Do Merit Scholarships Promote College Access? Evidence From Two States

IHELG Monograph

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IHELG
Do Merit Scholarships Promote College Access?  
Evidence From Two States

Introduction

Publicly-funded scholarships in the United States historically have been awarded based on the financial need of the student and his or her family, and with the goal of increasing access to college. Beginning with passage of the Higher Education Act of 1965, and in particular, establishment of Basic Educational Opportunity Grants in the 1972 Amendments, federally-funded student aid has been used in order to help achieve equality of postsecondary educational opportunity (Mumper, 1996). The State Student Incentive Grant program, also part of Title IV student aid programs, encouraged the development of state-funded scholarships. These state programs historically also used financial need as the primary criterion for awarding grants, and have grown to the extent that they now award almost $1 in aid for every $2 awarded in the federal Pell Grant program.

Since the 1980s, however, the use of financial need as the basis for awarding scholarships by the states has been eroding. Between 1982 and 2000 spending on need-based scholarships for undergraduates by the states increased 7.4 percent annually, while spending on merit programs increased at a 13.6 percent annual rate. The proportion of state grants awarded based on merit has risen from 9 percent to 22 percent during this period (Heller, in press, 2002; National Association of State Student Grant & Aid Programs, 2001).
As of early 2001, 13 states had implemented broad-based merit scholarship program. These states planned to distribute a combined $709 million in merit awards during the 2000-2001 academic year, more than twice the $325 million provided in need-based aid by those states in 1998-99 (Selingo, 2001). The most well known state merit scholarship program is the Helping Outstanding Pupils Educationally (HOPE) program in Georgia. Begun in 1993, it is now the largest state-run merit scholarship program in the country, awarding $189 million in the 1998/1999 academic year (Heller, in press, 2002). The criterion used for the awarding of HOPE scholarships is the attainment of a B average (3.0 on a 4.0 scale) in a selection of high school core curriculum subjects (Mumper, 1999).

Following the creation of the Georgia HOPE program, other states initiated broad-based merit scholarship programs. In 1997, the Florida legislature created the Bright Futures Scholarship program. Like Georgia, Florida had existing merit scholarship programs before the development of Bright Futures, and in fact, disbursed the largest amount of merit aid of any of the states before the development of HOPE in Georgia. Bright Futures consolidated Florida’s existing merit programs into a single program, and lowered the academic standard that needed to be met to win an award.

As with HOPE, Bright Futures is funded from state lottery revenues, has no income eligibility cap, and awards scholarship for up to four years of undergraduate education. Since its creation, it has become the nation’s second largest state-run merit program. The program has three types of awards, two for use at one of the state’s degree-granting institutions (public and private), and one for students
attending vocational/technical postsecondary education. A summary of the awards and eligibility requirements is shown in Table 1.

Table 1
Florida Bright Futures Scholarship Award Amounts and Eligibility Criteria

<table>
<thead>
<tr>
<th></th>
<th>Academic Scholars</th>
<th>Merit Scholars</th>
<th>Gold Seal Vocational</th>
</tr>
</thead>
<tbody>
<tr>
<td>Award amount</td>
<td>100% of tuition and fees plus $600</td>
<td>75% of tuition and fees</td>
<td>75% of tuition and fees</td>
</tr>
<tr>
<td>(public institutions)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Award amount</td>
<td>100% of tuition at comparable public</td>
<td>75% of tuition at comparable public</td>
<td>75% of tuition at comparable public</td>
</tr>
<tr>
<td>(private institutions)</td>
<td>institution</td>
<td>institution</td>
<td>institution</td>
</tr>
<tr>
<td>High school GPA</td>
<td>3.5 for college curriculum (15 courses)</td>
<td>3.0 for college curriculum (15</td>
<td>3.0 in college courses and 3.5 in</td>
</tr>
<tr>
<td></td>
<td></td>
<td>courses)</td>
<td>vocational courses</td>
</tr>
<tr>
<td>Minimum test score</td>
<td>1270 SAT/28 ACT</td>
<td>970 SAT/20 ACT</td>
<td>Varies, depending on the test taken</td>
</tr>
<tr>
<td>Other requirements</td>
<td>75 hours of community service in high</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>school</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Postsecondary GPA</td>
<td>3.0</td>
<td>2.75</td>
<td>2.75</td>
</tr>
<tr>
<td>(for renewal)</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Note: Alternative eligibility criteria exist for home-schooled students and GED recipients. All awards can be renewed for up to seven years or until a degree is earned, or a certain number of credit hours is attained. Awards can be used only at postsecondary institutions in the state of Florida.

Source: Postsecondary Education Planning Commission (1999)

In its initial year of operation in 1997-1998, the Bright Futures program awarded $69.6 million to 43,244 students, or an average award of $1,609 per student (Postsecondary Education Planning Commission, 1999). In its second year, the program expanded to award $93.3 million to 56,281 students, with approximately 57 percent of the dollars going to existing postsecondary students renewing their scholarships, and the remainder awarded to incoming students (Sue Jones, Florida Department of Education, personal communication, January 12, 2000). In 1999-2000,
$131.5 million was distributed to over 70,000 students (Bureau of Student Financial Assistance, 2000).

The state of Michigan chose to use a portion of its tobacco lawsuit settlement funds for the Michigan Merit Award Scholarship Program. The stated goal of the legislation creating the program was "to increase access to postsecondary education and reward Michigan high school graduates who have demonstrated academic achievement" ("Michigan merit award scholarship act," 1999, p. 2). The program provides one-time grants of $2,500 to students attending in-state public institutions, and $1,000 to those attending private or out-of-state institutions, with no income eligibility requirements. In its first year in operation in the 2000-2001 academic year, approximately 37,000, or 30 percent of all graduating seniors, qualified for a scholarship (Michigan Department of Treasury, 2000).

The Michigan program awards scholarships to students who score at Level 1 (exceeds Michigan standards) or Level 2 (meets Michigan standards) on all four portions of the Michigan Educational Assessment Program High School Tests (MEAP HST). The MEAP tests are a criterion-referenced test designed to measure knowledge of the state's designated curricular frameworks. The tests are given in four subject areas: mathematics, reading, science, and writing. Although the vast majority of scholarship recipients qualify through the MEAP test, the legislation also provides an alternative path for qualifying for the scholarships. To qualify under this alternative path, students must: 1) take all four subject area tests; 2) receive a score of Level 1 or 2 on at least two of the tests, and 3) score in the top 25 percent
nationally on the SAT 1, ACT, or ACT WorkKeys tests.\textsuperscript{1} All students in Michigan, regardless of family income or other characteristics, are eligible for the awards.\textsuperscript{2}

Little research has been conducted on the distributional effects of state merit scholarship programs. This study attempts to fill this gap by using data from the Michigan and Florida programs to examine how students' socioeconomic characteristics are related to eligibility and receipt of merit-based awards in these two states, and how different criteria used for awarding the scholarships affect distributional equity. This analysis will provide a comparison of whether these merit scholarship programs are likely to reach a population similar to that of need-based scholarship programs.

This study addresses three primary research questions:

- How does awarding of the Michigan Merit and Florida Bright Futures scholarships differ for individuals with varying socioeconomic characteristics?
- What relationship exists between the different criteria used to determine eligibility for the scholarships in the two states, and the racial and socioeconomic distribution of awards?

\textsuperscript{1} For the first cohort of students, the qualifying SAT combined score was 1170 and the ACT composite score was 24. The WorkKeys test assesses individuals' knowledge of workplace skills, and is often taken by students enrolled in vocational programs in secondary school. It tests skills in the areas of applied mathematics, applied technology, listening, locating information, observation, reading for information, teamwork, and writing. Students who qualify for a scholarship via the WorkKeys test can use the funds for postsecondary vocational or technical training only.

\textsuperscript{2} The full $2,500 scholarship is awarded for students attending college or some other form of postsecondary training in Michigan. Students attending out-of-state institutions are eligible for a $1,000 award. In addition to these awards, students achieving certain scores on the 7th and 8th grade MEAP tests are eligible for up to an additional $500 in scholarship funding.
What relationship exists between the distribution of awards and the college attendance patterns of students from individual high schools in the two states?

Theoretical Frameworks

The decisions that high school graduates make about whether or not to attend college (and where to attend) are grounded in human capital theory of microeconomics. Gary Becker (1993) and Theodore Schultz (1963) are among the most prominent authors of this explanation for why individuals acquire education and training. They theorize that individuals seek to increase their amount of human capital in order to earn higher returns in labor markets. Individuals do this primarily through investing in education, seeking to acquire skills or credentials that increase their productivity and lead to greater labor market rewards. The theory of human capital is akin to the theory of production among firms; just as firms invest in capital (financial and physical) in order to maximize output, individuals invest in human capital in order to maximize their output.

Since the potential rate of return on an investment depends on its initial price, the decision to attend college is also constrained by price. Thus, price theory in microeconomics helps explain the role of financial aid in college access and choice. The aid acts to lower the net price paid by the student, increasing the likelihood she will be able and willing to invest in postsecondary education. Research on the college choice process (examples of which are described below) shows that financial
aid is particularly effective at increasing the probability that a student from a lower-income family will enroll in college, and much less effective for students from higher-income families.

There is a long and rich history of research studies that have examined the effectiveness of financial aid on influencing the decisions that potential students make about enrolling in college. This research is often referred to as "student price responsiveness," "student demand," or "student price elasticity" studies. Reviews of much of this research have been published over the last three decades by Heller (1997), Jackson and Weathersby (1975), and Leslie and Brinkman (1988).

While these studies have been conducted at different times, utilizing a broad range of research methodologies and different samples of students, they have consistently reached two conclusions. First, different types of financial aid awards have varying impacts on college enrollment behavior: grants tend to have a stronger influence on college enrollment than do student loans or work study awards of the same magnitude. Second, students with different characteristics have varying enrollment reactions to changes in the amount of financial aid offered: African American, Hispanic, and low income students tend to be more price responsive (i.e., are more likely to enroll in college, or change the type of institution in which they enroll) than are White and middle- and upper-income students.

Two examples illustrate these effects. St. John (1990) analyzed the High School and Beyond sophomore cohort to examine the effects of tuition and financial aid increases on the college enrollment decisions of graduating high school students. He found that for low-income students, the enrollment response to a $100
increase in grant aid was over twice the response to a $100 decrease in the tuition price. In addition, the enrollment response of these students was over twice as large as the grant and tuition sensitivity of higher-income students. Heller (1999a) examined the public higher education enrollment response of different racial groups to increases in state grant spending. He found that the enrollment response of African Americans to increased state grant spending was approximately 3.7 times as large as that of White students, and that of Hispanics was 2.8 times as large as Whites.

A second body of research that is relevant to the research questions in this study examines the relationship between students' socioeconomic characteristics and the results of standardized tests. Studies of high school students that have examined student characteristics such as race, ethnicity, or socioeconomic status (SES) have consistently found strong relationships between those constructs and performance on standardized tests. Significant achievement gaps between White and Asian American students on one hand, and Hispanic and African American students on the other, and between high SES students and low SES students, have been identified. These gaps persist regardless of what specific learning outcome is measured, or whether the analysis is conducted at the level of individual students within schools or at the level of the schools themselves.

At the national level, the standard reports come from the National Assessment of Educational Progress (NAEP), which has been administered by the U.S. Department of Education for students in grades 4, 8, and 12 since 1969. Comparing student racial subgroups on the reading component of the 1998 NAEP,
for example, Donahue, Voekl, Campbell, and Mazzeo (1999) reported that the average reading scores for White students was higher than that for African American, Hispanic, and Native American students at all grade levels tested. Similar results have been found for the other components of the test, including mathematics, science, and writing (Greenwald, Persky, Campbell, & Mazzeo, 1999; O'Sullivan, Reese, & Mazzeo, 1997; Reese, Miller, Mazzeo, & Dossey, 1997). A number of researchers have synthesized data from various Education Department reports to draw further conclusions. Lee (1998) for example, organized achievement gaps from the NAEP mathematics test into four dimensions, pairing the within- and between-school levels with each of the categories of race and SES. His results, focusing on state policy correlates of gaps from the 1992 NAEP, indicate that while the existence of the gaps is universal, their size and the significance of the independent variables varies among different states. Sedlacek (1995) used hierarchical linear modeling to simultaneously weigh both within-and between-school effects, finding similar racial linkages to achievement across subject areas, and when controlling for gender, SES, and course-taking patterns. Bruschi and Anderson (1994), looking specifically at science achievement on the 1990 NAEP, also confirmed large differences between White, Hispanic, and African American groups across science content areas.

The linkages between academic achievement and SES have been less well documented, largely because SES is more difficult to measure than race. One measure of poverty, student eligibility for free or reduced lunches through the National School Lunch Program, has been collected as part of the NAEP dataset only
since 1996. Donahue et al. (1999) found that students who were eligible for the free and reduced-price lunch program had lower average reading scores than students who were not eligible for the program, at all grade levels tested. Of course, race and SES are highly correlated, both within and among schools (Orfield, 1994), urging caution on researchers who attempt to deal with both constructs. Stevens and Grymes (1993) emphasize that student subgroup achievement differences cannot be attributed to the subgroup identification itself, but rather that a complex array of factors such as opportunities to learn and socio-cultural environment combine to affect students' academic performance. One study that has attempted to parse the separate effects of race and SES is a meta-analysis of seven previous studies, all of which used nationally-representative samples of high school students from 1965 to 1996 (Hedges & Nowell, 1999). This study found that about a third of the African American-White racial gap in test scores is attributable to SES differences between the races. The authors also show that, while the gap is smaller at the bottom 5 percent and 10 percent of the test-score distribution (indicated by over-representation of African Americans), the top of the distribution shows a much larger gap: a hugely disproportionate underrepresentation of African Americans relative to Whites. Unlike economic status at the student level, however, school-level resources have generally not been found to correlate with student performance. Students who attend schools with lower per-pupil spending do not perform worse on tests compared to those in high-spending schools, when controlling for students' socioeconomic status and other variables (Gaudet, 1994; Sedlacek, 1995).
Methodology

The Michigan student-level data were obtained from the Michigan Merit Award Board (National Computer Systems, 1999). Additional data were acquired from the Michigan School Report (MSR), which includes data on enrollments, graduates, and college participation rates of public high schools in the state (Michigan Department of Education, 1999). The Florida scholarship data were provided to the researchers by the Florida Postsecondary Education Planning Commission. Both the Michigan and Florida Departments of Education report data on the number of graduates of public high schools each year and, among those graduates, how many enroll in postsecondary education the subsequent fall (Florida Department of Education, 2001; Michigan Department of Education, 1999). Additional high school-level data from both states were obtained from the Common Core of Data files from the National Center for Education Statistics (National Center for Education Statistics, 2001).

The research questions are answered using bivariate analysis techniques. We compare the distribution of students who qualified for the scholarship from each demographic category with the overall distribution of students in the state. The distribution of students with different background characteristics among scholarship qualifiers indicates which students in the state are benefiting most from the scholarship program. Over- or under-representation of scholarship qualifiers relative to those attempting to qualify indicates an imbalance in the awarding of scholarships.
Results

Table 2 presents the scholarship data for students from each racial group in Florida. While the overall scholarship rate was 26 percent, the rates for each group ranged from a low of under 9 percent of all African American high school graduates to a high of 43 percent of Asian/Pacific Islander graduates. While White students represented 61 percent of all high school graduates in the state, they were 77 percent of the scholarship recipients. Differences were also seen in the type of Bright Futures scholarship for which students qualified (see Table 1). While 31 percent of White and 38 percent of Asian Americans qualified for the Florida Academic Scholar award, the highest award level, only 12 percent and 23 percent of African Americans and Hispanics, respectively, qualified for that same award.

The Florida data represent students who were first-year college students and used their scholarship in the 1998-1999 school year. Because the scholarships provide such a large percentage of tuition costs, and the students are clearly academically talented, we believe that these data are a good proxy of the overall rates at which students from different groups and in different high schools qualified for the scholarships. Because the Bright Futures program awards scholarships only to students attending college in Florida (public or private institutions), the data include only those students. Thus, there may be some bias in the measures presented here if there are differentials in the rate at which students from different racial groups or high schools migrate out of state to attend college.
TABLE 2  
Scholarship Rates for Florida 1998 Public High School Graduates

<table>
<thead>
<tr>
<th>Race</th>
<th>High School Graduates</th>
<th>% of Total Graduates</th>
<th># of Award Recipients</th>
<th>Scholarship Rate</th>
<th>% of All Recipients</th>
</tr>
</thead>
<tbody>
<tr>
<td>Native American</td>
<td>196</td>
<td>0.2%</td>
<td>55</td>
<td>28.1%</td>
<td>0.2%</td>
</tr>
<tr>
<td>Asian/Pacific Islander</td>
<td>2,695</td>
<td>2.8%</td>
<td>1,145</td>
<td>42.5%</td>
<td>4.5%</td>
</tr>
<tr>
<td>African American</td>
<td>21,195</td>
<td>21.7%</td>
<td>1,893</td>
<td>8.9%</td>
<td>7.5%</td>
</tr>
<tr>
<td>Hispanic</td>
<td>13,818</td>
<td>14.2%</td>
<td>2,527</td>
<td>18.3%</td>
<td>10.0%</td>
</tr>
<tr>
<td>White</td>
<td>59,637</td>
<td>61.1%</td>
<td>19,331</td>
<td>32.4%</td>
<td>76.8%</td>
</tr>
<tr>
<td>Multiracial*</td>
<td>–</td>
<td>–</td>
<td>67</td>
<td>–</td>
<td>0.3%</td>
</tr>
<tr>
<td>Other*</td>
<td>–</td>
<td>–</td>
<td>157</td>
<td>–</td>
<td>0.6%</td>
</tr>
<tr>
<td>Total</td>
<td>97,541</td>
<td>100.0%</td>
<td>25,175</td>
<td>25.8%</td>
<td>100.0%</td>
</tr>
</tbody>
</table>

* While the Postsecondary Education Planning Commission allows students to indicate their race as “other” or “multiracial,” the state Department of Education does not use these categories. Students with missing race data are excluded from the calculations.

Table 3 presents similar information for the Michigan students. The scholarship qualification rates ranged from a low of 8 percent of African Americans to a high of 52 percent of Asian/Pacific Islander students. Of those Michigan students eligible to receive the awards, over 93 percent qualified for the scholarships by scoring at the required levels on all four MEAP tests. Approximately 6.5 percent qualified by passing two of the MEAP tests and scoring in the top 25 percent nationally on the ACT, and 0.15 percent qualified via the MEAP and SAT. No students qualified via the MEAP and WorkKeys test.

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4 Because the MEAP tests are given in 11th grade, the 11th grade enrollment in the 1998-99 school year is used as the basis for calculating the qualification rates for the Michigan students.
TABLE 3
Scholarship Qualification Rates for Michigan 1999 11th Graders in Public Schools

<table>
<thead>
<tr>
<th>Race</th>
<th>Grade 11 Enrollment</th>
<th>% of Total</th>
<th># of Award Recipients</th>
<th>Qualification Rate</th>
<th>% of All Recipients</th>
</tr>
</thead>
<tbody>
<tr>
<td>Native American</td>
<td>1,191</td>
<td>1.1%</td>
<td>219</td>
<td>18.4%</td>
<td>0.6%</td>
</tr>
<tr>
<td>Asian/Pacific Islander</td>
<td>1,855</td>
<td>1.6%</td>
<td>964</td>
<td>52.0</td>
<td>2.7</td>
</tr>
<tr>
<td>African American</td>
<td>15,360</td>
<td>13.6%</td>
<td>1,217</td>
<td>7.9</td>
<td>3.5</td>
</tr>
<tr>
<td>Hispanic</td>
<td>2,445</td>
<td>2.2%</td>
<td>601</td>
<td>24.6</td>
<td>1.7</td>
</tr>
<tr>
<td>White</td>
<td>90,980</td>
<td>80.4%</td>
<td>30,729</td>
<td>33.8</td>
<td>87.6</td>
</tr>
<tr>
<td>Multiracial*</td>
<td>1,294</td>
<td>1.1%</td>
<td>599</td>
<td>46.3</td>
<td>1.7</td>
</tr>
<tr>
<td>Other*</td>
<td></td>
<td>0.0%</td>
<td>745</td>
<td>–</td>
<td>2.1</td>
</tr>
<tr>
<td>Total</td>
<td>113,125</td>
<td>100.0%</td>
<td>35,074</td>
<td>31.0</td>
<td>100.0%</td>
</tr>
</tbody>
</table>

* While the MEAP tests allow students to indicate their race as “other,” the state Department of Education does not use this category for enrollment reports. Students with missing race data are excluded from the calculations.

Figure 1 compares the scholarship rates of racial groups in the two states, showing the large disparities in the rates for White and Asian American students on the one hand, and African American and Hispanic students on the other.
Figure 1
Scholarship Rates by Race

To examine the relationship between the students’ socioeconomic characteristics and scholarship awards, we used data on the percentage of students in each school who qualified for free or reduced-price lunch under the National School Lunch Program (herein designated as “free lunch”). Since eligibility for free lunch is determined by a federal formula of family size and income, this percentage is an indicator of the income levels of families in the school’s district. We divided the public high schools in each state into quintiles based on the percentage of students in each school who qualified for free lunch. The scholarship rates of each group are shown in Table 4.
Data on the number of students who continued on to postsecondary education after graduating from high school were used to estimate the postsecondary attendance rate in each public high school for the academic year before implementation of the merit scholarship program (1995-96 in Florida, averages of the 1996-97 through 1998-99 rates in Michigan).

To further explore this relationship, we divided the high schools into quintiles, based on their college attendance rates before implementation of the merit scholarship programs. We then compared the scholarship rates of the schools in each group. Table 5 presents the scholarship rates for the high schools in each state, arranged by the high school's college participation quintile. Schools with the highest proportion of students attending college (before implementation of the

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5 The Michigan data are based on high schools' report of their graduates status in the fall following graduation from high school. Because the high schools do not report the data every year, we took the average rate from a three-year period. The Florida data are based on student-level enrollment
state’s merit scholarship program) had the highest percentage of students receiving a scholarship.

**TABLE 5**
Scholarship Rates by High School College Participation Rate Quintile

<table>
<thead>
<tr>
<th>Quintile</th>
<th>Florida</th>
<th>Michigan</th>
</tr>
</thead>
<tbody>
<tr>
<td>1st quintile (highest college participation rate)</td>
<td>26.1%</td>
<td>44.0%</td>
</tr>
<tr>
<td>2nd quintile</td>
<td>20.4</td>
<td>37.5</td>
</tr>
<tr>
<td>3rd quintile</td>
<td>17.4</td>
<td>39.1</td>
</tr>
<tr>
<td>4th quintile</td>
<td>9.6</td>
<td>34.7</td>
</tr>
<tr>
<td>5th quintile (lowest college participation rate)</td>
<td>5.2</td>
<td>25.4</td>
</tr>
<tr>
<td>Correlation of school free lunch percentage and school scholarship rate</td>
<td>0.58 (p&lt;.001)</td>
<td>0.34 (p&lt;.001)</td>
</tr>
</tbody>
</table>

*Note: The analyses were weighted by the number of graduating seniors in each high school.*

**Discussion**

The data presented here demonstrate that a very strong relationship exists between socioeconomic characteristics and the rate at which students qualify for merit scholarships in Florida and Michigan. In both states, African Americans and Hispanics qualify for the scholarships at rates well below those of White and Asian American students. There is also a strong relationship between the income levels in the communities in which students attend school, as measured by the proportion of students who qualify for free lunch, and the probability that a student would earn a scholarship.

records in public and private universities in Florida, and thus exclude students attending college outside of the state.
The groups of students least likely to be awarded these scholarships are the populations who have traditionally been under-represented in higher education. Data on college participation rates by race indicate a large disparity between White and Asian American students, who have higher college-going rates, and African Americans and Hispanics, who attend college at lower rates (Heller, 1999b; Koretz, 1990). Other studies have demonstrated the gap in college participation by income level (Advisory Committee on Student Financial Assistance, 2001; Ellwood & Kane, 1999; Mortenson, 2000).

There do not appear to be large differences in the criteria used for awarding the scholarships in the two states, and the resulting distribution of the awards. Overall, a higher percentage of students in Michigan than in Florida were awarded scholarships, but the distributional effects within the two states were very similar. The difference between the use of a statewide criterion-referenced test (in Michigan) and the use of high school grades and national standardized tests (in Florida) was negligible.

Our final research question asked about the relationship between the distribution of scholarship awards and the college attendance patterns of high schools in the state. This question addresses the core issue of whether these programs are likely to have much impact on college access in each state. Because the greater proportion of the awards have been distributed to students in high schools with higher college-participation rates (before implementation of the merit scholarship programs), we conclude that the impact is likely to be much less than
those scholarship programs that target their awards to students based on financial need.

A few sample high schools can help to illustrate this conclusion. Table 5 shows the college participation rates for Michigan high schools (before implementation of the Michigan Merit Award Scholarship Program), and the scholarship award rates for those schools. For example, Grosse Ile High School, located in a wealthy suburb of Detroit, sent 94 percent of its students on to some form of postsecondary education before the scholarship program was implemented. Thus, the scholarship program could have induced at most the remaining 6 percent of the graduates in that school to attend college.\textsuperscript{6} However, 64 percent of the students in this school qualified for scholarships, indicating that at least 58 percent of the scholarships went to students who would likely have been college-bound anyway.\textsuperscript{7}

\textsuperscript{6} This assumes, of course, no large behavioral changes in the college-going patterns of the students in this school due to other factors in the first year the program was implemented.

\textsuperscript{7} It should be noted here the possibility that the scholarships could have had some impact on college choice among these students. For example, the $2,500 award may have induced a student who otherwise would have enrolled in a community college to enroll instead in a 4-year institution. But increasing college choice was not a legislated goal of the program; increasing college access was.
TABLE 5
College Participation and Scholarship Rates in Michigan Public High Schools

<table>
<thead>
<tr>
<th>High School</th>
<th>College Participation Rate</th>
<th>Scholarship Rate</th>
</tr>
</thead>
<tbody>
<tr>
<td>Statewide average</td>
<td>73%</td>
<td>37%</td>
</tr>
<tr>
<td>Grosse Ile HS</td>
<td>94</td>
<td>64</td>
</tr>
<tr>
<td>Farmington HS</td>
<td>93</td>
<td>69</td>
</tr>
<tr>
<td>Community HS (Ann Arbor)</td>
<td>93</td>
<td>60</td>
</tr>
<tr>
<td>Calumet HS</td>
<td>95</td>
<td>80</td>
</tr>
<tr>
<td>River Rouge HS</td>
<td>37</td>
<td>8</td>
</tr>
<tr>
<td>Hamtramck HS</td>
<td>30</td>
<td>14</td>
</tr>
<tr>
<td>Roseville HS</td>
<td>35</td>
<td>20</td>
</tr>
<tr>
<td>Madison HS</td>
<td>44</td>
<td>14</td>
</tr>
</tbody>
</table>

Note: The statewide averages were weighted by the number of graduating seniors in each high school. Each high school shown had a graduating class of at least 90 students.

In contrast, Hamtramck and River Rouge high schools are located in poor communities near Detroit. Less than 40 percent of the students in these schools attended college before the implementation of the scholarship program. Yet less than 15 percent in each qualified for the scholarships.
Similar patterns can be seen among Florida high schools in Table 6. Unlike the Michigan program, the Florida Bright Futures program does not have as one of its legislated goals increasing college access; rewarding academic achievement is the sole goal ("Florida Bright Futures Scholarship Program," 1999). Yet like the Michigan program, it is quite apparent that many of the scholarships are likely being awarded to students attending college anyway.

**TABLE 6**

<table>
<thead>
<tr>
<th>High School</th>
<th>College Participation Rate</th>
<th>Scholarship Rate</th>
</tr>
</thead>
<tbody>
<tr>
<td>Statewide average</td>
<td>50%</td>
<td>21%</td>
</tr>
<tr>
<td>Stanton Prep (Jacksonville)</td>
<td>74</td>
<td>58</td>
</tr>
<tr>
<td>Mast Academy (Key Biscayne)</td>
<td>73</td>
<td>42</td>
</tr>
<tr>
<td>Lincoln Park Academy (Pt. Pierce)</td>
<td>70</td>
<td>43</td>
</tr>
<tr>
<td>Seminole HS</td>
<td>70</td>
<td>41</td>
</tr>
<tr>
<td>Hollins HS (St. Petersburg)</td>
<td>39</td>
<td>9</td>
</tr>
<tr>
<td>Edison HS (Miami)</td>
<td>39</td>
<td>1</td>
</tr>
<tr>
<td>Shanks HS (Quincy)</td>
<td>36</td>
<td>7</td>
</tr>
<tr>
<td>Andrew Jackson HS (Jacksonville)</td>
<td>34</td>
<td>7</td>
</tr>
</tbody>
</table>

*Note: The statewide averages were weighted by the number of graduating seniors in each high school. Each high school shown had a graduating class of at least 100 students.*

Merit scholarship programs like those in Michigan and Florida have proven to be quite popular in recent years (Heller, in press, 2002). As these programs crowd out need-based scholarship programs, which traditionally have focused their awards on students who require financial assistance to attend college, it is likely that college access among lower income students will suffer. Merit scholarship programs are
likely to exacerbate, rather than help remedy, college enrollment gaps in the United States.

While merit scholarship programs have broad political support and possess wide popular appeal, policymakers need to be aware of the distortional impact of such programs and the concomitant negative implications for the expansion of equality of educational opportunity. States should consider the criteria that are used in the awarding of merit scholarships and create eligibility standards that promote equitable access to an increasingly large share of student financial aid expenditures.
References


Florida Department of Education. (2001). *Florida Education & Training Placement Information Program 1995-96 high school graduates by district,*


*Postsecondary Education OPPORTUNITY, 94*, 1-10.


