a college degree.

Consistent with findings described in other chapters, both sets of bar graphs show considerable relative economic mobility between generations. Regarding adult children without a college degree, reading from the bottom to top quintiles of parental income respectively and computing the sum of all adult children who moved out of their parents' income quintile, we see that 55 percent, 76 percent, 77 percent, 69 percent, and 77 percent of adult children move up or down relative to their parents' income quintile; that is, they land in an income quintile in their generation that is different than the income quintile occupied by their parents.

The role of a college degree. Note, however, the difficulty that

FIGURE 5 **Percent of Children with Family Income above their Parents' Family Income, by Education Level**



Source: Brookings tabulations of PSID data.

adult children had moving out of the bottom quintile. Without a college degree, 45 percent of adult children with parents in the lowest income quintile remained at the bottom, more than twice the level that would be expected if there were no relationship between parents' and adult children's income. By contrast, only 16 percent of adult children with a college degree remained in the bottom quintile.[7] In this case, education contributed to a boost in economic status for adult children from poor families.

Another solid piece of evidence that college contributes to relative economic mobility is the finding that adult children of parents in all five quintiles are much more likely to make it to the top two quintiles if they achieve a college degree. Only 14 percent of the adult children without a college degree from the bottom quintile of parental income reach the top two quintiles. By contrast, 41 percent of adult children from the bottom quintile make it to the top two quintiles if they earn a college degree.[8]

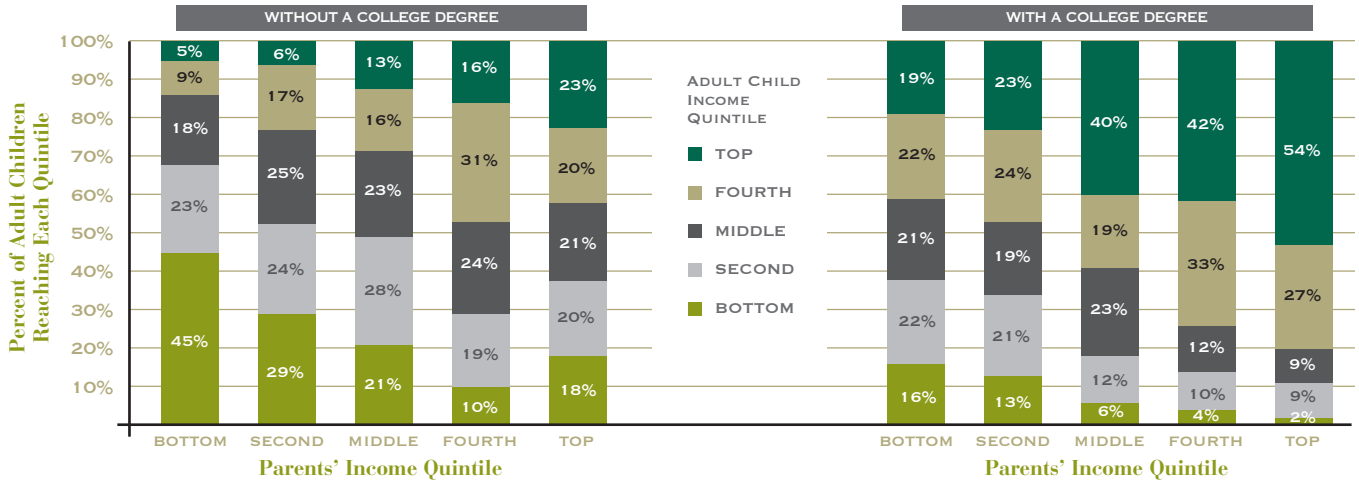
Achieving a college degree also helps those born into wealthier families retain their high position. By finishing college, the adult children of parents in the next-to-top income quintile improve their chances of staying in the top two quintiles from an already considerable 47 percent without a college education to 75 percent; the respective figures for adult children from the top quintile are 43 percent and a whopping 81 percent.

These analyses point to an important role for education in helping adult children from both relatively poor families and relatively wealthy families move up the income distribution relative to their peers.

The role of family background. On the other hand, one of the ways family background contributes to the economic success of adult children is that relatively wealthy parents can help their children get a good education. In fact, if it were not for the nation's education system, it might be more difficult for wealthy parents to pass along their income advantage to their children. Without a college education, only 23 percent of the adult children of parents in the top quintile themselves make it to the top quintile. This 23 percent is only a little higher than would be expected if the children of wealthy parents were equally likely to wind up in all five income quintiles. By contrast, with a college education 54 percent of the adult children of parents in the top quintile themselves make it into the top income quintile.[9] Family background is important, but adult children from the bottom can move up if they attain a college degree, and adult children from the top risk falling if they do not attain a college degree.

FIGURE 6

Chances of Getting Ahead for Children with and without a College Degree, from Families of Varying Income



Source: Brookings tabulations of PSID data.

Perhaps the most dramatic example of the importance of family background is shown by comparing adult children of parents in the top quintile who did not attain a college degree with adult children of parents in the bottom quintile who did attain a college degree. Children of parents in the top quintile have a 23 percent chance of winding up in the top quintile even though they fail to earn a college degree. Adult children of parents in the bottom quintile have only a 19 percent chance of winding up in the top quintile even when they get a college degree. Hard work can help students from poor families get ahead, but children from wealthy families nonetheless seem to have an advantage.

Given the powerful effect of a college education on the income of adult children from all levels of family income, the effects of family background and college education could be difficult to separate if parents with more income are more likely to have children who attain a college degree. Figure 7, which is similar to many other reports in the literature, shows that wealthier parents are indeed more likely to have children who attain a college degree.[10] Only 11 percent of children with parents in the bottom income quintile attain a college degree as compared with 53 percent of children with parents in the top income quintile. These results are consistent with the conclusion that one way relatively wealthy parents pass along their advantages to their children is by ensuring that they attend and graduate from college.

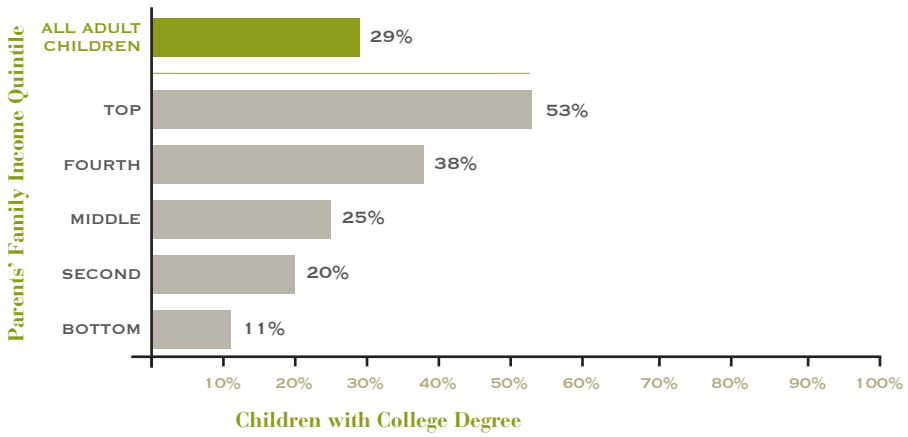
DOES EDUCATION INCREASE MOBILITY SUFFICIENTLY?

The evidence shows that both education and family background have an impact on absolute and relative mobility. Despite the fact that family background helps adult children get ahead or stay ahead, high educational attainment can make a difference by boosting the fortunes of poor children and allowing them both to earn more than their parents and even to surpass the income of many of their peers from wealthier families. Because education has the potential to boost the economic mobility of poor children, it is important to ask whether the nation's educational systems do enough to promote economic mobility.

When they believe the game is not rigged, Americans generally are not alarmed by the nation's growing income inequality: Americans want to be certain that everyone who works hard and plays by the rules has a decent shot at a good education and the income mobility that will result in most cases. Although it would be difficult to achieve consensus on precisely how much economic mobility would be ideal, most Americans would probably agree that more mobility is good and that it would be consistent with American values if more children from low-income families had a better chance of moving up the economic ladder—especially through educational achievement—than they do now.[11]

Thus, it seems fitting that at least since the Civil War, parents, the public, and politicians have made great efforts to create educational institutions that would promote economic growth and give all children a good chance to achieve economic mobility. Those efforts have produced good results: as we have seen, the twentieth century was marked by

FIGURE 7 **Percent of Children with a College Degree by Parents' Family Income Quintile, 2005**



Source: Brookings tabulations of PSID data.

huge increases in the average level of education, and this improvement was characteristic of both males and females and of all racial and ethnic groups. Even so, substantial differences in educational attainment remain, with blacks and Hispanics trailing badly behind whites and Asians, and with children from low-income families trailing as well.

The question remains: Can the nation's educational institutions do more to give children from families with widely different incomes and children from all ethnic and racial groups an equal opportunity to advance? To answer this question, we examine the evidence on the effectiveness of preschool education, K-12 public education, and college and university education in boosting economic mobility.

Preschool Education[12]

There is now strong evidence that performance differences on tests of intellectual ability between children from poor and minority families as compared with children from more advantaged families are apparent by three years of age.[13]
To address these gaps in learning during the preschool years and in intellectual achievement and social behavior once children enter the schools, the fields of preschool education and developmental psychology have long believed that high-quality preschool programs can ameliorate both the gaps in readiness for schooling and in school achievement. In addition, they believe quality preschool programs can have positive impacts on development that show up throughout the child's school years and even into adulthood.[14]

How solid is the evidence that these preschool optimists are correct? Many studies have shown that preschool can have immediate impacts on test scores and social behavior; a large, but smaller, number of studies have shown that high-quality programs can produce impacts that last through the elementary school years, especially by reducing placements in special education classes and reducing grade retentions; and at least three major longitudinal studies have shown that high-quality preschool programs can have lasting effects on school performance as well as on important developmental milestones related to economic mobility.[15]

Table 1, taken from the work of two leading researchers, summarizes the impacts of three of the best preschool programs and Head Start on teen parenting rates, adolescent well-being, criminal activity, and the net earnings gain in adulthood from participation in these high-quality programs.
It is not difficult to conclude that the types of impacts of preschool programs summarized in Table 1 would serve to increase economic mobility. If young boys and girls can avoid teen pregnancy, arrests and incarceration, drug use, or serious health problems, their chances of increasing their employment and earnings would clearly be enhanced. Even more impressive, all three of these studies produced direct estimates of net earnings gains of adult children who had participated in their respective preschool program. All are in excess of $30,000, and one reaches nearly $40,000.

The results from these three remarkable studies support the conclusion that high-quality preschool can produce a range of positive outcomes on children's development, not the least of which is boosting their economic mobility. However, the most telling criticism of this optimistic conclusion is that two of the programs were small scale (less than 125 families each), leading some researchers to suggest that these compelling results might not generalize to a larger program, let alone a national preschool program that could help all or nearly all poor children.
The third study, the Chicago Child-Parent Centers, was conducted with well over 1,500 children and was part of the routine operation of the Chicago Public Schools. That major impacts relating to economic mobility could be achieved by a preschool program as large as the Chicago Child-Parent Centers is encouraging. On the other hand, a recent national evaluation of Head Start, a program with national scope, found modest impacts on school readiness measures and social behavior at the end of the program.[16] There is some evidence that Head Start produces long-term effects,[17] but the results of the national evaluation raise doubts about the size and potential

permanence of the gains produced by Head Start. As shown in Table 1, there is no evidence that Head Start produces the effects on earnings achieved by the big three model programs.[18]

Most of those who study preschool programs agree that the evidence that preschool programs produce immediate impacts on development is overwhelming but that the evidence for longer-term impacts is more tenuous. Very good studies show that remarkable long-term impacts are possible, but whether a program of national scope would produce large impacts is less certain. As two leading preschool researchers concluded after a thorough review of the evidence, expectations about the impact of preschool on economic mobility "should be modest."[19]

K-12 Education[20]

Since publication of the justly famous Coleman Report in 1966, an enormous body of literature has accumulated that reinforces the Coleman conclusion that the greatest single influence on school achievement is family background.[21] Figure 8 provides a clear picture of the influence family background exerts on school achievement.[22] Based on the National Assessment of Educational Progress, the figure shows that at every measurement point between 1978 and 2004, 17-year-olds who had parents with higher levels of education out-performed adolescents who had parents with less education. Of the four levels of parent education (high school drop-out, high school graduate, some college, college degree), there was no overlap in the scores of their children at any of the nine testing occasions between 1978 and 2004.[23] Fortunately, there was some progress: those whose parents did not graduate from high school closed part of the gap between their math scores and the scores of the other three groups.

These differences in educational attainment between poor and more advantaged students are important for understanding economic mobility because, as Figure 1 illustrates, there is substantial evidence of a strong correlation between schooling and earnings. But as they now function, the nation's K-12 school systems provide only a modest boost to poor and minority children's chances of moving up the economic ladder.[24]

Of course, some children manage to use the public schools as a stepping-stone to further education and then

TABLE 1 **Effects of Selected Preschool Programs on Adolescent and Adult Behaviors**

Preschool Programs and Outcomes	Control or Comparison Group	Group Receiving Preschool Program
Teenage Parenting Rates:		
Abecedarian	45 %	26 %
Perry Preschool	37	26
Chicago Child-Parent Centers	27	20
Well-being:		
Health problem (Perry Preschool)	29 %	20 %
Drug user (Abecedarian)	39	18
Needed treatment for addiction (Perry Preschool)	34	22
Abortion (Perry Preschool)	38	16
Abuse/neglect by age 17 (Chicago Child-Parent Centers)	9	6
Criminal Activity:		
Number of felony violent assaults (Perry Preschool)*	0.37	0.17
Juvenile court petitions (Chicago Child-Parent Centers)	25	16
Booked or charged with a crime (Head Start)		12 percentage points lower
Net Earnings Gain from Participating in Early Childhood Programs:		
Abecedarian		$35,531
Perry Preschool		$38,892
Chicago Child-Parent Centers		$30,638
Head Start		No effect

**These data entries mean that the average child in the comparison group committed .37 felony assaults while the average child in the program committed only .17 assaults.*

Table entries are percentages unless otherwise noted.

Source: Barnett and Belfield, 2006, p. 84.

to economic advancement, but on average the K-12 schools do not do much to boost relative mobility. One recent review concluded that the "U.S. public schools tend to reinforce the transmission of low socioeconomic status from parents to children."[25] This conclusion should be tempered somewhat by the finding, shown clearly in Figures 5 and 6 above, that some children from poor families make it into college and that many of the students from poor families who graduate from college will move ahead of their peers from more advantaged families. Although we might wish that the public schools did more to boost the prospects of students from poor families, there is some reason to believe that the schools could become more effective in the future. Since at least the 1983 publication of *A Nation at Risk*, a prominent report that grabbed headlines by concluding that American schools were failing miserably, public education has been more or less in a state of permanent reform.[26] Major experiments have been launched to study classroom size, teacher quality and preparation, school accountability for achievement, new reading and math programs, vouchers, charter schools, and many other reforms.

In addition, the federal No Child Left Behind Act of 2001 imposed major accountability requirements on public schools and threatened serious penalties against schools that failed to perform. Further, to improve the quality of educational research, in 2002 Congress created the Institute of Education Sciences which now funds a host of well-designed, large-scale studies of educational interventions.

Despite all these reforms, as shown by Figure 8, educational achievement for the nation as a whole has not improved much. Moreover, the achievement gaps between students from poor or minority families and students from wealthier or white families have closed only modestly.[27] The conclusion that public K-12 education does little more than reinforce the differences children bring to the schools seems apt.

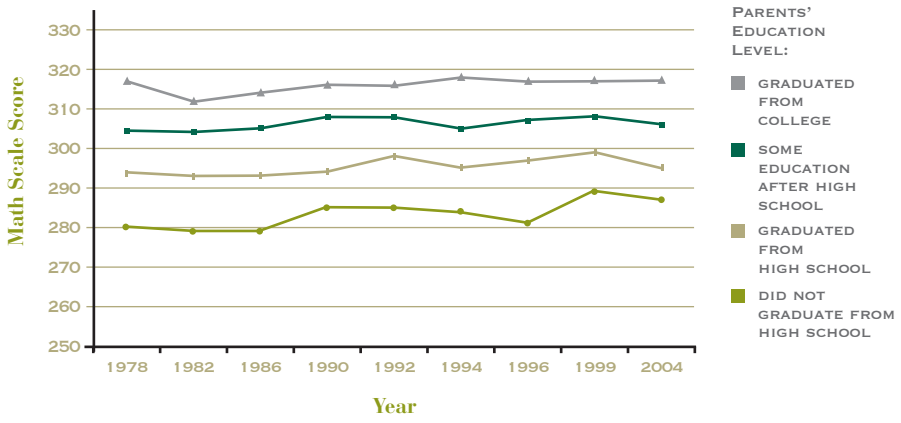
Nonetheless, the American K-12 education system has seldom been under such pressure to perform, research on education has never been as abundant or of as high quality as it is today, and the public schools have probably never had as many innovations under way as they do now. It is possible to remain hopeful that the future will bring more effective ways of improving the educational achievement of all students.

Colleges and Universities[28]

Adults with a college education have much higher family income than high school dropouts or high school graduates. There is also strong evidence that a college education boosts economic mobility of adult children from poor and low-income families. It should follow that if adolescents from poor and low-income families manage to attend and graduate from college at high rates, income mobility in the United States would receive a dramatic boost. But as we have seen (Figure 7), adolescents from poor families are much less likely to attend college than are adolescents from wealthier families.

Figure 9, based on work conducted at Harvard,[29] shows the percentage

FIGURE 8 **Trends in Average Mathematics Scores for 17-Year-Olds by Parents' Highest Level of Education, 1978–2004**



Source: National Assessment of Educational Progress Data Explorer.

of students from the top and bottom quartiles of family income who entered a vocational or two-year college or a four-year college. Although children from low-income families were more likely to enter two-year institutions than children from wealthier families, the evidence that these institutions boost subsequent employment and income is modest.[30] By contrast, children from wealthier families were more than twice as likely to enroll in four-year colleges, which greatly increases the likelihood that their earnings would place them in the upper income quintiles.

Differences in college graduation rates between children from poor and more advantaged families are even greater than differences in college enrollment. Researchers at the University of Wisconsin used the PSID to examine the probability that students with family income in the bottom quartile, as compared with students from families in the top quartile, would attend and would graduate from a four-year college. Although both their data set and their methods were different than those used in the Harvard study, their findings on enrollment in four-year colleges—22 percent versus 28 percent for poor students and 71 percent versus 66 percent for wealthier students—are roughly similar.

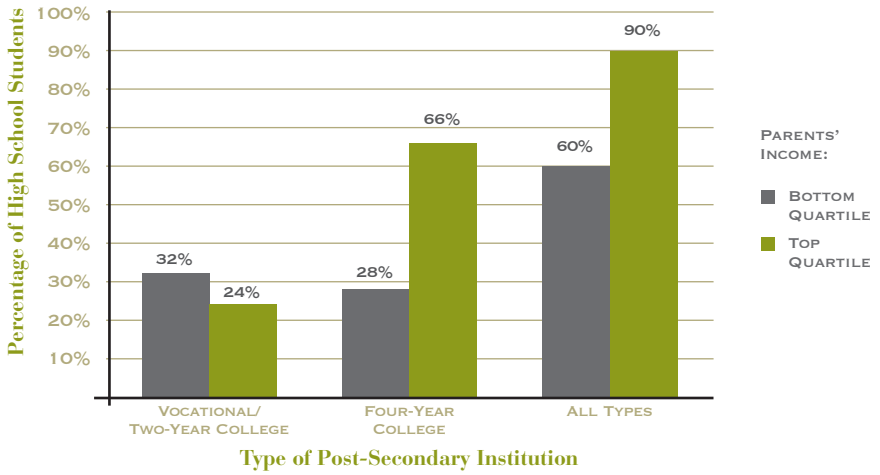
But the Wisconsin study found an even greater difference in college graduation rates. Less than 6 percent of students from the bottom income quartile, as compared with over 42 percent of students from the top quartile, actually graduated from college. Thus, although college would have a major impact on the jobs and incomes of students from poor and low-income families, relatively few of them attend college and even fewer of them graduate.

Part of the reason for lower college attendance and completion by students from low-income families may be that they are less prepared for college. As our review of evidence on the achievement levels of poor students from at least the age of three shows, these students on average perform well below the level of students from wealthier families.

Even so, recent studies have shown that a large number of students from poor families have high SAT scores yet do not attend good four-year colleges.[31] Although low educational achievement is certainly one reason many students from poorer families do not attend four-year colleges, there must be other factors at work, for a large number of academically qualified students from poor families are not attending four-year institutions. Even those who do enter these institutions have a much lower completion rate than their ability would predict.

A recent exhaustive review of the evidence showed that at every step in the process of preparing for, applying to, attending, and graduating from four-year universities, students from poor families are at a substantial disadvantage.[32] They are ill prepared for college by their high schools; they have less knowledge about and receive less help in searching for appropriate schools and filling out the application forms; and they have more difficulty applying for and receiving financial aid (which they need more than do students from wealthier families). Thus, like preschool education and

FIGURE 9 **Percentage of High School Class of 1992 Enrolled in Various Postsecondary Institutions**



Source: Ellwood and Kane, 2000, p. 286.

K-12 education, the nation's colleges and universities contribute less than they might to the economic mobility of disadvantaged students.

CONCLUSION

Previous chapters have shown that family background exerts a strong influence on the position adult children reach in the income distribution and on both their absolute and relative mobility. However, the evidence presented here shows that education can boost the mobility of children from poor and low-income families (and from wealthier families as well), because each additional level of attainment, from a high school degree, to a college degree, to a professional or graduate degree adds substantially to income.

These effects are powerful enough to boost the income of adult children from relatively poor families not only well past the income achieved by their parents but also past the income achieved by many of their peers with more advantaged family backgrounds who did not obtain equivalent education.

While the American faith in the capacity of education to boost economic mobility is well placed, there is a complicating factor. At every level from preschool, to the K-12 system, to the nation's college and universities, education has only modest economic impacts on the average low-income child or adolescent. Although education can and sometimes does boost the achievement and later the income of children from relatively poor families, the average effect of education at all levels is to reinforce the differences associated with the family background that children and adolescents bring with them to the classroom.

There is good reason to expect that education will continue having only a moderate impact on economic mobility in the United States until more poor children develop school readiness skills during the preschool years, until K-12 schools are more effective in imparting basic skills and in helping more poor children complete high school, and until more poor students enter and complete college.

NOTES

[1] Social scientists are careful not to draw causal inferences from correlational data of the type shown in Figure 1. The major reason Figure 1 does not prove that education causes higher income is that, although education and family income are correlated, other variables besides education that are correlated with education could account, at least in part, for the observed correlation. For example, people with more education tend to come from families with more income and education, to marry people who also have higher education and income, to have more stable marriages, and to live in better neighborhoods. All of these factors may contribute to the relationship between education and income shown in Figure 1.

[2] In Figures 2, 3, and 4, the data points shown on the abscissa include people who turned 21 in each of the respective years and were between ages 30 and 59 regardless of which census contained data for individuals who met the age criteria. See Fischer and Hout, 2006. Figures 2, 3, and 4 include data only from native-born Americans regardless of ethnic background.

[3] These analyses are based on the Panel Study of Income Dynamics (PSID). PSID investigators have repeatedly interviewed a sample of families and their descendents since 1968, allowing comparison of the children's income as adults with their family's income during childhood. To reduce the effects of year-to-year fluctuations in income, total family incomes of the adult children are averaged across five recent years (1995, 1996, 1998, 2000, and 2002) and compared to the 5-year averages of their parents' income in the period 1967–1971. The sample used here includes 2,367 individuals. The mean age of adult children when their income was measured was 39.4; the mean age of parents was 40.9. For further details, see Appendix A.

[4] After 1996, the PSID interviewed its sample every second year rather than every year in order to save money. Because we wanted to average adult children's income over five years as we had done with parents' income, it took more years to accumulate five years of income data.

[5] The differences between adults with and without a college education are statistically significant overall and for each of the five quintiles of parents' income.

[6] The difference between the bottom quintile and middle three quintiles in the percentage of college graduates who surpass their parents' income (96 percent compared to 84 percent, 86 percent, and 79 percent) is statistically significant under a joint test, but not all of the individual comparisons are statistically significant.

[7] The difference between 45 percent and 16 percent is statistically significant.

[8] The difference between 14 percent and 41 percent is statistically significant.

[9] The difference between 23 percent and 54 percent is statistically significant.

[10] See note 29.

[11] Jencks and Tach, 2006. Although parents might agree in the abstract that more mobility is good, parents with high incomes will nonetheless do everything they can to prevent downward mobility from striking their own children.

[12] This section is based in part on Barnett and Belfield, 2006.

[13] Lee and Burkam, 2002.

[14] Haskins, 2006; Sawhill and Ludwig. 2007; Karoly, Kilburn, and Cannon, 2005; Lazar et al., 1982.

[15] These three major studies are Campbell et al., 2002; Reynolds et al., 2001; Schweinhart et al., 2005. See also the references in note 14.

[16] Westat, 2005.

[17] Garces, Thomas, and Currie, 2002; and Currie and Neidell, 2007.

[18] Many Head Start advocates would argue that Head Start could produce greater impacts if teachers were better trained and if regulations on quality were more effectively enforced.

[19] Barnett and Belfield, 2006, p. 91.

[20] This section is based in part on Rouse and Barrow, 2006.

[21] Coleman et al., 1966; Jencks and Phillips, 1998; and Mosteller and Moynihan, 1972.

[22] National Center for Education Statistics, 2005.

[23] Similarly, in an analysis of the National Education Longitudinal Study of 1988, Rouse and Barrow, 2006, found striking differences in the expected direction between students from families in the lowest and highest quartiles of socioeconomic status on several measures including test scores, share of students reporting being held back in grade, school dropout rates, and share graduating from high school.

[24] Sawhill, 2006.

[25] Rouse and Barrow, 2006, p. 116.

[26] National Commission on Excellence in Education, 1983.

[27] Murnane, 2007.

[28] This section is based in part on Haveman and Smeeding, 2006.

[29] Ellwood and Kane, 2000. The Ellwood and Kane study is based on data from the High School and Beyond study.

[30] Haveman and Smeeding, 2006.

[31] Carnevale and Rose, 2004; and Winston and Hill, 2005.

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The Economic Mobility Project is a unique nonpartisan collaborative effort of The Pew Charitable Trusts that seeks to focus attention and debate on the question of economic mobility and the health of the American Dream. It is led by Pew staff and a Principals' Group of individuals from four leading policy institutes—The American Enterprise Institute, The Brookings Institution, The Heritage Foundation and The Urban Institute. As individuals, each principal may or may not agree with potential policy solutions or prescriptions for action but all believe that economic mobility plays a central role in defining the American experience and that more attention must be paid to understanding the status of U.S. economic mobility today.

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