Why Is the Number of College Freshmen Declining in Maryland?

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Between 2009 and 2014, the number of new full-time entering freshmen at Maryland public and private institutions of higher education decreased by nearly 5,700, or 14% (Maryland Higher Education Commission, 2010, 2011, 2012, 2013, 2014, 2015). This decline was not anticipated by many as the number of high school graduates in the state has remained near its 2008 peak. The decline was significant - larger than the fall 2014 freshman classes at University of Maryland College Park and University of Maryland Baltimore County combined, the largest and third largest freshmen classes in the state. Although the total number of Maryland high school graduates has remained stable in recent years, the demographic composition of high school graduating classes has been steadily changing, with increasing numbers of minority and low-income students and significantly fewer whites. This change in the composition of the students reaching college age appears to have been the main factor in the decline in freshmen enrollment since 2009. Most of this decline is attributable to many fewer blacks enrolling as freshmen and an apparent decline in lower-income students in general. The downturn for freshmen from Baltimore City was particularly large despite the fact that the number of high school graduates from the City was stable. It also appears that in Maryland’s highly competitive environment, Historically Black Colleges and Universities (HBCUs) have lost black freshmen to traditionally white institutions (TWIs) as the white college-age population has shrunk and the competition for freshmen has intensified.

The decline in black students resembles in some important respects the unanticipated downturn that took place in Maryland during the first half of the 1980s. At the time the black participation rate dropped sharply for Baltimore freshmen but grew slightly in the higher income counties. The State Board for Higher Education concluded that the enrollment of lower income black students declined in response to affordability issues (Maryland State Board for Higher Education, 1987). The current situation, however, is more widespread and begs the question of whether, in light of the changing nature of the population reaching college age, higher education will be able to enroll and graduate the same proportion of the college-age population now and in the future as it has in the past.

1 All data in this report concerning college freshmen by number, race, and residence utilize the annual enrollment
Background on College Enrollment Trends in Maryland

From the mid-1990s until 2011, enrollment in Maryland’s public and private institutions of higher education grew steadily. The total enrollment of over 373,000 in 2011 was an historic high for the state. Since then there has been a modest decline. About half of the growth in total enrollment between 1995 and 2011 was among full-time undergraduates, who tend to be from the pool of students enrolling in college directly following high school graduation. Full-time undergraduates currently make up 45% of all higher education enrollments and account for most of the decline that has taken place since 2011 (Maryland Higher Education Commission, 2015 and prior years).

A major reason for the downturn in full-time undergraduate enrollments was a sharp decline in full-time freshmen entering higher education in the state. The number of freshmen has decreased each year since peaking in 2009. This decline was not generally anticipated because there has not been a corresponding downturn in Maryland public high school graduates. The number of public high school graduates has been essentially unchanged since 2008 (Maryland State Department of Education, 2015 and prior years).  

While a surprising development to many, others anticipated a downturn in students entering (and graduating from) college. For example, the Western Interstate Commission for Higher Education (WICHE) has published eight editions of Knocking at the College Door (and supplements). This series provides state-by-state and national projections of high school graduates by race and ethnic group. The series is intended to highlight the changing size and nature of the college-age population and its implications (Western Interstate Commission for Higher Education, 2012). It would appear that in the case of Maryland, the issues raised by the WICHE analysis have been warranted.

Maryland High School Graduates and College Freshmen

Figure 1 shows the relationship between Maryland public high school graduates and full-time freshmen (from all sources) entering all public and private institutions of higher education in the state. While the number of high school graduates was essentially the same in 2014 as in 2009, the number of college freshmen was lower by nearly 5,700, a decrease of 14%.

Figure 2 shows freshmen numbers for Maryland residents, residents of other states, and residents of other countries separately. The vast majority of the downturn was among Maryland residents, with residents of other countries increasing slightly. The fact that nearly 90% of the freshmen downturn was among Maryland residents allows meaningful analysis of the nature of the students affected by the drop using aggregate data that are available for Maryland on the Maryland Higher Education Commission (MHEC) and Maryland State Department of Education (MSDE) web pages.

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2 All figures for high school graduates, both total and by race, are from the annual Summary of Attendance reports published by MSDE for the years 1998-99 through 2013-14. These can be found at http://marylandpublicschools.org/MSDE/divisions/planningresultstest/prim_pubs.htm?WBCMODE=Presenta.
Figure 1: Maryland Public High School Graduates/Completers and Freshmen Entering Maryland Higher Education, 2002-2014

Source: Maryland Higher Education Commission and Maryland State Department of Education

Figure 2: Residency of Entering Freshmen at Maryland Campuses, 2002-2014.

Source: Maryland Higher Education Commission
The ratio of freshmen who are residents of Maryland to Maryland high school graduates, which generally had been rising since 2002, has dropped steadily since 2009 when it was 0.55 (Figure 3). Since 2009 the ratio has dropped to 0.45. In other words, in 2009, there was more than one Maryland freshman resident for every two Maryland high school graduates (2 x .55 = 1.10); but by 2014 the ratio has declined to less than one Maryland freshman resident for every two Maryland high school graduates (2 x .45 = 0.90).

**Figure 3: Ratio of Entering Freshmen Who Are Maryland Residents to Maryland Public High School Graduates/Completers, 2002-2014.**

![Graph showing ratio of freshmen to Maryland residents over time]

Source: Maryland Higher Education Commission and Maryland State Department of Education

**What Types of Students Are Not Going to College?**

Historically, Maryland has been among the leaders in the number of its high school graduates who attend college in another state. There has been some speculation that more students have been leaving the state to attend college and that this has been responsible for the freshman decline. However, based on the nature of students and institutions most affected by the freshmen downturn, it is very unlikely that the missing students have enrolled in college elsewhere.

This section examines three broad indicators that provide insight into the nature of the students affected by the downturn: race, Maryland place of residence, and type of campus affected. All three point to the same conclusion – the state has lost primarily low-income and minority, in particular, black students since 2009. A brief summary of the findings for each of these indicators highlights these findings.
Among Maryland residents, African Americans accounted for 44% of the downturn even though the number of black public high school graduates changed very little between 2009 and 2014. In addition, nearly three-quarters of the decline in freshmen from other states were black.

Baltimore City, one of the poorest jurisdictions in the state, accounted for over one-quarter of the total decline in Maryland freshmen, even though the number of public high school graduates did not change during the period. Furthermore, college-going rates changed very little among Maryland’s most affluent jurisdictions.

Two-thirds of the decline among Maryland residents took place at community colleges. The state’s four historically black campuses, which enroll a much smaller number of freshmen than community colleges, accounted for an additional 8% of the decline among Maryland residents. Both community colleges and HBCUs serve higher proportions of lower income students in comparison to other campuses. By contrast, traditionally white campuses as a group actually experienced a relatively strong increase in freshmen enrollments.

_African Americans Accounted for a Disproportionate Share of the Downturn_

Maryland ranks near the top among states in the percentage of its population that is African American (4<sup>th</sup> highest based on the 2010 Census). In recent years, black students have accounted for an average of 35% of public high school graduates. While a large majority of public high school graduates from Baltimore City are black, over 80% of black high school graduates statewide come from outside of Baltimore. The majority of non-Baltimore black graduates come from the large suburban school districts in the Baltimore-Washington corridor.

Hence, to a greater extent than most states, Maryland’s future social and economic well being and that of its largest political subdivisions are related to the success of their black populations. Between 2009 and 2014, African Americans made up an average of 35% of public high school graduates in the state, providing an estimate of their share of the college-age population. Blacks, however, are somewhat under-represented among entering college freshmen (33% in 2009 but only 31% in 2014). The degree of black under-representation increases throughout the higher education pipeline, with only 21% of baccalaureate recipients being black (Maryland Higher Education Commission, 2015).<sup>3</sup> The state’s degree attainment goals<sup>4</sup> implicitly assume that blacks, which make up a large component of the college-age population, will achieve college degrees at an increasing rate. It is, therefore, of particular concern that the number of blacks entering Maryland higher education has decreased significantly.

Figure 4 shows the relationship between black public high school graduates in the state and black Maryland residents entering college as freshmen. There has been very little change in the number of black public high school graduates since 2009 (-3%) but the number of black Maryland residents enrolling as new freshmen has declined by 22%.

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<sup>4</sup> See Appendix Table 1 for information on Maryland’s college attainment goals.
The Relationship Between Income Level and the Decline

Showing a relationship between income level and the downturn in freshmen enrollment is difficult since MHEC does not disaggregate enrollment data by income. However, given the historic relationship between race and income, one can infer that much of the freshmen enrollment decline is among low-income students. For example, in Maryland as well as nationally, black family incomes are well below those of whites. Given the relationship between race and income, the 44% decline in the enrollment of black students in Maryland colleges suggests that a large portion of the overall freshmen decline at Maryland campuses is among students from lower income families.

The Degree of Downturn Varied by Jurisdiction Incomes: Further evidence of a relationship between the decline in freshmen and income comes from examining enrollment by jurisdiction. The number of freshmen from Baltimore City, which has the lowest average income among Maryland’s larger jurisdictions, declined substantially (45% between 2009 and 2014) despite no change in the number of public high school graduates from the City (Figure 5). Between 2009 and 2014, Baltimore accounted for 28% of the decline in freshman enrollment among Maryland residents despite being the source of only 10% of the in-state freshmen in 2009. In 2014, the City accounted for only 7% of Maryland residents enrolling as freshmen.
Figure 5: Baltimore Public High School Graduates and Freshmen in Maryland Higher Education Who Are Baltimore City Residents, 2009-2014.

Source: Maryland Higher Education Commission and Maryland State Department of Education

A broader measure that reinforces the low-income nature of the freshman decline is a comparison of the changes in the in-state college-going ratios from jurisdictions with different levels of affluence (Maryland Department of Planning, Maryland State Data Center, 2014). Figure 6 shows the changes in the college freshman-HS graduate ratios for Baltimore City and the more affluent large suburban school districts. The three jurisdictions with the highest incomes had only small changes in the college enrollment rates of their high school graduates (Howard, Montgomery, Charles). Baltimore County and Anne Arundel have somewhat lower median incomes and had somewhat larger downward changes in their enrollment ratios. Prince George’s, with a median income in the same range as Baltimore and Anne Arundel counties, was an exception with a small change in its college-going ratio. Baltimore City, with by far the lowest income of the group, had the largest decline in its enrollment ratio.

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5 The source table can be found at - http://www.mdp.state.md.us/msdc/HH_Income/ACS_3yr_Household_Median_Income_2011-2013.pdf
**Figure 6:** Changes in HS Graduation-College Freshmen Ratios for Large Subdivisions Between 2009 and 2014.

Sources: Maryland Higher Education Commission and Maryland State Department of Education for enrollment data; Maryland State Department of Planning from US. Census Bureau American Community Survey 2011-13 for income data.

**Certain Types of Campuses Accounted for the Downturn in Freshmen:** Examining the trends in freshmen at various types of campuses provides further potential for estimating what types of students have been involved in the downturn to the extent that different types of campuses enroll students with differing characteristics. In the case of Maryland’s recent downturn, the pattern very much adds to the evidence that the downturn has been concentrated among lower income groups.

Figure 7 shows that the overwhelming share of the downturn has been concentrated at community colleges. Public four-year campuses as a group experienced a very small downturn. However, this was concentrated at the state’s four historically black campuses. Traditionally white campuses (TWIs) as a group experienced an increase in freshman enrollment.\(^6\)

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\(^6\) See Appendix Table 2 for list of campuses included in Figure 7. Private campuses are excluded from Figure 7 because there are all types of private campuses (e.g., two-year trade schools, religious schools) that serve a wide variety of constituencies.
In Maryland as well as nationally, community colleges and HBCUs enroll the largest numbers of lower income students. The fact that these two groups of campuses experienced downturns while traditionally white campuses had increases strongly reinforces the lower income nature of the decline in freshmen.

**Maryland Has Experienced a Similar Decline Before**

During the first half of the 1980s, unlike now, the college-age population in the state was declining as a result of the end of the baby boom. The black college-age population was declining at only a modest pace but African-American enrollments in higher education were decreasing rapidly (Table 1). Meanwhile, the college-age population of other groups (primarily white at that time) was declining rapidly but the impacts on their enrollments in higher education were modest or negligible. A study carried out by the higher education coordinating board determined that nearly the entire decline in black enrollments that was not attributable to the drop in the size of the black college-age population was attributable to a drop in enrollment rates from Baltimore City. The City’s college enrollment rate, which had previously been above the enrollment rates for the state’s largest suburban jurisdictions, dropped to below the suburban rates by 1986. This pattern for Baltimore is comparable to what has happened recently. The study concluded that recent real increases in the cost of attendance above the rate of inflation and a reduction in the share of the costs covered by Pell Grants were most likely responsible for the downturn in black enrollments experienced by the state in the 1980s (Maryland State Board for Higher Education, 1987).
### Table 1: Changes in College Enrollments and the Size of the College-Age Population by Race, 1980-1986

<table>
<thead>
<tr>
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</thead>
<tbody>
<tr>
<td><strong>New Full-Time Freshmen</strong></td>
<td></td>
</tr>
<tr>
<td>Black</td>
<td>-21.5%</td>
</tr>
<tr>
<td>Non-Black</td>
<td>-13.3%</td>
</tr>
<tr>
<td><strong>Full-Time Undergraduates</strong></td>
<td></td>
</tr>
<tr>
<td>Black</td>
<td>-19.4%</td>
</tr>
<tr>
<td>Non-Black</td>
<td>-0.8%</td>
</tr>
<tr>
<td><strong>Population Ages 15-19</strong></td>
<td></td>
</tr>
<tr>
<td>Black</td>
<td>-11.0%</td>
</tr>
<tr>
<td>Non-Black</td>
<td>-20.4%</td>
</tr>
</tbody>
</table>

Source: Maryland State Board for Higher Education

While the African-American decline in the 1980s was attributed almost entirely to a decline in the rate at which Baltimore City residents enrolled in college, this currently is not the case. The 2009-2013 decline has been more widespread, with over 70% of the decline in freshmen coming from outside of Baltimore. Nevertheless, the decline from Baltimore was still disproportionate. In addition, because Maryland does not make available data for groups other than blacks in the sources used for this report, it is not possible to assess whether there was a downturn in Hispanic students as well as blacks.

*There are Reasons that the Freshman Decline Should Not Be a Surprise*

In Maryland, as elsewhere, the rapid growth in higher education enrollments since the mid-1990s was primarily the result of the baby boom “echo.” Baby boomers began having children in growing numbers around 1977, which translated into an increase in first graders six years later and high school graduates 18 years later. The result was over a decade of increases in white high school graduates beginning in the mid-1990s. The baby boom “echo,” as was the case for its parents, was primarily a white phenomenon. This has now peaked and the number of white high school graduates has declined significantly in recent years.

Meanwhile, the numbers of students from other racial/ethnic groups have been less cyclical than those of whites. Maryland has experienced long-term growth in its black population and ranks as one of the top states in the percentage of its population that is African American. Likewise, Asian Americans have experienced slow but steady long-term growth in the state, although their numbers are much smaller than other minority groups. Figure 8 shows the changes in the state’s K-12 public school enrollment between 1999 and 2014. Within an overall student population that has changed very little in total numbers, the number of Hispanics has grown dramatically while the number of whites has decreased substantially (Maryland State Department of Education, 2015 and prior years). Hispanics represent the single group that will experience strong growth for the foreseeable future.

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This analysis relies on the report for the school year beginning September 2014 and comparable prior annual reports published by the Maryland State Department of Education.
An increase in the proportion of students in the public schools who are eligible for the federal free and reduced-priced lunch program suggests a shift in enrollment away from more affluent families and toward greater numbers of lower-income students. Eligibility for this program, which approximates that for the federal Pell Grant program for low-income college students, has served as a leading indicator of the nature of the students who will reach college age (Figure 9). In 2014, 45% of public school students qualified for free and reduced priced meals compared to 31% in 2003.

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8 Information for this program by year can be found at: http://www.marylandpublicschools.org/MSDE/programs/schoolnutrition/docs/Free+and+Reduced-Price+Meal+Data.html

The change in the composition of public school enrollments has for the past several years had a significant impact on the makeup of public high school graduates. Most visible has been the steep decline in white high school graduates since their peak in 2008 (Figure 10).

Figure 9: Percentages of Maryland Public School Students Eligible for Free and Reduced-Price Meals 2003-2014

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Figure 10: Racial/Ethnic Composition of Maryland Public High School Graduates/Completers 1996-2014

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As shown in Figure 11, the changes in the number public high school graduates from Hispanics and “other,” primarily multiracial, have almost exactly balanced out the downturn in white graduates. In brief, white graduates are being replaced on nearly a one-for-one basis by students who, on average, come from families who are more racially and ethnically diverse.

**Figure 11: Changes in the Number of Higher School Graduates by Racial/Ethnic Group between 2009 and 2014.**

![Bar chart showing changes in the number of higher school graduates by racial/ethnic group between 2009 and 2014.](chart)

Source: Maryland State Department of Education

The shift toward a greater proportion of lower-income minorities among high school graduates has been reflected in the average level of pre-college preparation as measured by SAT scores (Figure 12). Maryland’s average scores, which in the past had closely tracked the national average, have now fallen well-below national norms for the past several years (The College Board, 2014 and prior years).\(^\text{10}\) SAT scores, of course, are closely correlated with parental education and income.

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\(^{10}\) Historical SAT score data for test takers nationally and in Maryland can be found at the College Board’s web site: [http://research.collegeboard.org/programs/sat/data](http://research.collegeboard.org/programs/sat/data).
Conclusion and Implications

The demographic shifts in the K-12 population, the increasing share of lower-income students in the public schools, and the drop in SAT scores have provided a coherent set of leading indicators to the higher education community that the nature of the college-age population would be changing. It is now apparent that the impact of these changes has been a significant drop in the number of high school graduates entering college. And, the change is only beginning.

The state has established ambitious goals for increasing the rate of degree attainment of its young population, including degree attainment by historically disadvantaged populations. These goals rely on a continuing increase in the number of college degrees awarded by Maryland institutions of higher education for all high school graduates. In light of the declines in college freshmen and undergraduates that have already taken place, the ability to achieve these goals is called into question.

Of more general concern is the ability of the K-12 system to prepare the “new” student body, which already is enrolled, for success in college; the ability of the higher education system to successfully educate and graduate at least the same percentage of the emerging college-age population as it has in the past; and the willingness of federal and state governments to ensure sufficient student financial aid to those who need it and adequate financial support to those campuses which enroll significant numbers of these students.
References

Maryland Department of Planning, Maryland State Data Center, (2014). Median household income for Maryland’s jurisdictions (Three Year ACS Data) 2011-2013. Baltimore.


The College Board. (2014 and prior years), College-bound seniors 2014 and prior years. New York: The College Board.

Appendix

Appendix Table 1: Maryland’s College Degree Attainment Goals

Maryland is among a number of states that has established college degree completion goals for its adult population.\textsuperscript{11} Complete College America is a non-profit organization that provided the impetus for this program and which monitors its implementation. For Maryland, as well as other states, the Lumina Foundation provided grant funding to assist in reaching their goals.\textsuperscript{12} Former Governor Martin O’Malley was a strong supporter of the goal\textsuperscript{13} and was actively involved in designing strategies for reaching the goal.

Maryland’s goal is that by 2025, 55% of its adult population ages 25-64 will hold at least an associate degree or higher. Currently, this figure is 45%. This goal has become state law\textsuperscript{14} and is one of the goals of the state’s strategic plan for postsecondary education.\textsuperscript{15}

According to MHEC, attainment of the goal will require Maryland to increase its production of associate and bachelor’s degrees from a baseline of 46,000 in 2011-12 to 55,000 in 2025.\textsuperscript{16} This is an average increase of 2.25% per year over the 2012-2025 period.

The changing demographics of the state have been advanced as the most prominent obstacle to attainment of this goal.\textsuperscript{17} A University of Pennsylvania study has called into question the feasibility of the goal because of the relatively poor performance of minority students in Maryland.\textsuperscript{18} The University System of Maryland also has expressed reservations about reaching the goal as a result of declining enrollments.\textsuperscript{19}

Degree production in Maryland has been increasing steadily as a result of the growth in the college-age population that began in the mid-1990s. That growth has now ended. In 2015, the number of degrees awarded increased by only 1.2%. With full-time undergraduates having peaked in 2011, it is likely that slow growth in degree production, at best, is ahead for the foreseeable future.

\textsuperscript{11} http://completecollege.org/college-completion-data/
\textsuperscript{13} http://archive.constantcontact.com/fs019/1101383760746/archive/1108022159435.html#LETTER.BLOCK6
\textsuperscript{16} Pp. 8-9, Maryland plan for postsecondary education.
\textsuperscript{17} http://articles.baltimoresun.com/2014-04-19/news/bs-ed-55-percent-goal-20140419_1_college-completion-danette-howard-need-based-financial-aid
\textsuperscript{18} http://www.upenn.edu/pennnews/news/leadership-maryland-higher-education-leaving-underserved-citizens-behind-penn-gse-rese-0
Appendix Table 2: Maryland Campuses Included in Figure 7

Public Four-Year Campuses

*Historically Black Campuses (HBCUs)*
- Bowie State University
- Coppin State University
- University of Maryland Eastern Shore
- Morgan State University

*Traditionally White Campuses (TWIs)*
- Frostburg State University
- Salisbury University
- Towson University
- University of Baltimore
- University of Maryland Baltimore County
- University of Maryland College Park
- University of Maryland University College

Public Community Colleges
- Allegany College of Maryland
- Anne Arundel Community College
- Carroll Community College
- Cecil College
- College of Southern Maryland
- Chesapeake College
- Community College of Baltimore County
- Baltimore city Community College
- Frederick Community College
- Garrett College
- Hagerstown Community College
- Harford Community College
- Howard Community College
- Montgomery College
- Prince George’s Community College
- Wor-Wic Community College
About the Maryland Equity Project

The Maryland Equity Project seeks to improve education through research that supports an informed public policy debate on the quality and distribution of educational opportunities. It conducts, synthesizes, and distributes research on key educational issues in Maryland and facilitates collaboration between researchers and policymakers. The Maryland Equity Project is a program in the Department of Teaching and Learning, Policy and Leadership in the College of Education at The University of Maryland.

About the Author

Joseph Popovich recently retired as Vice President for Planning and Information Technology at Morgan State University, Baltimore, Maryland. Prior to his position at Morgan State he was the Director for Policy Research at the Maryland Higher Education Commission and its predecessor agency, the Maryland State Board for Higher Education. He received his doctorate from the University of Maryland College Park and holds undergraduate and master’s degrees from Ohio University, Athens, Ohio.