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Forschungsinstitut
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of Labor

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ABSTRACT

Taking the Easy Way Out: How the GED Testing Program Induces Students to Drop Out*

The option to obtain a General Education Development (GED) certificate changes the incentives facing high school students. This paper evaluates the effect of three different GED policy innovations on high school graduation rates. A six point decrease in the GED pass rate due to an increase in national passing standards produced a 1.3 point decline in overall high school dropout rates. The introduction of a GED certification program in high schools in Oregon produced a four percent decrease in high school graduation rates. Introduction of GED certificates for civilians in California increased the high school dropout rate by 3 points. The GED program induces students to drop out of high school.

JEL Classification: C61

Keywords: GED, dropout

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A Web Appendix is available at http://jenni.uchicago.edu/GED_dropout/GED_incentives/

1 Introduction

This paper examines how changes in the availability and difficulty of the General Education Development (GED) test affect high school dropout rates. GED certification allows dropouts to earn a state-issued GED credential.

GED credentials account for approximately 12% of high school credentials issued in the U.S. in 2008 (Figure 1). Test takers are required to pass a five part, 7.5 hour test to certify their high school equivalence and earn a state-issued GED credential. Obtaining a GED is easier for most students than graduating in the traditional fashion. The option may be especially attractive for cognitively able students who lack credits or face other challenges. The median study time of GED test takers that study is 32 hours (Zhang, Han, and Patterson, 2009a).[1] In the early years of the test, the minimum passing score was low and on some sub-tests, passing scores were only slightly above what could be achieved by chance (Quinn, 1997).

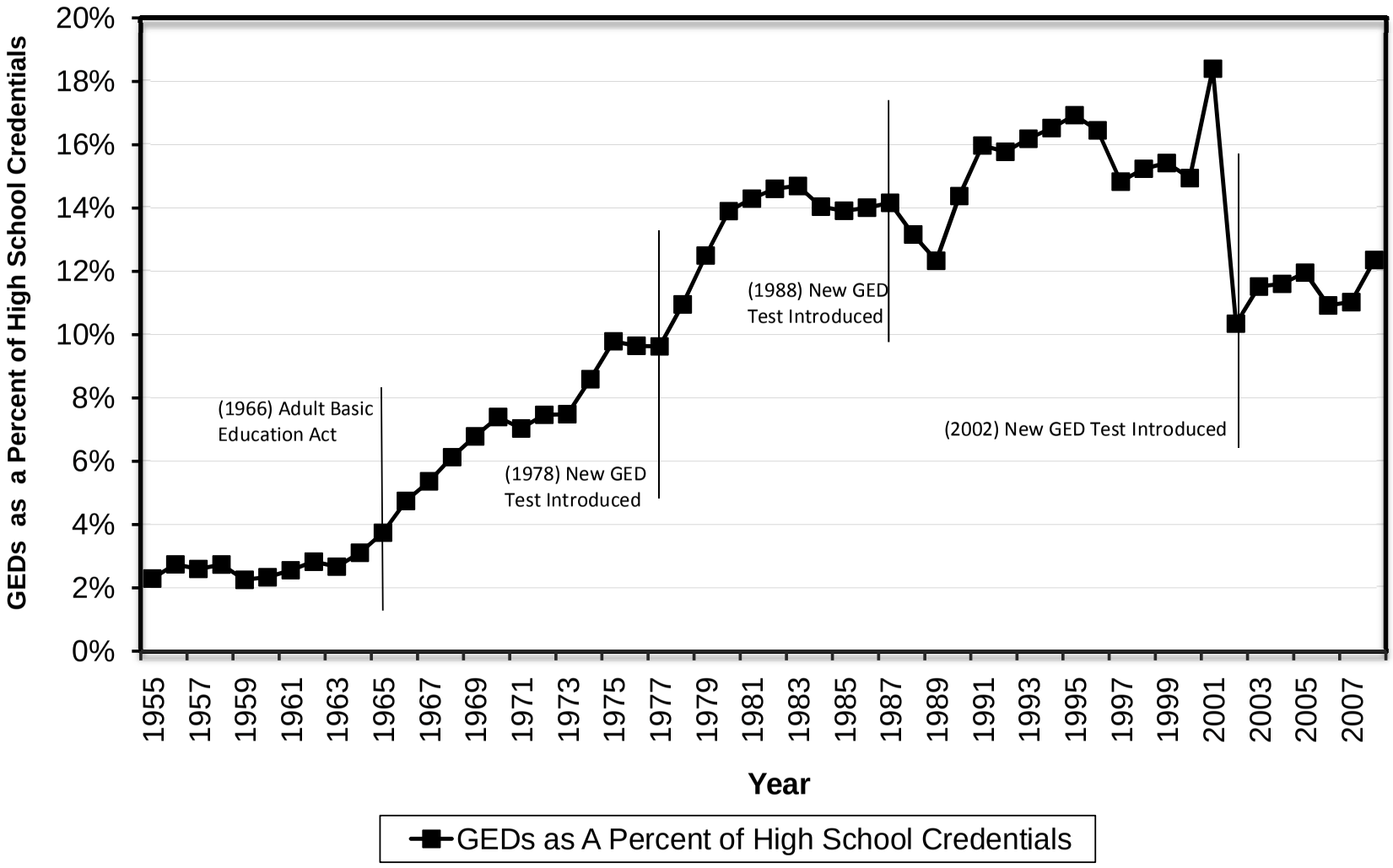
A large literature documents the small average labor market returns to GED certification.[2] Few papers have addressed whether the availability of the GED option induces students to drop out of school rather than graduate. Chaplin (1999) and Lillard (2001) estimate the effect of the availability of the GED on high school continuation and dropout rates by exploiting cross-state variation in GED testing policies over time. Controlling for state, year and age fixed effects, both studies find that state GED policies are statistically significant predictors of high school dropout rates. Policies that provide exemptions to age restrictions for GED testing or lower passing standards promote dropping out of high school. States with lower requirements for the GED have higher GED test-taking rates.

The endogeneity of cross-state variation in GED requirements is a potential problem with the identification strategy employed in previous studies. If states change GED requirements

[1] We do not know the amount of time spent studying by those who pass the exam. Data from 1989 (Boesel et al., 1998) shows that 56% of people reported studying 40 hours or less and 24% reported studying over 100 hours. Classroom attendance for a typical school year is over 1000 hours per year, and most GEDs are a year or more below twelfth grade when they drop out of school.

[2] See Heckman, Humphries, and Mader (2011) for a review of the literature.

Figure 1: GED Credentials Issued as a Percentage of All High School Completers, 1960-2006



SOURCE: Public and private high school graduate totals from NCES Digest of Educational Statistics (2005), Table 101; GED Credentials Issued from GED Statistical Reports (Various Years). NOTE: The figure plots proportion of GEDs issued each year over the number high school completers that year (regular high school graduates and GED recipients).

in response to trends in state-level dropout rates, estimates of the GED effect will be biased. States might respond to increased dropout rates by lowering the GED requirements. Estimates that do not account for this response would tend to overstate the effect of lower passing standards.

This paper presents three studies of the incentive effects of the GED program. The first study uses an identification strategy based on a nationally mandated change in GED passing standards imposed in 1997 by the GED Testing Service. All states were required to meet new minimum and mean score requirements. This national mandate forced some states to raise passing standards while other states were unaffected. This strategy addresses the endogeneity problem because the timing and magnitude of the one-time change in requirements is exogenous to any state-specific trends or policy changes.

Students react strongly to the change in the difficulty of the GED test. Difference-in-difference estimates show that a 6 percentage point decrease in the probability of passing the GED causes a statistically significant 1.3 percentage point decline in the overall dropout rate. The policy has its greatest effect on older students who are less restricted in their GED testing and school leaving decisions. The percentage of students enrolled in the 12th grade who do not graduate declines by 3 points more in states that were required to raise GED requirements compared to those that were not required to do so. GED policy changes have larger effects on minorities because at any grade they tend to be older and hence less subject to minimum school leaving age requirements. They are also more likely to be behind majority students in meeting graduation requirements.

In a second study, we examine the effect of introducing the "GED Option Program" in Oregon. First introduced in 2001, these programs offer GED preparation and certification in high schools. They target students perceived to be at risk of dropping out of high school and guide them into GED certification. The program substantially reduces high school graduation rates. Using panel data, we show that such programs lower high school graduation rates in Oregon by 4%.

In a third study, we examine the impact of introducing the GED in California. In 1974, California became the last state to award a high school equivalency credential to civilians who passed the GED exam.[3] Prior to recognizing the GED, California had higher graduation rates than other states in the U.S. After adopting the GED program, California graduation rates quickly fell to levels similar to those in other states. Difference-in-difference estimates show that high school graduation rates fell by 3 percentage points more in California compared to the rest of the U.S.

Our findings are consistent with previous studies that show that the GED induces youth to drop out of school. We expand upon previous studies by showing that minorities and males are more strongly affected by GED policy changes. We provide the first empirical estimate of the effect of introducing the GED program on high school graduation rates.

The paper proceeds as follows. Section two presents a background discussion of the relationship between GED policies and dropout rates. Section three analyzes the impact of the 1997 GED policy change on the dropout rate. Section four estimates the effect on the dropout rate of introducing the GED as an option for at risk high school students in Oregon. Section five estimates the effect of introducing the GED program for civilians on California dropout rates. Section six concludes with a discussion of our main findings and their implications for policy.

2 Evidence on the Effects of GED Policies and Incentives

The GED Testing Service (GEDTS) promotes its credential as being equivalent to a traditional high school diploma (Quinn, 1997). A recent NCES study shows that many people view the GED credentials as an attractive alternative to graduating from high school. The Education Longitudinal Study (ELS) follows a representative sample of 10th graders enrolled

[3]Prior to 1974, the GED program in California was restricted to veterans and military personnel.

in the spring of 2002 through graduation and beyond. In the spring of 2004, over 40% of dropouts stated that they did not complete high school because they "thought it would be easier to get a GED." This was the second most cited reason behind "missed too many school days" (43.5%). It also placed far above what are commonly believed to be primary reasons for dropping out of school such as pregnancy (27.8%), work (27.8%) and marriage (6.8%) (Table 1).[4]

There is a close relationship between trends in GED testing among school age youth and the national dropout rate. Figure 2 plots the dropout rate both including and excluding GED recipients as graduates. It also plots the percentage of GED test takers ages nineteen or under in each year. Increases in the fraction of students who choose not to complete high school are associated with rising GED test taking among secondary school-age youth. The two time series move together in response to national GED policy changes. When GED age requirements are lowered, GED testing rates increase for the young along with dropout rates. When standards are increased, dropout rates fall and GED test taking by the young declines.

The dropout rate that classifies GED recipients as dropouts reached historic lows in the early 1970s and rose afterward (Heckman and LaFontaine, 2010). In contrast, the dropout rate that counts GEDs as high school graduates, steadily declines over the entire period. In the first few years depicted, the two measures are nearly equal. They begin to diverge sharply after 1970, coinciding with the rapid expansion of the GED testing program shown in Figure 1.

Expansion of the GED testing program is associated with a number of important policy changes that made the GED more accessible to school-age youth. During the early 1970s, states began to eliminate age restrictions on GED testing in an attempt to make GED credentials more accessible to young dropouts (Quinn, 1997). Previously, most states required that individuals be at least 20 years old in order to take the GED. Additionally, in 1970 Adult

[4]Answers are not mutually exclusive and therefore percentages do not sum to one hundred.

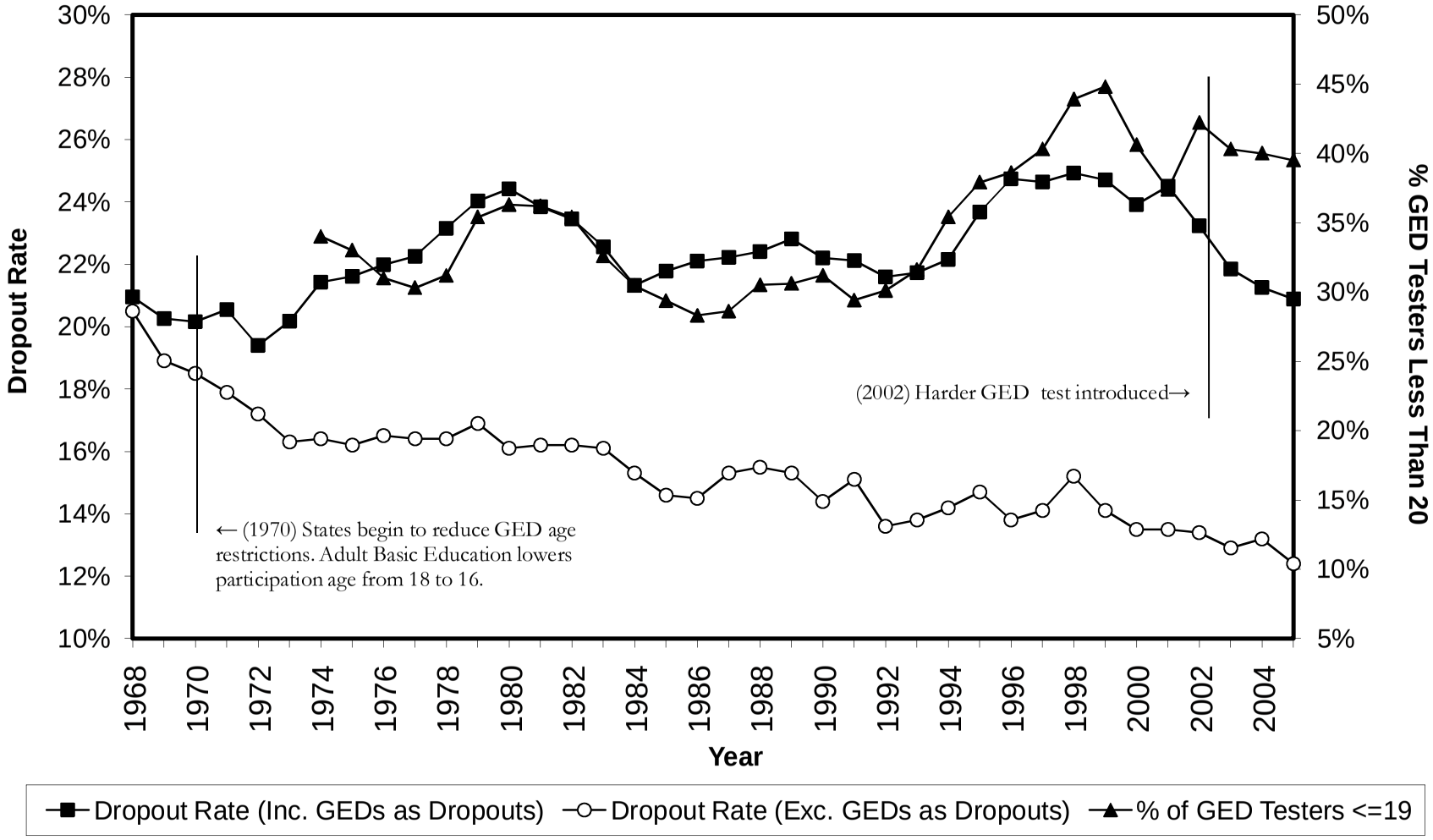
Table 1: Percentage of Spring 2002 HS sophomores who had not Completed a HS Degree by Spring 2004, by Reason for Leaving School

Reason for leaving school	Percent
Missed too many school days	43.5
Thought it would be easier to get GED	**40.5**
Getting poor grades/failing school	38.0
Did not like school	36.6
Could not keep up with schoolwork	32.1
Became pregnant*	27.8
Got a job	27.8
Thought could not complete course requirements	25.6
Could not get along with teachers	25.0
Could not work at same time	21.7
Had to support family	20.0
Did not feel belonged there	19.9
Could not get along with other students	18.7
Was suspended from school	16.9
Had to care for a member of family	15.5
Became father/mother of a baby	14.4
Had changed schools and did not like new one	11.2
Thought would fail competency test	10.5
Did not feel safe	10.0
Was expelled from school	9.9
Got married/planned to get married	6.8

Note: This indicator shows the percentage of high school students in the spring of their sophomore year who, in the spring 2 years later, were not in school and had not graduated with a regular diploma or certificate of attendance. The 1 percent of sophomores who left school and earned a General Educational Development (GED) certificate or other form of equivalency certificate as of the spring 2 years later are counted as having left school without a regular diploma or certificate of attendance.
Source: Reproduced from U.S. Department of Education, National Center for Education Statistics, Education Longitudinal Study of 2002 (ELS:2002/04), "First Follow-up, Student Survey, 2004," previously unpublished tabulation (January 2006).

*Percentage of female respondents only. The reason could only be selected by female respondents.

Figure 2: U.S. High School Dropout Rate Including and Excluding GED Recipients, 1968-2005



Note: The true dropout rate is calculated as the fraction of public and private school 8th graders who do not obtain a regular high school diploma. Public school enrollment and public and private high school diploma counts come from the NCES Digest of Education Statistics (various years). Annual private school enrollment is estimated from CPS October data. The NCES dropout rate is one minus the status completion rate. The status completion rate is computed from CPS October data as the percentage of 18- through 24-year-olds who are not enrolled in high school and who have any type of high school credential. High school credential includes a high school diploma or equivalent credential such as a GED.

Education (AE) programs began targeting younger populations by lowering the minimum age requirement for participation from 18 to 16 (Heckman, Humphries, and Mader, 2011). In the same year, Adult Secondary Education (ASE) programs were introduced targeting those lacking secondary education. These programs produced many GED credentials. AE programs issued 20% of GED credentials in 1972 and 40% by 1980 (Heckman, Humphries, and Mader, 2011).

Following these changes, both the dropout rate and the percentage of young GED test takers began to rise. Figure 3 shows that the average age of GED testing dropped precipitously in the early 70s. The average age of GED test takers declined from 29 in 1970 to 25 in 1973.[5] The average age has remained low since then except for a sharp increase in 1974 that coincides with the introduction of Pell grants financing higher education, which initially required at least a GED to qualify.[6]

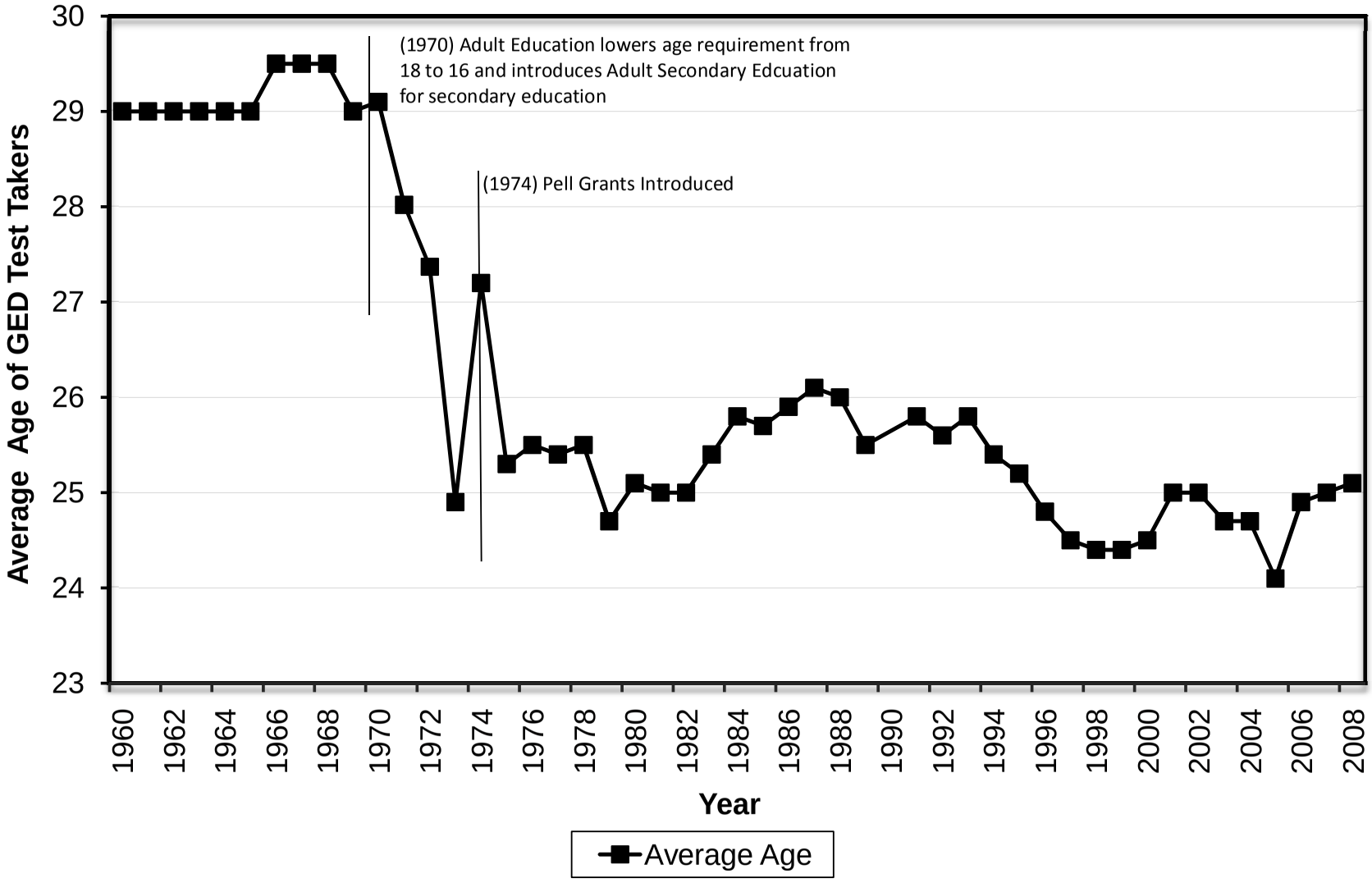
3 The Effect of the 1997 GED Policy Change

The survey and time series evidence suggests that GED test taking is related to youth dropout behavior. Are the observed relationships causal? In the first of the three studies reported in this paper, we address this question by exploiting exogenous variation in the difficulty of passing the GED arising from a nationally mandated toughening of GED passing score requirements in 1997. Prior to 1997, states fell into one of three groups: (1) 19 states with a requirement of a minimum score of 40 on each sub-test and a mean score of 45 across all sub-tests; (2) 26 states with a 35 minimum and 45 mean requirement and; (3) a group of 5 states where GED candidates had to achieve a 40 minimum on each test and/or a mean score of 45 across all tests.

[5]Heckman and LaFontaine (2010) show that the baby boom and the subsequent baby bust accounts for only a small portion of the variation in average age of GED test takers.

[6]The Federal Pell Grant Program provides need-based grants to low-income undergraduate and certain post-baccalaureate students to promote access to postsecondary education. (U.S. Department of Education Website, http://www.ed.gov/programs/fpg/index.html). The sharp rise in the average age in 1974 was possibly due to a pent up demand for college among older dropouts.

Figure 3: Average Age of GED Test Takers from the GED Testing Service, 1960-2006



Source: American Council on Education, General Educational Development Testing Service Statistical Reports.

Notes: The Federal Pell Grant Program provides need-based grants to low-income undergraduate and certain postbaccalaureate students to promote access to postsecondary education. (U.S. Department of Education Website).

Starting January 1st 1997, all states had to meet the new standard of a minimum score of 40 on each test and a mean score of 45. This standard forced the second group of states to raise their minimum score requirement on each test from 35 to 40 and the third group of states to eliminate the and/or scoring option. The first group of states that already met the new standards did not change their requirements. Figure 4 shows the geographic distribution of the states by category.

According to a norming study conducted by the American Council on Education, only 67% of graduating high school seniors are able to meet a minimum score requirement of 40 and a mean score requirement of 45. A minimum of 35 and a mean of 45 was obtained by 70% and 75% scored at the 40 or mean of 45 threshold (Table 2). Thus, the change in difficulty of passing the GED was far greater in the third group relative to the other two. Observed changes in pass rates in the three types of states before and after 1997 reflect this difference (See the far right-hand column of Table 2).

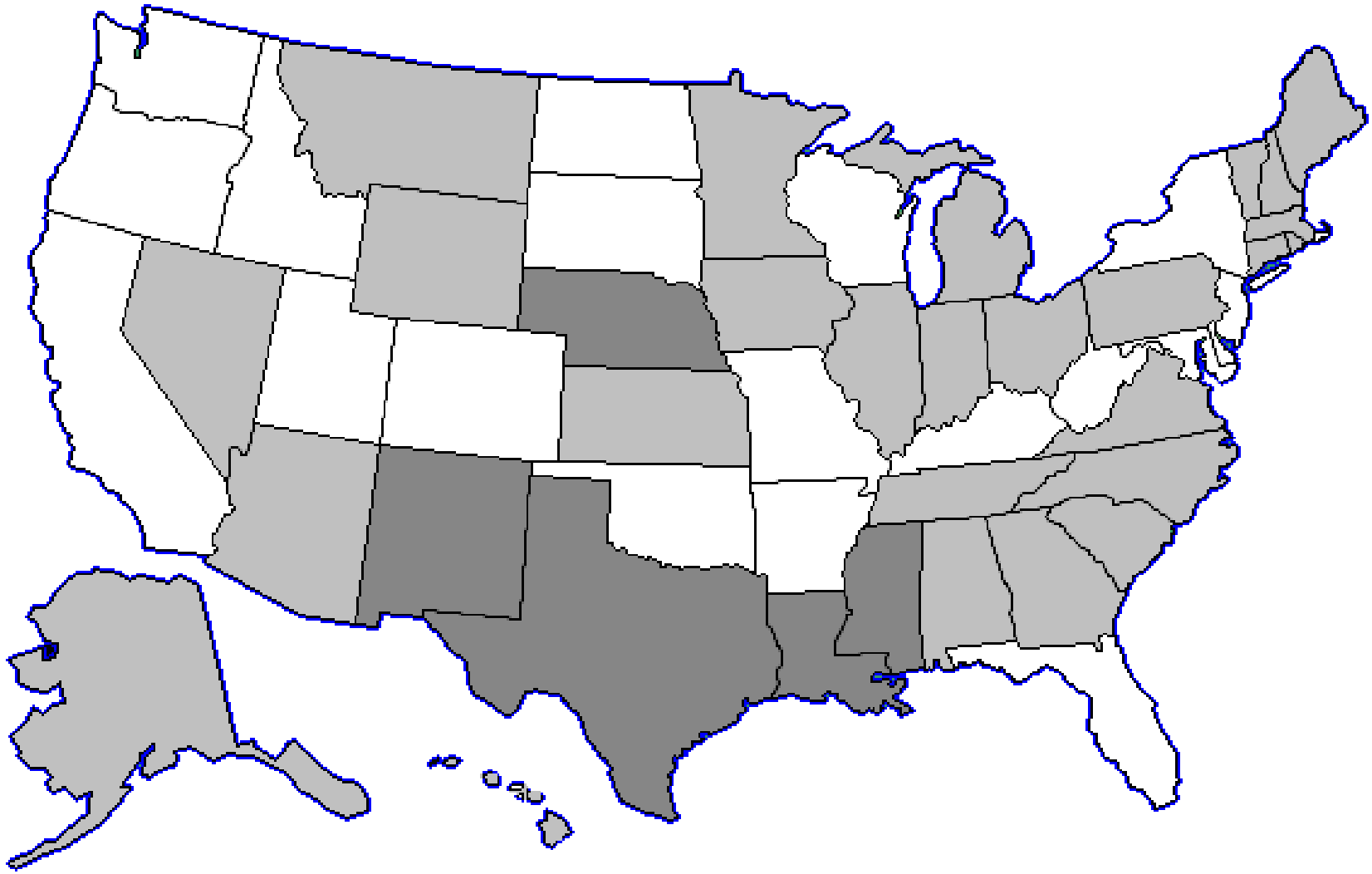
The third group of 5 states serves as our "treatment" group. The states that did not change their standards serve as the "control" group.[7] In our analysis, we compare GED testing and dropout rates in treatment and control states in the years 1994-1996 to the same rates measured in 1998-2000. We exclude 1997 from our empirical analysis because the change in GED requirements occurred in the middle of the school year. The reform could cause some students to drop out and take the GED early in the year and others to stay in school after the requirements were changed later in the same year.

We compute three measures of annual dropout rates using the Common Core of Data (CCD) and a methodology similar to that developed by Kominski (1990).[8] The measures are: (1) the *overall dropout* rate, defined as the percentage of students enrolled in the 10th,

[7]In the Web Appendix to this paper, we use as our control group the states that were required to minimally raise the difficulty of obtaining a GED to test the exogeneity assumption. The results from this analysis are consistent with the results reported in the text.

[8]The Common Core of Data (CCD) are collected from state departments of education and contain the number of students enrolled in each grade level in a given year in each state, as well as the number of high school diplomas issued in that year. From these annual counts, approximate annual exit rates from each grade can be computed. See the Web Appendix for more details on the construction of these measures.

Figure 4: States That Were Required to Raise GED Passing Standards in 1997



States that were required to eliminate the and/or score option (treatment group).
States that were required to raise the GED minimum score requirement from 35 to 40.
States that were not required to raise standards in 1997 (control group).

Source: GED Testing Service: 2001 GED Statistical Report.

Table 2: Percentage of High School Seniors Meeting Various GED Score Requirements and the Actual Change in Pass Rates Pre- and Post-1997

GED Score Standard	Number of States Prior to 1997 Change	% of HS Seniors Meeting Requirements*	Actual Change in Pass Rate**
Minimum 40 or Mean 45	5	73%	-7.43%
Minimum 35 and Mean 45	26	69%	-1.68%
Minimum 40 and Mean 45	19	67%	-1.26%

Source: The percentage of high school seniors in the GED norming study meeting the given score requirement is from the 1987 GED statistical report. The actual change in pass rates are from authors' calculation based on various GED statistical reports.

*GED Norming studies are based on the performance of a representative sample of high school seniors. Depending on their performance GED scores are normalized to obtain a normal distribution of mean 50 and standard deviation 10.

**In states that went from indicated requirement pre-1997 to Minimum 40 and Mean 45 post-1997.

11th and 12th grades in year t who are not enrolled and have not graduated in year $t+1$; (2) the *lower level* dropout rate, defined as the percentage of students enrolled in 10th and 11th grades in year t who are not enrolled in year $t+1$; and (3) the *upper level* dropout rate, given by the percentage of students enrolled in 12th grade in year t who did not graduate in year $t+1$.[9] These rates are yearly exit rates from school and therefore differ in levels from more commonly reported cohort dropout rates (see, e.g., Heckman and LaFontaine, 2010). All dropout rate calculations are then weighted by the fraction of the U.S. 15-17 year old population that resides in each state for our sample period. Figure 5 plots our measures of GED test taking and dropout rates by year in treatment and control states during our sample period. [10]

We define dropout rates this way for the following reasons. First, we need to compute yearly exit rates from schooling to capture the timing of the school leaving decision before and after the GED policy change. Second, we seek to examine whether there are differential effects by grade and age.[11] If students drop out to take the GED, we would expect to find larger effects for students enrolled in upper grade levels since they are older and, as a group, less restricted by compulsory schooling laws and GED testing age requirements. Third, these measures are less sensitive to migration than estimated cohort rates at the state level because they are defined over shorter intervals. Cohort dropout and graduation rates are generally calculated using up to 5 year lags of enrollment and diploma counts (e.g. diplomas issued in the spring of year t over fall 8th grade enrollment in year t-5). Our exit rates are lagged one year and therefore less sensitive to migration.[12] Finally, we do not include 9th

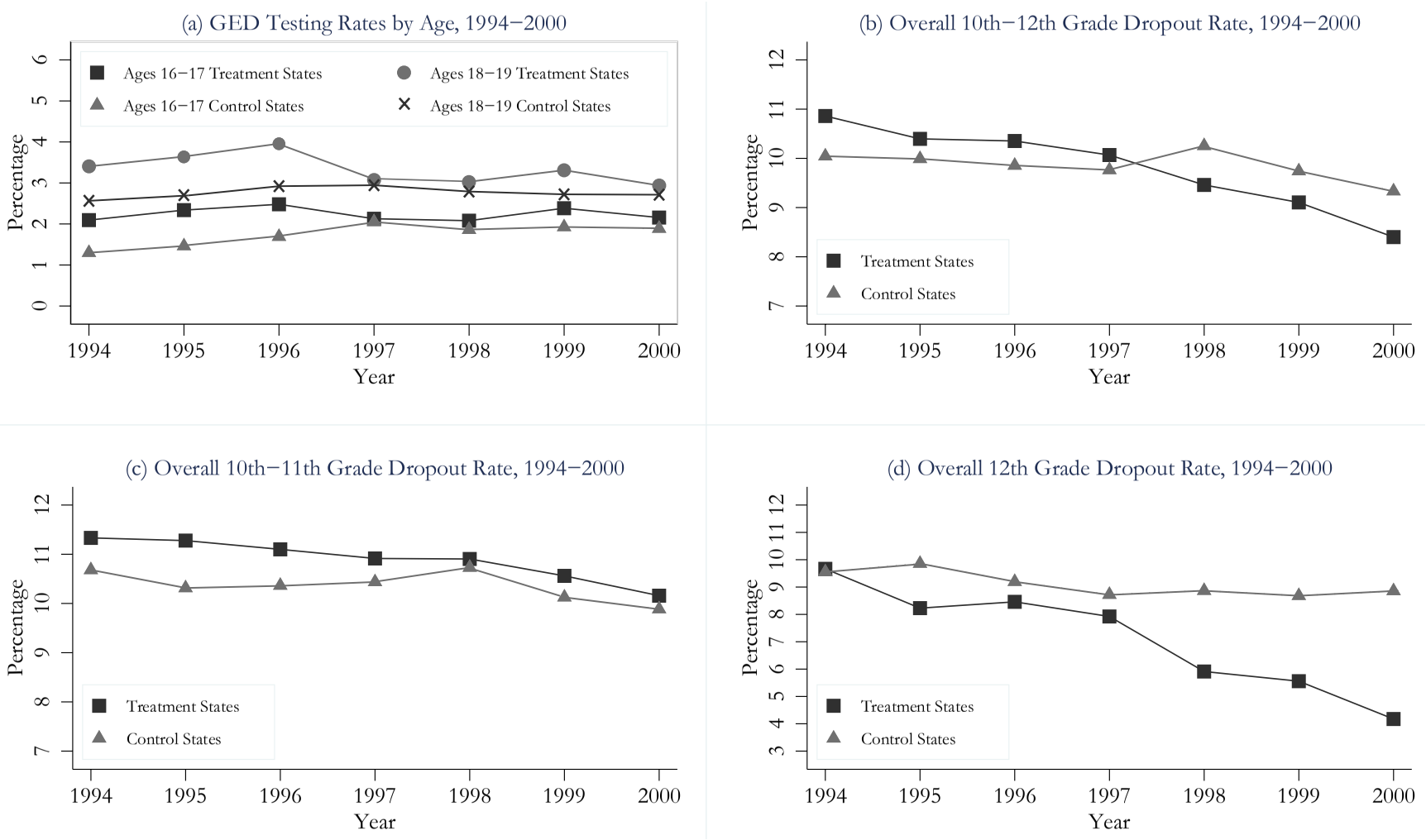
[9]The labels "overall", "lower" and "upper" are our own and are not based on any official definitions. All formulas used to compute each of the dropout rate measures are included in the Web Appendix.

[10]The plots by race are available in the Web Appendix. Data on GED testing by age is from the 1994-2000 GED Statistical reports (See GED Testing Service, Various). Population totals by age are obtained from the Census bureau.

[11]The age of students is not available in CCD data so we use the grade level as a proxy measure.

[12]A 1997 immigration reform generally made it more difficult to migrate and reside in the U.S. To test the sensitivity of our Hispanic estimates to this reform, we compare Hispanic dropout rates in high immigration control states to the large estimates we find in treatment states. We find no significant declines in dropout rates in these control states suggesting that bias due to migration is minimal. See the Web Appendix Table G-38 for this analysis.

Figure 5: GED Testing and Dropout Rates by Year, Treatment vs. Control States



Note: GED testing rates are calculated from yearly GED Statistical Reports as the percentage of the state population in the given age range who take the GED in that year. Dropout rates are calculated from the Common Core of Data (CCD) as the exit rate for those in the indicated grades in the given year. See the Web Appendix for further details. States required to raise GED pass requirements (treatment states) are: LA, MS, NE, NM, TX. States that did not change pass requirements (control states) are: AR, CA, CO, DE, DC, FL, ID, KY, MD, MO, NJ, NY, ND, OK, OR, SD, UT, WA, WV, WI. NJ is excluded in all dropout calculations due to data errors.

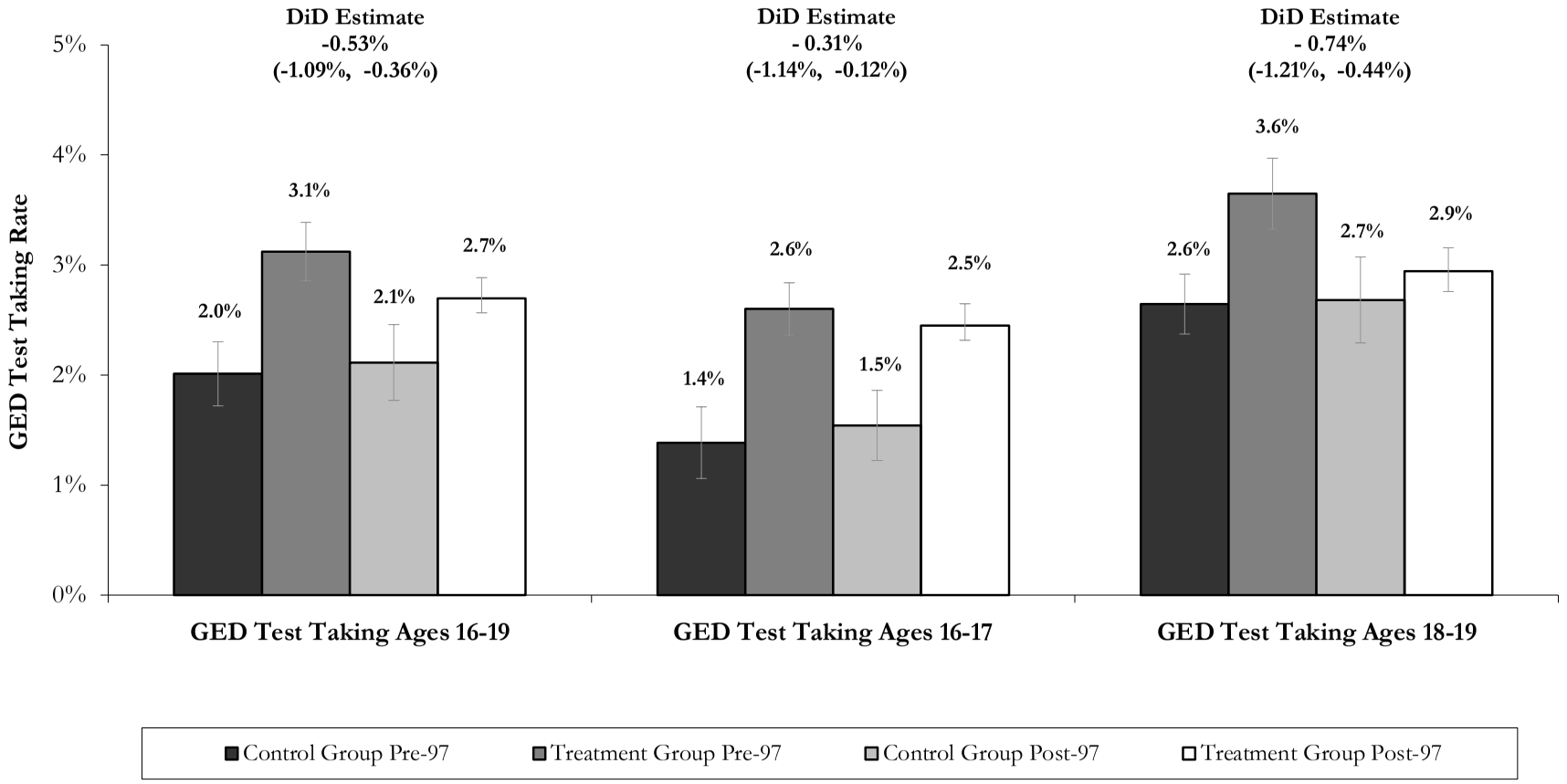
graders because high rates of retention at that grade make it difficult to calculate yearly exit rates between that grade and 10th grade. Students enrolled in 9th grade are predominately younger than 16 and therefore not allowed to take the GED test in any state.

Conley and Taber (2005) show that standard asymptotic results do not apply to many difference-in-difference studies due to the small number of observed policy changes. They develop a permutation test methodology that consistently estimates the asymptotic distribution of the treatment effect under the null hypothesis of no treatment effect. Since our sample is limited to only five states that were required to change GED testing policies, we follow their methodology when computing our test statistics. We also report robust standard errors clustered at the state level for purposes of comparison.

Figure 6 presents the average GED test taking rate by age pre- and post-1997. The unadjusted mean difference-in-difference estimates and standard errors are also reported for each age group at the top of the figure. For the control group, average GED testing rates remained essentially flat over the two periods for all age groups. In contrast, treatment group states exhibit a sharp decline in GED testing post-1997, especially for the older cohorts (ages 18-19) that face fewer restrictions in both leaving school and taking the GED test. The estimated change in the treatment group GED test taking rate for the older cohorts relative to that of the control group is about 0.74 points and is statistically significant at the 5% level. This is a 20% decline relative to the average GED test taking rate in treatment states prior to the change. Also, before raising passing requirements, treatment group states had much higher GED testing rates than did states in the control group. This difference in GED testing levels is nearly eliminated once the treatment states increased their standards.

The overall dropout rates pre- and post-1997 across all races in both control and treatment states are presented in Figure 7. Unadjusted difference-in-difference estimates and standard errors are reported at the top of each set of figures. The overall dropout rate declines sharply across all race groups in the treatment states, with the largest declines occurring for blacks

Figure 6: Average Pre- and Post-1997 GED Test Taking Rate by Age Group



Note: GED test taking rates are defined as the ratio between total number of test takers of a given age and total population of that age. The plot above shows the average GED test taking rate for the period pre-1997 (i.e. 1994-1996) and post-1997 (i.e. 1998-2000). All estimates are weighted by the 15-17 year old population by state. Conley-Taber adjusted confidence intervals in parentheses. The treatment group consists of states that were required to eliminate the and/or score option. These include: LA, MS, NE, NM, TX. The control group consists of states that already had high enough standards by 1997. These include: AR, CA, CO, DE, DC, FL, ID, KY, MD, MO, NJ, NY, ND, OK, OR, SD, UT, WA, WV, WI. The state of NJ is dropped in order for test taking rates to be consistent with dropout rate regressions. Source: GED Testing Service Annual Reports: "Who Took the GED?" (1994-2000).

and Hispanics.[13] The estimated change in the 10th-12th grade dropout rate across all races combined is -1.3% and is statistically significant at the 5% level. The effect for whites is -0.5 percentage points whereas for blacks and Hispanics it is -0.9 and -1.7 percentage points respectively.

In contrast, younger students did not drop out at higher rates, likely because they did not meet the minimum age requirements for the GED (see Figure C-1 in the Web Appendix). Dropout rates at lower levels decline in both treatment and control states for whites, blacks and Hispanics but none of the difference-in-difference estimates are statistically significantly different from zero.

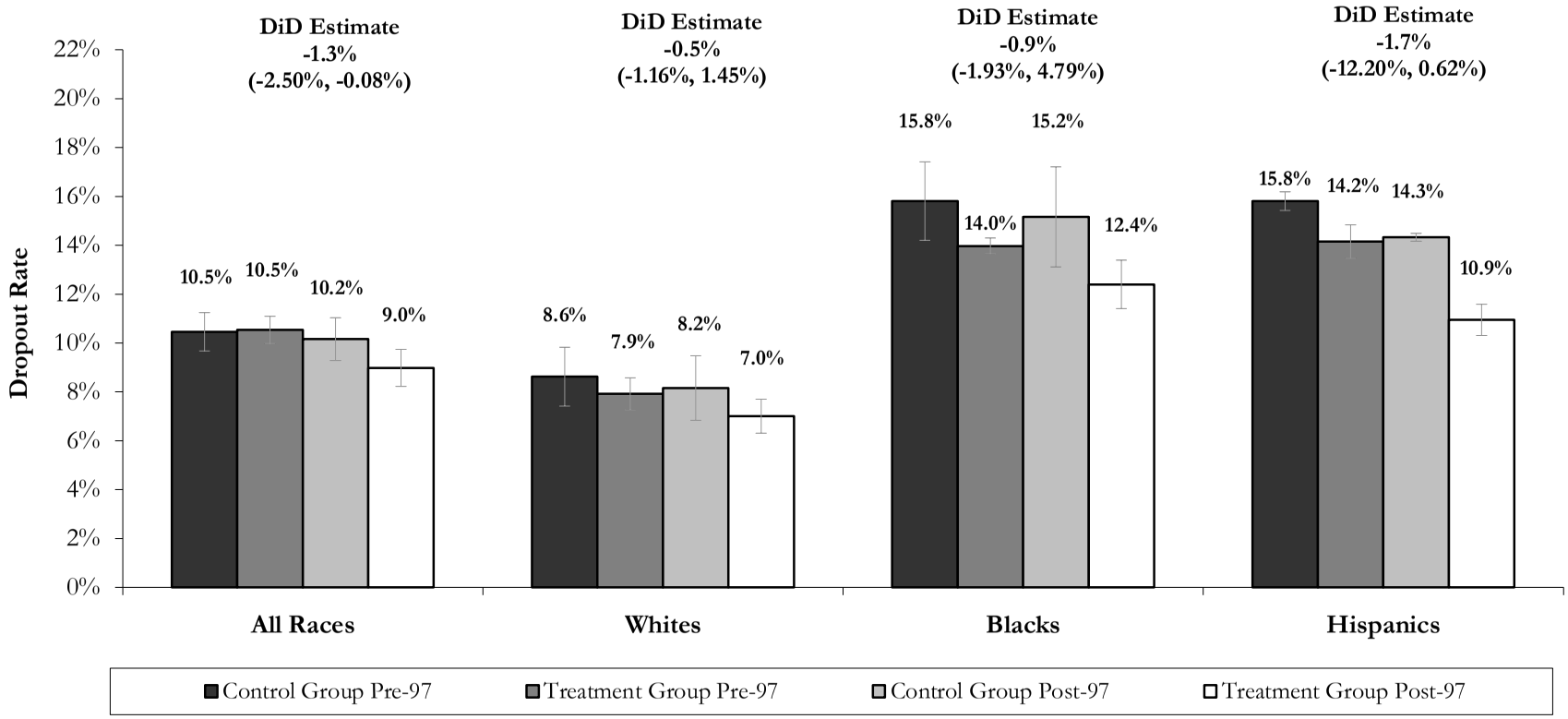
The estimated effect of the GED testing reform on school dropout rates is also much larger for older students (See Figure 8). The estimated change in the 12th grade dropout rate across all race groups combined is 3.1 points and is statistically significant at the 5% level. Again, we observe larger effects among minority students. Whereas the 12th grade dropout for whites decreases by 1.4 points, black and Hispanic dropout rates decline by 4.4 and 7 points more in treatment states, respectively. Declines in the 12th grade dropout rate account for nearly all of the decline in the overall dropout rate in states that increased GED standards.

Students enrolled in lower grade levels in treatment states effectively provide a second control group in our analysis. Most of the students in this group are not affected by changes in GED requirements because they are too young to take the GED test without obtaining a special exemption.[14] The greater decline in dropout rates for older students suggests that the relationship between students' behavior and the reform does not stem from a confounding factor that would affect all students (*e.g.* increased spending per pupil or number of teachers per pupil).

[13]The estimates by race are not directly comparable with the "all races" category since the former include fewer states as a result of missing enrollment data by race. All estimates by race are restricted to the same sub-sample of states.

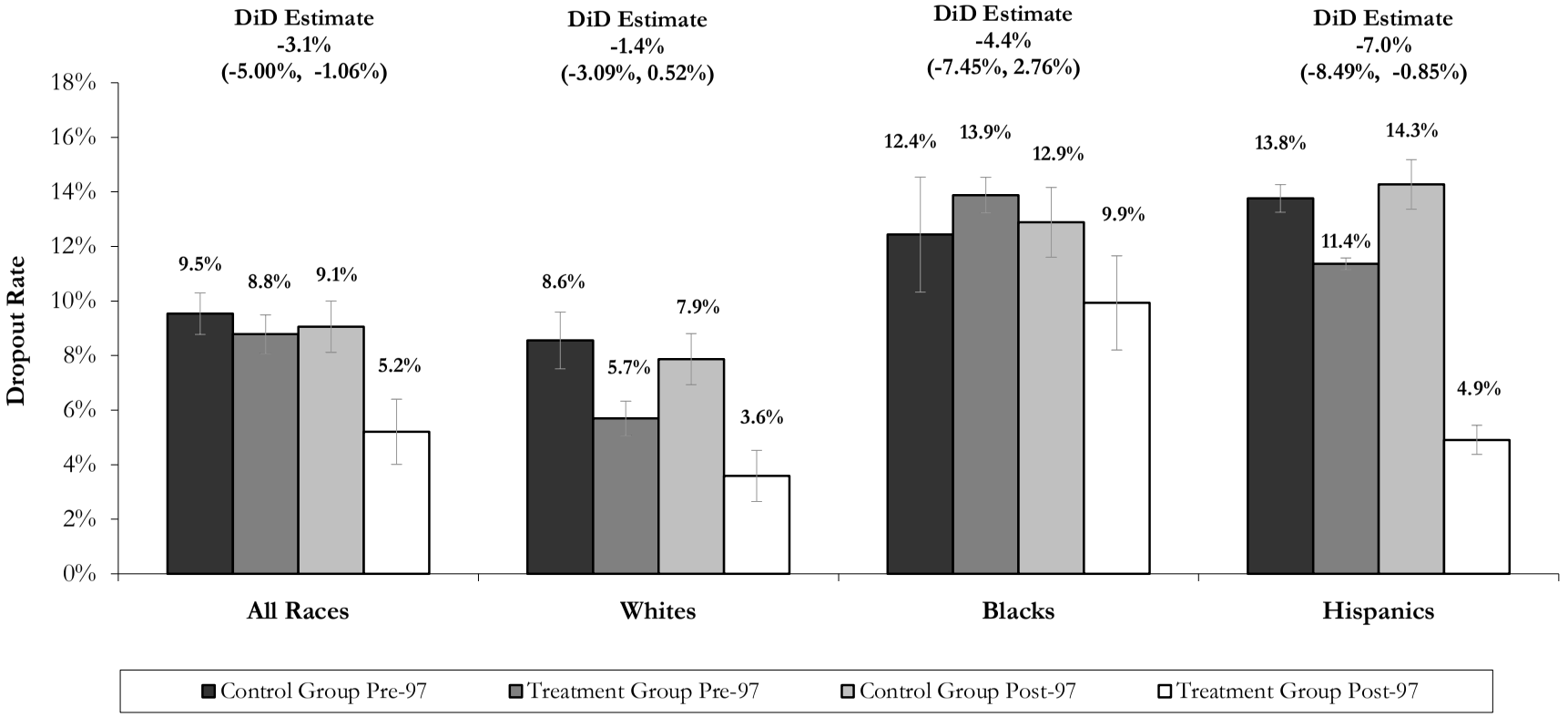
[14]Special exemptions to age requirements vary by state and include such conditions as teenage pregnancy, residence in a juvenile detention facility and enrollment in Job Corps programs. The 2006 GED Statistical Report contains additional information on this topic. (See GED Testing Service, Various.)

Figure 7: Average Pre- and Post-1997 10th-12th Grade Dropout Rate for Treatment and Control Group



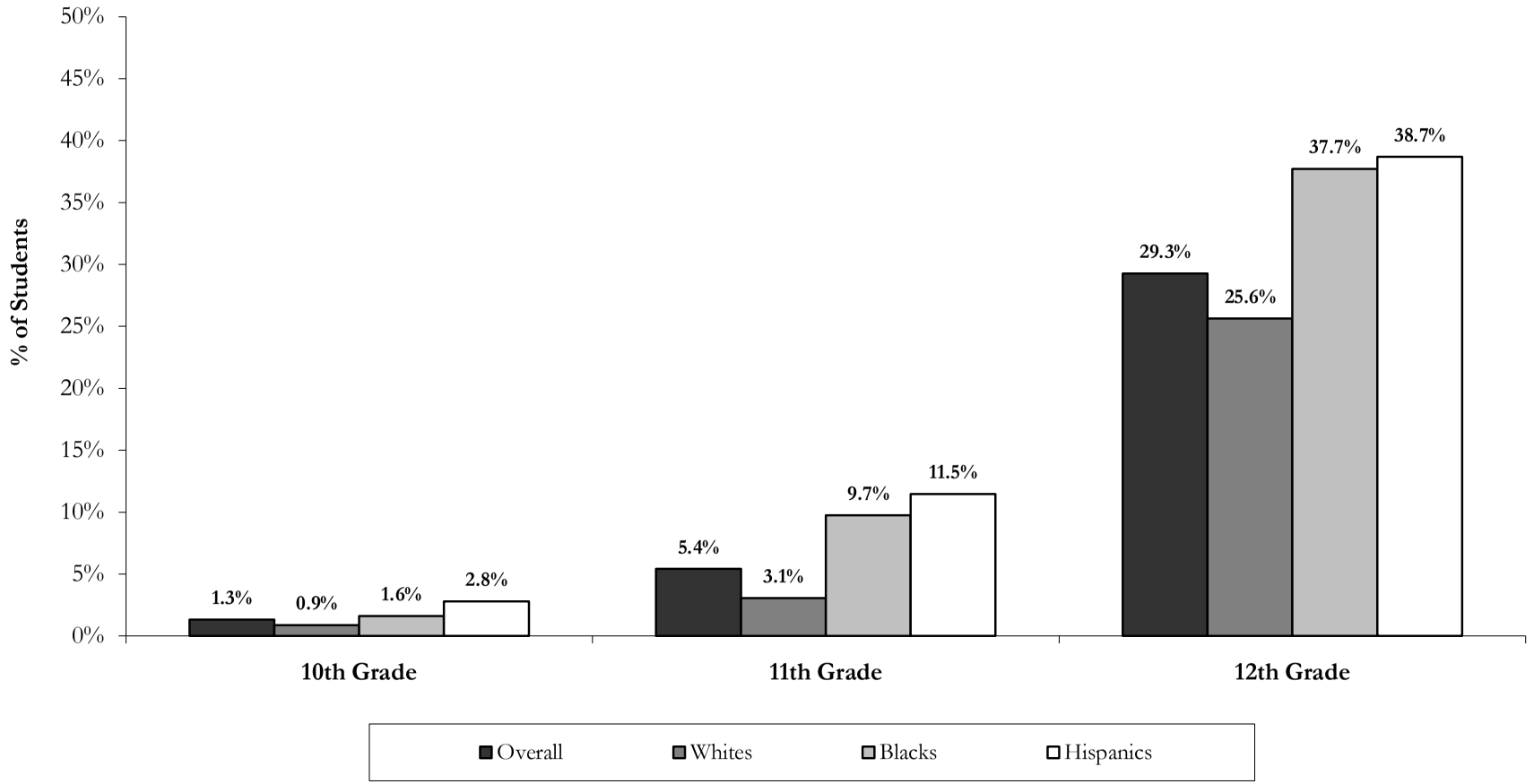
Note: The dropout rate is defined as the ratio of students enrolled in a given grade(s) in year t and the number of students enrolled in the previous grade(s) in year $t-1$, where t= 1994-2000. All estimates are weighted by the 15-17 year old population in the given state. The plot above shows the average dropout rate for the period pre-1997 (i.e. 1994-1996) and post-1997 (i.e. 1998-2000). Conley-Taber adjusted confidence intervals in parentheses. Treatment states are those states that were required to eliminate the and/or score option. These include: LA, MS, NE, NM, TX. Control states are those that already had high enough standards by 1997. These include: AR, CA, CO, DE, DC, FL, ID, KY, MD, MO, NJ, NY, ND, OK, OR, SD, UT, WA, WV, WI. States with fewer than two observations per period are dropped for 'all races' category. States with fewer than two observations per period for any of the dropout rate measures by race are dropped for by race categories. Control states dropped from 'all races' regressions due to missing and negative dropout rates include: NJ. Control states dropped from regression by race due to missing and negative dropout rates include: AR, ID, KY, MO, ND, NJ, NY, SD, UT, WA, WV. No treatment states are dropped from any regressions. Since there are more missings in the dropout rates by race, the 'all races' category is not directly comparable to the categories by race. Source: Common Core of Data (CCD).

Figure 8: Average Pre- and Post-1997 12th Grade Dropout Rate for Treatment and Control Group



Note: The dropout rate is defined as the ratio of students enrolled in a given grade(s) in year t and the number of students enrolled in the previous grade(s) in year $t-1$, where t= 1994-2000. All estimates are weighted by the 15-17 year old population in the given state. The plot above shows the average dropout rate for the period pre-1997 (i.e. 1994-1996) and post-1997 (i.e. 1998-2000). Conley-Taber adjusted confidence intervals in parentheses. Treatment states are those states that were required to eliminate the and/or score option. These include: LA, MS, NE, NM, TX. Control states are those that already had high enough standards by 1997. These include: AR, CA, CO, DE, DC, FL, ID, KY, MD, MO, NJ, NY, ND, OK, OR, SD, UT, WA, WV, WI. States with fewer than two observations per period are dropped for 'all races' category. States with fewer than two observations per period for any of the dropout rate measures by race are dropped for by race categories. Control states dropped from 'all races' regressions due to missing and negative dropout rates include: NJ. Control states dropped from regression by race due to missing and negative dropout rates include: AR, ID, KY, MO, ND, NJ, NY, SD, UT, WA, WV. No treatment states are dropped from any regressions. Since there are more missings in the dropout rates by race, the 'all races' category is not directly comparable to the categories by race. Source: Common Core of Data (CCD).

Figure 9: Percentage of HS Students Eighteen or Older by Grade and Race, CPS October 1994-2000



Authors' calculations from CPS October 1994-2000 data. The sample is restricted to those who report being enrolled in high school between the ages of 12 and 20.

If high school students respond to changes in GED score requirements, GED testing rates would likely increase immediately before increases in the standards and decline immediately afterward, artificially increasing our estimate of the dropout effect. In order to check that our estimates are not produced from a surge in test taking in 1996 and a subsequent decline induced by the shift to higher standards in 1997, we delete the 1996 observations. This barely effects our estimates.[15]

Figure 9 shows that differences in age between whites and minority students might explain why the reform has greater impact on minority students. For whites, 25.6% of the students are 18 and above in the fall of 12th grade. The corresponding figures for blacks and Hispanics are 37.7% and 38.7%, respectively. Far more minority students are in the age group that is not restricted by mandatory school leaving age requirements or GED minimum age requirements. Thus, more minority students are at risk of being induced to drop out of school by the GED at any given grade level. In addition, minority students have fewer credits than white students at each grade level, making the GED a more attractive option for them (See Agodini and Dynarski (1998)). Availability of the GED will induce more students to drop out as more students both delay entry into school and are held back in school.[16] Restricting the minimum age of GED test taking is one way to prevent early exit from secondary education.[17]

4 The GED Option Program

In our second study we evaluate the effect of introducing school-sanctioned GED preparation programs into high schools. As previously noted, a large and growing number of GED test takers certify before age 20 and before their high school class graduates. This represents a shift away from the "traditional" concept of the GED as a second chance for older dropouts.

[15]See Web Appendix D.4 for this and other sensitivity analyses. In Section D.5 of the web appendix we show that the trends prior to 1994 and post-2000 are in line with the trends displayed in Figure 5. The trends in the time period studies are not anamalous.

[16] Heckman and LaFontaine (2010).

[17]The Web Appendix Section E (locate at `http://jenni.uchicago.edu/GED_dropout/GED_incentives/`) presents a fixed effect analysis of the introduction of higher passing standards on dropout rates which corroborate the analysis of Section 3.

As shown in Figure 10a, 16 to 19 year old GED test takers are the largest and fastest growing group. Figure 10b shows that the bulk of the growth in the 16 to 19 age category comes from 16 to 17 year olds. The GED may be inducing students to leave high school rather than graduate.

4.1 The GED Option Program

The American Council on Education (ACE), the organization that operates the GED test, allows some states to offer the "GED Option Program." This program offers GED preparation and certification in high schools. It aims to target students at a high risk of dropping out, and guide them into GED certification as an alternative. The definition of high risk varies by state, but typically is defined to mean that the student is at risk of not graduating with his class or is a year behind in credits.

Originally started in 1989, implementation of the Option Program varies greatly by state. Virginia requires 15 hours of academic preparation per week and work- or career-based training for 10 hours a week, for a median of 12 weeks. Virginia also requires scores of 450 on each subsection of the official practice test. This is higher than the passing standard. In contrast, Oregon reports a median of 20 study hours and median enrollment of 75 days.[18,19] Despite the stated goal of targeting students behind in credits and likely to dropout, the majority of Option Program participants graduate before their high school class.[20]

The GED Option Program offers at-risk students a mixed bag. The program may help teach valuable skills to students who would otherwise drop out. However, introducing the GED directly into the high school may induce some students to GED certify rather than graduate. It may do this in several ways. Its presence in regular high schools lowers the information costs of learning about, preparing for, and taking the GED. Integrating it into the school system may also give the GED credential credibility. Teachers and counselors

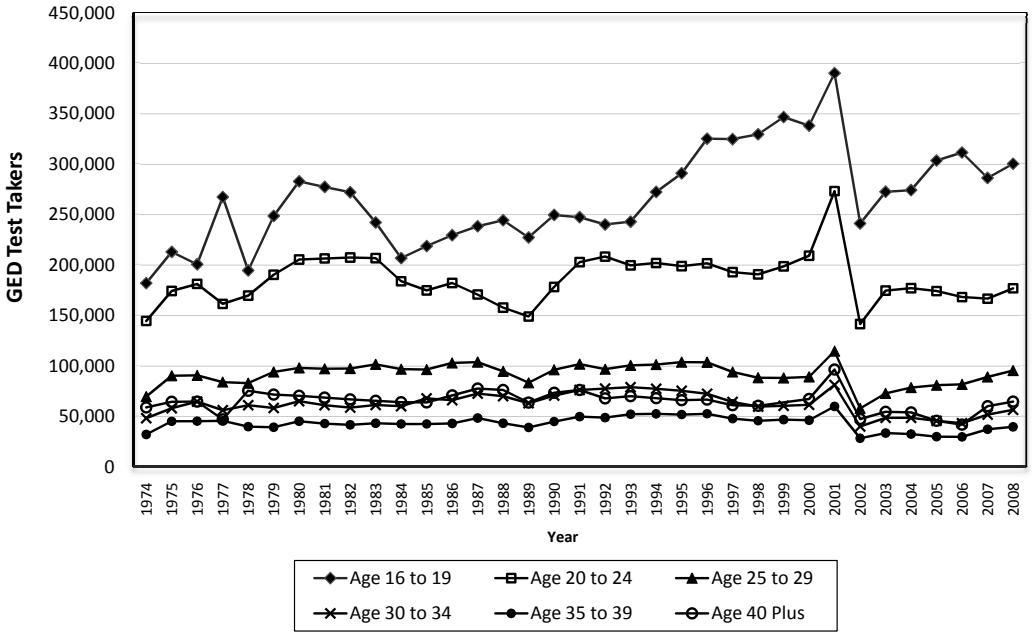
[18]GED Option Statistical Report (2009).

[19] Figures F-1 and F-2 in the Web Appendix show that the state option programs vary greatly in terms of average days enrolled and average preparation.

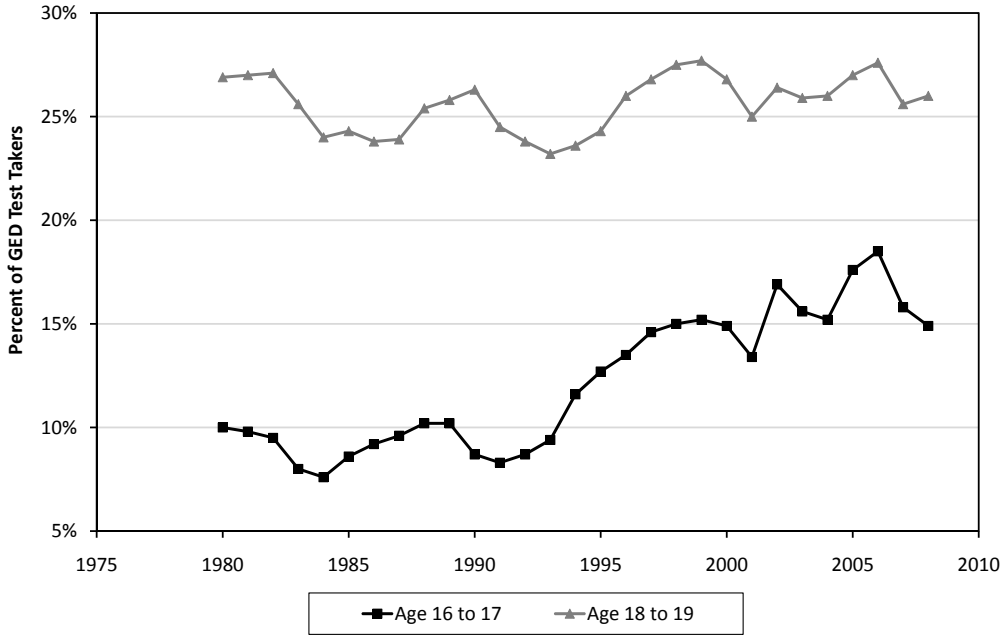
[20]See Figure F-3 in the Web Appendix.

Figure 10: Decomposing GED Testing Trends by Age

(a) Number of Test Takers by Age



(b) Decomposing 16 to 19 year of Test Taking



Source: GED Testing Services Annual Statistical Reports (1974-2009).

may encourage at-risk students to pursue the GED, not knowing the evidence of its minimal beneficial impact. School districts can count GED Option students for funding purposes while they are enrolled in the program, but remove them from the classroom. Administrators may encourage disruptive students to take the GED Option. The GED Option may have peer effects as those preparing for the GED are still present at their local high schools. The credibility of the GED Option is further bolstered by the fact that in many states the GED credential is semantically indistinguishable from a high school diploma.[21] (See Table F-1 in the Web Appendix.)

4.2 The Oregon GED Option Program

We evaluate the effect of the Oregon GED Option program on high school graduation rates using administrative records. Oregon implemented a GED Option program in 2001. The requirements of Oregon's program are lower than those of many other states.

Oregon allows school districts to petition the state for permission to implement GED Option programs. Once permitted, school districts typically implement the program in one of the following ways: (1) district wide; (2) in specific high schools in the district; or (3) only in non-traditional high schools or community colleges in the district. By 2005, 54% of districts had some form of an option program, with 49% having option programs in some schools and 28% having district-wide option programs.

4.3 The Effect of the GED Option Program on Cohort Completion Rates

Using the Common Core Data, we construct 8th grade, 9th grade, and 10th grade cohort completion rates, where the 8th grade cohort completion rate is the number of diplomas issued in a year divided by the number of 8th graders enrolled four years earlier. 9th and

[21] However, No Child Left Behind legislation prohibits states from issuing actual diplomas based on GED certification.

10th grade cohort completion rates are constructed in the same manner, but using 9th grade enrollment lagged three years or 10th grade enrollment lagged 2 years. We use all three cohort completion rates to check the robustness of our estimates. Using Oregon Department of Education Administrative data we construct three variables to capture the presence of a GED Option Program: (1) a dummy for district-wide implementation, (2) a dummy if the district has any regular high schools offering GED Option programs, and (3) a dummy for implementation of a GED Option program, but not in regular high schools. Districts with GED option programs outside of regular high schools typically have GED Option programs in local community colleges, or second-chance schools for expelled students. School districts with option programs in regular schools typically have a large number of schools offering the program and resemble district-wide programs. We present evidence on the exogeneity of the presence of these programs in districts in Section 4.4.

Using this data we regress one of our three cohort completion rates on one of the three measures of the GED Option program, a set of district controls, and district and year fixed effects:

$$Y_{i,t} = \alpha GED_{i,t} + \beta_1 X_{i,t} + \beta_2 Year_t + \beta_3 District_i + \epsilon_{i,t}, \quad i = 1, \ldots, I; \quad t = 1, \ldots, T$$

where $Y_{i,t}$ is either 8th, 9th, or 10th grade cohort completion rates; $GED_{i,t}$ is a binary variable indicating the presence or absence of a GED Option program; $X_{i,t}$ is a vector of time variant district characteristics; $Year_t$ is a year fixed effect and $District_i$ is a district fixed effect. We include among the $X_{i,t}$: percent black enrollment, percent Hispanic enrollment, percent free lunch eligible, percent free or reduced lunch eligible, the pupil-teacher ratio, total expenditure per pupil and total revenue per pupil. State and federally operated districts, charter districts, vocational or special needs districts, and non-operating districts are excluded from our analysis. We include data from 2000 through 2008 in our analysis, with 2002 being the first year programs were offered.

The presence of district-wide GED Option programs in schools decreases cohort completion rates. 8th, 9th, and 10th grade cohort completion rates decrease by 4.2%, 3.0%, and 4.2% after districts implement a district-wide program (Figure 11a). These estimates are all statistically significant.[22] We find similar results ranging from 3% to 4% for districts that have any option program in a regular high school.[23] Cohort completion rates are not affected in districts with Option programs implemented outside of regular high schools. (See Figure 11b.) This evidence supports the notion that information and availability play key roles in the decision to GED certify.

Not all students induced to drop out of high school by the Option program GED certify. We find an increase in GED certification rates[24] across cohorts in districts that adopt a GED Option program. The presence of a district-wide Option program is associated with a 1.7% increase in the cohort GED certification rate for the 8th, 9th, and 10th grade cohorts.[25] This increase is only half of the estimated decrease in cohort diploma rates.[26]

4.4 Which Districts Adopt Option Programs?

Districts select into Option Programs. Such selection may bias our results. Using NCES Common Core Data and district level 2000 Census data, we compare districts prior to the 2001 introduction of the GED Option. We find only small differences between districts that adopt GED Option programs and those that do not, suggesting that selection does not play a role (see Figure F-5 and Figure F-6 in the Web Appendix).

[22] Estimates are statistically significant at the 0.05 level for 8th and 10th grade cohort completion rates and the 0.1 level for 9th grade rates.

[23] See Figure F-4 in the Web Appendix.

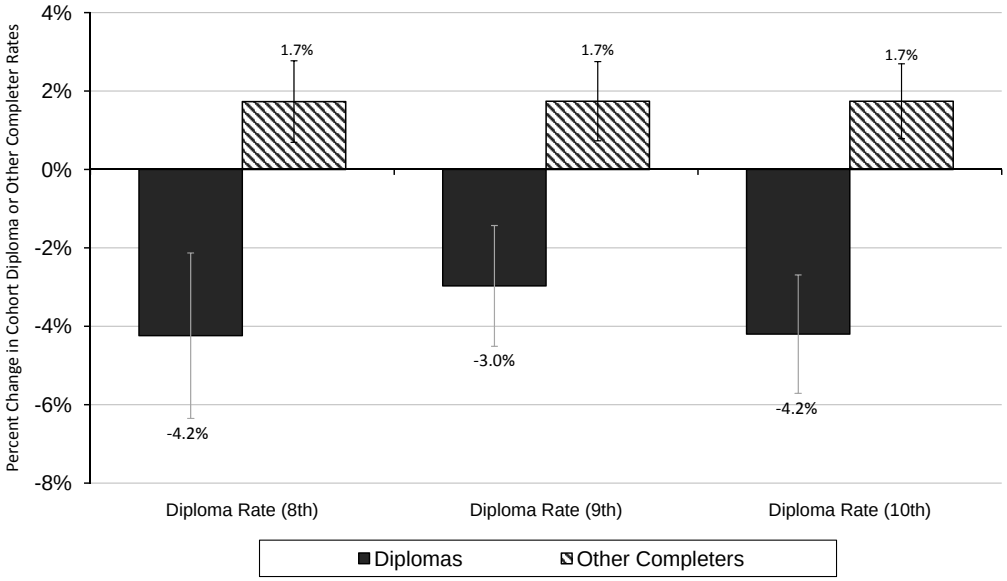
[24] GED certification rates are measured by the number of "other completers" reported by a district, which includes individuals that GED certify through school or state preparation programs.

[25] These estimates are jointly statistically significant at the 0.10 level.

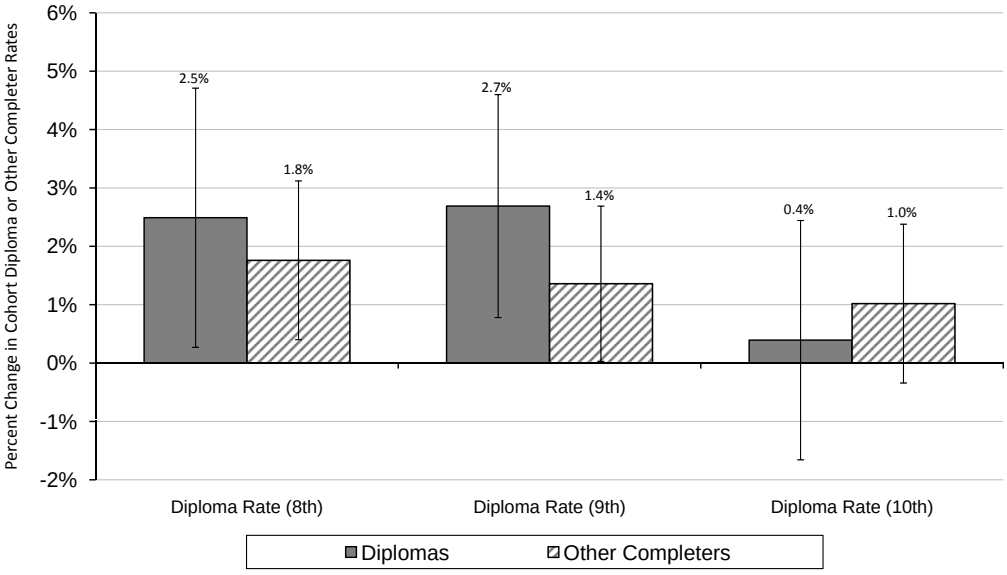
[26] We find no statistically significant effect of the Option Program on dropout rates when it is placed in alternative schools. This provides evidence that its presence in ordinary high school advertises its availability and possibly fosters iatrogenic peer effects.

Figure 11: The Effect of the GED Option Program on High School Cohort Completion Rates

(a) District-Wide GED Option Program



(b) Option Program Outside of Regular High Schools



Source: National Center for Education Statistics, Common Core Data and Oregon School Districts Administrative Data. Notes: Cohort completion rates are defined as the number of diplomas issued divided by 8th, 9th, or 10th grade enrollment lagged the appropriate number of years. The definition of other completers includes students who GED certify through a district or state-sanctioned certification program, and thus should capture students who GED certify through the GED Option program. Regressions include controls for percent black enrollment, percent Hispanic enrollment, percent free lunch eligible, percent free or reduced lunch eligible, pupil teacher ratio, expenditures per pupil, revenue per pupil, and district and year fixed effects. Regressions include 2001-2002 school year through 2007-2008 school year. The bars show standard errors.

5 Eliminating the GED Option in California

Our third study examines the effect of introducing the GED for civilians on dropout rates in California. In 1974, California became the last state to offer a state recognized credential for GEDs.[27] The California legislature amended the state education code to include provisions for the issuance of the California High School Equivalency Certificate to be given out on the basis of GED test scores.[28] According to the new law, this certificate would be "deemed to be a high school diploma for the purpose of meeting the requirements of employment by all state and local public agencies."

In 1974, the GED testing program was neither as large as it is today nor as popular among school age youth. However, even then it accounted for nearly 9% of all high school credentials issued and 34% of the test takers were age 16 to 19.[29]

To assess the impact of introducing the GED program we compare the high school graduation rate in California with that of all other states in the three years before and after 1974. Since enrollment counts by grade are not available on a state-by-state basis in this period, we use an estimate of the 14 year old population as a proxy for the entering 9th grade enrollment.[30]

Figure 12 displays the overall, male and female mean high school graduation rates pre- and post-1974 in both California and the rest of the country.[31] Difference-in-difference estimates are also reported. Prior to the introduction of the GED program, California had a high school graduation rate that was higher than that in the rest of the United States. Once the GED was introduced, California graduation rates immediately fell to the levels of other

[27] See Allen and Jones (1992).

[28] California Legislature (1973).

[29] See Figures 1 and 2.

[30] Population estimates for California were obtained from the California Demographic Research Unit. They provide estimates of the state population by age for the resident population on July 1st of each year. We use the July 1st 15 year old population in the next year to proxy for the previous years fall 14 year old population. U.S. population estimates by age are from the Census Bureau and are also estimates of the resident population on July 1st.

[31] Figure G-1 in the Web Appendix displays completion rates by year for California and the rest of the country for the years 1971-1977.

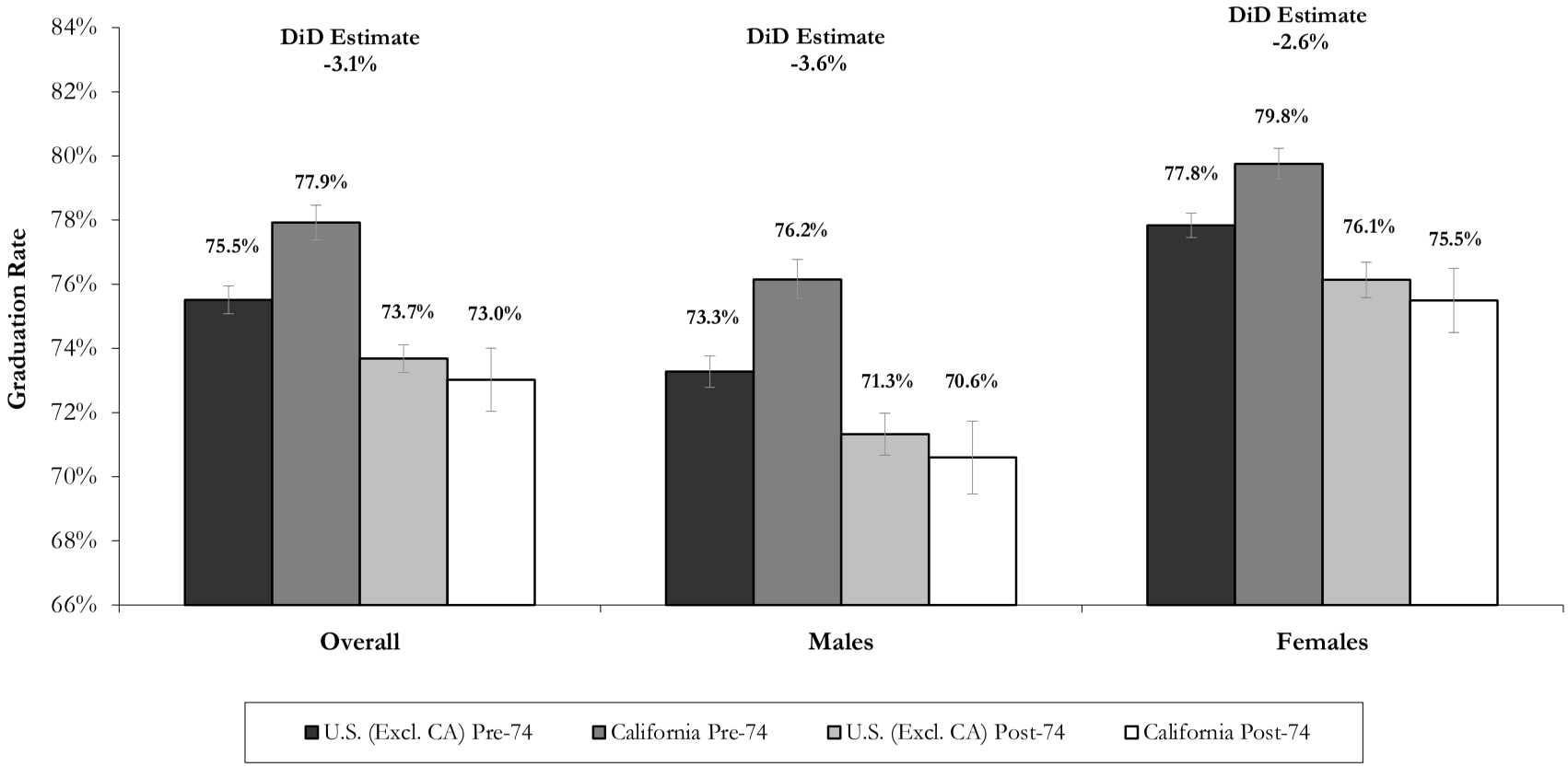
states. While graduation rates fell both in California and the rest of the U.S. during this time, difference-in-difference estimates show that introducing the GED program resulted in a 3 percentage point greater drop in California relative to other states in the period from 1975-1977.

The adverse effect of introducing the GED program on graduation rates was larger for males than females.[32] Male graduation rates fell by 3.6 percentage points while the graduation rate for females declined by 2.6 points. One reason for this differential is that males might have better immediate employment opportunities and would, therefore, find an early exit from high school through GED certification a more attractive option. Additionally, males are farther behind in school than females at any given age. This finding is also consistent with the evidence reported in Heckman and LaFontaine (2010), who show that male graduation rates have declined more than female rates since the early 1970s.

Evidence from the late introduction of the GED program in California further suggests that the GED induces youth to drop out of school. Eliminating the GED option would increase high school graduation rates. Arguably, estimates based on 1974 data understate the effect we would observe today if the GED were not available to students. Since 1974, the GED program has expanded and become more popular with adolescents and young adults. In addition, high school standards, as measured by mandatory courses and high-stakes testing requirements, have increased substantially since the mid-1980s (See Lillard and DeCicca (2001)). These changes increase the cost of graduating from high school and the attractiveness of the GED. For all of these reasons, it is plausible that our estimates based on California in the mid-1970s understate the potential impact of enacting this reform under current conditions.

[32]Data for this period are not available by race.

Figure 12: Graduation Rate Before and After Implementing the GED Program, California vs. All other States



Notes: Authors' calculations based on NCES data. The graduation rate is the number of regular public and private high school diplomas issued over the 14 year old population four years previous. Population totals for the U.S. were obtained from the U.S. Census Bureau. California population estimates were obtained from the California Demographic Research Unit. Huber-White robust standard errors in parentheses. State 15 year old population are used as weights. Pre-period is defined as 1971-1973 and Post-period as 1975-1977.

6 Conclusion

This paper presents three studies of the effect of the GED program on the high school graduation rate. In the first study, we find that raising the difficulty of obtaining the GED, through increasing passing requirements, reduces dropout rates. A nationally mandated increase in GED passing standards in 1997 resulted in a 1.3 percentage point drop in the overall dropout rate in states that were required to change their standards relative to those that were not required to do so. The observed reduction in dropout rates was stronger for older students enrolled in upper grade levels since these individuals are less restricted in both school leaving and GED testing. The twelfth grade high school dropout rate fell by 3 percentage points following the 1997 reform.

Minorities are more sensitive to the availability of GED credentials than are whites. At a given grade level, minority students tend to be older and further behind than majority students. These factors make obtaining a GED credential more attractive than high school graduation for minorities. Minority dropout rates exhibit the sharpest declines following the increase in GED passing standards. Black 12th grade dropout rates declined by 4.8 percentage points, those for Hispanics by 6.2 points and those for whites by 1.3 percentage points. There are smaller changes in dropout behavior for younger students not eligible to drop out.

In a second study, we examine the effect of introducing the GED into the high school setting. The GED Option program integrates GED test preparation and certification for struggling students directly into high schools. The introduction of the GED Option program in Oregon led to a four percent decrease in graduation rates.

In a third study, we show that introducing the GED produces substantial changes in overall graduation rates. Prior to the introduction of the GED program in 1974, California had higher graduation rates compared to those in the rest of the country. Our estimates show that when the California legislature established credentials for civilian dropouts passing the GED test, graduation rates fell by 3 points in California relative to the rest of the U.S., and

graduation levels dropped to those of the other states. Eliminating the GED option today would likely have much larger effects given the wider acceptance of the program.

Taken together, these studies suggest that the GED program induces students to drop out of school. The program has changed from its original intention of providing a second chance for adults to becoming a primary vehicle for obtaining high school certification among many students enrolled in secondary education.

This evidence should be a source of concern. The benefits of GED certification are slight. GED recipients perform in the labor market, post-secondary schooling, the military, and, in general, society at a level very close to that of dropouts and below that of high school graduates (see Heckman, Humphries, and Mader, 2011). Given the poor performance of GED recipients relative to high school graduates, the findings reported in this paper provide evidence that states should adopt policies to eliminate the availability of the GED for school-age children. Such a change in policy would not only raise high school graduation rates, but could also improve the future prospects of disadvantaged students.

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Web Appendix for "Taking the Easy Way Out: How the GED Testing Program Induces Students to Drop Out"

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and Pedro L. Rodríguez

First draft, December 2007

Revised, May 4, 2011

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A Data Sources

This article uses the Common Core of Data (CCD) to construct annual exit rates from secondary schooling. The CCD data are collected each year by the National Center for Education Statistics from state and local departments of education. The data provide aggregate annual counts of enrollments and diplomas issued (excluding GED certificates, certificates of completion and other alternative credentials) at the state, district and even school level. We use the aggregate state counts to construct various dropout measures using the methodology summarized in the next section. Many states do not report estimates by race for all years. They tend to be states that do not have large minority populations and therefore our estimates should not be overly biased due to their exclusion. In a very small number of cases, the estimated dropout rate was negative and these were set to missing. We experimented with a number of imputation procedures to correct for missing values. These were found not to affect our results in any substantial manner. The final measures used in the paper do not contain imputations and all estimates by race are restricted to the same sample of states to make the estimates comparable across groups. To be included in the analysis, states needed to have at least two observations for each dropout measure in both the pre and post treatment periods. It was not necessary to drop any treatment states in the analysis by race. The estimates by race should be considered more cautiously than the overall estimates due to these data limitations. For the analysis not by race only a few state-year observations are missing for the treatment and control states.

A summary of all the variables used in our analysis broken down by treatment status and time period are listed in Table E-3. GED testing rates by age at the individual state level are obtained from multiple years of the annual GED statistical reports published by the American Council on Education (ACE). GED age requirements by state are also from this source. Mandatory school leaving age for each state was obtained from various years of the Digest of Education Statistics. Annual measures at the state level of unemployment rates and per capita income were obtained from the Bureau of Labor Statistics and the Census

Bureau, respectively. Population estimates at the state level for each age are obtained from the U.S. Census Bureau. For the California analysis, population estimates were obtained from the California Demographic Research Unit due to a lack of data available on the state level from the Census Bureau. Diplomas issued in California and the U.S. were obtained from various years of the Digest of Education Statistics.

District level data on the implementation of the GED Option program were collected from unpublished administrative records from the Oregon Department of Education. These data include which districts implemented Option programs from its introduction in the 2001-2002 school year, through 2008. Cohort Completion rates and additional district level data were collected from the National Center for Educational Statistics Common Core Data. Enrollment by grade, number of diplomas issued per year, number of other completers per year, and district-level demographics were collected from 1998 through 2008. Additional Data from the 2000 Census incorporated into the NCES Common Core Data on poverty rates, median family income, and per-capita income by district were also extracted

B Definitions

B.1 Weighted GED Test Taking Rate Across Groups:

Let i denote state and t denote years. The rate is

$$\sum_{i=1}^{51} \frac{G(a)_{i,t}}{P(a)_{i,t}},$$

with $i = 1, ..., 51$ and $t = 1994, ..., 2000$, where

$G(a)_{i,t} =$ Number of GED Test Takers Age a in state i in year t.

$P(a)_{i,t} =$ Population Age a in state i in year t.

The number of states included in each sum is the number of states in groups 1 and 3 as defined in the text, dropping any states with fewer than two observations per period.

B.2 Overall Dropout Rate (10th-12th Grade) in state i in year t:

$$DO_{i,t} = \left(\frac{P(15-17)_{i,t}}{\sum_{i=1}^{51} P(15-17)_{i,t}} \right) \cdot \frac{(E(10)_{i,t-1} + E(11)_{i,t-1} + E(12)_{i,t-1}) - (E(11)_{i,t} + E(12)_{i,t} + H_{i,t})}{(E(10)_{i,t-1} + E(11)_{i,t-1} + E(12)_{i,t-1})},$$

with $i = 1, ..., 51$ and $t = 1994, ..., 2000$, where

$$\begin{aligned} P(15-17)_{i,t} = &\quad \text{Population Age 15-17 for } i,t. \\ E(10)_{i,t} = &\quad \text{Enrollment in Grade 10 for } i,t. \\ E(11)_{i,t} = &\quad \text{Enrollment in Grade 10 for } i,t. \\ E(12)_{i,t} = &\quad \text{Enrollment in Grade 10 for } i,t. \end{aligned}$$

$H_{i,t}$ is the number who graduate in state i at time t. These are people who were enrolled in school in the previous year.

B.3 Upper Level Dropout Rate (12th Grade) in state i in year t:

$$DU_{i,t} = \left(\frac{P(15-17)_{i,t}}{\sum_{i=1}^{51} P(15-17)_{i,t}} \right) \cdot \frac{E(12)_{i,t-1} - H_{i,t}}{E(12)_{i,t-1}},$$

with $i = 1, ..., 51$ and $t = 1994, ..., 2000$.

B.4 Lower Level Dropout Rate (10th-11th Grade) in state i in year t:

$$DL_{i,t} = \left(\frac{P(15-17)_{i,t}}{\sum_{i=1}^{51} P(15-17)_{i,t}} \right) \cdot \frac{(E(10)_{i,t-1} + E(11)_{i,t-1}) - (E(11)_{i,t} + E(12)_{i,t})}{(E(10)_{i,t-1} + E(11)_{i,t-1})},$$

with $i = 1, ..., 51$ and $t = 1994, ..., 2000$.

Weighted dropout rates by group are obtained by summing across the states in each group.

B.5 Cohort Completion Rates (8th, 9th, or 10th) in district i in year t:

$$CR = \frac{\text{Diplomas}_{i,t}}{\text{Enrollment}_{8\text{th},i,t-4}}$$

$$CR_{9\text{th},i,t} = \frac{\text{Diplomas}_{i,t}}{\text{Enrollment}_{9\text{th},i,t-3}}$$

$$CR_{10\text{th},i,t} = \frac{\text{Diplomas}_{i,t}}{\text{Enrollment}_{10\text{th},i,t-2}}$$

with t = 2000,...,2008, where:

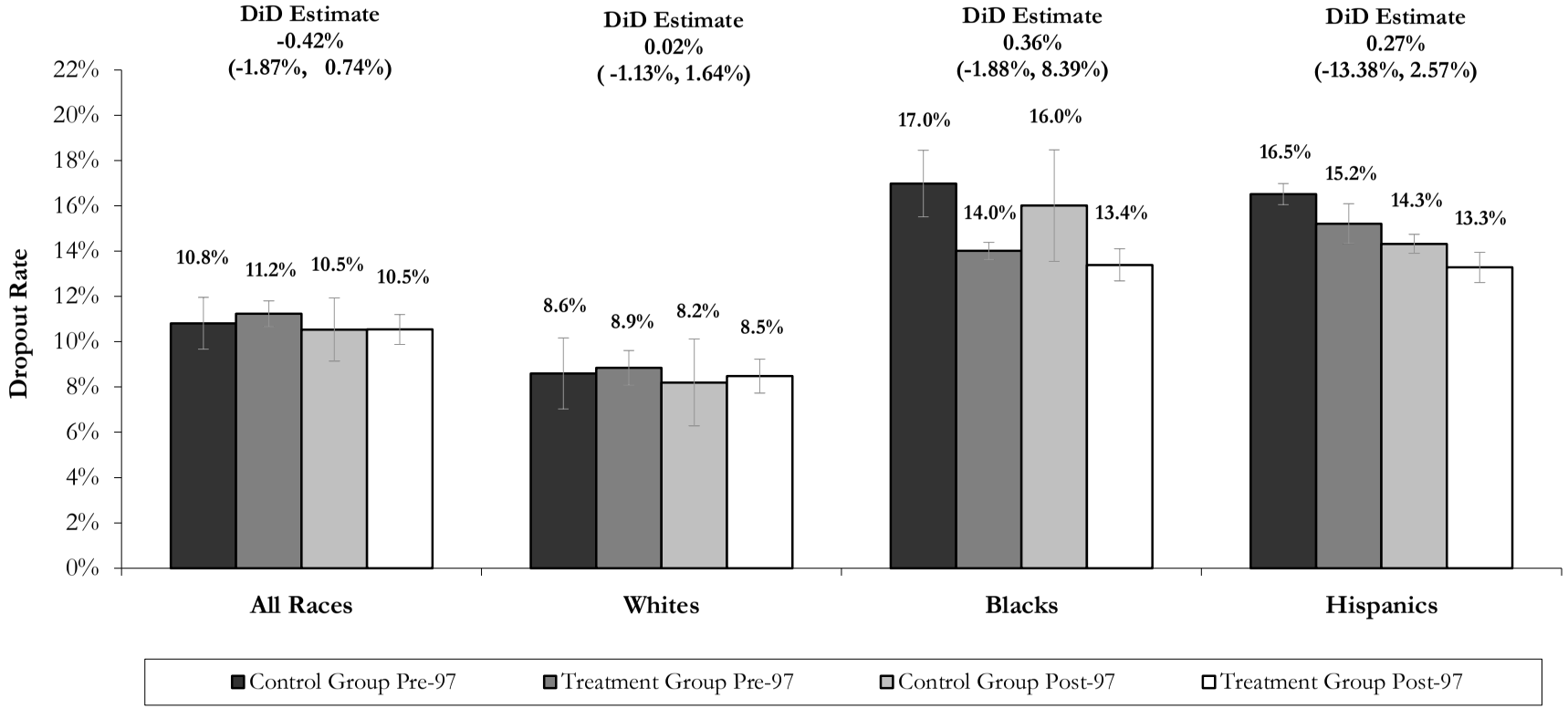
$$CR_{j\text{th},i,t} = \text{ Completion Rates Using Base Grade } j \text{ for } i,t.$$

$$\text{Diplomas}_{i,t} = \text{ Number of Diplomas Issued for } i,t.$$

$$\text{Enrollment}_{j\text{th},i,t} = \text{ Number of Enrolled Students in Grade } j \text{ for } i,t.$$

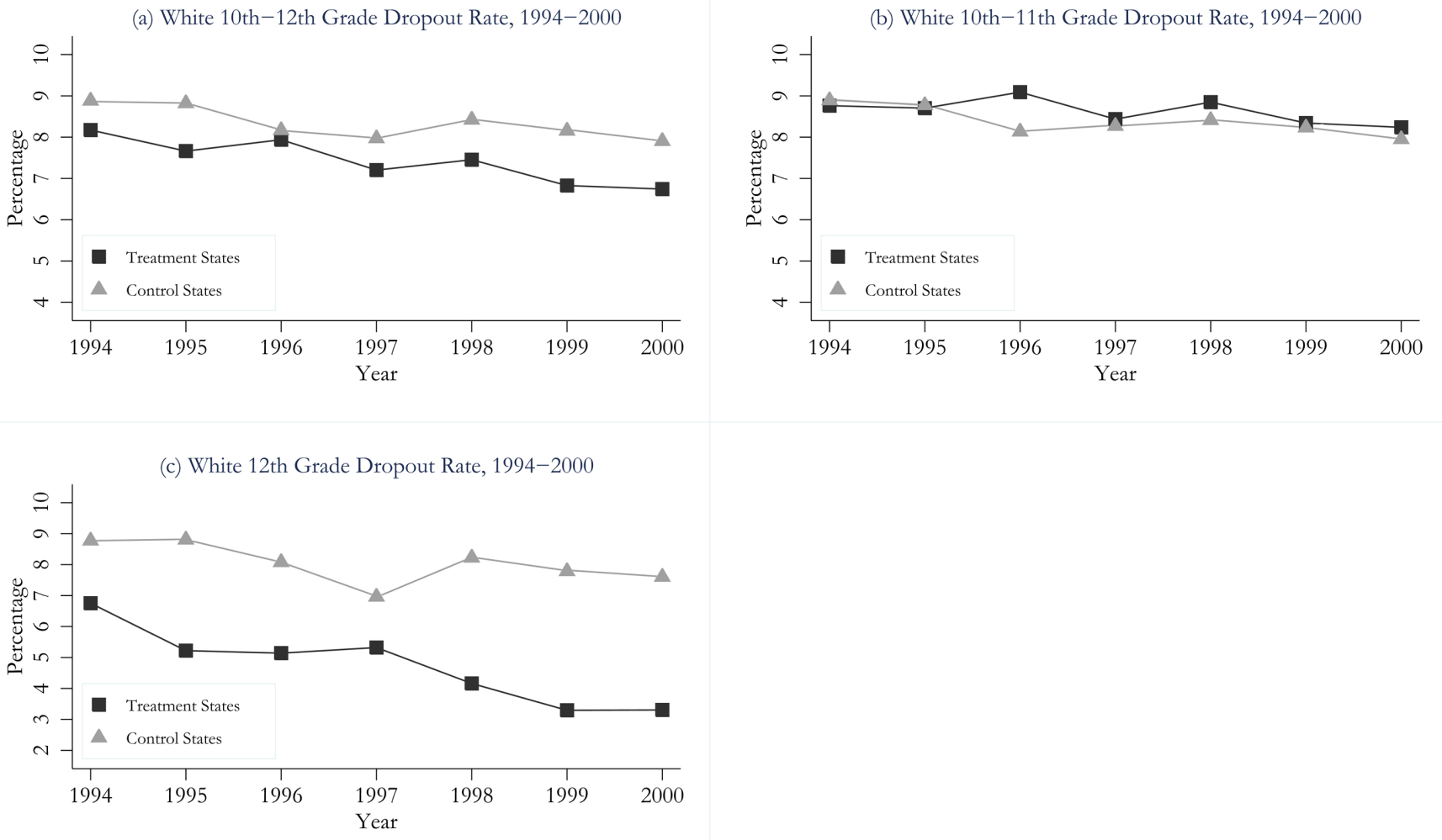
C Supplementary Materials for the 1997 Increase in Passing Standards

Figure C-1: Average Pre- and Post-1997 10th-11th Grade Dropout Rate for Treatment and Control Group



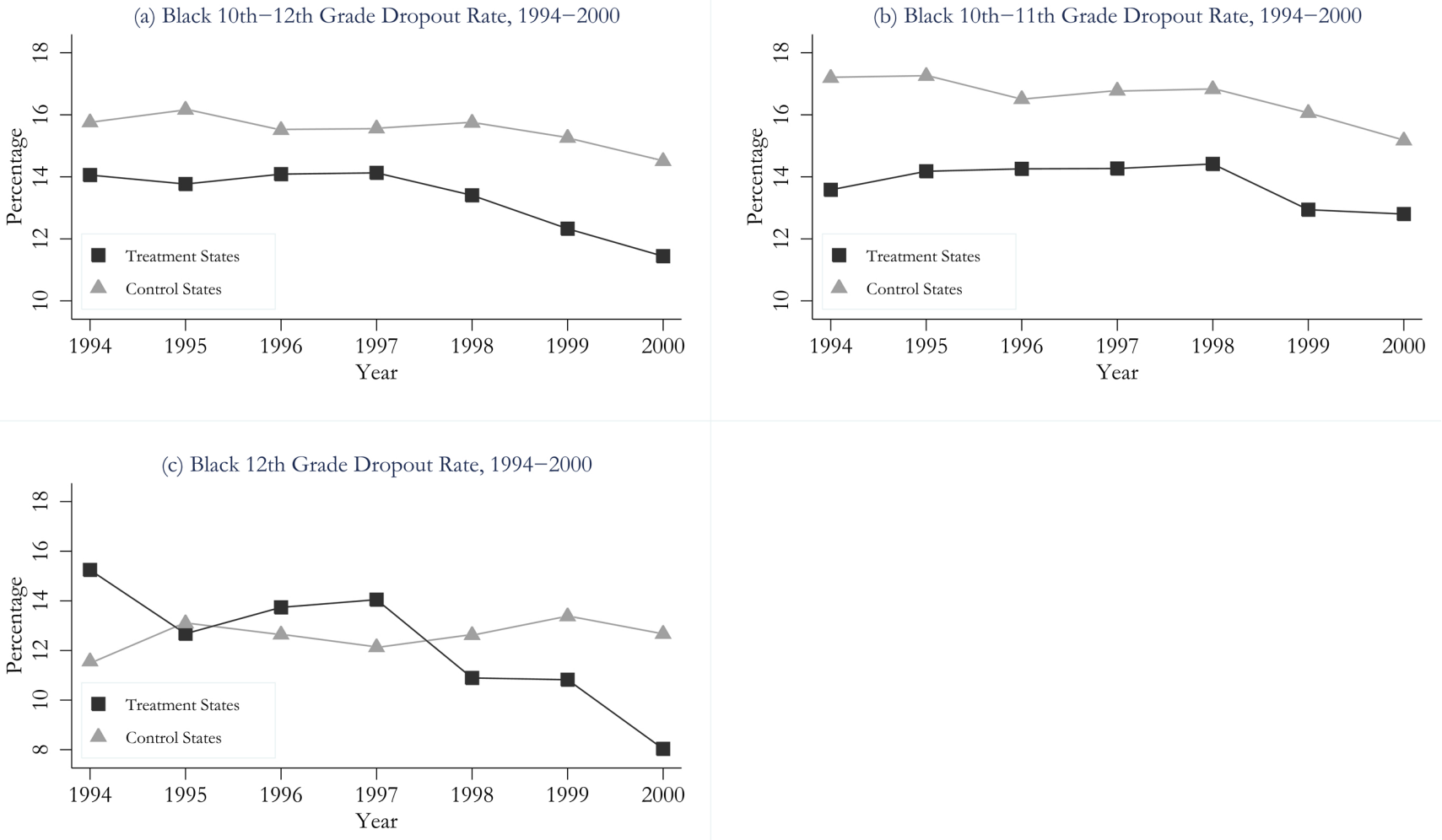
Note: The dropout rate is defined as the ratio of students enrolled in a given grade(s) in year t and the number of students enrolled in the previous grade(s) in year $t-1$, where t= 1994-2000. All estimates are weighted by the 15-17 year old population in the given state. The plot above shows the average dropout rate for the period pre-1997 (i.e. 1994-1996) and post-1997 (i.e. 1998-2000). Conley-Taber adjusted confidence intervals in parentheses. Treatment states are those states that were required to eliminate the and/or score option. These include: LA, MS, NE, NM, TX. Control states are those that already had high enough standards by 1997. These include: AR, CA, CO, DE, DC, FL, ID, KY, MD, MO, NJ, NY, ND, OK, OR, SD, UT, WA, WV, WI. States with fewer than two observations per period are dropped for 'all races' category. States with fewer than two observations per period for any of the dropout rate measures by race are dropped for by race categories. Control states dropped from 'all races' regressions due to missing and negative dropout rates include: NJ. Control states dropped from regression by race due to missing and negative dropout rates include: AR, ID, KY, MO, ND, NJ, NY, SD, UT, WA, WV. No treatment states are dropped from any regressions. Since there are more missings in the dropout rates by race, the 'all races' category is not directly comparable to the categories by race. Source: Common Core of Data (CCD).

Figure C-2: White Dropout Rates by Year, Treatment vs. Control States



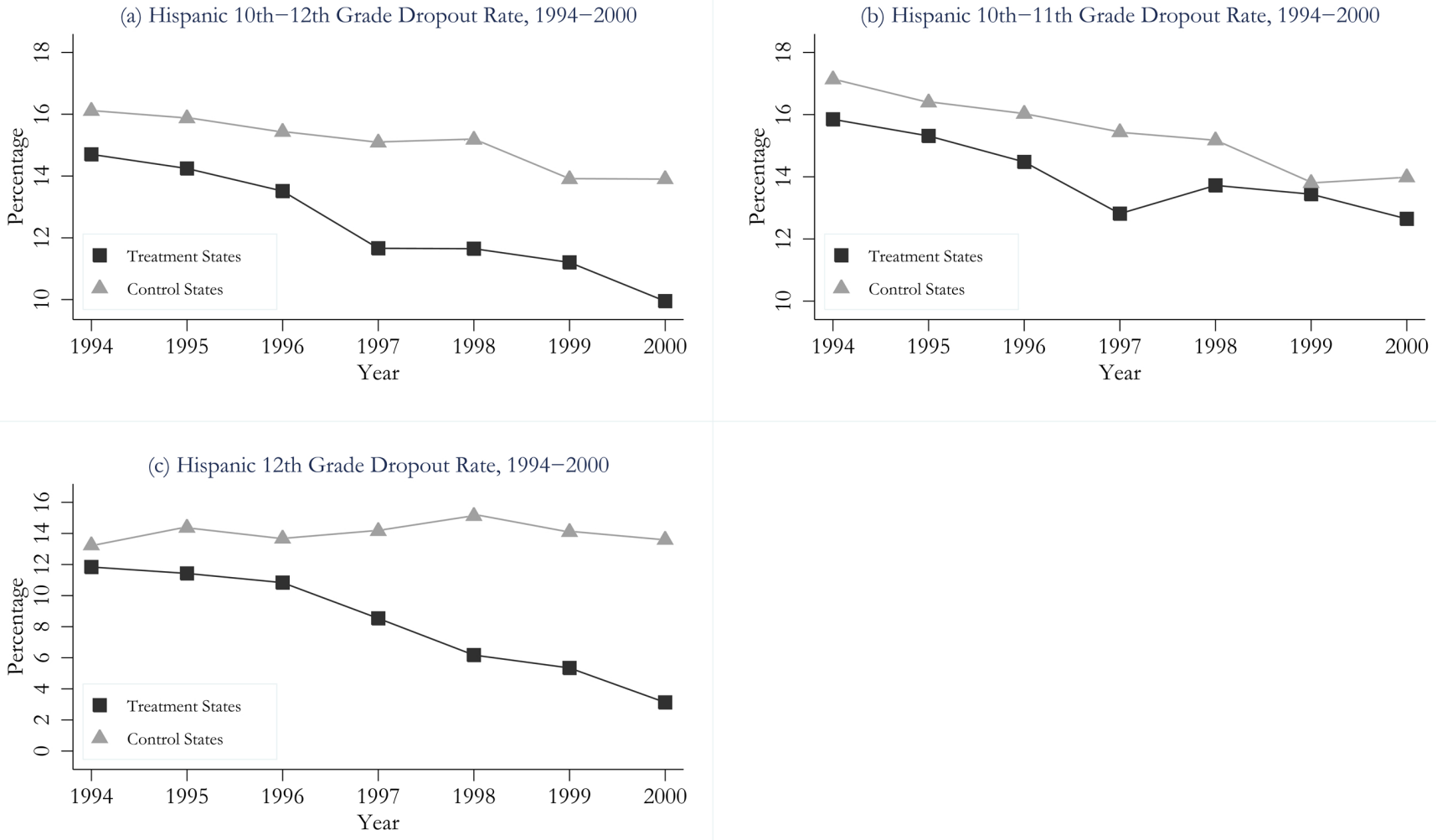
Note: GED testing rates are calculated from yearly GED Statistical Reports as the percentage of the state population in the given age range who take the GED in that year. Dropout rates are calculated from the Common Core of Data (CCD) as the exit rate for those in the indicated grades in the given year. See the appendix for further details. States required to raise GED pass requirements (changer states) are: LA, MS, NE, NM, TX. States that did not change pass requirements (non-changer states) are: AR, CA, CO, DE, DC, FL, ID, KY, MD, MO, NJ, NY, ND, OK, OR, SD, UT, WA, WV, WI. NJ is excluded in all dropout calculations due to data errors.

Figure C-3: Black Dropout Rates by Year, Treatment vs. Control States



Note: GED testing rates are calculated from yearly GED Statistical Reports as the percentage of the state population in the given age range who take the GED in that year. Dropout rates are calculated from the Common Core of Data (CCD) as the exit rate for those in the indicated grades in the given year. See the appendix for further details. States required to raise GED pass requirements (changer states) are: LA, MS, NE, NM, TX. States that did not change pass requirements (non-changer states) are: AR, CA, CO, DE, DC, FL, ID, KY, MD, MO, NJ, NY, ND, OK, OR, SD, UT, WA, WV, WI. NJ is excluded in all dropout calculations due to data errors.

Figure C-4: Hispanic Dropout Rates by Year, Treatment vs. Control States



Note: GED testing rates are calculated from yearly GED Statistical Reports as the percentage of the state population in the given age range who take the GED in that year. Dropout rates are calculated from the Common Core of Data (CCD) as the exit rate for those in the indicated grades in the given year. See the appendix for further details. States required to raise GED pass requirements (changer states) are: LA, MS, NE, NM, TX. States that did not change pass requirements (non-changer states) are: AR, CA, CO, DE, DC, FL, ID, KY, MD, MO, NJ, NY, ND, OK, OR, SD, UT, WA, WV, WI. NJ is excluded in all dropout calculations due to data errors.

D Robustness Checks for the Effect of the 1997 Increase in Passing Standards

This section reports alternative specifications of our model in the main text to test the robustness of the results (Table D-1). As in the main text, we only report the γ estimates for each check. For the full set of parameter estimates please refer to the Web Appendix.

D.1 Alternate Control Group

As one check of the exogeneity of the policy change assumption, we re-estimate the model using states that were required to raise the GED minimum score requirement rather than states that did not change. These are the lightly shaded states in Figure 4 in the text. These states were also required to change GED policies but the increase in difficulty was much smaller.

The first row of Table D-1 summarizes our overall results and results by race using this alternate control group. The estimated effect on the upper level dropout rate is in general larger than the effect obtained from our main control group. On the other hand, the effect on the lower level dropout rate is in general smaller except for whites. However, these results are generally consistent with the results reported in the text.

D.2 Southern States Only

With the exception of Nebraska, all treatment group states are located in the South. This suggests that while the timing of the score requirement change was exogenous, the states that were required to change were not a random sample of states. States likely set GED standards endogenously to reflect conditions in the state, i.e. states with traditionally higher dropout rates have lower GED testing standards. As a further robustness check of our main results, we estimate the model using only treatment and control states located in the South. The estimates, shown in the second row of Table D-1, are very similar to those reported

Table D-1: Summary of Robustness Checks

		10th-12th Grade Dropout Rate			
		All Races	**Whites**	**Blacks**	**Hispanics**
Score changer states as control group	Treatment Effect	-1.53%	-1.08%	-1.90%	-2.67%
	95% CI (Huber-White)	(-2.37%, -0.68%)	(-1.92%, -0.24%)	(-4.00%, 0.21%)	(-4.87%, -0.47%)
	95% CI (Conley-Taber)	(-2.19%, -0.49%)	(-3.40%, 0.15%)	(-4.39%, 2.06%)	(-6.17%, -0.98%)
	90% CI (Conley-Taber)	(-2.05%, -0.64%)	(-3.02%, -0.02%)	(-3.86%, 1.40%)	(-5.68%, -1.33%)
Southern states only	Treatment Effect	-1.45%	-0.42%	-2.16%	-3.08%
	95% CI (Huber-White)	(-1.91%, -1.00%)	(-0.75%, -0.10%)	(-3.23%, -1.09%)	(-5.51%, -0.65%)
	95% CI (Conley-Taber)	(-2.04%, 0.06%)	(-0.79%, 2.82%)	(-3.39%, -1.18%)	(-7.53%, -0.72%)
	90% CI (Conley-Taber)	(-1.91%, -0.14%)	(-0.65%, 1.52%)	(-2.96%, -1.29%)	(-7.23%, -0.99%)
Excluding states that changed minimum age required to drop out	Treatment Effect	-1.30%	-0.42%	-1.25%	-2.58%
	95% CI (Huber-White)	(-2.06%, -0.53%)	(-0.77%, -0.07%)	(-3.42%, 0.92%)	(-3.47%, -1.70%)
	95% CI (Conley-Taber)	(-2.56%, -0.37%)	(-0.90%, 0.15%)	(-3.00%, 3.47%)	(-3.72%, 0.48%)
	90% CI (Conley-Taber)	(-2.30%, -0.56%)	(-0.80%, 0.03%)	(-2.69%, 2.60%)	(-3.56%, -0.06%)

Note: The full regression specifications are presented in the Web Appendix. Unless otherwise stated the model is estimated using OLS. State 15-17 year old populations (by race for relevant regressions) are used as weights. The estimate reported above is the interaction between the treatment state dummy and the post period dummy, where the treatment state dummy is equal to 1 for treatment states and the post period dummy is equal to 1 for the years 1998-2000, otherwise both dummies are equal to 0. States with fewer than two observations per period are dropped for "all races" regressions. States with fewer than two observations per period for any of the dropout rate measures by race are dropped for by race regressions. Treatment states are those states that were required to eliminate the and/or score option. These include: LA, MS, NE, NM, TX. Unless otherwise stated control states are those that were not required to raise their GED minimum score requirement. These include: AR, CA, CO, DE, DC, FL, ID, KY, MD, MO, NJ, NY, ND, OK, OR, SD, UT, WA, WV, WI. From these states the following had to be dropped from the "by race" regressions due to missing and negative dropout rates: AR, ID, KY, MO, ND, NJ, NY, SD, UT, WA, WV. The state of NJ is also dropped from the "all races" regressions. Score changer states are those states that were required to raise their minimum score requirement from 35 to 40 in 1997. These include: AK, AL, AZ, CT, GA, HI, IA, IL, IN, KS, MA, ME, MI, MN, MT, NC, NH, NV, OH, PA, RI, SC, TN, VA, VT, WY. From these states the following are dropped due to missing and negative dropout rates: AL, AZ, IA, ME, MN, MT, NH, SC, TN, VT, WY. No treatment states are dropped from any of the regressions. States that changed the minimum age required to drop out include: DC (from original control group), MS and NM (both from treatment group). States that changed either school leaving or GED age requirements include: AR, DC, KY, MO, OK, OR, SD, UT, WI (from original control group) and MS, NE and NM (from treatment group).

Table D-1: Summary of Robustness Checks (Continued)

		10th-11th Grade Dropout Rate			
		All Races	**Whites**	**Blacks**	**Hispanics**
Score changer states as control group	Treatment Effect	-0.23%	-0.39%	0.25%	-1.09%
	95% CI (Huber-White)	(-0.91%, 0.47%)	(-1.10%, 0.32%)	(-2.74%, 3.25%)	(-4.33%, 2.15%)
	95% CI (Conley-Taber)	(-1.47%, 0.66%)	(-3.22%, 0.52%)	(-2.43%, 6.12%)	(-4.82%, 0.92%)
	90% CI (Conley-Taber)	(-1.31%, 0.47%)	(-2.75%, 0.39%)	(-2.01%, 4.83%)	(-4.34%, 0.48%)
Southern states only	Treatment Effect	-0.95%	-0.53%	-1.59%	-1.89%
	95% CI (Huber-White)	(-1.52%, -0.38%)	(-1.56%, 0.50%)	(-3.67%, 0.48%)	(-5.16%, 1.39%)
	95% CI (Conley-Taber)	(-1.83%, 0.86%)	(-1.26%, 1.77%)	(-3.59%, -0.15%)	(-9.06%, 0.14%)
	90% CI (Conley-Taber)	(-1.71%, 0.56%)	(-1.11%, 1.11%)	(-3.09%, -0.52%)	(-8.18%, -0.34%)
Excluding states that changed minimum age required to drop out	Treatment Effect	-0.56%	0.01%	0.13%	-1.25%
	95% CI (Huber-White)	(-1.68%, 0.57%)	(-1.03%, 1.05%)	(-3.49%, 3.74%)	(-2.40%, -0.09%)
	95% CI (Conley-Taber)	(-1.91%, 0.611%)	(-0.95%, 1.39%)	(-2.76%, 7.41%)	-3.73%, 2.66%)
	90% CI (Conley-Taber)	(-1.73%, 0.39%)	(-0.88%, 0.99%)	(-2.50%, 5.00%)	(-3.31%, 1.63%)

Note: The full regression specifications are presented in the Web Appendix. Unless otherwise stated the model is estimated using OLS. State 15-17 year old populations (by race for relevant regressions) are used as weights. The estimate reported above is the interaction between the treatment state dummy and the post period dummy, where the treatment state dummy is equal to 1 for treatment states and the post period dummy is equal to 1 for the years 1998-2000, otherwise both dummies are equal to 0. States with fewer than two observations per period are dropped for "all races" regressions. States with fewer than two observations per period for any of the dropout rate measures by race are dropped for by race regressions. Treatment states are those states that were required to eliminate the and/or score option. These include: LA, MS, NE, NM, TX. Unless otherwise stated control states are those that were not required to raise their GED minimum score requirement. These include: AR, CA, CO, DE, DC, FL, ID, KY, MD, MO, NJ, NY, ND, OK, OR, SD, UT, WA, WV, WI. From these states the following had to be dropped from the "by race" regressions due to missing and negative dropout rates: AR, ID, KY, MO, ND, NJ, NY, SD, UT, WA, WV. The state of NJ is also dropped from the "all races" regressions. Score changer states are those states that were required to raise their minimum score requirement from 35 to 40 in 1997. These include: AK, AL, AZ, CT, GA, HI, IA, IL, IN, KS, MA, ME, MI, MN, MT, NC, NH, NV, OH, PA, RI, SC, TN, VA, VT, WY. From these states the following are dropped due to missing and negative dropout rates: AL, AZ, IA, ME, MN, MT, NH, SC, TN, VT, WY. No treatment states are dropped from any of the regressions. States that changed the minimum age required to drop out include: DC (from original control group), MS and NM (both from treatment group). States that changed either school leaving or GED age requirements include: AR, DC, KY, MO, OK, OR, SD, UT, WI (from original control group) and MS, NE and NM (from treatment group).

Table D-1: Summary of Robustness Checks (Continued)

		12th Grade Dropout Rate			
		All Races	**Whites**	**Blacks**	**Hispanics**
Score changer states as control group	Treatment Effect	-4.83%	-2.11%	-6.10%	-6.66%
	95% CI (Huber-White)	(-7.05%, -2.59%)	(-4.52%, 0.29%)	(-15.98%, 3.78%)	(-9.55%, -3.78%)
	95% CI (Conley-Taber)	(-6.62%, -0.79%)	(-4.72%, 1.54%)	(-1.23%, 3.87%)	(-11.18%, -1.62%)
	90% CI (Conley-Taber)	(-6.12%, -1.28%)	(-4.33%, 1.08%)	(-1.06%, 2.49%)	(-10.15%, -2.22%)
Southern states only	Treatment Effect	-2.17%	0.07%	-3.30%	-5.82%
	95% CI (Huber-White)	(-4.29%, 0.05%)	(-2.76%, 2.90%)	(-8.48%, 1.87%)	(-8.04%, -3.61%)
	95% CI (Conley-Taber)	(-4.37%, 0.13%)	(-3.65%, 1.95%)	(-7.56%, 4.04%)	(-7.69%, 6.70%)
	90% CI (Conley-Taber)	(-3.94%, -0.13%)	(-2.06%, 1.77%)	(-5.97%, 2.53%)	(-7.47%, 1.27%)
Excluding states that changed minimum age required to drop out	Treatment Effect	-2.93%	-1.28%	-4.76%	-5.98%
	95% CI (Huber-White)	(-4.29%, -1.57%)	(-3.30%, 0.74%)	(-8.63%, -0.90%)	(-7.05%, -4.92%)
	95% CI (Conley-Taber)	(-6.41%, -0.46%)	(-3.85%, 1.67%)	(-9.84%, 1.52%)	(-9.97%, 1.32%)
	90% CI (Conley-Taber)	(-5.57%, -0.91%)	(-3.21%, 1.07%)	(-8.86%, 1.15%)	(-8.45%, 0.29%)

Note: The full regression specifications are presented in the Web Appendix. Unless otherwise stated the model is estimated using OLS. State 15-17 year old populations (by race for relevant regressions) are used as weights. The estimate reported above is the interaction between the treatment state dummy and the post period dummy, where the treatment state dummy is equal to 1 for treatment states and the post period dummy is equal to 1 for the years 1998-2000, otherwise both dummies are equal to 0. States with fewer than two observations per period are dropped for "all races" regressions. States with fewer than two observations per period for any of the dropout rate measures by race are dropped for by race regressions. Treatment states are those states that were required to eliminate the and/or score option. These include: LA, MS, NE, NM, TX. Unless otherwise stated control states are those that were not required to raise their GED minimum score requirement. These include: AR, CA, CO, DE, DC, FL, ID, KY, MD, MO, NJ, NY, ND, OK, OR, SD, UT, WA, WV, WI. From these states the following had to be dropped from the "by race" regressions due to missing and negative dropout rates: AR, ID, KY, MO, ND, NJ, NY, SD, UT, WA, WV. The state of NJ is also dropped from the "all races" regressions. Score changer states are those states that were required to raise their minimum score requirement from 35 to 40 in 1997. These include: AK, AL, AZ, CT, GA, HI, IA, IL, IN, KS, MA, ME, MI, MN, MT, NC, NH, NV, OH, PA, RI, SC, TN, VA, VT, WY. From these states the following are dropped due to missing and negative dropout rates: AL, AZ, IA, ME, MN, MT, NH, SC, TN, VT, WY. No treatment states are dropped from any of the regressions. States that changed the minimum age required to drop out include: DC (from original control group), MS and NM (both from treatment group). States that changed either school leaving or GED age requirements include: AR, DC, KY, MO, OK, OR, SD, UT, WI (from original control group) and MS, NE and NM (from treatment group).

in the text for nearly all groups. The one exception is that the white upper level dropout estimate is now very small and statistically insignificant.

D.3 Excluding States that Changed Minimum Age Requirements

A number of states in both our treatment and control groups either raised or lowered the minimum age for GED testing or the minimum age for school leaving during the period under study. Our fixed effect model controls for these changes. Alternatively, we estimate the model excluding these states to be sure that these changes are not driving our results. In row 3 of Table D-1, we drop all states that changed the minimum school leaving age and find that our estimates are robust to this alternate specification.

D.4 Excluding Additional Years from the Analysis

The change in test difficulty was implemented at the beginning of 1997, in the middle of the 1996-1997 school year. All regressions exclude 1996-1997 dropout rates as these would be the number enrolled in 1996 who were not still enrolled or graduated in 1997. If the change was well publicized, it may have lead to a rush of test takers trying to pass before the increase in test difficulty. As a robustness check we exclude 1996 through 1998 from our regressions. As shown in Figure D-2, excluding these years has little effect on the estimates. Similarly, the 12th grade dropout rate is notably higher in 1994 than the other years. As shown in Figure D-2, excluding 1994 has little effect on the estimates.

Table D-2: Alternative Year Specification for Change in Test Difficulty

	Including all Years				Excluding 1996 and 1998				Excluding 1994			
Dependent Variable	**All Races**	**Whites**	**Blacks**	**Hispanics**	**All Races**	**Whites**	**Blacks**	**Hispanics**	**All Races**	**Whites**	**Blacks**	**Hispanics**
10th-12th Grade	-1.29%	-0.43%	-1.29%	-2.74%	-1.42%	-0.43%	-1.60%	-3.20%	-1.17%	-0.33%	-1.49%	-2.39%
Dropout Rate	(.37)	(.15)	(.98)	(.40)	(.50)	(.30)	(1.06)	(.67)	(.26)	(.12)	(.84)	(.42)
10th-11th Grade	-0.55%	0.00%	0.09%	-1.38%	-0.57%	0.12%	-0.02%	-1.81%	-0.64%	-0.11%	-0.62%	-0.99%
Dropout Rate	(.54)	(.45)	(1.61)	(.50)	(.65)	(.54)	(1.86)	(.82)	(.43)	(.41)	(1.23)	(.58)
12th Grade	-2.95%	-1.32%	-4.84%	-6.16%	-3.30%	-1.58%	-5.70%	-6.67%	-2.39%	-0.72%	-3.63%	-5.95%
Dropout Rate	(.65)	(.88)	(1.82)	(.46)	(.83)	(1.14)	(2.35)	(.83)	(.65)	(.94)	(1.63)	(.91)
GED Testing Rate	-0.57%	…	…	…	-0.55%				-0.53%			
Ages 16-19	(.18)	…	…	…	(.19)				(.17)			
GED Testing Rate	-0.36%	…	…	…	-0.32%				-0.37%			
Ages 16-17	(.17)	…	…	…	(.21)				(.18)			
GED Testing Rate	-0.77%	…	…	…	-0.76%				-0.68%			
Ages 18-19	(.25)	…	…	…	(.27)				(.22)			

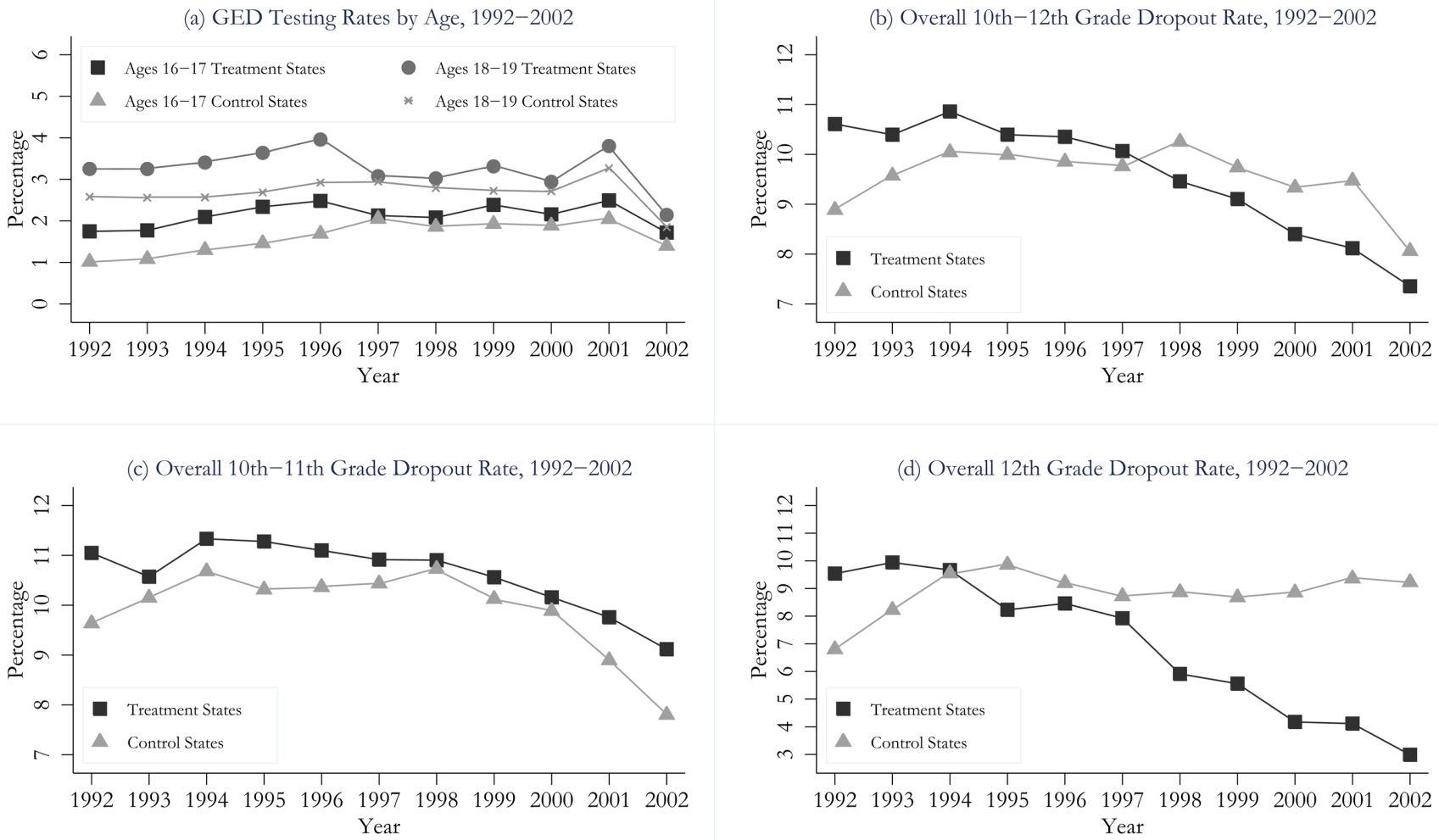
Note: Huber-White robust standard errors are in parentheses (clustered by state). Model is estimated using OLS. State 15-17 year old populations by race are used as weights. The estimate reported above is the interaction between the treatment state dummy and the post 1997 dummy, where the treatment state dummy is equal to 1 for treatment states and the post 1997 dummy is equal to 1 for the years 1998-2000, otherwise both dummies are equal to 0. States with fewer than two observations per period are dropped for 'all races' regressions. States with fewer than two observations per period for any of the dropout rate measures by race are dropped for by race regressions. Treatment states are those states that were required to eliminate the and/or score option. These include: LA, MS, NE, NM, TX. Control states are those that already had high enough standards by 1997. These include: AR, CA, CO, DE, DC, FL, ID, KY, MD, MO, NJ, NY, ND, OK, OR, SD, UT, WA, WV, WI. Control states dropped from 'all races' regressions due to missing and negative dropout rates include: NJ. Control states dropped from regression by race due to missing and negative dropout rates include: AR, ID, KY, MO, ND, NJ, NY, SD, UT, WA, WV. No treatment states are dropped.

The year 1997 is excluded from all regressions as was done in the original paper.

D.5 Extending the GED Testing and Dropout Rate Trends

When we extend the times series of GED testing and dropout rates on both sides of 1997, we obtain results that support the analysis in the main text. Prior to the increase in standards, the GED test-taking rate is higher in treatment states compared to control states. For the higher grade levels, dropout rates are higher in control states compared to treatment states prior to the introduction of the new standards but are lower afterwards. The effect is particularly strong for the 12th grade dropout rate. The breaks in the trends around 1997 are evident for the student pools more eligible to take the GED.

Figure D-1: GED Testing and Dropout Rates By Year, Treatment vs. Control States (extended years)



Note: GED testting rates are calculated from yearly GED Statistical Reports as the percetange of the state population in the given age range who take the GED in that year.
Dropout rates are calculated from the Common Core of Data (CCD) as the exit rate for those in the indicated grades in the given year. See the appendix for further details.
States required to raise GED pass requirements (changer states) are: LA, MS, NE, NM, TX. States that did not change pass requirements (non–changer states) are: AR, CA, CO, DE, DC, FL, ID, KY, MD, MO, NJ, NY, ND, OK, OR, SD, UT, WA, WV, WI. NJ is excluded in all dropout calculations due to data errors.

E Fixed Effect Estimates of the Effect of Increasing Passing Standards

One difficulty in isolating the effect of changes in GED passing standards on dropout rates is that both minimum school leaving age requirements and GED testing age requirements changed in the sample period under study (See Table E-1). During our sample period, three of the five states in our treatment group both raised and lowered their GED minimum age requirement. Two of these three states also raised the minimum age at which students can drop out of school. States included in our control group also made changes in their age requirements.

To control for these potentially confounding changes in age requirements and other sources of variation across states, we estimate a state fixed-effect regression. The model is

$$Y_{i,t} = \gamma(D_{treat} \cdot D_{\text{post 97}}) + \pi D_{\text{post 97}} + \theta_i + \psi X_{i,t} + \varepsilon_{i,t}$$

where $Y_{i,t}$ is the dropout rate for state i in year t and D_{treat} and $D_{\text{post 97}}$ are defined as

$$\begin{aligned} D_{treat} &= \begin{cases} 1 \text{ if the state eliminated the and/or GED score option in 1997} \\ 0 \text{ if the state was not required to raise GED standards in 1997} \end{cases} \\ D_{\text{post 97}} &= \begin{cases} 1 \text{ if } 1998 \leq \text{year} \leq 2000 \\ 0 \text{ otherwise} \end{cases} . \end{aligned}$$

The θ_i are time-invariant state level fixed effects and the $X_{i,t}$ are control variables that vary by states over time. These include dummy indicators for both the minimum age required to take the GED and the minimum age required to drop out of school, as well as measures of state level unemployment rates and per capita income to control for changes in labor market conditions during the sample period.[1] The parameter of interest is γ, which is the conditional difference-in-difference estimate of the treatment effect of the reform in GED

[1] See Table E-3 for the summary statistics of all variables used in these models. We do not control for high stakes testing because no treatment or control states implemented or changed testing requirements during the sample period.

Table E-1: Changes in GED Testing and Mandatory Schooling Age Requirements by Treatment Status, 1994-2000

Policy Change	**Treatment Group**	**Control Group**
Raised Minimum GED Age Requirement	MS (17 to 18, 1997), NE (16 to 18, 1998), NM (16 to 17, 2000).	AR (16 to 18, 2000), KY (16 to 19 ,1997 and 2000), MO (16 to 18, 1997), OK (16 to 18, 1997 and 2000), OR (16 to 18, 2000), SD (17 to 19, 1997 and 16 to 18, 1999), UT (17 to 18, 1997 and 2000), WI (18 to 18.5, 1999).
Lowered Minimum GED Age Requirement	MS (18 to 16, 2000), NE (17 to 16, 1995), NM (18 to 16, 1999).	KY (19 to 16, 1999), MO (18 to 16, 1995), OK (18 to 16, 1995 and 1999), OR (18 to 16, 1999), SD (18 to 17, 1995 and 19 to 16, 1998), UT (18 to 17, 1995 and 1999), WI (18.5 to 18, 1995).
Raised Minimum School Leaving Age Requirement	MS (16 to 17, 1997), NM (16 to 18, 1997).	DC (17 to 18, 1997).
Lowered Minimum Leaving Age Requirement	None.	None.

Source: GED Testing Service Annual Reports: "Who Took the GED?" (various years) and Digest of Education Statistics (various years).

Note: The year of change as well as the initial and final value for the age requirment are reported in parentheses.

standards on the high school dropout rate.

Weighted OLS estimates of γ from the full model both controlling and not controlling for changes in minimum age requirements are summarized in Table E-2.[2] The other parameter estimates are available in Table G-27. Using the full specification, the overall effect of the reform is a 1.3 percentage point reduction in the dropout rate in treatment states. The estimated effect on the upper level dropout rate remains close to 3 percentage points and is statistically significant. The estimated effect on the overall lower level dropout rate remains small and statistically insignificant. In general, the estimates including state level fixed effects but not controlling for changes in minimum age requirements are smaller than estimates based on the full specification. The regression-adjusted dropout and GED testing rate estimates are for the most part smaller but in close agreement with the unadjusted estimates reported in the text.

The fixed effects estimates by race are consistent with the unadjusted estimates as well. Again, the estimated treatment effect is greater for minorities compared to whites. As is true of the estimates reported in the text, the largest effect is on the upper level dropout rate. Increasing GED passing requirements decreased the upper level dropout rate in treatment states by 1.3 percentage points for whites, 4.8 percentage points for blacks and 6.2 percentage points for Hispanics.

[2]GLS estimates of the model are also available in the Web Appendix and match those reported in the text. The results also hold with serially correlated errors.

Table E-2: Weighted OLS Fixed Effects Estimates of the Impact of the 1997 GED Reform on Various Dropout Rate Measures

		Not Controlling for Minimum Age Requirements				Controlling for Minimum Age Requirements			
Dependent Variable		**All Races**	**Whites**	**Blacks**	**Hispanics**	**All Races**	**Whites**	**Blacks**	**Hispanics**
	Treatment Effect	-1.21%	-0.47%	-0.83%	-2.68%	-1.29%	-0.43%	-1.29%	-2.74%
10th-12th Grade	95% CI Huber-White Standard Errors	(-1.94%, -0.48%)	(-0.80%, -0.13%)	(-2.86%, 1.12%)	(-3.61%, -1.75%)	(-2.06%, -0.53%)	(-0.76%, -0.11%)	(-3.40%, 0.83%)	(-3.60%, -1.89%)
Dropout Rate	95% CI Conley-Taber Standard Errors	(-2.06%, 0.25%)	(-0.75%, 1.74%)	(-2.02%, 4.77%)	(-10.77%, 1.10%)	(-2.14%, -0.37%)	(-0.75%, 0.84%)	(-2.80%, 1.55%)	(-5.69%, -1.09%)
	90% CI Conley-Taber Standard Errors	(-1.91%, -0.01%)	(-0.68%, 1.36%)	(-1.61%, 3.69%)	(-9.42%, 0.43%)	(-1.99%, -0.51%)	(-0.68%, 0.64%)	(-2.54%, 1.06%)	(-5.21%, -1.46%)
	Treatment Effect	-0.46%	-0.02%	0.37%	-1.38%	-0.55%	0.00%	0.09%	-1.38%
10th-11th Grade	95% CI Huber-White Standard Errors	(-1.53%, 0.60%)	(-0.96%, 0.91%)	(-2.83%, 3.57%)	(-2.67%, -0.095%)	(-1.67%, 0.57%)	(-0.97%, 0.97%)	(-3.38%, 3.57%)	(-2.46%, -0.31%)
Dropout Rate	95% CI Conley-Taber Standard Errors	(-1.54%, 1.11%)	(-0.76%, 1.89%)	(-2.08%, 8.99%)	(-11.33%, 2.95%)	(-1.61%, 0.59%)	(-0.76%, 1.00%)	(-2.37%, 4.74%)	(-6.07%, 0.39%)
	90% CI Conley-Taber Standard Errors	(-1.38%, 0.85%)	(-0.63%, 1.51%)	(-1.51%, 7.34%)	(-9.90%, 2.20%)	(-1.41%, 0.39%)	(-0.63%, 0.81%)	(-2.09%, 3.84%)	(-5.31%, -0.02%)
	Treatment Effect	-2.86%	-1.38%	-4.02%	-5.99%	-2.95%	-1.32%	-4.84%	-6.16%
12th Grade	95% CI Huber-White Standard Errors	(-4.25%, -1.47%)	(-3.14%, 0.38%)	(-7.83%, -0.21%)	(-6.64%, -5.34%)	(-4.30%, -1.60%)	(-3.23%, 0.59%)	(-8.76%, -0.91%)	(-7.52%, -5.16%)
Dropout Rate	95% CI Conley-Taber Standard Errors	(-5.19%, -1.04%)	(-2.82%, 0.84%)	(-7.91%, 2.47%)	(-7.90%, 0.00%)	(-5.18%, -1.14%)	(-2.85%, 0.45%)	(-9.01%, 0.29%)	(-7.56%, 0.34%)
	90% CI Conley-Taber Standard Errors	(-4.80%, -1.31%)	(-2.54%, 0.48%)	(-7.00%, 1.56%)	(-7.39%, -0.98%)	(-4.86%, -1.40%)	(-2.54%, 0.21%)	(-8.19%, -0.50%)	(-7.11%, -0.52%)
	Treatment Effect	-0.55%	…	…	…	-0.57%	…	…	…
GED Testing Rate	95% CI Huber-White Standard Errors	(-0.87%, -0.23%)				(-0.94%, -0.21%)			
Ages 16-19	95% CI Conley-Taber Standard Errors	(-1.00%, -0.38%)	…	…	…	(-1.02%, -0.41%)	…	…	…
	90% CI Conley-Taber Standard Errors	(-0.94%, -0.42%)	…	…	…	(-0.95%, -0.46%)	…	…	…
	Treatment Effect	-0.34%	…	…	…	-0.36%	…	…	…
GED Testing Rate	95% CI Huber-White Standard Errors	(-0.66%, -0.02%)				(-0.71%, -0.023%)			
Ages 16-17	95% CI Conley-Taber Standard Errors	(-1.07%, -0.14%)	…	…	…	(-1.07%, -0.17%)	…	…	…
	90% CI Conley-Taber Standard Errors	(-1.00%, -0.20%)	…	…	…	(-0.98%, -0.24%)	…	…	…
	Treatment Effect	-0.76%	…	…	…	-0.77%	…	…	…
GED Testing Rate	95% CI Huber-White Standard Errors	(-1.20%, -0.32%)				(-1.28%, -0.26%)			
Ages 18-19	95% CI Conley-Taber Standard Errors	(-1.13%, -0.42%)	…	…	…	(-1.17%, -0.47%)	…	…	…
	90% CI Conley-Taber Standard Errors	(-1.05%, -0.47%)	…	…	…	(-1.08%, -0.51%)	…	…	…

Note: Conley-Taber adjusted confidence intervals are in parentheses. The full regression specifications are presented in the Web Appendix. Unless otherwise stated the model is estimated using OLS. State 15-17 year old populations (by race for relevant regressions) are used as weights. The estimate reported above is the interaction between the treatment state dummy and the post period dummy, where the treatment state dummy is equal to 1 for treatment states and the post period dummy is equal to 1 for the years 1998-2000, otherwise both dummies are equal to 0. States with fewer than two observations per period are dropped for "all races" regressions. States with fewer than two observations per period for any of the dropout rate measures by race are dropped for by race regressions. Treatment states are those states that were required to eliminate the and/or score option. These include: LA, MS, NE, NM, TX. Unless otherwise stated control states are those that were not required to raise their GED minimum score requirement. These include: AR, CA, CO, DE, DC, FL, ID, KY, MD, MO, NJ, NY, ND, OK, OR, SD, UT, WA, WV, WI. From these states the following had to be dropped from the "by race" regressions due to missing and negative dropout rates: AR, ID, KY, MO, ND, NJ, NY, SD, UT, WA, WV. The state of NJ is also dropped from the "all races" regressions. Score changer states are those states that were required to raise their minimum score requirement from 35 to 40 in 1997. These include: AK, AL, AZ, CT, GA, HI, IA, IL, IN, KS, MA, ME, MI, MN, MT, NC, NH, NV, OH, PA, RI, SC, TN, VA, VT, WY. From these states the following are dropped due to missing and negative dropout rates: AL, AZ, IA, ME, MN, MT, NH, SC, TN, VT, WY. No treatment states are dropped from any of the regressions. States that changed the minimum age required to drop out include: DC (from original control group), MS and NM (both from treatment group). States that changed either school leaving or GED age requirements include: AR, DC, KY, MO, OK, OR, SD, UT, WI (from original control group) and MS, NE and NM (from treatment group).

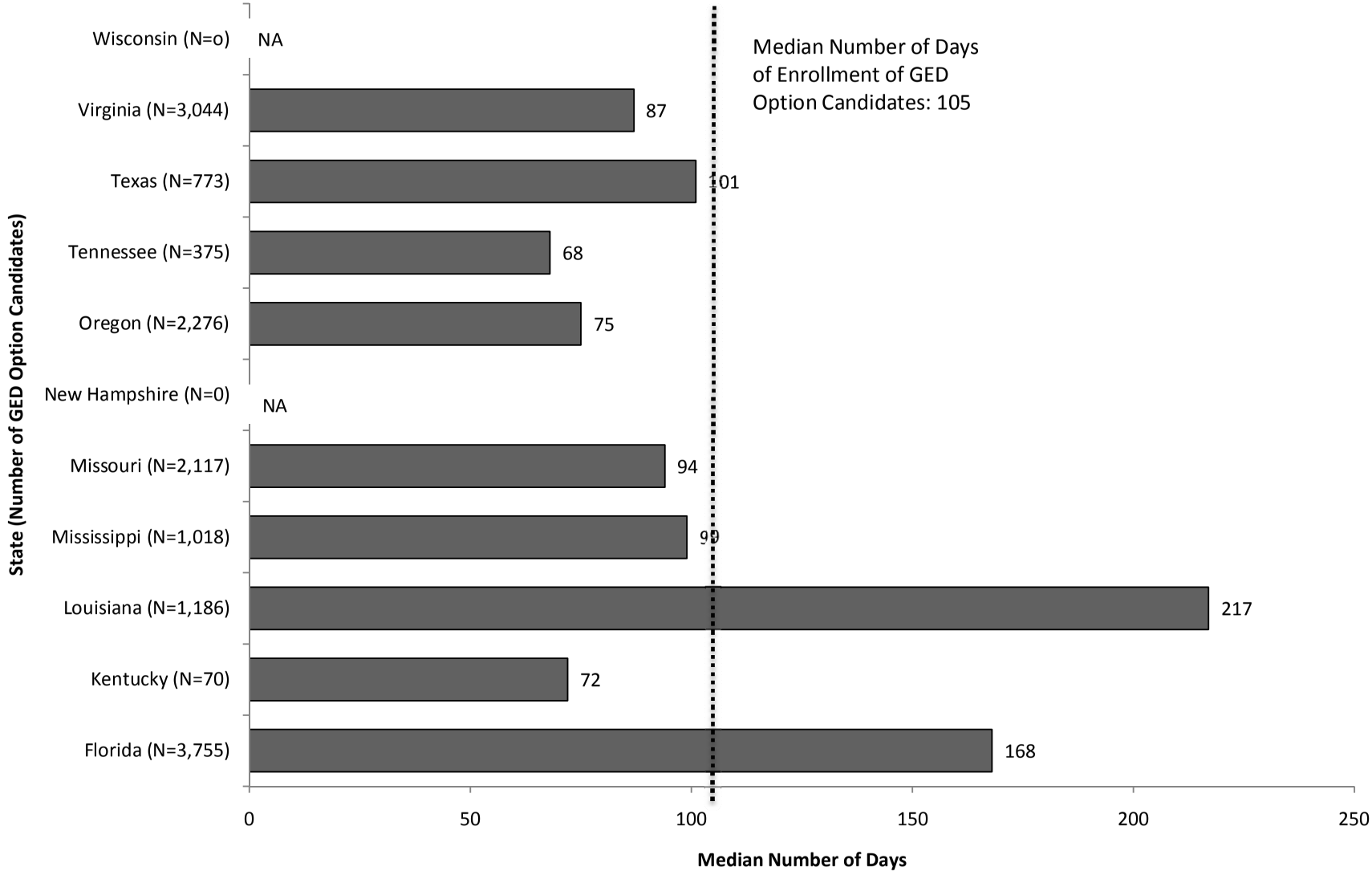
Table E-3: Summary Statistics of Variables Used in the Analysis

	Treatment Group States				Control Group States			
	Pre-1997 (N=15)		Post-1997 (N=15)		Pre-1997 (N=57)		Post-1997 (N=57)	
	Mean	N	Mean	N	Mean	N	Mean	N
10th-12th Grade Dropout Rate								
Overall	.105 (.019)	15	.090 (.021)	15	.100 (.033)	57	.098 (.032)	57
Whites	.079 (.019)	15	.070 (.019)	15	.086 (.029)	27	.082 (.030)	27
Blacks	.140 (.012)	15	.124 (.018)	15	.158 (.041)	27	.152 (.044)	27
Hispanics	.142 (.020)	15	.109 (.019)	15	.158 (.018)	27	.143 (.014)	27
10th-11th Grade Dropout Rate								
Overall	.112 (.022)	15	.105 (.023)	15	.105 (.041)	57	.102 (.043)	57
Whites	.089 (.024)	15	.085 (.023)	15	.086 (.037)	27	.082 (.042)	26
Blacks	.140 (.019)	15	.134 (.015)	15	.170 (.042)	27	.160 (.051)	27
Hispanics	.152 (.025)	14	.133 (.020)	15	.165 (.025)	27	.143 (.021)	27
12th Grade Dropout Rate								
Overall	.088 (.016)	15	.052 (.025)	15	.095 (.034)	56	.088 (.035)	56
Whites	.057 (.016)	15	.036 (.018)	15	.086 (.034)	26	.079 (.032)	26
Blacks	.139 (.019)	14	.099 (.035)	15	.124 (.058)	27	.129 (.039)	26
Hipsanics	.114 (.019)	15	.049 (.024)	15	.138 (.033)	26	.143 (.036)	26
GED Testing Rate								
Ages 16-19	0.031 (.007)	15	0.027 (.005)	14	0.020 (.007)	57	0.021 (.008)	57
Ages 16-17	0.026 (.006)	15	0.025 (.005)	14	0.014 (.009)	57	0.015 (.009)	57
Ages 18-19	.036 (.009)	15	.029 (.007)	14	.026 (.007)	57	.027 (.009)	57
Time Varying Covariates								
Minimum dropout age	16.78 (.425)	15	17.00 (.347)	15	16.92 (.991)	57	16.92 (.993)	57
Minimum GED testing age	17.65 (.569)	15	17.73 (.564)	15	17.71 (1.031)	57	17.88 (.937)	57
Log per capita income	9.91 (.087)	15	10.12 (.114)	15	10.07 (.133)	57	10.27 (.143)	57
Local unemployment rate	.062 (.010)	15	.047 (.007)	15	.062 (.014)	57	.046 (.009)	57

Note: Standard deviations in parentheses. The dropout rate is defined as the ratio of students enrolled in a given grade(s) in year t and the number of students enrolled in the previous grade(s) in year $t-1$, where t= 1994-2000. Enrollment data by grade are from the Common Core of Data (CCD). Minimum age required to drop out of school are from the Digest of Education Statistics (several years). Minimum age required to take the GED are from the yearly reports published by the GED Testing Service: "Who Took the GED?" (several years). Local unemployment rates are computed using monthly data from the Bureau of Labor Statistics. Log of per capita income are computed using data from the Census Bureau. All calculations are weighted by the 15-17 year old population in each state.

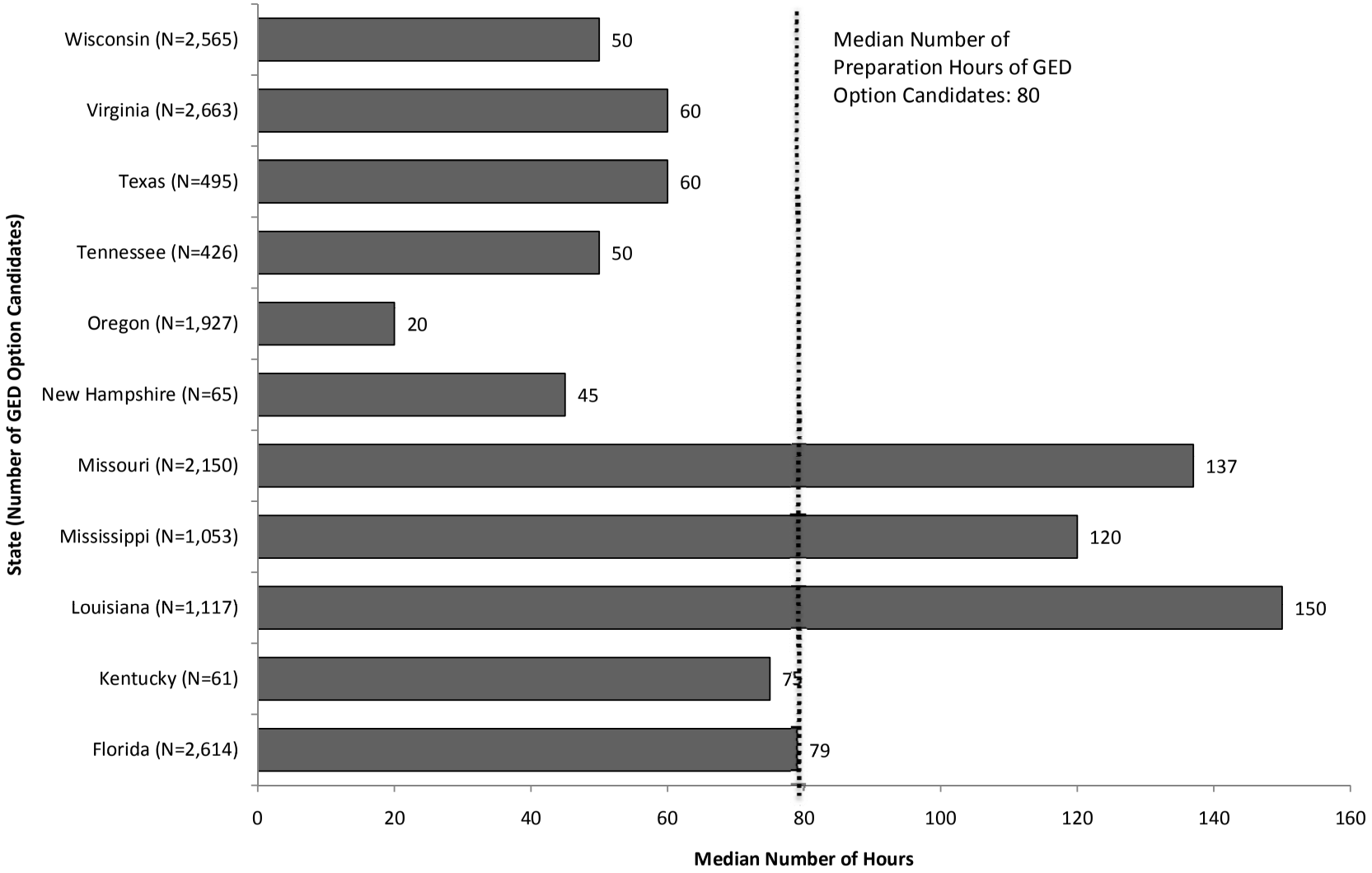
F Supplementary Material for the Analysis of the GED Option Program

Figure F-1: Median Days of Enrollment in GED Option, by State: 2008–09 School Year



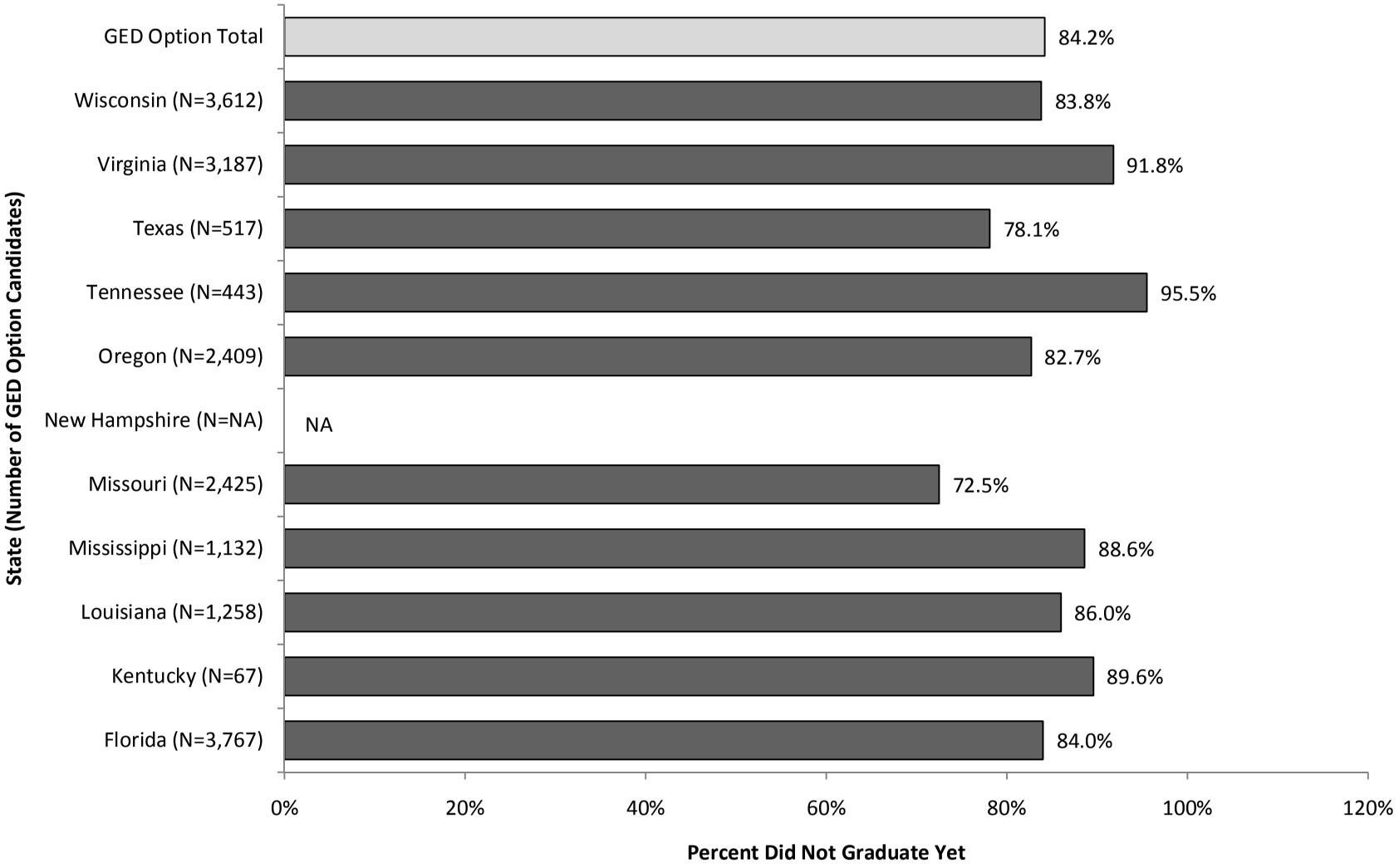
Source: GED Option Statistical Report (2009).

Figure F-2: Median Preparation Hours of GED Option Candidates, by State: 2008–09 School Year



Source: GED Option Statistical Report (2009).

Figure F-3: Ninth Grade Cohort Graduation Status of GED Option Candidates, by State: 2008–09 School Year



Source: GED Option Statistical Report (2009).

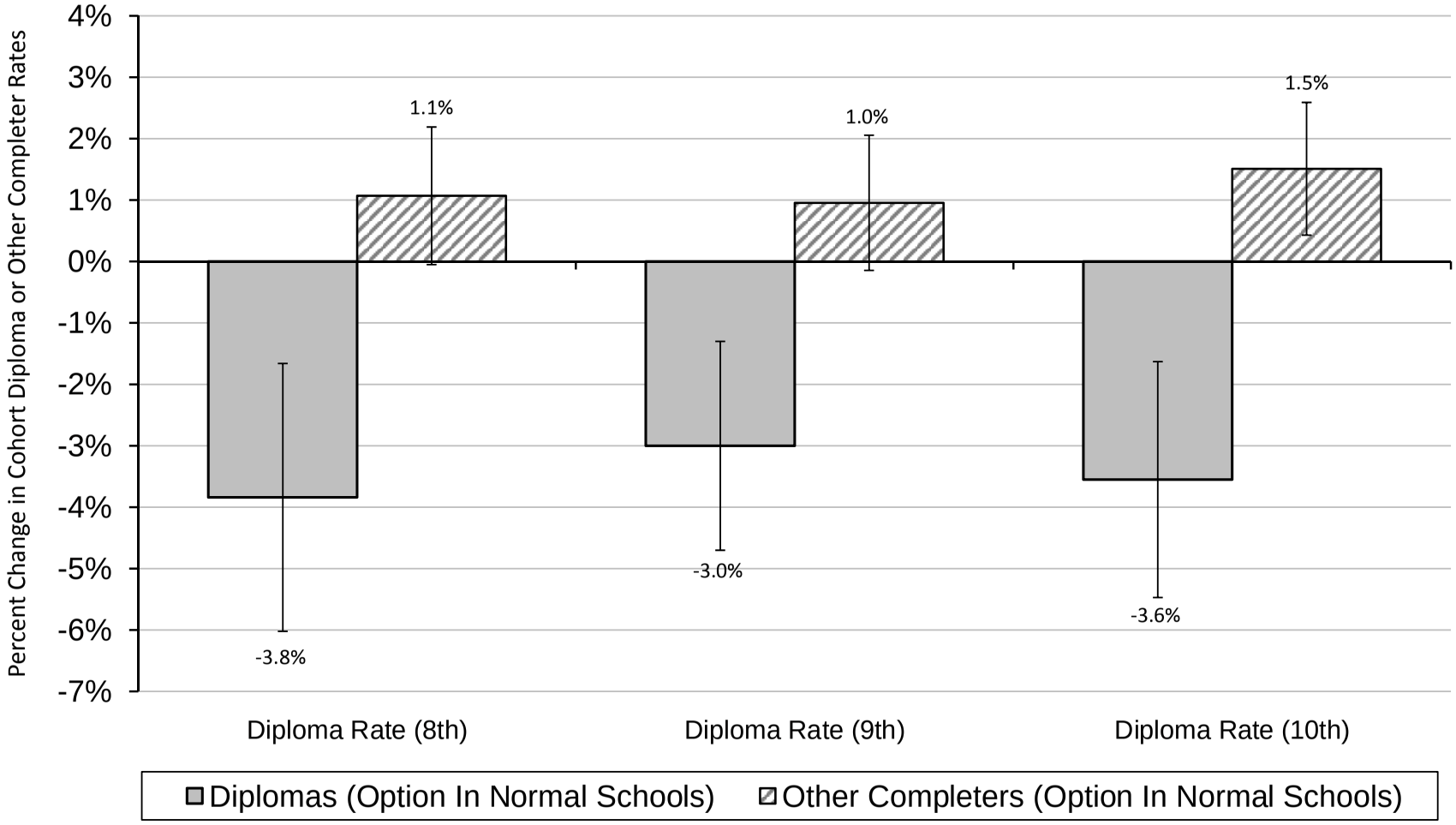
Table F-1: States Issuing Credentials Indistinguishable from High School Diplomas (2008)

State	Credential Title
Arkansas	Arkansas High School Diploma
Connecticut	Connecticut State High School Diploma
Florida	State of Florida High School Diploma
Hawaii	High School Diploma
Kansas	Kansas State High School Diploma
Maryland	Maryland High School Diploma
New Jersey	New Jersey State Issued High School Diploma
New Mexico	New Mexico High School Diploma
Oklahoma	Oklahoma High School Diploma
Pennsylvania	Commonwealth Secondary School Diploma

Source: GED Statistical Report 2008

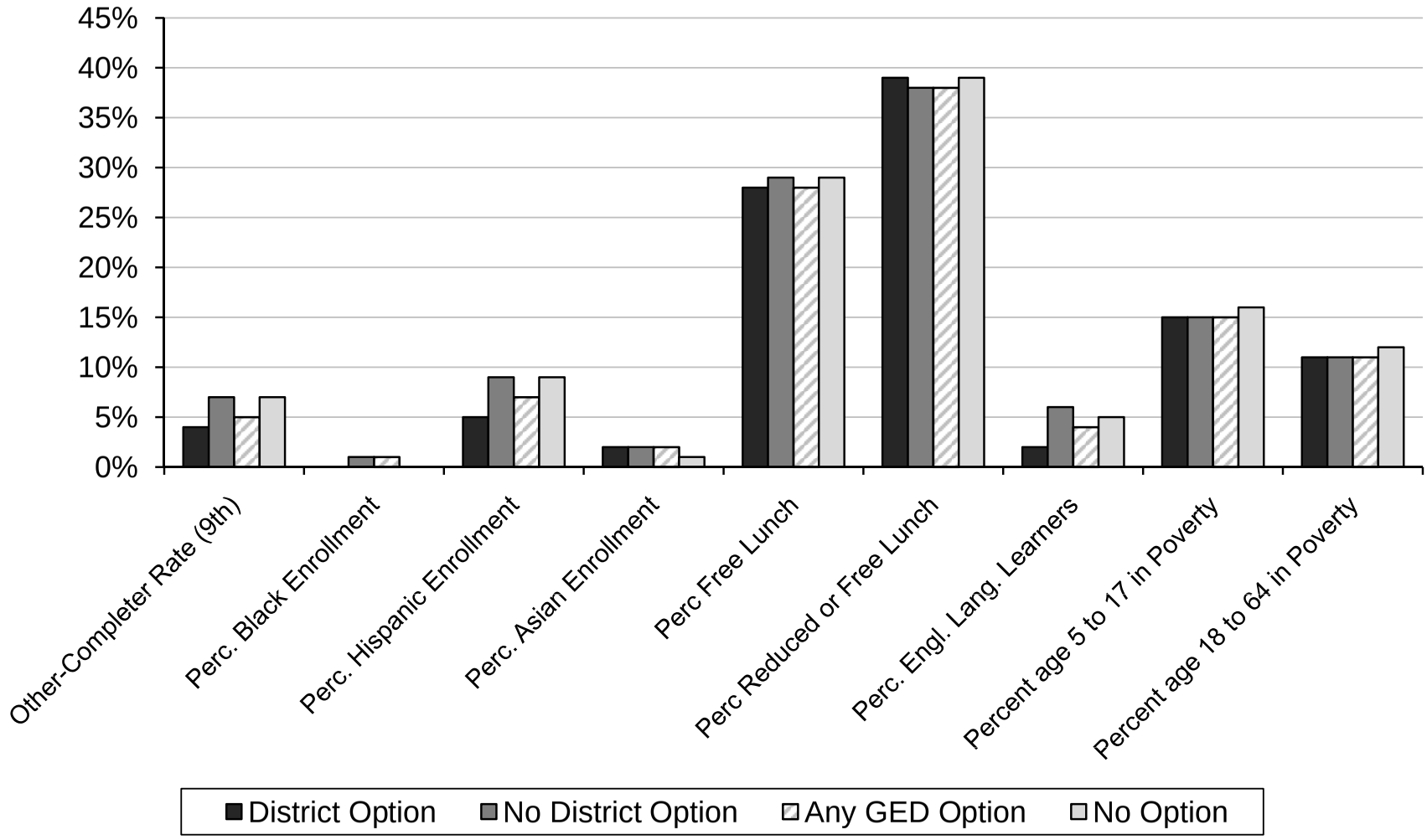
Notes: Includes year and district background characteristics and covariates.

Figure F-4: The Effect of Regular Schools Option Program on High School Cohort Completion Rates.



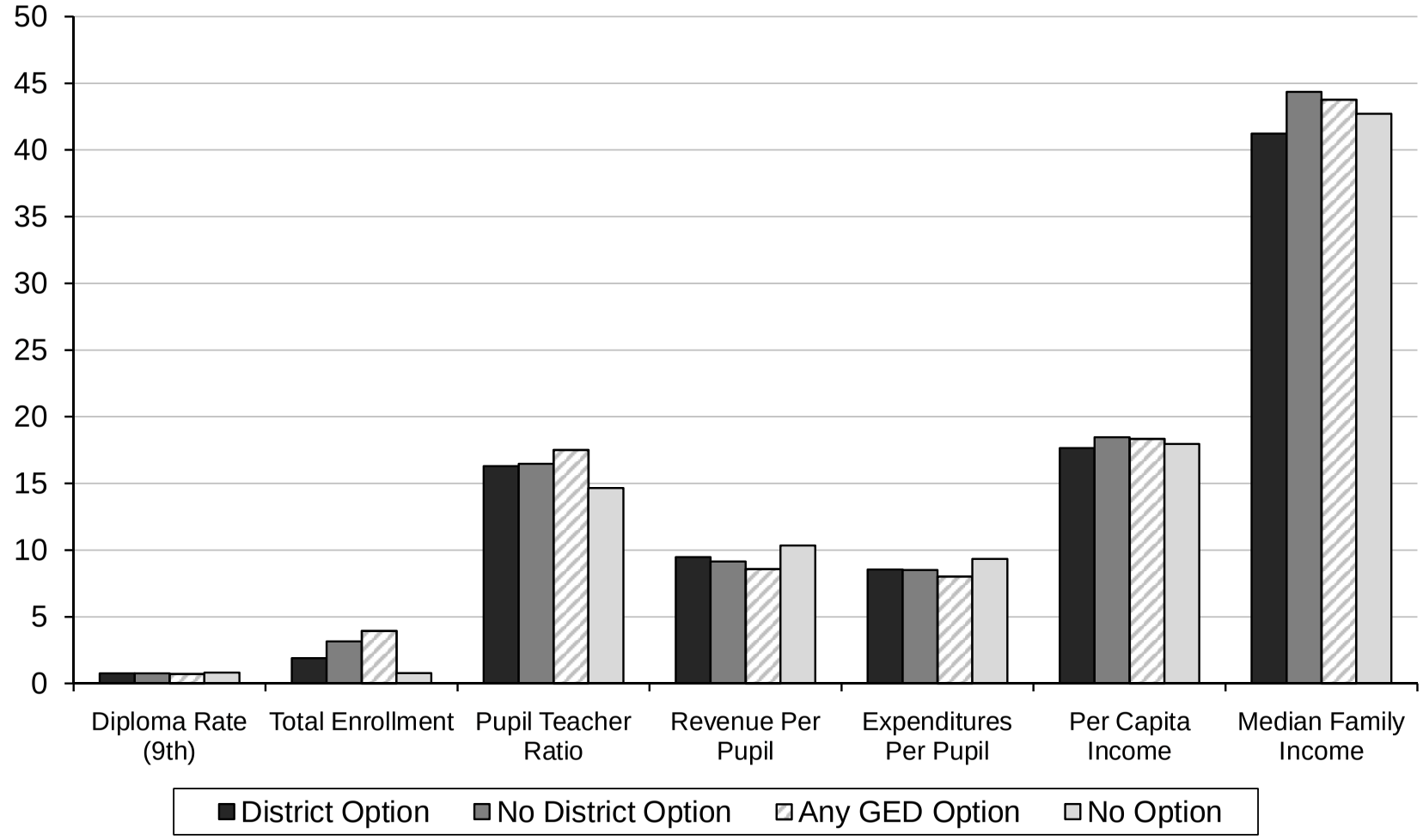
Source: National Center for Education Statistics, Common Core Data and Oregon School Districts Administrative Data. Notes: Cohort completion rates are defined as the number of diplomas issued divided by 8th, 9th, or 10th grade enrollment lagged the appropriate number of years. We show cohort completion rates for 8th, 9th, and 10th grade as a check of robustness. The definition of other completers includes students who GED certify through a district or state sanctioned certification program, and thus should capture students who GED certify through the GED Option program. Oregon was granted permission to offer the GED Option by the American Council on Education in 2001, but no schools implemented programs until the 2001-2002 school year. Regressions include controls for percent black enrollment, percent Hispanic enrollment, percent free lunch eligible, percent free or reduced lunch eligible, pupil teacher ratio, expenditures per pupil, revenue per pupil, and district and year fixed effects. Regressions include 2001-2002 school year through 2007-2008 school year. An alternative Option program is defined as one that was not present in traditional high schools, but only in community colleges or other institutions. Error bars show standard errors.

Figure F-5: Descriptive Comparisons of Districts with and without GED Option Programs (2000, prior to GED Option).



Source: National Center for Education Statistics, Common Core Data and Oregon School Districts Administrative Data. Notes: All measures are from year 2000, prior to the availability of the GED Option program.

Figure F-6: Descriptive Comparisons of Districts with and without GED Option Programs (2000, prior to GED Option)



Source: National Center for Education Statistics, Common Core Data and Oregon School Districts Administrative Data. Notes: Total enrollment, revenue per pupil, expenditures per pupil, per-capita income, and median family income are in thousands of year 2000 dollars. All measures are from year 2000, prior to the availability of the GED Option program.

Table F-2: The Effect of District-Wide Option Programs on Cohort Diploma Rates in Oregon

	Diploma Rate (8th)	Diploma Rate (9th)	Diploma Rate (10th)
Perc. Black Enrollment	1.021	-0.598	0.331
	(1.071)	(0.909)	(0.712)
Perc. Hispanic Enrollment	-0.853*	0.0784	0.210
	(0.514)	(0.293)	(0.245)
Perc Free Lunch	-0.345	-0.0771	-0.210
	(0.709)	(0.321)	(0.277)
Perc Reduced or Free Lunch	-0.203	-0.237	-0.155
	(0.452)	(0.216)	(0.200)
Pupil Teacher Ratio	-0.000216	-0.000137	-0.000342
	(0.000244)	(0.000244)	(0.000299)
Expenditures Per Pupil	-0.00605**	-0.00329	0.000567
	(0.00279)	(0.00232)	(0.00198)
Revenue Per Pupil	-0.0157	-0.00526	-0.00666
	(0.0123)	(0.0108)	(0.0110)
Dist. Wide Option	-0.0424**	-0.0297*	-0.0420***
	(0.0211)	(0.0154)	(0.0151)
Constant	1.214***	0.886***	0.916***
	(0.181)	(0.129)	(0.123)
Observations	1552	1552	1552
R^2	0.542	0.562	0.357
Adjusted R^2	0.477	0.500	0.266

Year and District Fixed Effects Not Shown Endogenous variable is a cohort graduation measure

* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

Table F-3: The Effect of District-Wide Option Programs on Cohort Other-Completer Rates in Oregon

	Other-Completer Rate (8th)	Other-Completer Rate (9th)	Other-Completer Rate (10th)
Perc. Black Enrollment	0.674	0.258	0.181
	(0.833)	(1.181)	(1.087)
Perc. Hispanic Enrollment	-0.138	-0.0361	-0.133
	(0.212)	(0.217)	(0.194)
Perc Free Lunch	-0.399	-0.285	-0.0678
	(0.503)	(0.485)	(0.297)
Perc Reduced or Free Lunch	0.330	0.262	0.0659
	(0.339)	(0.327)	(0.205)
Pupil Teacher Ratio	0.00407*	0.00571**	0.00313
	(0.00245)	(0.00285)	(0.00304)
Expenditures Per Pupil	-0.000203	0.000199	0.00203
	(0.00212)	(0.00219)	(0.00237)
Revenue Per Pupil	0.000921	0.00506	0.00380
	(0.00788)	(0.00936)	(0.00924)
Dist. Wide Option	0.0173*	0.0174*	0.0174*
	(0.0104)	(0.0101)	(0.00954)
Constant	0.0310	-0.0744	0.0121
	(0.111)	(0.103)	(0.111)
Observations	1134	1134	1134
R^2	0.352	0.330	0.325
Adjusted R^2	0.220	0.195	0.188

Year and District Fixed Effects Not Shown Endogenous variable is a cohort graduation measure

* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

Table F-4: The Effect of Option Programs only in Alternative Schools on Cohort Diploma Rates in Oregon

	Diploma Rate (8th)	Diploma Rate (9th)	Diploma Rate (10th)
Perc. Black Enrollment	0.985	-0.619	0.288
	(1.068)	(0.912)	(0.709)
Perc. Hispanic Enrollment	-0.833	0.0883	0.240
	(0.512)	(0.291)	(0.243)
Perc Free Lunch	-0.358	-0.0870	-0.223
	(0.710)	(0.322)	(0.278)
Perc Reduced or Free Lunch	-0.193	-0.231	-0.145
	(0.452)	(0.216)	(0.200)
Pupil Teacher Ratio	-0.000240	-0.000152	-0.000368
	(0.000244)	(0.000247)	(0.000305)
Expenditures Per Pupil	-0.00600**	-0.00327	0.000651
	(0.00280)	(0.00233)	(0.00199)
Revenue Per Pupil	-0.0153	-0.00497	-0.00626
	(0.0122)	(0.0108)	(0.0110)
Option Program only in Alt. Institutions	0.0249	0.0269	0.00393
	(0.0222)	(0.0191)	(0.0205)
Constant	1.219***	0.890***	0.920***
	(0.182)	(0.130)	(0.124)
Observations	1552	1552	1552
R^2	0.542	0.562	0.356
Adjusted R^2	0.477	0.499	0.265

Year and District Fixed Effects Not Shown Endogenous variable is a cohort graduation measure

* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

Table F-5: The Effect of Option Programs only in Alternative Schools on Cohort Other-Completer Rates in Oregon

	Other-Completer Rate (8th)	Other-Completer Rate (9th)	Other-Completer Rate (10th)
Perc. Black Enrollment	0.707	0.289	0.210
	(0.832)	(1.179)	(1.085)
Perc. Hispanic Enrollment	-0.167	-0.0627	-0.157
	(0.206)	(0.211)	(0.190)
Perc Free Lunch	-0.392	-0.278	-0.0607
	(0.504)	(0.486)	(0.297)
Perc Reduced or Free Lunch	0.326	0.259	0.0619
	(0.340)	(0.327)	(0.205)
Pupil Teacher Ratio	0.00414*	0.00578**	0.00320
	(0.00245)	(0.00284)	(0.00303)
Expenditures Per Pupil	-0.000280	0.000141	0.00199
	(0.00214)	(0.00220)	(0.00238)
Revenue Per Pupil	0.000701	0.00483	0.00355
	(0.00787)	(0.00934)	(0.00923)
Option Program only in Alt. Institutions	0.0176	0.0136	0.0102
	(0.0136)	(0.0133)	(0.0136)
Constant	0.0309	-0.0749	0.0113
	(0.111)	(0.103)	(0.111)
Observations	1134	1134	1134
R^2	0.351	0.330	0.324
Adjusted R^2	0.220	0.194	0.187

Year and District Fixed Effects Not Shown Endogenous variable is a cohort graduation measure

* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

Table F-6: The Effect of Option Programs in Traditional Schools on Cohort Diploma Rates in Oregon

	Diploma Rate (8th)	Diploma Rate (9th)	Diploma Rate (10th)
Perc. Black Enrollment	1.188	-0.464	0.483
	(1.098)	(0.924)	(0.705)
Perc. Hispanic Enrollment	-0.805	0.113	0.257
	(0.511)	(0.291)	(0.241)
Perc Free Lunch	-0.343	-0.0750	-0.210
	(0.707)	(0.320)	(0.277)
Perc Reduced or Free Lunch	-0.206	-0.240	-0.157
	(0.450)	(0.216)	(0.201)
Pupil Teacher Ratio	-0.000233	-0.000148	-0.000359
	(0.000242)	(0.000243)	(0.000299)
Expenditures Per Pupil	-0.00572**	-0.00304	0.000877
	(0.00282)	(0.00234)	(0.00198)
Revenue Per Pupil	-0.0162	-0.00567	-0.00708
	(0.0122)	(0.0108)	(0.0110)
Option Prog. in Regular Schools	-0.0384*	-0.0300*	-0.0355*
	(0.0218)	(0.0170)	(0.0192)
Constant	1.206***	0.880***	0.910***
	(0.179)	(0.128)	(0.122)
Observations	1552	1552	1552
R^2	0.542	0.562	0.357
Adjusted R^2	0.477	0.500	0.266

Year and District Fixed Effects Not Shown Endogenous variable is a cohort graduation measure

* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

Table F-7: The Effect of Option Programs in Traditional Schools on Cohort Other-Completer Rates in Oregon

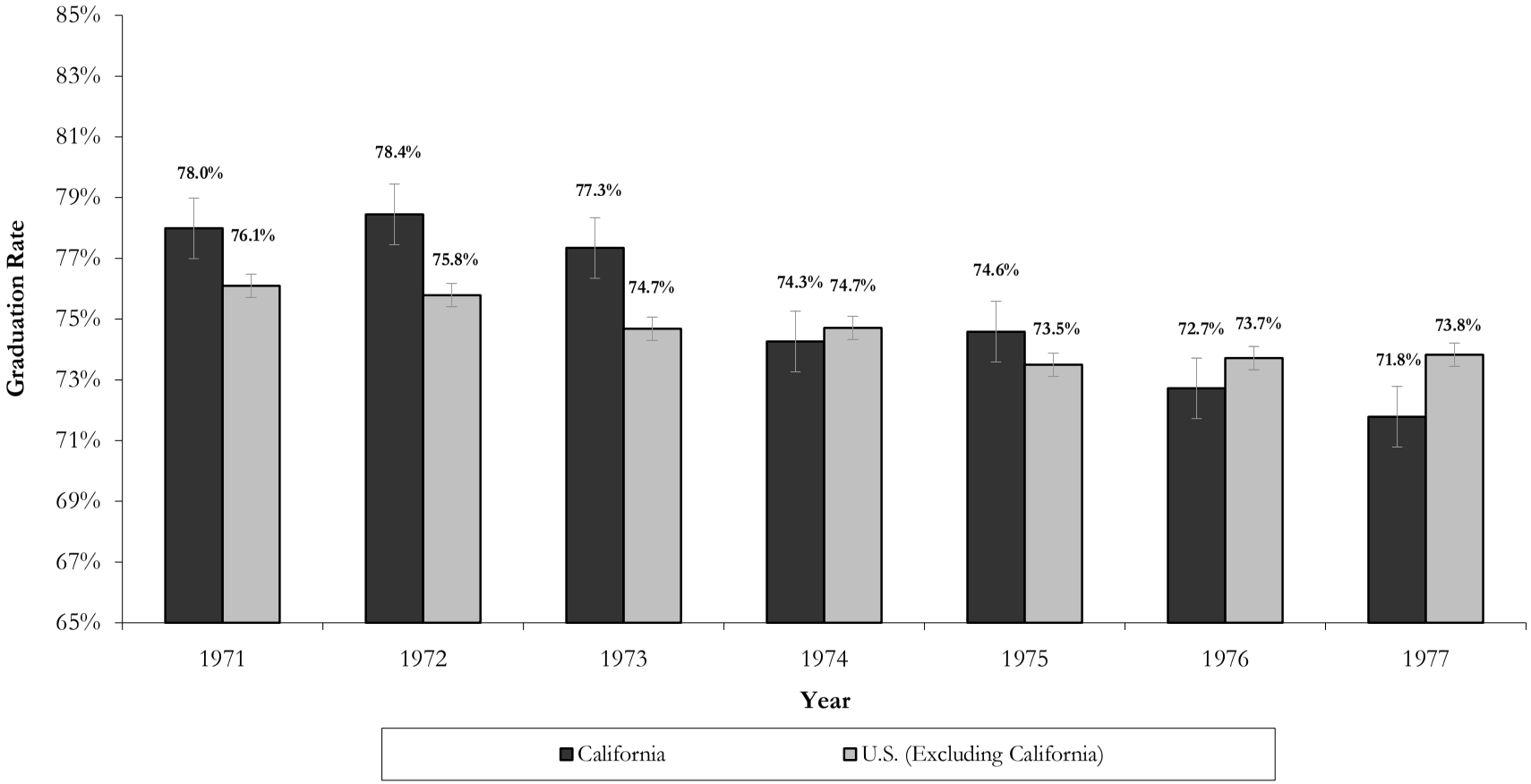
	Other-Completer Rate (8th)	Other-Completer Rate (9th)	Other-Completer Rate (10th)
Perc. Black Enrollment	0.639	0.229	0.120
	(0.843)	(1.187)	(1.097)
Perc. Hispanic Enrollment	-0.161	-0.0584	-0.156
	(0.205)	(0.211)	(0.189)
Perc Free Lunch	-0.396	-0.281	-0.0669
	(0.503)	(0.485)	(0.297)
Perc Reduced or Free Lunch	0.329	0.261	0.0664
	(0.339)	(0.326)	(0.204)
Pupil Teacher Ratio	0.00405*	0.00570**	0.00308
	(0.00244)	(0.00284)	(0.00305)
Expenditures Per Pupil	-0.000242	0.000165	0.00197
	(0.00213)	(0.00219)	(0.00236)
Revenue Per Pupil	0.000786	0.00491	0.00372
	(0.00788)	(0.00935)	(0.00922)
Option Prog. in Regular Schools	0.0107	0.00956	0.0151
	(0.0112)	(0.0110)	(0.0108)
Constant	0.0341	-0.0718	0.0171
	(0.110)	(0.102)	(0.111)
Observations	1134	1134	1134
R^2	0.351	0.330	0.325
Adjusted R^2	0.220	0.194	0.188

Year and District Fixed Effects Not Shown Endogenous variable is a cohort graduation measure

* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

G Additional Supplementary Materials

Figure G-1: Graduation Rate Before and After Implementing the GED Program, California vs. All other States



Notes: Authors' calculations based on NCES data. The graduation rate is the number of regular public and private high school diplomas issued over the 14 year old population four years previous. Population totals for the U.S. were obtained from the U.S. Census Bureau. California population estimates were obtained from the California Demographic Research Unit.

Table G-1: Fixed Effects Estimates of the Effect of the Reform on GED Test Taking Rates by Younger Cohorts

Independent Variables	**GED Test Taking Rate (Ages 16-19)**	**GED Test Taking Rate (Ages 16-17)**	**GED Test Taking Rate (Ages 18-19)**
Post 1997 dummy	-0.0002	0.0007	-0.0012
	(0.0007)	(0.0006)	(0.0011)
Score option changer state post 1997 (treatment effect)	-0.0055	-0.0034	-0.0076
	(0.0016)	(0.0015)	(0.0021)
Local unemployment rate	0.0020	0.0019	0.0021
	(0.0005)	(0.0007)	(0.0008)
Log of per capita income	0.0213	0.0184	0.0240
	(0.0061)	(0.0064)	(0.0084)
Observations	143	143	143
Number of States	24	24	24

Note: Huber-White robust standard errors are in parentheses (clustered by state). Model is estimated using OLS. State 15-17 year old populations are used as weights. The treatment effect reported above is the interaction between the treatment state dummy and the post 1997 dummy, where the treatment state dummy is equal to 1 for treatment states and the post 1997 dummy is equal to 1 for the years 1998-2000, otherwise both dummies are equal to 0. States with fewer than two observations per period are dropped. Treatment states are those states that were required to eliminate the and/or score option. These include: LA, MS, NE, NM, TX. Control states are those that already had high enough standards by 1997. These include: AR, CA, CO, DE, DC, FL, ID, KY, MD, MO, NY, ND, OK, OR, SD, UT, WA, WV, WI. Control states dropped due to missing and negative dropout rates include: NJ. No treatment states are dropped.

Table G-2: Fixed Effects Estimates of the Effect of the Reform on GED Test Taking Rates by Younger Cohorts Controlling for Age Requirements

Independent Variables	**GED Test Taking Rate (Ages 16-19)**	**GED Test Taking Rate (Ages 16-17)**	**GED Test Taking Rate (Ages 18-19)**
Post 1997 dummy	-0.0001	0.0007	-0.0011
	(0.0008)	(0.0007)	(0.0011)
Score option changer state post 1997 (treatment effect)	-0.0057	-0.0036	-0.0077
	(0.0018)	(0.0017)	(0.0025)
Local unemployment rate	0.0020	0.0019	0.0021
	(0.0006)	(0.0007)	(0.0009)
Log of per capita income	0.0214	0.0185	0.0241
	(0.0065)	(0.0070)	(0.0089)
Minimum GED age requirement is 16	0.0009	0.0007	0.0013
(dummy for minimum GED age requirement set above 18 is left out)	(0.0016)	(0.0019)	(0.0015)
Minimum GED age requirement is 17	-0.001	-0.0013	-0.0005
	(0.0017)	(0.0020)	(0.0020)
Minimum GED age requirement is 18	-0.0002	0.0001	-0.0002
	(0.0014)	(0.0015)	(0.0013)
Minimum school leaving age is 16	-0.0004	-0.0007	0.0001
(dummy for minimum school leaving age set above 17 is left out)	(0.0019)	(0.0009)	(0.0032)
Minimum school leaving age is 17	0.0005	0.0000	0.0011
	(0.0017)	(0.0012)	(0.0036)
Observations	143	143	143
Number of States	24	24	24

Note: Huber-White robust standard errors are in parentheses (clustered by state). Model is estimated using OLS. State 15-17 year old populations are used as weights. The treatment effect reported above is the interaction between the treatment state dummy and the post 1997 dummy, where the treatment state dummy is equal to 1 for treatment states and the post 1997 dummy is equal to 1 for the years 1998-2000, otherwise both dummies are equal to 0. States with fewer than two observations per period are dropped. Treatment states are those states that were required to eliminate the and/or score option. These include: LA, MS, NE, NM, TX. Control states are those that already had high enough standards by 1997. These include: AR, CA, CO, DE, DC, FL, ID, KY, MD, MO, NY, ND, OK, OR, SD, UT, WA, WV, WI. Control states dropped due to missing and negative dropout rates include: NJ. No treatment states are dropped.

Table G-3: Fixed Effects Estimates of the Effect of the Reform on Dropout Rates (All Races)

Independent Variables	**10th-12th Grade Dropout Rate**	**10th-11th Grade Dropout Rate**	**12th Grade Dropout Rate**
Post 1997 dummy	0.0089	0.0113	0.003
	(0.0039)	(0.0047)	(0.0066)
Score option changer state post 1997 (treatment effect)	-0.0121	-0.0046	-0.0286
	(0.0035)	(0.0051)	(0.0067)
Local unemployment rate	0.0041	0.0083	-0.0078
	(0.0030)	(0.0057)	(0.0056)
Log of per capita income	-0.0285	-0.0073	-0.0994
	(0.0273)	(0.0371)	(0.0391)
Observations	144	144	142
Number of States	24	24	24

Note: Huber-White robust standard errors are in parentheses (clustered by state). Model is estimated using OLS. State 15-17 year old populations are used as weights. The treatment effect reported above is the interaction between the treatment state dummy and the post 1997 dummy, where the treatment state dummy is equal to 1 for treatment states and the post 1997 dummy is equal to 1 for the years 1998-2000, otherwise both dummies are equal to 0. States with fewer than two observations per period are dropped. Treatment states are those states that were required to eliminate the and/or score option. These include: LA, MS, NE, NM, TX. Control states are those that already had high enough standards by 1997. These include: AR, CA, CO, DE, DC, FL, ID, KY, MD, MO, NJ, NY, ND, OK, OR, SD, UT, WA, WV, WI. Control states dropped due to missing and negative dropout rates include: NJ. No treatment states are dropped.

Table G-4: Fixed Effects Estimates of the Effect of the Reform on Dropout Rates (Whites)

Independent Variables	**10th-12th Grade Dropout Rate**	**10th-11th Grade Dropout Rate**	**12th Grade Dropout Rate**
Post 1997 dummy	0.0073	0.0082	0.0042
	(0.0031)	(0.0054)	(0.0064)
Score option changer state post 1997 (treatment effect)	-0.0047	-0.0002	-0.0138
	(0.0015)	(0.0043)	(0.0082)
Local unemployment rate	0.0037	0.0061	-0.0017
	(0.0015)	(0.0040)	(0.0050)
Log of per capita income	-0.0309	-0.0149	-0.0661
	(0.0191)	(0.0291)	(0.0247)
Observations	84	83	82
Number of States	14	14	14

Note: Huber-White robust standard errors are in parentheses (clustered by state). Model is estimated using OLS. State 15-17 year old populations are used as weights. The treatment effect reported above is the interaction between the treatment state dummy and the post 1997 dummy, where the treatment state dummy is equal to 1 for treatment states and the post 1997 dummy is equal to 1 for the years 1998-2000, otherwise both dummies are equal to 0. States with fewer than two observations per period for any of the dropout rate measures by race are dropped. Treatment states are those states that were required to eliminate the and/or score option. These include: LA, MS, NE, NM, TX. Control states are those that already had high enough standards by 1997. These include: AR, CA, CO, DE, DC, FL, ID, KY, MD, MO, NJ, NY, ND, OK, OR, SD, UT, WA, WV, WI. Control states dropped due to missing and negative dropout rates include: AR, ID, KY, MO, ND, NJ, NY, SD, UT, WA, WV. No treatment states are dropped.

Table G-5: Fixed Effects Estimates of the Effect of the Reform on Dropout Rates (Blacks)

Independent Variables	**10th-12th Grade Dropout Rate**	**10th-11th Grade Dropout Rate**	**12th Grade Dropout Rate**
Post 1997 dummy	0.0145	0.0138	0.0156
	(0.0098)	(0.0141)	(0.0251)
Score option changer state post 1997 (treatment effect)	-0.0083	0.0037	-0.0402
	(0.0094)	(0.0148)	(0.0176)
Local unemployment rate	-0.0032	-0.0004	-0.0109
	(0.0067)	(0.0118)	(0.0160)
Log of per capita income	-0.1364	-0.1245	-0.1584
	(0.0688)	(0.0760)	(0.1409)
Observations	84	84	82
Number of States	14	14	14

Note: Huber-White robust standard errors are in parentheses (clustered by state). Model is estimated using OLS. State 15-17 year old populations are used as weights. The treatment effect reported above is the interaction between the treatment state dummy and the post 1997 dummy, where the treatment state dummy is equal to 1 for treatment states and the post 1997 dummy is equal to 1 for the years 1998-2000, otherwise both dummies are equal to 0. States with fewer than two observations per period for any of the dropout rate measures by race are dropped. Treatment states are those states that were required to eliminate the and/or score option. These include: LA, MS, NE, NM, TX. Control states are those that already had high enough standards by 1997. These include: AR, CA, CO, DE, DC, FL, ID, KY, MD, MO, NJ, NY, ND, OK, OR, SD, UT, WA, WV, WI. Control states dropped due to missing and negative dropout rates include: AR, ID, KY, MO, ND, NJ, NY, SD, UT, WA, WV. No treatment states are dropped.

Table G-6: Fixed Effects Estimates of the Effect of the Reform on Dropout Rates (Hispanics)

Independent Variables	**10th-12th Grade Dropout Rate**	**10th-11th Grade Dropout Rate**	**12th Grade Dropout Rate**
Post 1997 dummy	0.0136	0.0097	0.0233
	(0.0062)	(0.0064)	(0.0074)
Score option changer state post 1997 (treatment effect)	-0.0268	-0.0138	-0.0599
	(0.0043)	(0.0060)	(0.0030)
Local unemployment rate	0.0120	0.0202	(0.0114)
	(0.0046)	(0.0069)	(0.0063)
Log of per capita income	-0.0049	0.0674	-0.2041
	(0.0562)	(0.0677)	(0.0611)
Observations	84	83	82
Number of States	14	14	14

Note: Huber-White robust standard errors are in parentheses (clustered by state). Model is estimated using OLS. State 15-17 year old populations are used as weights. The treatment effect reported above is the interaction between the treatment state dummy and the post 1997 dummy, where the treatment state dummy is equal to 1 for treatment states and the post 1997 dummy is equal to 1 for the years 1998-2000, otherwise both dummies are equal to 0. States with fewer than two observations per period for any of the dropout rate measures by race are dropped. Treatment states are those states that were required to eliminate the and/or score option. These include: LA, MS, NE, NM, TX. Control states are those that already had high enough standards by 1997. These include: AR, CA, CO, DE, DC, FL, ID, KY, MD, MO, NJ, NY, ND, OK, OR, SD, UT, WA, WV, WI. Control states dropped due to missing and negative dropout rates include: AR, ID, KY, MO, ND, NJ, NY, SD, UT, WA, WV. No treatment states are dropped.

Table G-7: Fixed Effects Estimates of the Effect of the Reform on Dropout Rates Controlling for Age Requirements (All Races)

Independent Variables	**10th-12th Grade Dropout Rate**	**10th-11th Grade Dropout Rate**	**12th Grade Dropout Rate**
Post 1997 dummy	0.0093	0.0125	0.0023
	(0.0040)	(0.0050)	(0.0066)
Score option changer state post 1997 (treatment effect)	-0.0129	-0.0055	-0.0295
	(0.0037)	(0.0054)	(0.0065)
Local unemployment rate	0.0043	0.0090	-0.0084
	(0.0031)	(0.0060)	(0.0057)
Log of per capita income	-0.0276	-0.0037	-0.1018
	(0.0285)	(0.0392)	(0.0392)
Minimum GED age requirement is 16	0.0047	0.0145	-0.0092
(dummy for minimum GED age requirement set above 18 is left out)	(0.0043)	(0.0037)	(0.0057)
Minimum GED age requirement is 17	0.0065	0.0155	-0.0101
	(0.0054)	(0.0053)	(0.0117)
Minimum GED age requirement is 18	0.0035	0.0114	-0.0086
	(0.0038)	(0.0023)	(0.0048)
Minimum school leaving age is 16	0.007	0.0073	0.0039
(dummy for minimum school leaving age set above 17 is left out)	(0.0058)	(0.0071)	(0.0060)
Minimum school leaving age is 17	0.0187	0.0152	0.0187
	(0.0091)	(0.0099)	(0.0139)
Observations	144	144	142
Number of States	24	24	24

Note: Huber-White robust standard errors are in parentheses (clustered by state). Model is estimated using OLS. State 15-17 year old populations are used as weights. The treatment effect reported above is the interaction between the treatment state dummy and the post 1997 dummy, where the treatment state dummy is equal to 1 for treatment states and the post 1997 dummy is equal to 1 for the years 1998-2000, otherwise both dummies are equal to 0. States with fewer than two observations per period are dropped. Treatment states are those states that were required to eliminate the and/or score option. These include: LA, MS, NE, NM, TX. Control states are those that already had high enough standards by 1997. These include: AR, CA, CO, DE, DC, FL, ID, KY, MD, MO, NY, ND, OK, OR, SD, UT, WA, WV, WI. Control states dropped due to missing and negative dropout rates include: NJ. No treatment states are dropped.

Table G-8: Fixed Effects Estimates of the Effect of the Reform on Dropout Rates Controlling for Age Requirements (Whites)

Independent Variables	**10th-12th Grade Dropout Rate**	**10th-11th Grade Dropout Rate**	**12th Grade Dropout Rate**
Post 1997 dummy	0.0076	0.0087	0.0042
	(0.0033)	(0.0056)	(0.0066)
Score option changer state post 1997 (treatment effect)	-0.0043	0.0000	-0.0132
	(0.0015)	(0.0045)	(0.0088)
Local unemployment rate	0.0037	0.0065	-0.0026
	(0.0016)	(0.0044)	(0.0054)
Log of per capita income	-0.0320	-0.0132	-0.0741
	(0.0200)	(0.0313)	(0.0275)
Minimum GED age requirement is 16	0.0014	0.0059	-0.0081
(dummy for minimum GED age requirement set above 18 is left out)	(0.0031)	(0.0053)	(0.0040)
Minimum GED age requirement is 17	0.0019	0.0092	-0.0168
	(0.0059)	(0.0060)	(0.0188)
Minimum GED age requirement is 18	0.0023	0.0051	-0.004
	(0.0006)	(0.0011)	(0.0016)
Minimum school leaving age is 16	0.0135	0.0126	0.0115
(dummy for minimum school leaving age set above 17 is left out)	(0.0044)	(0.0037)	(0.0061)
Minimum school leaving age is 17	0.0148	0.0176	-0.001
	(0.0092)	(0.0054)	(0.0213)
Observations	84	83	82
Number of States	14	14	14

Note: Huber-White robust standard errors are in parentheses (clustered by state). Model is estimated using OLS. State 15-17 year old populations are used as weights. The treatment effect reported above is the interaction between the treatment state dummy and the post 1997 dummy, where the treatment state dummy is equal to 1 for treatment states and the post 1997 dummy is equal to 1 for the years 1998-2000, otherwise both dummies are equal to 0. States with fewer than two observations per period for any of the dropout rate measures by race are dropped. Treatment states are those states that were required to eliminate the and/or score option. These include: LA, MS, NE, NM, TX. Control states are those that already had high enough standards by 1997. These include: CA, CO, DE, DC, FL, MD, OK, OR, WI. Control states dropped due to missing and negative dropout rates include: AR, ID, KY, MO, ND, NJ, NY, SD, UT, WA, WV. No treatment states are dropped.

Table G-9: Fixed Effects Estimates of the Effect of the Reform on Dropout Rates Controlling for Age Requirements (Blacks

Independent Variables	**10th-12th Grade Dropout Rate**	**10th-11th Grade Dropout Rate**	**12th Grade Dropout Rate**
Post 1997 dummy	0.0179	0.0185	0.0143
	(0.0101)	(0.0145)	(0.0258)
Score option changer state post 1997 (treatment effect)	-0.0129	0.0009	-0.0484
	(0.0098)	(0.0161)	(0.0182)
Local unemployment rate	-0.0026	0.0008	-0.0121
	(0.0067)	(0.0125)	(0.0167)
Log of per capita income	-0.1362	-0.1239	-0.1589
	(0.0652)	(0.0733)	(0.1405)
Minimum GED age requirement is 16	0.0630	0.0697	0.0410
(dummy for minimum GED age requirement set above 18 is left out)	(0.0080)	(0.0138)	(0.0156)
Minimum GED age requirement is 17	0.0296	0.038	-0.0257
	(0.0146)	(0.0139)	(0.0209)
Minimum GED age requirement is 18	0.0519	0.055	0.0417
	(0.0038)	(0.0051)	(0.0088)
Minimum school leaving age is 16	0.0565	0.0666	0.0301
(dummy for minimum school leaving age set above 17 is left out)	(0.0139)	(0.0149)	(0.0122)
Minimum school leaving age is 17	0.0413	0.0463	-0.003
	(0.0090)	(0.0154)	(0.0148)
Observations	84	84	82
Number of States	14	14	14

Note: Huber-White robust standard errors are in parentheses (clustered by state). Model is estimated using OLS. State 15-17 year old populations are used as weights. The treatment effect reported above is the interaction between the treatment state dummy and the post 1997 dummy, where the treatment state dummy is equal to 1 for treatment states and the post 1997 dummy is equal to 1 for the years 1998-2000, otherwise both dummies are equal to 0. States with fewer than two observations per period for any of the dropout rate measures by race are dropped. Treatment states are those states that were required to eliminate the and/or score option. These include: LA, MS, NE, NM, TX. Control states are those that already had high enough standards by 1997. These include: CA, CO, DE, DC, FL, MD, OK, OR, WI. Control states dropped due to missing and negative dropout rates include: AR, ID, KY, MO, ND, NJ, NY, SD, UT, WA, WV. No treatment states are dropped.

Table G-10: Fixed Effects Estimates of the Effect of the Reform on Dropout Rates Controlling for Age Requirements (Hispanics)

Independent Variables	**10th-12th Grade Dropout Rate**	**10th-11th Grade Dropout Rate**	**12th Grade Dropout Rate**
Post 1997 dummy	0.0141	0.0107	0.0224
	(0.0067)	(0.0068)	(0.0079)
Score option changer state post 1997 (treatment effect)	-0.0274	-0.0138	-0.0616
	(0.0040)	(0.0050)	(0.0046)
Local unemployment rate	0.0122	0.0204	-0.0110
	(0.0045)	(0.0071)	(0.0070)
Log of per capita income	-0.0033	0.0664	-0.1958
	(0.0582)	(0.0690)	(0.0714)
Minimum GED age requirement is 16	0.0265	0.0327	0.0088
(dummy for minimum GED age requirement set above 18 is left out)	(0.0150)	(0.0218)	(0.0089)
Minimum GED age requirement is 17	0.0301	0.0414	0.0016
	(0.0114)	(0.0174)	(0.0104)
Minimum GED age requirement is 18	0.0415	0.0521	0.0131
	(0.0035)	(0.0051)	(0.0047)
Minimum school leaving age is 16	-0.0051	-0.0001	-0.0166
(dummy for minimum school leaving age set above 17 is left out)	(0.0076)	(0.0105)	(0.0064)
Minimum school leaving age is 17	0.0912	0.113	-0.0194
	(0.0186)	(0.0281)	(0.0216)
Observations	84	83	82
Number of States	14	14	14

Note: Huber-White robust standard errors are in parentheses (clustered by state). Model is estimated using OLS. State 15-17 year old populations are used as weights. The treatment effect reported above is the interaction between the treatment state dummy and the post 1997 dummy, where the treatment state dummy is equal to 1 for treatment states and the post 1997 dummy is equal to 1 for the years 1998-2000, otherwise both dummies are equal to 0. States with fewer than two observations per period for any of the dropout rate measures by race are dropped. Treatment states are those states that were required to eliminate the and/or score option. These include: LA, MS, NE, NM, TX. Control states are those that already had high enough standards by 1997. These include: CA, CO, DE, DC, FL, MD, OK, OR, WI. Control states dropped due to missing and negative dropout rates include: AR, ID, KY, MO, ND, NJ, NY, SD, UT, WA, WV. No treatment states are dropped.

Table G-11: Fixed Effects Estimates of the Effect of the Reform on Dropout Rates with Minimum Score Changer States as Control Group (All Races)

Independent Variables	**10th-12th Grade Dropout Rate**	**10th-11th Grade Dropout Rate**	**12th Grade Dropout Rate**
Post 1997 dummy	0.0182	0.0146	0.0274
	(0.0071)	(0.0064)	(0.0161)
Score option changer state post 1997 (treatment effect)	-0.0153	-0.0023	-0.0483
	(0.0044)	(0.0035)	(0.0114)
Local unemployment rate	0.0069	0.0006	0.0193
	(0.0036)	(0.0042)	(0.0073)
Log of per capita income	-0.0420	-0.0897	0.0640
	(0.0355)	(0.0540)	(0.0586)
Minimum GED age requirement is 16	0.0007	-0.0010	0.0034
(dummy for minimum GED age requirement set above 18 is left out)	(0.0027)	(0.0042)	(0.0076)
Minimum GED age requirement is 17	0.0046	0.0037	0.0031
	(0.0077)	(0.0086)	(0.0236)
Minimum GED age requirement is 18	0.0045	0.0088	-0.0103
	(0.0076)	(0.0087)	(0.0099)
Minimum school leaving age is 16	0.0031	-0.0016	0.017
(dummy for minimum school leaving age set above 17 is left out)	(0.0036)	(0.0026)	(0.0083)
Minimum school leaving age is 17	0.0101	-0.0002	0.0379
	(0.0052)	(0.0051)	(0.0237)
Observations	186	186	184
Number of States	31	31	31

Note: Huber-White robust standard errors are in parentheses (clustered by state). Model is estimated using OLS. State 15-17 year old populations are used as weights. The treatment effect reported above is the interaction between the treatment state dummy and the post 1997 dummy, where the treatment state dummy is equal to 1 for treatment states and the post 1997 dummy is equal to 1 for the years 1998-2000, otherwise both dummies are equal to 0. States with fewer than two observations per period are dropped. Treatment states are those states that were required to eliminate the and/or score option. These include: LA, MS, NE, NM, TX. Control states are those that were required to raise their minimum score requirement from 35 to 40 in 1997. These include: AK, AL, AZ, CT, GA, HI, IA, IL, IN, KS, MA, ME, MI, MN, MT, NC, NH, NV, OH, PA, RI, SC, TN, VA, VT, WY. No states had be dropped as a result of missing or negative dropout rates.

Table G-12: Fixed Effects Estimates of the Effect of the Reform on Dropout Rates with Minimum Score Changer States as Control Group (Whites)

Independent Variables	**10th-12th Grade Dropout Rate**	**10th-11th Grade Dropout Rate**	**12th Grade Dropout Rate**
Post 1997 dummy	0.0071	0.0015	0.001
	(0.0099)	(0.0044)	(0.0193)
Score option changer state post 1997 (treatment effect)	-0.0108	-0.0039	-0.0211
	(0.0040)	(0.0034)	(0.0115)
Local unemployment rate	-0.0023	-0.0048	0.0024
	(0.0040)	(0.0040)	(0.0090)
Log of per capita income	-0.0403	-0.0386	0.0132
	(0.0278)	(0.0253)	(0.0448)
Minimum GED age requirement is 16	-0.0061	-0.0009	-0.0174
(dummy for minimum GED age requirement set above 18 is left out)	(0.0043)	(0.0034)	(0.0094)
Minimum GED age requirement is 17	-0.0084	-0.0066	-0.0089
	(0.0080)	(0.0049)	(0.0228)
Minimum GED age requirement is 18	-0.0076	-0.0024	-0.0154
	(0.0055)	(0.0046)	(0.0111)
Minimum school leaving age is 16	0.0045	0.0037	0.0002
(dummy for minimum school leaving age set above 17 is left out)	(0.0048)	(0.0033)	(0.0106)
Minimum school leaving age is 17	0.0059	0.0035	0.0078
	(0.0069)	(0.0037)	(0.0229)
Observations	117	116	118
Number of States	20	20	20

Note: Huber-White robust standard errors are in parentheses (clustered by state). Model is estimated using OLS. State 15-17 year old populations are used as weights. The treatment effect reported above is the interaction between the treatment state dummy and the post 1997 dummy, where the treatment state dummy is equal to 1 for treatment states and the post 1997 dummy is equal to 1 for the years 1998-2000, otherwise both dummies are equal to 0. States with fewer than two observations per period for any of the dropout rate measures by race are dropped. Treatment states are those states that were required to eliminate the and/or score option. These include: LA, MS, NE, NM, TX. Control states are those that were required to raise their minimum score requirement from 35 to 40 in 1997. These include: AK, AL, AZ, CT, GA, HI, IA, IL, IN, KS, MA, ME, MI, MN, MT, NC, NH, NV, OH, PA, RI, SC, TN, VA, VT, WY. Control states dropped due to missing and negative dropout rates include:AL, AZ, IA, ME, MN, MT, NH, SC, TN, VT, WY. No treatment states were dropped.

Table G-13: Fixed Effects Estimates of the Effect of the Reform on Dropout Rates with Minimum Score Changer States as Control Group (Blacks)

Independent Variables	**10th-12th Grade Dropout Rate**	**10th-11th Grade Dropout Rate**	**12th Grade Dropout Rate**
Post 1997 dummy	0.0274	0.0063	0.0414
	(0.0193)	(0.0098)	(0.0587)
Score option changer state post 1997 (treatment effect)	-0.019	0.0025	-0.061
	(0.0101)	(0.0143)	(0.0472)
Local unemployment rate	-0.0047	-0.0190	0.0339
	(0.0078)	(0.0170)	(0.0317)
Log of per capita income	-0.1719	-0.2349	0.1443
	(0.1152)	(0.1908)	(0.2572)
Minimum GED age requirement is 16	-0.0271	0.0037	-0.1088
(dummy for minimum GED age requirement set above 18 is left out)	(0.0094)	(0.0163)	(0.0485)
Minimum GED age requirement is 17	-0.0415	-0.004	-0.1382
	(0.0148)	(0.0210)	(0.0743)
Minimum GED age requirement is 18	-0.0357	0.0008	-0.1236
	(0.0124)	(0.0217)	(0.0631)
Minimum school leaving age is 16	0.0195	-0.0061	0.0753
(dummy for minimum school leaving age set above 17 is left out)	(0.0097)	(0.0151)	(0.0450)
Minimum school leaving age is 17	0.0216	-0.0016	0.0708
	(0.0136)	(0.0200)	(0.0693)
Observations	118	117	112
Number of States	20	20	20

Note: Huber-White robust standard errors are in parentheses (clustered by state). Model is estimated using OLS. State 15-17 year old populations are used as weights. The treatment effect reported above is the interaction between the treatment state dummy and the post 1997 dummy, where the treatment state dummy is equal to 1 for treatment states and the post 1997 dummy is equal to 1 for the years 1998-2000, otherwise both dummies are equal to 0. States with fewer than two observations per period for any of the dropout rate measures by race are dropped. Treatment states are those states that were required to eliminate the and/or score option. These include: LA, MS, NE, NM, TX. Control states are those that were required to raise their minimum score requirement from 35 to 40 in 1997. These include: AK, AL, AZ, CT, GA, HI, IA, IL, IN, KS, MA, ME, MI, MN, MT, NC, NH, NV, OH, PA, RI, SC, TN, VA, VT, WY. Control states dropped due to missing and negative dropout rates include:AL, AZ, IA, ME, MN, MT, NH, SC, TN, VT, WY. No treatment states were dropped.

Table G-14: Fixed Effects Estimates of the Effect of the Reform on Dropout Rates with Minimum Score Changer States as Control Group (Hispanics)

Independent Variables	**10th-12th Grade Dropout Rate**	**10th-11th Grade Dropout Rate**	**12th Grade Dropout Rate**
Post 1997 dummy	0.0356	0.0282	0.0426
	(0.0081)	(0.0102)	(0.0162)
Score option changer state post 1997 (treatment effect)	-0.0267	-0.0109	-0.0666
	(0.0105)	(0.0155)	(0.0138)
Local unemployment rate	0.0251	0.0114	0.0511
	(0.0106)	(0.0148)	(0.0178)
Log of per capita income	-0.0177	-0.0866	0.1486
	(0.0915)	(0.1309)	(0.1354)
Minimum GED age requirement is 16	0.0215	-0.0227	0.1092
(dummy for minimum GED age requirement set above 18 is left out)	(0.0363)	(0.0156)	(0.0879)
Minimum GED age requirement is 17	0.0129	-0.0324	0.1062
	(0.0348)	(0.0186)	(0.0826)
Minimum GED age requirement is 18	0.0062	-0.0227	0.0681
	(0.0311)	(0.0157)	(0.0741)
Minimum school leaving age is 16	0.0095	0.0078	0.0038
(dummy for minimum school leaving age set above 17 is left out)	(0.0095)	(0.0156)	(0.0128)
Minimum school leaving age is 17	0.1285	0.1502	-0.009
	(0.0162)	(0.0221)	(0.0183)
Observations	118	116	115
Number of States	20	20	20

Note: Huber-White robust standard errors are in parentheses (clustered by state). Model is estimated using OLS. State 15-17 year old populations are used as weights. The treatment effect reported above is the interaction between the treatment state dummy and the post 1997 dummy, where the treatment state dummy is equal to 1 for treatment states and the post 1997 dummy is equal to 1 for the years 1998-2000, otherwise both dummies are equal to 0. States with fewer than two observations per period for any of the dropout rate measures by race are dropped. Treatment states are those states that were required to eliminate the and/or score option. These include: LA, MS, NE, NM, TX. Control states are those that were required to raise their minimum score requirement from 35 to 40 in 1997. These include: AK, AL, AZ, CT, GA, HI, IA, IL, IN, KS, MA, ME, MI, MN, MT, NC, NH, NV, OH, PA, RI, SC, TN, VA, VT, WY. Control states dropped due to missing and negative dropout rates include:AL, AZ, IA, ME, MN, MT, NH, SC, TN, VT, WY. No treatment states were dropped.

Table G-15: Fixed Effects Estimates of the Effect of the Reform on Dropout Rates Restricting Sample to Southern States (All Races)

Independent Variables	**10th-12th Grade Dropout Rate**	**10th-11th Grade Dropout Rate**	**12th Grade Dropout Rate**
Post 1997 dummy	0.0117	0.0112	0.013
	(0.0055)	(0.0072)	(0.0079)
Score option changer state post 1997 (treatment effect)	-0.0145	-0.0095	-0.0217
	(0.0021)	(0.0026)	(0.0101)
Local unemployment rate	-0.0023	-0.0069	0.0047
	(0.0030)	(0.0033)	(0.0053)
Log of per capita income	-0.0798	-0.0906	-0.1029
	(0.0359)	(0.0308)	(0.0601)
Minimum GED age requirement is 16	-0.0019	0.0128	-0.0198
(dummy for minimum GED age requirement set above 18 is left out)	(0.0019)	(0.0019)	(0.0061)
Minimum GED age requirement is 17	-0.0054	0.0139	-0.0453
	(0.0124)	(0.0139)	(0.0069)
Minimum GED age requirement is 18	-0.0032	0.0123	-0.0209
	(0.0016)	(0.0020)	(0.0042)
Minimum school leaving age is 16	0.0086	0.01	0.0005
(dummy for minimum school leaving age set above 17 is left out)	(0.0085)	(0.0100)	(0.0045)
Minimum school leaving age is 17	0.017	0.0205	-0.011
	(0.0211)	(0.0241)	(0.0067)
Observations	72	72	70
Number of States	12	12	12

Note: Huber-White robust standard errors are in parentheses (clustered by state). Model is estimated using OLS. State 15-17 year old population are used as weights. States with fewer than two observations per period are dropped. The treatment effect reported above is the interaction between the treatment state dummy and the post period dummy, where the treatment state dummy is equal to 1 for treatment states and the post period dummy is equal to 1 for the years 1998-2000, otherwise both dummies are equal to 0. Treatment states are those states in the south that were required to eliminate the and/or score option. These include: LA, MS, NM, TX. Control states are those states in the south that already had high enough standards by 1997. These include: AR, DE, DC, FL, KY, MD, OK and WV.

Table G-16: Fixed Effects Estimates of the Effect of the Reform on Dropout Rates Restricting Sample to Southern States (Whites)

Independent Variables	**10th-12th Grade Dropout Rate**	**10th-11th Grade Dropout Rate**	**12th Grade Dropout Rate**
Post 1997 dummy	0.0075	0.008	0.004
	(0.0052)	(0.0093)	(0.0078)
Score option changer state post 1997 (treatment effect)	-0.0042	-0.0053	0.0007
	(0.0014)	(0.0045)	(0.0123)
Local unemployment rate	0.0010	-0.0017	0.0082
	(0.0032)	(0.0050)	(0.0035)
Log of per capita income	-0.0490	-0.0403	-0.0606
	(0.0408)	(0.0546)	(0.0476)
Minimum GED age requirement is 16	0.5726	…	0.6661
(dummy for minimum GED age requirement set above 18 is left out)	(0.4110)	…	(0.5179)
Minimum GED age requirement is 17	0.5632	-0.0021	0.6302
	(0.4134)	(0.0052)	(0.5182)
Minimum GED age requirement is 18	0.5723	-0.0003	0.6664
	(0.4115)	(0.0040)	(0.5199)
Minimum school leaving age is 16	0.0129	0.0123	0.0068
(dummy for minimum school leaving age set above 17 is left out)	(0.0069)	(0.0062)	(0.0066)
Minimum school leaving age is 17	0.0056	0.0139	-0.0345
	(0.0160)	(0.0107)	(0.0042)
Observations	54	53	52
Number of States	9	9	9

Note: Huber-White robust standard errors are in parentheses (clustered by state). Model is estimated using OLS. State 15-17 year old population by race are used as weights. States with fewer than two observations per period for any of the dropout rate measures by race are dropped. The treatment effect reported above is the interaction between the treatment state dummy and the post period dummy, where the treatment state dummy is equal to 1 for treatment states and the post period dummy is equal to 1 for the years 1998-2000, otherwise both dummies are equal to 0. Treatment states are those states in the south that were required to eliminate the and/or score option. These include: LA, MS, NM, TX. Control states are those states in the south that already had high enough standards by 1997. These include: AR, DE, DC, FL, KY, MD, OK and WV. Control states dropped due to missings include: AR, KY and WV. No treatment states were dropped as a result of missings.

Table G-17: Fixed Effects Estimates of the Effect of the Reform on Dropout Rates Restricting Sample to Southern States (Blacks)

Independent Variables	**10th-12th Grade Dropout Rate**	**10th-11th Grade Dropout Rate**	**12th Grade Dropout Rate**
Post 1997 dummy	0.0233	0.0181	0.0347
	(0.0121)	(0.0184)	(0.0219)
Score option changer state post 1997 (treatment effect)	-0.0216	-0.0159	-0.033
	(0.0046)	(0.0090)	(0.0224)
Local unemployment rate	-0.0061	-0.0112	0.0084
	(0.0082)	(0.0098)	(0.0105)
Log of per capita income	-0.1446	-0.1294	-0.1723
	(0.0698)	(0.0544)	(0.1690)
Minimum GED age requirement is 16	…	…	1.7931
(dummy for minimum GED age requirement set above 18 is left out)	…	…	(1.7685)
Minimum GED age requirement is 17	-0.0138	-0.0118	1.7195
	(0.0052)	(0.0069)	(1.7593)
Minimum GED age requirement is 18	-0.0064	-0.0074	1.7908
	(0.0031)	(0.0055)	(1.7627)
Minimum school leaving age is 16	0.0506	0.0655	0.0323
(dummy for minimum school leaving age set above 17 is left out)	(0.0043)	(0.0055)	(0.0154)
Minimum school leaving age is 17	0.0526	0.0656	-0.0177
	(0.0033)	(0.0093)	(0.0178)
Observations	54	54	52
Number of States	9	9	9

Note: Huber-White robust standard errors are in parentheses (clustered by state). Model is estimated using OLS. State 15-17 year old population by race are used as weights. States with fewer than two observations per period for any of the dropout rate measures by race are dropped. The treatment effect reported above is the interaction between the treatment state dummy and the post period dummy, where the treatment state dummy is equal to 1 for treatment states and the post period dummy is equal to 1 for the years 1998-2000, otherwise both dummies are equal to 0. Treatment states are those states in the south that were required to eliminate the and/or score option. These include: LA, MS, NM, TX. Control states are those states in the south that already had high enough standards by 1997. These include: AR, DE, DC, FL, KY, MD, OK and WV. Control states dropped due to missings include: AR, KY and WV. No treatment states were dropped as a result of missings.

Table G-18: Fixed Effects Estimates of the Effect of the Reform on Dropout Rates Restricting Sample to Southern States (Hispanics)

Independent Variables	10th-12th Grade Dropout Rate	10th-11th Grade Dropout Rate	12th Grade Dropout Rate
Post 1997 dummy	0.0221	0.0175	0.0321
	(0.0176)	(0.0222)	(0.0080)
Score option changer state post 1997 (treatment effect)	-0.0308	-0.0189	-0.0582
	(0.0105)	(0.0142)	(0.0096)
Local unemployment rate	0.0069	0.0058	0.0108
	(0.0189)	(0.0279)	(0.0121)
Log of per capita income	-0.0579	-0.0358	-0.1109
	(0.1369)	(0.1830)	(0.1271)
Minimum GED age requirement is 16	…	…	1.1960
(dummy for minimum GED age requirement set above 18 is left out)	…	…	(1.3277)
Minimum GED age requirement is 17	-0.0015	0.0000	1.197
	(0.0068)	(0.0090)	(1.3271)
Minimum GED age requirement is 18	0.0103	0.0175	1.1906
	(0.0189)	(0.0278)	(1.3340)
Minimum school leaving age is 16	0.0003	0.0052	-0.0121
(dummy for minimum school leaving age set above 17 is left out)	(0.0100)	(0.0122)	(0.0060)
Minimum school leaving age is 17	0.0961	0.1197	-0.0196
	(0.0184)	(0.0244)	(0.0125)
Observations	54	53	52
Number of States	9	9	9

Note: Huber-White robust standard errors are in parentheses (clustered by state). Model is estimated using OLS. State 15-17 year old population by race are used as weights. States with fewer than two observations per period for any of the dropout rate measures by race are dropped. The treatment effect reported above is the interaction between the treatment state dummy and the post period dummy, where the treatment state dummy is equal to 1 for treatment states and the post period dummy is equal to 1 for the years 1998-2000, otherwise both dummies are equal to 0. Treatment states are those states in the south that were required to eliminate the and/or score option. These include: LA, MS, NM, TX. Control states are those states in the south that already had high enough standards by 1997. These include: AR, DE, DC, FL, KY, MD, OK and WV. Control states dropped due to missings include: AR, KY and WV. No treatment states were dropped as a result of missings.

Table G-19: Fixed Effects Estimates of the Effect of the Reform on Dropout Rates Excluding States that Changed Minimum Age Required to Drop Out (All Races)

Independent Variables	**10th-12th Grade Dropout Rate**	**10th-11th Grade Dropout Rate**	**12th Grade Dropout Rate**
Post 1997 dummy	0.0094	0.0126	0.0023
	(0.0040)	(0.0050)	(0.0066)
Score option changer state post 1997 (treatment effect)	-0.013	-0.0056	-0.0293
	(0.0037)	(0.0054)	(0.0065)
Local unemployment rate	0.0042	0.0089	-0.0086
	(0.0032)	(0.0062)	(0.0058)
Log of per capita income	-0.0288	-0.0043	-0.1038
	(0.0298)	(0.0413)	(0.0409)
Minimum GED age requirement is 16	0.0048	0.0149	-0.0098
(dummy for minimum GED age requirement set above 18 is left out)	(0.0044)	(0.0041)	(0.0058)
Minimum GED age requirement is 17	0.0073	0.0142	-0.0022
	(0.0050)	(0.0052)	(0.0089)
Minimum GED age requirement is 18	0.0034	0.0112	-0.0084
	(0.0038)	(0.0023)	(0.0045)
Observations	126	126	125
Number of States	21	21	21

Note: Huber-White robust standard errors are in parentheses (clustered by state). Model is estimated using OLS. State 15-17 year old population are used as weights. States with fewer than two observations per period are dropped. The treatment effect reported above is the interaction between the treatment state dummy and the post period dummy, where the treatment state dummy is equal to 1 for treatment states and the post period dummy is equal to 1 for the years 1998-2000, otherwise both dummies are equal to 0. Treatment states are those states that were required to eliminate the and/or score option. These include: LA, MS, NE, NM, TX. Treatment states dropped in this regression are MS and NM. Control states are those that already had high enough standards by 1997. These include: AR, CA, CO, DE, DC, FL, ID, KY, MD, MO, NJ, NY, ND, OK, OR, SD, UT, WA, WV, WI. Washington D.C. is the only one from the control group dropped due to changes in minimum age required to drop out. Control states dropped due to missing and negative dropout rates include: NJ. No treatment states are dropped.

Table G-20: Fixed Effects Estimates of the Effect of the Reform on Dropout Rates Excluding States that Changed Minimum Age Required to Drop Out (Whites)

Independent Variables	**10th-12th Grade Dropout Rate**	**10th-11th Grade Dropout Rate**	**12th Grade Dropout Rate**
Post 1997 dummy	0.0079	0.0093	0.0039
	(0.0033)	(0.0057)	(0.0068)
Score option changer state post 1997 (treatment effect)	-0.0042	0.0001	-0.0128
	(0.0016)	(0.0047)	(0.0091)
Local unemployment rate	0.0032	0.0058	-0.0024
	(0.0018)	(0.0046)	(0.0056)
Log of per capita income	-0.0374	-0.0217	-0.0708
	(0.0210)	(0.0330)	(0.0301)
Minimum GED age requirement is 16	0.0002	0.0047	-0.0088
(dummy for minimum GED age requirement set above 18 is left out)	(0.0031)	(0.0058)	(0.0045)
Minimum GED age requirement is 17	0.0041	0.0075	-0.0025
	(0.0035)	(0.0077)	(0.0090)
Minimum GED age requirement is 18	0.002	0.0047	-0.0039
	(0.0007)	(0.0011)	(0.0016)
Observations	66	66	66
Number of States	11	11	11

Note: Huber-White robust standard errors are in parentheses (clustered by state). Model is estimated using OLS. State 15-17 year old population are used as weights. States with fewer than two observations per period for any of the dropout rate measures by race are dropped. The treatment effect reported above is the interaction between the treatment state dummy and the post period dummy, where the treatment state dummy is equal to 1 for treatment states and the post period dummy is equal to 1 for the years 1998-2000, otherwise both dummies are equal to 0. Treatment states are those states that were required to eliminate the and/or score option. These include: LA, MS, NE, NM, TX. Treatment states dropped in this regression due to changes in minimum age required to drop out of school are MS and NM. Control states are those that already had high enough standards by 1997. These include: AR, CA, CO, DE, DC, FL, ID, KY, MD, MO, NJ, NY, ND, OK, OR, SD, UT, WA, WV, WI. Washington D.C. is the only one from the control group dropped due to changes in minimum age required to drop out. Control states dropped due to missing and negative dropout rates include: AR, ID, KY, MO, ND, NJ, NY, SD, UT, WA, WV.
No treatment states are dropped.

Table G-21: Fixed Effects Estimates of the Effect of the Reform on Dropout Rates Excluding States that Changed Minimum Age Required to Drop Out (Blacks)

Independent Variables	**10th-12th Grade Dropout Rate**	**10th-11th Grade Dropout Rate**	**12th Grade Dropout Rate**
Post 1997 dummy	0.0168	0.0177	0.012
	(0.0098)	(0.0145)	(0.0264)
Score option changer state post 1997 (treatment effect)	-0.0125	0.0013	-0.0476
	(0.0097)	(0.0162)	(0.0173)
Local unemployment rate	-0.0057	-0.0014	-0.0173
	(0.0065)	(0.0137)	(0.0181)
Log of per capita income	-0.1582	-0.1385	-0.1952
	(0.0692)	(0.0823)	(0.1532)
Minimum GED age requirement is 16	0.0693	0.0882	0.0153
(dummy for minimum GED age requirement set above 18 is left out)	(0.0167)	(0.0240)	(0.0211)
Minimum GED age requirement is 17	0.0086	0.0304	-0.044
	(0.0149)	(0.0257)	(0.0413)
Minimum GED age requirement is 18	0.0499	0.0537	0.0382
	(0.0031)	(0.0050)	(0.0100)
Observations	66	66	66
Number of States	11	11	11

Note: Huber-White robust standard errors are in parentheses (clustered by state). Model is estimated using OLS. State 15-17 year old population are used as weights. States with fewer than two observations per period for any of the dropout rate measures by race are dropped. The treatment effect reported above is the interaction between the treatment state dummy and the post period dummy, where the treatment state dummy is equal to 1 for treatment states and the post period dummy is equal to 1 for the years 1998-2000, otherwise both dummies are equal to 0. Treatment states are those states that were required to eliminate the and/or score option. These include: LA, MS, NE, NM, TX. Treatment states dropped in this regression due to changes in minimum age required to drop out of school are MS and NM. Control states are those that already had high enough standards by 1997. These include: AR, CA, CO, DE, DC, FL, ID, KY, MD, MO, NJ, NY, ND, OK, OR, SD, UT, WA, WV, WI. Washington D.C. is the only one from the control group dropped due to changes in minimum age required to drop out. Control states dropped due to missing and negative dropout rates include: AR, ID, KY, MO, ND, NJ, NY, SD, UT, WA, WV.

No treatment states are dropped.

Table G-22: Fixed Effects Estimates of the Effect of the Reform on Dropout Rates Excluding States that Changed Minimum Age Required to Drop Out (Hispanics)

Independent Variables	**10th-12th Grade Dropout Rate**	**10th-11th Grade Dropout Rate**	**12th Grade Dropout Rate**
Post 1997 dummy	0.0142	0.0107	0.0225
	(0.0064)	(0.0065)	(0.0076)
Score option changer state post 1997 (treatment effect)	-0.0258	-0.0125	-0.0598
	(0.0040)	(0.0052)	(0.0048)
Local unemployment rate	0.0105	0.0189	-0.0129
	(0.0046)	(0.0076)	(0.0072)
Log of per capita income	-0.0213	0.0507	-0.2160
	(0.0596)	(0.0739)	(0.0728)
Minimum GED age requirement is 16	0.0226	0.0262	0.0057
(dummy for minimum GED age requirement set above 18 is left out)	(0.0132)	(0.0192)	(0.0131)
Minimum GED age requirement is 17	0.0344	0.0407	0.0079
	(0.0119)	(0.0183)	(0.0163)
Minimum GED age requirement is 18	0.0401	0.0509	0.0115
	(0.0035)	(0.0054)	(0.0050)
Observations	66	66	64
Number of States	11	11	11

Note: Huber-White robust standard errors are in parentheses (clustered by state). Model is estimated using OLS. State 15-17 year old population are used as weights. States with fewer than two observations per period for any of the dropout rate measures by race are dropped. The treatment effect reported above is the interaction between the treatment state dummy and the post period dummy, where the treatment state dummy is equal to 1 for treatment states and the post period dummy is equal to 1 for the years 1998-2000, otherwise both dummies are equal to 0. Treatment states are those states that were required to eliminate the and/or score option. These include: LA, MS, NE, NM, TX. Treatment states dropped in this regression due to changes in minimum age required to drop out of school are MS and NM. Control states are those that already had high enough standards by 1997. These include: AR, CA, CO, DE, DC, FL, ID, KY, MD, MO, NJ, NY, ND, OK, OR, SD, UT, WA, WV, WI. Washington D.C. is the only one from the control group dropped due to changes in minimum age required to drop out. Control states dropped due to missing and negative dropout rates include: AR, ID, KY, MO, ND, NJ, NY, SD, UT, WA, WV.

No treatment states are dropped.

Table G-23: Fixed Effects Estimates of the Effect of the Reform on Dropout Rate Excluding States that Changed the Minimum Age Required to either Drop Out or Take the GED (All Races)

Independent Variables	**10th-12th Grade Dropout Rate**	**10th-11th Grade Dropout Rate**	**12th Grade Dropout Rate**
Post 1997 dummy	0.0125	0.0161	0.003
	(0.0048)	(0.0059)	(0.0083)
Score option changer state post 1997 (treatment effect)	-0.0151	-0.0078	-0.0321
	(0.0045)	(0.0068)	(0.0063)
Local unemployment rate	0.0072	0.0142	-0.0101
	(0.0039)	(0.0077)	(0.0070)
Log of per capita income	-0.0119	0.0316	-0.1167
	(0.0422)	(0.0601)	(0.0543)
Observations	72	72	72
Number of States	12	12	12

Note: Huber-White robust standard errors are in parentheses (clustered by state). Model is estimated using OLS. State 15-17 year old population are used as weights. States with fewer than two observations per period are dropped. The treatment effect reported above is the interaction between the treatment state dummy and the post period dummy, where the treatment state dummy is equal to 1 for treatment states and the post period dummy is equal to 1 for the years 1998-2000, otherwise both dummies are equal to 0. Treatment states are those states that were required to eliminate the and/or score option and did not change age requirements during period under study. These include: LA, TX. Control states are those that already had high enough standards by 1997 and did not change age requirements during period under study. These include: CA, CO, DE, FL, ID, MD, NJ, NY, ND, WA, WV. Control states dropped due to missing and negative dropout rates include: NJ. No treatment states are dropped.

Table G-24: Fixed Effects Estimates of the Effect of the Reform on Dropout Rate Excluding States that Changed the Minimum Age Required to either Drop Out or Take the GED (Whites)

Independent Variables	**10th-12th Grade Dropout Rate**	**10th-11th Grade Dropout Rate**	**12th Grade Dropout Rate**
Post 1997 dummy	0.0106	0.0121	0.0061
	(0.0032)	(0.0069)	(0.0103)
Score option changer state post 1997 (treatment effect)	-0.0038	0.0016	-0.0145
	(0.0010)	(0.0045)	(0.0114)
Local unemployment rate	0.0034	0.0065	-0.0035
	(0.0026)	(0.0056)	(0.0058)
Log of per capita income	-0.0481	-0.0305	-0.0856
	(0.0290)	(0.0430)	(0.0301)
Observations	42	42	42
Number of States	12	12	12

Note: Huber-White robust standard errors are in parentheses (clustered by state). Model is estimated using OLS. State 15-17 year old population are used as weights. States with fewer than two observations per period are dropped. The treatment effect reported above is the interaction between the treatment state dummy and the post period dummy, where the treatment state dummy is equal to 1 for treatment states and the post period dummy is equal to 1 for the years 1998-2000, otherwise both dummies are equal to 0. Treatment states are those states that were required to eliminate the and/or score option and did not change age requirements during period under study. These include: LA, TX. Control states are those that already had high enough standards by 1997 and did not change age requirements during period under study. These include: CA, CO, DE, FL, ID, MD, NJ, NY, ND, WA, WV. Control states dropped due to missing and negative dropout rates include: NJ, NY, WA, WV. No treatment states are dropped.

Table G-25: Fixed Effects Estimates of the Effect of the Reform on Dropout Rate Excluding States that Changed the Minimum Age Required to either Drop Out or Take the GED (Blacks)

Independent Variables	**10th-12th Grade Dropout Rate**	**10th-11th Grade Dropout Rate**	**12th Grade Dropout Rate**
Post 1997 dummy	0.0178	0.0176	0.0146
	(0.0107)	(0.0163)	(0.0297)
Score option changer state post 1997 (treatment effect)	-0.0128	0.0016	-0.0488
	(0.0108)	(0.0176)	(0.0188)
Local unemployment rate	-0.0025	0.0024	-0.0171
	(0.0066)	(0.0140)	(0.0205)
Log of per capita income	-0.1314	-0.1031	-0.2023
	(0.0737)	(0.0740)	(0.1696)
Observations	42	42	42
Number of States	12	12	12

Note: Huber-White robust standard errors are in parentheses (clustered by state). Model is estimated using OLS. State 15-17 year old population are used as weights. States with fewer than two observations per period are dropped. The treatment effect reported above is the interaction between the treatment state dummy and the post period dummy, where the treatment state dummy is equal to 1 for treatment states and the post period dummy is equal to 1 for the years 1998-2000, otherwise both dummies are equal to 0. Treatment states are those states that were required to eliminate the and/or score option and did not change age requirements during period under study. These include: LA, TX. Control states are those that already had high enough standards by 1997 and did not change age requirements during period under study. These include: CA, CO, DE, FL, ID, MD, NJ, NY, ND, WA, WV. Control states dropped due to missing and negative dropout rates include: NJ, NY, WA, WV. No treatment states are dropped.

Table G-26: Fixed Effects Estimates of the Effect of the Reform on Dropout Rate Excluding States that Changed the Minimum Age Required to either Drop Out or Take the GED (Hispanics)

Independent Variables	**10th-12th Grade Dropout Rate**	**10th-11th Grade Dropout Rate**	**12th Grade Dropout Rate**
Post 1997 dummy	0.0147	0.0116	0.0219
	(0.0070)	(0.0078)	(0.0069)
Score option changer state post 1997 (treatment effect)	-0.0274	-0.0153	-0.0575
	(0.0047)	(0.0060)	(0.0059)
Local unemployment rate	0.0123	0.0221	-0.0155
	(0.0054)	(0.0087)	(0.0082)
Log of per capita income	-0.0048	0.0809	-0.2417
	(0.0663)	(0.0811)	(0.0803)
Observations	42	42	41
Number of States	12	12	12

Note: Huber-White robust standard errors are in parentheses (clustered by state). Model is estimated using OLS. State 15-17 year old population are used as weights. States with fewer than two observations per period are dropped. The treatment effect reported above is the interaction between the treatment state dummy and the post period dummy, where the treatment state dummy is equal to 1 for treatment states and the post period dummy is equal to 1 for the years 1998-2000, otherwise both dummies are equal to 0. Treatment states are those states that were required to eliminate the and/or score option and did not change age requirements during period under study. These include: LA, TX. Control states are those that already had high enough standards by 1997 and did not change age requirements during period under study. These include: CA, CO, DE, FL, ID, MD, NJ, NY, ND, WA, WV. Control states dropped due to missing and negative dropout rates include: NJ, NY, WA, WV. No treatment states are dropped.

Table G-27: GLS Fixed Effects Estimates of the Effect of the Reform on Dropout Rates Controlling for Age Requirements (All Races)

Independent Variables	**10th-12th Grade Dropout Rate**	**10th-11th Grade Dropout Rate**	**12th Grade Dropout Rate**
Post 1997 dummy	0.0079	0.0111	0.0027
	(0.0022)	(0.0026)	(0.0033)
Score option changer state post 1997 (treatment effect)	-0.0127	-0.0077	-0.027
	(0.0021)	(0.0021)	(0.0049)
Local unemployment rate	0.0022	0.0039	-0.0034
	(0.0011)	(0.0015)	(0.0017)
Log of per capita income	-0.0370	-0.0285	-0.0680
	(0.0118)	(0.0135)	(0.0180)
Minimum GED age requirement is 16	0.0072	0.0126	-0.0020
(dummy for minimum GED age requirement set above 18 is left out)	(0.0030)	(0.0041)	(0.0035)
Minimum GED age requirement is 17	0.0021	0.0077	-0.0134
	(0.0044)	(0.0050)	(0.0082)
Minimum GED age requirement is 18	0.0059	0.01	-0.0048
	(0.0025)	(0.0036)	(0.0030)
Minimum school leaving age is 16	0.0023	0.0009	0.0047
(dummy for minimum school leaving age set above 17 is left out)	(0.0056)	(0.0041)	(0.0106)
Minimum school leaving age is 17	0.0059	0.0029	0.0097
	(0.0076)	(0.0073)	(0.0129)
Observations	144	144	142
Number of States	24	24	24

Note: Huber-White robust standard errors are in parentheses (clustered by state). Model is estimated using GLS. State 15-17 year old populations are used as weights. The treatment effect reported above is the interaction between the treatment state dummy and the post 1997 dummy, where the treatment state dummy is equal to 1 for treatment states and the post 1997 dummy is equal to 1 for the years 1998-2000, otherwise both dummies are equal to 0. States with fewer than two observations per period are dropped. Treatment states are those states that were required to eliminate the and/or score option. These include: LA, MS, NE, NM, TX. Control states are those that already had high enough standards by 1997. These include: AR, CA, CO, DE, DC, FL, ID, KY, MD, MO, NY, ND, OK, OR, SD, UT, WA, WV, WI. Control states dropped due to missing and negative dropout rates include: NJ. No treatment states are dropped.

Table G-28: GLS Fixed Effects Estimates of the Effect of the Reform on Dropout Rates Controlling for Age Requirements (Whites)

Independent Variables	**10th-12th Grade Dropout Rate**	**10th-11th Grade Dropout Rate**	**12th Grade Dropout Rate**
Post 1997 dummy	0.007	0.0086	0.0008
	(0.0019)	(0.0022)	(0.0035)
Score option changer state post 1997 (treatment effect)	-0.0042	0.0005	-0.0118
	(0.0015)	(0.0017)	(0.0041)
Local unemployment rate	0.0038	0.0051	-0.0007
	(0.0010)	(0.0016)	(0.0018)
Log of per capita income	-0.0297	-0.0201	-0.0528
	(0.0100)	(0.0124)	(0.0181)
Minimum GED age requirement is 16	0.0039	0.0087	-0.0044
(dummy for minimum GED age requirement set above 18 is left out)	(0.0024)	(0.0033)	(0.0033)
Minimum GED age requirement is 17	0.0054	0.0092	-0.0138
	(0.0051)	(0.0071)	(0.0108)
Minimum GED age requirement is 18	0.0023	0.0046	-0.0036
	(0.0012)	(0.0021)	(0.0022)
Minimum school leaving age is 16	0.0159	0.0159	0.0114
(dummy for minimum school leaving age set above 17 is left out)	(0.0089)	(0.0129)	(0.0136)
Minimum school leaving age is 17	0.0195	0.0194	0.001
	(0.0106)	(0.0151)	(0.0183)
Observations	84	83	82
Number of States	14	14	14

Note: Huber-White robust standard errors are in parentheses (clustered by state). Model is estimated using GLS. State 15-17 year old populations are used as weights. The treatment effect reported above is the interaction between the treatment state dummy and the post 1997 dummy, where the treatment state dummy is equal to 1 for treatment states and the post 1997 dummy is equal to 1 for the years 1998-2000, otherwise both dummies are equal to 0. States with fewer than two observations per period for any of the dropout rate measures by race are dropped. Treatment states are those states that were required to eliminate the and/or score option. These include: LA, MS, NE, NM, TX. Control states are those that already had high enough standards by 1997. These include: AR, CA, CO, DE, DC, FL, ID, KY, MD, MO, NY, ND, OK, OR, SD, UT, WA, WV, WI. Control states dropped due to missing and negative dropout rates include: AR, ID, KY, MO, ND, NJ, NY, SD, UT, WA, WV. No treatment states are dropped.

Table G-29: GLS Fixed Effects Estimates of the Effect of the Reform on Dropout Rates Controlling for Age Requirements (Blacks)

Independent Variables	**10th-12th Grade Dropout Rate**	**10th-11th Grade Dropout Rate**	**12th Grade Dropout Rate**
Post 1997 dummy	0.0172	0.014	0.0136
	(0.0056)	(0.0082)	(0.0116)
Score option changer state post 1997 (treatment effect)	-0.016	-0.0071	-0.0386
	(0.0043)	(0.0061)	(0.0107)
Local unemployment rate	-0.0065	-0.0025	0.0030
	(0.0033)	(0.0052)	(0.0053)
Log of per capita income	-0.1577	-0.0976	-0.0437
	(0.0311)	(0.0441)	(0.0544)
Minimum GED age requirement is 16	0.0574	0.0676	0.0493
(dummy for minimum GED age requirement set above 18 is left out)	(0.0143)	(0.0217)	(0.0122)
Minimum GED age requirement is 17	0.023	0.0406	-0.0083
	(0.0222)	(0.0352)	(0.0199)
Minimum GED age requirement is 18	0.05	0.0552	0.0498
	(0.0133)	(0.0203)	(0.0107)
Minimum school leaving age is 16	0.0395	0.0621	0.0334
(dummy for minimum school leaving age set above 17 is left out)	(0.0160)	(0.0291)	(0.0206)
Minimum school leaving age is 17	0.0242	0.0494	-0.004
	(0.0248)	(0.0343)	(0.0240)
Observations	84	84	82
Number of States	14	14	14

Note: Huber-White robust standard errors are in parentheses (clustered by state). Model is estimated using GLS. State 15-17 year old populations are used as weights. The treatment effect reported above is the interaction between the treatment state dummy and the post 1997 dummy, where the treatment state dummy is equal to 1 for treatment states and the post 1997 dummy is equal to 1 for the years 1998-2000, otherwise both dummies are equal to 0. States with fewer than two observations per period for any of the dropout rate measures by race are dropped. Treatment states are those states that were required to eliminate the and/or score option. These include: LA, MS, NE, NM, TX. Control states are those that already had high enough standards by 1997. These include: AR, CA, CO, DE, DC, FL, ID, KY, MD, MO, NY, ND, OK, OR, SD, UT, WA, WV, WI. Control states dropped due to missing and negative dropout rates include: AR, ID, KY, MO, ND, NJ, NY, SD, UT, WA, WV. No treatment states are dropped.

Table G-30: GLS Fixed Effects Estimates of the Effect of the Reform on Dropout Rates Controlling for Age Requirements (Hispanics)

Independent Variables	**10th-12th Grade Dropout Rate**	**10th-11th Grade Dropout Rate**	**12th Grade Dropout Rate**
Post 1997 dummy	0.013	0.0148	0.0258
	(0.0048)	(0.0063)	(0.0086)
Score option changer state post 1997 (treatment effect)	-0.0265	-0.0155	-0.0644
	(0.0046)	(0.0055)	(0.0065)
Local unemployment rate	0.0118	0.0231	-0.0046
	(0.0027)	(0.0036)	(0.0038)
Log of per capita income	-0.0075	0.0709	-0.1568
	(0.0293)	(0.0367)	(0.0421)
Minimum GED age requirement is 16	0.0290	0.0454	0.0143
(dummy for minimum GED age requirement set above 18 is left out)	(0.0174)	(0.0252)	(0.0171)
Minimum GED age requirement is 17	0.0342	0.0526	0.0086
	(0.0195)	(0.0277)	(0.0188)
Minimum GED age requirement is 18	0.0407	0.054	0.0173
	(0.0155)	(0.0230)	(0.0147)
Minimum school leaving age is 16	-0.0027	0.0062	-0.0181
(dummy for minimum school leaving age set above 17 is left out)	(0.0114)	(0.0136)	(0.0101)
Minimum school leaving age is 17	0.0706	0.0877	-0.0189
	(0.0147)	(0.0229)	(0.0426)
Observations	84	83	82
Number of States	14	14	14

Note: Huber-White robust standard errors are in parentheses (clustered by state). Model is estimated using GLS. State 15-17 year old populations are used as weights. The treatment effect reported above is the interaction between the treatment state dummy and the post 1997 dummy, where the treatment state dummy is equal to 1 for treatment states and the post 1997 dummy is equal to 1 for the years 1998-2000, otherwise both dummies are equal to 0. States with fewer than two observations per period for any of the dropout rate measures by race are dropped. Treatment states are those states that were required to eliminate the and/or score option. These include: LA, MS, NE, NM, TX. Control states are those that already had high enough standards by 1997. These include: AR, CA, CO, DE, DC, FL, ID, KY, MD, MO, NY, ND, OK, OR, SD, UT, WA, WV, WI. Control states dropped due to missing and negative dropout rates include: AR, ID, KY, MO, ND, NJ, NY, SD, UT, WA, WV. No treatment states are dropped.

Table G-31: GLS Fixed Effects Estimates of the Effect of the Reform on Dropout Rates Controlling for Age Requirements and Using Panel Specific AR-1 Autocorrelation Structure (All Races)

Independent Variables	**10th-12th Grade Dropout Rate**	**10th-11th Grade Dropout Rate**	**12th Grade Dropout Rate**
Post 1997 dummy	0.0076	0.0122	0.0018
	(0.0019)	(0.0019)	(0.0024)
Score option changer state post 1997 (treatment effect)	-0.0137	-0.009	-0.0283
	(0.0017)	(0.0019)	(0.0038)
Local unemployment rate	0.0027	0.0049	-0.0068
	(0.0010)	(0.0012)	(0.0016)
Log of per capita income	-0.0283	-0.0207	-0.0925
	(0.0106)	(0.0106)	(0.0135)
Minimum GED age requirement is 16	0.0077	0.0150	-0.0032
(dummy for minimum GED age requirement set above 18 is left out)	(0.0026)	(0.0019)	(0.0023)
Minimum GED age requirement is 17	0.0036	0.0129	-0.0085
	(0.0042)	(0.0036)	(0.0070)
Minimum GED age requirement is 18	0.0052	0.0119	-0.0062
	(0.0024)	(0.0011)	(0.0012)
Minimum school leaving age is 16	0.005	0.0032	0.0067
(dummy for minimum school leaving age set above 17 is left out)	(0.0054)	(0.0050)	(0.0102)
Minimum school leaving age is 17	0.0121	0.0098	0.0218
	(0.0075)	(0.0082)	(0.0125)
Observations	144	144	142
Number of States	24	24	24

Note: Huber-White robust standard errors are in parentheses (clustered by state). Model is estimated using GLS using panel specific AR-1 autocorrelation structure. State 15-17 year old populations are used as weights. The treatment effect reported above is the interaction between the treatment state dummy and the post 1997 dummy, where the treatment state dummy is equal to 1 for treatment states and the post 1997 dummy is equal to 1 for the years 1998-2000, otherwise both dummies are equal to 0. States with fewer than two observations per period are dropped. Treatment states are those states that were required to eliminate the and/or score option. These include: LA, MS, NE, NM, TX. Control states are those that already had high enough standards by 1997. These include: AR, CA, CO, DE, DC, FL, ID, KY, MD, MO, NY, ND, OK, OR, SD, UT, WA, WV, WI. Control states dropped due to missing and negative dropout rates include: NJ. No treatment states are dropped.

Table G-32: GLS Fixed Effects Estimates of the Effect of the Reform on Dropout Rates Controlling for Age Requirements and Using Panel Specific AR-1 Autocorrelation Structure (Whites)

Independent Variables	**10th-12th Grade Dropout Rate**	**10th-11th Grade Dropout Rate**	**12th Grade Dropout Rate**
Post 1997 dummy	0.0076	0.0093	0.0042
	(0.0017)	(0.0019)	(0.0035)
Score option changer state post 1997 (treatment effect)	-0.0051	-0.0005	-0.017
	(0.0012)	(0.0015)	(0.0033)
Local unemployment rate	0.0034	0.0041	-0.0030
	(0.0010)	(0.0015)	(0.0016)
Log of per capita income	-0.0312	-0.0251	-0.0638
	(0.0091)	(0.0113)	(0.0177)
Minimum GED age requirement is 16	0.0042	0.0093	-0.0051
(dummy for minimum GED age requirement set above 18 is left out)	(0.0021)	(0.0030)	(0.0037)
Minimum GED age requirement is 17	0.0049	0.0093	-0.0251
	(0.0044)	(0.0055)	(0.0095)
Minimum GED age requirement is 18	0.0022	0.0045	-0.0033
	(0.0009)	(0.0020)	(0.0027)
Minimum school leaving age is 16	0.0179	0.0193	0.0122
(dummy for minimum school leaving age set above 17 is left out)	(0.0094)	(0.0118)	(0.0075)
Minimum school leaving age is 17	0.0211	0.0228	-0.0076
	(0.0106)	(0.0129)	(0.0127)
Observations	84	83	82
Number of States	14	14	14

Note: Huber-White robust standard errors are in parentheses (clustered by state). Model is estimated using GLS using panel specific AR-1 autocorrelation structure. State 15-17 year old populations are used as weights. The treatment effect reported above is the interaction between the treatment state dummy and the post 1997 dummy, where the treatment state dummy is equal to 1 for treatment states and the post 1997 dummy is equal to 1 for the years 1998-2000, otherwise both dummies are equal to 0. States with fewer than two observations per period for any of the dropout rate measures by race are dropped. Treatment states are those states that were required to eliminate the and/or score option. These include: LA, MS, NE, NM, TX. Control states are those that already had high enough standards by 1997. These include: AR, CA, CO, DE, DC, FL, ID, KY, MD, MO, NY, ND, OK, OR, SD, UT, WA, WV, WI. Control states dropped due to missing and negative dropout rates include: AR, ID, KY, MO, ND, NJ, NY, SD, UT, WA, WV. No treatment states are dropped.

Table G-33: GLS Fixed Effects Estimates of the Effect of the Reform on Dropout Rates Controlling for Age Requirements and Using Panel Specific AR-1 Autocorrelation Structure (Blacks)

Independent Variables	**10th-12th Grade Dropout Rate**	**10th-11th Grade Dropout Rate**	**12th Grade Dropout Rate**
Post 1997 dummy	0.0169	0.0114	0.013
	(0.0041)	(0.0073)	(0.0111)
Score option changer state post 1997 (treatment effect)	-0.0156	-0.0089	-0.0404
	(0.0034)	(0.0058)	(0.0099)
Local unemployment rate	-0.0075	-0.0065	0.0014
	(0.0031)	(0.0049)	(0.0053)
Log of per capita income	-0.1653	-0.1084	-0.0613
	(0.0278)	(0.0415)	(0.0540)
Minimum GED age requirement is 16	0.0622	0.0732	0.0457
(dummy for minimum GED age requirement set above 18 is left out)	(0.0125)	(0.0189)	(0.0125)
Minimum GED age requirement is 17	0.0309	0.0401	-0.016
	(0.0204)	(0.0314)	(0.0185)
Minimum GED age requirement is 18	0.0532	0.0603	0.0473
	(0.0113)	(0.0177)	(0.0106)
Minimum school leaving age is 16	0.0495	0.0772	0.0292
(dummy for minimum school leaving age set above 17 is left out)	(0.0174)	(0.0279)	(0.0146)
Minimum school leaving age is 17	0.0388	0.0606	-0.0083
	(0.0221)	(0.0268)	(0.0195)
Observations	84	84	82
Number of States	14	14	14

Note: Huber-White robust standard errors are in parentheses (clustered by state). Model is estimated using GLS using panel specific AR-1 autocorrelation structure. State 15-17 year old populations are used as weights. The treatment effect reported above is the interaction between the treatment state dummy and the post 1997 dummy, where the treatment state dummy is equal to 1 for treatment states and the post 1997 dummy is equal to 1 for the years 1998-2000, otherwise both dummies are equal to 0. States with fewer than two observations per period for any of the dropout rate measures by race are dropped. Treatment states are those states that were required to eliminate the and/or score option. These include: LA, MS, NE, NM, TX. Control states are those that already had high enough standards by 1997. These include: AR, CA, CO, DE, DC, FL, ID, KY, MD, MO, NY, ND, OK, OR, SD, UT, WA, WV, WI. Control states dropped due to missing and negative dropout rates include: AR, ID, KY, MO, ND, NJ, NY, SD, UT, WA, WV. No treatment states are dropped.

Table G-34: GLS Fixed Effects Estimates of the Effect of the Reform on Dropout Rates Controlling for Age Requirements and Using Panel Specific AR-1 Autocorrelation Structure (Hispanics)

Independent Variables	**10th-12th Grade Dropout Rate**	**10th-11th Grade Dropout Rate**	**12th Grade Dropout Rate**
Post 1997 dummy	0.0093	0.01	0.0244
	(0.0043)	(0.0056)	(0.0083)
Score option changer state post 1997 (treatment effect)	-0.0249	-0.0115	-0.0645
	(0.0036)	(0.0047)	(0.0058)
Local unemployment rate	0.0112	0.0198	-0.0057
	(0.0022)	(0.0030)	(0.0035)
Log of per capita income	-0.0025	0.0517	-0.1539
	(0.0261)	(0.0327)	(0.0415)
Minimum GED age requirement is 16	0.0267	0.0356	0.0127
(dummy for minimum GED age requirement set above 18 is left out)	(0.0163)	(0.0189)	(0.0169)
Minimum GED age requirement is 17	0.0314	0.0479	0.0047
	(0.0185)	(0.0217)	(0.0185)
Minimum GED age requirement is 18	0.0418	0.0577	0.0173
	(0.0147)	(0.0167)	(0.0146)
Minimum school leaving age is 16	-0.0086	-0.0053	-0.0191
(dummy for minimum school leaving age set above 17 is left out)	(0.0092)	(0.0106)	(0.0098)
Minimum school leaving age is 17	0.0713	0.0911	-0.0374
	(0.0087)	(0.0158)	(0.0353)
Observations	84	83	82
Number of States	14	14	14

Note: Huber-White robust standard errors are in parentheses (clustered by state). Model is estimated using GLS using panel specific AR-1 autocorrelation structure. State 15-17 year old populations are used as weights. The treatment effect reported above is the interaction between the treatment state dummy and the post 1997 dummy, where the treatment state dummy is equal to 1 for treatment states and the post 1997 dummy is equal to 1 for the years 1998-2000, otherwise both dummies are equal to 0. States with fewer than two observations per period for any of the dropout rate measures by race are dropped. Treatment states are those states that were required to eliminate the and/or score option. These include: LA, MS, NE, NM, TX. Control states are those that already had high enough standards by 1997. These include: AR, CA, CO, DE, DC, FL, ID, KY, MD, MO, NY, ND, OK, OR, SD, UT, WA, WV, WI. Control states dropped due to missing and negative dropout rates include: AR, ID, KY, MO, ND, NJ, NY, SD, UT, WA, WV. No treatment states are dropped.

Table G-35: Difference-in-Difference Estimates of the Effect of the Reform on Dropout Rates Controlling for Age Requirements and Restricting Control Group to California and Florida (High Immigrant States) (All Races)

Independent Variables	**10th-12th Grade Dropout Rate**	**10th-11th Grade Dropout Rate**	**12th Grade Dropout Rate**
Score option changer state	-0.016	-0.0166	-0.0136
	(0.0127)	(0.0146)	(0.0091)
Score option changer state post 1997 (treatment effect)	-0.0069	0.0056	-0.0365
	(0.0063)	(0.0122)	(0.0132)
Post 1997 dummy	-0.0086	-0.0126	0.0007
	(0.0055)	(0.0121)	(0.0118)
Constant	0.1214	0.1290	0.1014
	(0.0111)	(0.0132)	(0.0050)
Observations	42	42	42
Number of States	7	7	7

Note: Huber-White robust standard errors are in parentheses (clustered by state). Model is estimated using OLS. State 15-17 year old populations are used as weights. The treatment effect reported above is the interaction between the treatment state dummy and the post 1997 dummy, where the treatment state dummy is equal to 1 for treatment states and the post 1997 dummy is equal to 1 for the years 1998-2000, otherwise both dummies are equal to 0. States with fewer than two observations per period are dropped. Treatment states are those states that were required to eliminate the and/or score option. These include: LA, MS, NE, NM, TX. Control states are those that already had high enough standards by 1997 and have large immigrant populations. These include: CA and FL.

Table G-36: Difference-in-Difference Estimates of the Effect of the Reform on Dropout Rates Controlling for Age Requirements and Restricting Control Group to California and Florida (High Immigrant States) (Whites)

Independent Variables	**10th-12th Grade Dropout Rate**	**10th-11th Grade Dropout Rate**	**12th Grade Dropout Rate**
Score option changer state	-0.0216	-0.0192	-0.026
	(0.0205)	(0.0251)	(0.0099)
Score option changer state post 1997 (treatment effect)	-0.002	0.0043	-0.0146
	(0.0038)	(0.0108)	(0.0148)
Post 1997 dummy	-0.0072	-0.0080	-0.0065
	(0.0037)	(0.0108)	(0.0142)
Constant	0.1008	0.1077	0.0830
	(0.0193)	(0.0238)	(0.0073)
Observations	42	42	42
Number of States	7	7	7

Note: Huber-White robust standard errors are in parentheses (clustered by state). Model is estimated using OLS. State 15-17 year old populations are used as weights. The treatment effect reported above is the interaction between the treatment state dummy and the post 1997 dummy, where the treatment state dummy is equal to 1 for treatment states and the post 1997 dummy is equal to 1 for the years 1998-2000, otherwise both dummies are equal to 0. States with fewer than two observations per period are dropped. Treatment states are those states that were required to eliminate the and/or score option. These include: LA, MS, NE, NM, TX. Control states are those that already had high enough standards by 1997 and have large immigrant populations. These include: CA and FL.

Table G-37: Difference-in-Difference Estimates of the Effect of the Reform on Dropout Rates Controlling for Age Requirements and Restricting Control Group to California and Florida (High Immigrant States) (Blacks)

Independent Variables	**10th-12th Grade Dropout Rate**	**10th-11th Grade Dropout Rate**	**12th Grade Dropout Rate**
Score option changer state	-0.031	-0.0411	-0.001
	(0.0104)	(0.0071)	(0.0223)
Score option changer state post 1997 (treatment effect)	-0.0119	0.0003	-0.043
	(0.0155)	(0.0266)	(0.0267)
Post 1997 dummy	-0.0038	-0.0065	0.0035
	(0.0136)	(0.0261)	(0.0223)
Constant	0.1707	0.1812	0.1398
	(0.0098)	(0.0058)	(0.0212)
Observations	42	42	42
Number of States	7	7	7

Note: Huber-White robust standard errors are in parentheses (clustered by state). Model is estimated using OLS. State 15-17 year old populations are used as weights. The treatment effect reported above is the interaction between the treatment state dummy and the post 1997 dummy, where the treatment state dummy is equal to 1 for treatment states and the post 1997 dummy is equal to 1 for the years 1998-2000, otherwise both dummies are equal to 0. States with fewer than two observations per period are dropped. Treatment states are those states that were required to eliminate the and/or score option. These include: LA, MS, NE, NM, TX. Control states are those that already had high enough standards by 1997 and have large immigrant populations. These include: CA and FL.

Table G-38: Difference-in-Difference Estimates of the Effect of the Reform on Dropout Rates Controlling for Age Requirements and Restricting Control Group to California and Florida (High Immigrant States) (Hispanics)

Independent Variables	**10th-12th Grade Dropout Rate**	**10th-11th Grade Dropout Rate**	**12th Grade Dropout Rate**
Score option changer state	-0.0189	-0.0171	-0.0214
	(0.0076)	(0.0095)	(0.0055)
Score option changer state post 1997 (treatment effect)	-0.016	0.0053	-0.0725
	(0.0037)	(0.0068)	(0.0059)
Post 1997 dummy	-0.0161	-0.0246	0.0079
	(0.0036)	(0.0063)	(0.0043)
Constant	0.1604	0.1693	0.1351
	(0.0024)	(0.0014)	(0.0050)
Observations	42	42	42
Number of States	7	7	7

Note: Huber-White robust standard errors are in parentheses (clustered by state). Model is estimated using OLS. State 15-17 year old populations are used as weights. The treatment effect reported above is the interaction between the treatment state dummy and the post 1997 dummy, where the treatment state dummy is equal to 1 for treatment states and the post 1997 dummy is equal to 1 for the years 1998-2000, otherwise both dummies are equal to 0. States with fewer than two observations per period are dropped. Treatment states are those states that were required to eliminate the and/or score option. These include: LA, MS, NE, NM, TX. Control states are those that already had high enough standards by 1997 and have large immigrant populations. These include: CA and FL.