Through October 2003, more than $2 billion in program funds have been disbursed to over 730,000 students.
Initiated in 1993 and funded by a state lottery, Georgia’s HOPE (“Helping Outstanding Pupils Educationally”) program provides two types of college financial aid—the merit-based HOPE Scholarship and the HOPE Grant. Through October 2003, more than $2 billion in program funds have been disbursed to over 730,000 students. National attention has been focused on the scholarship, and at least 15 other states have implemented or proposed merit-aid programs using the HOPE model. States have typically justified their actions in three ways: (1) to increase college enrollments in the state; (2) to stem the “brain drain”; and (3) to promote academic achievement.

To qualify for the HOPE Scholarship, students must graduate with a “B” average from a Georgia high school. There is no means test. For HOPE Scholars in degree-granting public institutions, the program covers full tuition, mandatory fees, and a book allowance; the value of the award is about $4,000 at the state’s flagship institutions for the 2003-2004 academic year. Scholarship recipients attending in-state, private, degree-granting institutions receive a standard award of $3,000 per academic year toward tuition. Once in college, students must maintain a “B” average with a minimum number of credits to retain the award. In contrast, eligibility for the HOPE Grant does not depend on high school GPA, and its coverage is limited to tuition and fees associated with nondegree programs offered (mostly) by technical schools.

Table 1 provides a breakdown of program disbursements in terms of the number of awards and dollars of aid from 1993 to 2002. Degree-granting institutions accounted for 55 percent of all awards and 82 percent of total aid during this period, with four-year colleges and universities representing, respectively, 44 and 60 percent of these totals by themselves. Thus, the lion’s share of program resources is devoted to the merit-based scholarship—in particular, to high school graduates matriculating at four-year schools. The other 45 percent of awards flowed to technical schools in the form of grants, but these institutions receive a relatively small proportion of total aid due to their low tuition.

Until the eligibility criteria for the scholarship were stiffened in 2000, the share of HOPE funds allocated to the scholarship component of the program grew steadily. Between 1993 and 1999, the number of HOPE-eligible high school graduates rose more than 50 percent, from 29,840 to 45,149, and the proportion of high school graduates satisfying the merit requirements increased from 48 percent to almost 65 percent. Even after the rules change, the fraction of high school graduates qualifying for the scholarship has approached 60 percent.

Program Effects on Georgia College Enrollments

In a 2003 article (Cornwell, Mustard, and Sridhar, “The Enrollment Effects of Merit-Based Financial Aid: Evidence from Georgia’s HOPE Scholarship”), we examine the HOPE program’s effects on enrollments in Georgia colleges. For the 1988-1997 time period (which covers five years before and after the program’s introduction), we compare enrollment rates in Georgia with those in the other member states of the Southern Regional Education Board (SREB), using data from the National Center for Education Statistics (NCES). Our findings, which take into account differences in state-level personal incomes and wages, are summarized in Table 2. The first two columns of the table present estimated enrollment rate changes due to HOPE for all schools and by institution type, with the enrollment rate defined as the ratio of first-time freshmen enrollees to recent high school graduates. The second two columns report the results of separate analyses for blacks and whites at four-year schools (where the overall program effect is concentrated), but in this case the denominator in the enrollment ratio is the number of 18 and 19-year-olds because high school graduate data are not available by race.

Program Effects by Institution Type

First, we find that HOPE raised the first-time-freshmen enrollment rate in Georgia about

Table 1. Numbers of HOPE Awards and Amount of Aid by Institution Type, 1993-2002

<table>
<thead>
<tr>
<th>Institution Type</th>
<th>Number of Awards (Percent of Total)</th>
<th>Aid in Millions of Dollars (Percent of Total)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Four-Year Schools</td>
<td>526,033 (21.9)</td>
<td>$942.00 (52.7)</td>
</tr>
<tr>
<td>Public</td>
<td>389,452 (16.3)</td>
<td>$840.09 (46.0)</td>
</tr>
<tr>
<td>Private</td>
<td>136,581 (5.9)</td>
<td>$101.91 (5.4)</td>
</tr>
<tr>
<td>Two-Year Schools</td>
<td>144,061 (6.2)</td>
<td>$279.43 (15.2)</td>
</tr>
<tr>
<td>Public</td>
<td>109,362 (4.6)</td>
<td>$237.48 (13.2)</td>
</tr>
<tr>
<td>Private</td>
<td>34,699 (1.5)</td>
<td>$41.95 (2.4)</td>
</tr>
<tr>
<td>Technical Schools</td>
<td>547,078 (23.0)</td>
<td>$342.86 (19.0)</td>
</tr>
<tr>
<td>HOPE Program</td>
<td>1,217,172 (51.9)</td>
<td>$1,564.30 (84.9)</td>
</tr>
</tbody>
</table>

Note: * Of the 34 HOPE-eligible technical schools, 13 offer associate’s degrees and therefore can award both the scholarship and grant. ** Private two-year and four-year schools were eligible to participate only from 1996. A few public four-year and two-year institutions also offer technical certificates and diplomas.

The lion’s share of program resources is devoted to the merit-based scholarship—in particular, to high school graduates matriculating at four-year schools.

continued on page 22
9 percent relative to the rest of the SREB between 1988 and 1997. Second, the data from the different types of postsecondary institutions show that virtually all of the increase was realized in four-year public and private schools, with the enrollment rate rising 12 percent in the former and 20 percent in the latter. Enrollment rates in two-year schools showed no net change as individuals who would have otherwise entered the labor market filled the seats vacated by students pursuing four-year degrees. However, some of the costs of new two-year-school enrollees were likely financed by the HOPE Grant, which applies exclusively to nondegree programs at two-year and technical schools and has no merit requirements. Had it not been for the grant, the enrollment rates in two-year institutions would likely have decreased.

In terms of enrolled students, our results suggest that the HOPE program increased the total number of first-time freshmen in Georgia colleges by roughly 4,100 per year between 1993 and 1997. This represents about 12 percent of high school graduates who qualified for the scholarship during these five years and 21 percent of those who took the award. However, the overall program response involves enrollees at two-year schools, who are more likely recipients of the grant, and there were at least as many of these individuals as HOPE Scholars over the period. Thus, the overall, program-induced enrollment increase amounts to roughly 10 percent of all first-year program beneficiaries.

### Program Effects by Institution Type and Race

The overall pattern depicted in the first two columns of Table 2 is generally replicated when we separately analyze enrollments by race.

#### Table 2. Estimated Changes in the Enrollment Rate in Georgia Colleges Due to HOPE, 1988-1997

<table>
<thead>
<tr>
<th>Institution Type</th>
<th>Change in the Enrollment Rate&lt;sup&gt;a&lt;/sup&gt;</th>
<th>By Institution Type and Race</th>
<th>Change in the Enrollment Rate&lt;sup&gt;b&lt;/sup&gt;</th>
</tr>
</thead>
<tbody>
<tr>
<td>All Institutions</td>
<td>9%</td>
<td>Public four-year</td>
<td>9%</td>
</tr>
<tr>
<td>Public, four-year</td>
<td>12%</td>
<td>All Races</td>
<td>9%</td>
</tr>
<tr>
<td>Private, four-year</td>
<td>20%</td>
<td>White</td>
<td>4%</td>
</tr>
<tr>
<td>Public, two-year</td>
<td>-</td>
<td>Black</td>
<td>27%</td>
</tr>
<tr>
<td>Public, two-year + Technical</td>
<td>-</td>
<td>Private four-year</td>
<td>16%</td>
</tr>
<tr>
<td></td>
<td></td>
<td>All Races</td>
<td>9%</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Black</td>
<td>14%</td>
</tr>
</tbody>
</table>


Note: *The enrollment rate is defined as the ratio of first-time-freshmen enrollees to recent high school graduates. *The denominator in the enrollment rate is the number of 18- and 19-year-olds.

Enrollment rates in two-year schools showed no net change as individuals who would have otherwise entered the labor market filled the seats vacated by students pursuing four-year degrees.

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### Program Effects by Institution Type and Race

The overall pattern depicted in the first two columns of Table 2 is generally replicated when we separately analyze enrollments by race. For

![Figure 1. Percent of UGA and Georgia Tech Freshmen Who Are African American, 1990-2000](image-url)
both African Americans and whites, HOPE’s influence is largely confined to four-year schools with the greater percentage increases for African Americans in public institutions. Part of the explanation for sizeable estimated percentage increases in black enrollment rates in Georgia colleges is that African Americans had much lower enrollment rates to begin with; therefore, a relatively small jump in the fraction of black 18- and 19-year-olds enrolling in a Georgia college can account for a large percentage change. Further, Georgia is home to a number of historically black colleges and universities (HBCUs), providing an added incentive for African Americans to choose an in-state, four-year college. The data indicate a substantial policy effect for these institutions.

Further, the increases in black enrollments have generally occurred at Georgia’s less selective schools, which include the HBCUs, all but one of which is rated “less competitive” by Barron’s Guide, the fifth of the six ranking categories. There has been no corresponding rise in black enrollment rates at the state’s more selective institutions, the University of Georgia and Georgia Institute of Technology. Bugler, Henry, and Rubenstein (1999) reported that the average black fraction of first-year, in-state enrollments in all state postsecondary institutions was 18 percent over the 1988-1992 period. Between 1993 and 1998, the average share rose to 22 percent. In contrast, the black share of freshmen enrollments at the state’s most selective institutions, the University of Georgia and Georgia Tech, has fallen during the HOPE period (see Figure 1). At the University of Georgia, which has experienced the largest increase in SAT scores of entering students during the HOPE period, the percentage of blacks in the freshmen class has dropped sharply since 1995, when the income cap on scholarship eligibility was removed.

Because the SAT is one of the main criteria for admission at Georgia and Georgia Tech, and African Americans as a group score lower on the SAT, they are disadvantaged when seeking admission to these universities, which have seen their average freshman SATs rise during the HOPE period.

**Staying Home and Moving Up**

In addition to quantifying the overall and race-specific program effects, we attempt to sort out to what degree they can be attributed to HOPE’s incentive to attend an in-state college versus moving up from a two-year to a four-year school. A careful examination of the four years of student residence and migration data available from the NCES suggests that HOPE’s influence on the in-state/out-of-state margin accounts for about 75 percent of the HOPE effect on recent freshmen enrollments at four-year schools. (By “recent” freshmen, we mean those who enter college within 12 months of high school graduation.)

However, this result misses the “late matriculators,” who represent perhaps as much as two-thirds of the overall program effect. By virtue of their delayed entry, we suppose these students are generally not candidates to leave the state to attend college but are more likely to be induced to move up from a two-year to a four-year school by the scholarship.

Unfortunately, the residence and migration information is generally limited to recent freshmen, so it is not possible to infer much from the data about the movements of late matriculators. In any case, our combined recent and all-freshmen findings point to the conclusion that the scholarship’s reduction of the four-year/two-year relative price represents a substantial share of the overall HOPE effect.

**Financing HOPE**

Since the HOPE program is financed by a state lottery, the cost of the program is borne by lottery players. The literature is remarkably consistent on some basic characteristics of the typical player: male, low-income, low educated, and African American. Consequently, lotteries are a regressive form of taxation, one that places a relatively greater burden on the poor.

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**Some of the costs of new two-year-school enrollees were likely financed by the HOPE Grant, which applies exclusively to nondegree programs at two-year and technical schools and has no merit requirements.**

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**Table 3. Lottery Sales by Income Quintile, 2001**

<table>
<thead>
<tr>
<th>Variable</th>
<th>Quintile 1</th>
<th>Quintile 2</th>
<th>Quintile 3</th>
<th>Quintile 4</th>
<th>Quintile 5</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lottery Sales Per Capita</td>
<td>$330</td>
<td>$304</td>
<td>$378</td>
<td>$326</td>
<td>$283</td>
</tr>
<tr>
<td>Avg. Per Capita Income</td>
<td>$17,179</td>
<td>$19,251</td>
<td>$20,871</td>
<td>$22,702</td>
<td>$28,405</td>
</tr>
<tr>
<td>Avg. Sales as Percent of Avg. PCI</td>
<td>1.89</td>
<td>1.58</td>
<td>1.81</td>
<td>1.43</td>
<td>1.03</td>
</tr>
<tr>
<td>Number of Counties</td>
<td>32</td>
<td>32</td>
<td>31</td>
<td>32</td>
<td>32</td>
</tr>
</tbody>
</table>

Note: All income variables are in real dollars calculated using the Consumer Price Index with 1998 as the base year.
Acknowledging this, the National Gambling Impact Study Commission (1999) recommended that “states with lotteries reduce their sales dependence on low-income neighborhoods” (pp. 3-19).

Compared with the other 38 state lotteries, Georgia’s is widely recognized as one of the most successful. It is the only lottery that increased revenue in each of its first seven years, and it has the second highest per capita sales of any lottery in the nation. Sales rose steadily from just over $1 billion in fiscal year 1994 to almost $2.5 billion in the 2003 fiscal year. By 1997, per capita sales were $238 per person, trailing only those of Massachusetts (National Gambling Impact Study Commission, 1999).

In a related 2003 article (Cornwell and Mustard, “The Distributional Impacts of Lottery-Fund, Merit Scholarships: Evidence from Georgia’s HOPE Program”), we show that the typical Georgia player is very similar to his counterpart in other states. Tables 3 and 4 illustrate our main findings using the most recently available (2001) data. In Table 3, Georgia counties are divided into per capita income quintiles, and per capita lottery sales, average per capita income, and sales as a percentage of income are reported for each. Per capita sales are lowest in the highest-income counties with the average county in the top quintile of the income distribution contributing almost $50 less per person per year than the typical bottom-quintile county. In terms of the fraction of income spent on lottery tickets, the disparities are even larger: the share in the lowest-income quintile (1.89 percent of income) is about twice that of the highest-income quintile (1.03 percent).

Table 4 shows how lottery sales vary by the racial composition of a county. In this case, Georgia counties are grouped into quintiles by the fraction of their population that is African American. Counties with high concentrations of African Americans are much more likely to have high levels of lottery sales. In the least black (most white) quintile, per capita sales averaged $265.15, representing 1.2 percent of per capita income. In contrast, counties with the greatest share of African Americans had mean sales of $457.55 (almost 75 percent greater), accounting for 2.24 percent of income (twice as high).

Summary

In the first five years of the program, Georgia’s HOPE Scholarship raised the first-time freshman enrollment rate by 9 percent relative to the enrollment rates of other member states of the SREB. This gain was realized primarily at four-year institutions, a pattern that held for both whites and African Americans. For African Americans, Georgia’s HBCUs amplify the HOPE discount for in-state schools. However, the evidence suggests HOPE has made it more difficult for African Americans to matriculate at the state’s most selective institutions (specifically, Georgia and Georgia Tech) because of the scholarship’s effect on college stratification by SAT scores.

Since the program is financed by a state lottery, its costs are disproportionately borne by lower-income and African-American families, who spend a larger share of their incomes on the lottery than more affluent and white families. However, because high school academic achievement and family income are positively correlated, the HOPE Scholarship tends to benefit students from middle- and upper-income households.

Christopher Cornwell is a professor of economics and David B. Mustard is an associate professor of economics at the University of Georgia. For more information, see the authors’ HOPE Scholarship page: www.terry.uga.edu/hope. This article was reprinted from Insights on Southern Poverty with permission of the UK Center for Poverty Research, University of Kentucky.

Notes

1 In the first year of the program, there was a household income cap of $66,000. This cap was raised to $100,000 the following year and eliminated entirely thereafter.

2 Note that “awards” does not equal “recipients” be-

Table 4. Lottery Sales by Quintile of Black Population, 2001

<table>
<thead>
<tr>
<th>Variable</th>
<th>Quintile 1 (≤ 10.8 Percent)</th>
<th>Quintile 2 (10.8-23.4 Percent)</th>
<th>Quintile 3 (23.4-31.0 Percent)</th>
<th>Quintile 4 (31.0-43.715 Percent)</th>
<th>Quintile 5 (&gt; 43.715 Percent)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lottery Sales Per Capita</td>
<td>$265</td>
<td>$251</td>
<td>$299</td>
<td>$346</td>
<td>$458</td>
</tr>
<tr>
<td>Avg. Per Capita Income</td>
<td>$22,419</td>
<td>$23,116</td>
<td>$20,728</td>
<td>$20,574</td>
<td>$21,566</td>
</tr>
<tr>
<td>Avg. Sales as % of Avg. PCI</td>
<td>1.2</td>
<td>1.14</td>
<td>1.44</td>
<td>1.7</td>
<td>2.24</td>
</tr>
<tr>
<td>Number of Counties</td>
<td>32</td>
<td>32</td>
<td>31</td>
<td>32</td>
<td>32</td>
</tr>
</tbody>
</table>

Note: All income variables are in real dollars calculated using the Consumer Price Index with 1998 as the base year.
cause a single recipient receives an award each year he or she qualifies, and, in the case of the grant, he or she can receive multiple awards within the same year, depending on the nature of the vocational training program.

3 Scholarship requirements changed for high school classes that graduated in 2000 and later. Previously, the GPA requirement was defined in terms of college preparatory courses. Now, to receive HOPE, high school students must have a “B” average in the strictly academic courses that make up the “core curriculum.”

4 The evidence for regressivity comes from Pennsylvania (Spiro 1974; Heavey 1978), Connecticut and Massachusetts (Brinner and Clotfelter 1975), Michigan (Brinner and Clotfelter 1975), Maryland (Clotfelter 1979), California (Clotfelter and Cook 1987), Canada (Livernois 1987; Vaillancourt and Grignon 1988), Illinois (Borg and Mason 1988), Colorado (Hansen 1995), and Texas (Price and Novak 2000).

References


