Examining Key Impacts of the Test-Optional Movement for Early-Adopters

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Prior to the swift increase in popularity during the onset of the COVID-19 pandemic, the test-optional movement was initially characterized by a set of schools that had switched their application policy starting at the turn of the millennium. As of 2019, around 250 four-year colleges and universities adopted a test-optional application procedure that allowed students to apply without submitting a college entrance exam score. School administrators often cited the desire for greater racial and socioeconomic diversity as the driving force behind the change in policy.[1]

However, it is unclear to what extent test-optional policies can increase college enrollment of typically underrepresented students. Previous studies have shown that standardized tests help students signal their ability (Goodman, 2016). However, others have documented that there are inequities in access to college entrance exams (Bulman, 2015) and there is a strong correlation between exam scores and socioeconomic status (Rothstein, 2004), which could serve as potential reasons test-optional policies might promote greater representation of low-income and minority students.

Beyond the question of changes in enrollment, there are concerns that removing a signal of academic ability will impact the academic performance of admitted students. Opponents maintain that the best predictor of college performance is the combination of high school grades and college entrance exam scores, leading to concerns that test-optional policies will result in the denial of applicants who are more likely to be successful (Mattern, 2016). However, if in the absence of exam scores, test-optional schools require stronger performance on other academic measures for admission, the impact on college academic performance remains uncertain.

Schools must also consider that if test-optional policies change the composition of the student body, there may need to be adjustments to the financial aid students receive.

[1] Anecdotally, when Wake Forest University went test-optional in 2009, Martha Allman, the director of admissions at the time, directly cited student diversity as the reason for the switch. Specifically, she stated: ``By making the SAT and ACT optional, we hope to broaden the applicant pool and increase access at Wake Forest for groups of students who are currently underrepresented at selective universities." This sentiment has carried forward in other statements made by officials at test-optional institutions prior to COVID-19 (Lash, 2015; George Washington University, 2015; Hoover, 2018).

In this paper, I address these questions by leveraging the differential timing of adoption of these policies. I construct a detailed panel dataset on selective four-year colleges and universities from the Integrated Postsecondary Education Data System (IPEDS) and the Department of Education. I focus the analysis on the set of test optional policies adopted from 2006 to 2014 and employ a recent dynamic difference-in-differences strategy developed by Callaway and Sant'Anna (2021).

The advantage of focusing on schools that made the switch prior to the onset of the COVID-19 pandemic is two-fold. First, the expanded time horizon allows for examination of the impacts of these policies on longer-term outcomes (e.g., six-year graduation rates) and second, including institutions who adopted a test-optional policy after 2019 would make it difficult to disentangle the impacts of test-optional policies from the pandemic.

I find that after the switch to a test-optional policy, adopting schools saw increases in the share of first-time, full-time Black, American Indian/Alaskan Native, and Hispanic (BAH) students as well as the share of undergraduate students receiving Pell Grants. Focusing on the changes in shares is critical in this context as there is an open question of whether test-optional policies simply allow schools to expand rather than change the composition of the student body. Furthermore, I find no evidence that these changes in enrollment led to any significant changes in adopting institutions' retention or six-year graduation rates. Adopting schools did see changes in financial aid receipt. Test-optional schools saw increases in the share of students receiving aid and taking loans, with the average amount of aid declining following policy adoption.

Understanding how test-optional policies impact academic performance and financial aid receipt is important because these policies are often adopted with the goal to address inequities in postsecondary outcomes and have not been the focus in the existing literature (Bennett, 2021; Belasco et al., 2015; Saboe and Terrizzi, 2019). However, if students are enrolling in these institutions, but dropping out at a higher rate and/or accruing additional debt, test-optional policies may contribute to existing gaps across racial and income groups.

I. The Test-Optional Movement

Test-optional policies have existed for some time but have become increasingly popular in the last two decades. Bowdoin College was the first to adopt a test-optional policy in 1969 (Bowdoin College, 1970), but it was not until the mid-2000's that there was a sharp increase in the number of schools following suit. The number of schools that have made the switch to

a test-optional policy increased from 21 in 2001 to just under 190 in 2018. The types of schools switching to test-optional admissions during this time frame has also changed. The test-optional movement, which began with a group of selective liberal arts colleges, had expanded to include both public research institutions and five of the U.S. News Top 50 Universities before the onset of the COVD-19 pandemic.[2]

At test-optional institutions, it is not required for a student to submit the SAT or ACT to be considered for admissions. The exact policy varies slightly across institutions. In some cases, students may be required to submit additional application materials, or scores from other standardized tests such as Advanced Placement or International Baccalaureate exams. While students are told they are not penalized for omitting their test scores, schools must rely more heavily on the other aspects of a student's applications (e.g. class rank, etc.) on a scale that is unknown to them.

II. Data and Methods

A. Data –

The data for this study come from the Integrated Postsecondary Education Data System (IPEDS) and the U.S. Department of Education (DOE). The data I use from IPEDS include institutional-level information on enrollment by race, retention and six-year graduation rates, as well as financial aid outcomes. The data I use from the DOE includes information on Pell Grant recipients.

My sample focuses on the years 2001-2018[3] and includes 922 colleges and universities that are not identified as a school for the arts or religious training program and are categorized as at least "moderately selective" in IPEDS. I focus on schools adopting the test-optional policy between the years of 2006-2014 which gives me at least four years of data before and after the policy was implemented. In total, I identify 63 schools in my sample that switched to a test-optional policy during this time frame by cross referencing announcements from Fair Test (2020) and Bennett (2021).

The scope of the data available from IPEDS has grown over time and as a result, there is often inconsistent time coverage of each of the variables. Similarly, some data are only required in alternate years. To combat these issues, I place requirements on the reporting behavior of each school I have in the sample. To be included, a school cannot be missing

[2] These institutions include Wake Forest University, University of Rochester, Brandeis University, The University of Chicago and New York University (Reiter, 2024).

[3] The years of sampled data is extended for retention and six-year graduation rates (to 2020 and 2022, respectively) to construct the appropriate rates for the relevant cohorts. It should also be noted that data on retention rates is only available from 2003 onwards.

more than 1 year of data for each of the following variables: Enrollment by Race, Number of Applications, Tuition and Total Enrollment. Additionally, I exclude all schools that went test-optional between 2015 and 2018.

B. Empirical Strategy –

I identify the effect of switching to a test-optional admissions policy using a difference-in-differences developed by Callaway and Sant'Anna (2021). I use their estimation procedure to identify group-specific average treatment effects on the treated (denoted as $ATT(g,t)$) which reflect the average treatment effects on the treated for group g at time period t. In this context, each group g represents the set of schools who adopt a test-optional policy in the same year. Time periods, t, include years leading up to and following adoption of the policy. School in the control group are denoted by $C = 1$.

Callaway and Sant'Anna (2021) formally shows that under the assumption of conditional parallel trends between the control and treatment groups, the group-specific average treatment effects can be represented by

$$(1)\ ATT(g,t) = E\left[Y_t - Y_{g-1} \middle| G_g = 1\right] - E[Y_t - Y_{g-1} | C = 1]$$

where the average effect of adoption for units in group g is identified by taking the evolution of the outcome variable experienced by that group (the first term in Equation (1)) and adjusting it by the evolution of the outcome variable experienced by the control group (the second term in Equation (1)). Under the parallel trends assumption, this second term is the path of outcomes that units in group g would have experienced if they had not adopted the policy. Once the $ATT(g,t)$ is calculated for each treatment g and time period t, I combine the estimates to form the aggregated causal parameters.

To create a single, overall point estimate, I take the average of all the identified group-time average treatment effects. For inference, I use the recommended bootstrapping procedure and cluster at the school-level. I incorporate pre-treatment covariates using Callaway and Sant'Anna's procedure to create propensity-score-based matches between treatment and control units.

III. Results

A. Enrollment –

Table 1 reports the results for the outcome variables of interest related to enrollment. I find consistent and statistically significant effects of switching to a test-optional application policy on both BAH and Pell Grant enrollment. Specifically, after implementing the policy, adopting schools increased the percentage of

FTFT students who identify as BAH by 1.5 percentage points and share of undergraduate students receiving a Pell grant by 1.3 percentage points.

Together, these results suggest that over the entire post-period, adopting schools saw changes in the enrollment composition of their student body. However, it is important to contextualize these findings. The baseline levels of BAH students are relatively low at test-optional institutions. On average, adopting schools reported only 11.24 percent of their first-time, full-time students identifying as BAH (in the year before adoption) while the average test-requiring school reports 21.43 percent (across all years). Whether test-optional policies will have similar effects for schools that better represent the average 4-year college/university is to be determined.

A remaining question is whether the increase in BAH enrollment comes at the expense of other groups. A future iteration of this work will examine enrollment impacts by race and gender to address this concern and the question of whether these policies change the composition of the student body or simply allow for schools to expand.

B. Retention and Graduation Rates –

Table 1 also presents the results when the outcome variables of interest include school-level measures of retention and six-year graduation rates. I find no evidence that adopting schools saw significant changes in either measure of academic performance. Furthermore, I can rule out any effect size larger than a 1.18 percentage point decline for retention rates or 1.02 percentage points for six-year graduation rates. When compared to the baseline means for these outcome variables at test-optional schools (83.52 and 71.64, respectively) these results are small.

This analysis cannot fully address whether test-optional schools face a potential tradeoff between diversity and academic performance. However, these results suggest cohorts that enrolled under a test-optional policy do not retain or graduate at different rates than those in the same cohort enrolled at a test-requiring institutions.

A future iteration of this work will explore whether adopting schools see changes in enrolled students high school performance to further understand potential changes in quality. Prior research focused on differences in performance across submitters and non-submitters has shown mixed results, illustrating that the impact of test-optional policies likely depends on institution characteristics (Hiss and Franks, 2014; Friedman et al., 2024).

[Insert Table 1 Here]

C. Financial Aid –

Table 2 reports the results where the outcome variables of interest are school-level measures of financial aid receipts. Panel A reports changes in institutional grant aid for first-time, full-time (FTFT) students and Panel B reports changes in loans taken by FTFT students. After adopting a test-optional policy, schools that switched increased the share of students that received institutional aid, but the average amount of the grants decreased suggesting that schools had to respond to the change in financial need of their enrolled cohorts.[4]

Interestingly, students seem to somewhat offset the decreases in institutional aid by taking out loans. Schools that adopted a test-optional policy also saw increases in the share of FTFT students taking any loans after they made the switch. However, the average amount of loans taken by first-time, full-time students did not seem to change following adoption of these policies.

[Insert Table 2 Here]

Whether the shift in financial aid has longer term consequences is an open question. The current literature on the effect of additional student debt on labor market and other life cycle outcomes is mixed. Most recently, Black et al. (2023) show that increases in student borrowing limits significantly increased constrained students' bachelor's degree attainment, labor market outcomes, and loan repayment. However, their findings contrast with much of the literature that finds additional loan debt negatively affects outcomes including graduate school enrollment (Chakrabarti et al., 2023), and home ownership (Mezza et al., 2020).

Conversations with admissions directors have highlighted how this has become a critical point of discussion for schools considering the move to test-optional, but future work will need to be done to explore this question.

IV. Validity Checks

A key assumption underlying the estimation strategy is that there are no other policy interventions test-optional schools are adopting when the make the switch in their application process. A particular concern is that schools that switch to a test-optional admissions policy may also be implementing a suite of programs to attract underrepresented groups of students.

In Table 3, I rule out three potential programs schools could have implemented in

[4] Interviews I conducted with different directors of admissions at adopting schools further bolster this claim. One director of admissions stated their institution had to remove its need-blind policy to compensate for the changes in financial aid that were brought upon by the switch to test-optional.

conjunction with their move to a test-optional policy. Specifically, I examine whether adopting schools changed their application fees, academic services expenditures, or the number of BAH faculty/staff new hires.

I find that adopting schools saw no changes in their application fees or expenditures following the switch to a test-optional policy, suggesting these factors don't drive my results. However, I find some evidence that test-optional schools may be decreasing the number of BAH new hires. This result runs counter to a possible rationale for the increase in BAH enrollment but poses an important potential consequence future research should consider.

[Insert Table 3 Here]

V. Conclusion

This paper shows that schools adopting a test-optional policy between 2006 and 2014 saw significant changes in enrollment composition. Beyond students' racial and income composition, I also show that adopting a test-optional policy is not associated with any changes in the academic performance of students. However, my results suggesting adopting schools saw decreases in average institutional aid and increases in the share of students taking out loans points to potential unintended consequences of these policies that has not been discussed in the prior literature.

These findings are especially important considering that several institutions that made the switch because of the COVID-19 pandemic have since returned to test-requiring policies. My results suggest that that these reversals could have large implications on diversity and may not come with a benefit of increased retention or graduation. Institutions debating the removal of their test-optional policy must consider these potential costs.

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Tables

TABLE 1 – EFFECTS OF TEST-OPTIONAL POLICIES ON ENROLLMENT AND ACADEMIC PERFORMANCE

	FTFT BAH	Pell Grant Recipients	Retention Rate	Six-Year Graduation Rate
ATT	1.51***	1.28***	-0.29	-0.08
	(0.48)	(0.48)	(0.45)	(0.48)
Observations	16,594	16,151	15,086	14,477
Baseline Mean	11.24	18.73	83.52	71.64

Notes: Standard errors are calculated using a bootstrap technique and are clustered at the school level. Pre-treatment covariates include baseline levels of enrollment, tuition and graduation rates. Data come from IPEDS and the Department of Education. Some institutions are missing data in certain years leading to differences in the number of observations. FTFT BAH is shorthand for first-time, full-time, Black, American Indian/Alaskan Native, and Hispanic. Baseline mean represents the average of the variable for test-optional schools in the year before adoption. The outcome variables are measured as shares/rates ranging from 0 to 100. The results on graduation rates are driven by cohorts who entered prior to 2016.

*** Significant at the 1 percent level.

** Significant at the 5 percent level.

* Significant at the 10 percent level

TABLE 2 – EFFECTS OF TEST-OPTIONAL POLICIES ON FINANCIAL AID

	Shares	Avg. Amount
Panel A. FTFT Receiving Institutional Aid		
ATT	2.80**	-941.87**
	(1.19)	(363.59)
Observations	16,593	16,580
Baseline Mean	83.32	15,568.39
Panel B. FTFT Taking a Loan		
ATT	3.03**	204.42
	(1.46)	(206.57)
Observations	16,593	16,575
Baseline Mean	64.62	6,603.76

Notes: Standard errors are calculated using a bootstrap technique and are clustered at the school level. Pre-treatment covariates include baseline levels of enrollment, tuition and graduation rates. Financial aid data come from IPEDS. Some institutions are missing data in certain years leading to differences in the number of observations. FTFT is shorthand for first-time, full-time. Baseline mean represents the average of the variable for test-optional schools in the year before adoption. Shares are in the range of 0 to 100.

*** Significant at the 1 percent level.

** Significant at the 5 percent level.

* Significant at the 10 percent level

TABLE 3 - OTHER POSSIBLE POLICY INTERVENTIONS

	Application Fees ($)	Academic Services Expenditures (in Millions)	# of BAH New Hires
ATT	-0.05	-1.98	-0.63**
	(1.99)	(4.69)	(0.31)
Observations	16,210	15,558	13,449
Baseline Mean	42.33	17.30	1.48

Notes: Standard errors are calculated using a bootstrap technique and are clustered at the school level. Pre-treatment covariates include baseline levels of enrollment, tuition and graduation rates. Data on outcome variables come from IPEDS. Some institutions are missing data in certain years leading to differences in the number of observations. BAH is shorthand Black, American Indian/Alaskan Native, and Hispanic. Baseline mean represents the average of the variable for test-optional schools in the year before adoption.

*** Significant at the 1 percent level.

** Significant at the 5 percent level.

* Significant at the 10 percent level