

**PLACE-BASED COLLEGE SCHOLARSHIPS: AN ANALYSIS
OF MERIT AID AND UNIVERSAL PROGRAMS**

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Executive Summary

College is critical for attaining a middle-class life, but rising college costs and stagnant family incomes have made college less affordable. During the past 20 years many states and local areas have started college scholarship programs for high school graduates in order to increase college access. Pittsburgh Public Schools started its program, called the Pittsburgh Promise, in 2008.

In this report we summarize research literature on the effects of two common types of programs: 1) merit aid, including the Pittsburgh Promise, which requires students to have a minimum GPA and/or test score to qualify; and 2) universal programs, which allow nearly all high school graduates to qualify. Our purpose is to determine which programs best achieve the four common goals for scholarship programs listed below and to make recommendations for improving outcomes in cities with and without a college scholarship program. Our findings are:

Increasing K-12 student achievement Merit aid and universal programs have little effect on student motivation and achievement. However, merit aid can produce a small increase in achievement among students, especially whites, near the GPA or test score cutoff for a scholarship and a small increase in high school dropouts among students with low grades. Further, merit aid does not appear to cause grade inflation in high school.

Most low-achieving students in center city school districts are minority and low-income. The best way to help these students is to provide comprehensive health, social, economic and educational services continuously from pre-birth through high school and additional assistance through college, as is done in the Harlem Children's Zone.

Increasing college enrollment and completion Merit aid allows many students who were going to college anyway to attend better colleges and reduce college debt. If college enrollment rates are unusually low in an area, as they were in Georgia when the Georgia HOPE program was started, then merit aid can also increase college enrollment and completion among white and middle/upper income students. The Pittsburgh Promise is likely to allow more students to attend better schools and reduce debt once the maximum award increases to \$10,000 a year in 2012.

Full-tuition universal programs provide substantial benefits to white and middle-upper income students while also helping minority and low-income students. These programs can double the percentage of high school graduates with low grades who complete a four-year college degree and can greatly increase the percentage of all high school graduates who enroll in higher quality colleges. These impacts occur because the programs have a large award and a simple application procedure, nearly all high school graduates are eligible, and students have many years after high school to complete college. Full-tuition universal programs are more affordable for a community if the award is limited to public colleges.

Increasing school district enrollment and city population The full-tuition universal program in Kalamazoo, MI has shown that a large, broad-based, easy-to-apply-for scholarship can stop enrollment decline and increase enrollment in an urban school district. Population also started increasing in Kalamazoo two years after the start of the Promise. The Pittsburgh Promise has not stopped declines in public school enrolment or city population. The likely reasons are the small award, eligibility requirements that exclude half of the high school graduates, and an application process that can be difficult for low-income students and their families.

Reducing poverty and racial disparities Full-tuition universal programs reduce poverty because they increase college enrollment and completion among students with low high school achievement. These programs can also reduce black-white disparities since black college enrollment and completion can increase more than increases in white rates. Merit aid, which excludes low achieving high school graduates, does little to reduce poverty but does increase racial disparities by giving college aid to a much larger percentage of white than black high school graduates.

Recommendations for City Programs

A city with a universal college scholarship should make sure the program has a simple application procedure, a large award (such as full-tuition at public colleges and universities in the state), and a long time period after high school to use the award (at least ten years). A first-dollar scholarship tends to be easier to administer and more effective, but it is also more expensive than a middle-dollar scholarship. In addition, each community with a universal scholarship should reform K-12 education and invest in comprehensive services for disadvantaged students from pre-birth through college, such as in the Harlem Children's Zone. This will help poor students increase school achievement and be better able to take advantage of the college scholarship.

A city with a merit-based college scholarship could keep its current program in order to help students who were planning to go to college anyway but should add two major programs to help low-skill students. First, the community should reform K-12 education and invest in comprehensive services for disadvantaged students from pre-birth through college, such as in the Harlem Children's Zone. Second, the community should create a college scholarship program for high school graduates who are not eligible for the merit-aid program. To be most effective and efficient, this program should have the characteristics of a universal program (as described above).

A city with no college scholarship program for high school graduates should do two things. First, it should improve education for disadvantaged kids by reforming K-12 education and providing comprehensive services for disadvantaged students from pre-birth through college, such as in the Harlem Children's Zone. Second, the community should create a universal college scholarship similar to that in Kalamazoo, which is full-tuition and first-dollar, has a simple application procedure, can be used up to ten years or more after high school, and can be used at public colleges and universities in the state.

A sticking point for many people is whether high school graduates with less than a 2.5 or 2.0 GPA should go to college and receive a Promise-type scholarship. Actually, the majority of these graduates (including low-skill black graduates) already enroll in college. Further, when open admission is combined with free college tuition, academic support, and many years to complete college, the results can be astounding. For example, the number of black graduates of four-year colleges can more than double.

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A college degree is necessary for obtaining good jobs and a middle-class life (Baum and Payea, 2010; Deming and Dynarski, 2009). College is also critical for increasing general cognitive ability, particularly among black students (Myerson, Rank, Raines and Schnitzler, 1998). Further, America lacks a strong vocational system and offers no major alternative to college as a pathway to a good life (Rosenbaum, 2001).

Unfortunately, rising college costs and stagnant incomes have reduced the ability of families to afford college. Nearly half of all college-qualified, low- and moderate-income high school graduates cannot enroll in four-year colleges because of financial barriers (College Board, 2008). In addition, many students who enroll in two- or four-year colleges have difficulty graduating because of financial difficulties. Further, many college graduates leave with substantial debt.

A number of cities in recent years have created college scholarship programs for high school graduates in an effort to increase access to and success in college, stop public school enrollment decline, and achieve other goals. These are often called Promise programs. In this report we examine various types of Promise programs and determine the extent to which they achieve these common and important goals:

- Improving K-12 student achievement, such as higher levels of effort, attendance, grades, test scores, and high school graduation rates
- Improving college student outcomes, such as greater enrollment, attending higher quality colleges, increased retention, increased completion, and lower debt
- Stopping school district enrollment and city population decline
- Reducing poverty and racial disparities in the community

The models studied are (see examples in Table 1):

- Full-tuition merit aid programs, such as Georgia's HOPE Scholarship
- Flat-award merit aid programs, such as the Pittsburgh Promise, which has a maximum award of \$5,000 now and \$10,000 from 2012
- Targeted merit aid programs, such as the Tennessee Education Lottery Scholarship
- Full-tuition universal programs, such as the Kalamazoo Promise
- Full-tuition programs, such as in the City University of New York from 1970 to 1975, which was universal for two-year and merit-based for four-year colleges

In this report we review research and data on the actual effects of city and state programs in relation to the goals stated above. Particular attention is given to estimating effects by race, gender, and income to determine which models can benefit all types of students. Based on the review, we make recommendations for cities with merit and universal programs and for cities which do not presently have a place-based college aid program.

This project was funded by the Falk Foundation. The information in this report will not only be useful to Pittsburgh but can also help communities across the nation decide how to improve their scholarship programs or decide which program to adopt.

IMPROVING K-12 STUDENT ACHIEVEMENT

There is immense need to improve K-12 student achievement. In Pittsburgh Public Schools 46% of black males, 34% of black females, 33% of white males, and 25% of white females drop out of school (Engberg and Gill, 2006). Further, 64% of black and 25% of white high school graduates of Pittsburgh Schools have a grade point average below 2.5 (Bangs, Davis, Ness, Elliott and Henry, 2009).

Improving K-12 student achievement is often a goal of local and state college aid programs. This section summarizes research on the actual effects of these programs and reaches conclusions about the likely effects of the Pittsburgh Promise. Our findings are:

- 1. Merit aid programs, such as the Pittsburgh Promise, are likely to increase effort and achievement among high school students close to the GPA or test score requirements for the scholarship.**

Merit aid programs have eligibility criteria that require a minimum level of student achievement, such as reaching some high school GPA, SAT, or ACT level. Since grades could increase due to grade inflation, researchers often use SAT and ACT scores to determine changes in student effort and achievement caused by scholarship programs. Two studies have used SAT or ACT scores to determine merit aid effects by race.

First, Pallais (2009) found that the Tennessee Education Lottery Scholarships (TELS) increased the share of white students by 6.2 percentage points and black students by 1.8 percentage points who scored at least 19 on the ACT test, the minimum needed to qualify for the scholarship. Even though a much larger share of black students (75%) than white students (34%) scored below 19 before TELS began, white students more than black students had scores closer to 19 and needed a smaller gain to reach 19.

The same pattern exists for the Pittsburgh Promise in relation to high school GPA. A much higher percentage of Pittsburgh's black high school graduates (64%) than white graduates (25%) have a high school GPA below the 2.5 required for the Pittsburgh Promise, but the black grades are far below 2.5 whereas the white grades are much closer. For example, 39% of black but only 9% of white graduates have a GPA below 2.0 (Bangs et al, 2009).

Second, Henry and Rubenstein (2002) studied Georgia's Hope Scholarship, which requires a high school GPA of 3.0 or higher. They found that black graduates with a GPA of 2.9 or 3.1 (i.e., close to the 3.0 threshold) increased their SAT scores by 20-25 points from a baseline of about 900 while SAT scores for white graduates declined by 0.2 to 6.9 points from a baseline of about 1000. These data suggest that black students but not white students who were close to the GPA cutoff gained in general cognitive ability. Even

though white SAT scores did not increase, it is unknown whether white students close to the 3.0 requirement raised their grades in order to qualify for the scholarship.

2. A merit-based college scholarship does not appear to cause high school grades in general to increase or cause grade inflation in high school.

Bugler, Henry, and Rubenstein (1999) found that the Georgia HOPE Scholarship did not cause high school grades to increase faster after HOPE started than before the start of the program and that after HOPE started grades did not increase faster than SAT scores.

3. A merit aid program, such as the Pittsburgh Promise, by itself is not likely to increase high school completion.

Dynarski (2008) found that merit-based, full-tuition scholarship programs in Georgia and Arkansas did not increase high school graduation rates. High school completion did not increase because the scholarships mostly change behavior of students close to the GPA requirement, and these students perform well enough in school that they would not have dropped out anyway. The same is likely for the Pittsburgh Promise which has a 2.5 GPA requirement. We found that very few dropouts (9.2%) in Pittsburgh Public Schools had a GPA of 2.5 or above (Bangs et al, 2009).

4. Eligibility requirements for merit aid do not reliably indicate that students are college-ready. Many merit aid and universal program recipients will need remedial education in college.

The Governor's Office of Student Achievement in Georgia (December 2007) reported that 37% of first-year freshmen with HOPE scholarships (which requires a high school GPA of 3.0 or higher) at state colleges and 40% at two-year colleges needed remedial courses. In addition, only 35% of first-time freshmen with HOPE scholarships still had the scholarship after the first year of college (30 credit hours). This suggests that the high school GPA requirement of merit-based programs is not a reliable indicator of college-readiness among high school graduates. Other indicators of college readiness are needed. Remedial programs will be needed in college for many merit aid as well as universal scholarship recipients.

5. Universal programs, which provide scholarships to high school graduates with both high and low grades, may increase expectations of graduating from college and may increase effort among students with low grades. However, the Pittsburgh Promise and other merit-based programs are likely to reduce expectations of graduating from college, reduce effort, and increase dropout rates among students with low grades because these students are excluded from the scholarship.

Attewell and Lavin (2007, Table 7.8) found that 8th grade students in the U.S. with a GPA of 2.0 or less and college degree plans were more likely than students with low grades and no degree plans to come to class prepared (45% vs. 36%), complete a "new basics" high school curriculum (14% vs. 3%), take the ACT or SAT test (55% vs. 42%), graduate with a high school diploma (69% vs. 59%), and enroll in college (71% vs. 52%). Since universal programs offer scholarships to academically weak high school students,

these programs may result in increased college plans and student effort in high school. However, no direct evidence of this is known to exist. Merit-based programs, which exclude high school students with low grades, are likely to lead to student beliefs that they cannot qualify for the scholarship and cannot afford college. This can lead to giving up and dropping out.

6. The overall conclusion is that merit-based and universal programs do not have large effects on K-12 student achievement.

A city-based college scholarship program by itself is not likely to substantially reduce the problems of urban school districts, such as low teacher quality, lack of parental involvement, and low levels of student motivation, engagement, grades, test scores, and high school completion.

7. The best way to help low-income, low achieving students is to provide comprehensive health, social, economic and educational services continuously from pre-birth through high school and additional assistance through college.

Most low-achieving students in center city school districts are minority and low-income. Research indicates that the best way to help these students is to provide comprehensive health, social, economic and educational services to these youth and their families continuously from pre-birth through high school and additional assistance through college. The Harlem Children's Zone is the most effective model (Dobbie and Fryer, 2009). The cost-effectiveness of starting services early and providing them continuously has been demonstrated by Cunha and Heckman (2006 and 2007). In addition, school districts will need to avoid programs that hurt student achievement and reduce high school completion, such as separate schools for students with discipline problems and high stakes graduation exams.

IMPROVING COLLEGE STUDENT OUTCOMES

College enrollment rates vary greatly by income and race. While 80% of high school graduates in the highest fifth of family incomes enroll in college within one year after graduation, only 55% of graduates in the lowest fifth enroll. Further, 70% of non-Hispanic whites but only 56% of blacks and 62% of Hispanics enroll (Baum and Payea, 2010).

College completion rates also vary greatly. While 31% of non-Hispanic white females age 25-29 have completed at least a B.A. degree, only 21% of black females and 15% of Hispanic females have done so. Among males age 25-29, 32% of non-Hispanic whites, 18% of blacks, and 10% of Hispanics completed at least a B.A. degree.

Existing financial aid is inadequate to meet student needs. For example, "the mean amount of unmet need for low-income, first generation students is \$6,000 (before loans), which represents half of their median annual income of \$12,100" (Pell Institute, 2008). Unmet financial need can lead to staying out of college, enrolling in lower quality colleges, and student debt.

Two-thirds of four-year college graduates in 2008 had student loans and the average debt was \$23,200. College debt is a particularly serious problem for low-income and African American

graduates. Among graduates with Pell Grants (i.e., low-income students), 14% had \$40,000 or more in student loans while only 8% without Pell Grants had that much student debt. In addition, 16% of African American, 10% of white, 8% of Hispanic, and 5% of Asian four-year college graduates had \$40,000 or more in student loans (Project on Student Debt, 2010).

In our study we determined to what extent place-based college scholarship programs improve these and other college outcomes. Our findings are:

- 1. A minimum high school GPA, which is often used as a requirement for merit aid, is a poor indicator of potential college achievement. High school graduates with a low GPA often succeed in college.**

National data show that 28% of black women and 46% of black men who obtain B.A. degrees have less than a 2.5 high school GPA (Attewell and Lavin, 2007, Figure 8.1). In addition, the majority of high school graduates with a GPA of 2.0 or less graduate from college with an A.A. degree or higher within eight years after leaving high school (Attewell and Lavin, 2007, p168).

Among students who were admitted to CUNY with free tuition from 1970 to 1975 and earned a B.A. degree by the year 2000, 53% of black women, 15% of white women, and 36% of Hispanic women had a high school GPA below 2.5 (Attewell and Lavin, 2007, Figure 8.1). No data on men are available for this indicator.

- 2. Full-tuition, broad-based scholarship programs can increase college success for students with a low high school GPA.**

The CUNY program offered open admissions, free tuition, academic support, and no limit on years to complete college for 1970-75 high school grads in New York City. While more than 80% of black women entering CUNY and receiving full tuition had a high school GPA of 2.0 or less, 40.6% graduated with a four-year college degree by the year 2000. Only 18.9% would have graduated with a four-year degree if the program had applied only to high school grads with a GPA of 2.5 or higher. This represents a 115% increase in four-year college grads (Attewell and Lavin, 2007).

- 3. Merit-based, full-tuition programs: a) increase college enrollment among white and middle- and upper-income youth; and b) increase two- or four-year degree completion among students who would have gone to college without the scholarship.**

Dynarsky (2002) found that the Georgia HOPE Scholarship, which requires a 3.0 HS GPA¹ and provides full-tuition, increased white college enrollment by 12% and middle- and upper-income enrollment by 11% but slightly reduced or caused no change in black and low-income enrollment. In effect, this merit-based program increased income and racial gaps in college attendance. No increase in college attendance occurred among blacks and low-income students because many had grades too low to qualify for the scholarship, more forms had to be completed for low-income students (many of which were black), and the state cut back on need-based financial aid for college (which mostly

¹ Eligibility criteria were loosely applied until 2007 (Governor's Office of Student Achievement, Dec. 2007).

affected black and low-income students). The Pittsburgh Promise, which does not provide full tuition for many students, is likely to result in smaller increases in white and middle- and upper-income enrollment in college.

Dynarski (2008) found that merit-aid, full-tuition programs in Georgia and Arkansas increased persistence in college to a two- or four-year degree by 5-11% among students who would have enrolled in college without the programs. The persistence effect of the Pittsburgh Promise is likely to be less because it does not provide full-tuition for many recipients.

Dynarski (2008) found that merit-aid, full-tuition programs in Georgia and Arkansas increased completion of two- or four-year degrees by 3-4%. The Pittsburgh Promise is likely to have a smaller effect since its scholarship is often less than full-tuition.

4. Large scholarships can increase enrollment at high quality four-year colleges.

The full-tuition universal program in Kalamazoo, MI covers tuition at public colleges and universities in Michigan. The highest cost public school in the state is the University of Michigan, which in 2010-11 cost \$12,000-16,000 per year for undergraduate tuition and fees. One of the major effects of the Kalamazoo Promise has been to increase enrollment at the University of Michigan from 12 in 2005, before the program started, to 48 in 2008.

The Pittsburgh Promise has a maximum annual benefit of \$5,000 now and \$10,000 starting in 2012. The relatively small maximum award of the Pittsburgh Promise is likely to produce smaller increases in enrollment in higher quality and more expensive schools.

5. Broad-based scholarship programs help many more college students than programs with limited eligibility.

Universal programs cover nearly all high school graduates. Targeted merit aid programs allow an intermediate percentage of high school graduates to be eligible, 62-70% depending on the GPA and ACT requirements (Ness and Noland, 2007). Other state merit aid programs enable a much smaller percentage of high school graduates to be eligible, 37-40% depending on the criteria (Ness and Noland, 2007; Governor's Office of Student Achievement, 2010). The Pittsburgh Promise, with its 2.5 high school GPA requirement, covers half of the high school graduates (Bangs et al, 2009).

6. Limiting scholarships to public colleges and universities in the home state allows universal programs to keep total costs down and increase college completion rates while offering full-tuition and broad-based scholarships.

Public colleges are less expensive than private and for-profit colleges. Including tuition and fees, housing, food, and miscellaneous expenses, the price of full-time undergraduate education after grants in 2007-08 in the nation was:

- \$10,600 for public two-year colleges
- \$15,200 for public four-year colleges

- \$25,500 for private nonprofit four-year colleges
- \$25,800 for for-profit four-year or less colleges
(National Center for Education Statistics, August 2010)

Further, in-state compared to out-of-state full-time students at public four-year colleges and universities pay \$6,000 to \$7,000 less for tuition, room and board, and other expenses after taking into account grants from all sources (College Board, 2010).

Since private colleges and out-of-state public colleges are more expensive, place-based scholarship programs can offer larger scholarships and help more low- and middle-income students for a fixed amount of spending if funds are restricted to public in-state colleges. In addition, an award limited to public in-state colleges would result in lower family contributions and debt because the scholarship would cover a larger share of college costs. Further, limiting the award to public in-state colleges would lead to some increase in B.A. completion rates since 55% of freshmen in public four-year colleges and 22% in for-profit four-year colleges graduate within six years (Baum and Payea, 2010).

7. Simplified scholarship application processes increase college enrollment.

Full-tuition, first-dollar programs, such as the Kalamazoo Promise, usually have simple application procedures while middle-dollar programs, such as the Pittsburgh Promise, and need-based programs, such as Pell Grants, require completion of a complicated financial aid application called FAFSA. The burden of submitting FAFSA and the usual late notification about eligibility and amount of award in April of the senior year in high school substantially reduce college-going. Dynarski and Scott-Clayton (2007) estimate that submitting a simple form instead of FAFSA for a grant providing an average of \$2,500 per year would increase college enrollment by 7-9% among students and families with incomes below \$50,000. Bettinger, Long, Oreopoulos and Sanbonmatsu (2009) found that simplifying FAFSA preparation and providing professional tax assistance increased college enrollment by 8 percentage points among low- and middle-income students at a cost of \$87.50/participant and \$1,094/additional college student enrolled.

8. Middle- and last-dollar scholarships reduce program costs but also make programs more complex and require more paperwork.

An advantage of a middle-dollar scholarship over first-dollar aid is that the former does not replace federal and state aid that students would have received anyways while the latter replaces it. The advantage of a last-dollar program over middle- and first-dollar programs is that the former does not replace funds that the family and student could have contributed through savings or earnings. However, middle- and last-dollar programs usually require completion of FAFSA forms, which as noted above, substantially reduce participation by low- and middle-income students.

INCREASING SCHOOL DISTRICT ENROLLMENT AND CITY POPULATION

Prior to the Pittsburgh Promise, enrollment in Pittsburgh Public Schools declined by an average of 4.3% per year from fall 2003 to fall 2007. Prior to 2003 data were generally unreliable on enrollment in Pittsburgh. One of the major goals for the Pittsburgh Promise has been to stop the decline of enrollment and actually increase enrollment. Our findings on the effects of college aid programs on K-12 enrollment are:

- 1. The universal, full-tuition scholarship program in Kalamazoo, MI stopped declining K-12 school enrollment and increased enrollment each year after the program started. Population decline also stopped two years after the start of the program. The merit-based, small award in Pittsburgh did not stop declining enrollment in the first three years after the start of the program and did not stop population decline.**

The Kalamazoo Promise, with its full-tuition scholarship for nearly all high school graduates, reversed decades of school district enrollment and city population decline and increased enrollment and population after the program started. The Pittsburgh Promise has not stopped enrollment or population decline (see Table 2). The reasons for the different results are likely to be:

- Nearly all high school graduates are eligible for the Kalamazoo Promise while only half are eligible for the Pittsburgh Promise starting in 2010.
- The Kalamazoo Promise pays full tuition for in-state undergraduates, which can be as high as \$16,000 in 2010-2011 at the University of Michigan, while the Pittsburgh Promise pays a maximum of \$5,000.
- The Kalamazoo Promise requires completion of a simple short application form while the Pittsburgh Promise requires completion of a complicated form.

The increase in the maximum award offered by the Pittsburgh Promise to \$10,000 a year starting in 2012 may slow school enrollment and population decline. However, the effects are likely to be limited since students must score “advanced” on 11th grade achievement tests to receive the extra \$5,000 per year and only a small share of Pittsburgh Public School students perform at this level (A+ Schools, 2010).

REDUCING POVERTY AND INCREASING THE MIDDLE-CLASS

African American poverty is a serious problem in the city of Pittsburgh. In the most recent American Community Survey data from the Census Bureau, 25% of blacks but only 11% whites in the city lived in poverty in 2005-2009. Further, the city in 2000 had some of the highest poverty rates for African American children, working age adults, and elderly among the 70 largest cities in the nation (Bangs, Anthou, Hughes and Shorter, 2004). In addition, Allegheny County in 1990 had the smallest percentage of blacks in the middle class and in upper income categories among 12 large urban counties (McElroy, Andrews and Washington, 1999).

Educational attainment greatly affects poverty rates. In 2008 adults age 25 and over with less than a high school degree had a poverty rate of 26%, 13% with any type of high school degree,

9% with some college or an associate's degree, and 4% with a bachelor's degree or higher (calculated by the authors from the 2009 American Community Survey, U.S. Census Bureau).

Since higher education is the primary means of reducing poverty and achieving a middle-class life, it is particularly important that as many high school students as possible receive the support and financial aid needed to enroll and succeed in college. Our findings on the effects of college aid programs on poverty are:

1. Full-tuition universal programs can substantially reduce poverty because of increased college enrollment and completion rates among low-income high school graduates and among the children of these high school graduates.

Open admission policies double the number of students enrolled in four-year colleges compared to policies that require a 2.5 high school GPA or higher to enroll and double the number enrolled in two-year colleges compared to policies that require a high school GPA of 2.0 or higher (Attewell and Lavin, 2007, p. 188). In addition, the CUNY universal full-tuition program compared to the same program with a 2.5 high school GPA requirement increased bachelor degree attainment by 115% among black women, 17% among white women, and 56% among Hispanic women (Attewell and Lavin, 2007, Figure 8.1). Given the lower poverty rates by education level shown above, these data suggest that a universal financial aid program can substantially reduce poverty by increasing education levels.

2. Merit-based programs have little effect on poverty because low-income high school students are mostly excluded from the scholarship due to low grades.

The Pittsburgh Promise excludes most black and low-income students, and this exclusion is likely to substantially increase when high school graduation exams start in the next few years (Bangs et al, 2009). This means that the Promise will do little to increase the middle-class or reduce the city's black poverty rate.

3. Racial disparities in Pittsburgh will increase since most white high school graduates will receive the scholarship and most black graduates will not.

The long-term effect of the scholarship is that those who receive financial aid are likely to do well in life and those who do not receive it are likely to have high levels of poverty and related social problems. Racial disparities in Pittsburgh, which are already among the highest in the nation (Bangs et al, 2004), will increase since most white graduates will receive the scholarship and most blacks will not.

CONCLUSIONS AND RECOMMENDATIONS

Based on our review of research on place-based college scholarship programs, full-tuition universal programs produce more positive effects than merit programs. The Kalamazoo Promise and the CUNY program from 1970-1975 are key examples. A full-tuition universal program can produce large increases in college enrollment and completion, reverse public school enrollment decline, and reduce poverty. However, this type of program does not lead to substantial improvements in K-12 student achievement.

The Pittsburgh Promise and other merit aid programs primarily help students already planning to go to college to attend better quality colleges and reduce debt. These programs also produce a small increase in college enrollment, persistence, and completion rates, but they do not substantially improve K-12 student achievement, stop public school enrollment decline, or reduce poverty. Merit programs are also likely to substantially increase racial disparities in social and economic conditions since much higher percentages of white than black high school graduates receive the scholarship.

The Pittsburgh Promise would be much more likely to increase college enrollment and completion rates, stop enrollment decline, and reduce poverty and racial disparities in the city if the maximum award were larger (such as full tuition at public colleges and universities in the state), nearly all graduates were eligible, the application procedure were simple, and graduates had more years after high school to use the award.

Our recommendations for cities in general are:

1. A city with a universal college scholarship should make sure the program has a simple application procedure, a large award (such as full-tuition at public colleges and universities in the state), and a long time period after high school to use the award (such as ten years). A first-dollar scholarship tends to be easier to administer and more effective but is also more expensive than a middle- or last-dollar scholarship. In addition, each community with a universal scholarship should reform K-12 education and invest in comprehensive services for disadvantaged students from pre-birth through college, such as in the Harlem Children's Zone, to help poor students increase school achievement and take advantage of the scholarship.
2. A city with a merit-based college scholarship could keep its current program in order to help students who were planning to go to college anyway but should add two major programs to help low-skill students. First, the community should reform K-12 education and invest in comprehensive services for disadvantaged students from pre-birth through college, such as in the Harlem Children's Zone. Second, the community should create a college scholarship program for the high school graduates who are not eligible for the merit-aid program. To be most effective and efficient, this program should have the characteristics of a universal program (as described above).
3. A city with no college scholarship program for high school graduates should first improve education for disadvantaged kids by reforming K-12 education and providing comprehensive services for disadvantaged students from pre-birth through college, such as in the Harlem Children's Zone. Second, the community should create a college scholarship program similar to that of the Kalamazoo Promise, which is a full-tuition, first-dollar college scholarship with a simple application procedure, ten years to use the award, and use only at public colleges and universities in the state.
4. Cities should not hesitate to provide a college scholarship to high school graduates with low grades. The majority of these graduates (including low-skill black grads) already enroll in college due to open admissions policies. Providing college financial aid and academic support and allowing many years to complete college can greatly increase the number of high school graduates who complete four-year colleges.

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