

Merit and Success in Higher Education

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Merit and social standing

- Education is an increasingly important component of status attainment
 - (Baccalaureate) College attendance
 - Elite college attendance
 - College completion

Merit and higher education

- On what (defensible) basis do we ration postsecondary opportunities?
- How are these attributes related to baccalaureate completion?
- How (if at all) have these patterns changed over time?

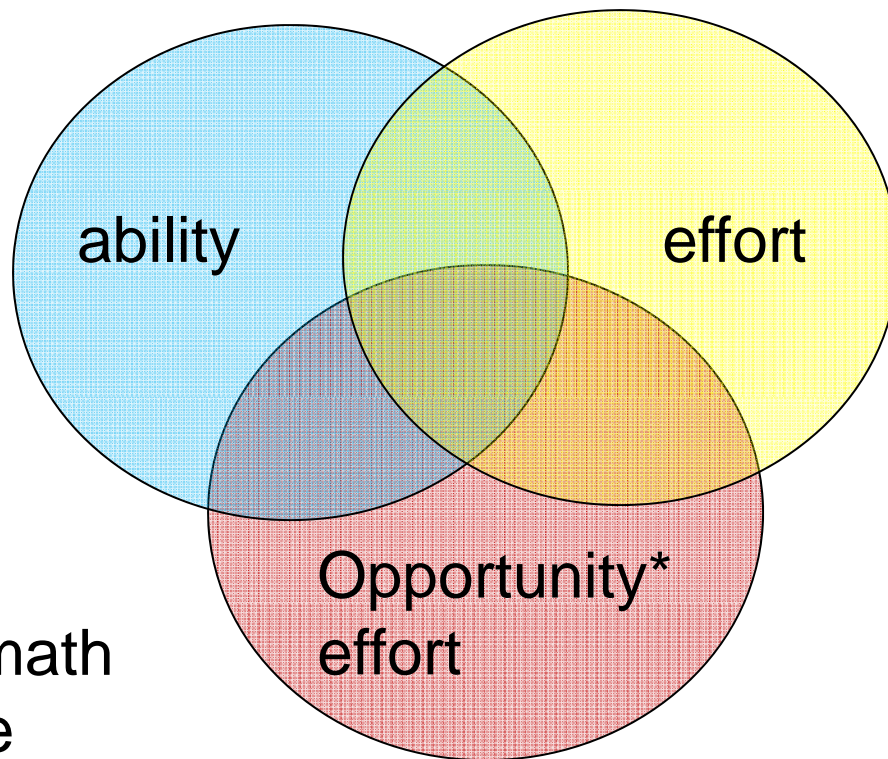
Merit and higher education

- Merit=IQ+effort
 - Standardized test scores: Snapshot of achievement at a point in time
 - High school GPA: Cumulative record of achievement and effort
 - Math course taking: Intersection of achievement, effort and structure

Measuring merit

Test scores

GPA



High math
course

Change over time

- Grade inflation->decline in signaling power of grades
- Increasing obsession with test scores
- Rise in math course taking

Data

- Sophomores in:
 - 1980 (High School and Beyond)
 - 1990 (NELS)
 - 2002 (ELS)
- who completed a GED or earned a diploma within 2 years of expected graduation

Data: outcomes

- Ever attend four year college
 - Ever attend elite college (Barron's highly or most competitive)
 - Earn baccalaureate degree

Data: key predictors

- Test scores in math and reading comprehension
 - Standardized within each study
- High school GPA from high school transcripts

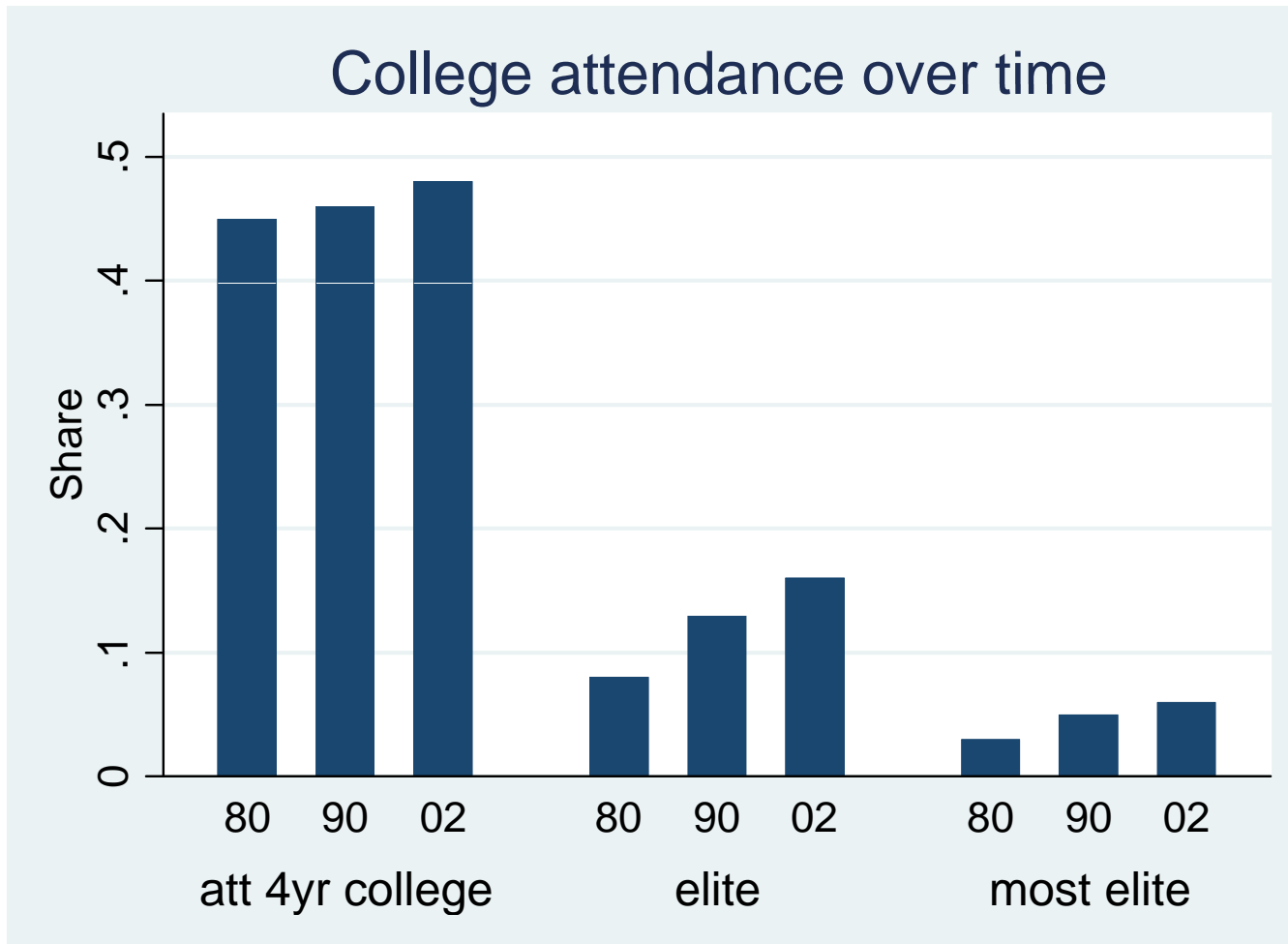
Data: key predictors

- Highest level of math completed in high school
 - Calculus
 - Pre-calculus
 - Advanced math
 - Algebra II
 - < algebra 2

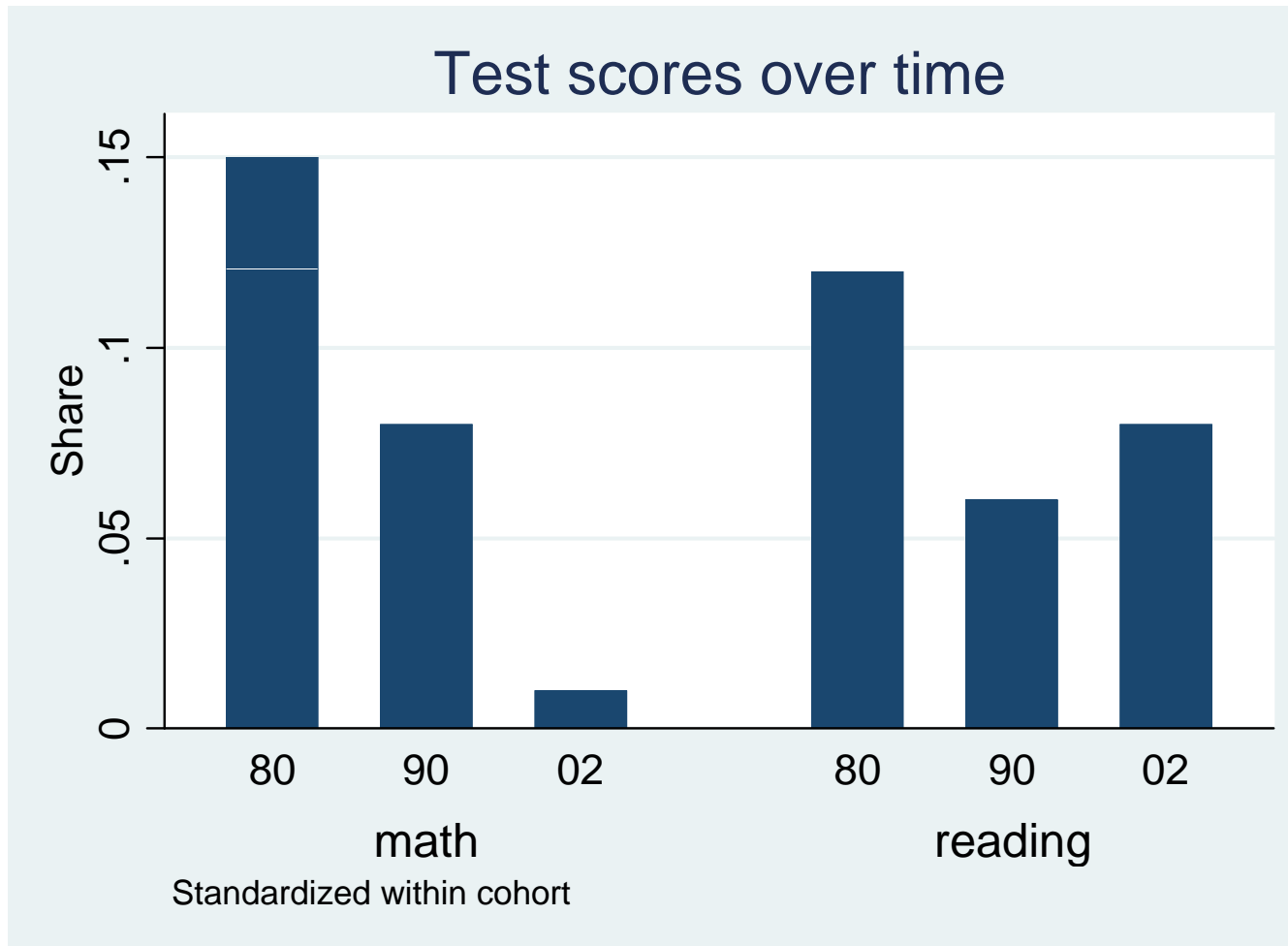
Data: controls

- Sex
- Race/ethnicity
- Parental education
- School offers calculus, pre-calculus

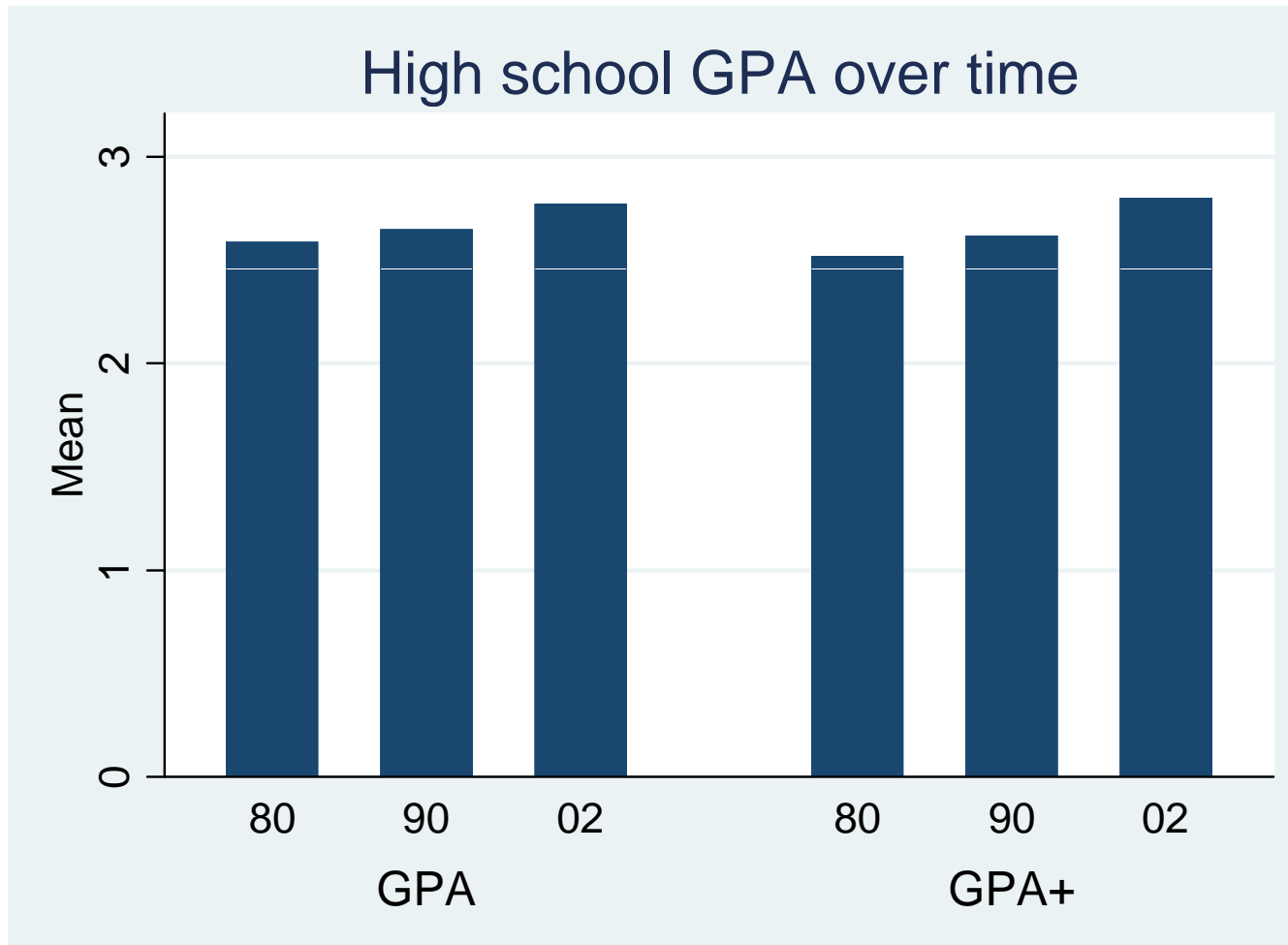
Trends in key outcomes



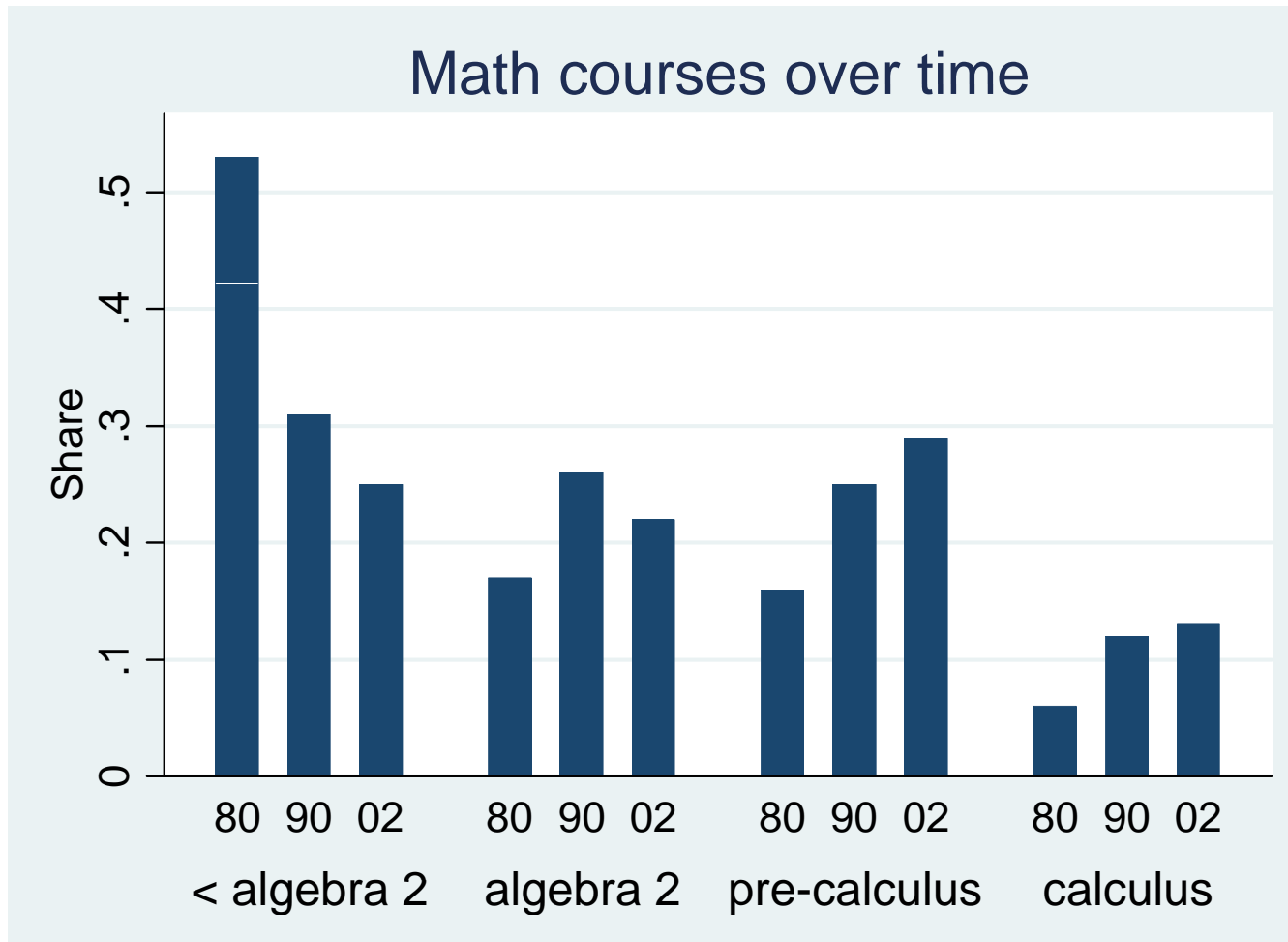
Trends in key predictors



Trends in key predictors



Trends in key predictors



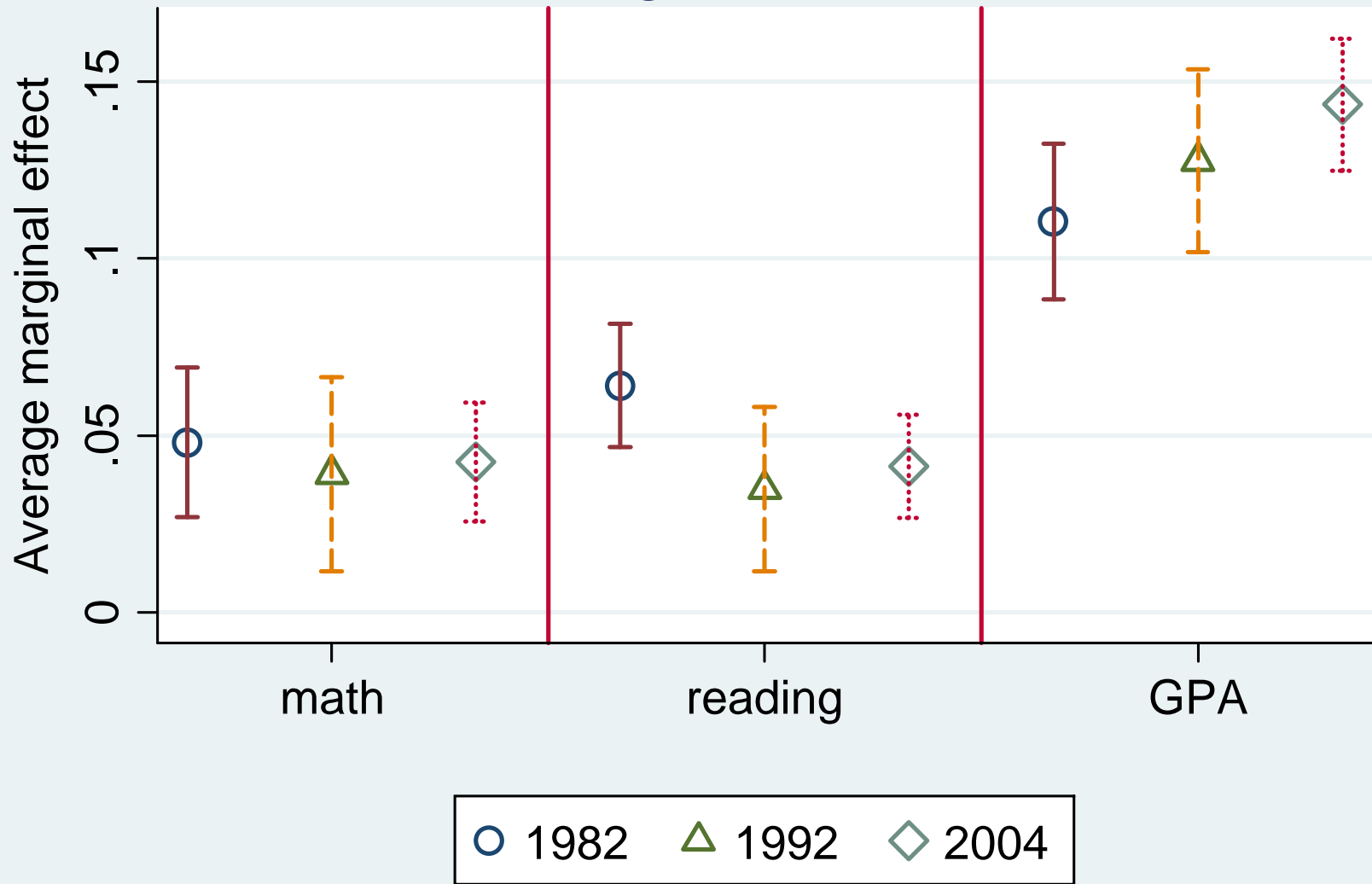
Models

- Logistic regression
 - Use panel weights
 - Adjust standard errors for clustering on sampled schools
 - Listwise deletion

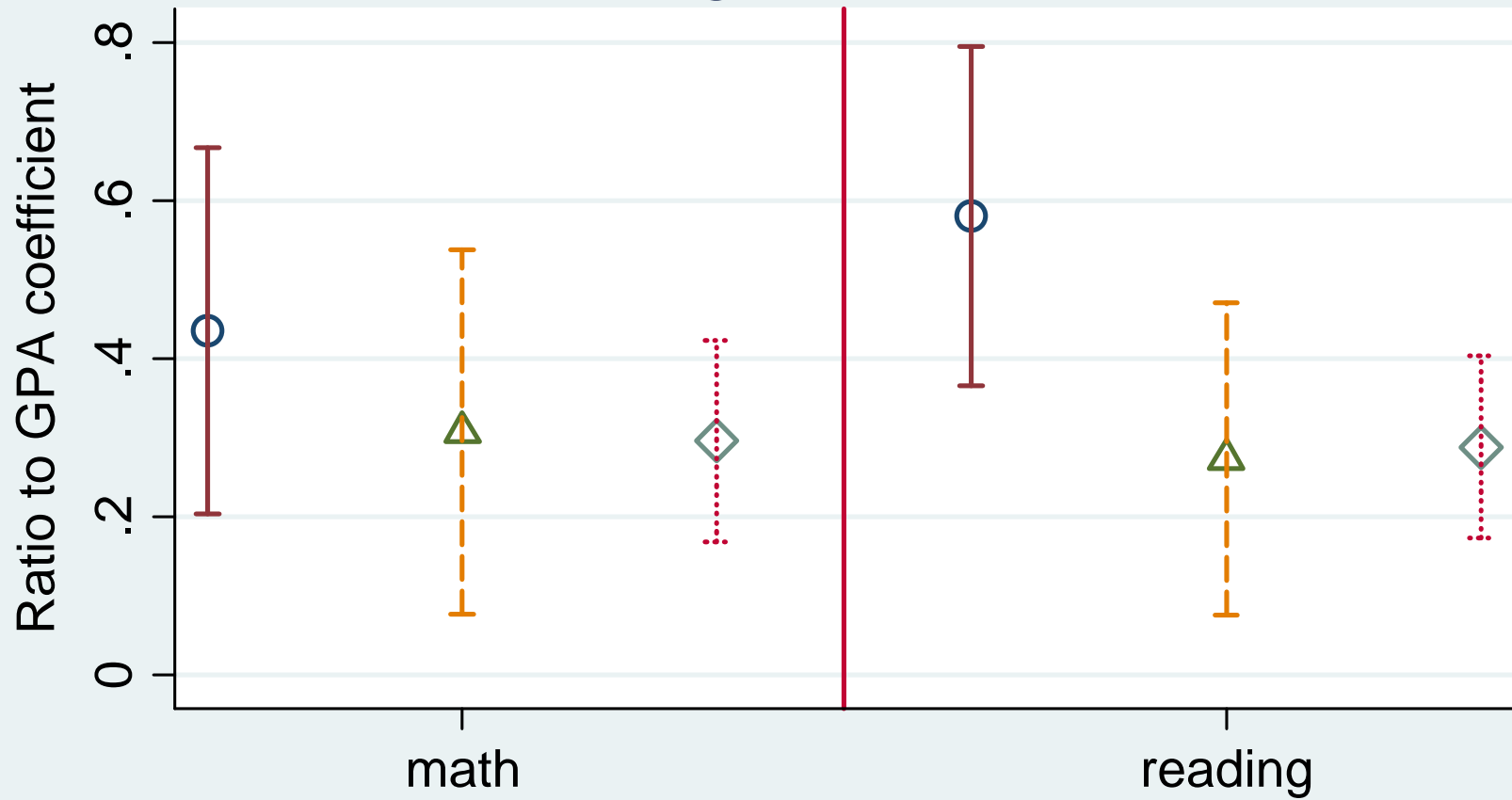
Models

- Present average marginal effects and coefficient ratios
 - AMEs reflect expected average change in probability of outcome
 - Coefficient ratios standardize within sample on GPA coefficient

College attendance

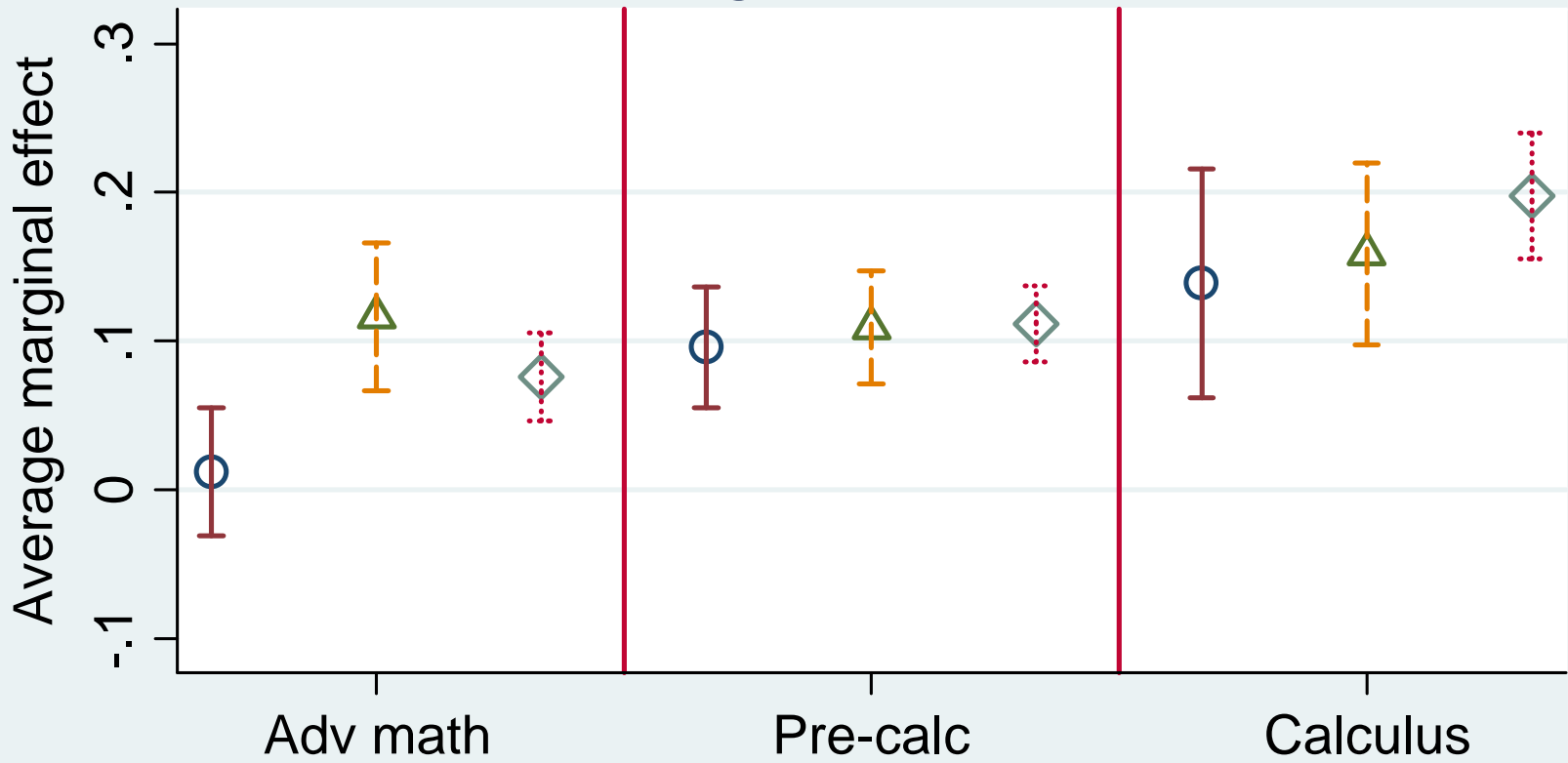


College attendance



○ 1982 △ 1992 ◇ 2004

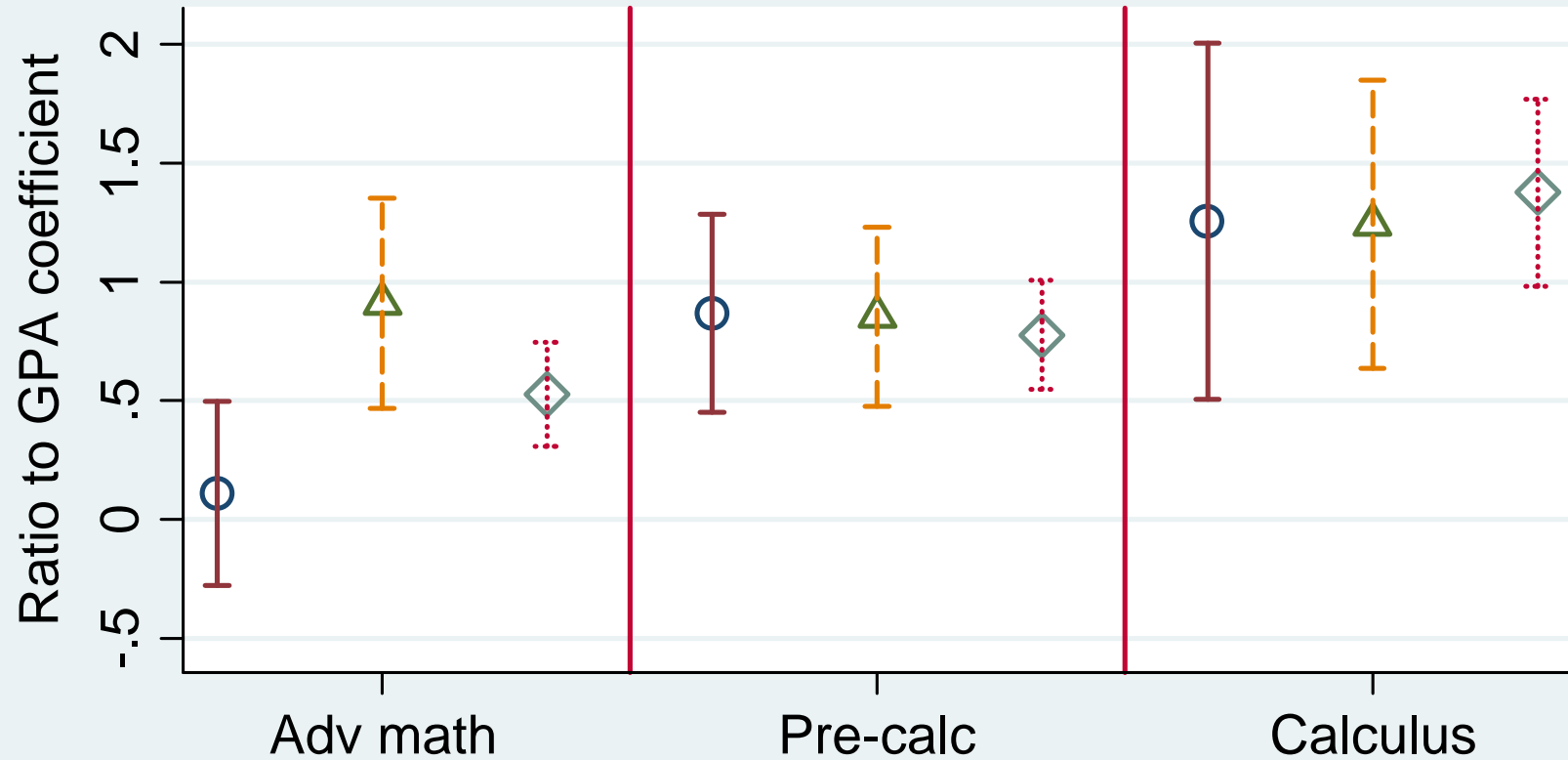
College attendance



○ 1982 △ 1992 ◇ 2004

Algebra 2 omitted

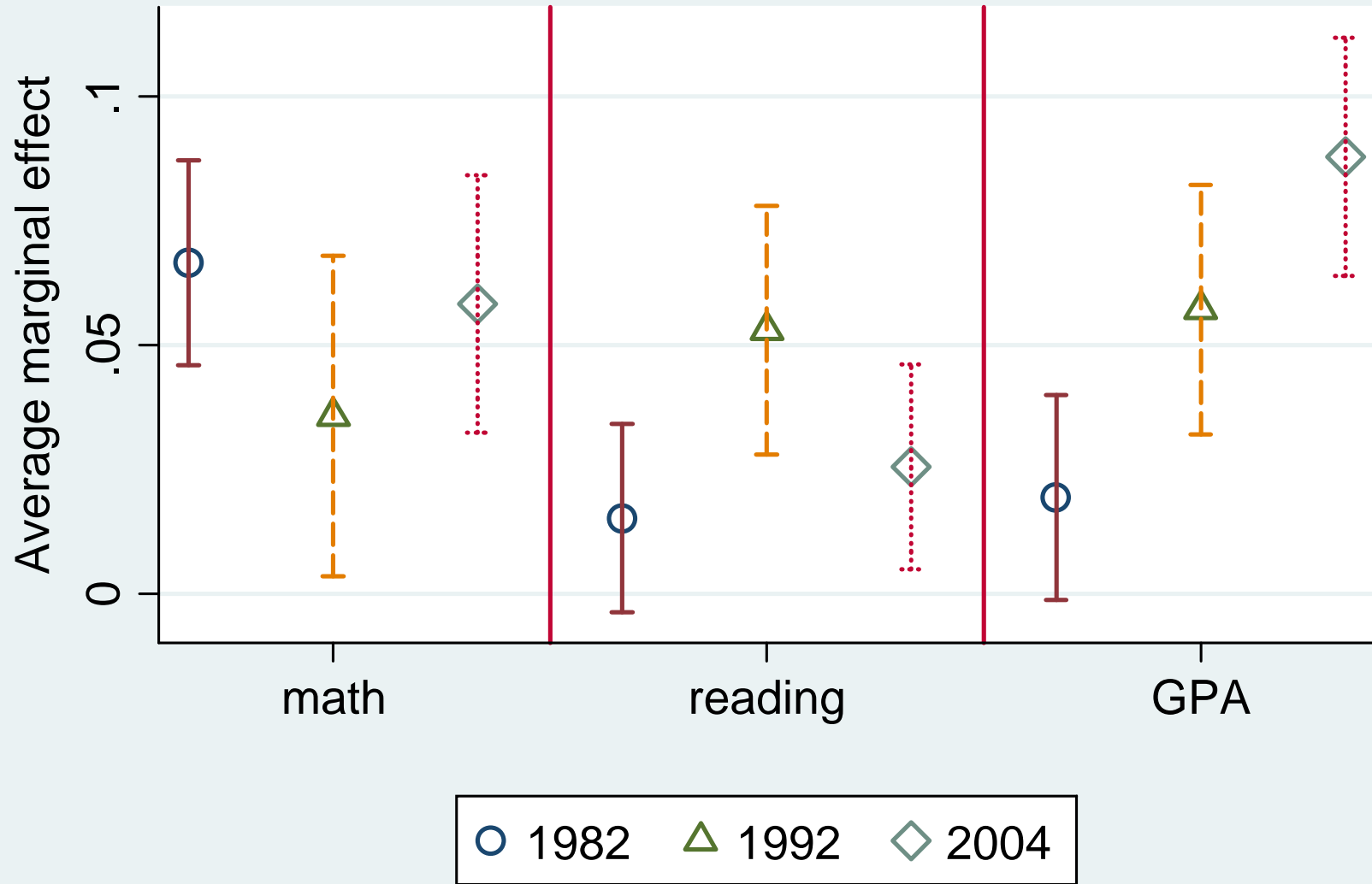
College attendance



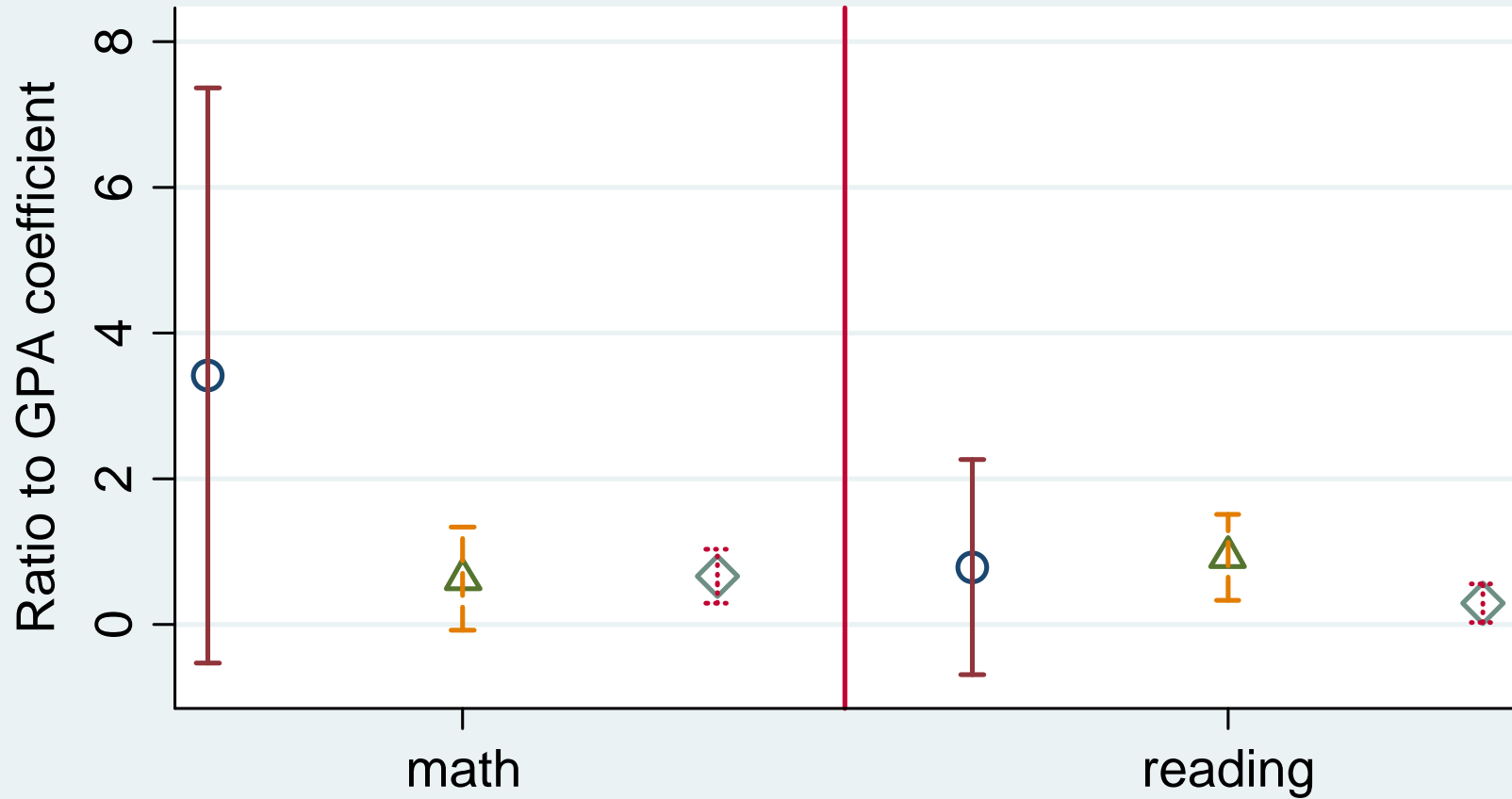
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Algebra 2 omitted

Elite college attendance

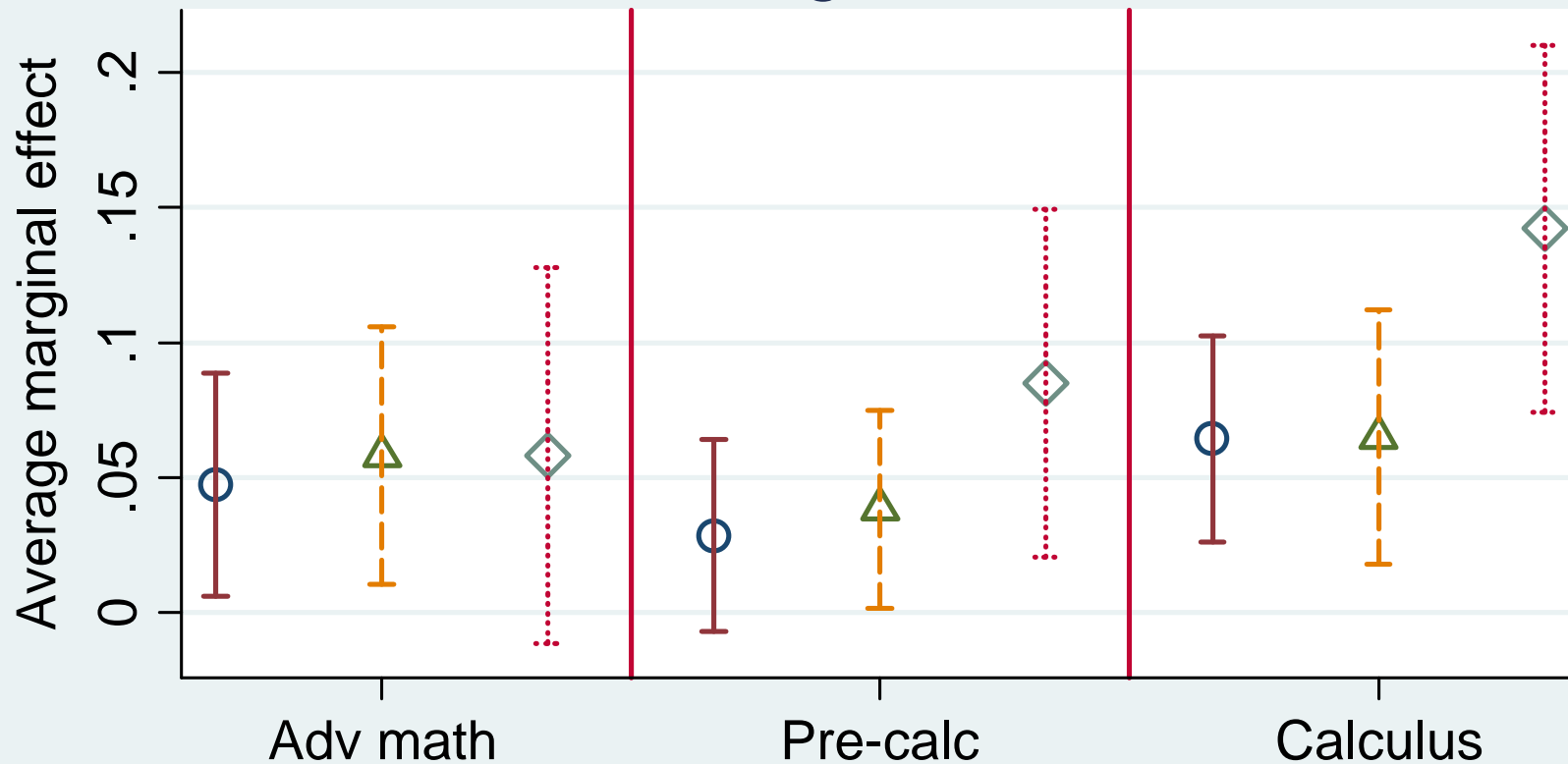


Elite college attendance



○ 1982 △ 1992 ◇ 2004

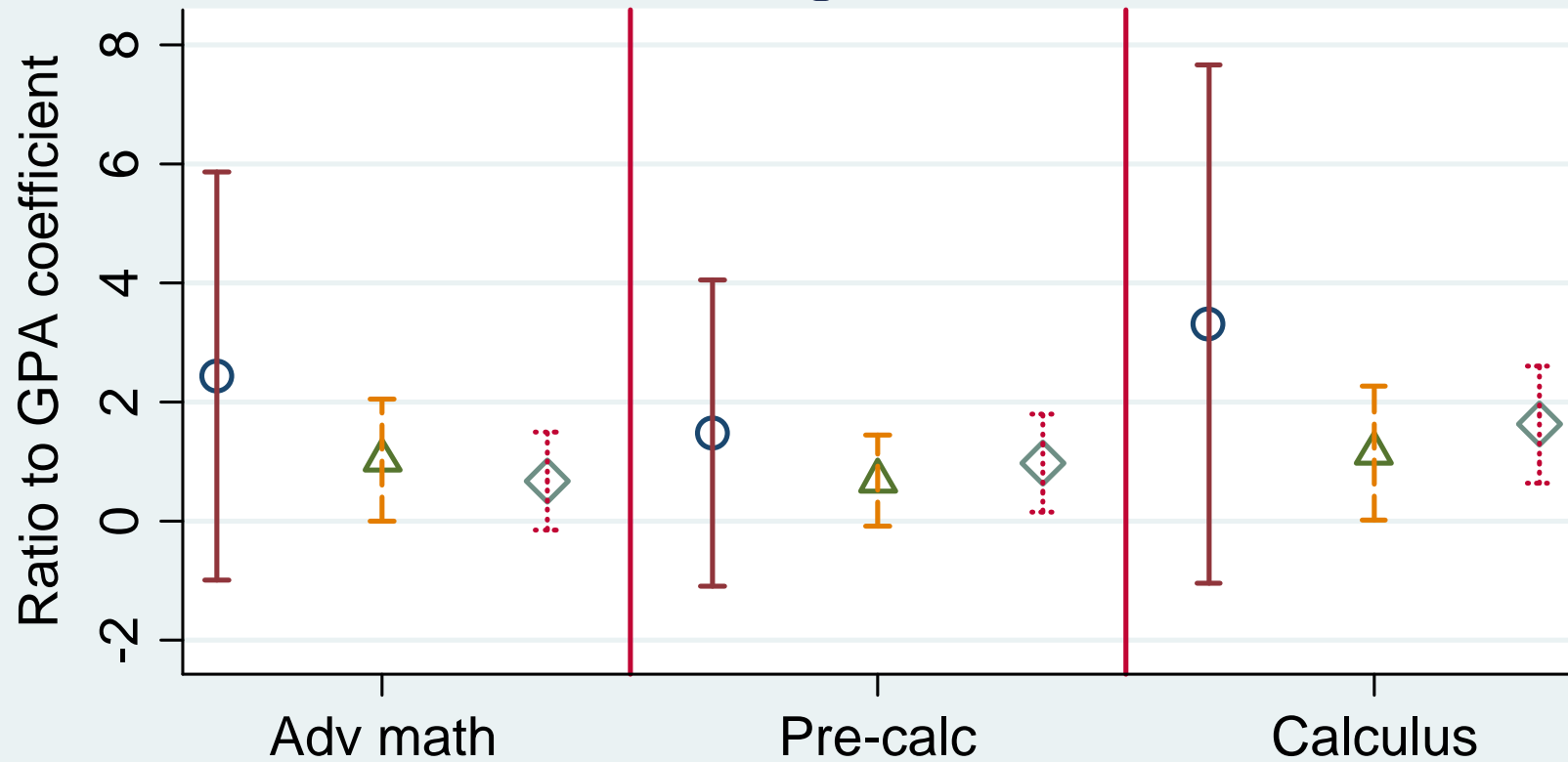
Elite college attendance



○ 1982 △ 1992 ◇ 2004

Algebra 2 omitted

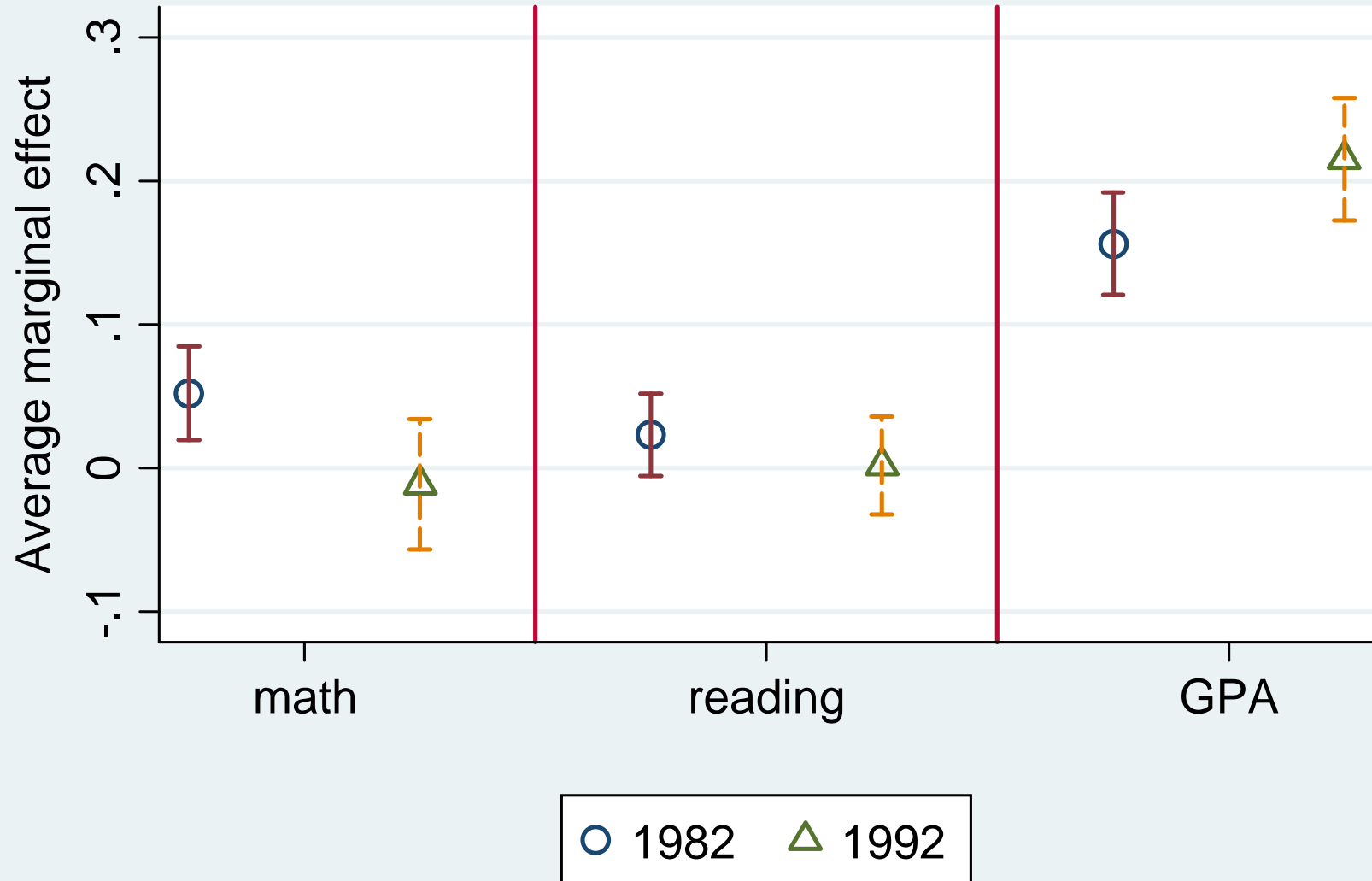
Elite college attendance



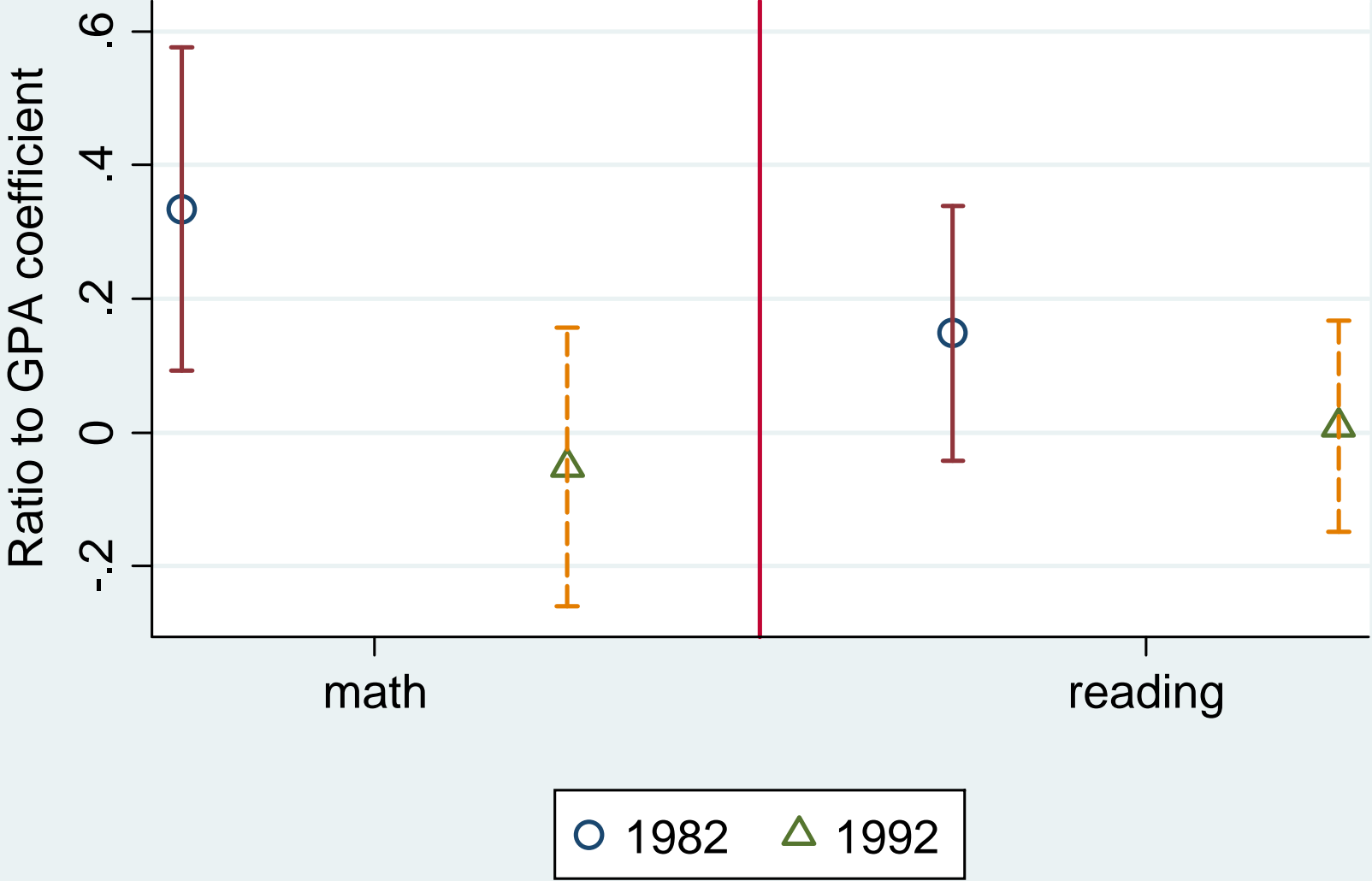
○ 1982 △ 1992 ◇ 2004

Algebra 2 omitted

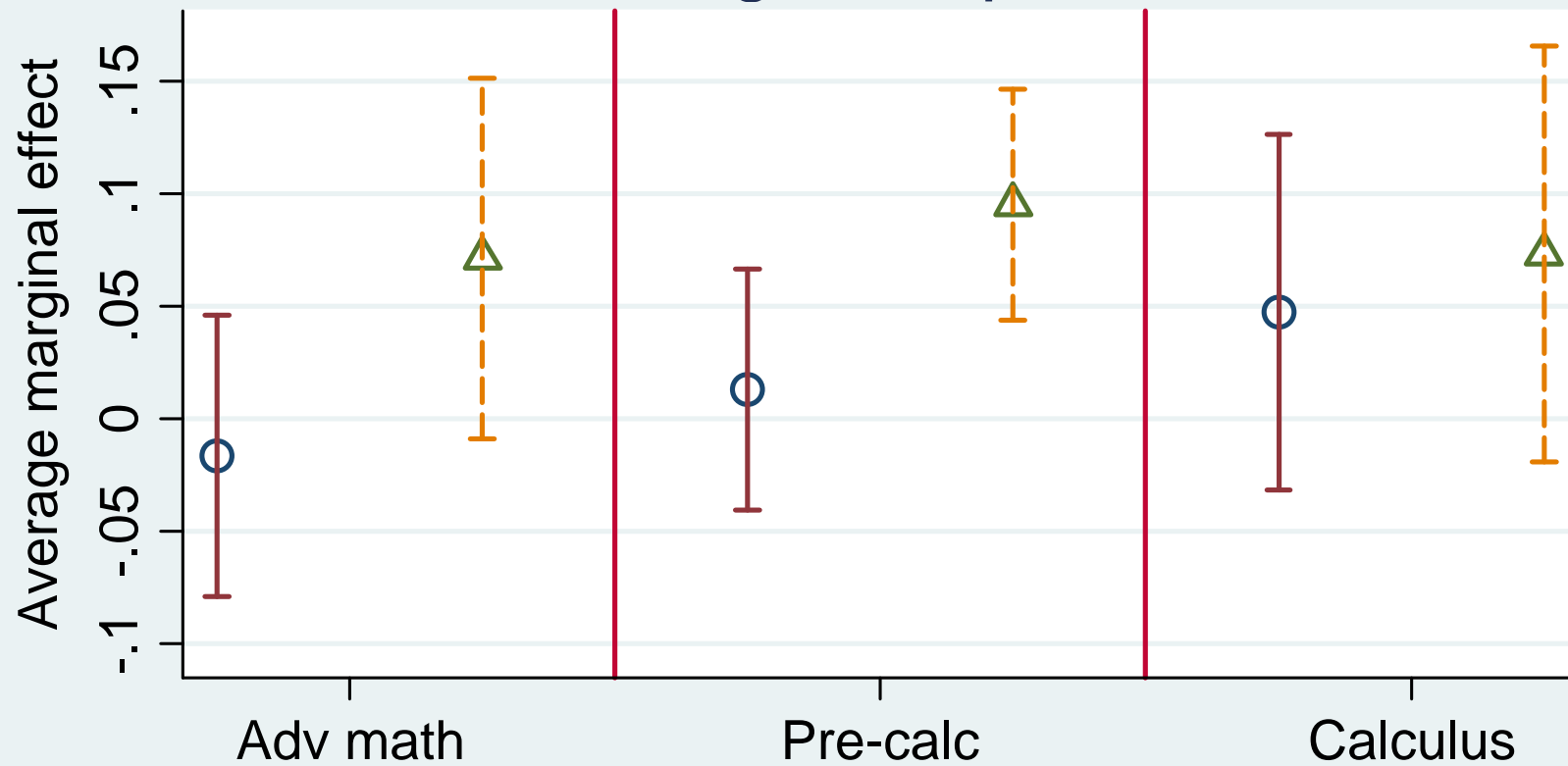
College completion



College completion



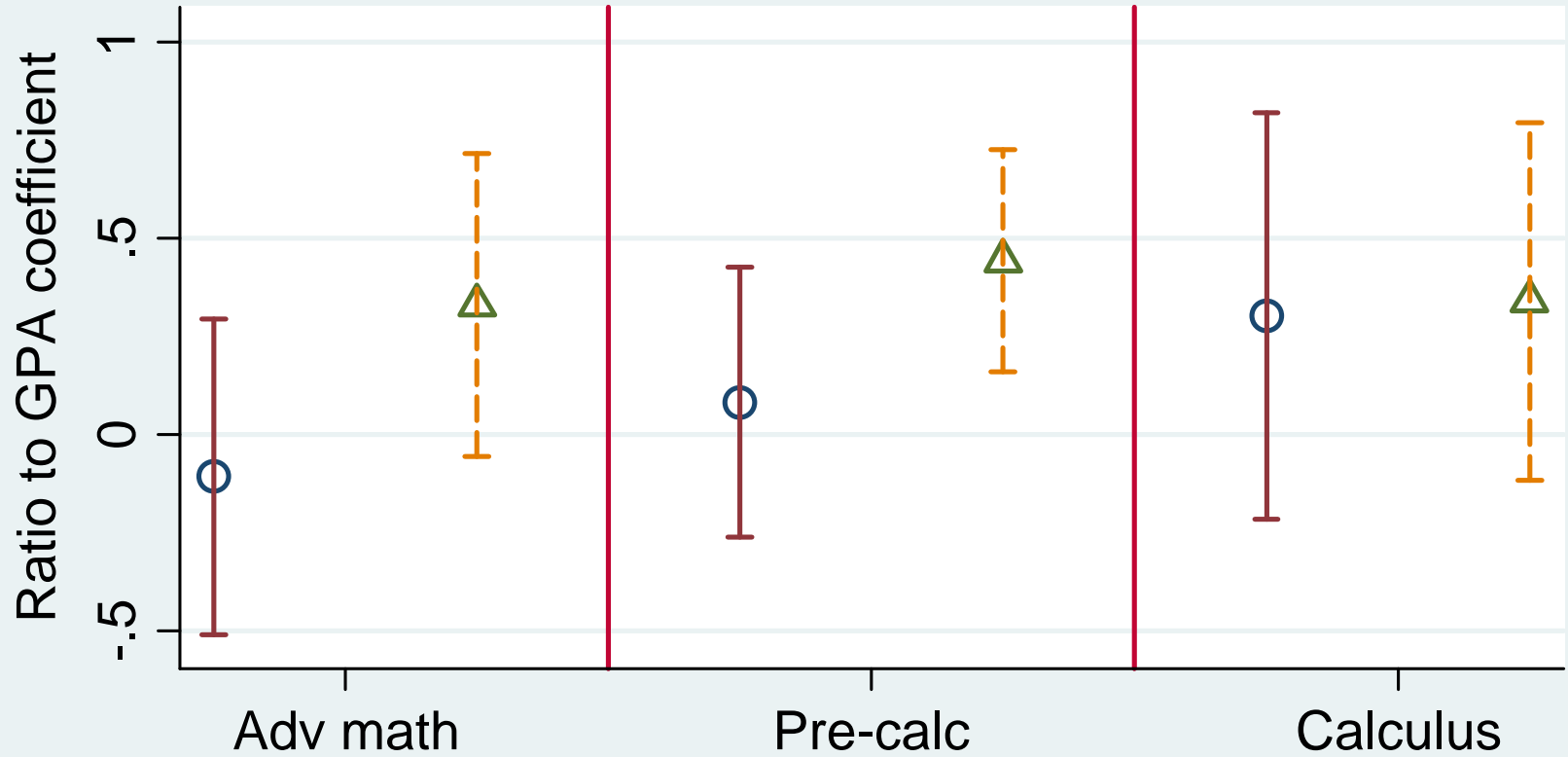
College completion



○ 1982 △ 1992

Algebra 2 omitted

College completion



○ 1982 △ 1992

Algebra 2 omitted

Summary

- Grades have always mattered more than test scores for attendance and completion
 - If anything, relative importance of grades is on the rise

Summary

- Effects on elite college less clear, but suggest possible rise in the relative importance of grades.

Effort and ability

- America has always been deeply ambivalent about which to accord the greater weight
- Importance of effort appears to be on the rise