

# California's Early Assessment Program: Assessing Intended and Unintended Consequences

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# Presentation Outline

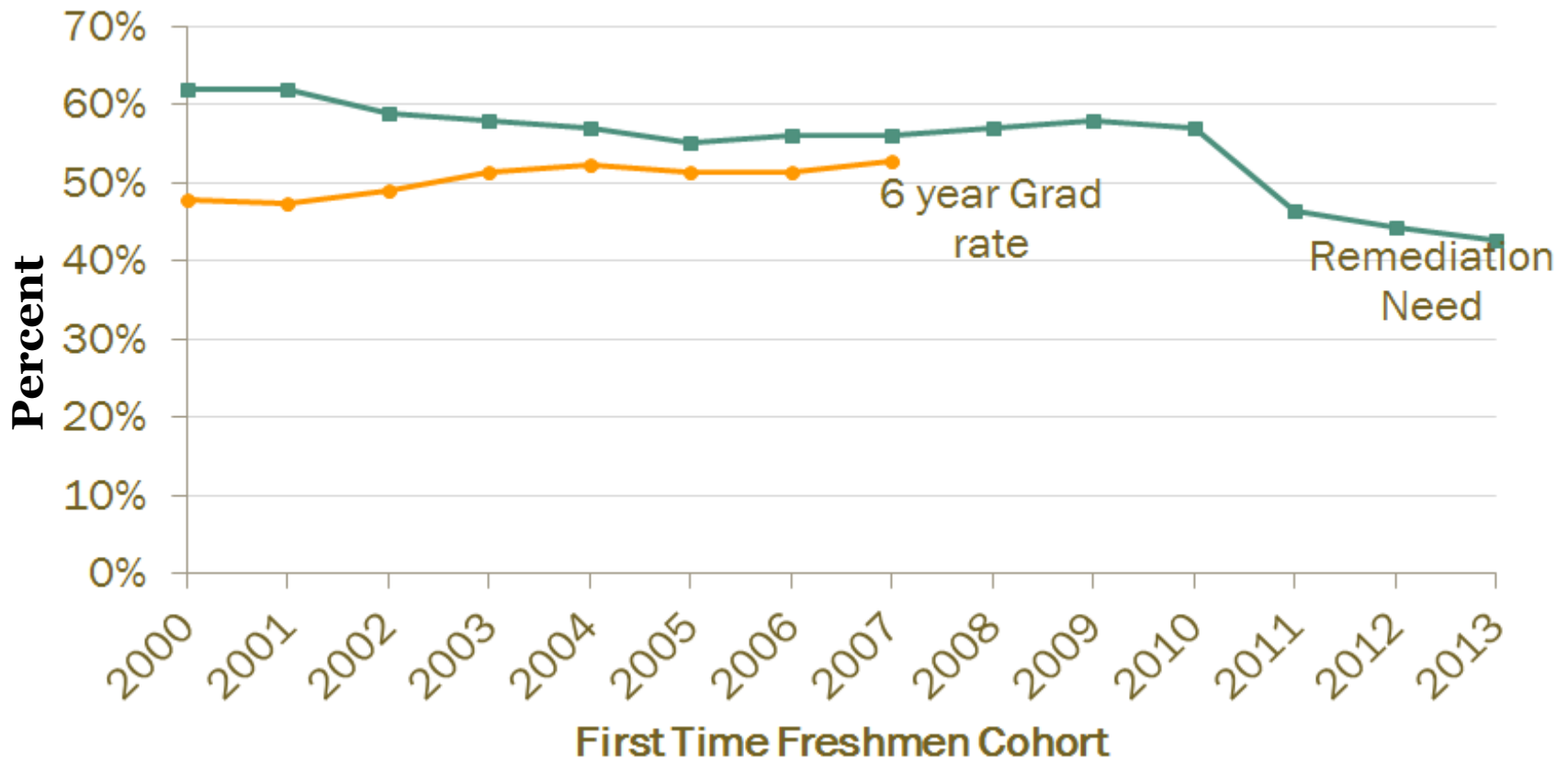
1. Background on the EAP
2. The Intended Impacts of the EAP
3. Unintended consequences and mechanisms of the EAP
4. Future Research on the EAP and College Readiness

Section 1

# **BACKGROUND ON THE EAP**

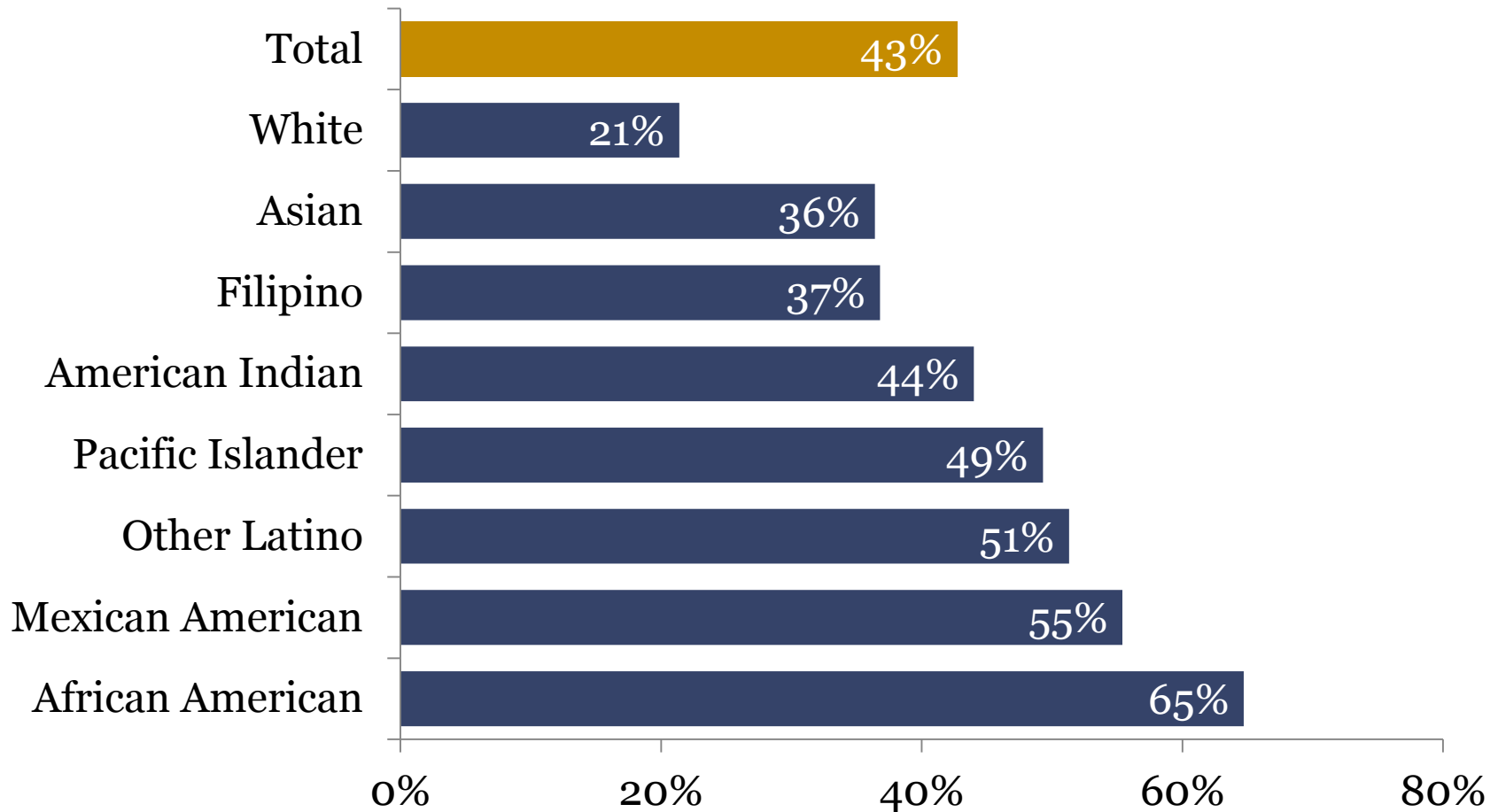
# High remediation and low graduation rates at CSUs

Percent of students requiring some remediation at CSU system and six-year graduation rates by cohort

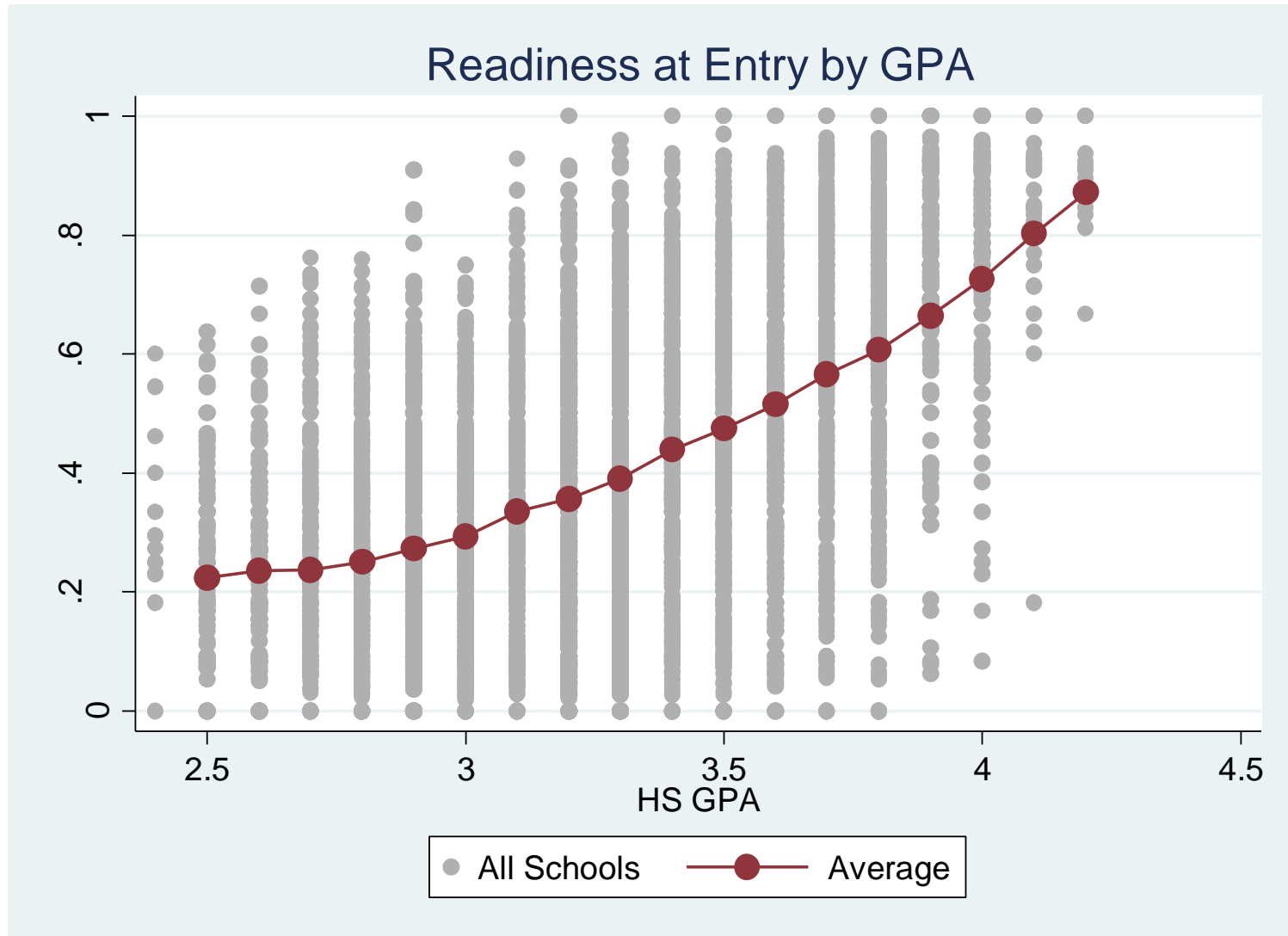


# Remediation need varies by race

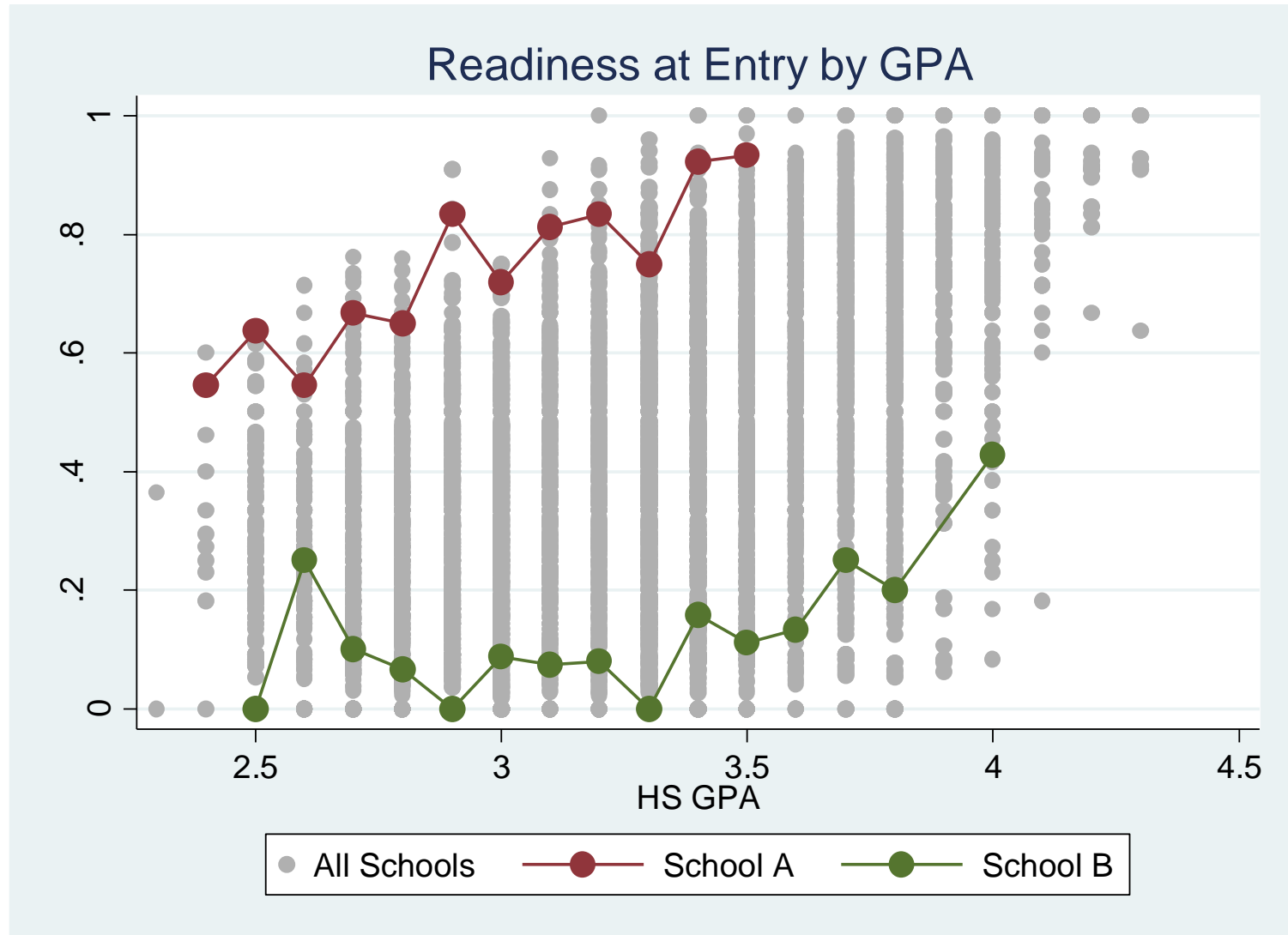
## Percent of students Requiring remediation at CSU in 2013



# College Readiness by High School



# “Readiness” Differs by High School





# Early Assessment Program Overview

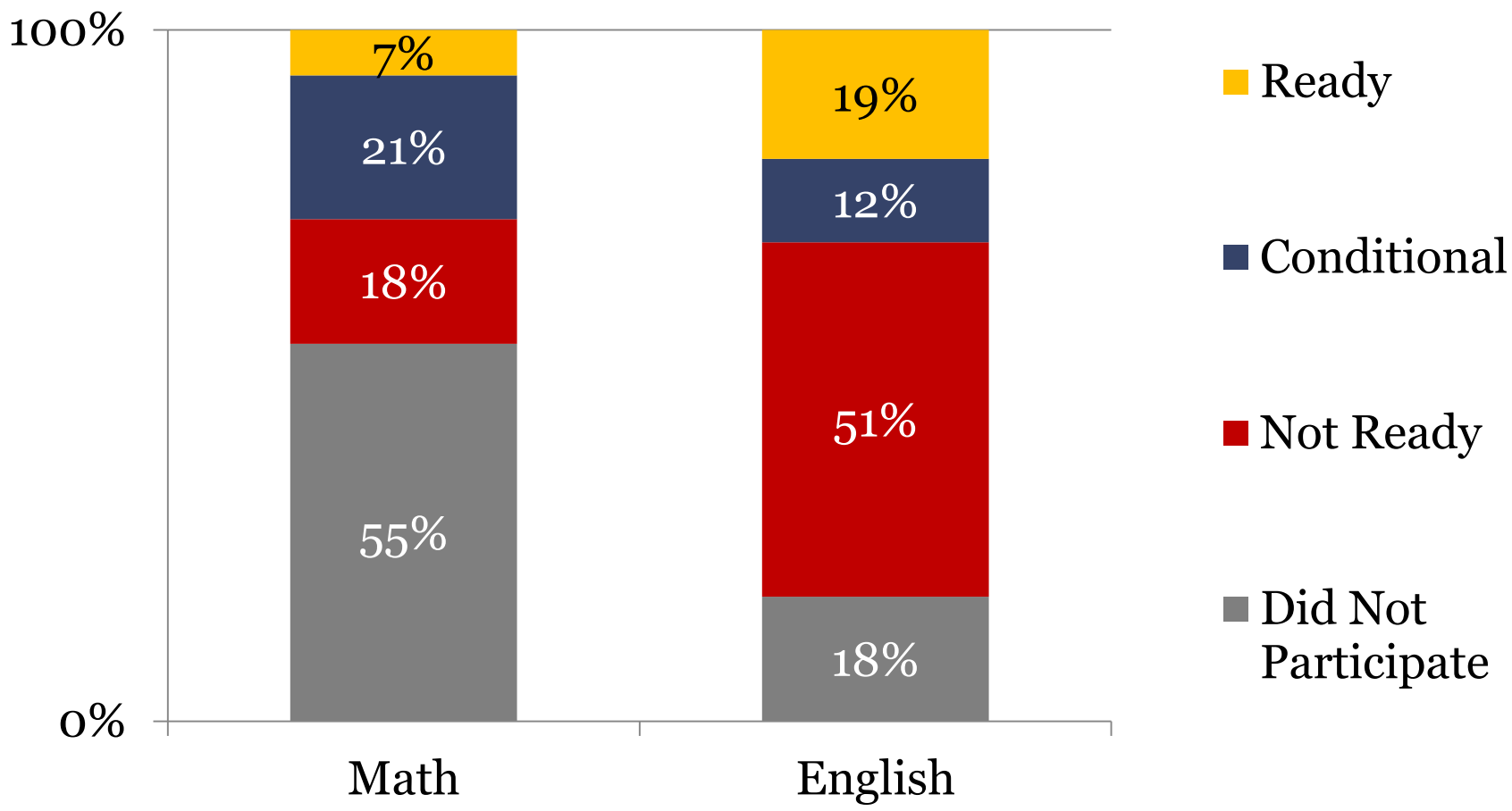
- Goals of EAP:
  - Provide an early signal to students about their college readiness
  - California State University collaboration with K-12
  - Provide 12<sup>th</sup> grade interventions
- Components of EAP:
  - 11<sup>th</sup> grade testing (early assessment)
  - Professional development for teachers
  - Supplemental preparation for students

# The EAP sends a college readiness signal to 11<sup>th</sup> grade students

- Optional 11<sup>th</sup> grade test in English and Mathematics
  - Optional 15 questions on 11<sup>th</sup> grade CST
  - Additional items developed by CSU faculty
  - Score based on CST augmented with EAP items
- Potential college readiness signals
  - Exempt from remedial courses at a CSU
  - Conditional Exempt from remedial courses at CSU
  - Not exempt from remedial courses at a CSU

# Most students are not Ready for College Level Work

## 2013 EAP Test Results



Section 2

# **THE INTENDED IMPACTS OF THE EAP**

# Intended Consequences: Research Questions

- How does participation in California's Early Assessment Program affect a student's probability of requiring remedial coursework in college?
- Does the effect of the program differ for different students?

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- How does participation in California's Early Assessment Program affect a student's probability of requiring remedial coursework in college?
- Does the effect of the program differ for different students?

# Data

- CSU Chancellor's Office
  - Six cohorts of first-time freshman applicants (2000/01 – 2005/06)
- California Department of Education
  - Matched CSU applicants (enrollees) to CST scores, EAP participation, other student and high school characteristics

# Creating a Counterfactual

## Pre-EAP Cohorts

Non-participants

## Post-EAP Cohorts

Participants

Non-participants



# Intent to Treat

## Pre-EAP Cohorts

Non-participants

## Post-EAP Cohorts

Participants

Non-participants



# Impact of Participation

## Pre-EAP Cohorts

Non-participants

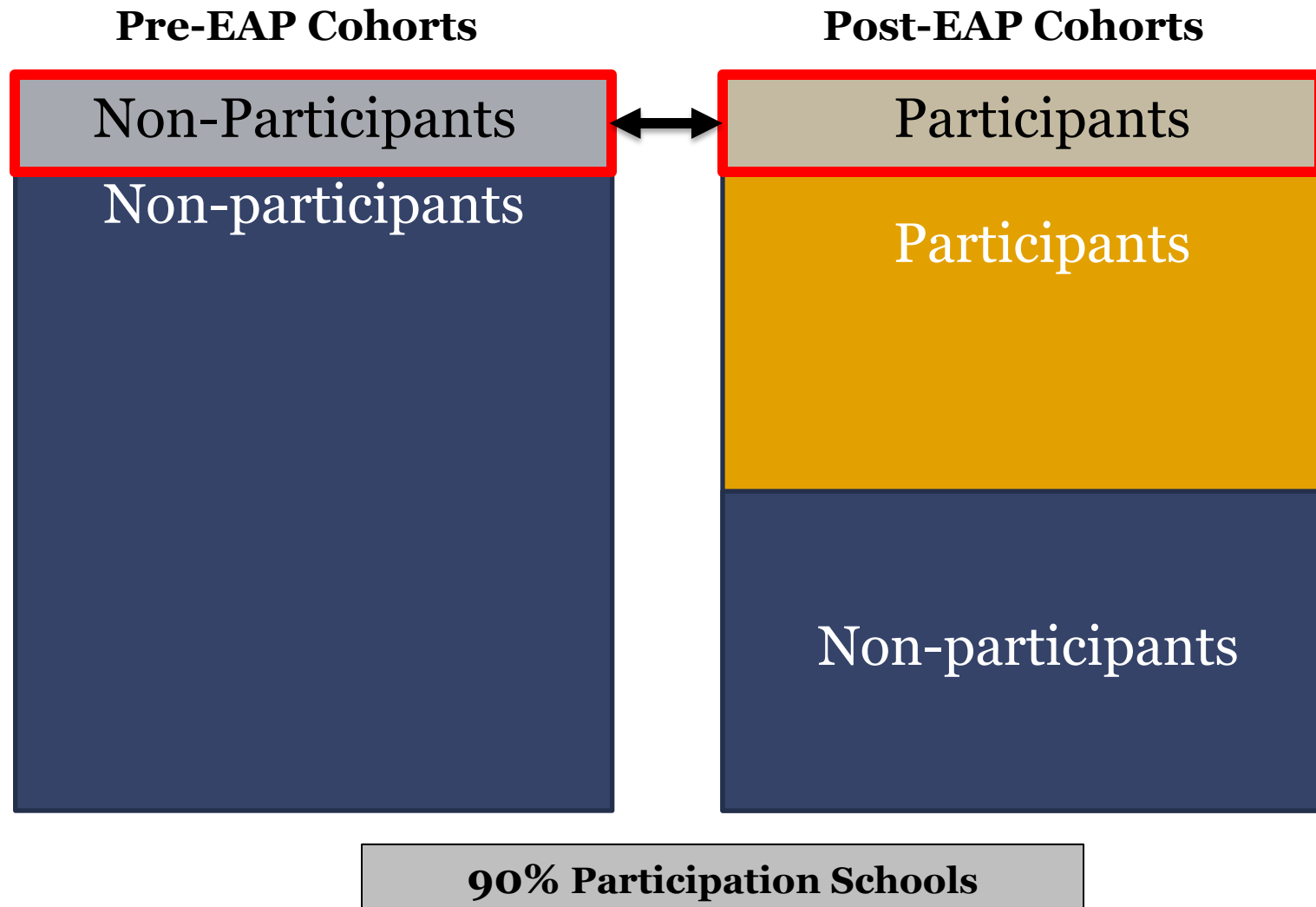
## Post-EAP Cohorts

Participants

Non-participants

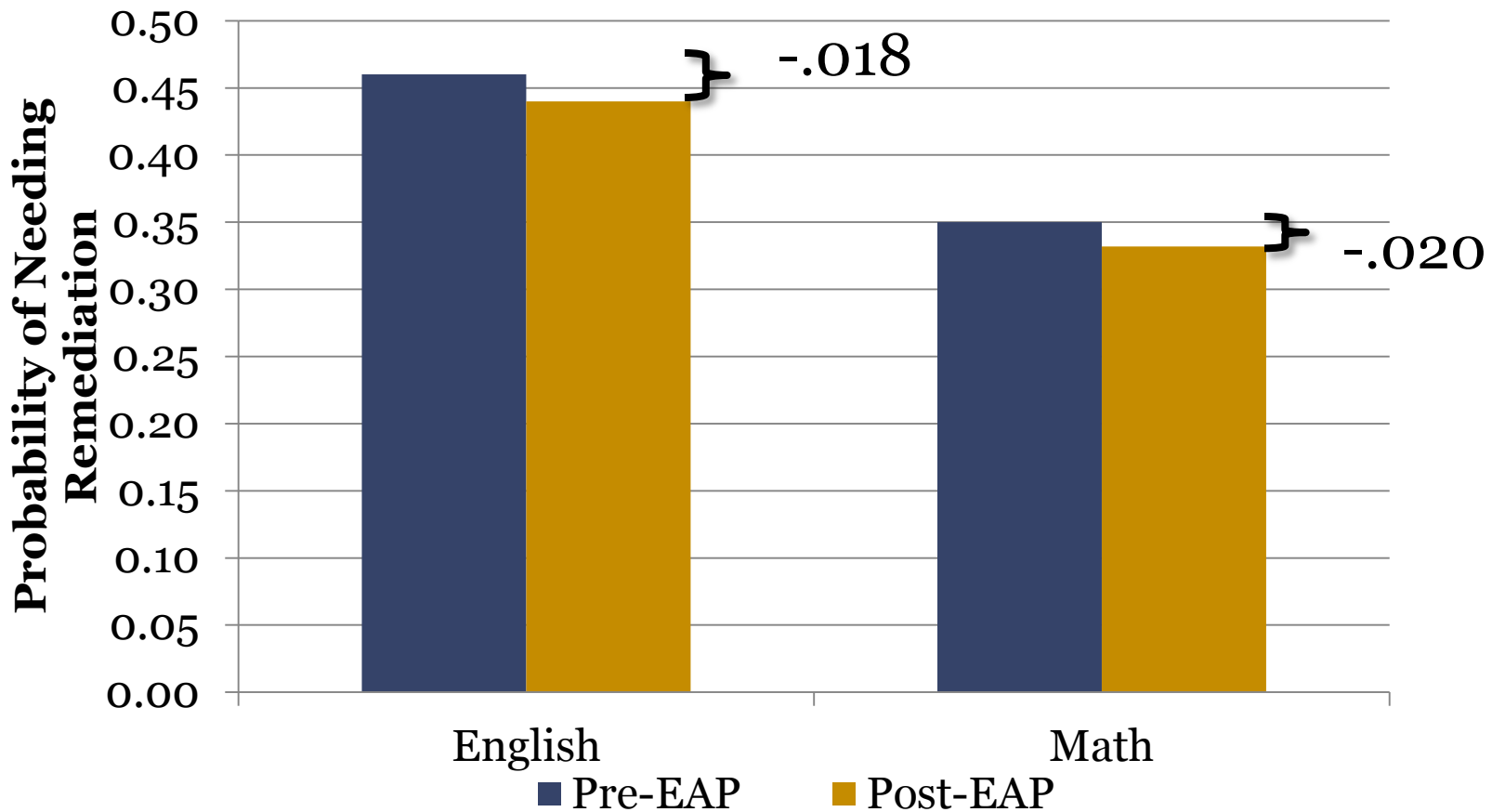


# Impact of participation at high participation schools



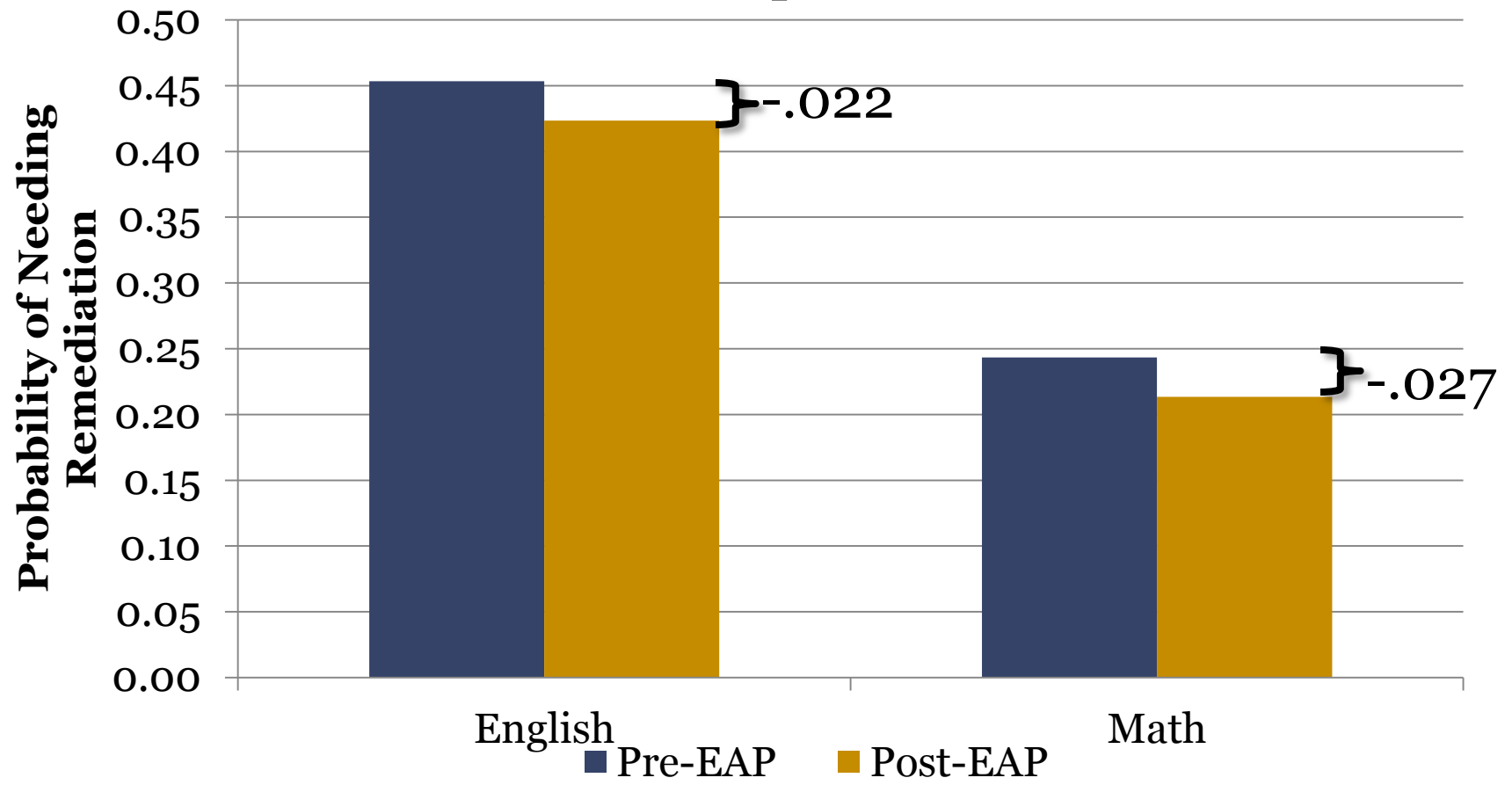
# The implementation of the EAP is related to lower likelihood of requiring remediation

### Fitted Values for Remediation Rates (ITT)



# Participation in the EAP is related to lower likelihood of requiring remediation

## Fitted Values for Remediation Rates (For 90% Participation Schools)

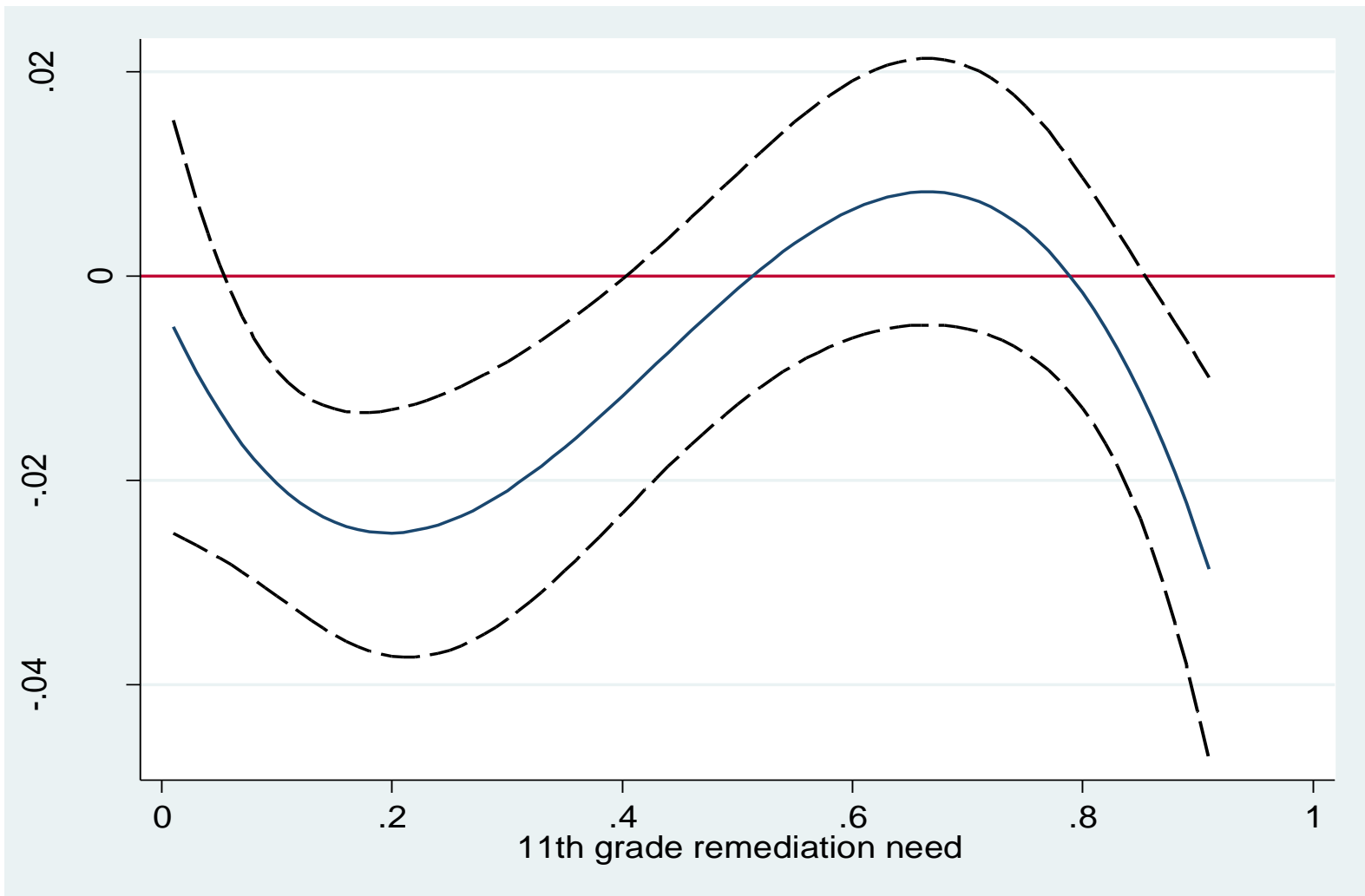


# Intended Consequences: Research Questions

- How does participation in California's Early Assessment Program affect a student's probability of requiring remedial coursework in college?
- Does the effect of the program differ for different students?

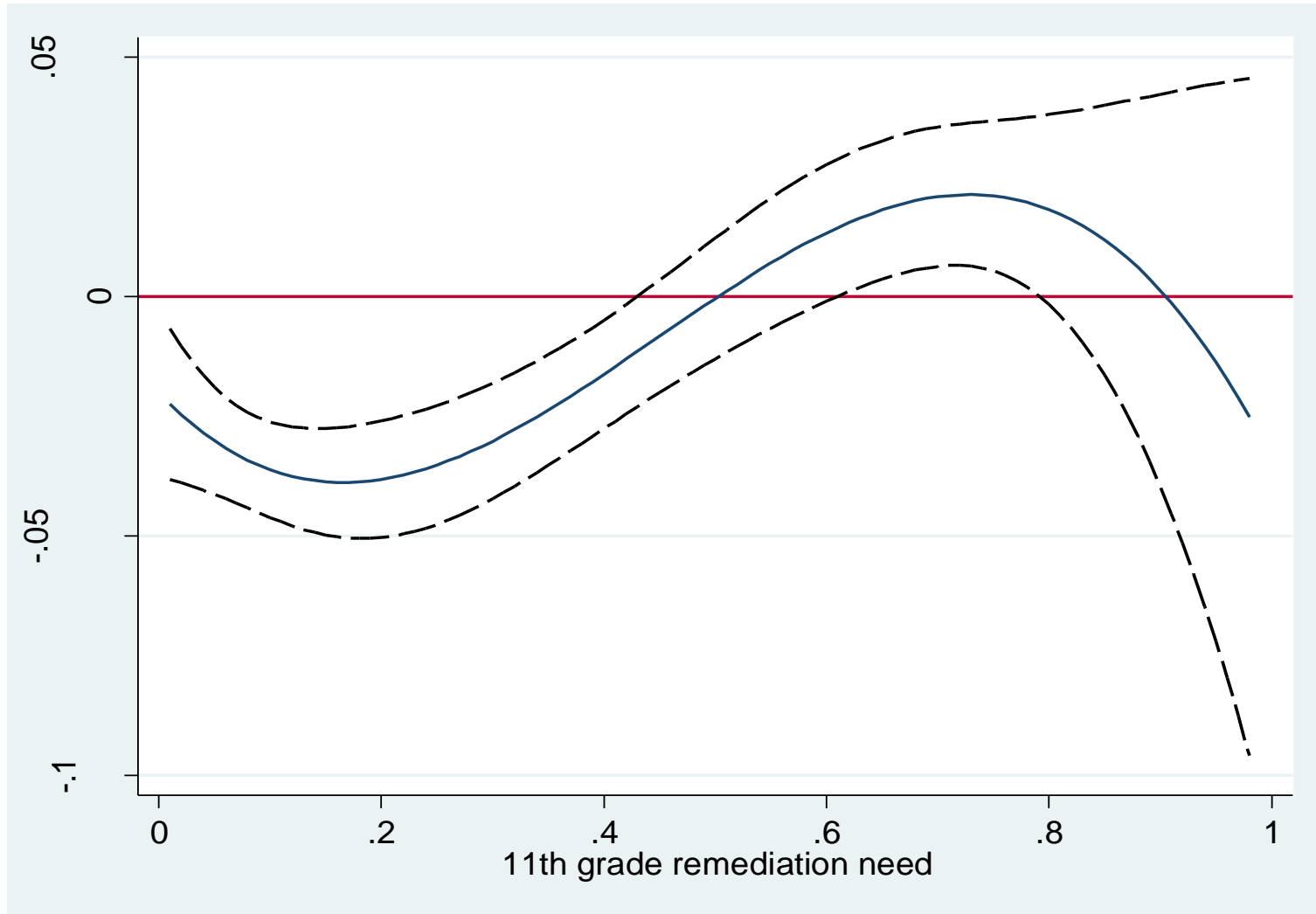
# Students with the lowest probability of needing remediation seem to benefit the most

Estimated EAP Effect at Different Levels of Need for English Remediation



# Students with the lowest probability of needing remediation seem to benefit the most

Estimated EAP Effect at Different Levels of Need for Math Remediation





## Summary: Impacts of the EAP Program

- The EAP policy led to a modest reduction in the probability that CSU freshmen require remediation.
- EAP participation leads to a modest (1 to 2 percentage point) reduction in the probability that CSU freshmen require remediation.
- The program had larger effects for students who were less likely to need remediation

Section 3

**UNINTENDED  
CONSEQUENCES AND  
MECHANISMS OF THE EAP**

# Unintended Consequences and Mechanisms: Research Questions

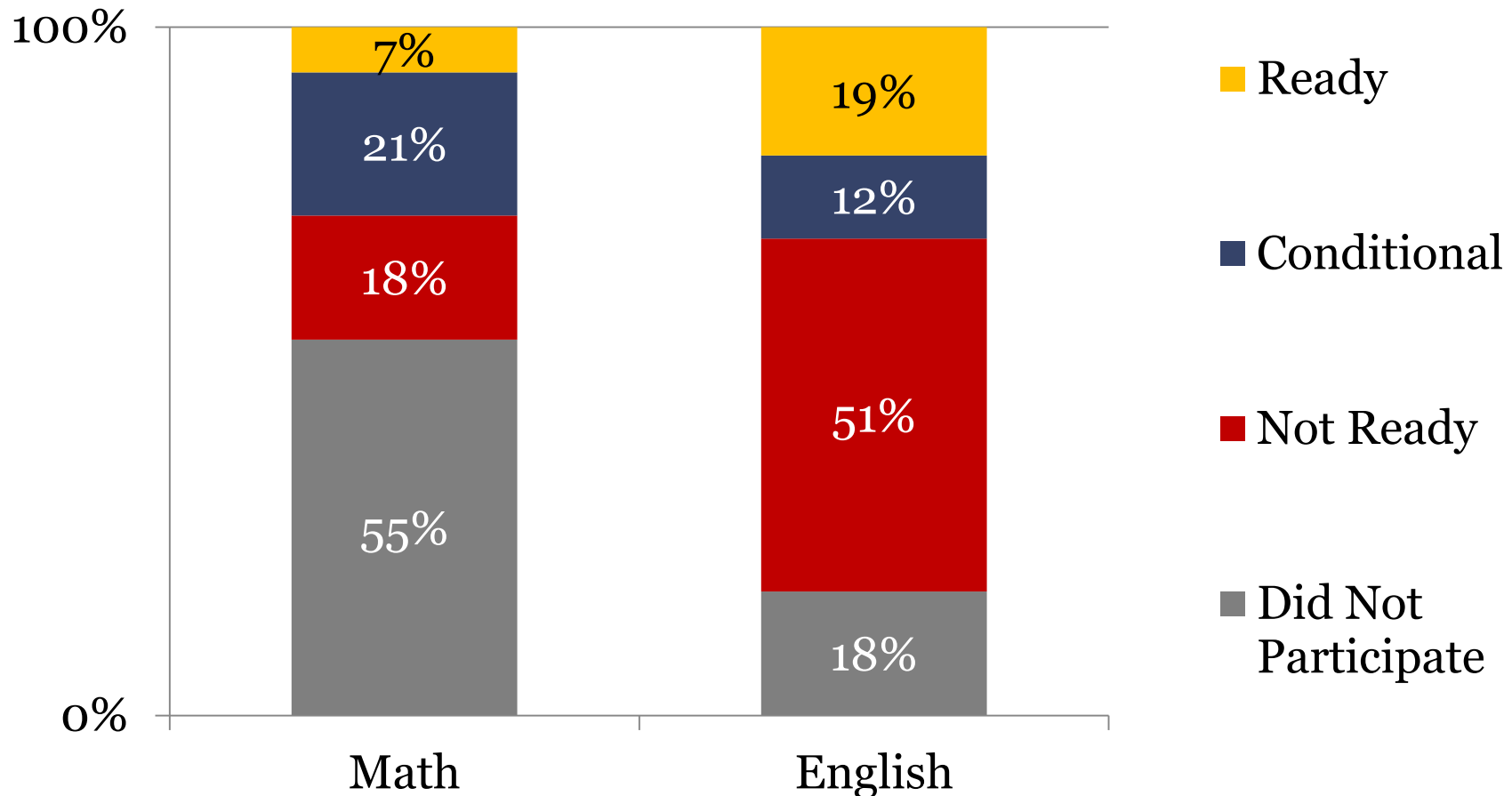
1. Does the EAP discourage CSU enrollment?
2. Does the EAP encourage math course-taking in 12<sup>th</sup> grade?
3. How does the EAP impact high school accountability measures?
4. Has there been an impact of the EAP on community colleges?

# Unintended Consequences and Mechanisms: Research Questions

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# Most students are not Ready for College Level Work

## 2013 EAP Test Results



# How did the EAP reduce the need for remediation?

*Option 1:* Students are motivated by a not-exempt signal to improve in their senior year.

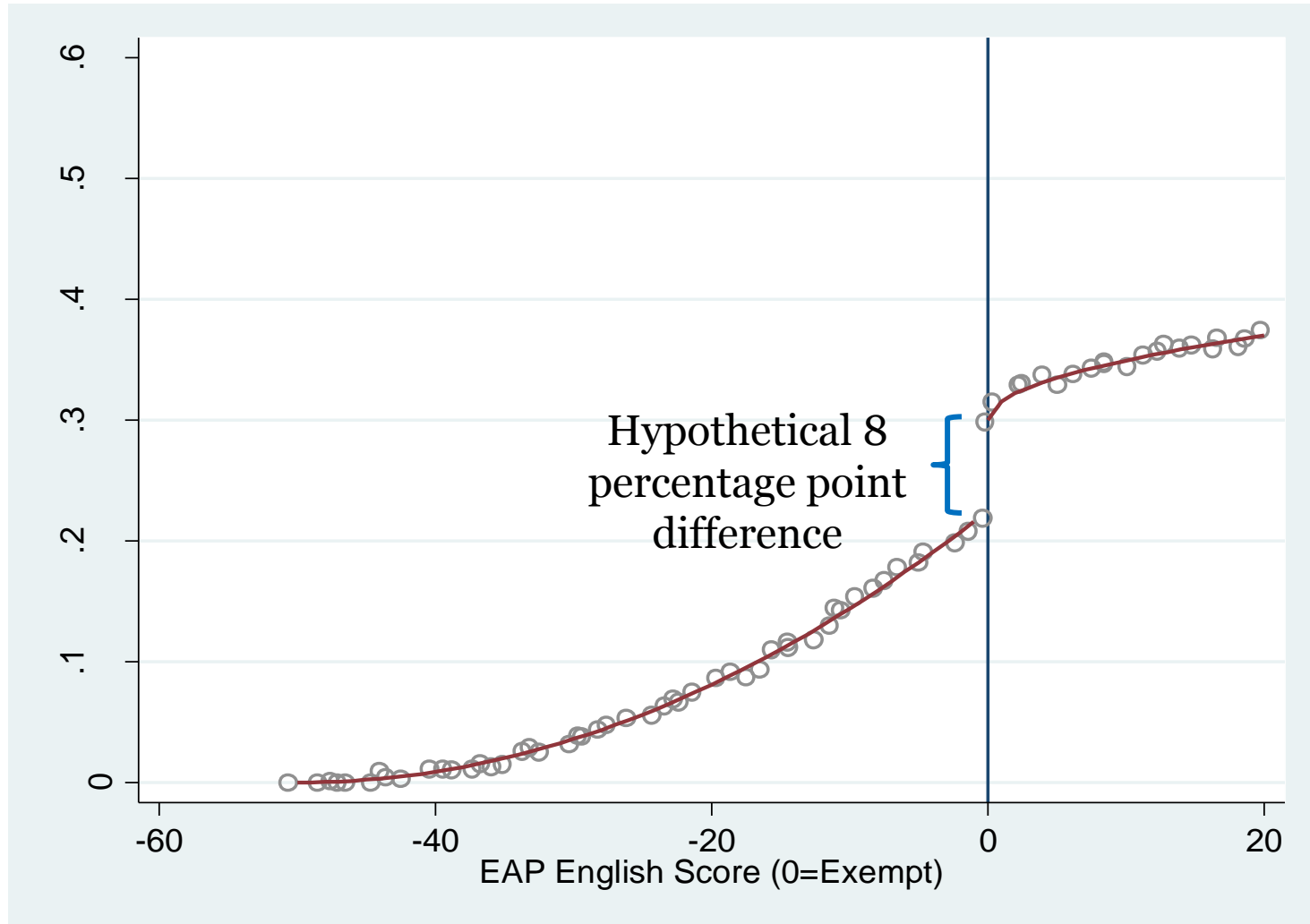
*Option 2:* Students receiving a not-exempt signal are discouraged from attending a CSU.

# Testing the impact of the college readiness signal

- Outcomes:
  - CSU Application
  - CSU Enrollment
- Predictor:
  - Readiness signal (exempt status)

# Example regression discontinuity effect

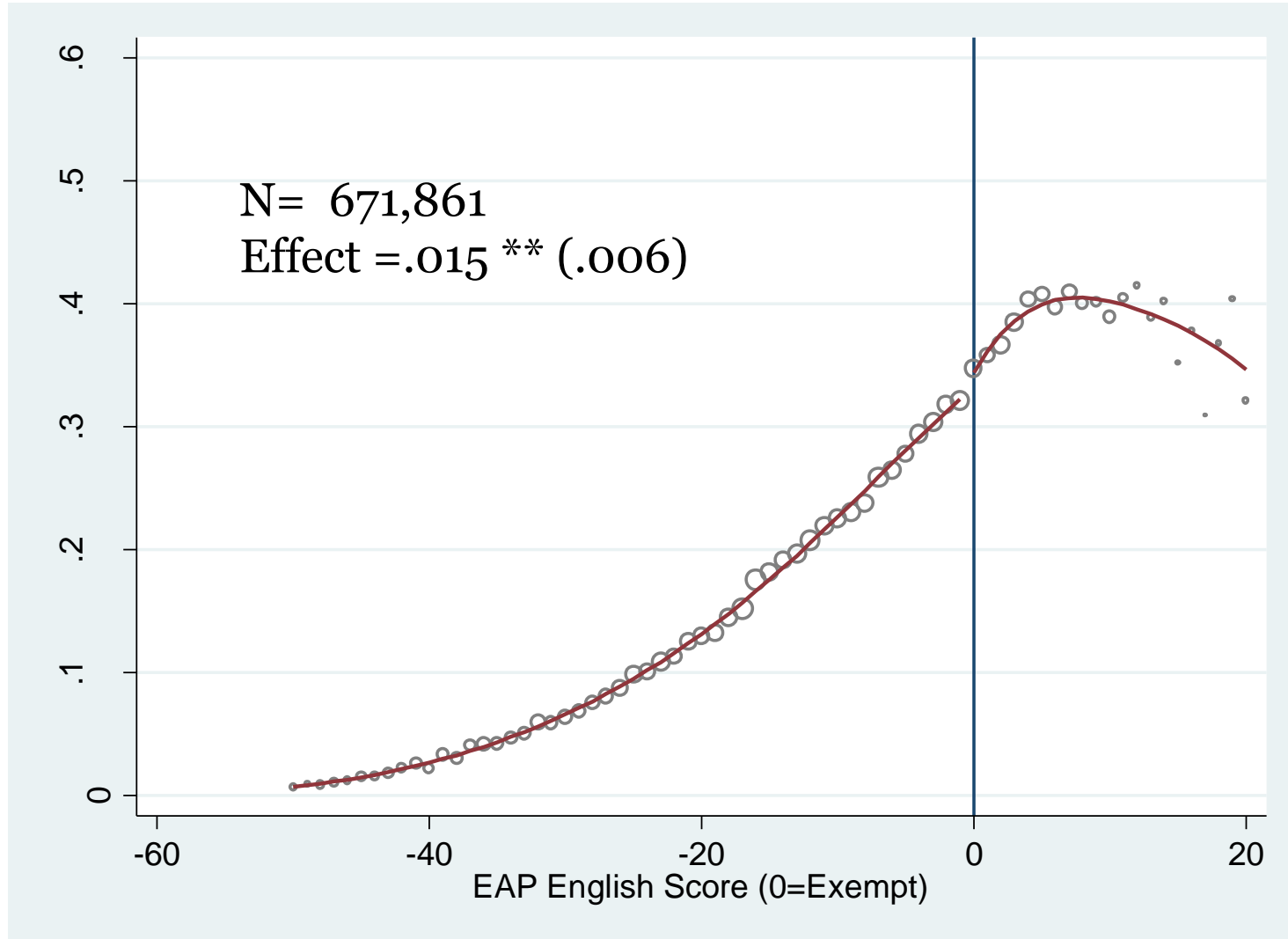
**Hypothetical** Probability of Applying to a CSU by EAP English Score





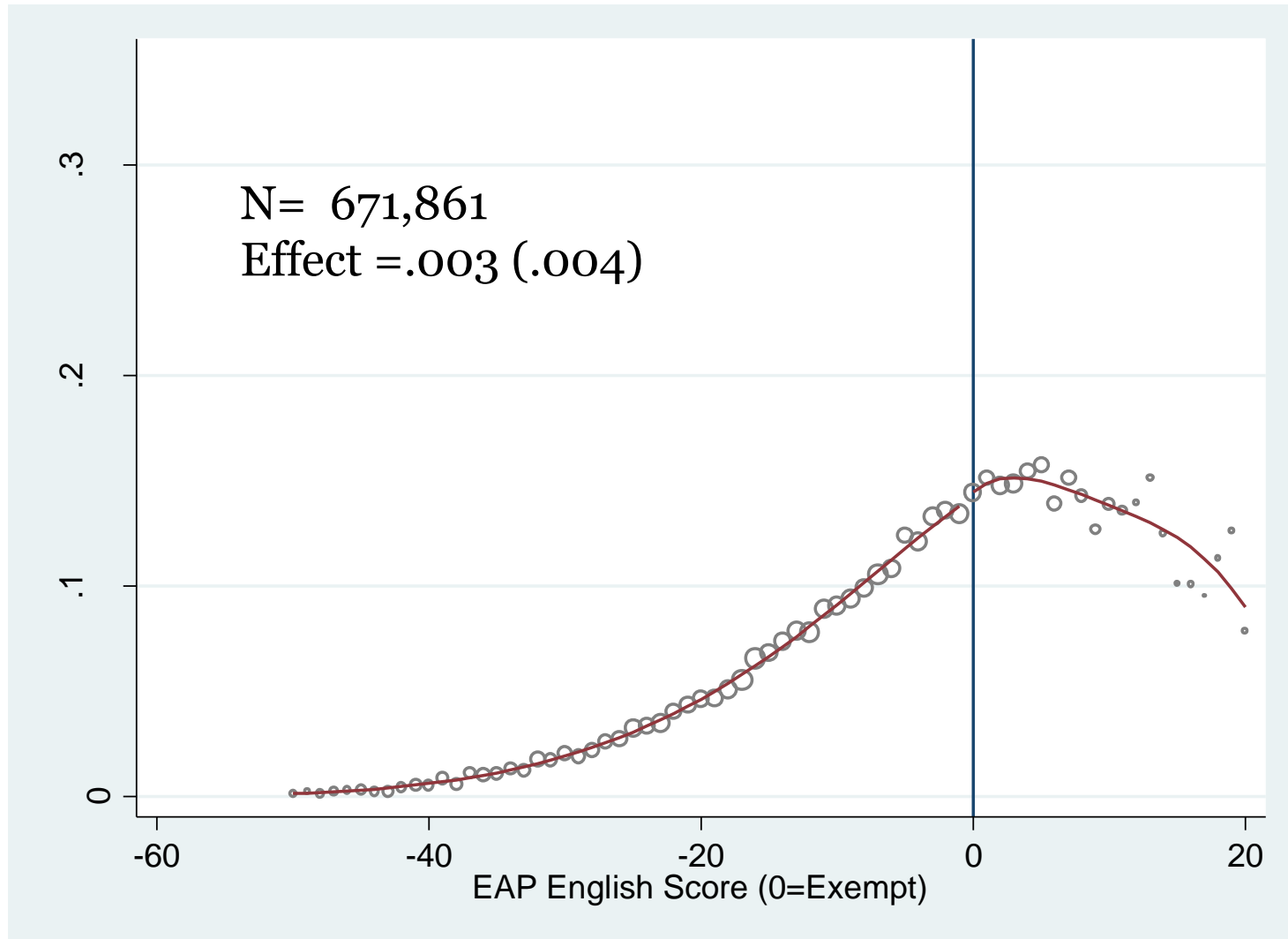
# The English readiness signal has a small impact on CSU application (only among math nonparticipants)

Probability of Applying to a CSU by EAP English Score



# The English readiness signal has no impact on CSU enrollment

Probability of Attending a CSU by EAP English Score



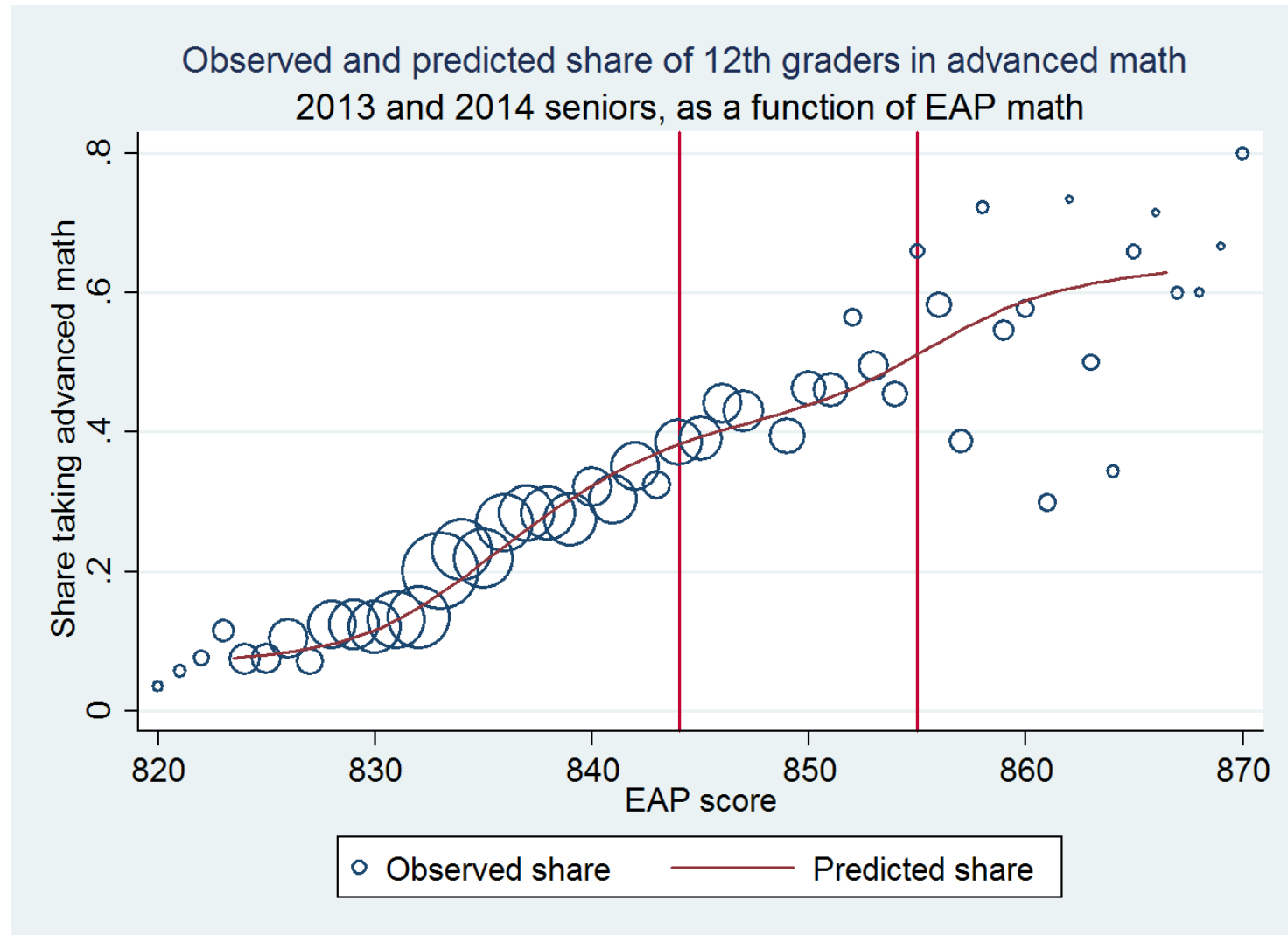
# Early negative information does not discourage students from enrolling

- The English readiness signal has no impact for EAP Math participants
- For math non-participants:
  - There is a small negative impact on application to a CSU
  - There is no impact on CSU enrollment

# Unintended Consequences and Mechanisms: Research Questions

1. Does the EAP discourage CSU enrollment?
- 2. Does the EAP encourage math course-taking in 12<sup>th</sup> grade?**
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# Students are no more likely to enroll in advanced math when receiving conditional exempt signal

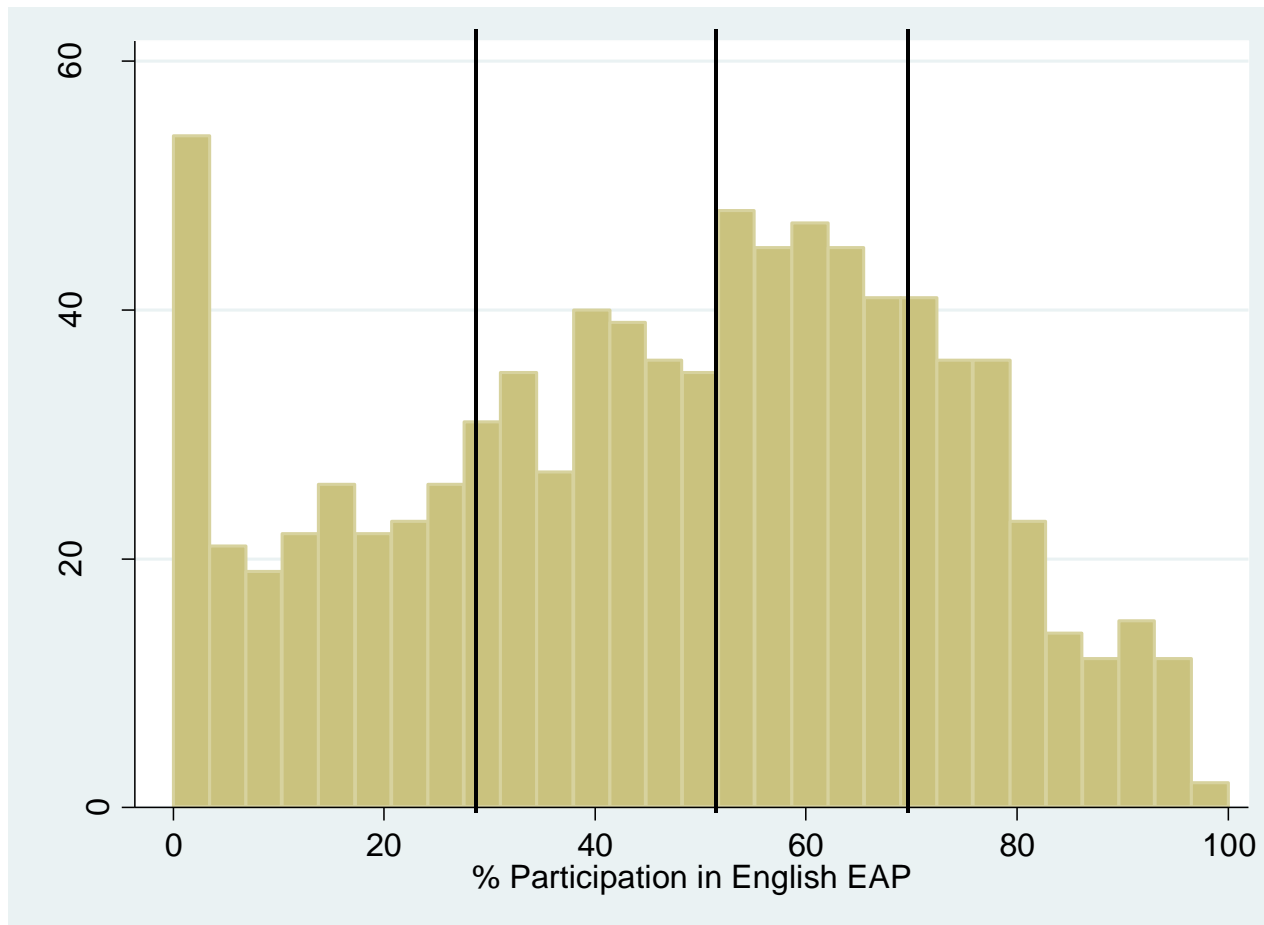


# Unintended Consequences and Mechanisms: Research Questions

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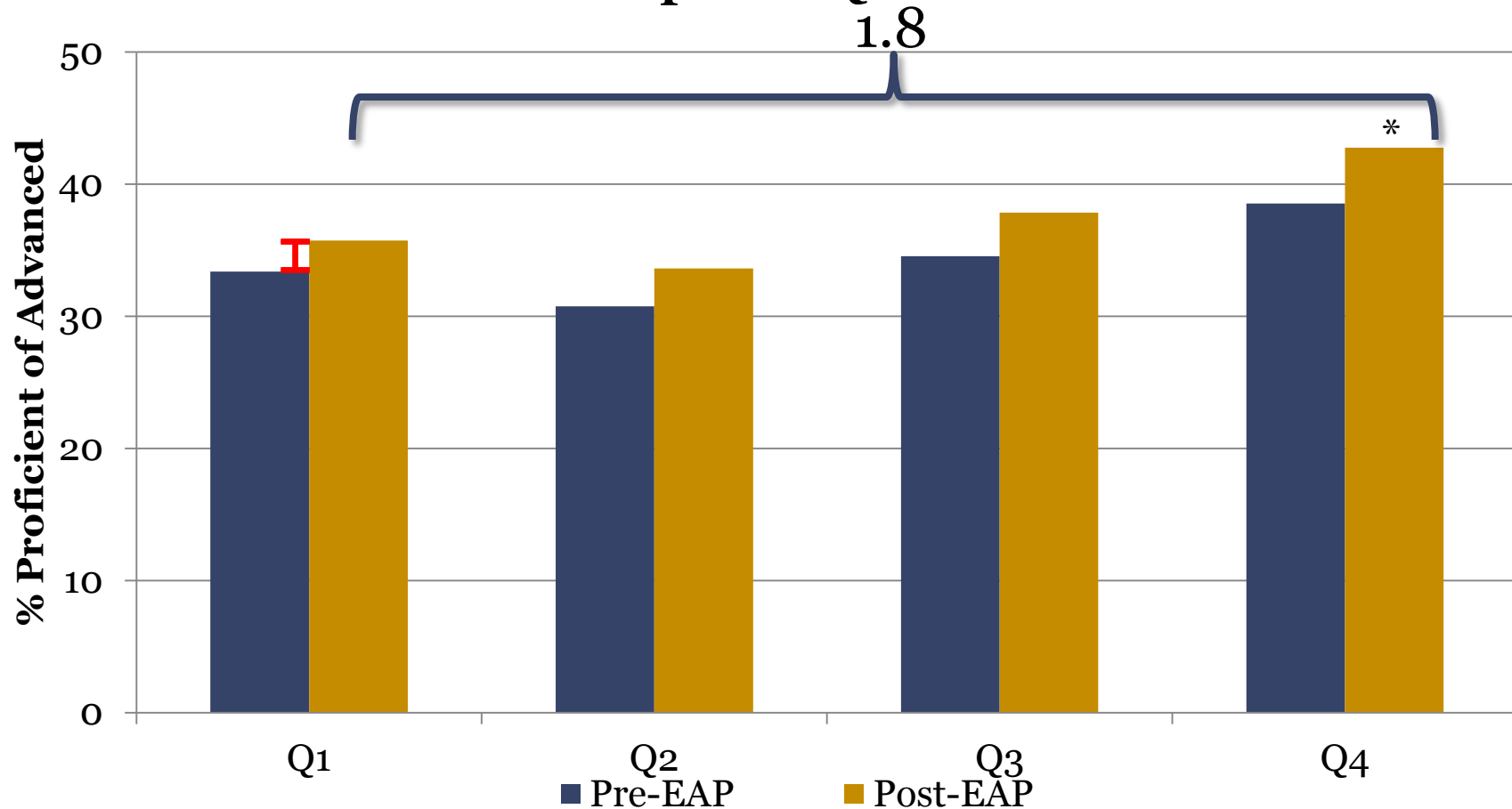
# Using EAP participation quartiles

## Percent of students taking EAP English Exam per school (2005 Cohort)



# Higher EAP participation is associated with higher levels of CST Proficiency

## Pre-Post Differences in School-wide CST Proficiency by Participation Quartiles

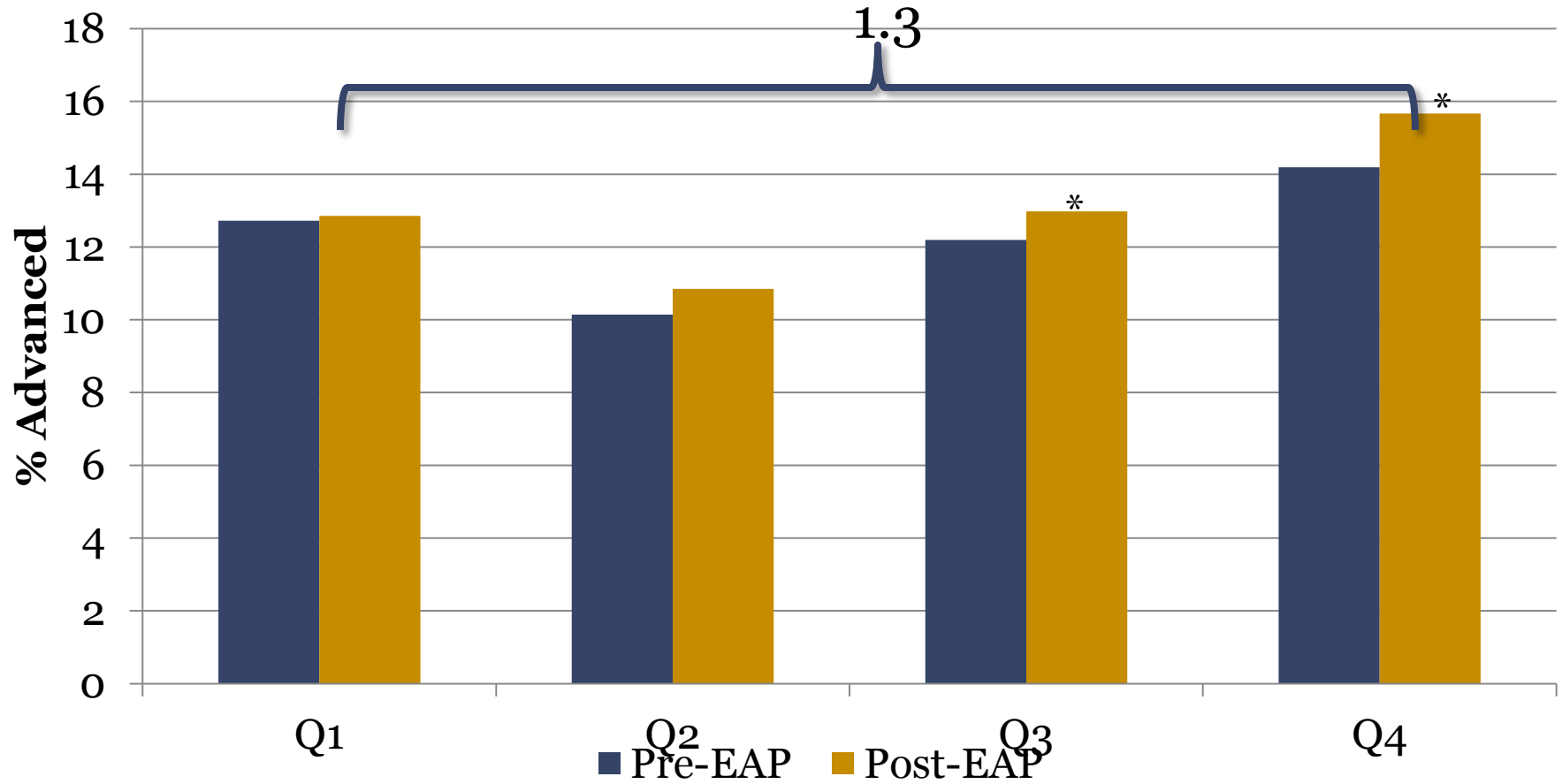


Fitted Values for CST Proficiency from Difference in Difference



# Higher EAP participation is associated with higher levels of CST Advanced

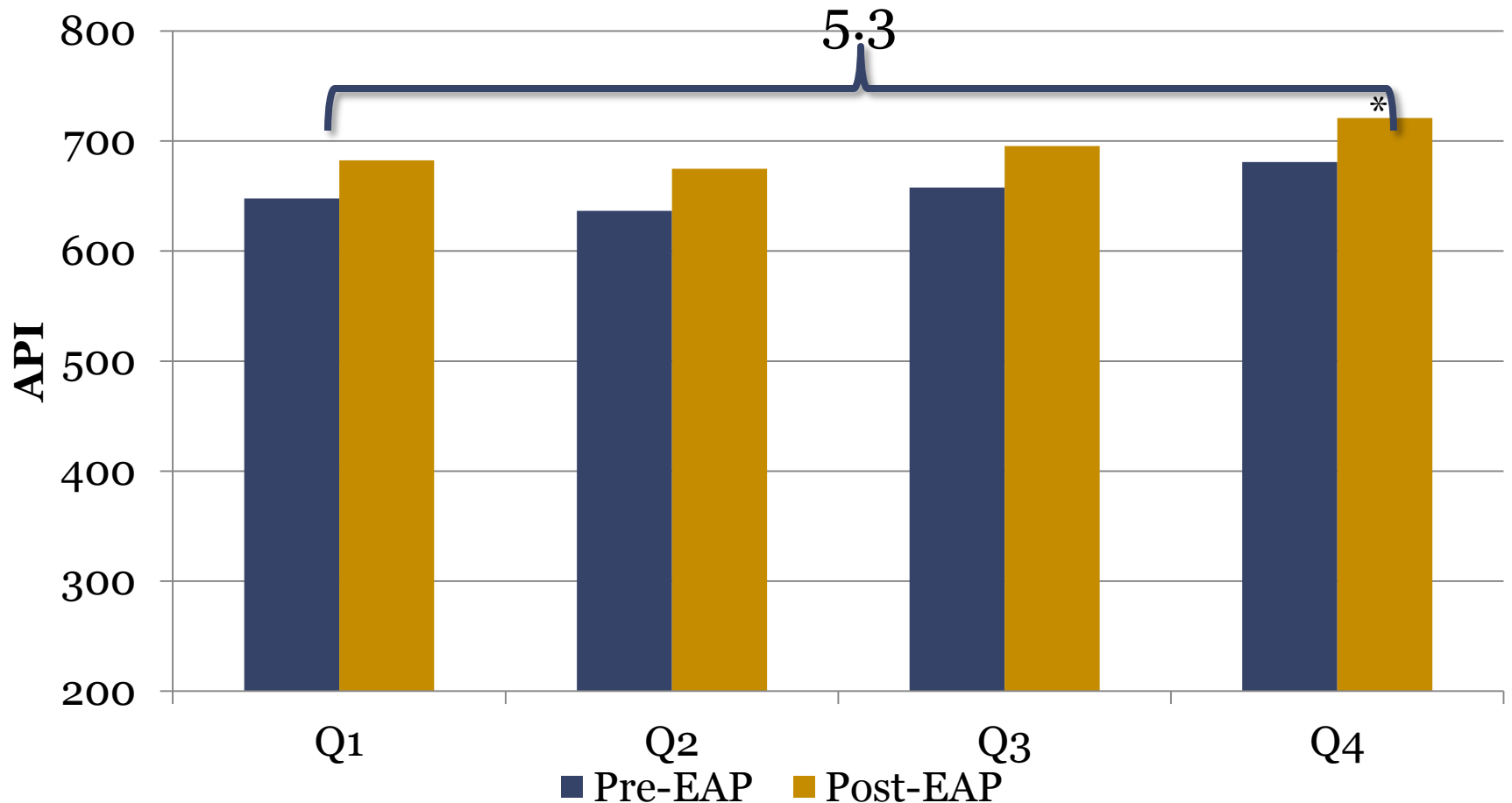
## Pre-Post Differences in School-wide CST Advanced by Participation Quartiles



Fitted Values for CST Advanced from Difference in Difference

# Higher EAP participation is associated with higher API

## Pre-Post Differences in School-wide API by Participation Quartiles



Fitted Values for API from Difference in Difference

# Conclusions: EAP and college readiness at high<sup>43</sup> schools

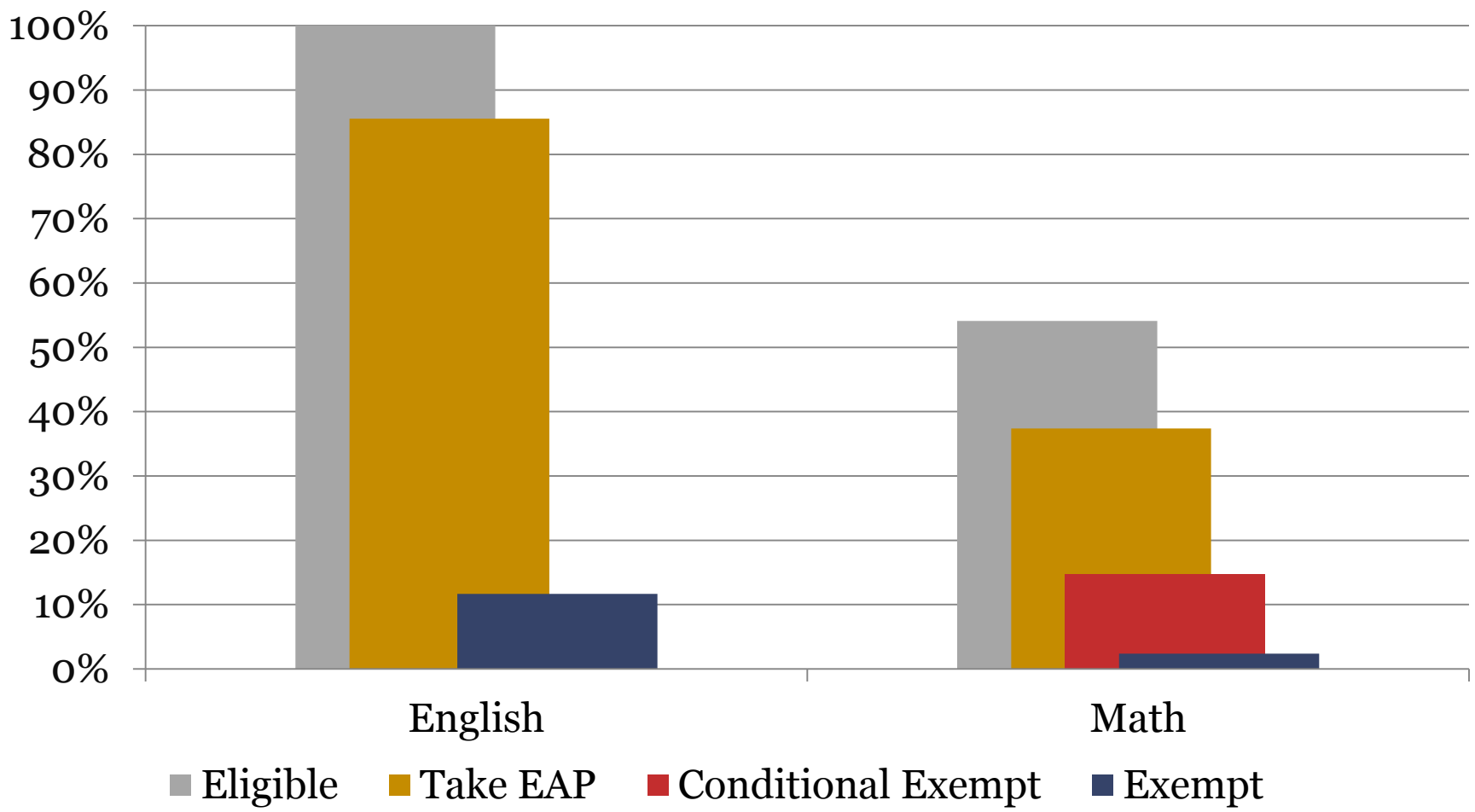
- School characteristics are mostly unrelated to EAP participation
- Schools in all levels of participation see gains in test scores, accountability measures, and college-level outcomes
- Higher levels of participation in EAP are associated with higher gains across tests scores and school accountability measures

# Unintended Consequences and Mechanisms: Research Questions

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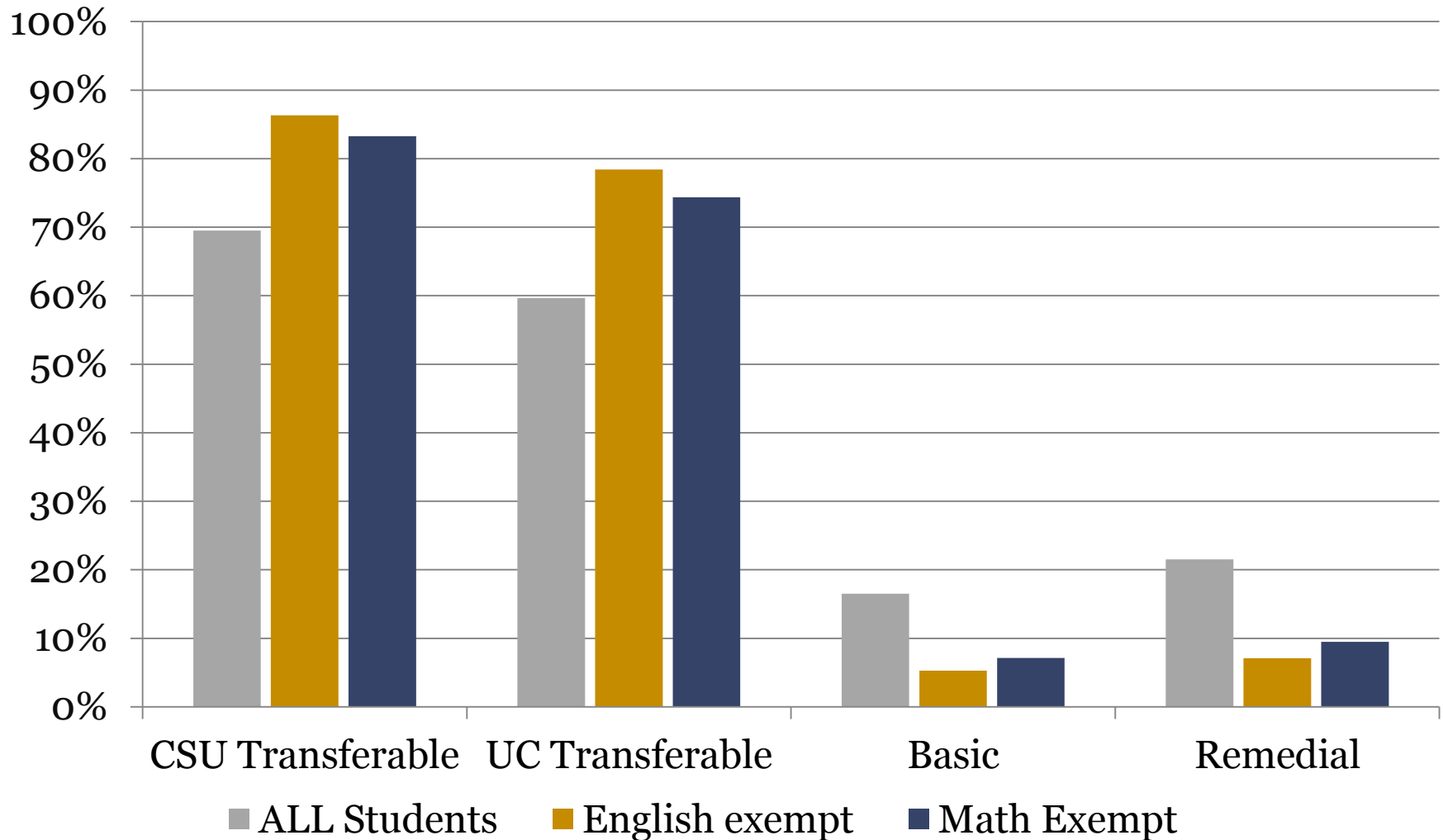
# Very Few CCC students are exempt via the EAP

### Percent of CCC Entering Students Scoring Exempt in 2009



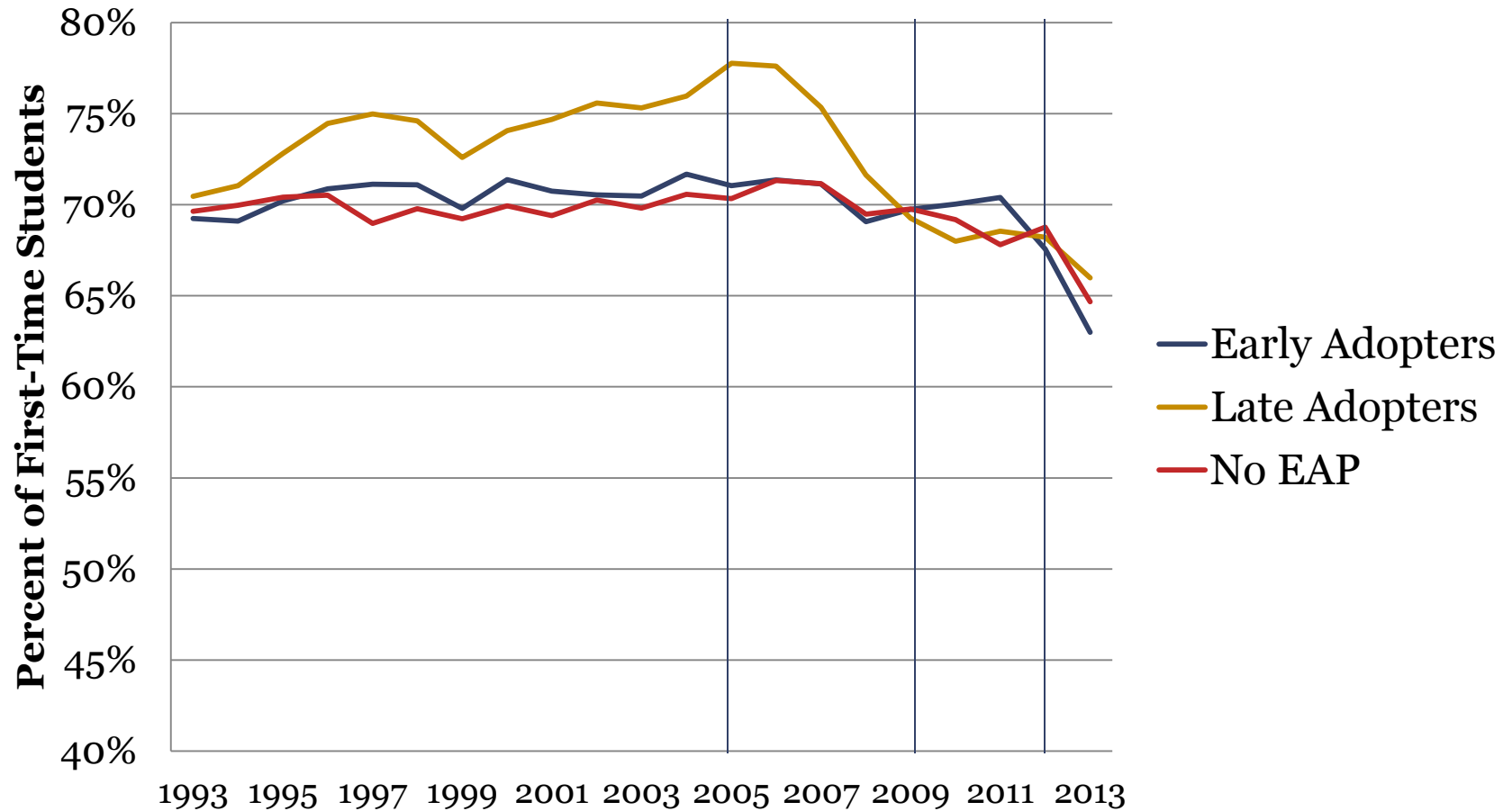
# EAP Exempt students take more demanding courses

## Percent of Transferrable Classes for EAP Exempt Students



# EAP at Community Colleges

## English Developmental Course Participation



# Summary: Unintended Consequences of the EAP

- The EAP does not dissuade students from applying to or enrolling in a CSU
- The EAP does not impact student 12<sup>th</sup> grade course-taking
- EAP participation may benefit high school accountability measures
- EAP adoption at community college is associated with lower rates of developmental coursetaking



Section 4

**FUTURE RESEARCH ON THE  
EAP AND COLLEGE  
READINESS**

# Future work on college readiness

- Long term outcomes of EAP
  - Graduation
  - Time to degree
  - Persistence
- College Readiness in the era of Common Core and Smarter Balanced Assessments
- Early Start at California State University

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