

## Valuing education and affording college: Two studies

Recent research by Institute affiliates on the role of education in economic growth has produced two works which run counter to current thought. One study challenges standard measures of the value of schooling and concludes on the optimistic note that its full value has been underrated. The other study analyzes data on college enrollment over the past decade and concludes, on a pessimistic note, that federal aid programs have not reached their goal of expanding the educational opportunities of poorer youth.

### On measuring the value of education

An earlier article in *Focus* described the educational revolution that has taken place in the United States during the twentieth century—that the people born in the first five years of this century achieved a median of 8.6 grades of schooling while those born at mid-century reached a median of 12.8 grades. In 1910, little more than half (62.5 percent) of Americans aged 5–19 were in school; by 1974 that figure had risen to 89.4 percent.<sup>1</sup> In describing the sources of this educational growth, the article identified one of the causes of change in educational attainment: “the expected economic advantage to having more education.”

In the past, the “expected economic advantage” of increased schooling has been calculated by economists in terms of increased earnings of an individual over the lifetime. Are there not, however, other benefits that accrue from education? Benefits that do not pass through a market, but whose value can nonetheless be measured? In a recent paper, Institute affiliates Robert H. Haveman and Barbara L. Wolfe (see box, p. 10) review past work, then perform their own analysis of marketed and nonmarketed effects of education. By “marketed” they mean that a price can be put on the effect; “nonmarketed” means that the value is not directly reflected in the market.

Their work has particular importance because recent studies have pointed to declining rates of return to additional education as measured by increased lifetime labor market

earnings. For example, considerable publicity accompanied Richard Freeman’s book, *The Overeducated American*, which noted that in the early 1970s, “for the first time in recent history, the economic value of an investment in college education fell.” Freeman forecast that “overall, the period of severe ‘overeducation’ is likely to last for about a decade,” and even after that, “in contrast to the past, higher education will be a ‘marginal’ investment.”<sup>2</sup> Declining rates of return mean that a current student is receiving less profit from investment in higher education than in the past, and would perhaps be better advised to enter the job market and use the funds that would have gone for tuition for other investments.

Haveman and Wolfe argue that schooling generates other effects that have value for the individual as well as for society and which are not registered in earnings differences. “A full accounting must consider all of education’s effects, positive and negative, and not simply those recorded in a single market.” The authors have reviewed the literature of the last two decades and have compiled a catalogue of twenty different types of educational effects—private and public, marketed and nonmarketed.

Among the private effects (marketed and unmarketed), they list the increased fringe benefits and better working conditions that may be enjoyed by those with higher education. Studies which include these effects show rates of return that are 10 to 40 percent greater than estimates based solely on earnings differences. Schooling also induces changes in the value of leisure—i.e., the quality of leisure experienced. “Child quality” is another element of well-being that is affected by education: parents’ educational levels are positively and significantly related to their children’s health, cognitive development, education, occupational status, and future earnings. Schooling also has positive and significant effects on the health status of the person who receives more education. And, in terms of what the economists call “choice efficiency,” findings indicate that education in the form of information, facts, and ideas enables people with more education to make more efficient choices in the consumer market, labor market, and marriage market.

Among the public effects of education, Haveman and Wolfe cite some evidence that more educated persons are less likely to engage in criminal activity. Other public benefits include greater social cohesion and more technological change.

Their “catalogue of effects” demonstrates that education yields benefits to true economic well-being in ways not reflected in estimates of rates of return to labor market activities. The problem, of course, lies in finding a method to measure those benefits. Haveman and Wolfe outline a technical procedure based on neoclassical demand theory for measuring the marginal value of education in such a way as to capture both marketed and nonmarketed effects. Their estimation is based on “willingness to pay”—i.e., the amount an individual would pay for additional education in view of the dollar value of the expected effect of education.

Haveman and Wolfe apply their procedure to the numerical values reported in previous studies for several nonmarketed items in their catalogue. The results indicate that earlier standard estimates of the benefits of education capture only about three-fifths of the full value—full, in this case, meaning both marketed and nonmarketed effects.

Haveman and Wolfe point out that their analysis is restricted in several ways. First, it uses only those effects for which evidence already exists, and other effects which have not been researched may be positive or negative—perhaps, for example, there is more job-related stress among those with more education. Second, equating education with years of schooling ignores the variation that is bound to exist in the quality of schooling received: “In many cases what passes for schooling may be misplaced, misleading, and useless drudgery.” Third, their calculation of dollars is a rough estimate.

Nevertheless, the basic importance of this study is striking, and it engages the public interest. The value of education goes beyond the increases in earnings which it generates; it embraces quality of life, both private and public, in multifaceted ways. And even if we discount their value figure to account for possible overestimation, their approach suggests a far greater economic return to education than other, more narrowly focused, studies have indicated.

### **On financial aid to college students**

Lee Hansen traces the growth of federal student financial aid programs over the 1970s, when loan and grant programs for college students expanded considerably in an effort to increase the enrollment of low-income students. To assess the effectiveness of aid programs in widening access to higher education, Hansen compares enrollment rates of dependent (not self-supporting) college-age youths, dividing them into categories of black and white, men and women; in each category he compares those from families

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### **Selected papers**

W. L. Hansen, “Economic Growth and Equal Opportunity: Conflicting or Complementary Goals in Higher Education?” Institute for Research on Poverty Discussion Paper no. 706-82.

Robert H. Haveman and Barbara L. Wolfe, “Education and Economic Well-Being: The Role of Non-Market Effects.” Institute for Research on Poverty Discussion Paper no. 716-82.

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of above-median income with those of below-median income. The data are for the early 1970s (an average for October 1971 and 1972) and the late 1970s (an average for October 1978 and 1979), and come from the Census Bureau’s annual Current Population Reports.

His comparison of enrollment rates in that period shows that, overall, college enrollment went down slightly. While, as described below, the ratio of students from lower-income families to students from higher-income families did not rise, neither did enrollment rates change appreciably in absolute terms for either income class. Among the groups there was considerable variation. For whites the enrollment rate declined half a percentage point, but for blacks it rose 1.5 percentage points. The rates went down for men, but up for women.

To address the question of whether a greater proportion of low-income students enrolled at the end of the decade than at the beginning, that is, whether the aid programs served their purpose, Hansen calculates for each group the ratio of youth aged 18–24 attending college from below-median-income families to those of above-median-income families. In all cases the ratios declined, leading to the pessimistic conclusion: “Once again the trends run counter to our expectations that student financial aid would increase enrollment opportunities for lower-income youth.”

Hansen also analyzes data from two surveys of high school seniors in 1972 and 1980 that contain information on whether the students planned to go to college.<sup>3</sup> The ratios over time of students expecting to earn a four-year college degree who came from below-median-income families rela-

tive to those from above-median-income families varied with race and sex. The ratios went down among whites and men, but went up for blacks and women. Because the first two groups are larger than the second two, the overall ratios went down by a small amount. The decline again leads to a somewhat gloomy conclusion, namely, that educational aspirations have not changed to any significant extent for youths from lower-income families.

These findings have proved controversial. Critics have pointed out that college enrollment figures for the early 1970s are inflated because young men in those years chose college rather than military service in Vietnam, whereas the figures for the late 1970s may be depressed because deteriorating economic conditions discouraged college attendance. Moreover, the author himself offers two qualifications to the pessimism of his conclusion. First, he speculates that student aid may not have been sufficiently generous to attract into college additional young people from lower-income groups. The implication that could be drawn from that point (Hansen does not explicitly do so) is that the programs deserve to be expanded, not abandoned. Second, Hansen states that perhaps, if no financial aid had been available, enrollment rates would have declined more than they did. If so, the programs could be regarded as a success in the sense that without them fewer low-income students would have attended college. Finally, since they did provide aid to low-income students, Hansen concludes that they operated as transfers rather than as human investment programs.

The two studies that have been described here share the quality of going against what many have accepted as common knowledge: that rates of return to education have gone down; that federal student aid programs have expanded post-secondary educational opportunities for young people from poorer families. And they both call for economists to refine their tools of analysis, especially their measures of the effects of education — on the country's economic growth, on personal well-being, and on the well-being of the nation. ■

## **Economic status of the aged**

*continued from page 4*

are now enrolled in the program, and the cost continues to mount, not only because of the increasing number of aged, but because the cost of medical care has risen so fast. In 1967 Medicare expenditures were \$3 billion a year; in 1981 they were over \$37 billion. According to Karen Davis, the program has greatly increased the care available to the elderly and has been a major source of relief of the burden of excessive bills.<sup>10</sup>

### **Medicaid**

At the same time that Medicare was enacted for Social Security beneficiaries, Medicaid, an income-tested program, was established for the needy. Because the aged are the group most likely to be in need of prolonged and expensive medical care, this program aids them more than other groups. About 70 percent of all Medicaid expenditures go for hospital and nursing-home care. In 1981 the expenses for this program, shared by the federal government and the states, came to \$27.6 billion, and it served 22.1 million people.

### **SSI**

Supplemental Security Income is an inflation-indexed negative income tax for the aged, blind, and disabled, which in 1974 replaced state-run Old Age Assistance and programs for the aged, blind, and disabled. It provides a national uniform cash benefit to all the aged whose income and assets are below a certain amount, with benefits reduced as income rises. States have the option to supplement the benefit level. In 1981 expenditures for SSI were estimated at \$8.5 billion.

Oddly enough it has been estimated that only 50 percent of those eligible for SSI are enrolled. Jennifer Warlick found that although the amount of the benefit is positively related to the decision to participate in SSI, many people eligible for large benefits do not participate. The reasons why they do not apply are not easy to pinpoint, and therefore will not be easy to rectify.<sup>11</sup>

### **Food Stamps**

Food Stamps is an inflation-indexed negative income tax which provides benefits in kind for low-income households. Forty-one percent of food stamp recipients are either receiving OASDI or SSI. This includes the elderly, survivors, and the disabled. The budgetary cost of Food Stamps was estimated to be \$9.7 billion in 1981.

## **Comparing the aged poor to the nonaged poor**

Mean incomes include both extremes, the very wealthy and the very poor. No category of citizens is more diverse than the aged, who have in common primarily their longevity.

<sup>1</sup> Robert Mare, "Sources of Educational Growth in America," *Focus*, 3:2 (Winter 1978-79), 5-6, 12.

<sup>2</sup> Richard Freeman, *The Overeducated American* (New York: Academic Press, 1976), pp. 184, 188.

<sup>3</sup> The National Longitudinal Study of the High School Class of 1972; High School and Beyond — A National Longitudinal Study of the 1980s, 1980 Baseline Study.