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Financial Aid Problems for Dependent Students From Low Income Families

by Tom Mortenson

Students from low income families have relatively poor prospects for earning a baccalaureate degree from college. Furthermore, while the prospects for students from higher income families improved during the 1980s, students from families earning less than \$20,000 per year lost both in terms of access to higher education and completion of degree programs.

This paper examines three financial aid policies that work against dependent students from low income families: (1) zeroing-out calculated negative parental contributions, (2) requiring a minimum self-help expectation from students from low income families, and (3) substituting expensive financial aid (loans) for free aid (grants). These policies make college a substantially more expensive investment decision for low income students, thus denying many of them the education their higher income counterparts can afford.

Higher educational opportunity is the socially-endorsed means to socioeconomic advancement for those with the motivation and talent to improve their welfare and status. This endorsement is the direct result of recognizing the public interests served by fostering higher educational opportunity. In addition to public interests that support American social, economic, or political endeavors, these recent public interests are all concerned with human capital development: reducing poverty, reducing inequality, and improving labor force productivity.

During the 1980s higher education became an increasingly important means for socioeconomic advancement as alternative paths diminished. Families headed by individuals with baccalaureate degrees maintained or improved their standard of living while those without college educations saw their living standards erode, often appreciably. Thus, the distribution of higher educational opportunity and its redistribution during the 1980s is of central importance to those responsible for designing and administering programs to foster higher educational opportunity. Those who formulate, review, and administer programs that foster higher educational opportunity must act now to remedy the decline of the 1980s. Congress is preparing a new federal financial aid plan for the 1990s.

For one group of students served by public programs designed to foster higher educational opportunity, college access and completion has always been a problem. And it is this group that suffered a decline in both access and completion rates during the 1980s. College graduation chances for students from the bottom quartile of family income—below about \$20,000 per year—are far lower than they are for students from higher income families. These students are

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least likely to graduate from high school, least likely to go on to college if they do graduate from high school, and least likely to complete college if they enroll. Moreover, and unlike their higher income counterparts, low income students' chances of graduating from college during the 1980s spiralled downward. This is after their chances had improved during the 1970s (Mortenson and Wu, 1990). Across the family income spectrum, students from low income families stand out by their lack of access and low college completion rates.

A portion of this problem can be attributed to the inability of the student financial aid system to address the financial needs of students from low income families. Financial aid is generally targeted toward helping those with financial need to pay for their college educations. However, the current system does a better job of assisting students from middle income families meet their needs than it does those from low income families.

This paper addresses three problems of the student financial aid system for students from low income families. First, need analysis treats all zero family contribution students as if they are identical when they are not. Second, the minimum student self-help contribution is harder for students from low income families to earn than it is for more affluent students. And third, the substitution of expensive financial aid for free financial aid adds attendance costs that are not addressed in the student budget and imposes special risk considerations for students from low income families.

This paper analyzes these problems by first describing the educational progress of students with different family incomes, then analyzing three financial aid issues that appear to especially work against students from low income families, and finally calculating the comparable costs of college attendance for students at different family income levels by adding these excluded costs to the student budget.

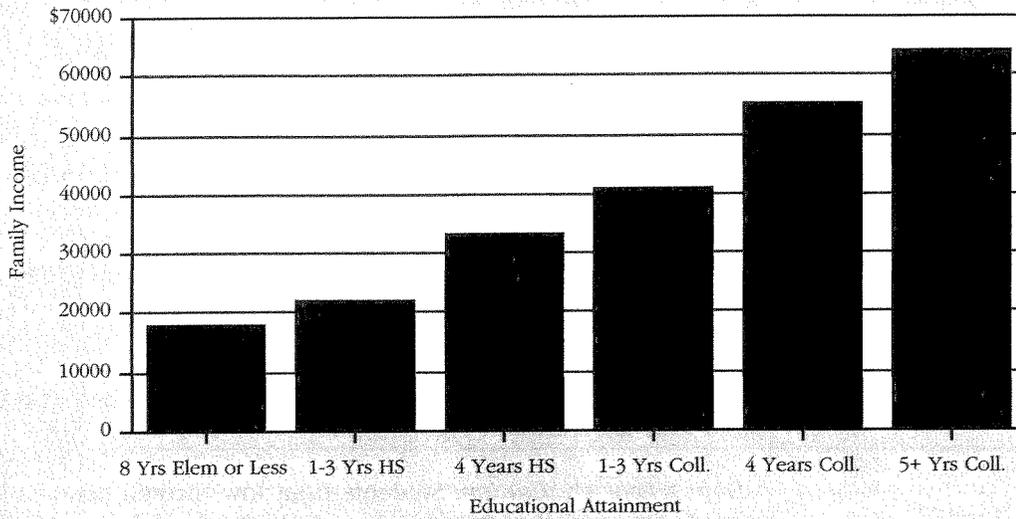
College Participation Experience

The Meaning of Higher Education to Students

The labor market provides large and growing incentives for young people to continue in the educational system for as long as they can be successful students. One's best chance for entering a high income stream and then keeping up with or moving ahead of inflation is through baccalaureate level collegiate education, as shown in Figure 1. Without a college degree, one will normally enter the labor force at a lower income level and inflation will devour pay increases as shown in Figure 2. Not only does more income provide access to necessities—housing, food, clothing, etc.—but money also provides access to luxuries that are available—such as home ownership, dining out, fancy clothing, entertainment, travel, etc.

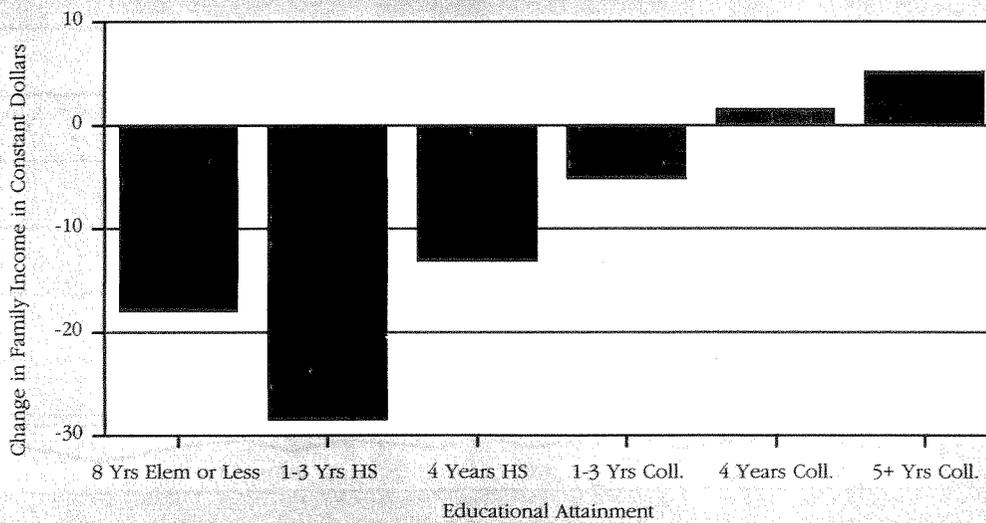
College freshmen recognize the labor market rewards for a college education. *The American Freshman: National Norms* survey reports that the most frequently cited very important reason for attending college is "to get a better job." However, since 1971 the fastest growing reason cited by freshmen for attending college has

FIGURE 1
Median Family Income By Educational Attainment of Householder
1990



Source: Current Population Reports, Consumer Income, Series P-60.

FIGURE 2
Change in Median Family Income
By Educational Attainment of Householder
Between 1973 and 1990



Source: Current Population Reports, Consumer Income, Series P-60.

been "to make more money." Even two-year college freshmen recognize the relationship between greater levels of educational attainment and their personal welfare: in 1990 more than four out of five first-time, full-time two-year college students planned to earn at least a baccalaureate degree from college (Astin, et al, 1990).

The Path to a Baccalaureate Degree

Students must pass three hurdles on the path to a bachelor's degree: first they must graduate from high school, then enroll in college, then complete college. At every step students from low income families drop out at a higher rate than more affluent students. In the late 1980s by age 24 about 6% of the baccalaureate degrees awarded went to students from the bottom quartile of family income, 12% to the second quartile, 26% to the third quartile, and 56% to the top quartile. The proportion of individuals from each family income quartile that earned a baccalaureate degree by age 24 between 1970 and 1989 are shown in Figure 3 (Mortenson and Wu, 1990).

High school graduation. Students from low income families have fared better over the last twenty years in high school than they have in gaining access to and completing higher education. Unlike students from the top three quartiles of family income, high school graduation

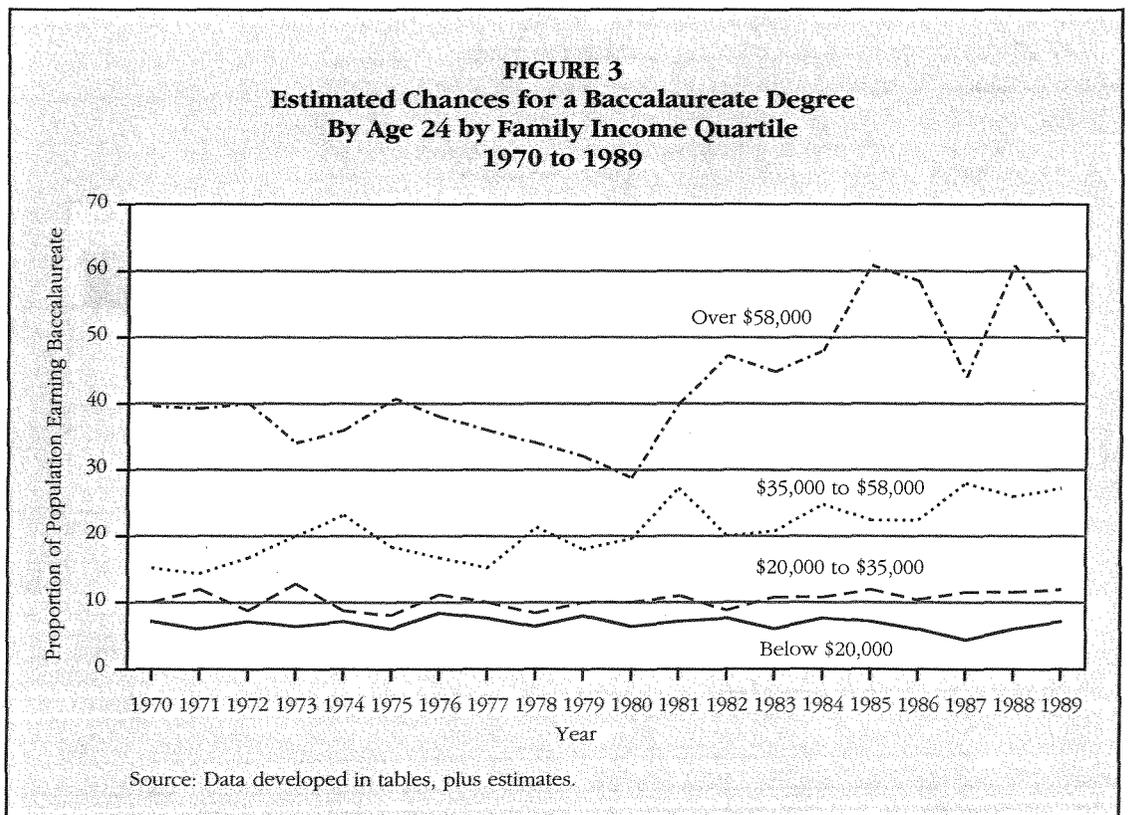
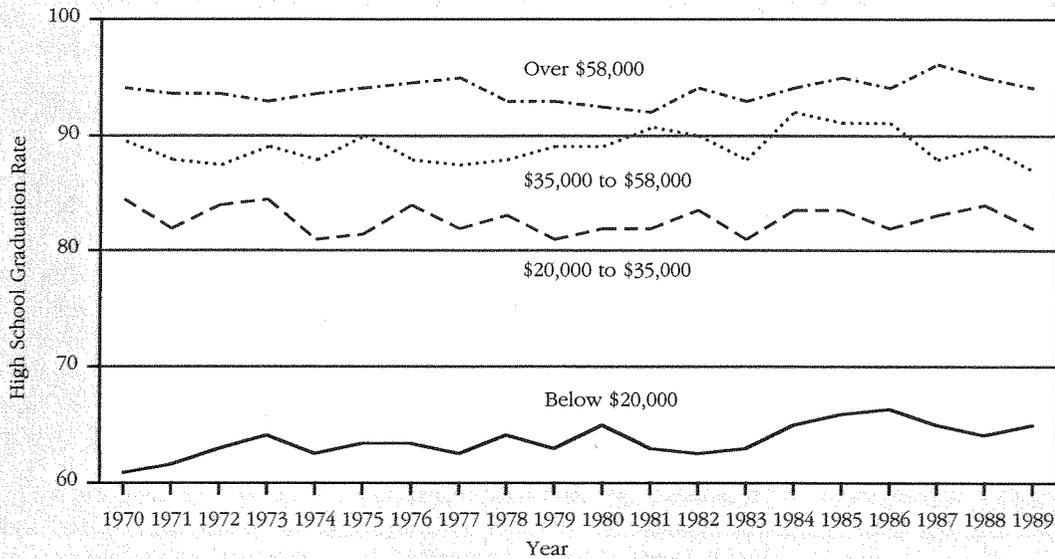


FIGURE 4
High School Graduation Rates by Family Income Quartiles
For Unmarried 18 to 24 Year Olds
1970 to 1989



Source: Current Population Survey, Series P-20.

rates improved for bottom quartile students over the last twenty years as shown in Figure 4.

Perhaps the increase in high school graduation rates may be attributed to the clear focus of federal Chapter 1 funding from the Elementary and Secondary Education Act to school districts with concentrations of students from very low income families. In any case, that dependent students have made progress in educational attainment through at least high school graduation—both compared to higher income groups and to the same group over the last twenty years—is important because it shows that progress in educational attainment is possible for students from poor families.

College participation and completion. A different picture of educational attainment for students from low income families emerges when we look at the transition from high school into college and the chances of earning a baccalaureate degree by age 24. Figure 5 shows the college success rate, or chances for both entering college and completing a baccalaureate degree by age 24 for each of the four family income quartiles. In the top three quartiles of family income, the college success rate increased, especially during the 1980s. In the bottom quartile, however, the college success rate declined during the 1980s.

It is the uniqueness of the problem of higher educational opportunity for dependent students from low income families that draws our attention. First, high school graduation rates increased only for students from the bottom quartile of family income; they remained flat for twenty years for students from each of the top three quartiles. Then, college success rates deteriorated for the bottom quartile students during the 1980s while they were increasing substantially for students in each of the top three quartiles during the same period. Despite the clarity of labor market signals calling for greater levels of educational attainment, the students in the bottom quartile were apparently unable to respond. Something is getting in the way of their higher educational opportunity.

Problems in Financial Aid

Students from very low income families face a variety of obstacles in pursuing education that are more significant than such problems are for students from more affluent families. Family income is correlated with family structure, parental education, social status, quality of schools previously attended, and a large number of other conditions that help determine one's chances for success in education and life. Family income is, however, a major factor in what need analysis in financial aid is based upon.

Negative Parental Contributions

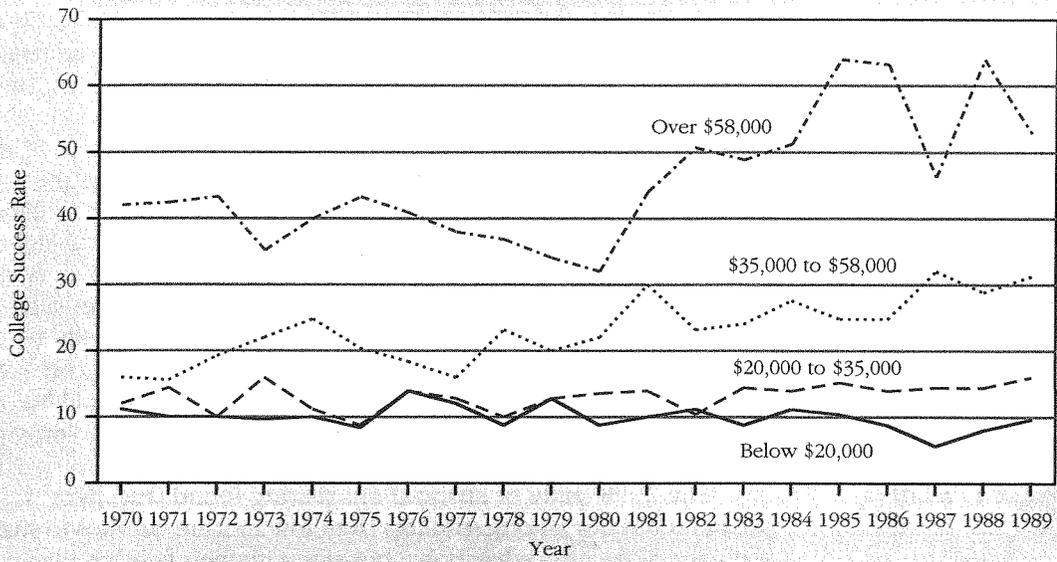
The cornerstone of the credibility of need analysis is the understanding that each family's circumstances are assessed according to objective measures of ability to pay, and that families with different abilities to pay will have different expected family contributions. This principle is applied to families from the top three quartiles of the family income distribution, but not the bottom quartile.

A family of four with one dependent child in college and no asset contribution will have a zero expected parental contribution at family incomes ranging from zero up to about \$22,000 per year. That is to say, parents of a family of four with one in college are not expected to provide any contribution from their income. This finding applies to all families of four with incomes up to \$22,000, one in college and no contributing assets, including families earning \$20,000, or \$15,000, or \$10,000, or \$5000, or zero annual incomes.

All such families are treated identically in need analysis. But are their financial circumstances similar? We need only ask two families at different income levels to determine if this is the case. Would a family making \$20,000 per year trade places with another making \$10,000 per year? Probably not. Would the \$10,000 family trade places with the \$20,000 income family? Of course they would.

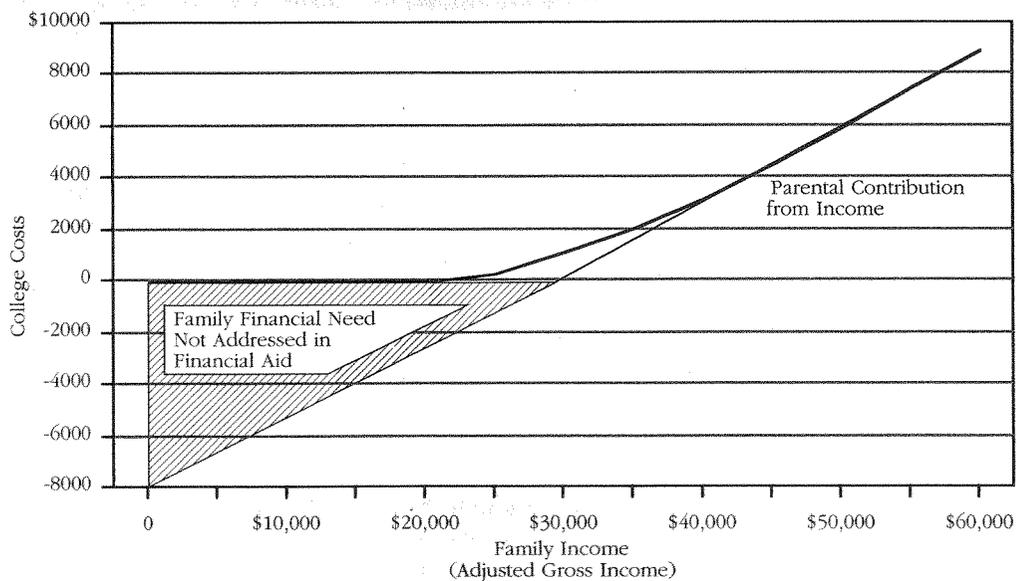
But need analysis does not address such differences. Instead a calculated negative expected parental contribution is converted to zero. Families in substantially different circumstances are treated as if they were similarly situated. This is the antithesis of need analysis that judges each family according to its unique circumstances. Public policy chooses to ignore the reality of low family income conditions to the detriment of students it professes to want to help. Figure 6 illustrates the negative expected parental contribution.

FIGURE 5
College Success Rates By Family Income Quartiles
1970 to 1989



Source: ACT Student Aid Research Report 90-3.

FIGURE 6
The Negative Parental Contribution Problem In Need Analysis
1990-91



Assumptions: Family size = 4, 1 in college, freshman, no assets.

“Public policy chooses to ignore the reality of low family income conditions to the detriment of students it professes to want to help.”

The reason for this particular treatment is a federal policy decision to separate student aid from public aid. Student financial aid is to be used to finance only the direct and indirect costs of college attendance. It is not to be used to finance any opportunity costs of college such as living costs of the remaining members of the family unit for which the prospective college student may feel a sense of responsibility.

There is anecdotal evidence about this aspect of negative expected parental contribution. One typical story is about the low family income student whose direct and indirect costs of attendance are met entirely with gift aid, but who still chooses not to attend college. When asked why, the student responds that the family depends on the student's income for basic necessities. The student feels kinship needs are greater than the personal benefits to be derived from attending college. Another typical story concerns the student from a low income family who exhausts financial aid before the school year is over because some of that aid was used to provide for the student's family during the school year.

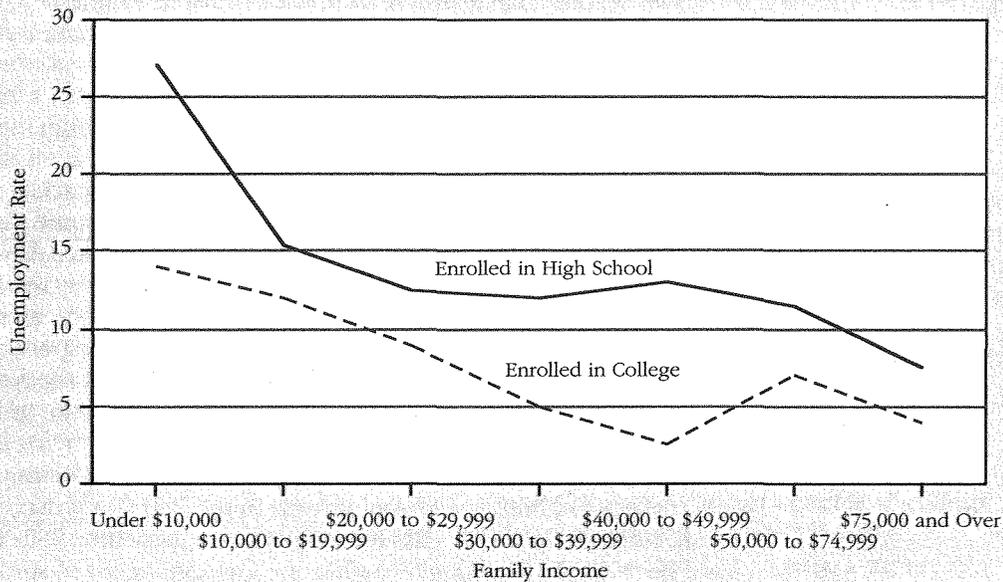
One 1978 study of financial aid sharing found that there was a greater tendency among students from low income families to share their Social Security educational benefits with their families than was the case for students from higher income families. Twenty one percent of students whose parents had incomes below \$2,000 per year shared their Social Security educational benefits with their families, compared to 5% of those received by students whose parents had incomes greater than \$25,000. Also, students who lived at home were more likely to share these benefits with their families than were those who did not live at home (Valiga, 1978). These results indicate that educational benefits received by students specifically for higher educational study are sometimes shared with the student's family, and this happens more often among low income families than high income families.

Minimum Expected Student Contribution

Under need analysis, students are expected to contribute toward financing their college educations, even if they have neither income nor savings from which to meet that expectation. At the minimum, freshmen are currently expected to provide \$700 per year and all others \$900. For many students these expectations are easily met and often exceeded. For others, mainly students from low income families, the contribution may not be as easily provided.

Teenage unemployment is related to a variety of factors, including race, location, and—especially important for the purposes of need analysis—family income. The Bureau of Labor Statistics found from the October, 1989 Current Population Survey that the unemployment rate among 16 to 24 year old relatives of householders was 10.4%. Among those in this group who were enrolled in high school the rate was 14.0%, and among those enrolled in college it was 6.9%. However, the unemployment rate varied sharply by family income levels as shown in Figure 7. For both high school and college

FIGURE 7
Unemployment Rates for Students in the Labor Force
Age 16 to 24 Years by Family Income
October, 1989



Source: Bureau of Labor Statistics.

students, the unemployment rate was highest for those from families with incomes of less than \$20,000 per year.

Students from lowest family income backgrounds are the least likely to have accumulated the minimum \$700 or \$900 expected from the student in need analysis. They have the greatest difficulties finding employment in the labor force, and their earnings are more likely to go to family maintenance than are other students from higher family income backgrounds.

Substitution of Loans for Grants

In the economic investment model of college student enrollment demand, college attendance decisions are the result of a net benefit calculation: benefits minus costs. A prospective college student will choose college over alternative activities, or one college over another, based on the perceived highest net benefits of the choices available.

When loans are substituted for grants in the student's financial aid package, net benefits of college attendance are reduced in two ways. First, loans are more expensive than are grants. Not only must the financial aid be repaid after college, but so too must various fees that are associated with issuing the loan, as well as interest on the unpaid balance. Quoted interest rates of 8% can increase to more than 15% depending on the fees charged and period of loan repayment after leaving college. Under a six year repayment plan, a 5%

origination fee, and a 2% insurance fee, a student will repay \$1.37 for each dollar of loan aid received (Mortenson, 1990). These costs reduce net benefits of college attendance. The more loans are substituted for grants, the more the net benefits of college are reduced.

The second characteristic of loans compared to grants is their risk. College is a risky investment decision for any student, but it is more so for students from low income families. Only about one low income student in five who starts college is likely to earn a baccalaureate degree by age 24, compared to about half from high income families (Mortenson and Wu, 1990). Thus, a student from a low family income background who receives a financial aid package that includes a significant loan component may correctly assume that he or she has only one chance in five of earning the baccalaureate degree that would provide the increased earnings to repay the loan.

At least as perceived by some prospective students, at some point the net benefits of college attendance are driven below the net benefits of alternatives to college by the addition of loan repayment, financing, and risk costs. At this point one would expect the individual to do something other than attend college.

Despite these problems with loans, especially for students from low income families, the lack of growth in the Pell Grant maximum award since the late 1970s has meant that throughout the 1980s loans have been used increasingly to meet the financial needs of students. The rate of substitution of loans for grants may be appreciated as follows: between the mid 1970s and the late 1980s, the average annual increase in the Pell Grant maximum available to the poorest students was about \$60 per year. During this same period of time the average annual increase in the cost of attending a public college was \$300 per year, and it was \$600 per year at private colleges. That is to say, each and every year for 15 years the potential loan burden on students from low income families increased by \$240 per year of college attended in public colleges and by \$540 in private institutions.

Not only have loans been substituted for grants, but each new federal loan program has been more costly to students. The first loan program in 1958—National Defense Student Loans—started with a 3% interest rate and had relatively generous deferment and forgiveness features. In 1965 the Guaranteed Student Loan Program began at 7% interest rates, with a 9 month grace period, and very restricted forgiveness features. More recently the PLUS loan program has added educational loans at 12% interest and immediate repayment obligations. Each step had a clear budgetary reason behind it. But the budgetary imperatives have ignored the intent and effect of student aid to encourage students to attend college.

Summary and Conclusions

Dependent students from low income families have not fared well in terms of college access and completion compared to their more affluent peers during the 1980s. Their college participation and completion rates are far below those of students from higher income families. And for much of the 1980s these rates have gone down for

students from low income families while they were increasing substantially for students from higher income families. As a result, the disparity in higher educational opportunity between students from low income backgrounds and those from higher income backgrounds is wider now than it has been at any time in the last two decades.

The economic model of student demand for higher education provides a fairly clear idea of the reasons the above conditions exist. That model holds that:

A student will choose to attend college if the perceived net benefits of attending college are greater than the net benefits of the alternatives. The benefits of college include short term consumption benefits plus long term investment benefits, discounted to present value. The costs of college include short term costs such as current expenses and opportunity costs, plus deferred long term financing costs, discounted to present value.

When costs are ignored—costs such as family maintenance, financing, and risk—or resources are assumed to be present when they may not be—such as summer savings—the net benefits of college attendance are reduced by costs ignored in financial aid.

Students from low income families possess a variety of characteristics that limit their chances for college. Their parents may be less supportive of educational attainment, their academic preparation may be deficient, and they may have attended inferior schools.

More central to the concerns of student financial aid for students from low income families, however, is that the design of the financial aid system is flawed in two crucial ways. First, need analysis treats all low income families alike, and it expects all students to make the same minimum self-help expectation without regard to their earning prospects. Although need analysis ostensibly is intended to deal with the reality of individual circumstances, and it does so where expected parental contributions are greater than zero, need analysis fails to address the differing realities faced by students from low income families. Only exceptional intervention by individual financial aid administrator's use of professional judgment can override this problem.

Second, federal budgetary imperatives have clouded and confused the original intent of student aid to reduce the net costs of attending college for needy students. Loans are not substitutes for grants for students from low income families. They add financing and risk costs to the college investment decision and thereby reduce the net benefits of attending college. Instead of vehicles to higher educational opportunity, loans become obstacles.

Finally, we can estimate what the true comparable costs of attending college are for students from different family income backgrounds by converting each financial aid problem to the costs it adds to the student budget. Table 1 calculates the estimated average annual cost of a year at a public university in 1990-91 for students at

“Across the family income spectrum, students from low income families stand out by their lack of access and low college completion rates.”

TABLE 1
Estimated Average Total Annual Public University Attendance Costs
For Families at Different Income Levels
1990-91

Family Income	Student Budget ^a	Negative Parental Contribution ^b	Minimum Student Contribution ^c	Loans Substituted for Grants ^d	Final Cost to Family
\$0	\$7,048	\$8,000	\$182	\$3,418	\$18,648
5000	7,048	6,667	182	3,418	17,315
10,000	7,048	5,333	108	3,418	15,907
15,000	7,048	4,000	108	3,418	14,574
20,000	7,048	2,667	85	3,418	13,218
25,000	7,048	1,333	85	3,418	11,884
30,000	7,048	0	84	3,418	10,550
35,000	7,048	0	84	3,372	10,504
40,000	7,048	0	88	1,791	8,927
50,000	7,048	0	79	0	7,127
60,000	7,048	0	79	0	7,127
70,000	7,048	0	79	0	7,127
80,000	7,048	0	53	0	7,101
90,000	7,048	0	53	0	7,101

^aState resident living on campus. Source: ACT BSQ survey.

^bNegative parental contribution = $(.2667 \times \text{family income}) - \8000 .

^cUnemployment rate for high school students \times \$700.

^dStudent budget - expected family contribution = need. Need, or \$2,500, whichever is less, \times (payback amount / amount actually received). The payback/received ratio assumes a six year repayment, in which case the ratio is 1.367. Future values of loan repayments not discounted to present values.

different levels of family income. Only for students from families with incomes above about \$50,000 does the college budget used in financial aid reasonably accurately reflect the costs faced by the family. At lower income levels, families face considerably higher college attendance costs. The highest college attendance costs are faced by students from the families with lowest incomes. Under this calculation, a dependent student from a very low income family actually faces college attendance costs that are two and a half times greater than are the costs faced by a student from a family with an income of \$50,000 or more. ♦

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