

Executive Summary of Impacts of the METCO Program

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January 2024

Embargoed until January 16th at 12:00PM

Overview

This study analyzes the short and long run impacts of the METCO voluntary desegregation bussing program on participants from Boston and their peers who reside in suburban districts. The study is conducted by an independent research team led by Professor Elizabeth Setren at Tufts University.

Research Questions

- What are the effects of the METCO program on participating students' outcomes? K-12 outcomes include MCAS test scores, attendance, suspensions, college aspirations, college preparation, and high school graduation. Post-secondary outcomes include college enrollment, persistence, and graduation, the type of college students attended (if any), employment, and earnings.
- What is the impact of the METCO program on participating suburban districts' students? Outcomes of interest include academic performance, attendance, suspensions, and classroom composition.

Data

Impact on Urban Participants

The project studies applicants to the Boston METCO program who enrolled in K-12 between the 1990-91 and 2019-20 school years. Applicant data from METCO, Inc. and the Northeastern University METCO Archives were digitized by the research team. Applicants were matched to Massachusetts Department of Elementary and Secondary Education's (MA DESE) administrative data on students' school enrollment, demographics, and K-12 outcomes that range from the 2002-03 to 2022-23 school years. College outcomes data come from the National Student Clearinghouse¹ and include any applicants who were 18-22 years old between 2002 and 2022. A partnership between Massachusetts Department of Unemployment Assistance and MA DESE provided earnings and employment data for 2010 to 2023. The data includes applicants who enrolled in Massachusetts public schools when they were aged 14 or older between 2001 to 2023, but excludes federal and military jobs, self-employment, and jobs outside of Massachusetts. Additional applicant demographic data come from birth records provided by the Massachusetts Department of Vital Records.

Impact on Suburban Resident Peers

To study the impact of exposure to METCO peers on suburban students, the project uses MA DESE administrative education records from the 2001-02 through the 2019-20 school years.

¹ through matches conducted by MA DESE and Tufts University

Data on METCO suburban students include demographics, MCAS test scores, attendance, suspensions, SAT and AP test taking and scores, and high school graduation. Importantly, the data identifies whether Boston METCO students are in suburban students' grade levels or classes. It also contains course-taking information which allows for analysis of classroom peer characteristics.

Research Methods

Impact on Urban Participants

A variety of factors might lead families to apply to METCO. It is possible that those factors might make their children more or less likely to score higher on the MCAS exams, graduate from high school, envision themselves going to college, etc. To understand the impact of participating in METCO, it is important to compare families with similar characteristics, including those unobserved factors that lead families to apply. By comparing families with similar observed and unobserved traits, we can ensure that any differences between METCO participants and non-participants are due to the METCO program itself, and not due to the *types* of students that participate in the program. To accomplish this, the study compares students who applied to METCO and received an offer to participate to those who applied at similar ages and had similar traits but were not given an offer. Using the application data and birth records data, we see that those with and without offers have similar neighborhood characteristics, health at birth, family structure, income status at birth, and parent's education. To adjust for the fact that not all students with METCO offers accept them, I use a statistical method called Two-Stage Least Squares (2SLS) which estimates the effect of those who *participated*, not just the effect of getting an offer to participate.

Impact on Suburban Resident Peers

Most schools in METCO suburban districts enroll METCO participants from Boston at some point in time, but not all grade cohorts within a school have METCO students. Some schools have years where they pause accepting new METCO kindergartners or 1st graders. Other schools started or stopped enrolling METCO participants during the past 20 years.

This project compares the outcomes of students with METCO peers in their grades to others without METCO peers who are in a slightly older or younger grade within the same school. This within-school comparison controls for school-specific factors that do not change over the study period. To control for factors that vary with time, I use other METCO schools that consistently enroll METCO participants. For example, if overall attendance rates are lower in one year due to a particularly bad flu season, these comparison schools will adjust for that difference. This staggered Difference in Differences method estimates the impact of having any METCO participants in a grade cohort.

Findings

Impact on Urban Participants

METCO leads to substantial gains in Math and English Language Arts (ELA) MCAS test scores across grades 3 through 10. Students score 50 percent closer to the state average for Math and two-thirds closer to the state average for ELA by 10th grade because of program participation. The program lowers the likelihood students are suspended by about one-third for middle and

high school grades and two-thirds for elementary grades. METCO enrollment increases school attendance by 2 to 4 days a year despite the farther distance and fewer public transit options if students miss the school bus. METCO participation halves the high school dropout rate and increases on-time high school graduation by 10 percentage points.

Participating in METCO increases SAT taking by 30 percent and increases the likelihood of scoring a 1000 or higher by 38 percent. However, students are not more likely to score above a 1200 on the SAT. METCO also has no impact on AP exam taking or scores. Participating in METCO increases the likelihood students meet the Competency Determination graduation requirement. Attending suburban METCO schools increases four-year college aspirations and enrollment by 17 percentage points each. Students are more likely to enroll in all but the most competitive colleges. METCO results in a 6-percentage point increase in 4-year college graduation rates and leads to increased earnings and employment in Massachusetts at age 25 through 35.

Understanding the impact of METCO on the school experience of students shows two key differences in the experiences of those with and without METCO offers. Participating in the METCO program shifts students from schools where about half of students enroll in a 4-year college to schools where about three-fourths pursue a 4-year degree. This shift in college expectations may be an important factor leading to the strong increase in college going because effects are largest for students whose parents did not graduate college. METCO participation increases the likelihood that students are tracked to lower performing classes. It is possible that the programs' effects could be larger with access to more advanced coursework.

The impacts across the 33 different districts are similar. This implies that students benefit from attending districts regardless of their distance from home, the number of Boston peers in their school, and other differences across districts.

Impact on Suburban Resident Peers

I find no effect of having METCO participants in the grade on suburban students' MCAS test scores, attendance rates, or suspension rates. Having METCO peers does not change the proportion of a student's classmates which are suspended. Therefore, there is no indication that students experience more severe classroom disruptions due to having METCO peers.

Findings are consistent across the 33 suburban districts. Effects are similar when grade cohorts have relatively more and relatively fewer METCO participants. In sum, there is no evidence that having METCO participants in a grade cohort has a negative impact on suburban resident students' academic or behavioral outcomes.

Implications for Policy and Practice

Overall, the results show that the METCO program has a large positive effect on its participants' educational achievements and careers. The analysis shows no indication that concerns about negative academic or behavioral effects from having Boston METCO peers are warranted.

The findings point to a few areas for potential policy improvements:

- Districts could investigate the course assignment process to assess whether METCO students can enroll in more advanced courses, including APs.
- While METCO reduces the likelihood that students are suspended, students from Boston are more likely to be suspended than their suburban peers. Districts may benefit from understanding this disparity.
- Additional SAT preparation supports for METCO students could help them earn higher scores.
- Participants enroll in all but the most selective 4-year colleges at a higher rate. Additional supports with the college application process could help students match with more selective schools which often provide more generous financial aid.
- Additional support for alumni to help them navigate and persist in college could increase the college graduation rate.

Acknowledgements

METCO, Inc. and the Massachusetts Department of Elementary and Secondary Education generously shared data to conduct this research and provided invaluable insight into the METCO program which informed the research. This project was supported by the U.S. Institute for Education Sciences, The Boston Foundation, The Spencer Foundation, The Russell Sage Foundation, and Tufts University. Sara Ji, Savannah Kochinke, and Elizabeth Pancotti provided excellent research assistance.