# Access, Persistence, and Graduation in North Carolina's Public Four-Year Institutions

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CALDER Meeting
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# Questions Motivating the Study

- Considerable evidence that disparities persist, by race and SES, and in some cases have widened, in both K-12 and postsecondary outcomes.
- Does public (4-year) higher education reduce these disparities or make them worse?
- To what extent can disparities in postsecondary outcomes be explained away by disparities in student background or K-12 outcomes?
- Are things getting better or worse over time?

# Our Data

All 8th graders in North Carolina, several cohorts

For those who attended a UNC university, linked to data on enrollment and performance in college

Information on gender, race/ethnicity, educational attainment of highest-attaining parent, 8th grade test scores

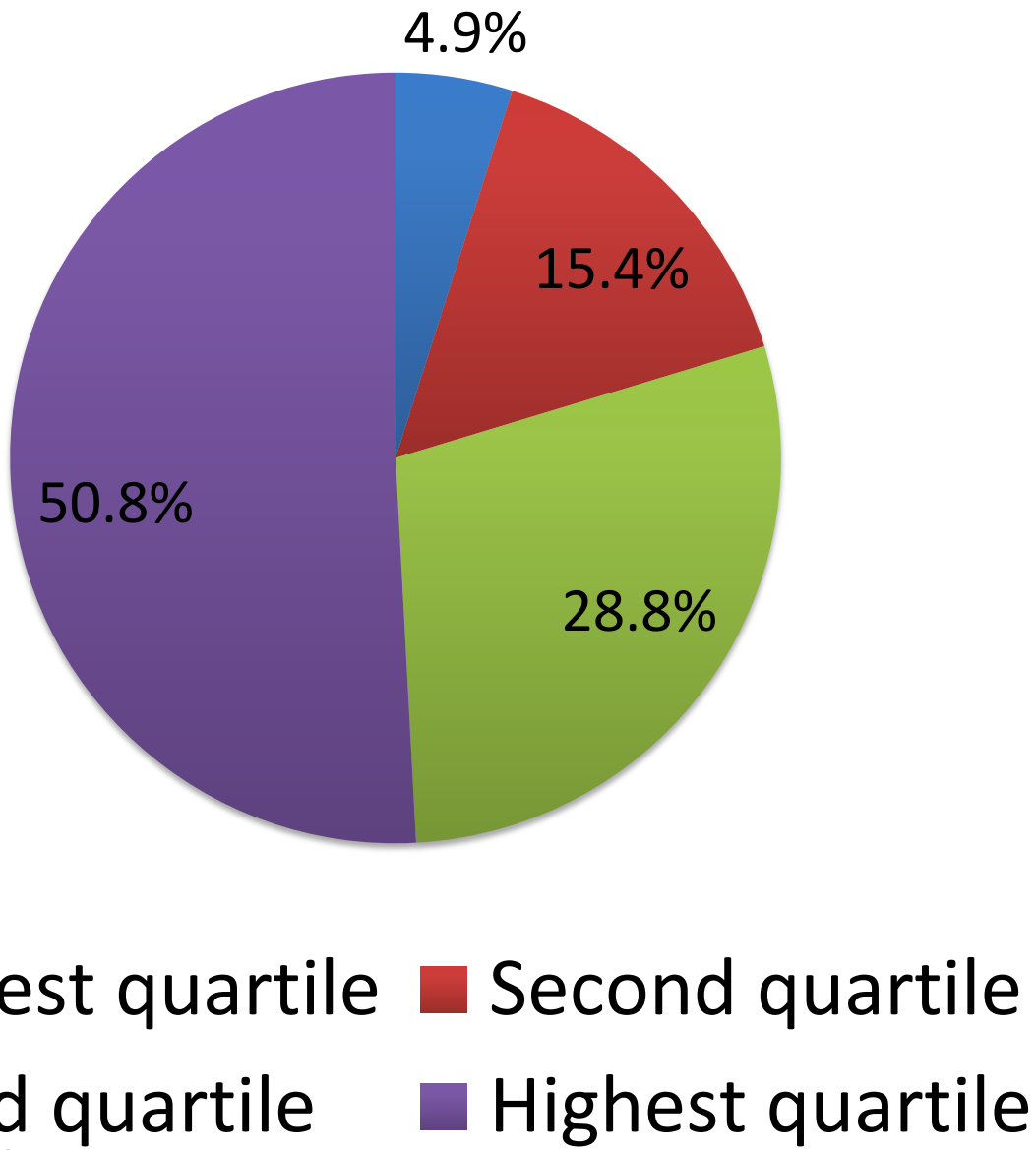
# Two Cohorts of Students

| 8th Grade Cohort | 1999 | 2004 |
|---|---|---|
| **Expected year of:** | | |
| taking the 8th grade EOGs | 1999 | 2004 |
| graduating from high school | 2003 | 2008 |
| entering college | 2003 | 2008 |
| college graduation, 4 yrs | 2007 | 2012 |
| college graduation, 6 yrs | 2009 | 2014 |

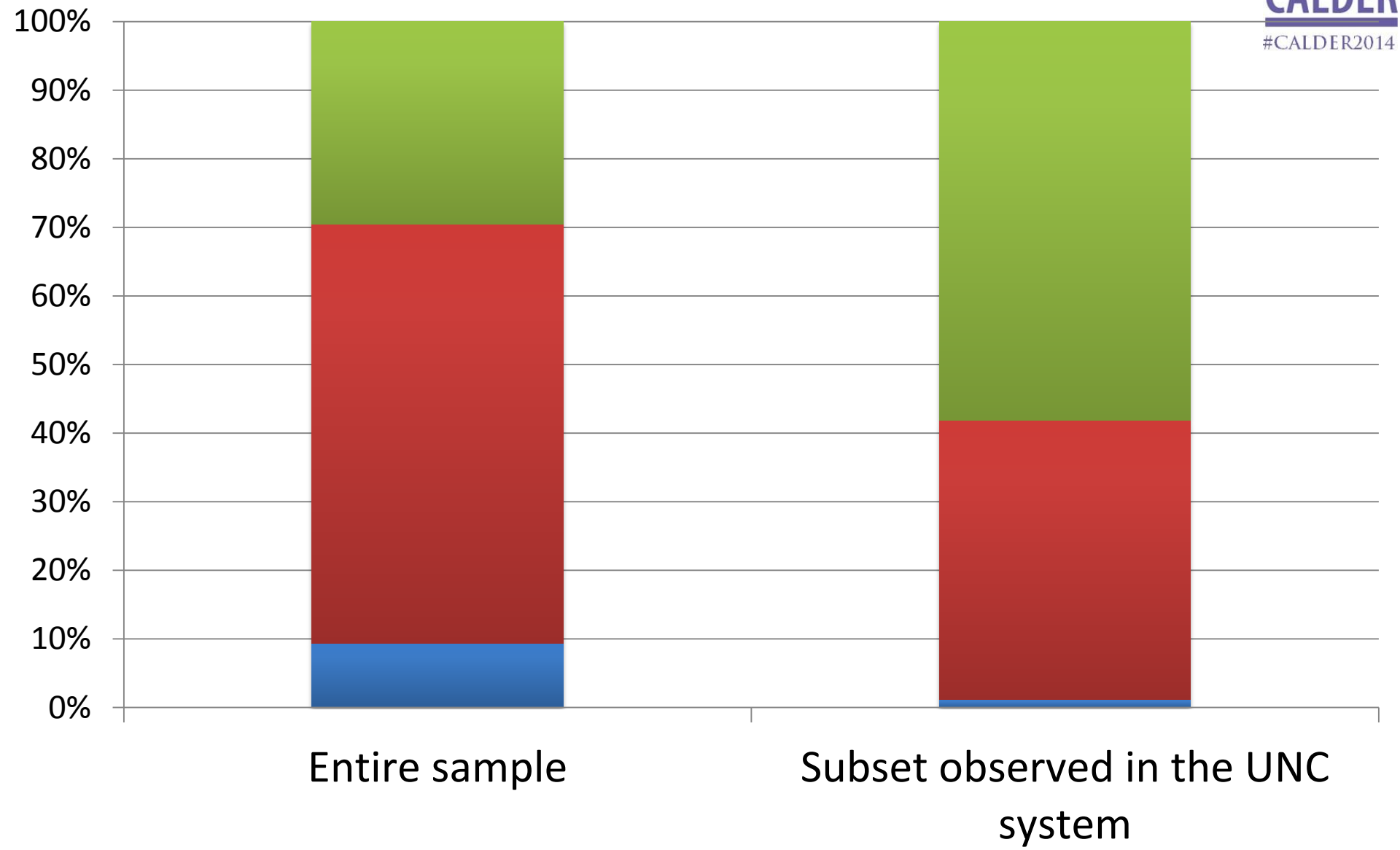
# Institutions in the UNC system

| Campus name | Enrollment | Percent black | HBCU |
|---|---|---|---|
| Appalachian State University | 11,051 | 0.04 | |
| Elizabeth City State University | 2,277 | 0.87 | Yes |
| East Carolina University | 14,724 | 0.17 | |
| Fayetteville State University | 3,189 | 0.89 | Yes |
| NC Agriculture & Technical State University | 7,521 | 0.94 | Yes |
| NC Central University | 4,116 | 0.96 | Yes |
| NC School of the Arts | 237 | 0.06 | |
| NC State University | 18,467 | 0.09 | |
| UNC Asheville | 2,152 | 0.03 | |
| UNC Charlotte | 11,227 | 0.13 | |
| UNC Chapel Hill | 13,223 | 0.12 | |
| UNC Greensboro | 10,271 | 0.24 | |
| UNC Pembroke | 4,076 | 0.28 | |
| UNC Wilmington | 7,364 | 0.05 | |
| Western Carolina University | 6,604 | 0.06 | |
| Winston-Salem State University | 4,380 | 0.95 | Yes |
| Total | 120,879 | 0.27 | |

# 8th grade test score performance of students in linked UNC system sample



# Distribution of parental education

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# Indicators of stratification/segregation across UNC system campuses

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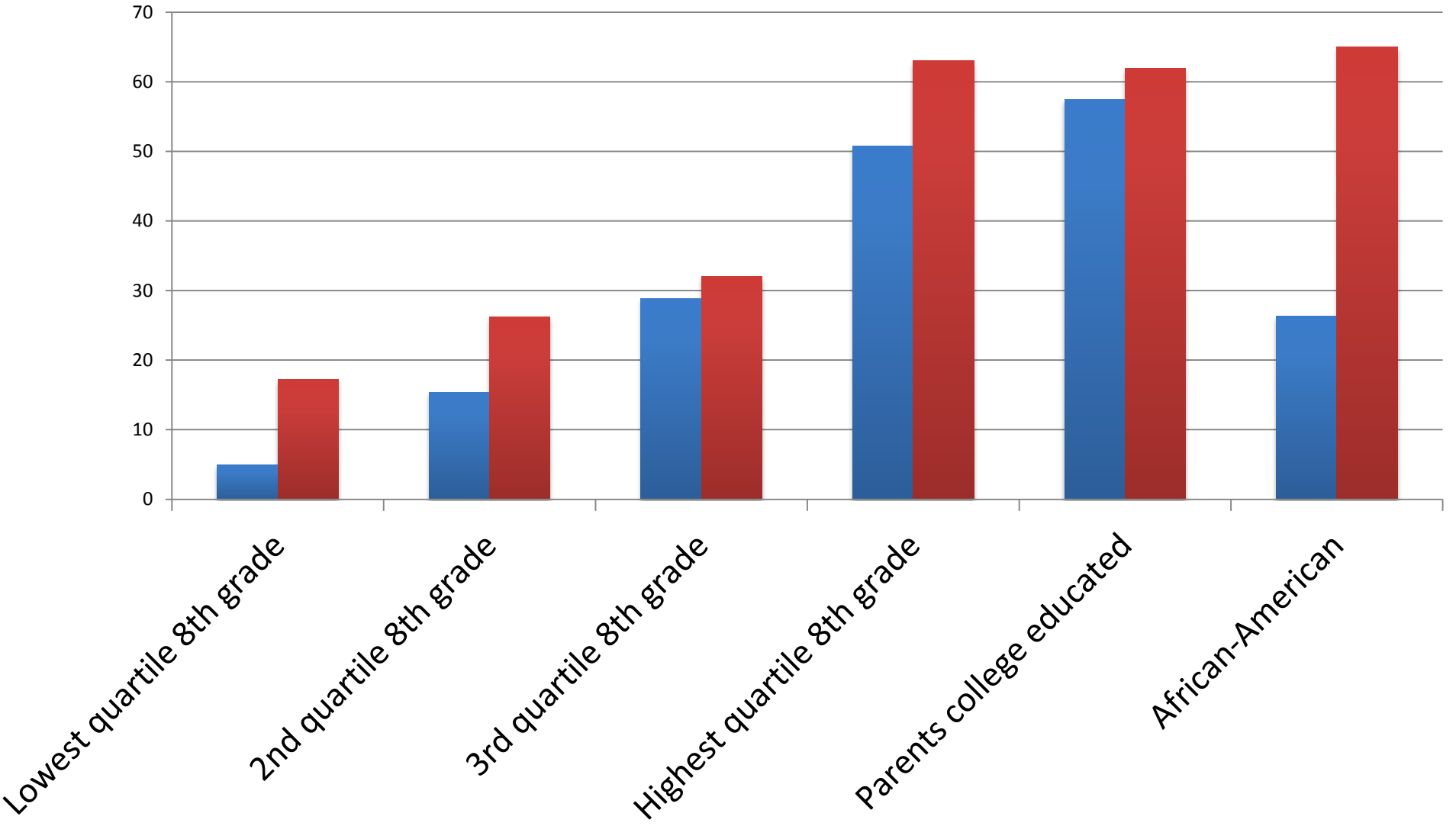

**"Outcomes"**

- Enroll in a UNC campus
- Enroll in UNC Chapel Hill
- Earn a GPA of 3.0 or better (after 45 hours)
- Major in a STEM subject (after 60 hours)
- Graduate in 4 years

**Two analyses**

- All 8$^{th}$ graders, cohorts of 1999 and 2004
- Only those who enroll in a UNC institution

# Enrollment at a UNC campus: African-American coefficient across specifications

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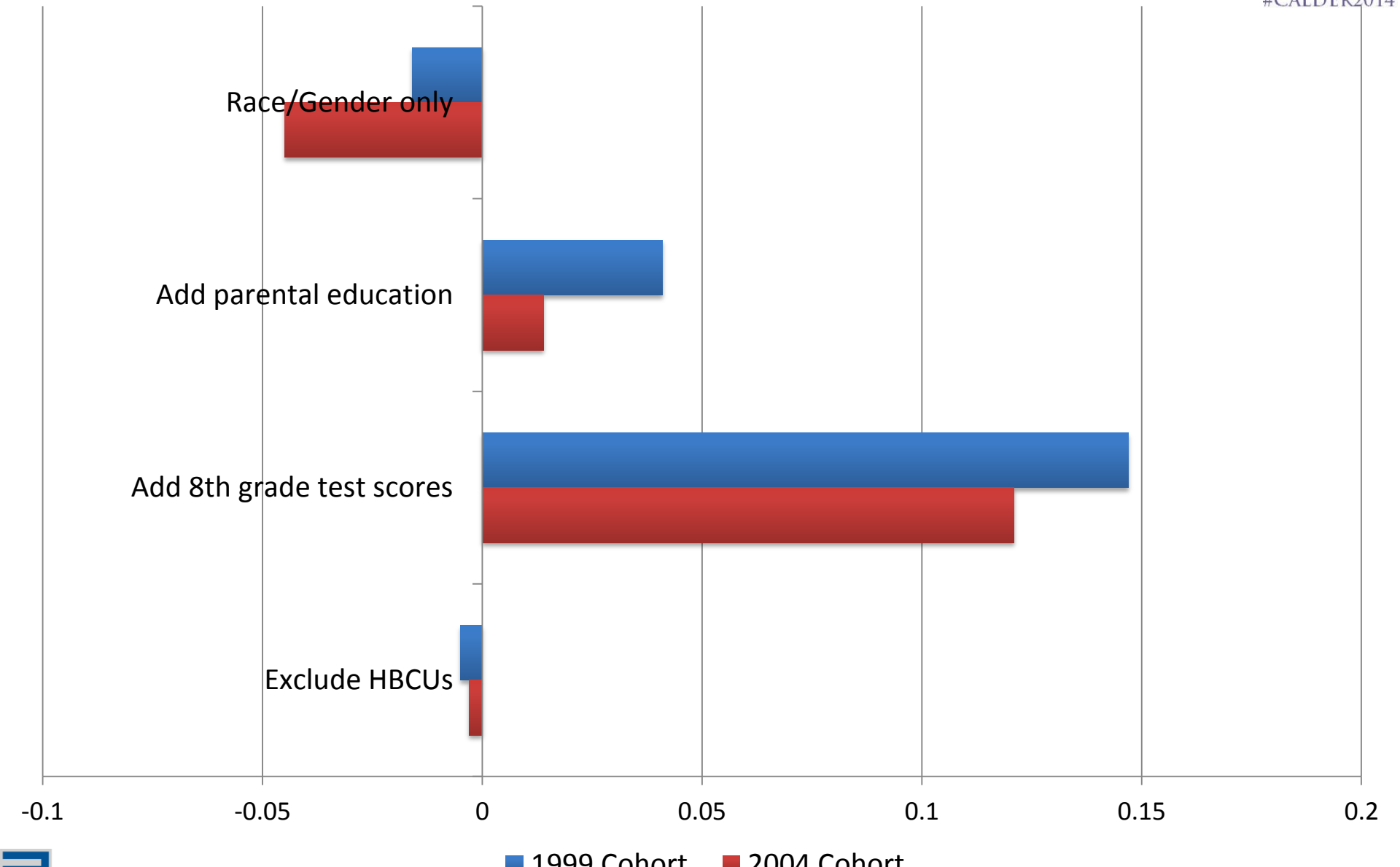

# Enrollment at a UNC campus: Parent College Graduate coefficient across specifications

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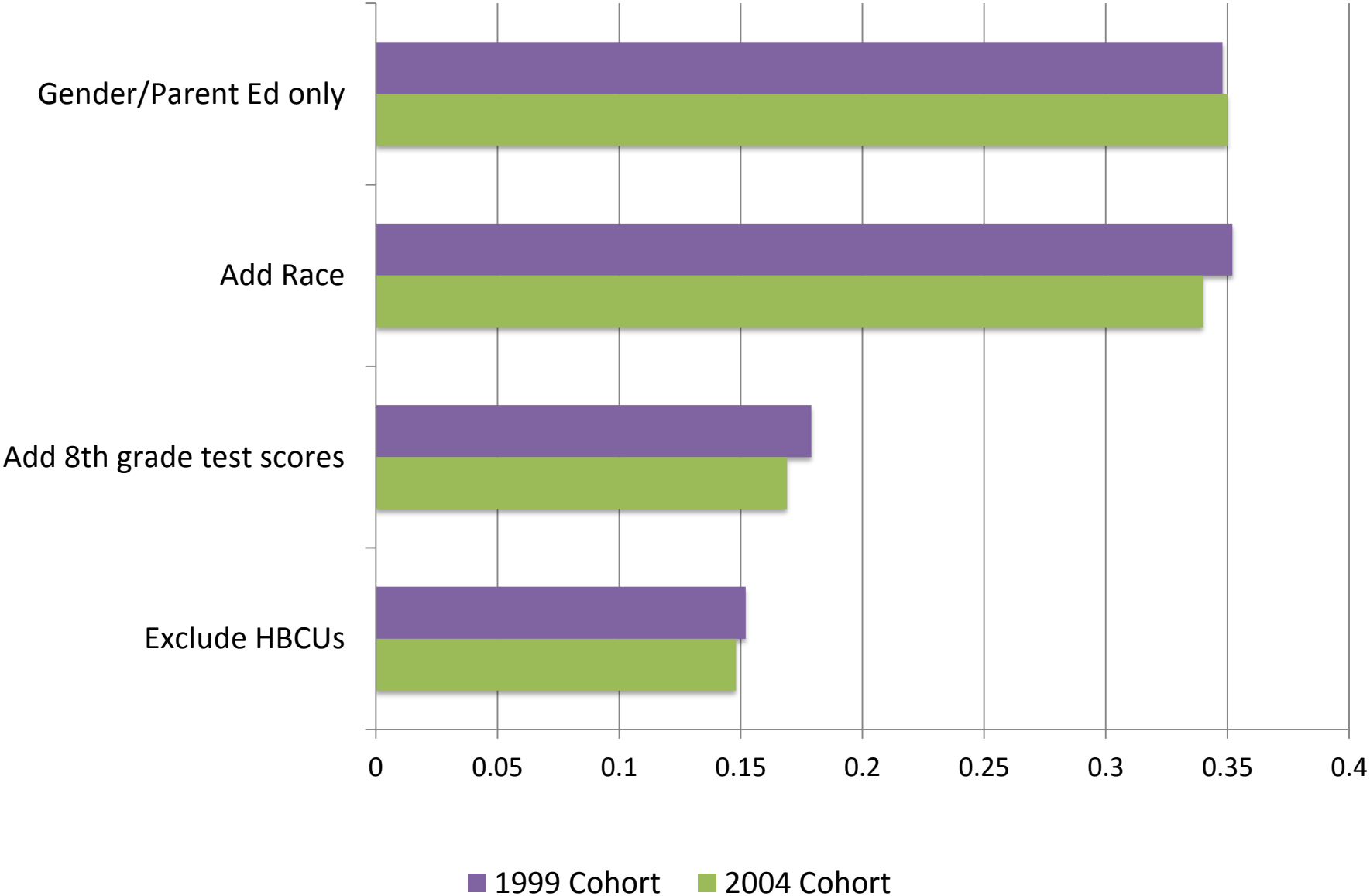

# Enrollment at UNC-Chapel Hill: African-American coefficient across specifications

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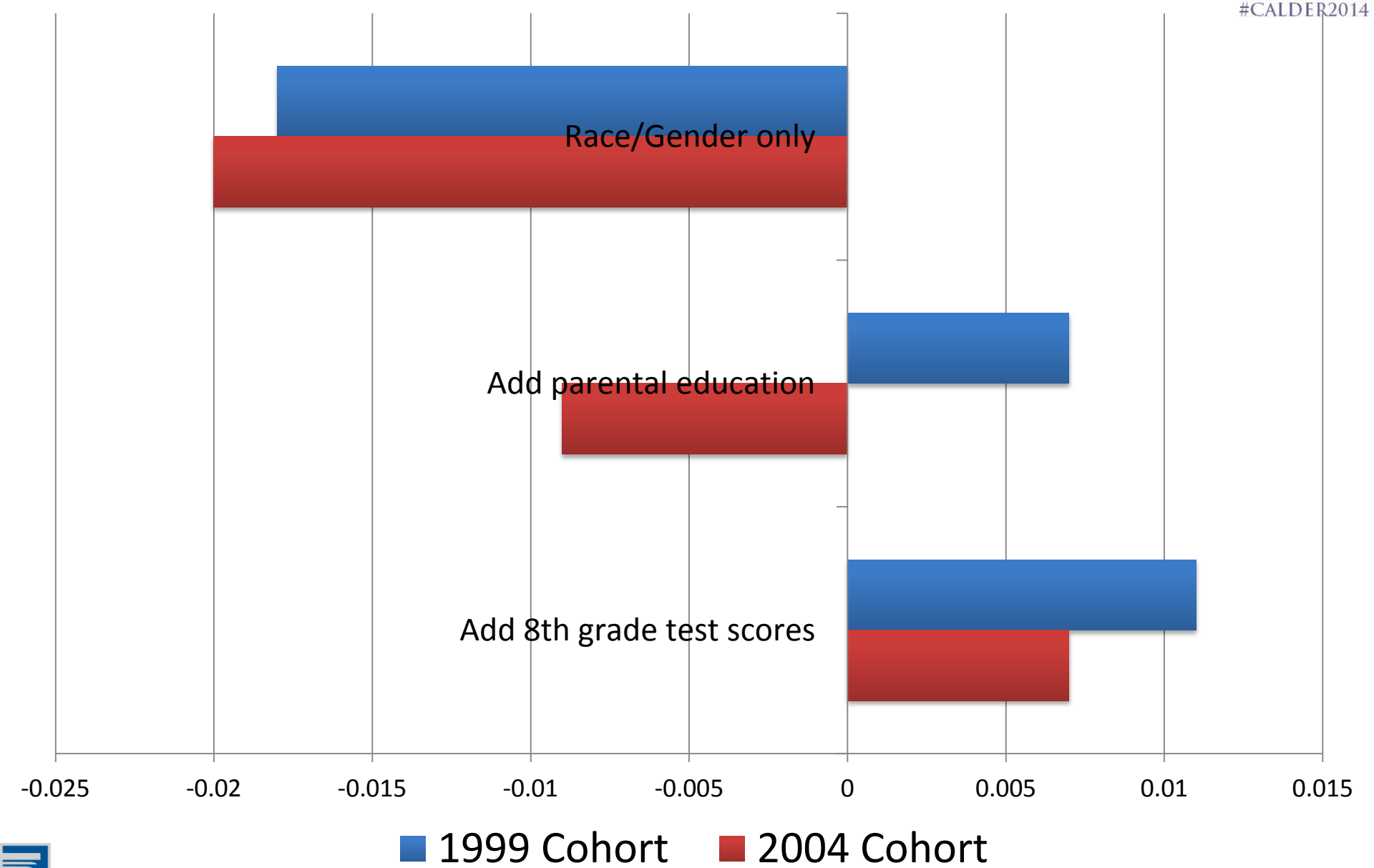

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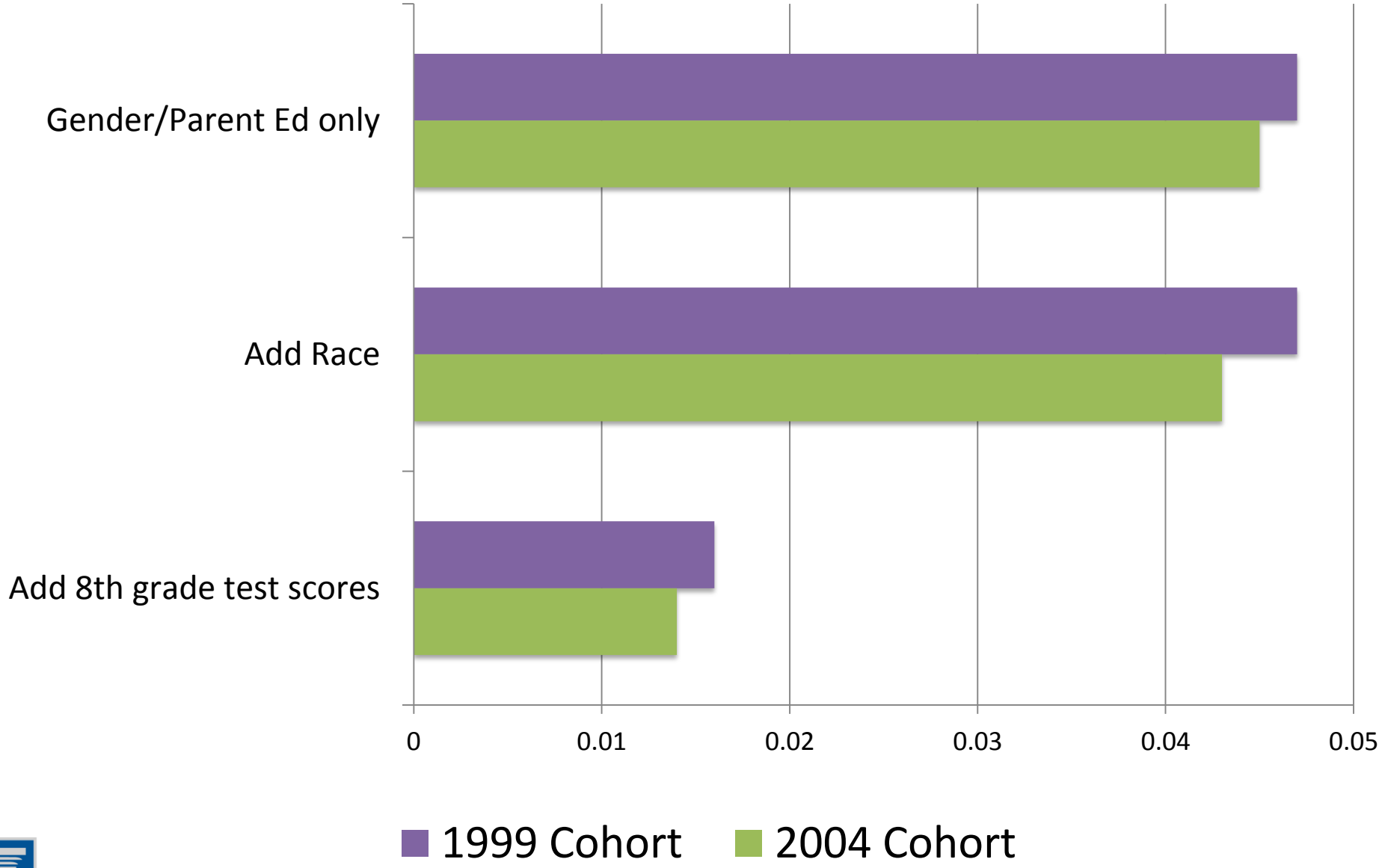

# Enrolled with a GPA of 3.0+ (after 45 credit hours): African-American coefficient across specifications

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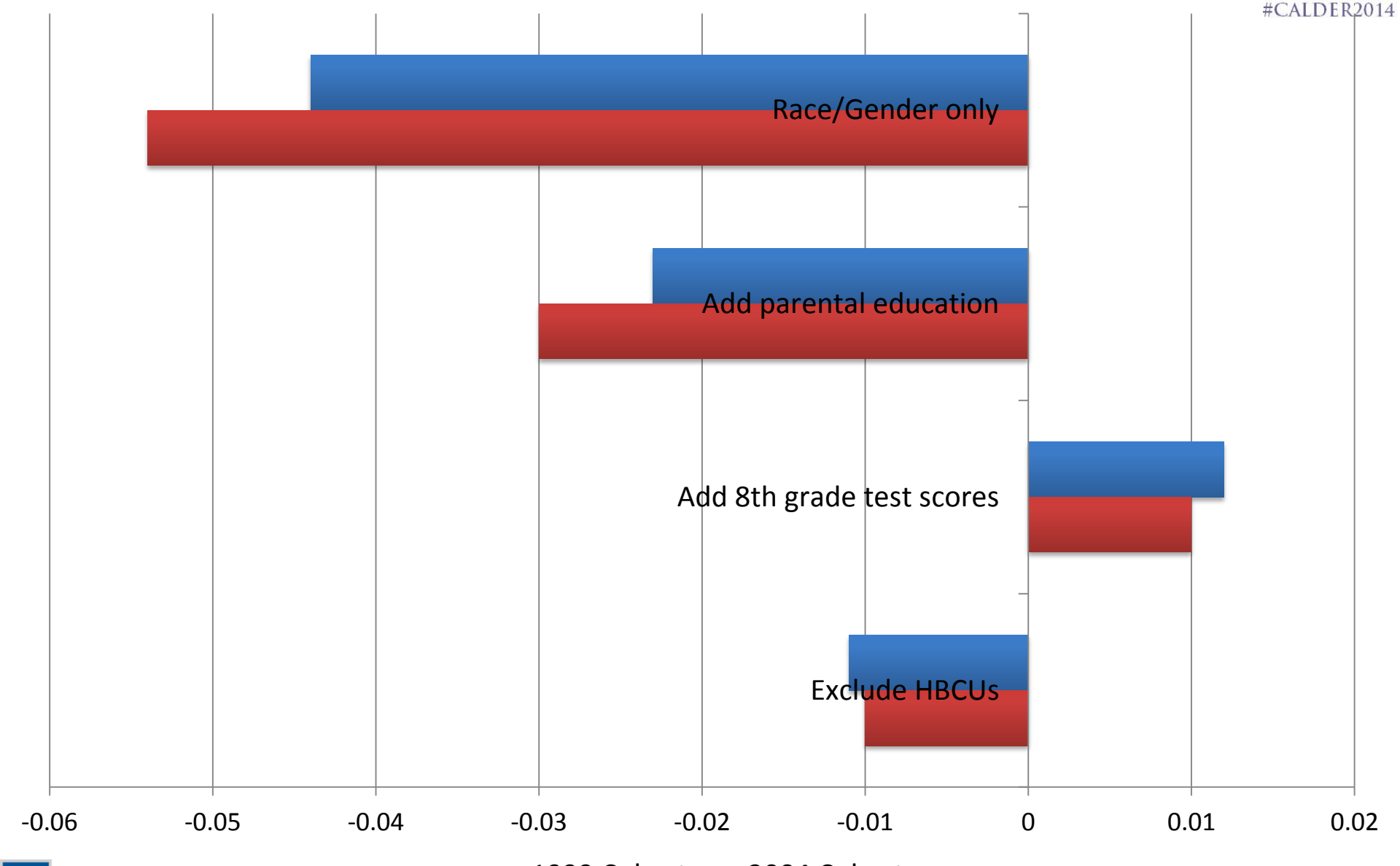

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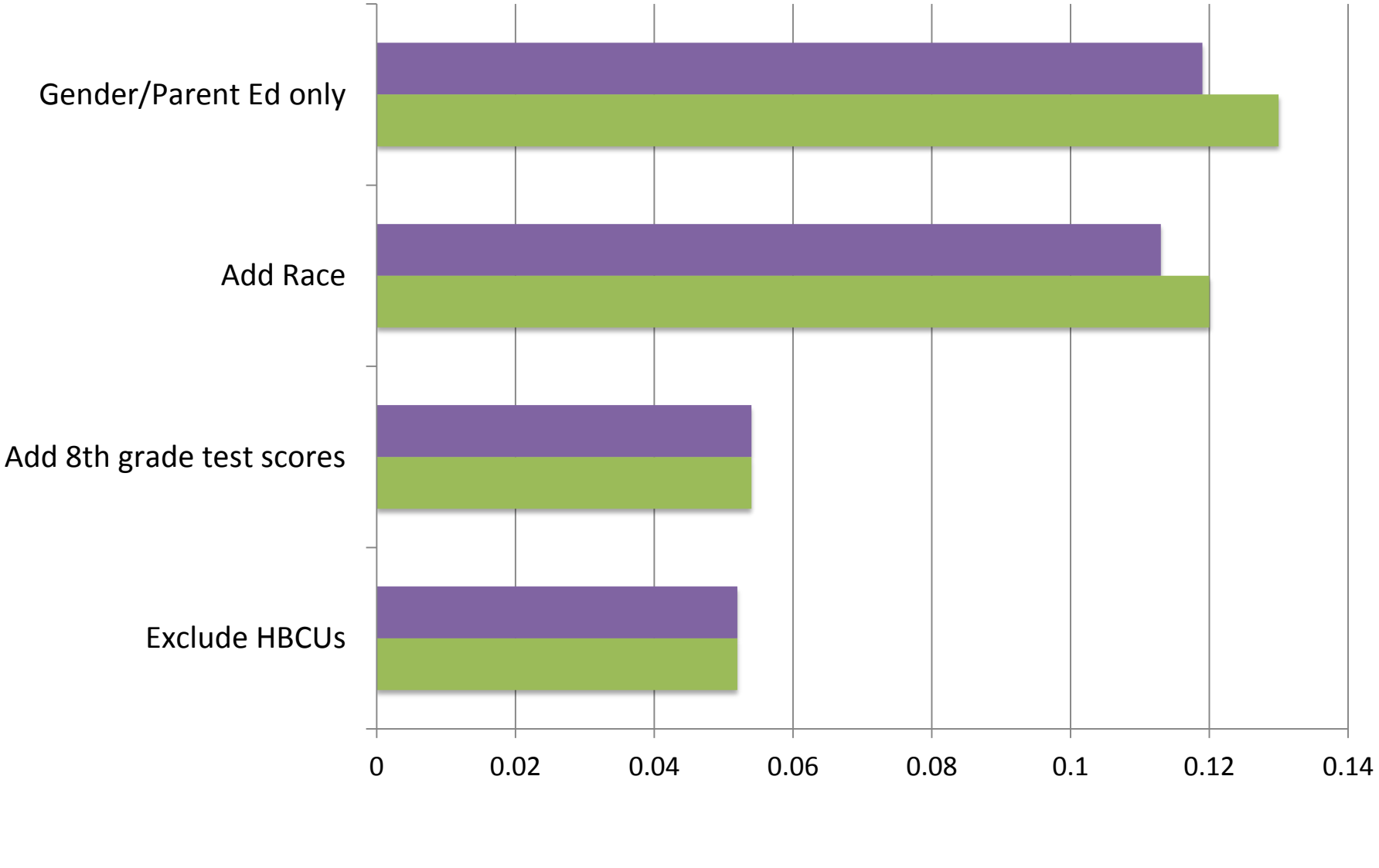

# STEM Major at any campus (after 60 credit hours): African-American coefficient across specifications

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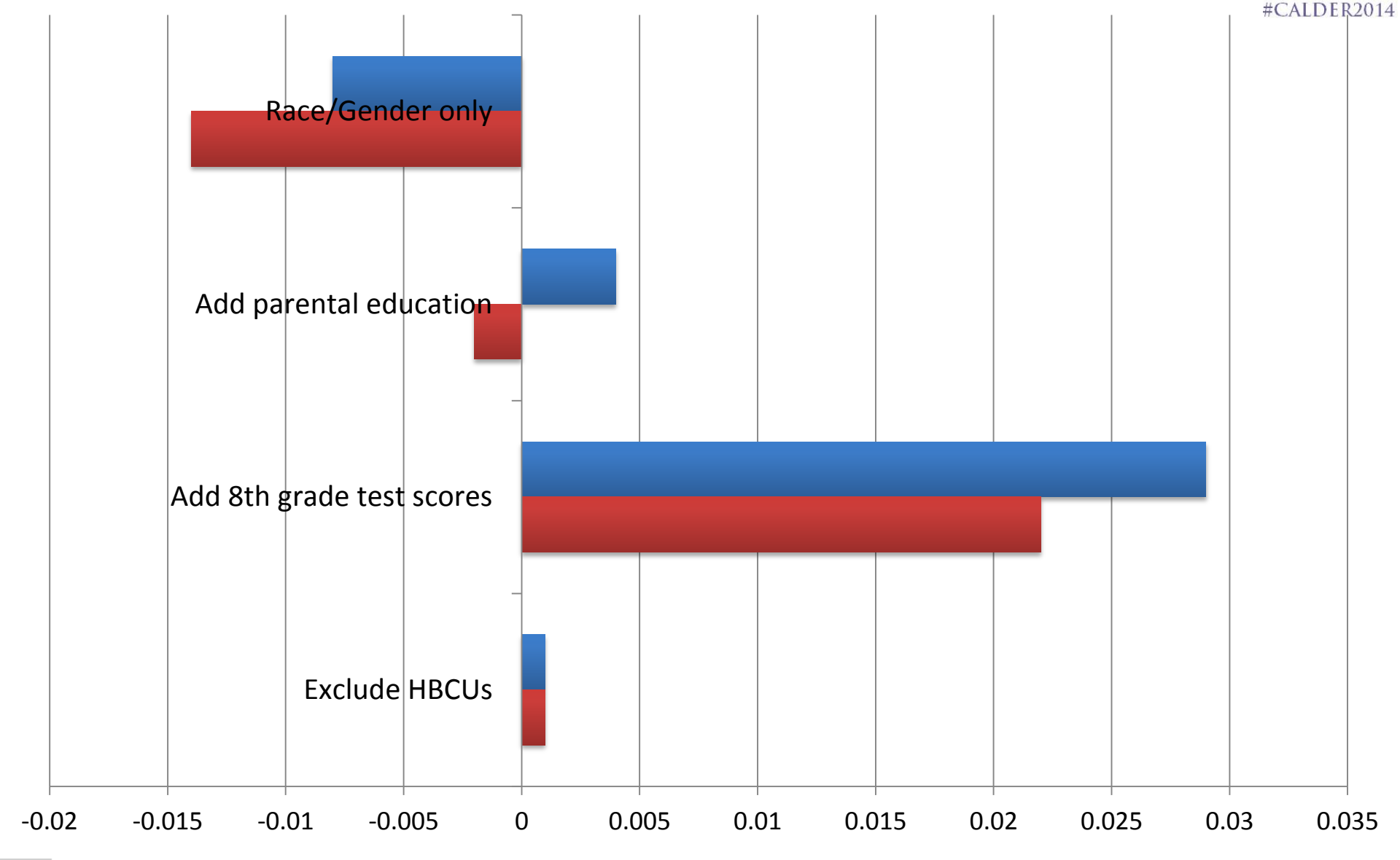

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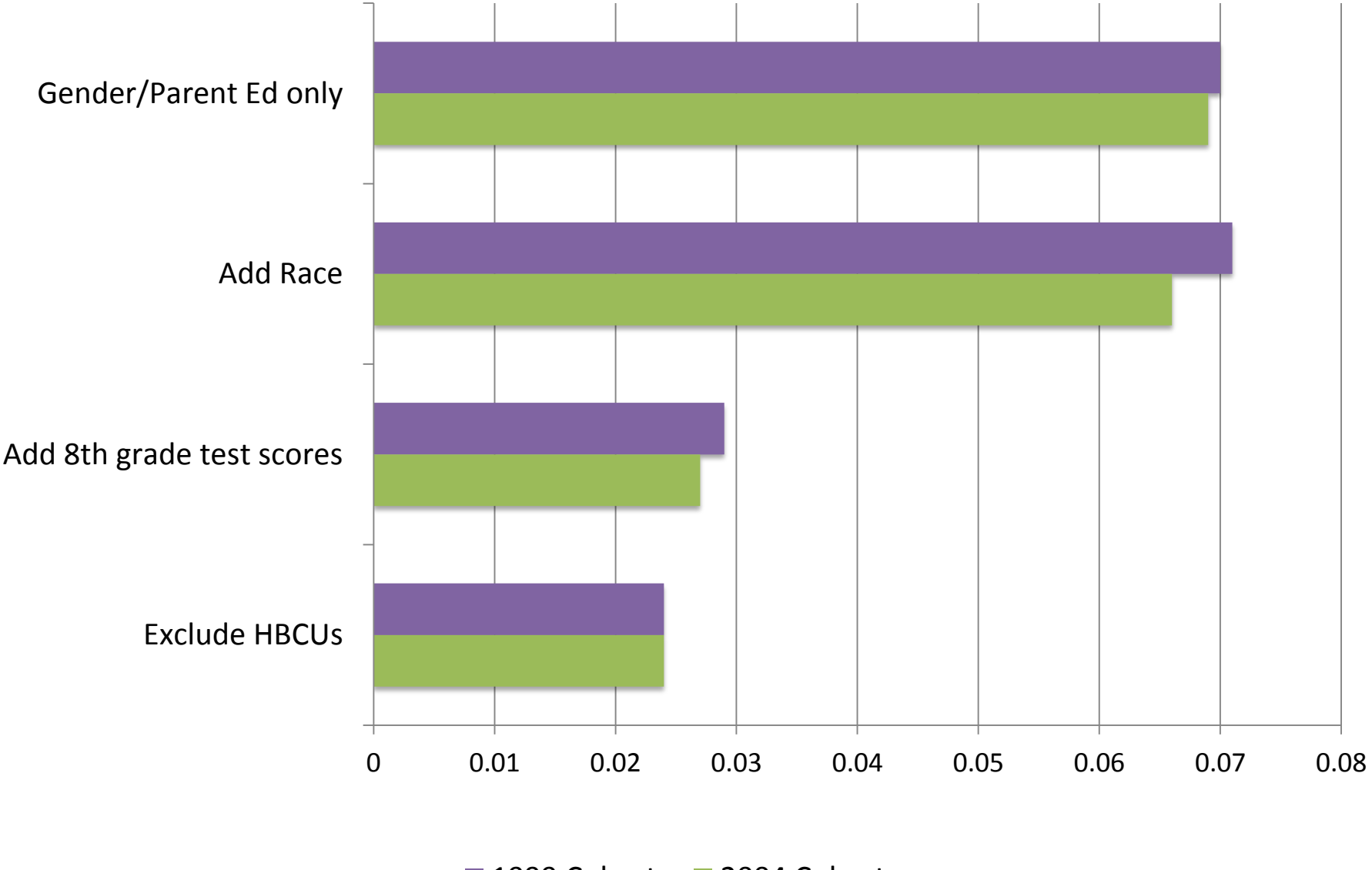
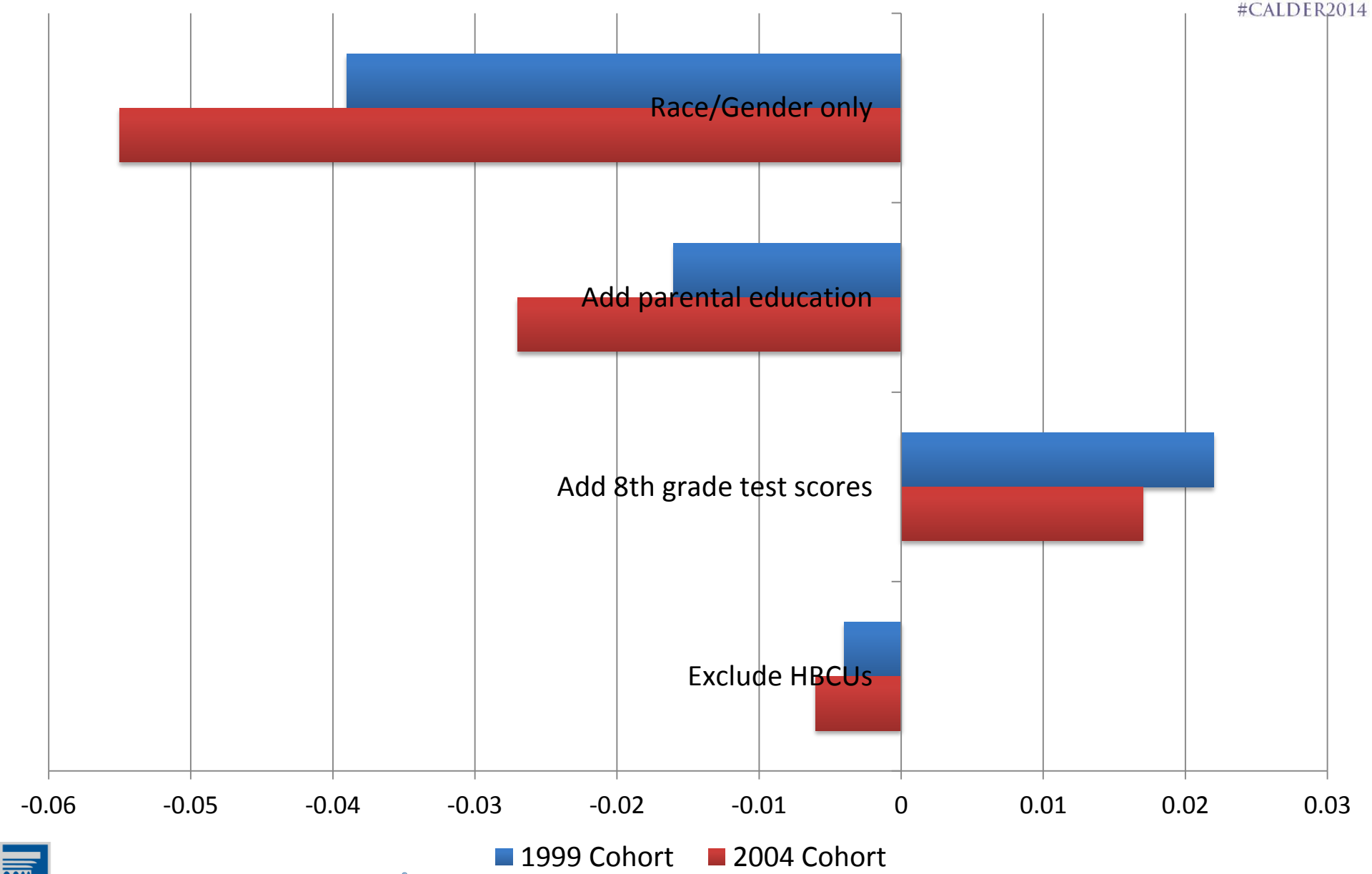


# Graduate from any UNC campus within 4 years: African-American coefficient across specifications

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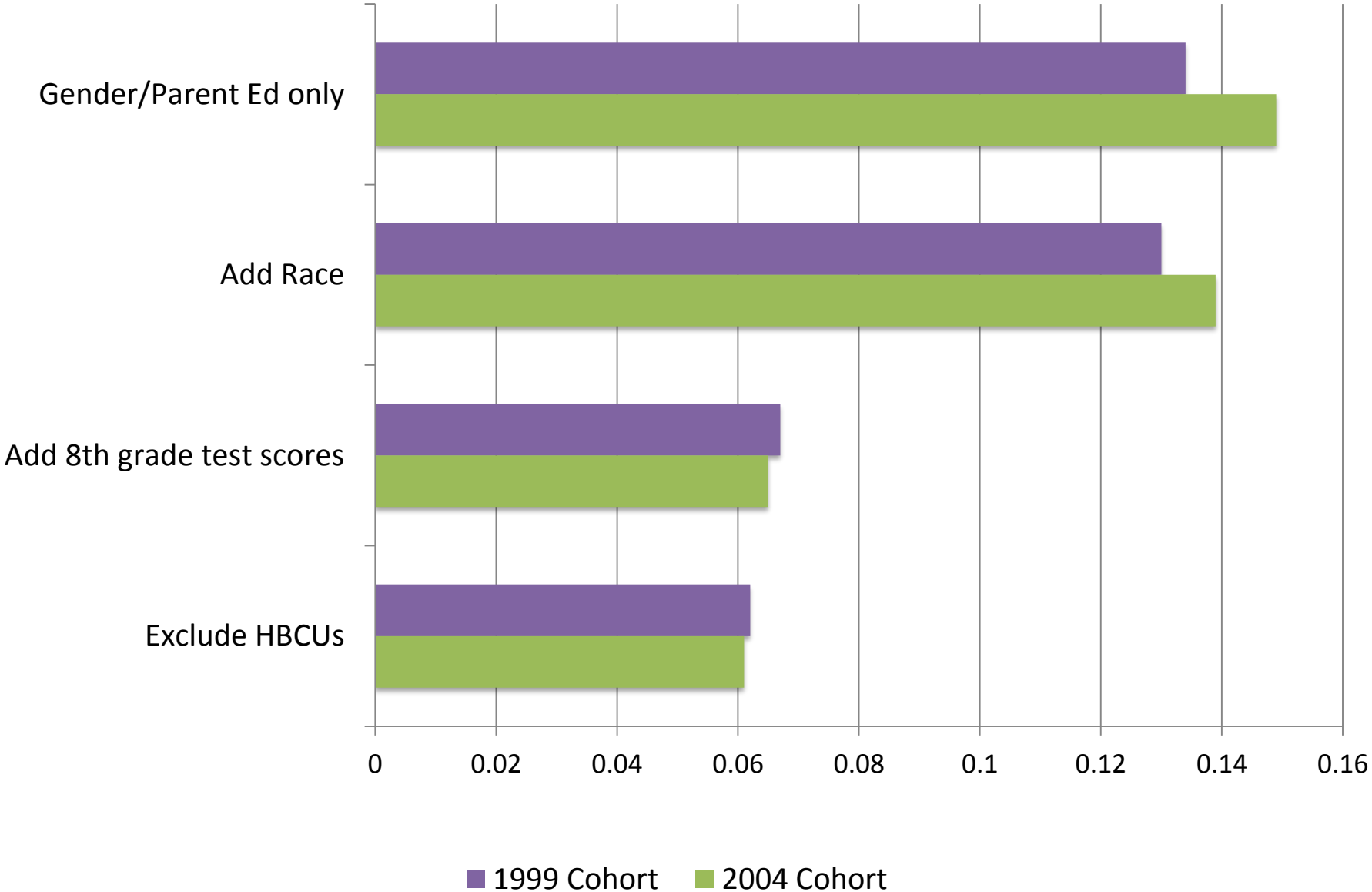

# Graduate in 4 years conditional on enrollment: African-American coefficient across specifications

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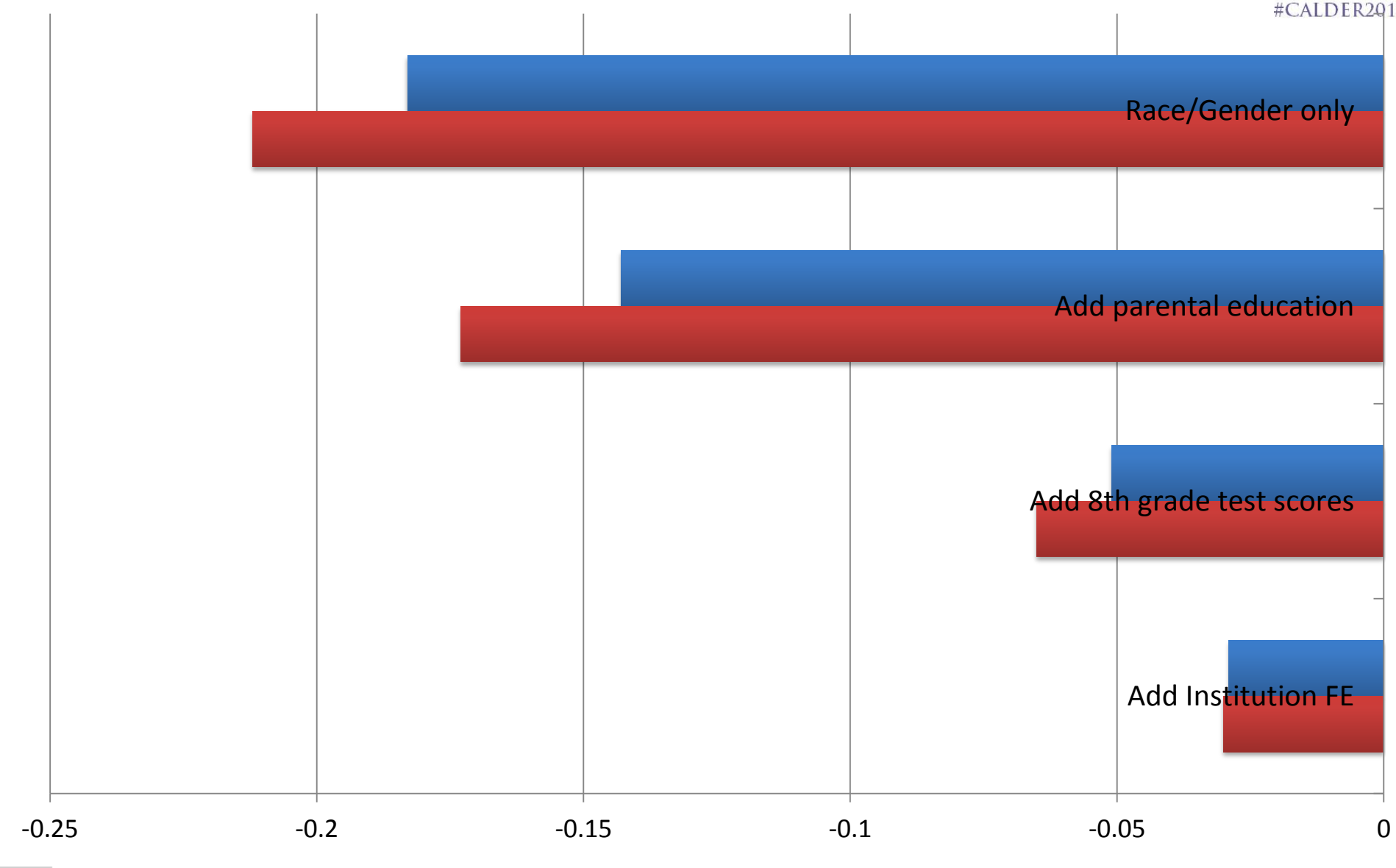

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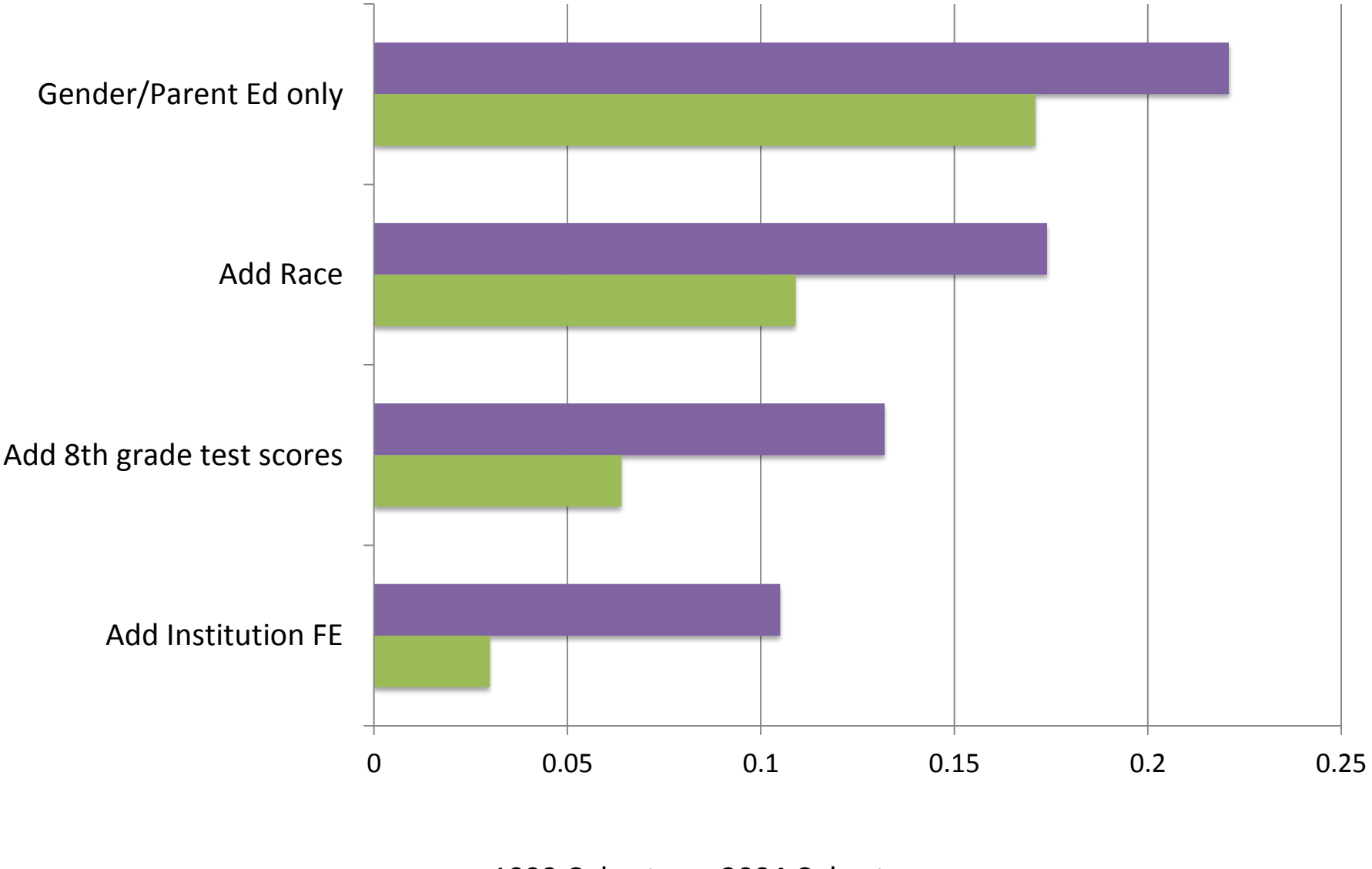

# Outcomes for Black Students Who Attended HBCUs

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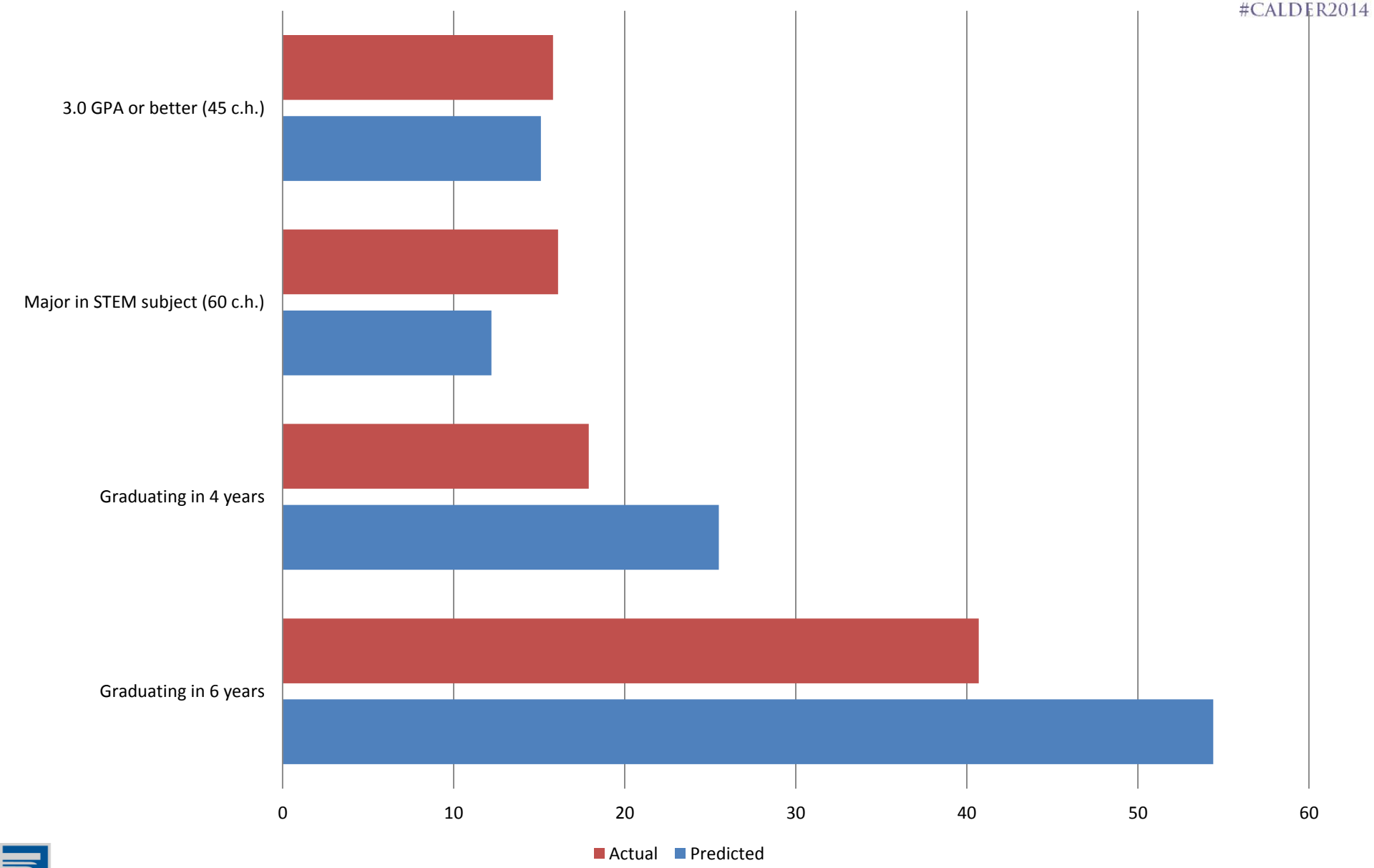

# Outcomes for High-Achieving, Low SES Students who Did Not Attend Chapel Hill or NC State

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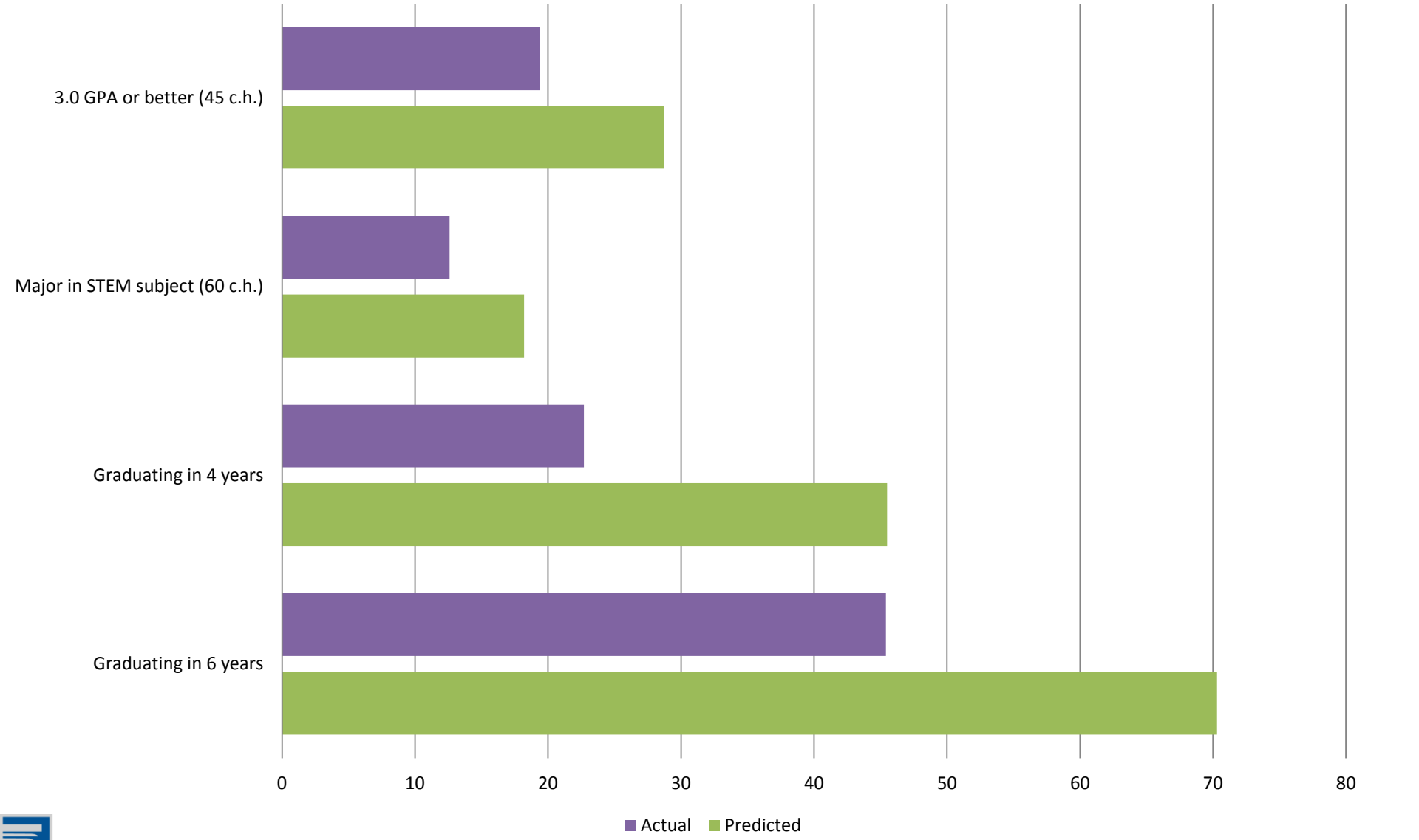


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# Conclusions

- As a whole, the UNC system serves to offset partially **racial** disparities in pre-college characteristics and outcomes.
- It does so in large part through its HBCUs.
- Owing to those HBCUs, the UNC system is actually more segregated by race than the state's secondary schools.
- The UNC system does not fully counteract **socioeconomic** disparities, and may in fact contribute to them.