IES Institute of Education Sciences

APPENDIXES
November 2021

Regional Educational Laboratory Northwest
At Education Northwest

What Were the Reach and Impact of the Oregon Promise Financial Aid Program in Its First Two Years?

Appendix A. Oregon Promise

Appendix B. Methods

Appendix C. Supporting analysis

See https://go.usa.gov/xecvh for the full report.

Appendix A. Oregon Promise

Oregon Promise was created by the Oregon legislature in 2015 and is administered by the Office of Student Access and Completion (OSAC) at Oregon's Higher Education Coordinating Commission (HECC). This appendix begins with a brief overview of research on statewide promise programs and then summarizes information about Oregon Promise that was drawn from HECC reports in 2016 and 2018 (Higher Education Coordinating Commission, 2016, 2018a, 2018b) and from the Oregon Promise website (Higher Education Coordinating Commission, 2021a).

State promise programs

Promise programs are relatively new financial aid models that cover all or nearly all college tuition costs for eligible students (Lepe & Weissman, 2020; Miller-Adams, 2015; Perna & Leigh, 2018). Unlike traditional forms of financial aid, in which eligibility is based primarily on merit or need, promise programs use residency in a district, city, or state as a key eligibility criterion (Miller-Adams, 2015; Perna & Leigh, 2018). Evaluations have found that students who enroll in these programs are more likely to enroll in and, for some programs, to persist in and complete college (Bartik et al., 2017; Bifulco et al., 2019; Bucceri, 2013; Daugherty & Gonzalez, 2016; Miller-Adams, 2015). Despite the growing body of evidence on promise programs, continued evaluation of specific programs is valuable because promise program models vary widely, with differences in application processes, eligibility criteria, residency requirements, the types of institutions included in the program, and how funding is disbursed (Perna & Leigh, 2018).

Oregon is among a small number of states that have implemented a promise program. Most state promise programs are "last-dollar" models that cover tuition costs after any federal Pell Grants and other grants are applied. In most states the maximum federal Pell Grant covers most students' community college tuition costs (Ma et al., 2019); consequently, most promise program aid goes to students from middle- and high-income households. Students from low-income households who are eligible for Pell Grants might experience only a small increase in aid. However, some last-dollar programs can cover nontuition expenses when tuition is fully covered by other aid. This approach can help alleviate the burden that nontuition college costs place on students from low-income households (Goldrick-Rab, 2016).

Many state promise programs implement merit-based eligibility requirements or require full-time enrollment in college (Mishory, 2018). Merit-based financial aid tends to benefit students from higher-income households and White students more than students from low-income households and students of color (Dynarksi, 2000, 2003),

whereas need-based aid benefits underserved students (Bettinger, 2015; Goldrick-Rab et al., 2016). Placing a full-time enrollment requirement on students might restrict access to financial aid for a large proportion of community college students. Part-time students make up 37 percent of the college-going population, and they tend to have financial obligations that induce them to work for a substantial number of hours (Bombardieri, 2017). Consequently, students who start as part-time students at two-year colleges have some of the lowest college completion rates (Shapiro et al., 2016). While Oregon Promise has a minimum high school grade point average (GPA) or GED test score requirement, the state gives awards to students who are enrolled part-time. Thus, students whose financial situation requires concurrent employment are still eligible for Oregon Promise financial assistance.

The type of institution a state aid program targets might also influence the postsecondary outcomes of its participants. Most state promise programs target two-year colleges, potentially influencing students that might have gone to a four-year university to instead choose a two-year college (Cohodes & Goodman, 2014). However, starting at a four-year university is not an option for many community college students, and enrolling in community college benefits their long-term completion prospects compared with not enrolling at all (Brand et al., 2014).

The Oregon Promise program

Oregon Promise is open to individuals with a high school diploma or GED test credential, including to those who complete high school in public school, private school, home school, a correctional facility, or a foster care placement outside of the state (Higher Education Coordinating Commission, 2021a; S.B. 1605). This study focused on public school students only, and this section describes the program during the study time period when 2015/16 and 2016/17 public school seniors could apply. The program is similar as of 2021.

Oregon Promise award in the first two years of the program. During the study time period the Oregon Promise award amount depended on several factors: federal Pell Grant and state Oregon Opportunity Grant[1] award amounts, number of credits taken per term, and tuition costs at the student's community college. For full-time students awards ranged from $1,000 to $3,248, minus a $50 per term co-pay, during the first year of the program (the 2016/17 academic year; Higher Education Coordinating Commission, 2016). During the 2021/22 academic year awards ranged from $1,000 to $4,131, minus a $50 per term co-pay (Higher Education Coordinating Commission, 2021a).

Because Oregon Promise is a last-dollar financial aid model, students from higher-income households receive larger awards, and students from lower-income households receive smaller awards. In 2016/17, 22 percent of disbursed Oregon Promise funds were awarded to students who received a Pell Grant, and 78 percent of funds were awarded to students who did not receive a Pell Grant. In 2017/18, 29 percent of disbursed Oregon Promise funds were awarded to students who received a Pell Grant, and 71 percent of funds were awarded to students who did not receive a Pell Grant (Higher Education Coordinating Commission, 2018b). There were generally four ranges of award amounts for students eligible for a full Pell Grant and full Oregon Opportunity Grant, partial Pell Grant and a full Oregon Opportunity Grant, partial Pell Grant and no Oregon Opportunity Grant, and no Pell Grant and no Oregon Opportunity Grant (table A1).

[1] The Oregon Opportunity Grant is the state's longest-running financial aid program. It is a need-based grant program for students from the lowest-income households in the state. The grant provides funding to Oregon residents who attend a public higher education institution and have an expected family contribution below the expected family contribution limit for that year. For students entering college in 2021/22, the expected family contribution limit was $6,000, and the maximum award was $2,778 for community college students and $3,612 for four-year college and university students (Higher Education Coordinating Commission, 2021b).

Table A1. Oregon Promise award amounts for full-time students in the first year of the program, by expected family contribution

Expected family contribution or aid amount	Students eligible for a full Pell Grant and a full Oregon Opportunity Grant	Students eligible for a partial Pell Grant and a full Oregon Opportunity Grant	Students eligible for a partial Pell Grant but not eligible for an Oregon Opportunity Grant	Students not eligible for a Pell Grant or an Oregon Opportunity Grant
Expected family contribution	$0	$1–$3,500	$3,501–$5,200	More than $5,200
Oregon Promise grant (per term)	$284	$284–$751	$752–$1,082	$1,083
Oregon Opportunity Grant (per term)	$698	$698	$0	$0
Federal Pell Grant (per term)	$1,938	$765–$1,937	$1–$764	$0

Source: Based on information on different aid amounts by expected family contribution in 2016 from Higher Education Coordinating Commission (2016).

Oregon Promise eligibility requirements in the first two years of the program. To apply for Oregon Promise, students completed an Oregon Promise application and the Free Application for Federal Student Aid (FAFSA) or the Oregon Student Aid Application (ORSAA), which is for students with undocumented status, Deferred Action for Childhood Arrivals status, or Temporary Protected Status. Regardless of which aid application they used, students named at least one community college they expected to attend.

To be eligible for an Oregon Promise award, high school graduates had to meet a GPA requirement (2.5 or higher) and GED recipients a test score requirement (145 or higher). In addition, students had to have lived in Oregon for at least 12 months prior to community college enrollment and have a valid FAFSA or ORSAA. Applicants selected for the FAFSA verification process (by a college they listed or the federal government) had to complete verification to be offered an award.

Because of a state budget shortfall, the state introduced an expected family contribution (EFC) limit after the application deadline in the second year, and only applicants with an EFC below $20,000 were eligible to receive an award in 2017/18. (The EFC limit did not impact students who received the grant in 2016/17 and were renewing their award.) Oregon gave HECC the authority to revisit the EFC limit on an annual basis and to use it only when state funds are insufficient to fund Oregon Promise. In 2018/19 and 2019/20 HECC removed the EFC limit and funded all eligible applicants. Because of budget cuts resulting from the COVID-19 pandemic, applicants entering community college in fall 2020 with an EFC at or above $22,000 were not eligible for an award.

High school seniors submitted their application in May, and OSAC verified eligibility based on students' high school transcripts and FAFSA or ORSAA. In the first year of the program, students were required to submit their transcript to verify that their GPA was 2.5 or higher (Higher Education Coordinating Commission, 2018b). After the first year, OSAC worked directly with high school registrars to verify student GPAs. OSAC staff examined students' FAFSA to verify their residency and, in years when the EFC limit applied, their EFC.

To receive an Oregon Promise award, eligible applicants who were offered an award had to enroll in community college within six months after high school or GED completion. To maintain the award, students had to complete at least six credits per term, attend at least three terms per school year (fall, winter, and spring), make satisfactory progress aligned with Pell Grant requirements, and complete a first-year experience at the college.

In addition to these requirements, to renew their award for additional academic years, students had to file a FAFSA or ORSAA by June 1 and list their current Oregon community college on the form. Students also had to attend college during the fall term of their renewal years to retain the award. The award duration was 90 attempted credit hours, not including remedial credits.

See OSAC's Oregon Promise website (https://oregonstudentaid.gov/oregon-promise.aspx) for up-to-date information on program requirements.

Numbers of Oregon Promise applicants, eligible applicants, and recipients. More than 19,000 students applied for Oregon Promise in the first year of the program. Of these, 10,863 students met eligibility requirements and were offered an award, and 6,971 students accepted an award offer (table A2; Higher Education Coordinating Commission, 2018a, 2018b). In the second year of the program, 15,840 students applied, 8,869 students were offered an award, and 5,674 accepted an award offer (Higher Education Coordinating Commission, 2018b). During the first two years of the program, Oregon Promise recipients accounted for slightly more than 5 percent of all Oregon community college students and 24 percent of full-time equivalent Oregon community college students (Higher Education Coordinating Commission, 2018b).

Table A2. Comparison of actual and study numbers of Oregon Promise applicants, eligible applicants, and recipients

	First year of program			Second year of program		
Oregon Promise sample size	Applicants	Eligible applicants	Recipients	Applicants	Eligible applicants	Recipients
Statewide total	19,223	10,863	6,971	15,840	8,869	5,674
Study sample	12,480	10,016	6,365	11,737	8,325	5,090

Note: There are large differences in applicant numbers between the statewide total and the study sample because data provided to the study team excluded the following applicants: students who started but did not submit the Oregon Promise application, students who submitted an Oregon Promise application but did not submit a Free Application for Federal Student Aid (FAFSA) or Oregon Student Aid Application (ORSAA) for the correct year, and students who submitted an Oregon Promise application and FAFSA or ORSAA for the correct year but did not list an Oregon community college. Differences in eligible applicant numbers and recipient numbers between the statewide total and the study sample are most likely because the program is available to GED, home school, and private school students, but the study focused only on public high school students.
Source: Higher Education Coordination Committee (2018b) and authors' analysis of Oregon Promise data.

References

Bartik, T. J., Hershbein, B. J., & Lachowska, M. (2017). *The effects of the Kalamazoo Promise Scholarship on college enrollment, persistence, and completion* (Working Paper No. 15-229). W.E. Upjohn Institute for Employment Research. Retrieved August 16, 2018, from http://research.upjohn.org/up_workingpapers/229/.

Bettinger, E. (2015). Need-based aid and college persistence: The effects of the Ohio College Opportunity Grant. *Educational Evaluation and Policy Analysis, 37*(1), 102S–119S. http://eric.ed.gov/?id=EJ1058622.

Bifulco, R., Rubenstein, R., & Sohn, H. (2019). Evaluating the effects of universal place-based scholarships on student outcomes: The Buffalo "Say Yes to Education" program. *Journal of Policy Analysis and Management, 38*(4), 918–943. https://onlinelibrary.wiley.com/doi/10.1002/pam.22139.

Bombardieri, M. (2017). *Hidden in plain sight: Understanding part-time college students in America*. Center for American Progress. Retrieved August 16, 2018, from https://www.americanprogress.org/issues/education-postsecondary/reports/2017/09/06/438341/hidden-plain-sight/.

Brand, J. E., Pfeffer, F. T., & Goldrick-Rab, S. (2014). The community college effect revisited: The importance of attending to heterogeneity and complex counterfactuals. *Sociological Science, 1*(1), 448–465. https://www.sociologicalscience.com/download/volume%201/october/SocSci_v1_448to465.pdf.

Bucceri, K. (2013). *Are early commitment programs the answer to gaps in college enrollment and outcomes by income? The case of Oklahoma's Promise* (Doctoral dissertation). Columbia University, Teachers College. Retrieved August 16, 2018, from https://academiccommons.columbia.edu/catalog/ac%3A166621.

Cohodes, S., & Goodman, J. (2014). Merit aid, college quality and college completion: Massachusetts' Adams Scholarship as an in-kind subsidy. *American Economic Journal: Applied Economics, 6*(4), 251–285. Retrieved August 16, 2018, from https://www.aeaweb.org/articles?id=10.1257/app.6.4.251.

Daugherty, L., & Gonzalez, G. C. (2016). *The impact of the New Haven Promise program on college enrollment, choice, and persistence* (Working Paper No. WR-1146). RAND Corporation.

Dynarski, S. (2000). *Hope for whom? Financial aid for the middle class and its impact on college attendance* (NBER No. 7756). National Bureau of Economic Research.

Dynarski, S. M. (2003). Does aid matter? Measuring the effect of student aid on college attendance and completion. *American Economic Review, 93*(1), 279–288.

Goldrick-Rab, S. (2016). *Paying the price: College costs, financial aid, and the betrayal of the American dream*. University of Chicago Press.

Goldrick-Rab, S., Kelchen, R., Harris, D. N., & Benson, J. (2016). Reducing income inequality in educational attainment: Experimental evidence on the impact of financial aid in college completion. *American Journal of Sociology, 121*(6), 1762–1817.

Higher Education Coordinating Commission. (2016). *Senate Bill 81 legislative report: The first term of the Oregon Promise*. https://www.oregon.gov/highered/research/Documents/Legislative/SB-81-Report-Oregon-Promise-1st-term-2016.pdf.

Higher Education Coordinating Commission. (2018a). *Oregon Promise: Year 1 and the start of year 2*. http://www.oregon.gov/highered/about/Documents/Commission/COMMISSION/2018/01_Jan-11-18/9.2%20Oregon%20Promise%20report%20from%20year%202.pdf.

Higher Education Coordinating Commission. (2018b). *Senate Bill 81 (2015): The Oregon Promise—report from year 3*. https://www.oregon.gov/highered/research/Documents/Reports/SB-81-Oregon-Promise-2018.pdf.

Higher Education Coordinating Commission. (2021a). *Oregon Promise Grant.* Retrieved September 7, 2021, from https://oregonstudentaid.gov/oregon-promise.aspx.

Higher Education Coordinating Commission. (2021b). *Oregon Opportunity Grant.* Retrieved September 7, 2021, from https://oregonstudentaid.gov/oregon-opportunity-grant.aspx.

Lepe, M., & Weissman, E. (2020). *Looking ahead toward equity: The College Promise Success Initiative.* MDRC.

Ma, J., Pender, M., & Welch, M. (2019). *Education pays 2019: The benefits of higher education for individuals and society.* College Board. https://research.collegeboard.org/pdf/education-pays-2019-full-report.pdf.

Miller-Adams, M. (2015). *Promise nation: Transforming communities through place-based scholarships*. W.E. Upjohn Institute for Employment Research. Retrieved August 16, 2018, from http://research.upjohn.org/cgi/viewcontent.cgi?article=1253&context=up_press.

Mishory, J. (2018). *The future of statewide College Promise programs: A state guide to free college*. Century Foundation. Retrieved August 16, 2018, from https://tcf.org/content/report/future-statewide-college-promise-programs/.

Perna, L. W., & Leigh, E. W. (2018). Understanding the promise: A typology of state and local college promise programs. *Educational Researcher, 47*(3), 155–180. http://eric.ed.gov/?id=EJ1174363.

S.B. 1605, Special Session. (2020). Retrieved September 7, 2021, from https://olis.oregonlegislature.gov/liz/2020S1/Measures/Overview/SB1605.

Shapiro, D., Dundar, A., Wakhungu, P. K., Yuan, X., Nathan, A., & Hwang, Y. (2016). *Completing college: A national view of student attainment rates—fall 2010 cohort* (Signature Report No. 12). National Student Clearinghouse, Research Center. http://eric.ed.gov/?id=ED580301.

Appendix B. Methods

This appendix provides comprehensive information about study methods, including detailed information about the data sources and variables used, the study sample, how missing data were handled, and the analyses used in this report.

Data sources and variables used

The study used data from four sources:

1. *K–12 data from the Oregon Department of Education (ODE) from 2004/05 to 2016/17.* These data included statewide K–12 records on all students in the sample. Seniors in 2015/16 were in grade 1 in 2004/05, and seniors in 2016/17 were in kindergarten in 2004/05. Variables from the ODE data used in the study included gender, race/ethnicity, eligibility for the National School Lunch Program, special education status, migrant education status, English learner status, charter school indicator, attendance, discipline incidences, state assessment scores, Advanced Placement and International Baccalaureate course participation, high school locale (National Center for Education Statistics locale codes), and high school graduation status.
2. *National postsecondary data from the National Student Clearinghouse (NSC) from 2016/17 to 2019/20.* Through its data-sharing agreement with Education Northwest, ODE provided the study team with annual updates of NSC data linked to statewide K–12 records. Data elements used in the study included college enrollment and persistence records, college type, and college completion records from postsecondary institutions in the United States. NSC matches K–12 and college records to identify students who go to college, but data might not capture all students who do so. Some students do not match to NSC records (for example, due to typographical errors in their names), they have their records protected, or, for a very small proportion of students (particularly those who attend for-profit colleges), their institution is not in the NSC.
3. *Oregon Promise application data from the Oregon Higher Education Coordinating Commission (HECC)*. Education Northwest executed a data-sharing agreement with HECC to use the first two years of Oregon Promise application data (2016/17 and 2017/18). The 2016/17 data included application data from individuals who applied in the first year of the program, the 2017/18 data included application data from the individuals who applied in the second year of the program, as well as application data from first-year recipients who renewed their award. Variables in the Oregon Promise data included application status, reasons the application was rejected, course load at community college by term, and award amount by term. The agreement with HECC also allowed the study team to use dual-credit and direct-enrollment course participation data from community college and university data and Federal Pell Grant indicator data from community college data.
4. *Unweighted cumulative high school grade point average data from school districts in the Portland metro area.* The state does not collect grade point average (GPA) data from school districts, so these data were not part of the K–12 data provided by ODE. Thus, the study team collected GPA data directly from six districts in the Portland metro area: Portland Public Schools, Beaverton School District (SD), Hillsboro SD, Forest Grove SD, Gresham-Barlow SD, and Parkrose SD.

Each data element used in the study is described in table B1.

Table B1. Descriptions of study data elements

Data element	Description
Oregon Department of Education K–12 data	
School ID	Name and ID of senior year high school
Grade 12 year	• Grade 12 in 2015/16 • Grade 12 in 2016/17
Gender	Indicator of student gender
Race/ethnicity	Indicator of student race/ethnicity
Eligibility for the National School Lunch Program	The study used two versions of this variable: • Ever eligible at any point during K–12 enrollment. • Persistently eligible three years in a row.
Received special education services	The study examined two versions of this variable: • Ever received special education services (based on an Individualized Education Program) at any point during K–12 enrollment. • Ever received special education services (based on an Individualized Education Program) during high school.
Migrant education status	Ever participated in a migrant education program at any point during K–12 enrollment
Classified as an English learner student	The study examined two versions of this variable: • Former English learner student: Classified as an English learner student in grades K–8 but not classified as an English learner student in grades 9–12. • Current English learner student: Classified as English learner student in grades 9–12.
Charter school attendance	Indicates whether a student attended a charter school during high school
School mobility	Indicates whether a student attended more than one Oregon public school during high school
High school attendance	Research question 1 used a binary indicator of whether a student's average high school attendance rate was 90 percent or higher. Research question 2 used a continuous variable of average high school attendance rate.
Expelled or suspended during high school	Indicates whether a student was ever expelled or suspended during high school
Test score on state math assessment	Research question 1 used a binary indicator of whether the student met state standards on the Smarter Balanced state math assessment. Research question 2 used continuous scaled score on the state math assessment in grade 11.
Test score on state reading assessment	Research question 1 used a binary indicator of whether the student met state standards on the Smarter Balanced state reading assessment. Research question 2 used continuous scaled score on the state reading assessment in grade 11.
Dual-credit course participation	Dual-credit courses are courses taught by a certified high school teacher that students take in high school for college credit. Dual-credit course enrollment data from the Higher Education Coordinating Commission (HECC) were matched to Oregon Department of Education (ODE) data to identify students who took dual-credit courses in high school.
Direct-enrollment course participation	Direct-enrollment courses are college or university credit-bearing courses taught by a college faculty member that high school students take on the community college or university campus or online, along with college students. Direct-enrollment course enrollment data from HECC were matched to ODE data to identify students who took direct-enrollment courses in high school.
Advanced Placement course participation	Indicates whether a student took an Advanced Placement course in high school
International Baccalaureate course participation	Indicates whether a student took an International Baccalaureate course in high school

Senior year high school locale	High school locale based on National Center for Education Statistics locale codes. Four high school locales are examined in this study: city, suburb, town, rural.
National Student Clearinghouse data	
College enrollment	The study examined two college enrollment variables: • Enrolled in any college within six months of high school graduation. • Enrolled in any college within two years of high school graduation.
College persistence	The study examined two college persistence variables: • Persisted in the first year of college after high school (still enrolled in May or June of that academic year). • Still enrolled in 2019/20 or completed college by 2019/20.
Oregon Promise application data	
Application year	Year in which student first applied for Oregon Promise
Oregon Promise status	Indicators to identify: • Applicant: Student has a record in the Oregon Promise application data. • Eligible applicant: Application review status code is valid, and applicant has no reject reasons. • Recipient: Student received disbursed funds in at least one term.
Number of terms with Oregon Promise award	Categorical variable that indicates whether student received disbursed funds: • Only in the first term in the first year of community college. • In multiple terms in the first year of community college and zero terms in the second year. • In both the first and second years of community college.
Oregon Promise award amount	Categorical variable that combines Oregon Promise award amount per term, credit load per term, and indicators of Federal Pell Grant and Oregon Opportunity Grant status per term and indicates whether student received: • The maximum Oregon Promise award: Student received the maximum award based on credit load and did not have an indicator of receiving a Pell Grant or an Oregon Opportunity Grant in all enrolled terms. • Some Oregon Promise award: Student did not fall into the minimum or maximum award categories. • The minimum Oregon Promise award: Student received the minimum award based on credit load and had an indicator of receiving a Pell Grant or an Oregon Opportunity Grant in all enrolled terms.
District grade point average (GPA) data	
District ID	Name and ID of district providing data
Cumulative GPA	A continuous measure of a student's unweighted cumulative high school GPA; ranges from 0 to 4.0

Source: Authors' compilation.

Study sample

The sample for the study is all grade 12 students in Oregon public high schools in the 2015/16 and 2016/17 academic years, as senior year is when students apply for Oregon Promise.

The study team linked K–12 ODE, National Student Clearinghouse, and district data using students' unique public school ID numbers.

The Oregon Promise data file provided to the study team did not include students' public school ID numbers. The file included all applicants who submitted a Free Application for Federal Student Aid (FAFSA) or Oregon Student Aid Application (ORSAA) and listed at least one Oregon community college on the FAFSA or ORSAA. The data did not include applicants who:

- Started but did not submit the Oregon Promise application.
- Submitted an Oregon Promise application but did not submit a FAFSA or ORSAA for the correct year.

- Submitted a FAFSA or ORSAA for the correct year but did not list an Oregon community college on the form.

The study team matched Oregon Promise application data to K–12 data using the following procedure:

- A fuzzy matching algorithm using the reclink command in Stata and first, middle, and last names and birthdate was created to link all 2015/16 and 2016/17 seniors in ODE data (95,579 unique students) and all individuals in Oregon Promise data (27,424 unique individuals).
- The matching algorithm found a match in the ODE data for 25,814 Oregon Promise applicants, but 1,440 matches were not exact and appeared to be different individuals (different names or birthdates). These 1,440 cases were dropped, and the final matched sample was 24,374[2] (89 percent of the 27,424 students in the original applicant file).

The study team then merged the 24,374 matched Oregon Promise students with the study dataset. All Oregon Promise applicants had records in the ODE file for the correct year (that is, the application year in Oregon Promise data was their senior year in high school), except for 157 students. These 157 students applied for Oregon Promise during a year in which they were not in grade 12; thus, they did not have any data in the ODE file. These 157 students were dropped, generating a final Oregon Promise applicant sample of 24,217.

Thus, the final study dataset included 95,579 public high school seniors with K–12 records from ODE for all students, national postsecondary records from the NSC, Oregon Promise application records, and GPA from the Portland metro area districts.

The sample inclusion criteria for each research question are described below.

Research question 1. The sample consisted of all high school seniors who attended a public high school in Oregon during the 2015/16 and 2016/17 academic years (*n* = 95,579).

- Research question 1a compared applicants (*n* = 24,217) with the total sample (*n* = 95,579).
- Research question 1b compared first-year applicants (*n* = 12,480), eligible applicants (*n* = 10,016), and recipients (*n* = 6,365) with second-year applicants (*n* = 11,737), eligible applicants (*n* = 8,325), and recipients (*n* = 5,090).
- Research question 1c examined the sample of seniors at public high schools in the Portland metro area that provided cumulative unweighted GPA data (*n* = 17,769). The three largest districts in the Portland metro area—Portland Public Schools (*n* = 6,089), Beaverton SD (*n* = 5,900), and Hillsboro SD (*n* = 2,814)—provided GPA data, as did three smaller districts—Forest Grove SD (*n* = 879), Gresham-Barlow SD (*n* = 1,595), and Parkrose SD (*n* = 492).
- Research question 1d included only Oregon Promise recipients from the first year of the program (*n* = 6,365).

Research question 2. The sample consisted of high school graduates only.

- The sample for research question 2a included seniors at public high schools in the Portland metro area who graduated in 2015/16 (*n* = 7,998). Sample sizes by district are the following: Portland Public Schools (*n* = 2,669), Beaverton SD (*n* = 2,627), Hillsboro SD (*n* = 1,314), Forest Grove SD (*n* = 412), Gresham-Barlow SD (*n* = 775), and Parkrose SD (*n* = 201).

[2] The 3,050 students in the Oregon Promise applicant file who did not match with ODE records might have been GED students who were not seniors in the study years, home-schooled students not registered with a district, or private school students. Additionally, Oregon Promise eligibility requirements were not entirely clear to everyone in Oregon during the first program year. As a result, several ineligible individuals applied, including juniors and non–high school students (for example, adults).

- The sample for research question 2b included only public high school graduates in 2015/16 or 2016/17 in the Portland metro area who were eligible applicants (*n* = 3,258) or did not apply for Oregon Promise (*n* = 11,383).
- The sample for research question 2c consisted of all public high school graduates in 2015/16 or 2016/17 who were eligible applicants (*n* = 18,065) or did not apply for Oregon Promise (*n* = 53,445).

Missing data

The study had minimal missing data, as the study team had nearly all K–12 data. Only four variables had missing data: average high school attendance rate, grade 11 state Smarter Balanced assessment scores in math and reading, and senior year high school locale code (table B2). The approach for handling each variable with missing data is described here.

Average high school attendance rate. The descriptive analyses used a binary variable that indicated whether a student had an average high school attendance rate of 90 percent or higher. The regression analyses used listwise deletion to remove cases with missing data.

Grade 11 state assessment scores in math and reading. The descriptive analyses used a binary variable that indicated whether a student met or exceeded state standards on the Smarter Balanced assessment. The regression analyses used listwise deletion to remove cases with missing data.

Senior year high school locale code. The descriptive analyses used binary variables to indicate high school locale. The regression analyses included a binary variable that reflected unknown high school locale code.

Table B2. Missing data

	Missing sample for research question 1 (*n* = 95,579)		Missing sample for research question 2a, Portland metro area sample (*n* = 7,998)		Missing sample for research question 2b, Portland metro area sample (*n* = 14,641)		Missing sample for research question 2c, statewide sample (*n* = 71,510)	
Variable	Number	Percent	Number	Percent	Number	Percent	Number	Percent
Average high school attendance rate	na	na	13	<1	26	<1	287	<1
Grade 11 state assessment score—math	na	na	263	3	504	3	2,398	3
Grade 11 state assessment score—reading	na	na	277	3	509	3	2,372	3
Senior year high school locale code	4,794	5	na	na	na	na	1,253	2

na is not applicable because the variable is not used in this analysis.
Source: Authors' analysis of Oregon Department of Education data.

Analyses

Research question 1. Which public high school seniors in 2015/16 and 2016/17 did Oregon Promise reach and serve? To answer research question 1, the study team calculated the percentage of all Oregon public high school seniors in 2015/16 and 2016/17 who were applicants, eligible applicants, and recipients. These percentages were calculated for the overall sample, each senior class, and the Portland metropolitan (metro) area subsample. Among applicants who were not offered an award—that is, applicants who did not meet eligibility requirements—the study team examined why each application was rejected and calculated the percentages of ineligible applicants by reason.

For each subquestion the study team calculated and compared the following descriptive characteristics for all Oregon public high school students in 2015/16 and 2016/17 and Oregon Promise applicants (research question 1a); applicants, eligible applicants, and recipients in the first and second years of the program (research question

1b); and nonapplicant high school graduates with a GPA of 2.0–2.49 and applicants in the Portland metro area (research question 1c):

- Gender: male, female.
- Race/ethnicity: American Indian/Alaska Native, Asian, Black, Latinx, Multiracial, Pacific Islander, White.
- Eligibility for the National School Lunch Program: ever eligible (in any grade in K–12), persistently eligible (in any grade in K–12).
- Special education status: ever received special education services (in any grade in K–12), ever received special education services in high school.
- Migrant education status: ever in migrant education program (in any grade in K–12).
- English learner status: former English learner student (in any grade in K–8, not 9–12), current English learner student (in any grade in 9–12).
- Senior year high school locale: city, suburb, town, rural.

For research question 1b, the study team also calculated and compared descriptive statistics for recipients who received the maximum Oregon Promise award, recipients who received the minimum Oregon Promise award, and recipients who received some Oregon Promise award (between the minimum and the maximum).

To answer question 1d, the study team also calculated and compared descriptive statistics for recipients in the first year of the program who received an Oregon Promise award only in their first term at community college, those who received an award in two or three terms in their first year at community college but not in their second year, and those who received an award in both their first and second years at community college. This last group of students persisted in all terms at an Oregon community college, applied for a second year of funding (in their first year of college), met all eligibility requirements (see appendix A), and then enrolled and received Oregon Promise funding in their second year at community college. This analysis focused on the following characteristics:

- Average high school attendance rate 90 percent or higher.
- Ever suspended or expelled during high school.
- Met or exceeded state standards on the math Smarter Balanced assessment and met or exceeded state standards on the reading Smarter Balanced assessment.
- Took dual-credit courses, took direct-enrollment courses, took Advanced Placement courses, took International Baccalaureate courses.

Results for research question 1a are in table C1, results for question 1b are in tables C2 and C3, results for question 1c are in table C4, and results for question 1d are in table C5 in appendix C.

Research question 2. What were the impacts of the offer of an Oregon Promise award on public high school graduates' college enrollment, first-year persistence, and longer-term persistence or completion? To identify the impact of Oregon Promise, the study used two different quasi-experimental designs.

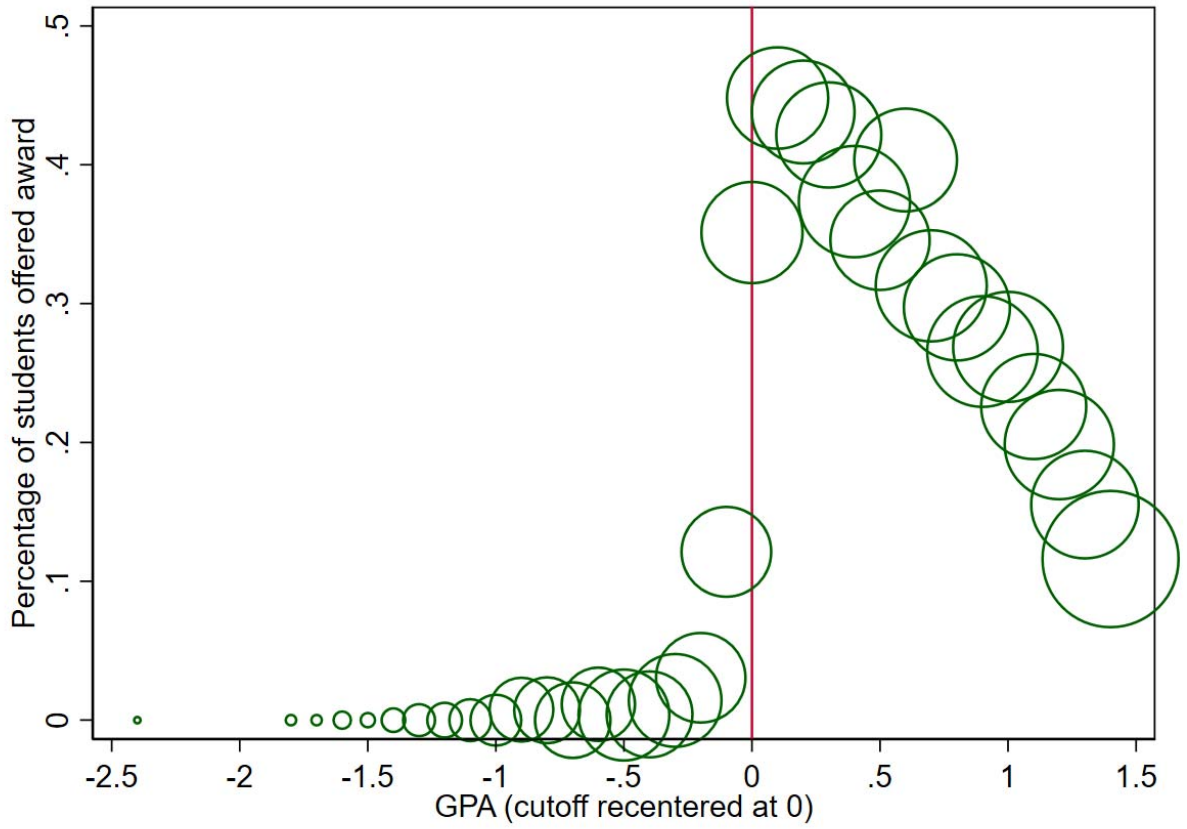
Main approach. To address research question 2a, the study team used a fuzzy regression discontinuity design (RDD). RDD is used when a cutoff score (in this case, a 2.5 GPA) determines whether individuals are assigned to an intervention (in this case, potential eligibility for an Oregon Promise award). The underlying assumption is that while the forcing variable (in this case, GPA) might be related to the outcome, the relationship should be smooth, so any discontinuity at the cutoff can be attributed to treatment assignment, not to any excluded or unobservable factors (Imbens & Lemieux, 2008).

The analysis for research question 2 included high school graduates in 2015/16 who attended public schools in the Portland metro area. The design was limited to the Portland metro area because GPA is not collected at the state level, so the study team collected GPA data from districts in the Portland metro area, which has large and diverse school districts. Furthermore, an expected family contribution requirement was introduced in the second year of the program, and thus eligibility among 2016/17 seniors who applied was also based on expected family contribution from their FAFSA. However, the study team did not have access to students' expected family contribution. Thus, the study team had to limit the analysis to 2015/16 high school graduates only.

The analysis included all high school graduates in 2015/16 who attended public schools in the Portland metro area regardless of whether they applied for Oregon Promise, so a fuzzy RDD was used to first predict the probability of applying and being offered an award based on GPA and then to identify the impact of the offer of an award on outcomes. This two-stage regression model essentially estimated the change in the outcome measure for high school graduates who had a GPA at or just above the cutoff compared with high school graduates who had a GPA just below the cutoff.

Figure B1 illustrates the discontinuity, or jump, in the probability of being an eligible applicant offered an award at the 2.5 GPA cutoff among seniors who graduated in 2015/16 from public high schools in the Portland metro area. The *F*-test from the first-stage equation that estimated the relationship between having a 2.5 or higher GPA and being offered an Oregon Promise award is between 17.80 and 22.59 (see table C7 in appendix C).

Figure B1. Relationship between grade point average of 2015/16 high school graduates in the Portland metro area and being an eligible applicant offered an Oregon Promise award



GPA is grade point average.
Note: The bubble size represents the number of students at each GPA value. GPA values are binned into 0.1 units to provide a clearer picture of the relationship between GPA and award offer. For example, 264 graduates had a high school GPA of 2.40–2.49 and are represented in the bubble at –0.1, right below 0 (since the 2.5 GPA cutoff was recentered at 0), 336 graduates had a high school GPA of 2.5–2.59 and are represented in the circle at the 0 value, 337 graduates had a high school GPA of 2.6–2.69 and are represented in the circle at the 0.1 value, and so on.
Source: Authors' analysis of data from the Oregon Department of Education, Higher Education Coordinating Commission, and Portland metro area districts.

The What Works Clearinghouse (WWC) rates RDD studies based on five standards: integrity of the forcing variable, attrition, continuity in the relationship between the forcing variable and outcome, functional form/bandwidth, and fuzzy RDD (What Works Clearinghouse, 2017). This section describes how the current study was designed to align to WWC standards. Attrition is not discussed because it is not an issue in this study: the four study outcomes are dichotomous and equal 1 if the student was present in the National Student Clearinghouse postsecondary data and 0 otherwise.

Integrity of the forcing variable. The study must establish the institutional integrity of the forcing variable (GPA) with a description of the cutoff (2.5) and values that illustrate that there is no manipulation of the values that determine treatment assignment.

In the first year of the program, seniors applied for Oregon Promise during the college admissions and financial aid application process (between March and June of their senior year). Seniors who graduated early used their cumulative unweighted GPA at the end of their junior year to determine whether they were eligible for Oregon Promise. All other seniors were supposed to use their cumulative unweighted GPA as of the first semester of their senior year. In the first year of the program, there was some confusion about the 2.5 GPA cutoff (for example, how to calculate it, which semesters or quarters to use; Hodara et al., 2017). Thus, high school staff encouraged anyone who was approaching a final 2.5 GPA to apply (Hodara et al., 2017).

In the first year of the program, students sent their final transcripts to the Office of Student Access and Completion (OSAC), whose staff verified that students' final unweighted GPA was 2.5 or higher (Higher Education Coordinating Commission, 2018). (After the first year of the program, high school registrars began verifying student GPA using seventh semester unweighted GPA or final GPA.)

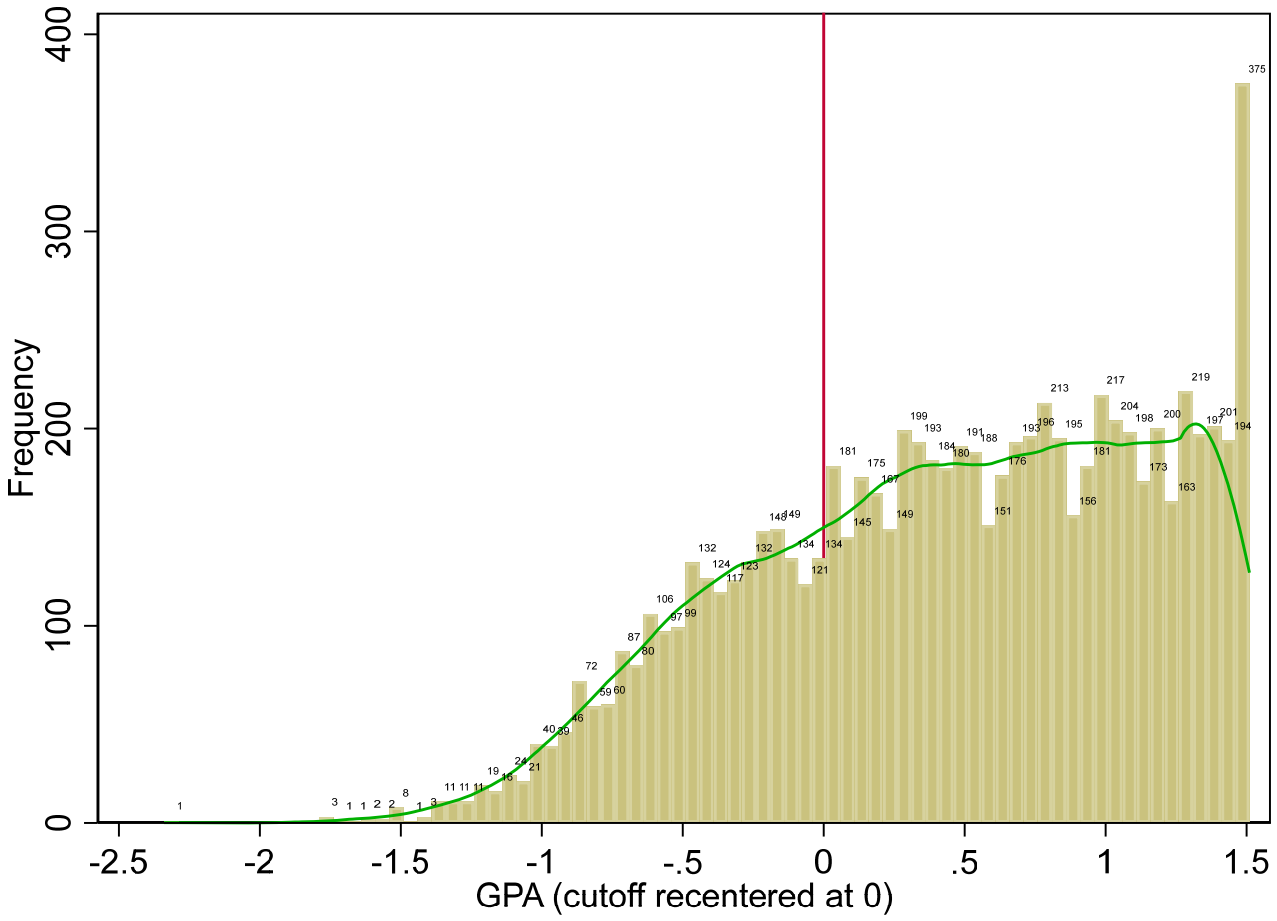
A potential issue is the possibility of manipulation around the cutoff, in that students with a cumulative GPA below 2.5 as of the first semester of their senior year could have raised their GPA above the cutoff. Students might not be randomly sorted if certain students intentionally worked to meet the 2.5 cutoff. It is unlikely that this occurred in the first year of the program because students and teachers did not learn about the GPA requirement until well into students' senior year, and, as noted above, there was some confusion about the cutoff (Hodara et al., 2017).

The study team tested the statistical and graphical integrity of the final GPA values by first producing a histogram to check for concentration of scores around the 2.5 GPA cutoff (which would point to systematic sorting above or below the cutoff; McCrary, 2008). While some concentration of scores occurred around 2.5, there were also concentrations at other scores, typically at .5 intervals (for example, 2.0, 2.5, 3.0, 3.5, and 4.0; figure B2).

The study used the rdrobust and rdbwselect procedures described in Calonico et al. (2017) to select optimal bandwidths around the cutoff. These commands estimated regressions around the 2.5 cutoff and selected an optimal bandwidth that minimized bias. This approach suggested a bandwidth 0.24 above and below the cutoff for the outcome of college enrollment within six months of high school exit, 0.26 above and below the cutoff for the outcome of college enrollment within two years of high school exit, 0.27 above and below the cutoff for the outcome of college persistence in the first year of college, and 0.25 above and below the cutoff for the outcome of still enrolled in or completed college by 2019/20.

The McCrary test assessed the smoothness of the GPA densities around the cutoff. The study team used the smallest (0.24) and largest (0.27) optimal bandwidths as well as one slightly larger bandwidth (0.30 above and below the cutoff). It is important to estimate the results using multiple bandwidths to assess the robustness of the results using different bandwidths; the strongest results from the main specification are robust to additional specifications (Scott-Clayton and Rodriguez, 2015). The McCrary test demonstrated no clear manipulation of GPA, or nonrandom sorting, around the 2.5 cutoff (table B3).

Figure B2. Distribution of grade point average among 2015/16 high school graduates in the Portland metro area



GPA is grade point average.

Note: The green line illustrates the kernel density, which is another way of illustrating the density of GPA with a smooth line (rather than a traditional histogram). The kernel density illustrates a steady increase in the number of graduates at higher values of GPA, with a sharp dropoff at the highest values.

Source: Authors' analysis of data from the Oregon Department of Education, Higher Education Coordinating Commission, and Portland metro area districts.

Table B3. McCrary test to assess the smoothness of the grade point average densities around the cutoff

Regression result	Bandwidth +/– 0.24	Bandwidth +/– 0.27	Bandwidth +/– 0.30
2.5 or higher GPA	0.92	0.80	0.52
Standard error	(0.69)	(0.65)	(0.61)
p-value	0.18	0.22	0.39
Distance above 2.5	–3.09	–1.89	–0.29
Standard error	(3.78)	(3.23)	(2.84)
p-value	0.41	0.56	0.92
Distance below 2.5	–0.57	–0.43	0.79
Standard error	(2.93)	2.61	–2.05
p-value	0.84	0.87	0.70
Constant	3.49	3.50	3.62
Standard error	(0.42)	(0.40)	(0.38)
p-value	0.00	0.00	0.00
N	379	428	480
R^2	0.01	0.01	0.01

GPA is grade point average.

Note: Table shows results from a regression analysis using a collapsed dataset in which the unit of analysis is a GPA value (that is, each row in the dataset is a GPA value ranging from –2.5 to 1.5), the dependent variable is the number of students with that GPA value, and the independent variables are an indicator of having a 2.5 or higher GPA, distance above the cutoff, and distance below the cutoff. The first row indicates the bandwidth around GPA that the sample was restricted to: +/– 0.24 point is 2.26–2.76, +/– 0.27 point is 2.23–2.77, and +/– 0.30 point is 2.20–2.80. The indicator of having a GPA at or above the cutoff is not significant in the three models with different bandwidths, providing evidence of no random sorting around the cutoff.

Source: Authors' analysis of data from the Oregon Department of Education, Higher Education Coordinating Commission, and Portland metro area districts.

Continuity. The study team used the same bandwidths used in the regression models to test whether there were any discontinuities in baseline covariates around the cutoff. Following WWC guidelines, any impacts (that is, discontinuities) at the cutoff larger than 0.25 standard deviation in absolute value indicate that impacts on outcomes at the cutoff are unlikely to be attributable to Oregon Promise, violating the underlying assumption of the design. Table B4 shows the means and standard deviations for the treatment and comparison groups for three different bandwidths. The mean differences were not larger than 0.25 standard deviation. To adjust for differences in characteristics, the regression models controlled for all covariates listed in table B4. Table B5 shows regression results in which the outcome is the covariate. Regression results, as well as regression results for all other covariates not shown, demonstrate that there are no discontinuities associated with income and test scores.

Table B4. Means and standard deviations for 2015/16 public high school graduates in the Portland metro area with grade point averages around the 2.5 cutoff

Covariate or outcome	Treatment			Comparison			Difference in means	Standardized difference in means
	Mean	Standard deviation	Sample size	Mean	Standard deviation	Sample size		
+/– .24 bandwidth								
Covariates								
Female	0.42	0.49	795	0.42	0.49	648	–0.01	0.01
Male	0.58	0.49	795	0.58	0.49	648	0.01	0.01
American Indian/Alaska Native	0.02	0.13	795	0.01	0.10	648	0.01	0.05
Asian	0.06	0.23	795	0.04	0.20	648	0.02	0.07
Black	0.09	0.29	795	0.08	0.26	648	0.02	0.07
Latinx	0.29	0.45	795	0.36	0.48	648	–0.07	0.16
Multiracial	0.05	0.22	795	0.04	0.19	648	0.01	0.06
Pacific Islander	0.01	0.10	795	0.01	0.12	648	0.00	0.04
White	0.48	0.50	795	0.46	0.50	648	0.03	0.05
Ever eligible for the National School Lunch Program	0.69	0.46	795	0.76	0.43	648	–0.07	0.15
Ever received special education services	0.25	0.43	795	0.27	0.45	648	–0.02	0.05
Ever in migrant education program	0.04	0.21	795	0.08	0.27	648	–0.03	0.14
Current English learner student	0.07	0.25	795	0.06	0.24	648	0.01	0.03
Former English learner student	0.20	0.40	795	0.26	0.44	648	–0.07	0.15
Attended a charter school during high school	0.03	0.17	795	0.03	0.17	648	0.00	0.00
Attended more than one high school	0.16	0.37	795	0.17	0.38	648	–0.01	0.04
Average high school attendance rate	0.92	0.07	793	0.91	0.07	648	0.00	0.07
Suspended or expelled during high school	0.14	0.35	795	0.18	0.38	648	–0.03	0.09
Smarter Balanced assessment math score	–0.19	0.89	761	–0.18	0.83	632	–0.01	0.01
Smarter Balanced assessment reading score	–0.22	0.94	762	–0.18	0.95	631	–0.04	0.05
Took dual-credit course	0.37	0.48	795	0.31	0.46	648	0.05	0.11
Took direct-enrollment course	0.08	0.27	795	0.09	0.29	648	–0.01	0.04
Took Advanced Placement course	0.33	0.47	795	0.31	0.46	648	0.02	0.04
Took International Baccalaureate course	0.17	0.37	795	0.11	0.31	648	0.06	0.16
Outcomes								
Enrolled in college within six months	0.55	0.50	795	0.40	0.49	648	0.15	0.30
Enrolled in college within two years	0.64	0.48	795	0.50	0.50	648	0.14	0.28
Persisted during first year in college	0.40	0.49	795	0.27	0.44	648	0.13	0.27
Still enrolled or complete by 2019/20	0.29	0.45	795	0.19	0.39	648	0.10	0.23

Covariate or outcome	Treatment			Comparison			Difference in means	Standardized difference in means
	Mean	Standard deviation	Sample size	Mean	Standard deviation	Sample size		
+/– .27 bandwidth								
Covariates								
Female	0.42	0.49	898	0.42	0.49	734	–0.01	0.01
Male	0.58	0.49	898	0.58	0.49	734	0.01	0.01
American Indian/Alaska Native	0.02	0.12	898	0.01	0.11	734	0.00	0.03
Asian	0.05	0.23	898	0.04	0.19	734	0.01	0.07
Black	0.09	0.28	898	0.07	0.26	734	0.01	0.05
Latinx	0.30	0.46	898	0.37	0.48	734	–0.07	0.14
Multiracial	0.05	0.22	898	0.04	0.20	734	0.01	0.04
Pacific Islander	0.01	0.10	898	0.01	0.12	734	0.00	0.03
White	0.48	0.50	898	0.45	0.50	734	0.03	0.06
Ever eligible for the National School Lunch Program	0.69	0.46	898	0.76	0.43	734	–0.07	0.16
Ever received special education services	0.24	0.43	898	0.28	0.45	734	–0.04	0.08
Ever in migrant education program	0.04	0.20	898	0.08	0.27	734	–0.03	0.14
Current English learner student	0.07	0.26	898	0.06	0.24	734	0.01	0.03
Former English learner student	0.20	0.40	898	0.26	0.44	734	–0.06	0.14
Attended a charter school during high school	0.03	0.18	898	0.03	0.18	734	0.00	0.00
Attended more than one high school	0.16	0.37	898	0.17	0.38	734	–0.01	0.02
Average high school attendance rate	0.92	0.07	896	0.91	0.07	734	0.01	0.08
Suspended or expelled during high school	0.14	0.35	898	0.18	0.38	734	–0.04	0.10
Smarter Balanced assessment math score	–0.18	0.88	859	–0.29	0.84	716	0.10	0.12
Smarter Balanced assessment reading score	–0.19	0.94	859	–0.28	0.95	714	0.09	0.09
Took dual-credit course	0.37	0.48	898	0.31	0.46	734	0.06	0.12
Took direct-enrollment course	0.09	0.28	898	0.09	0.28	734	0.00	0.01
Took Advanced Placement course	0.34	0.48	898	0.31	0.46	734	0.04	0.08
Took International Baccalaureate course	0.17	0.38	898	0.11	0.31	734	0.06	0.19
Outcomes								
Enrolled in college within six months	0.55	0.50	898	0.39	0.49	734	0.16	0.33
Enrolled in college within two years	0.64	0.48	898	0.49	0.50	734	0.15	0.30
Persisted during first year in college	0.40	0.49	898	0.26	0.44	734	0.14	0.31
Still enrolled or complete by 2019/20	0.29	0.45	898	0.18	0.38	734	0.11	0.26

Covariate or outcome	Treatment			Comparison			Difference in means	Standardized difference in means
	Mean	Standard deviation	Sample size	Mean	Standard deviation	Sample size		
+/– .30 bandwidth								
Covariates								
Female	0.42	0.49	1,020	0.42	0.49	808	0.00	0.01
Male	0.58	0.49	1,020	0.58	0.49	808	0.00	0.01
American Indian/Alaska Native	0.02	0.12	1,020	0.01	0.12	808	0.00	0.02
Asian	0.05	0.23	1,020	0.04	0.19	808	0.02	0.07
Black	0.08	0.27	1,020	0.08	0.27	808	0.00	0.00
Latinx	0.29	0.45	1,020	0.36	0.48	808	–0.07	0.15
Multiracial	0.05	0.22	1,020	0.04	0.20	808	0.01	0.04
Pacific Islander	0.01	0.09	1,020	0.01	0.11	808	0.00	0.03
White	0.50	0.50	1,020	0.45	0.50	808	0.05	0.09
Ever eligible for the National School Lunch Program	0.69	0.46	1,020	0.77	0.42	808	–0.08	0.18
Ever received special education services	0.24	0.43	1,020	0.28	0.45	808	–0.04	0.10
Ever in migrant education program	0.04	0.20	1,020	0.07	0.26	808	–0.03	0.14
Current English learner student	0.07	0.25	1,020	0.06	0.24	808	0.01	0.04
Former English learner student	0.19	0.40	1,020	0.26	0.44	808	–0.07	0.16
Attended a charter school during high school	0.03	0.18	1,020	0.03	0.18	808	0.00	0.00
Attended more than one high school	0.16	0.36	1,020	0.18	0.39	808	–0.03	0.07
Average high school attendance rate	0.92	0.06	1,018	0.91	0.07	807	0.01	0.13
Suspended or expelled during high school	0.14	0.35	1,020	0.19	0.39	808	–0.05	0.13
Smarter Balanced assessment math score	–0.18	0.87	975	–0.32	0.84	788	0.13	0.15
Smarter Balanced assessment reading score	–0.18	0.94	976	–0.31	0.96	786	0.13	0.14
Took dual-credit course	0.37	0.48	1,020	0.31	0.46	808	0.06	0.14
Took direct-enrollment course	0.10	0.30	1,020	0.09	0.29	808	0.01	0.03
Took Advanced Placement course	0.35	0.48	1,020	0.29	0.45	808	0.06	0.13
Took International Baccalaureate course	0.17	0.38	1,020	0.11	0.31	808	0.06	0.18
Outcomes								
Enrolled in college within six months	0.56	0.50	1,020	0.38	0.49	808	0.18	0.36
Enrolled in college within two years	0.65	0.48	1,020	0.49	0.50	808	0.16	0.33
Persisted during first year in college	0.42	0.49	1,020	0.25	0.44	808	0.16	0.35
Still enrolled or complete by 2019/20	0.30	0.46	1,020	0.17	0.38	808	0.12	0.29

Note: Students in the treatment group had a 2.5 or higher grade point average (GPA). Students in the comparison group had a GPA below 2.5. The first row on each page indicates the bandwidth around GPA that the sample was restricted to: +/– .24 point is 2.26–2.76, +/– .27 point is 2.23–2.77, and +/– .30 point is 2.20–2.80. The formula for calculating the standardized difference in group means is:

$$|(\overline{X_t} - \overline{X_c})| \Big/ \sqrt{((\sigma_t^2 + \sigma_c^2)/2)}$$

Source: Authors' analysis of data from the Oregon Department of Education, Higher Education Coordinating Commission, and Portland metro area districts.

Table B5. Regression results for select covariates for 2015/16 public high school graduates in the Portland metro area with grade point averages around the 2.5 cutoff

	Bandwidth +/– 0.24			Bandwidth +/– 0.27			Bandwidth +/– 0.30		
Regression result	Ever eligible for the National School Lunch Program	SBA math score	SBA reading score	Ever eligible for the National School Lunch Program	SBA math score	SBA reading score	Ever eligible for the National School Lunch Program	SBA math score	SBA reading score
2.5 or higher GPA	–0.075	0.014	–0.070	–0.066	0.032	–0.071	–0.051	0.014	–0.097
	(0.047)	(0.094)	(0.102)	(0.044)	(0.088)	(0.096)	(0.042)	(0.084)	(0.091)
Distance above 2.5	–0.085	0.859	0.364	–0.087	0.827*	0.845*	–0.107	0.560	0.809*
	(0.241)	(0.472)	(0.499)	(0.199)	(0.382)	(0.411)	(0.165)	(0.312)	(0.340)
Distance below 2.5	0.147	0.628	1.488**	0.040	0.448	1.054*	–0.099	0.873*	1.344***
	(0.246)	(0.457)	(0.536)	(0.203)	(0.394)	(0.453)	(0.171)	(0.349)	(0.394)
Constant	0.774***	–0.307***	–0.192*	0.766***	–0.324***	–0.231**	0.752***	–0.282***	–0.202**
	(0.034)	(0.067)	(0.075)	(0.032)	(0.064)	(0.071)	(0.030)	(0.061)	(0.067)
Observations	1,443	1,393	1,393	1,632	1,575	1,573	1,828	1,763	1,762
R-squared	0.006	0.016	0.013	0.007	0.018	0.016	0.009	0.023	0.024

* Significant at $p < .05$; ** significant at $p < .01$; *** significant at $p < .001$.

GPA is grade point average. SBA is Smarter Balanced assessment.

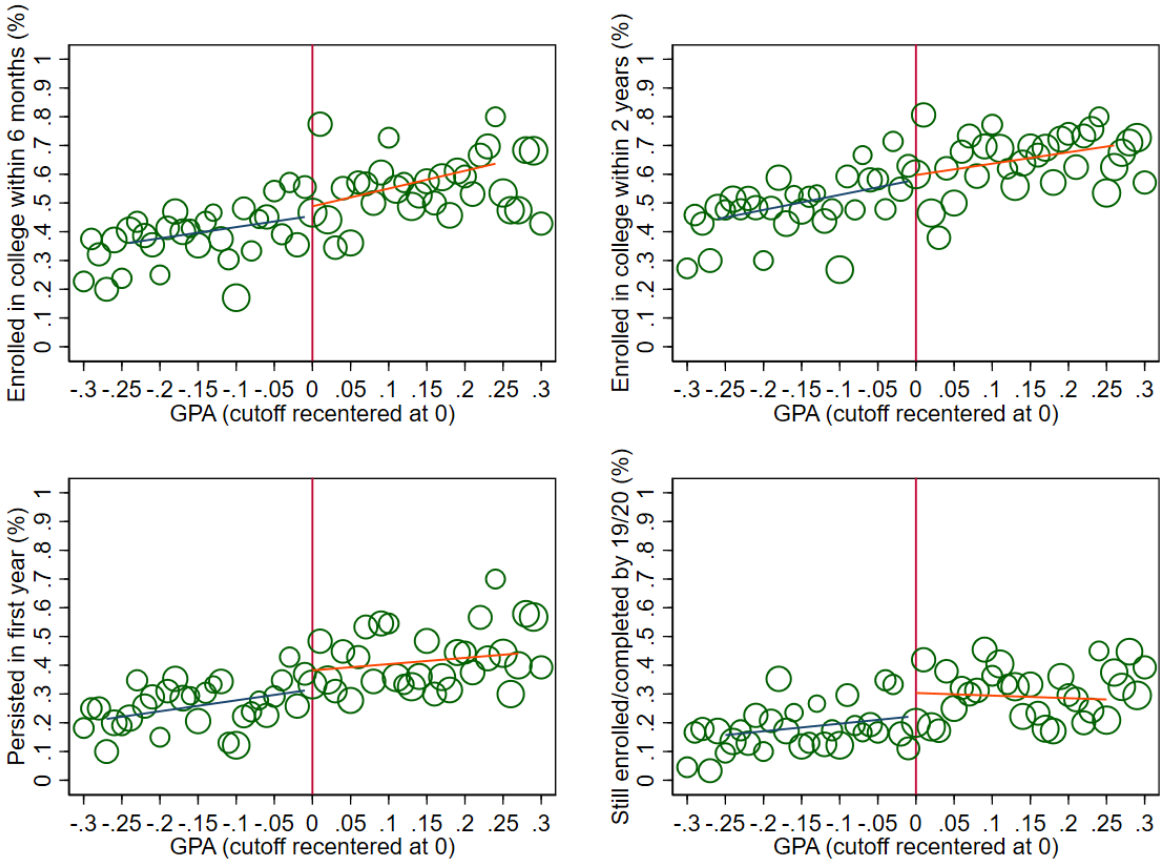
Note: The table shows results from a regression analysis in which the dependent variable is the covariate displayed in the second header row and the independent variables are an indicator of having a 2.5 or higher GPA, distance above the cutoff, and distance below the cutoff. The first header row indicates the bandwidth around GPA that the sample was restricted to: +/– .24 point is 2.26–2.76, +/– .27 point is 2.23–2.77, and +/– .30 point is 2.20–2.80. The indicator of having a GPA at or above the cutoff is not significant for all covariates with different bandwidths, providing evidence of no discontinuities in baseline covariates around the cutoff. Numbers in parentheses are robust standard errors.

Source: Authors' analysis of data from the Oregon Department of Education and the Higher Education Coordinating Commission.

Functional form/bandwidth. The RDD model estimated the treatment effect at the cutoff, but it is more difficult to model the relationship between the outcome and forcing variable for students who score far from the cutoff (Murnane & Willett, 2011). Thus, the models described below were run with three different bandwidths that restricted the sample to students with GPAs around the 2.5 cutoff. The strongest results are robust across different bandwidths.

The study team also examined the relationship between GPA and the outcomes of interest with scatter plots that illustrated a linear relationship within the optimal bandwidth between the intervention and outcomes (figure B3). As a result, the model was run with a linear interaction term.

Figure B3. Relationship between grade point average and outcomes for 2015/16 public high school graduates in the Portland metro area with grade point averages around the 2.5 cutoff



GPA is grade point average.
Source: Authors' analysis of data from the Oregon Department of Education and the Higher Education Coordinating Commission.

Fuzzy RDD. The sample included all high school graduates in 2015/16 who attended public schools in the Portland metro area regardless of whether they applied for Oregon Promise. A sharp RDD would estimate the direct effect of treatment assignment based on meeting or exceeding a cutoff (in this case, earning a 2.5 or higher GPA) on seniors' postsecondary outcomes:

$$Y_i = \gamma_0 + \gamma_1(above_i) + \gamma_2(above_i * cutoffdist_i) + \gamma_3(below_i * cutoffdist_i) + X_i\gamma + \mu_i.$$

In the model, *above* is the dichotomous indicator of having a 2.5 or higher GPA; *below* is the indicator of having a GPA below 2.5; *cutoffdist* is the distance student *i*'s GPA is from the cutoff, or the forcing variable; and the interaction terms account for the linear relationships above and below the cutoff between GPA and the outcome. The vector of student-level covariate *X* controls for the same characteristics and high school outcomes described

in table B4. District fixed effects are included to account for district variation. The outcomes of interest *Y* include immediate college enrollment (within six months of high school graduation), college enrollment within two years of high school graduation, persistence in the first year of college, and still enrolled in 2019/20 or completed by 2019/20. The residual term μ_i is an error term. These intent-to-treat results are included in table C6 in appendix C.

However, this design was not practical for this study because earning a 2.5 GPA did not automatically mean high school graduates were offered an Oregon Promise award. Students had to first apply for Oregon Promise and have a valid FAFSA or ORSAA. Thus, the most appropriate design was a fuzzy RDD, which uses an instrumental variable or two-stage equation approach that can provide estimates for the impact of being offered an Oregon Promise award.

In the fuzzy RDD model for this analysis, the first stage was a linear probability model that predicted being an eligible applicant offered an award as a function of having a 2.5 or higher GPA, and the second stage estimated the local average treatment effect of the predicted probability of being an eligible applicant offered an award for individual *i*:

$$Eligibleapplicant_i = \gamma_0 + \gamma_1(above_i) + \gamma_2(above_i * cutoffdist_i) + \gamma_3(below_i * cutoffdist_i) + X_i\gamma + \mu_i$$

$$Y_i = \beta_0 + \beta_1(\widehat{Eligibleapplicant_i}) + \beta_2(above_i * cutoffdist_i) + \beta_3(below_i * cutoffdist_i) + X_i\beta + \varepsilon_i.$$

In the model, *above* is the dichotomous indicator of having a 2.5 or higher GPA; *below* is the indicator of having a GPA below 2.5; *cutoffdist* is the distance student *i*'s GPA is from the cutoff, or the forcing variable; and the interaction terms account for the linear relationships above and below the cutoff between GPA and the outcome. The vector of student-level covariate *X* controls for the same characteristics and high school outcomes described in table B4. District fixed effects are included to account for district variation. The outcomes of interest *Y* include immediate college enrollment (within six months of high school graduation), college enrollment within two years of high school graduation, persistence in the first year of college, and still enrolled in 2019/20 or completed by 2019/20. The residual terms μ_i and ε_i are error terms.

Table C7 in appendix C displays the first stage results from the fuzzy RDD model, and table C8 displays the findings (results from the second stage of the fuzzy RDD model). The main report discusses only the results from the model with the smallest bandwidth (+/– .24). The results are consistent with the intent to treat results and across bandwidths.

Exploratory approach. A fuzzy regression discontinuity design can be rigorous and used to estimate causal impacts, but the results have limited generalizability. In this study, results are limited to seniors from public high schools in the Portland metro area who graduated in 2015/16 with a GPA close to 2.5. To address this limited generalizability and confirm findings from the main approach, the study team used an exploratory approach with a larger sample.

To answer research questions 2b and 2c, the study team conducted propensity score weighting with covariate adjustment. Propensity score analysis ensures that the treatment and comparison groups are at least comparable on the observed covariates, and covariate adjustment might then be able to reduce any remaining differences on the observed covariates between the two samples and improve the precision of the impact estimation (Rubin & Thomas, 2000).

This approach used two samples of students: public high school graduates from school districts in the Portland metro area only who were seniors in 2015/16 and 2016/17 (question 2b) and public high school graduates from all school districts across Oregon who were seniors in 2015/16 and 2016/17 (question 2c). The analysis was the same for both samples.

The study team matched students who applied and were eligible for an Oregon Promise award with students who did not apply using radius matching that calculated a propensity score (the probability of having an eligible Oregon Promise application) for each student in the sample based on the individual characteristics and high school indicators listed in tables B6–B8. With radius matching each eligible applicant was matched only with nonapplicants whose propensity score fell within the specified caliper of .01. All control students were given the same propensity score weight.

Following WWC standards (What Works Clearinghouse, 2017) and the review protocol for studies of interventions that support postsecondary success (What Works Clearinghouse, 2016), the study team included a measure of socioeconomic status (percentage of students eligible for the National School Lunch Program) and a continuous measure of academic achievement (scaled scores on the Smarter Balanced assessment) in the propensity score calculation to demonstrate baseline equivalence of the analytic sample using these measures. After calculating the propensity scores and assigning weights to each student, the study team examined the propensity score distribution and standardized mean differences to determine whether there was sufficient overlap of the distribution of the propensity scores between the two groups as well as successful balancing of the covariates across groups.

The study team visually inspected the distribution of the treatment and comparison group propensity scores and found that there was nearly perfect overlap between the two groups. Additionally, across all samples and analyses the standardized differences in means were reduced to almost zero between the treatment and matched comparison groups. Tables B6–B8 present means and standard deviations for the unmatched and matched samples. Figures B4–B6 illustrate how the standardized differences in means are reduced to almost zero in the matched samples. Table B6 and figure B4 include the sample of public high school graduates in the Portland metro area only, and the analysis includes GPA. Table B7 and figure B5 include the sample of public high school graduates in the Portland metro area only, and the analysis does not include GPA. Table B8 and figure B6 include the sample of all public high school graduates in Oregon, and the analysis does not include GPA.

Table B6. Means and standard deviations for 2015/16 and 2016/17 public high school graduates in the Portland metro area who were in the treatment group (applicants who were eligible) or control group (nonapplicants), grade point average included in analysis

		Mean		Standard deviation		Standardized difference in group means
Variable	Sample	Treatment	Control	Treatment	Control	
Female	Unmatched	0.55	0.47	0.50	0.50	0.16
	Matched	0.55	0.56	0.50	0.50	0.01
American Indian/Alaska Native	Unmatched	0.01	0.01	0.12	0.12	0.00
	Matched	0.01	0.01	0.12	0.12	0.00
Asian	Unmatched	0.10	0.10	0.30	0.30	0.01
	Matched	0.10	0.10	0.30	0.30	0.01
Black	Unmatched	0.05	0.06	0.23	0.23	0.02
	Matched	0.05	0.06	0.23	0.23	0.01
Latinx	Unmatched	0.28	0.23	0.45	0.42	0.13
	Matched	0.28	0.27	0.45	0.44	0.04
Multiracial	Unmatched	0.05	0.05	0.21	0.23	0.03
	Matched	0.05	0.05	0.21	0.22	0.01
Pacific Islander	Unmatched	0.01	0.01	0.08	0.09	0.01
	Matched	0.01	0.01	0.08	0.09	0.01

Variable	Sample	Mean		Standard deviation		Standardized difference in group means
		Treatment	Control	Treatment	Control	
Ever eligible for the National School Lunch Program	Unmatched	0.68	0.52	0.47	0.50	0.33
	Matched	0.68	0.67	0.47	0.47	0.02
Ever received special education services	Unmatched	0.18	0.20	0.38	0.40	0.06
	Matched	0.18	0.17	0.38	0.38	0.01
Ever in migrant education program	Unmatched	0.04	0.04	0.20	0.19	0.01
	Matched	0.04	0.04	0.20	0.19	0.03
Current English learner student	Unmatched	0.05	0.05	0.22	0.21	0.02
	Matched	0.05	0.05	0.22	0.22	0.01
Former English learner student	Unmatched	0.25	0.18	0.43	0.38	0.17
	Matched	0.25	0.23	0.43	0.42	0.03
Ever suspended or expelled during high school	Unmatched	0.07	0.11	0.26	0.32	0.15
	Matched	0.07	0.07	0.26	0.25	0.01
Average high school attendance rate	Unmatched	0.94	0.93	0.05	0.06	0.17
	Matched	0.94	0.94	0.05	0.05	0.00
Scaled SBA math score	Unmatched	0.15	0.25	0.88	1.17	0.10
	Matched	0.15	0.15	0.88	1.00	0.00
Scaled SBA reading score	Unmatched	0.13	0.13	0.89	1.09	0.01
	Matched	0.13	0.14	0.89	0.96	0.01
Grade point average	Unmatched	3.13	2.97	0.42	0.76	0.27
	Matched	3.13	3.15	0.42	0.42	0.05
Grade point average squared	Unmatched	9.98	9.37	2.70	4.30	0.17
	Matched	9.98	10.10	2.70	2.59	0.05
Took dual-credit course	Unmatched	0.56	0.43	0.50	0.50	0.26
	Matched	0.56	0.56	0.50	0.50	0.00
Took direct-enrollment course	Unmatched	0.25	0.13	0.43	0.34	0.30
	Matched	0.25	0.24	0.43	0.43	0.02
Took Advanced Placement course	Unmatched	0.53	0.44	0.50	0.50	0.19
	Matched	0.53	0.53	0.50	0.50	0.00
Took International Baccalaureate course	Unmatched	0.19	0.24	0.39	0.43	0.14
	Matched	0.19	0.18	0.39	0.39	0.01
Attended more than one school in high school	Unmatched	0.09	0.12	0.28	0.32	0.10
	Matched	0.09	0.09	0.28	0.29	0.01
Attended a charter school during high school	Unmatched	0.03	0.03	0.18	0.16	0.03
	Matched	0.03	0.04	0.18	0.19	0.03

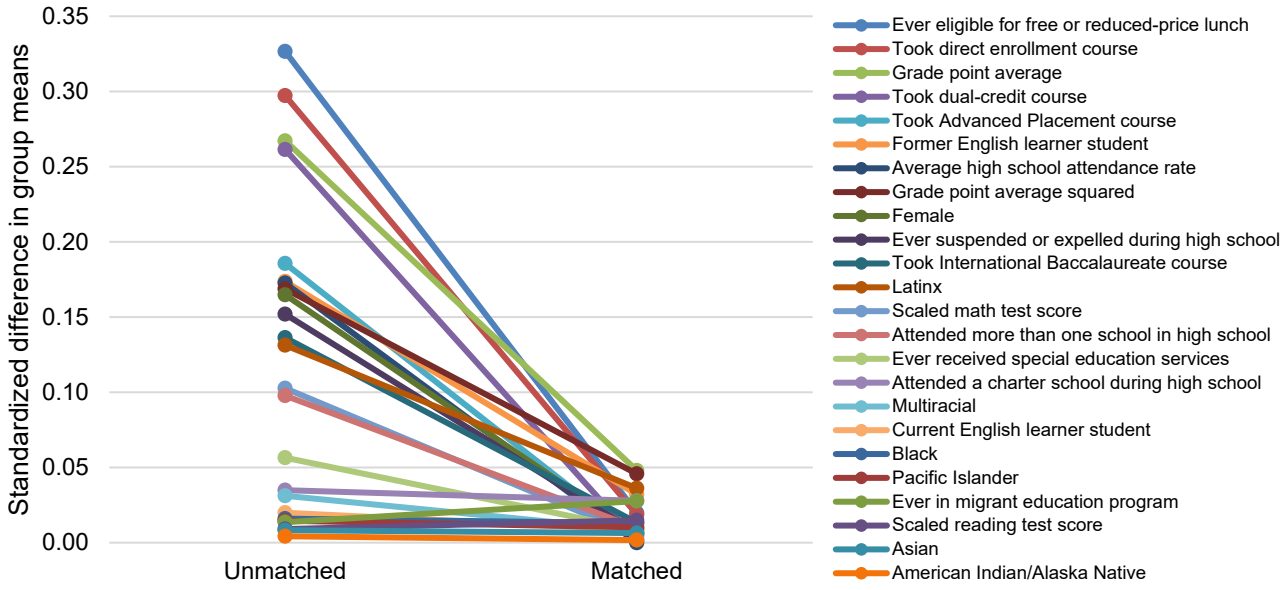
SBA is Smarter Balanced assessment.

Note: The total unmatched sample size is 3,172 students in the treatment group and 10,871 students in the control group (598 students were dropped from the sample because they were missing test scores or attendance data). The total matched sample size is 3,169 students in the treatment group and 10,871 students in the control group and does not include 3 treatment students who were dropped because their propensity score was higher than the maximum or less than the minimum propensity score of the control group. The formula for calculating the standardized difference in group means is:

$$|(\overline{X_t} - \overline{X_c})| \Big/ \sqrt{((\sigma_t^2 + \sigma_c^2)/2)}$$

Source: Authors' analysis of data from the Oregon Department of Education, Higher Education Coordinating Commission, and Portland metro area districts.

Figure B4. Standardized differences in means in unmatched and matched samples for 2015/16 and 2016/17 public high school graduates in the Portland metro area who were in the treatment group (applicants who were eligible) or control group (nonapplicants), grade point average included in analysis



Note: For balance to be achieved, the absolute standardized differences in means should be less than 0.25 (Stuart, 2010). The prematch standardized differences in group means are between 0.01 and 0.33; after the matching procedure the standardized differences in group means are between 0.00 and 0.05. The formula for calculating the standardized difference in group means is:

$$|(\overline{X_t} - \overline{X_c})| \Big/ \sqrt{((\sigma_t^2 + \sigma_c^2)/2)}$$

Source: Authors' analysis of data from the Oregon Department of Education, Higher Education Coordinating Commission, and Portland metro area districts.

Table B7. Means and standard deviations for 2015/16 and 2016/17 public high school graduates in the Portland metro area who were in the treatment group (applicants who were eligible) or control group (nonapplicants), grade point average not included in analysis

		Mean		Standard deviation		Standardized difference in group means
Variable	Sample	Treatment	Control	Treatment	Control	
Female	Unmatched	0.55	0.47	0.50	0.50	0.16
	Matched	0.55	0.56	0.50	0.50	0.00
American Indian/Alaska Native	Unmatched	0.01	0.01	0.12	0.12	0.00
	Matched	0.01	0.01	0.12	0.11	0.00
Asian	Unmatched	0.10	0.10	0.30	0.30	0.01
	Matched	0.10	0.10	0.30	0.30	0.00
Black	Unmatched	0.05	0.06	0.23	0.23	0.02
	Matched	0.05	0.06	0.23	0.23	0.01
Latinx	Unmatched	0.28	0.23	0.45	0.42	0.13
	Matched	0.28	0.28	0.45	0.45	0.01
Multiracial	Unmatched	0.05	0.05	0.21	0.23	0.03
	Matched	0.05	0.05	0.21	0.22	0.00
Pacific Islander	Unmatched	0.01	0.01	0.08	0.09	0.01
	Matched	0.01	0.01	0.08	0.09	0.00
Ever eligible for the National School Lunch Program	Unmatched	0.68	0.52	0.47	0.50	0.33
	Matched	0.68	0.68	0.47	0.47	0.00

Variable	Sample	Mean		Standard deviation		Standardized difference in group means
		Treatment	Control	Treatment	Control	
Ever received special education services	Unmatched	0.18	0.20	0.38	0.40	0.06
	Matched	0.18	0.18	0.38	0.38	0.00
Ever in migrant education program	Unmatched	0.04	0.04	0.20	0.19	0.01
	Matched	0.04	0.04	0.20	0.20	0.01
Current English learner student	Unmatched	0.05	0.05	0.22	0.21	0.02
	Matched	0.05	0.05	0.22	0.22	0.01
Former English learner student	Unmatched	0.25	0.18	0.43	0.38	0.17
	Matched	0.25	0.24	0.43	0.43	0.01
Ever suspended or expelled during high school	Unmatched	0.07	0.11	0.26	0.32	0.15
	Matched	0.07	0.07	0.26	0.26	0.00
Average high school attendance rate	Unmatched	0.94	0.93	0.05	0.06	0.17
	Matched	0.94	0.94	0.05	0.05	0.01
Scaled SBA math score	Unmatched	0.15	0.25	0.88	1.17	0.10
	Matched	0.15	0.14	0.88	1.11	0.01
Scaled SBA reading score	Unmatched	0.13	0.13	0.89	1.09	0.01
	Matched	0.13	0.13	0.89	1.04	0.00
Took dual-credit course	Unmatched	0.56	0.43	0.50	0.50	0.26
	Matched	0.56	0.56	0.50	0.50	0.01
Took direct-enrollment course	Unmatched	0.25	0.13	0.43	0.34	0.30
	Matched	0.25	0.25	0.43	0.43	0.01
Took Advanced Placement course	Unmatched	0.53	0.44	0.50	0.50	0.19
	Matched	0.53	0.52	0.50	0.50	0.02
Took International Baccalaureate course	Unmatched	0.19	0.24	0.39	0.43	0.14
	Matched	0.19	0.19	0.39	0.39	0.01
Attended more than one school in high school	Unmatched	0.09	0.12	0.28	0.32	0.10
	Matched	0.09	0.09	0.28	0.28	0.00
Attended a charter school during high school	Unmatched	0.03	0.03	0.18	0.16	0.03
	Matched	0.03	0.04	0.18	0.19	0.01

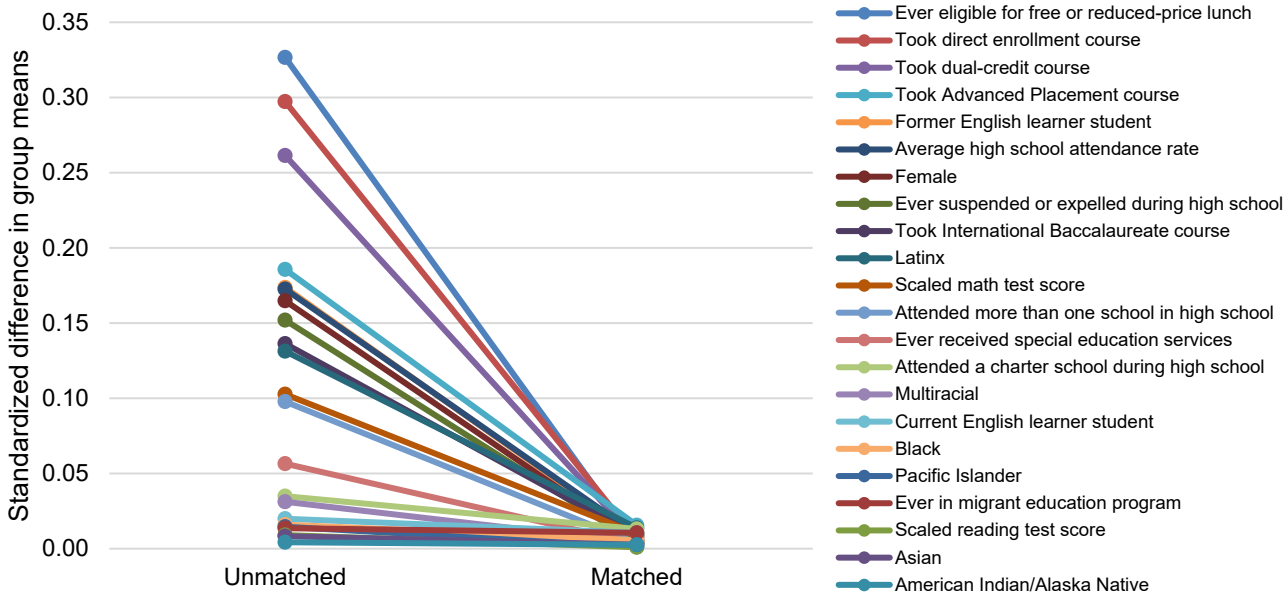
SBA is Smarter Balanced assessment.

Note: The total unmatched sample size is 3,172 students in the treatment group and 10,871 students in the control group (598 students were dropped from the sample because they were missing test scores or attendance data). The total matched sample size is 3,162 students in the treatment and 10,871 students in the control group and does not include 10 treatment students who were dropped because their propensity score was higher than the maximum or less than the minimum propensity score of the control group. The formula for calculating the standardized difference in group means is:

$$|(\overline{X_t} - \overline{X_c})| \Big/ \sqrt{((\sigma_t^2 + \sigma_c^2)/2)}$$

Source: Authors' analysis of data from the Oregon Department of Education, Higher Education Coordinating Commission, and Portland metro area districts.

Figure B5. Standardized differences in means in unmatched and matched samples for 2015/16 and 2016/17 public high school graduates in the Portland metro area who were in the treatment group (applicants who were eligible) or control group (nonapplicants), grade point average not included in analysis



Note: For balance to be achieved, the absolute standardized differences in means should be less than 0.25 (Stuart, 2010). The prematch standardized differences in group means are between 0.01 and 0.33; after the matching procedure the standardized differences in group means are between 0.00 and 0.02. The formula for calculating the standardized difference in group means is:

$$|(\overline{X_t} - \overline{X_c})| \Big/ \sqrt{((\sigma_t^2 + \sigma_c^2)/2)}$$

Source: Authors' analysis of data from the Oregon Department of Education, Higher Education Coordinating Commission, and Portland metro area districts.

Table B8. Means and standard deviations for all 2015/16 and 2016/17 public high school graduates who were in the treatment group (applicants who were eligible) or control group (nonapplicants)

		Mean		Standard deviation		Standardized difference in group means
Variable	Sample	Treatment	Control	Treatment	Control	
Female	Unmatched	0.57	0.47	0.49	0.50	0.21
	Matched	0.57	0.58	0.49	0.49	0.00
American Indian/Alaska Native	Unmatched	0.02	0.03	0.15	0.16	0.01
	Matched	0.02	0.02	0.15	0.15	0.00
Asian	Unmatched	0.04	0.04	0.20	0.21	0.01
	Matched	0.04	0.04	0.20	0.20	0.00
Black	Unmatched	0.02	0.02	0.13	0.15	0.04
	Matched	0.02	0.02	0.13	0.14	0.01
Latinx	Unmatched	0.24	0.22	0.43	0.41	0.06
	Matched	0.24	0.23	0.43	0.42	0.01
Multiracial	Unmatched	0.03	0.04	0.18	0.20	0.03
	Matched	0.03	0.04	0.18	0.18	0.01
Pacific Islander	Unmatched	0.01	0.01	0.07	0.08	0.01
	Matched	0.01	0.01	0.07	0.07	0.00
Ever eligible for the National School Lunch Program	Unmatched	0.70	0.64	0.46	0.48	0.14
	Matched	0.70	0.70	0.46	0.46	0.01
Ever received special education services	Unmatched	0.16	0.22	0.37	0.41	0.14
	Matched	0.16	0.16	0.37	0.37	0.00

Variable	Sample	Mean		Standard deviation		Standardized difference in group means
		Treatment	Control	Treatment	Control	
Ever in migrant education program	Unmatched	0.06	0.05	0.23	0.21	0.05
	Matched	0.06	0.05	0.23	0.23	0.01
Current English learner student	Unmatched	0.02	0.03	0.15	0.18	0.06
	Matched	0.02	0.02	0.15	0.15	0.00
Former English learner student	Unmatched	0.17	0.14	0.38	0.35	0.10
	Matched	0.17	0.17	0.38	0.38	0.00
Ever suspended or expelled during high school	Unmatched	0.10	0.18	0.30	0.39	0.25
	Matched	0.10	0.10	0.30	0.30	0.01
Average high school attendance rate	Unmatched	0.94	0.92	0.05	0.06	0.27
	Matched	0.94	0.94	0.05	0.05	0.00
Scaled SBA math score	Unmatched	0.21	0.11	0.81	1.06	0.11
	Matched	0.21	0.21	0.81	0.82	0.00
Scaled SBA reading score	Unmatched	0.25	0.09	0.79	1.02	0.18
	Matched	0.25	0.25	0.79	0.80	0.00
Scaled SBA math score squared	Unmatched	0.70	1.13	1.04	1.62	0.31
	Matched	0.70	0.72	1.04	1.03	0.02
Scaled SBA reading score squared	Unmatched	0.68	1.04	1.02	1.47	0.29
	Matched	0.68	0.71	1.02	0.99	0.03
Took dual-credit course	Unmatched	0.63	0.44	0.48	0.50	0.40
	Matched	0.63	0.63	0.48	0.48	0.00
Took direct-enrollment course	Unmatched	0.33	0.16	0.47	0.36	0.40
	Matched	0.33	0.34	0.47	0.47	0.02
Took Advanced Placement course	Unmatched	0.43	0.37	0.50	0.48	0.14
	Matched	0.43	0.44	0.50	0.50	0.00
Took International Baccalaureate course	Unmatched	0.10	0.11	0.29	0.31	0.05
	Matched	0.10	0.10	0.29	0.29	0.00
Attended more than one school in high school	Unmatched	0.08	0.16	0.28	0.36	0.23
	Matched	0.08	0.08	0.28	0.28	0.00
Attended a charter school during high school	Unmatched	0.07	0.09	0.25	0.28	0.07
	Matched	0.07	0.07	0.25	0.25	0.00
Senior year high school in suburb	Unmatched	0.24	0.27	0.43	0.44	0.07
	Matched	0.24	0.24	0.43	0.43	0.00
Senior year high school in town	Unmatched	0.29	0.25	0.46	0.43	0.11
	Matched	0.29	0.29	0.46	0.46	0.00
Senior year high school rural	Unmatched	0.14	0.12	0.35	0.32	0.08
	Matched	0.14	0.14	0.35	0.35	0.00
Senior year high school locale unknown	Unmatched	0.01	0.02	0.08	0.14	0.12
	Matched	0.01	0.01	0.08	0.08	0.01

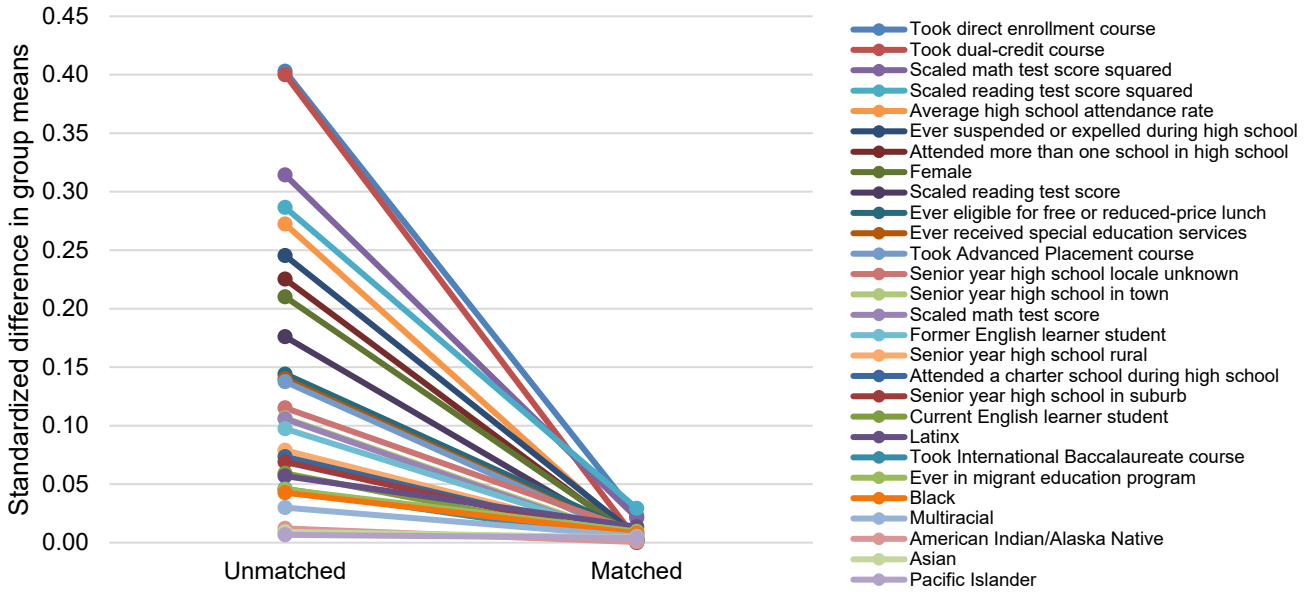
SBA is Smarter Balanced assessment.

Note: The total unmatched sample size is 17,742 students in the treatment group and 50,973 students in the control group (2,795 students were missing test scores or attendance data and were dropped from sample). The total matched sample size is 17,740 students in the treatment group and 50,973 students in the control group and does not include 2 treatment students who were dropped because their propensity score was higher than the maximum or less than the minimum propensity score of the control group. The formula for calculating the standardized difference in group means is:

$$|(\overline{X_t} - \overline{X_c})| \Big/ \sqrt{((\sigma_t^2 + \sigma_c^2)/2)}$$

Source: Authors' analysis of data from the Oregon Department of Education and the Higher Education Coordinating Commission.

Figure B6. Standardized differences in means in unmatched and matched samples for all 2015/16 and 2016/17 public high school graduates who were in the treatment group (applicants who were eligible) or control group (nonapplicants)



Note: For balance to be achieved, the absolute standardized differences in means should be less than 0.25 (Stuart, 2010). The prematch standardized differences in group means are between 0.01 and 0.40; after the matching procedure the standardized differences in group means are between 0.00 and 0.02. The formula for calculating the standardized difference in group means is:

$$|(\overline{X_t} - \overline{X_c})| \Big/ \sqrt{((\sigma_t^2 + \sigma_c^2)/2)}$$

Source: Authors' analysis of data from the Oregon Department of Education and the Higher Education Coordinating Commission.

After determining that the propensity score analysis produced weights that reduced differences in the effect size of each pretreatment covariate, the study team estimated a linear probability model that included propensity score weights (that is, nonapplicants who were similar to eligible applicants were weighted more heavily in the model). The study conducted three regression analyses that used the same model but different samples (Portland metro area sample including GPA in model, Portland metro area excluding GPA in model, and statewide sample). The model is:

$$Y_{is} = a + \beta Eligibleapplicant_{is} + \beta X_{is} + \alpha_s + e_{is}.$$

In this model *Y* is the outcomes of interest, which for student *i* are immediate college enrollment (within six months of high school graduation), college enrollment within two years of high school graduation, persistence in the first year of college, and still enrolled in 2019/20 or completed by 2019/20; *Eligibleapplicant* is a dichotomous indicator that is equal to 1 if the student had an eligible Oregon Promise application and 0 if the student did not; *X* is a vector of student characteristics (all variables listed in tables B6–B8); α is an indicator of senior year high school (high school fixed effects); and e_i is a random error term for student *i* in school *s*.

Full regression results are provided in tables C9–C11 in appendix C.

References

Calonico, S., Cattaneo, M. D. Farrell, M. H., & Titiunik, R. (2017). rdrobust: Software for regression-discontinuity designs. *Stata Journal*, *17*(2), 372−404. Retrieved March 10, 2020, from https://ideas.repec.org/a/tsj/stataj/v17y2017i2p372-404.html.

Higher Education Coordinating Commission. (2018). *Senate Bill 81 (2015): The Oregon Promise—report from year 3*. https://www.oregon.gov/highered/research/Documents/Reports/SB-81-Oregon-Promise-2018.pdf.

Hodara, M., Petrokubi, J., Pierson, A., Vazquez, M., & Yoon, S. (2017). *Fulfilling the promise? Early findings on Oregon's new college grant program.* Education Northwest.

Imbens, G.W., & Lemieux, T. (2008). Regression discontinuity designs: A guide to practice. *Journal of Econometrics, 142*(2), 615–635.

McCrary, J. (2008). Manipulation of the running variable in the regression discontinuity design: A density test. *Journal of Econometrics, 142*(2)*,* 698–714.

Murnane, R. J., & Willett, J. B. (2011). *Methods matter: Improving causal inference in educational and social science research.* Oxford University Press.

Rubin, D. B., & Thomas, N. (2000). Combining propensity score matching with additional adjustments for prognostic covariates. *Journal of the American Statistical Association, 95*(450), 573–585.

Scott-Clayton, J., & Rodriguez, O. (2015). Development, discouragement, or diversion? New evidence on the effects of college remediation. *Education Finance and Policy, 10*(1), 4–45.

Stuart, E. (2010). Matching methods for causal inference: A review and a look forward. *Statistical Science, 25*(1), 1–21.

What Works Clearinghouse. (2016). *Review protocol for studies of interventions to support postsecondary success: Version 3.0*. U.S. Department of Education, Institute of Education Sciences, National Center for Education Evaluation and Regional Assistance. Retrieved October 1, 2018, from https://ies.ed.gov/ncee/wwc/Document/263.

What Works Clearinghouse. (2017). *Standards handbook (Version 4.0)*. U.S. Department of Education, Institute of Education Sciences, National Center for Education Evaluation and Regional Assistance. http://eric.ed.gov/?id=ED577036.

Appendix C. Supporting analysis

Tables C1–C5 address research question 1: Which public high school seniors in 2015/16 and 2016/17 did Oregon Promise reach and serve?

Table C1 addresses research question 1a: How were the demographic characteristics and school locale of applicants similar to or different from the characteristics of all Oregon public high school seniors?

Table C1. Characteristics of 2015/16 and 2016/17 public high school seniors and Oregon Promise applicants

Characteristic	All seniors (*n* = 95,579)	Applicants (*n* = 24,217)
Proportion of senior class	100.0	25.3
Gender		
Female	48.3	55.9
Male	51.7	44.1
Race/ethnicity		
American Indian/Alaska Native	3.0	2.5
Asian	4.0	4.0
Black	2.7	2.1
Latinx	23.6	24.0
Multiracial	3.7	3.5
Pacific Islander	0.6	0.5
White	62.4	63.4
Eligibility for the National School Lunch Program		
Ever eligible	68.4	68.7
Persistently eligible	54.4	53.7
Special education status		
Ever received special education services	23.6	17.6
Ever received special education services in high school	15.8	9.1
Migrant education status		
Ever in migrant education program	4.8	5.3
English learner status		
Former English learner student	13.9	16.6
Current English learner student	4.2	2.8
Senior year high school locale		
City	32.3	31.6
Suburb	24.9	24.7
Town	25.9	28.5
Rural	11.9	14.1

Note: The groups in the header row are not mutually exclusive. Applicants are a subset of seniors.
Source: Authors' analysis of data from the Oregon Department of Education and the Higher Education Coordinating Commission.?

Tables C2 and C3 address research question 1b: How did the number, percentage, and characteristics of applicants, eligible applicants, and recipients vary in the first and second years of the program?

Table C2. Characteristics of 2015/16 and 2016/17 public high school seniors by Oregon Promise application status

	2015/16 seniors				2016/17 seniors			
Characteristic	All seniors (*n* = 51,393)	Applicants (*n* = 12,480)	Eligible applicants (*n* = 10,016)	Recipients (*n* = 6,365)	All seniors (*n* = 49,565)	Applicants (*n* = 11,737)	Eligible applicants (*n* = 8,325)	Recipients (*n* = 5,090)
Proportion of senior class	100.0	24.2	19.5	12.4	100.0	23.7	16.8	10.3
Gender								
Female	48.0	55.6	56.2	55.5	47.7	56.3	58.8	58.1
Male	52.0	44.4	43.8	44.5	52.3	43.7	41.2	41.9
Race/ethnicity								
American Indian/Alaska Native	3.1	2.5	2.2	2.1	3.0	2.5	2.7	2.4
Asian	3.9	3.9	4.2	4.1	4.0	4.1	4.5	4.1
Black	2.7	2.0	1.7	1.5	2.9	2.1	2.1	1.9
Latinx	24.2	24.4	22.5	21.6	24.0	23.6	25.6	25.6
Multiracial	3.5	3.2	3.2	3.2	3.9	3.9	3.8	3.8
Pacific Islander	0.6	0.4	0.4	0.3	0.7	0.6	0.6	0.6
White	62.1	63.6	65.8	67.1	61.5	63.2	60.6	61.7
Eligibility for the National School Lunch Program								
Ever eligible	69.2	68.7	65.7	62.2	69.9	68.7	76.2	73.2
Persistently eligible	54.9	53.2	49.8	46.5	56.3	54.2	61.4	58.6
Special education status								
Ever received special education services	24.7	17.3	15.9	16.4	25.2	17.9	16.8	17.7
Ever received special education services in high school	17.3	9.3	8.0	8.2	17.1	8.8	8.0	8.7
Migrant education status								
Ever in migrant education program	5.1	5.5	5.2	4.9	4.8	5.0	5.8	5.7
English learner status								
Former English learner student	13.5	16.4	15.7	15.0	14.5	16.8	18.9	18.7
Current English learner student	4.7	2.9	2.5	2.5	4.3	2.7	3.0	2.8
Senior year high school locale								
City	31.8	31.2	31.2	30.7	32.5	32.0	32.7	32.9
Suburb	24.7	24.8	24.7	25.6	24.8	24.5	23.1	23.3
Town	26.3	28.9	29.3	29.8	25.4	28.1	29.0	29.1
Rural	11.7	13.8	13.9	13.3	11.7	14.5	14.4	13.9

Note: The groups in the second header row are not mutually exclusive. Applicants are a subset of seniors, eligible applicants are a subset of applicants, and recipients are a subset of eligible applicants.
Source: Authors' analysis of data from the Oregon Department of Education and the Higher Education Coordinating Commission.

Table C3. Characteristics of Oregon Promise recipients by Oregon Promise award amount

Characteristic	2015/16 seniors			2016/17 seniors		
	Full Pell (Minimum Oregon Promise award) (*n* = 1,244)	No Pell (Maximum Oregon Promise award) (*n* = 4,386)	Some Pell (Some Oregon Promise award) (*n* = 735)	Full Pell (Minimum Oregon Promise award) (*n* = 1,194)	No Pell (Maximum Oregon Promise award) (*n* = 3,207)	Some Pell (Some Oregon Promise award) (*n* = 689)
Proportion of all recipients	19.5	68.9	11.5	23.5	63.0	13.5
Gender						
Female	62.0	52.6	61.8	63.1	55.7	60.8
Male	38.0	47.4	38.2	36.9	44.3	39.2
Race/ethnicity						
American Indian/Alaska Native	2.4	1.7	4.2	2.8	1.9	3.9
Asian/Pacific Islander[a]	5.2	4.3	3.5	4.7	5.1	2.4
Black	1.6	1.4	2.0	2.0	1.8	2.0
Latinx	32.0	17.3	29.8	31.2	22.8	29.2
Multiracial	2.6	3.5	2.9	4.0	3.7	3.5
White	56.2	71.8	57.6	55.2	64.6	58.9
Eligibility for the National School Lunch Program						
Ever eligible	90.0	50.3	86.0	91.3	64.1	83.7
Persistently eligible	76.4	33.5	73.9	80.2	48.0	70.2
Special education status						
Ever received special education services	15.5	17.0	14.1	14.1	19.1	17.6
Ever received special education services in high school	7.6	8.5	7.6	6.2	9.7	8.9
Migrant education status						
Ever in migrant education program	10.0	2.8	8.4	7.6	4.5	8.1
English learner status						
Former English learner student	24.8	11.0	21.9	23.9	16.5	20.0
Current English learner student	4.0	2.1	2.3	2.8	3.0	2.3
Senior year high school locale						
City	29.0	31.2	30.7	30.8	34.5	29.3
Suburb	22.0	26.9	23.3	19.5	25.2	20.9
Town	33.1	28.7	30.9	32.7	26.9	32.9
Rural	15.6	12.4	14.4	16.5	12.7	15.2

a. The Asian and Pacific Islander categories were combined because cell sizes were too small to report the categories separately.

Source: Authors' analysis of data from the Oregon Department of Education and the Higher Education Coordinating Commission.

Table C4 addresses research question 1c: How might the number and characteristics of potential applicants in the Portland metro area have changed if the grade point average requirement had been lowered?

Table C4. Characteristics of 2015/16 and 2016/17 public high school seniors in the Portland metropolitan area

Characteristic	All seniors (*n* = 17,769)	High school graduates (*n* = 15,750)	High school graduates with a GPA of 2.0–2.49 (*n* = 2,504)	High school graduates with a 2.5 or higher GPA (*n* = 11,664)	High school graduates with a 2.5 or higher GPA who applied (*n* = 3,735)	Applicants (*n* = 4,439)	Eligible applicants (*n* = 3,296)	Recipients (*n* = 2,104)
Proportion of all seniors	100.0	88.6	14.1	65.6	21.0	25.0	18.5	11.8
Gender								
Female	48.2	49.0	40.1	52.9	54.6	53.5	55.4	54.7
Male	51.8	51.0	59.9	47.1	45.4	46.5	44.6	45.3
Race/ethnicity								
American Indian/Alaska Native	1.6	1.4	2.0	1.2	1.3	1.4	1.4	1.0
Asian	9.2	9.8	3.7	12.1	9.6	8.9	9.8	9.0
Black	6.6	6.1	9.1	4.7	5.3	6.2	5.8	4.8
Latinx	25.4	24.2	37.6	18.0	26.7	28.7	28.2	27.4
Multiracial	5.2	5.3	4.0	5.7	5.0	4.7	4.9	5.0
Pacific Islander	0.9	0.9	1.6	0.7	0.6	0.8	0.8	0.7
White	51.1	52.4	42.0	57.7	51.5	49.5	49.2	52.1
Eligibility for the National School Lunch Program								
Ever eligible	58.9	55.9	77.7	47.1	63.4	66.5	68.3	65.2
Persistently eligible	47.5	44.7	66.4	35.6	50.4	54.1	55.3	52.5
Special education status								
Ever received special education services	22.0	19.7	29.9	15.5	17.9	19.2	17.8	19.0
Ever received special education services in high school	14.7	12.4	22.2	8.1	10.4	11.6	10.2	10.9
Migrant education status								
Ever in migrant education program	4.1	3.9	6.9	2.3	4.0	4.3	4.2	3.9
English learner status								
Former English learner student	18.8	19.0	26.2	15.6	22.4	23.9	24.2	23.8
Current English learner student	5.9	5.3	7.5	3.9	5.5	5.8	5.9	5.6

GPA is grade point average.

Note: The groups in the header row are not mutually exclusive. High school graduates are a subset of seniors, high school graduates with a GPA of 2.0–2.49 and high school graduates with a GPA of 2.5 or higher are subsets of high school graduates, high school graduates with a GPA of 2.5 or higher who applied are a subset of high school graduates with a GPA of 2.5 or higher, applicants are a subset of seniors, eligible applicants are a subset of applicants, and recipients are a subset of eligible applicants.

Source: Authors' analysis of data from the Oregon Department of Education and the Higher Education Coordinating Commission.

Table C5 addresses research question 1d: What percentage of recipients in the first year of the program renewed their award and received it in their second year at community college, and how did their high school outcomes compare with those of recipients who received an award only in their first year?

Table C5. Characteristics of Oregon Promise recipients by number of Oregon Promise award terms, 2015/16 seniors only

Characteristic	Received Oregon Promise award only in first term in college (*n* = 708)	Received Oregon Promise award only in first year for multiple terms (*n* = 2,252)	Received Oregon Promise award during first and second years in college (*n* = 3,405)
Proportion of all first-year recipients	11.1	35.4	53.5
High school performance (academic and nonacademic)			
Average high school attendance rate above 90 percent	78.4	85.1	87.5
Ever suspended or expelled during high school	14.1	10.3	7.9
Met state standards in math	78.7	81.5	82.1
Met state standards in reading	89.8	91.4	91.6
Participation in college credit opportunities			
Took dual-credit course	49.6	60.2	65.1
Took direct-enrollment course	20.3	21.3	15.2
Took Advanced Placement course	30.4	41.7	41.5
Took International Baccalaureate course	7.8	8.4	11.2
Postsecondary outcomes based on National Student Clearinghouse			
Still enrolled or completed within two years at any college (2017/18)	28.8	55.6	93.0

Source: Authors' analysis of data from the Oregon Department of Education and the Higher Education Coordinating Commission.

Tables C6–C11 address research question 2: What were the impacts of the offer of an Oregon Promise award on public high school graduates' college enrollment, first-year persistence, and longer-term persistence or completion?

Tables C6–C8 address research question 2a: What were the impacts among seniors from public high schools in the Portland metro area who graduated in 2015/16 with a GPA close to 2.5?

Table C6. Impact of having a 2.5 or higher grade point average on postsecondary outcomes among 2015/16 high school graduates in the Portland metro area (intent-to-treat results)

	Enrolled in college within six months			Enrolled in college within two years			Persisted during first year in college			Still enrolled or completed by 2019/20		
Regression result	+/– .24	+/– .27	+/– .30	+/– .24	+/– .27	+/– .30	+/– .24	+/– .27	+/– .30	+/– .24	+/– .27	+/– .30
Student has a GPA at or above 2.5	0.063	0.056	0.064	0.010	0.015	0.018	0.100*	0.083	0.084*	0.096*	0.074	0.069
	(0.052)	(0.049)	(0.046)	(0.051)	(0.048)	(0.046)	(0.050)	(0.047)	(0.040)	(0.045)	(0.042)	(0.040)
GPA above * Distance from 2.5 cutoff	0.354	0.223	0.226	0.425	0.218	0.263	0.075	0.071	0.211	–0.215	–0.083	0.045
	(0.259)	(0.213)	(0.175)	(0.249)	(0.204)	(0.169)	(0.256)	(0.212)	(0.175)	(0.231)	(0.194)	(0.162)
GPA below * Distance from 2.5 cutoff	0.109	0.314	0.248	0.348	0.448*	0.399*	–0.018	0.208	0.090	0.077	0.198	0.136
	(0.271)	(0.223)	(0.195)	(0.274)	(0.226)	(0.200)	(0.252)	(0.204)	(0.180)	(0.217)	(0.176)	(0.155)
Female	0.027	0.025	0.025	0.002	0.001	0.003	0.057*	0.048*	0.045*	0.056*	0.045*	0.040
	(0.027)	(0.025)	(0.024)	(0.027)	(0.025)	(0.024)	(0.026)	(0.024)	(0.023)	(0.024)	(0.022)	(0.021)
American Indian/Alaska Native	–0.185*	–0.151	–0.084	–0.167	–0.139	–0.082	–0.118	–0.076	–0.014	–0.122	–0.083	–0.066
	(0.091)	(0.086)	(0.091)	(0.102)	(0.096)	(0.096)	(0.085)	(0.082)	(0.089)	(0.069)	(0.072)	(0.070)
Asian	–0.001	0.014	0.016	0.066	0.076	0.061	–0.030	–0.017	–0.003	–0.012	0.006	0.013
	(0.067)	(0.062)	(0.059)	(0.064)	(0.059)	(0.056)	(0.069)	(0.066)	(0.062)	(0.062)	(0.059)	(0.056)
Black	0.115*	0.134**	0.114*	0.150**	0.165***	0.142**	0.041	0.055	0.040	0.072	0.064	0.054
	(0.050)	(0.048)	(0.045)	(0.049)	(0.047)	(0.044)	(0.047)	(0.045)	(0.042)	(0.046)	(0.043)	(0.041)
Latinx	–0.014	–0.010	–0.005	0.029	0.027	0.028	–0.008	0.002	–0.006	–0.040	–0.031	–0.024
	(0.038)	(0.035)	(0.033)	(0.038)	(0.036)	(0.034)	(0.036)	(0.034)	(0.032)	(0.034)	(0.031)	(0.030)
Multiracial	0.091	0.106	0.131*	0.052	0.091	0.108*	0.042	0.031	0.048	0.019	0.029	0.032
	(0.065)	(0.060)	(0.056)	(0.063)	(0.057)	(0.053)	(0.067)	(0.062)	(0.059)	(0.061)	(0.057)	(0.054)
Pacific Islander	–0.101	–0.093	–0.096	–0.107	–0.109	–0.118	0.018	0.028	0.013	0.016	0.012	0.004
	(0.121)	(0.115)	(0.115)	(0.122)	(0.116)	(0.116)	(0.118)	(0.113)	(0.113)	(0.119)	(0.109)	(0.109)
Ever eligible for the National School Lunch Program	–0.116***	–0.114***	–0.109***	–0.120***	–0.124***	–0.126***	–0.130***	–0.127***	–0.128***	–0.092**	–0.080**	–0.099***
	(0.032)	(0.030)	(0.028)	(0.032)	(0.030)	(0.028)	(0.032)	(0.030)	(0.028)	(0.030)	(0.028)	(0.027)

	Enrolled in college within six months			Enrolled in college within two years			Persisted during first year in college			Still enrolled or completed by 2019/20		
Regression result	+/– .24	+/– .27	+/– .30	+/– .24	+/– .27	+/– .30	+/– .24	+/– .27	+/– .30	+/– .24	+/– .27	+/– .30
Ever received special education services	0.032	0.016	0.028	0.021	0.013	0.020	0.004	–0.010	0.003	0.031	0.010	0.011
	(0.030)	(0.028)	(0.026)	(0.030)	(0.028)	(0.027)	(0.028)	(0.027)	(0.025)	(0.026)	(0.025)	(0.023)
Ever in migrant education program	–0.085	–0.089	–0.099	–0.076	–0.093	–0.081	–0.052	–0.060	–0.059	–0.013	0.004	0.009
	(0.062)	(0.056)	(0.054)	(0.064)	(0.059)	(0.056)	(0.056)	(0.051)	(0.050)	(0.049)	(0.045)	(0.044)
Current English learner student	0.093	0.088	0.094	0.084	0.112*	0.126*	0.129*	0.117*	0.104*	0.082	0.060	0.062
	(0.059)	(0.055)	(0.053)	(0.060)	(0.056)	(0.054)	(0.056)	(0.053)	(0.051)	(0.053)	(0.049)	(0.047)
Former English learner student	0.145***	0.131***	0.146***	0.123**	0.127***	0.137***	0.128**	0.118**	0.144***	0.115**	0.090**	0.099**
	(0.039)	(0.037)	(0.035)	(0.039)	(0.036)	(0.034)	(0.039)	(0.037)	(0.035)	(0.037)	(0.035)	(0.033)
Attended a charter school during high school	–0.047	–0.042	–0.036	–0.007	–0.026	–0.017	–0.046	–0.051	–0.048	0.028	0.014	0.016
	(0.074)	(0.067)	(0.061)	(0.079)	(0.071)	(0.066)	(0.072)	(0.063)	(0.058)	(0.067)	(0.058)	(0.055)
Attended more than one high school	–0.095**	–0.107**	–0.131***	–0.106**	–0.120***	–0.132***	–0.095**	–0.103***	–0.115***	–0.073*	–0.087**	–0.094***
	(0.036)	(0.034)	(0.032)	(0.038)	(0.035)	(0.033)	(0.032)	(0.030)	(0.029)	(0.029)	(0.026)	(0.025)
Average high school attendance rate	0.301	0.345	0.323	0.060	0.126	0.136	0.523**	0.476**	0.456**	–0.029	0.000	0.029
	(0.213)	(0.200)	(0.191)	(0.218)	(0.206)	(0.195)	(0.195)	(0.182)	(0.175)	(0.187)	(0.174)	(0.164)
Ever suspended or expelled during high school	–0.051	–0.038	–0.030	–0.063	–0.047	–0.032	–0.059	–0.044	–0.045	–0.064*	–0.062*	–0.060*
	(0.035)	(0.033)	(0.031)	(0.036)	(0.033)	(0.031)	(0.032)	(0.030)	(0.028)	(0.028)	(0.026)	(0.024)
Scaled SBA math score	0.005	0.011	0.016	0.025	0.032	0.031	0.026	0.023	0.024	0.020	0.021	0.021
	(0.019)	(0.018)	(0.017)	(0.018)	(0.017)	(0.017)	(0.018)	(0.017)	(0.016)	(0.016)	(0.015)	(0.015)
Scaled SBA reading score	0.029	0.025	0.021	0.022	0.022	0.021	0.022	0.019	0.013	0.015	0.020	0.020
	(0.017)	(0.016)	(0.015)	(0.017)	(0.016)	(0.016)	(0.016)	(0.015)	(0.015)	(0.015)	(0.014)	(0.014)
Took dual-credit course	0.151***	0.152***	0.144***	0.103***	0.104***	0.107***	0.118***	0.121***	0.117***	0.053*	0.048*	0.047*
	(0.028)	(0.026)	(0.025)	(0.028)	(0.026)	(0.024)	(0.028)	(0.026)	(0.024)	(0.025)	(0.024)	(0.022)
Took direct-enrollment course	0.042	0.028	0.038	0.037	0.012	0.016	0.023	0.017	0.043	–0.010	–0.017	0.004
	(0.049)	(0.046)	(0.041)	(0.047)	(0.044)	(0.040)	(0.048)	(0.044)	(0.040)	(0.043)	(0.040)	(0.036)
Took Advanced Placement course	0.130***	0.125***	0.130***	0.099***	0.103***	0.103***	0.073*	0.081**	0.078**	0.056*	0.051*	0.040
	(0.030)	(0.028)	(0.026)	(0.029)	(0.027)	(0.026)	(0.030)	(0.027)	(0.026)	(0.027)	(0.025)	(0.024)
Took International Baccalaureate course	0.158***	0.134***	0.127***	0.137***	0.123***	0.116***	0.112**	0.078*	0.077*	0.142***	0.121**	0.110**
	(0.042)	(0.039)	(0.037)	(0.040)	(0.037)	(0.035)	(0.043)	(0.039)	(0.037)	(0.040)	(0.038)	(0.035)

	Enrolled in college within six months			Enrolled in college within two years			Persisted during first year in college			Still enrolled or completed by 2019/20		
Regression result	+/– .24	+/– .27	+/– .30	+/– .24	+/– .27	+/– .30	+/– .24	+/– .27	+/– .30	+/– .24	+/– .27	+/– .30
District ID=2	–0.221***	–0.225***	–0.209***	–0.167**	–0.153**	–0.155**	–0.219***	–0.223***	–0.196***	–0.161***	–0.184***	–0.184***
	(0.052)	(0.048)	(0.046)	(0.053)	(0.050)	(0.048)	(0.047)	(0.044)	(0.043)	(0.042)	(0.039)	(0.037)
District ID=3	–0.033	–0.041	–0.021	–0.065	–0.057	–0.038	0.007	–0.021	0.015	–0.068	–0.096*	–0.080*
	(0.050)	(0.046)	(0.043)	(0.049)	(0.044)	(0.042)	(0.049)	(0.044)	(0.042)	(0.044)	(0.040)	(0.038)
District ID=4	–0.111**	–0.115**	–0.101**	–0.077	–0.084*	–0.074*	–0.069	–0.086*	–0.080*	–0.070*	–0.101**	–0.112***
	(0.040)	(0.037)	(0.035)	(0.040)	(0.037)	(0.035)	(0.039)	(0.035)	(0.034)	(0.035)	(0.033)	(0.031)
District ID=5	–0.291***	–0.296***	–0.227***	–0.361***	–0.367***	–0.272***	–0.141*	–0.165*	–0.089	–0.172**	–0.186***	–0.156**
	(0.072)	(0.069)	(0.066)	(0.075)	(0.072)	(0.071)	(0.069)	(0.067)	(0.065)	(0.054)	(0.052)	(0.051)
District ID=6	–0.059	–0.061	–0.044	–0.067*	–0.066*	–0.046	–0.010	–0.030	–0.004	–0.068*	–0.085**	–0.064*
	(0.034)	(0.032)	(0.030)	(0.034)	(0.032)	(0.030)	(0.034)	(0.032)	(0.030)	(0.032)	(0.030)	(0.029)
Constant	0.162	0.151	0.143	0.556**	0.512*	0.478*	–0.168	–0.090	–0.107	0.280	0.295	0.271
	(0.209)	(0.197)	(0.187)	(0.212)	(0.200)	(0.190)	(0.191)	(0.178)	(0.170)	(0.182)	(0.170)	(0.161)
Observations	1,383	1,563	1,751	1,383	1,563	1,751	1,383	1,563	1,751	1,383	1,563	1,751
R-squared	0.158	0.163	0.162	0.137	0.145	0.143	0.129	0.132	0.133	0.096	0.102	0.104

* Significant at $p < .05$; ** significant at $p < .01$; *** significant at $p < .001$.
GPA is grade point average. SBA is Smarter Balanced assessment.
Note: These are the intent-to-treat results from a regression discontinuity design. Numbers in parentheses are robust standard errors.
Source: Authors' analysis of data from the Oregon Department of Education, Higher Education Coordinating Commission, National Student Clearinghouse, and Portland metro area districts.

Table C7. Relationship between grade point average and offer of an Oregon Promise award (first stage results)

Regression result	+/– .24	+/– .27	+/– .30
Student has a GPA at or above 2.5	0.210***	0.234***	0.239***
	(0.044)	(0.041)	(0.038)
GPA above * Distance from 2.5 cutoff	0.426	0.300	0.306
	(0.251)	(0.207)	(0.173)
GPA below * Distance from 2.5 cutoff	0.657***	0.505***	0.449***
	(0.168)	(0.143)	(0.118)
Female	0.070**	0.058**	0.053**
	(0.022)	(0.021)	(0.020)
American Indian/Alaska Native	–0.026	–0.048	–0.044
	(0.091)	(0.080)	(0.075)
Asian	–0.163**	–0.168***	–0.157***
	(0.053)	(0.049)	(0.048)
Black	0.093*	0.075	0.064
	(0.043)	(0.041)	(0.038)
Latinx	–0.005	0.001	0.015
	(0.031)	(0.030)	(0.028)
Multiracial	–0.020	0.003	–0.007
	(0.051)	(0.051)	(0.048)
Pacific Islander	–0.047	–0.037	–0.033
	(0.098)	(0.094)	(0.095)
Ever eligible for the National School Lunch Program	0.007	0.021	0.015
	(0.027)	(0.025)	(0.024)
Ever received special education services	0.045	0.040	0.044*
	(0.025)	(0.023)	(0.022)
Ever in migrant education program	–0.059	–0.066	–0.048
	(0.044)	(0.040)	(0.039)
Current English learner student	0.102*	0.082	0.084
	(0.050)	(0.046)	(0.044)
Former English learner student	0.098**	0.084**	0.066*
	(0.034)	(0.032)	(0.030)
Attended a charter school during high school	0.003	–0.026	–0.048
	(0.063)	(0.057)	(0.052)
Attended more than one high school	–0.040	–0.058*	–0.050
	(0.029)	(0.027)	(0.025)
Average high school attendance rate	0.325	0.323*	0.313*
	(0.176)	(0.164)	(0.154)
Ever suspended or expelled during school	–0.034	–0.026	–0.011
	(0.027)	(0.026)	(0.024)
Scaled SBA math score	–0.001	0.004	0.006
	(0.015)	(0.014)	(0.014)

Regression result	+/– .24	+/– .27	+/– .30
Scaled SBA reading score	0.024	0.020	0.017
	(0.014)	(0.013)	(0.013)
Took dual-credit course	0.083***	0.069**	0.077***
	(0.024)	(0.022)	(0.021)
Took direct-enrollment course	–0.036	–0.019	–0.018
	(0.039)	(0.037)	(0.034)
Took Advanced Placement course	0.072**	0.082***	0.084***
	(0.025)	(0.024)	(0.022)
Took International Baccalaureate course	–0.006	0.002	0.008
	(0.035)	(0.033)	(0.032)
District ID=2	–0.108*	–0.100*	–0.096*
	(0.045)	(0.041)	(0.039)
District ID=3	0.110**	0.107**	0.086*
	(0.042)	(0.039)	(0.036)
District ID=4	–0.076*	–0.076*	–0.087**
	(0.032)	(0.029)	(0.028)
District ID=5	–0.148**	–0.128*	–0.100
	(0.053)	(0.055)	(0.054)
District ID=6	0.004	0.018	0.017
	(0.029)	(0.027)	(0.026)
Constant	–0.235	–0.250	–0.246
	(0.174)	(0.162)	(0.152)
Observations	1,383	1,563	1,751
F-test	17.80	18.96	22.59
R-squared	0.232	0.230	0.234

* Significant at $p < .05$; ** significant at $p < .01$; *** significant at $p < .001$.
GPA is grade point average. SBA is Smarter Balanced assessment.
Note: This regression model uses a regression discontinuity design. These are the intent-to-treat results. Numbers in parentheses are robust standard errors.
Source: Authors' analysis of data from the Oregon Department of Education, Higher Education Coordinating Commission, National Student Clearinghouse, and Portland metro area districts.

Table C8. Impact of the offer of an Oregon Promise award on postsecondary outcomes among 2015/16 high school graduates in the Portland metro area (treatment on the treated)

	Enrolled in college within six months			Enrolled in college within two years			Persisted during first year in college			Still enrolled or completed by 2019/20		
Regression result	+/– .24	+/– .27	+/– .30	+/– .24	+/– .27	+/– .30	+/– .24	+/– .27	+/– .30	+/– .24	+/– .27	+/– .30
Student offered award	0.303	0.240	0.267	0.047	0.065	0.077	0.476*	0.356	0.352*	0.456*	0.317	0.290
	(0.232)	(0.195)	(0.181)	(0.239)	(0.200)	(0.186)	(0.231)	(0.191)	(0.178)	(0.220)	(0.179)	(0.165)
GPA above* Distance from 2.5 cutoff	0.225	0.151	0.144	0.405	0.199	0.240	–0.128	–0.035	0.103	–0.410	–0.179	–0.044
	(0.300)	(0.235)	(0.197)	(0.312)	(0.237)	(0.201)	(0.308)	(0.237)	(0.200)	(0.304)	(0.228)	(0.193)
GPA below* Distance from 2.5 cutoff	–0.090	0.193	0.128	0.317	0.416	0.365	–0.331	0.028	–0.068	–0.222	0.038	0.006
	(0.379)	(0.290)	(0.252)	(0.390)	(0.298)	(0.259)	(0.368)	(0.274)	(0.237)	(0.334)	(0.243)	(0.209)
Female	0.006	0.011	0.011	–0.001	–0.003	–0.001	0.024	0.027	0.027	0.024	0.027	0.025
	(0.030)	(0.026)	(0.024)	(0.031)	(0.027)	(0.025)	(0.030)	(0.026)	(0.024)	(0.028)	(0.024)	(0.022)
American Indian/Alaska Native	–0.177*	–0.140	–0.073	–0.166	–0.135	–0.079	–0.105	–0.059	0.002	–0.111	–0.068	–0.053
	(0.079)	(0.078)	(0.083)	(0.098)	(0.093)	(0.093)	(0.085)	(0.080)	(0.085)	(0.071)	(0.072)	(0.066)
Asian	0.048	0.054	0.058	0.074	0.086	0.073	0.048	0.043	0.052	0.062	0.059	0.058
	(0.072)	(0.067)	(0.062)	(0.073)	(0.066)	(0.061)	(0.074)	(0.068)	(0.064)	(0.075)	(0.067)	(0.063)
Black	0.087	0.116*	0.097*	0.145**	0.160***	0.137**	–0.004	0.028	0.017	0.029	0.040	0.036
	(0.054)	(0.049)	(0.046)	(0.053)	(0.048)	(0.045)	(0.052)	(0.047)	(0.044)	(0.053)	(0.047)	(0.043)
Latinx	–0.012	–0.010	–0.009	0.029	0.027	0.026	–0.006	0.002	–0.011	–0.038	–0.031	–0.028
	(0.035)	(0.033)	(0.032)	(0.037)	(0.035)	(0.033)	(0.036)	(0.033)	(0.031)	(0.036)	(0.032)	(0.030)
Multiracial	0.097	0.105	0.133*	0.053	0.090	0.109*	0.051	0.030	0.050	0.028	0.028	0.034
	(0.063)	(0.058)	(0.054)	(0.062)	(0.056)	(0.052)	(0.069)	(0.062)	(0.058)	(0.062)	(0.057)	(0.054)
Pacific Islander	–0.086	–0.084	–0.087	–0.105	–0.107	–0.115	0.041	0.041	0.024	0.037	0.024	0.013
	(0.105)	(0.102)	(0.101)	(0.119)	(0.112)	(0.112)	(0.097)	(0.096)	(0.097)	(0.110)	(0.102)	(0.102)
Ever eligible for the National School Lunch Program	–0.118***	–0.119***	–0.113***	–0.120***	–0.125***	–0.127***	–0.133***	–0.135***	–0.133***	–0.095**	–0.086**	–0.104***
	(0.030)	(0.029)	(0.027)	(0.031)	(0.029)	(0.027)	(0.030)	(0.028)	(0.027)	(0.030)	(0.028)	(0.026)
Ever received special education services	0.018	0.007	0.016	0.019	0.010	0.017	–0.018	–0.024	–0.012	0.011	–0.003	–0.002
	(0.029)	(0.027)	(0.026)	(0.031)	(0.028)	(0.027)	(0.030)	(0.027)	(0.026)	(0.028)	(0.025)	(0.024)
Ever in migrant education program	–0.067	–0.073	–0.086	–0.074	–0.089	–0.077	–0.024	–0.036	–0.042	0.014	0.025	0.023
	(0.061)	(0.056)	(0.053)	(0.064)	(0.060)	(0.056)	(0.057)	(0.051)	(0.050)	(0.052)	(0.046)	(0.044)

	Enrolled in college within six months			Enrolled in college within two years			Persisted during first year in college			Still enrolled or completed by 2019/20		
Regression result	+/– .24	+/– .27	+/– .30	+/– .24	+/– .27	+/– .30	+/– .24	+/– .27	+/– .30	+/– .24	+/– .27	+/– .30
Current English learner student	0.062	0.068	0.072	0.080	0.107	0.119*	0.080	0.088	0.075	0.035	0.034	0.038
	(0.059)	(0.054)	(0.052)	(0.063)	(0.057)	(0.055)	(0.060)	(0.054)	(0.052)	(0.058)	(0.051)	(0.048)
Former English learner student	0.115**	0.110**	0.128***	0.118**	0.121**	0.132***	0.082	0.088*	0.121***	0.070	0.063	0.080*
	(0.044)	(0.038)	(0.035)	(0.044)	(0.039)	(0.036)	(0.045)	(0.039)	(0.036)	(0.045)	(0.038)	(0.035)
Attended a charter school during high school	–0.048	–0.036	–0.023	–0.007	–0.025	–0.013	–0.048	–0.041	–0.032	0.027	0.022	0.030
	(0.071)	(0.064)	(0.059)	(0.078)	(0.069)	(0.064)	(0.071)	(0.060)	(0.056)	(0.065)	(0.054)	(0.052)
Attended more than one high school	–0.083*	–0.093**	–0.118***	–0.104**	–0.116**	–0.128***	–0.076*	–0.082**	–0.097***	–0.055	–0.068*	–0.079**
	(0.034)	(0.033)	(0.031)	(0.038)	(0.036)	(0.033)	(0.033)	(0.031)	(0.028)	(0.031)	(0.028)	(0.026)
Average high school attendance rate	0.202	0.268	0.239	0.045	0.105	0.112	0.368	0.361	0.346*	–0.177	–0.102	–0.062
	(0.216)	(0.201)	(0.189)	(0.228)	(0.212)	(0.198)	(0.202)	(0.186)	(0.176)	(0.206)	(0.183)	(0.170)
Ever suspended or expelled during school	–0.040	–0.032	–0.027	–0.061	–0.045	–0.031	–0.043	–0.035	–0.041	–0.049	–0.054*	–0.057*
	(0.034)	(0.031)	(0.029)	(0.036)	(0.033)	(0.031)	(0.032)	(0.029)	(0.027)	(0.030)	(0.026)	(0.024)
Scaled SBA math score	0.005	0.010	0.014	0.025	0.031	0.031	0.027	0.022	0.022	0.020	0.020	0.019
	(0.018)	(0.017)	(0.016)	(0.018)	(0.017)	(0.016)	(0.018)	(0.016)	(0.015)	(0.017)	(0.016)	(0.015)
Scaled SBA reading score	0.022	0.020	0.017	0.021	0.021	0.019	0.011	0.012	0.007	0.004	0.014	0.015
	(0.018)	(0.016)	(0.015)	(0.018)	(0.016)	(0.015)	(0.017)	(0.015)	(0.014)	(0.016)	(0.014)	(0.014)
Took dual-credit course	0.126***	0.135***	0.124***	0.099**	0.099***	0.101***	0.078*	0.096***	0.090**	0.016	0.026	0.025
	(0.032)	(0.028)	(0.027)	(0.033)	(0.028)	(0.027)	(0.033)	(0.028)	(0.027)	(0.031)	(0.026)	(0.025)
Took direct-enrollment course	0.053	0.032	0.043	0.038	0.013	0.018	0.040	0.023	0.050	0.007	–0.011	0.010
	(0.049)	(0.045)	(0.040)	(0.047)	(0.044)	(0.039)	(0.050)	(0.044)	(0.040)	(0.043)	(0.038)	(0.035)
Took Advanced Placement course	0.108***	0.106***	0.107***	0.096**	0.097**	0.097***	0.039	0.052	0.049	0.024	0.025	0.016
	(0.032)	(0.030)	(0.029)	(0.033)	(0.031)	(0.029)	(0.034)	(0.031)	(0.029)	(0.032)	(0.029)	(0.027)
Took International Baccalaureate course	0.160***	0.134***	0.125***	0.137***	0.123***	0.115***	0.114**	0.078*	0.074*	0.145***	0.121**	0.108**
	(0.039)	(0.037)	(0.034)	(0.039)	(0.036)	(0.034)	(0.041)	(0.038)	(0.036)	(0.041)	(0.037)	(0.035)
District ID=2	–0.188***	–0.201***	–0.183***	–0.162**	–0.147**	–0.148**	–0.168**	–0.188***	–0.162***	–0.111*	–0.152***	–0.156***
	(0.055)	(0.050)	(0.047)	(0.059)	(0.053)	(0.050)	(0.052)	(0.046)	(0.044)	(0.050)	(0.043)	(0.040)
District ID=3	–0.067	–0.067	–0.043	–0.070	–0.064	–0.044	–0.045	–0.059	–0.015	–0.119*	–0.130**	–0.104*
	(0.053)	(0.048)	(0.043)	(0.054)	(0.048)	(0.044)	(0.054)	(0.047)	(0.043)	(0.053)	(0.045)	(0.041)

Regression result	Enrolled in college within six months			Enrolled in college within two years			Persisted during first year in college			Still enrolled or completed by 2019/20		
	+/– .24	+/– .27	+/– .30	+/– .24	+/– .27	+/– .30	+/– .24	+/– .27	+/– .30	+/– .24	+/– .27	+/– .30
District ID=4	–0.088*	–0.097*	–0.078*	–0.073	–0.079*	–0.067	–0.033	–0.059	–0.049	–0.035	–0.077*	–0.086**
	(0.041)	(0.038)	(0.037)	(0.044)	(0.039)	(0.038)	(0.041)	(0.037)	(0.035)	(0.039)	(0.035)	(0.033)
District ID=5	–0.246**	–0.265***	–0.200**	–0.355***	–0.358***	–0.264***	–0.070	–0.119	–0.054	–0.105	–0.145**	–0.127*
	(0.078)	(0.073)	(0.066)	(0.083)	(0.077)	(0.072)	(0.074)	(0.069)	(0.064)	(0.063)	(0.056)	(0.054)
District ID=6	–0.060	–0.066*	–0.049	–0.067*	–0.067*	–0.048	–0.012	–0.037	–0.010	–0.070*	–0.090**	–0.069*
	(0.032)	(0.031)	(0.029)	(0.033)	(0.031)	(0.029)	(0.033)	(0.032)	(0.030)	(0.033)	(0.031)	(0.029)
Constant	0.233	0.211	0.208	0.567**	0.528**	0.496**	–0.056	–0.002	–0.021	0.387*	0.374*	0.342*
	(0.198)	(0.187)	(0.176)	(0.209)	(0.196)	(0.184)	(0.184)	(0.171)	(0.162)	(0.189)	(0.170)	(0.159)
Observations	1,383	1,563	1,751	1,383	1,563	1,751	1,383	1,563	1,751	1,383	1,563	1,751
R-squared	0.240	0.233	0.235	0.154	0.168	0.170	0.159	0.178	0.184	0.030	0.093	0.107

* Significant at $p < .05$; ** significant at $p < .01$; *** significant at $p < .001$.
GPA is grade point average. SBA is Smarter Balanced assessment.
Note: This regression model uses a fuzzy regression discontinuity design. These results are the second stage results from an instrumental variable model. Numbers in parentheses are robust standard errors.
Source: Authors' analysis of data from the Oregon Department of Education, Higher Education Coordinating Commission, National Student Clearinghouse, and Portland metro area districts.

Tables C9 and C10 answer research question 2b: What were the impacts among all seniors from public high schools in the Portland metro area who graduated in 2015/16 or 2016/17?

Table C9. Impact of the offer of an Oregon Promise award on postsecondary outcomes among 2015/16 and 2016/17 high school graduates in the Portland metro area who applied and were eligible for Oregon Promise, compared with nonapplicants (includes grade point average in analysis)

Regression result	Enrolled in college within six months		Enrolled in college within two years		Persisted in first year		Still enrolled or completed by 2019/20	
	(1) Unadjusted	(2) Adjusted	(3) Unadjusted	(4) Adjusted	(5) Unadjusted	(6) Adjusted	(7) Unadjusted	(8) Adjusted
Student offered award	0.229***	0.212***	0.188***	0.175***	0.125***	0.110***	0.073***	0.074***
	(0.009)	(0.009)	(0.008)	(0.008)	(0.009)	(0.010)	(0.010)	(0.011)
Female	0.005	0.006	0.009	0.003	0.021**	0.023*	0.022**	0.030**
	(0.007)	(0.010)	(0.007)	(0.009)	(0.008)	(0.010)	(0.008)	(0.011)
American Indian/Alaska Native	0.025	0.038	0.013	0.028	0.034	0.018	0.027	0.031
	(0.029)	(0.037)	(0.029)	(0.033)	(0.031)	(0.040)	(0.031)	(0.049)
Asian	0.008	0.020	–0.006	0.010	–0.023	–0.005	0.030*	0.078***
	(0.012)	(0.017)	(0.011)	(0.014)	(0.014)	(0.019)	(0.014)	(0.021)

Regression result	Enrolled in college within six months		Enrolled in college within two years		Persisted in first year		Still enrolled or completed by 2019/20	
	(1) Unadjusted	(2) Adjusted	(3) Unadjusted	(4) Adjusted	(5) Unadjusted	(6) Adjusted	(7) Unadjusted	(8) Adjusted
Black	0.097***	0.101***	0.089***	0.087***	0.047**	0.046*	0.088***	0.121***
	(0.017)	(0.022)	(0.017)	(0.021)	(0.017)	(0.023)	(0.016)	(0.026)
Latinx	0.017	0.018	0.009	0.002	0.007	0.006	0.003	0.003
	(0.011)	(0.014)	(0.010)	(0.012)	(0.012)	(0.015)	(0.011)	(0.017)
Multiracial	0.038*	0.053**	0.042**	0.047**	0.017	0.044*	0.036*	0.053*
	(0.015)	(0.020)	(0.014)	(0.017)	(0.016)	(0.021)	(0.016)	(0.025)
Pacific Islander	–0.108**	–0.128*	–0.161***	–0.173**	–0.008	–0.019	–0.056	–0.088
	(0.039)	(0.060)	(0.040)	(0.061)	(0.039)	(0.061)	(0.039)	(0.064)
Ever eligible for the National School Lunch Program	–0.069***	–0.052***	–0.078***	–0.055***	–0.053***	–0.041***	–0.087***	–0.088***
	(0.009)	(0.010)	(0.008)	(0.009)	(0.010)	(0.012)	(0.009)	(0.013)
Ever received special education services	–0.022*	–0.009	–0.019*	–0.012	–0.018	–0.020	–0.011	0.001
	(0.009)	(0.012)	(0.009)	(0.011)	(0.010)	(0.014)	(0.009)	(0.015)
Ever in migrant education program	–0.055**	–0.063*	–0.065**	–0.063*	–0.040*	–0.027	–0.041*	–0.049
	(0.019)	(0.030)	(0.020)	(0.029)	(0.020)	(0.030)	(0.018)	(0.032)
Current English learner student	–0.024	–0.027	0.009	–0.005	0.014	0.034	–0.026	–0.034
	(0.018)	(0.025)	(0.019)	(0.024)	(0.019)	(0.026)	(0.018)	(0.030)
Former English learner student	0.030**	0.009	0.050***	0.019	0.051***	0.043**	0.038**	0.026
	(0.011)	(0.015)	(0.011)	(0.013)	(0.012)	(0.016)	(0.012)	(0.017)
Ever suspended or expelled during high school	–0.038**	–0.048*	–0.033*	–0.035	–0.052***	–0.050*	–0.034**	–0.055**
	(0.012)	(0.020)	(0.013)	(0.019)	(0.013)	(0.021)	(0.011)	(0.021)
Average attendance rate during high school	0.355***	0.322**	0.270***	0.157	0.451***	0.415***	0.339***	0.360**
	(0.069)	(0.103)	(0.070)	(0.093)	(0.073)	(0.111)	(0.066)	(0.116)
Scaled SBA math score	0.002	0.011	0.002	0.016*	–0.004	0.004	0.003	0.017*
	(0.005)	(0.007)	(0.005)	(0.006)	(0.006)	(0.008)	(0.005)	(0.008)
Scaled SBA reading score	–0.001	–0.000	0.009	0.006	0.015**	0.016*	0.005	0.013
	(0.005)	(0.007)	(0.005)	(0.006)	(0.005)	(0.007)	(0.005)	(0.008)
GPA	0.249***	0.636***	0.344***	0.677***	0.341***	0.678***	–0.110***	0.169
	(0.040)	(0.111)	(0.041)	(0.102)	(0.041)	(0.119)	(0.033)	(0.128)

Regression result	Enrolled in college within six months		Enrolled in college within two years		Persisted in first year		Still enrolled or completed by 2019/20	
	(1) Unadjusted	(2) Adjusted	(3) Unadjusted	(4) Adjusted	(5) Unadjusted	(6) Adjusted	(7) Unadjusted	(8) Adjusted
GPA squared	–0.006	–0.076***	–0.030***	–0.089***	–0.034***	–0.093***	0.066***	0.018
	(0.007)	(0.018)	(0.007)	(0.016)	(0.007)	(0.019)	(0.006)	(0.021)
Took dual-credit course	0.034***	0.029**	0.018*	0.008	0.104***	0.090***	0.031***	0.023
	(0.008)	(0.011)	(0.008)	(0.010)	(0.009)	(0.012)	(0.009)	(0.013)
Took direct-enrollment course	0.111***	0.105***	0.121***	0.106***	0.080***	0.080***	0.038***	0.043**
	(0.010)	(0.012)	(0.009)	(0.011)	(0.011)	(0.014)	(0.011)	(0.015)
Took Advanced Placement course	0.109***	0.097***	0.108***	0.093***	0.062***	0.060***	0.092***	0.091***
	(0.010)	(0.013)	(0.010)	(0.012)	(0.011)	(0.014)	(0.010)	(0.015)
Took International Baccalaureate course	0.072***	0.065**	0.089***	0.069**	–0.018	–0.028	0.092***	0.079**
	(0.016)	(0.022)	(0.016)	(0.021)	(0.017)	(0.024)	(0.016)	(0.026)
Attended more than one school in high school	–0.048***	–0.067***	–0.041**	–0.056**	–0.063***	–0.097***	–0.030*	–0.062**
	(0.013)	(0.020)	(0.014)	(0.018)	(0.014)	(0.021)	(0.012)	(0.021)
Attended a charter school during high school	–0.023	–0.030	0.002	–0.016	0.012	0.035	–0.005	0.013
	(0.027)	(0.038)	(0.026)	(0.034)	(0.029)	(0.039)	(0.026)	(0.037)
2015/16 senior	0.005	0.018	0.001	0.013	–0.003	0.010	0.010	0.006
	(0.007)	(0.010)	(0.007)	(0.009)	(0.008)	(0.010)	(0.007)	(0.011)
Grade 12 school indicator	Included	Included	Included	Included	Included	Included	Included	Included
Constant	–0.361***	–0.755***	–0.291**	–0.557**	–0.398***	–0.781***	–0.077	–0.492*
	(0.086)	(0.203)	(0.089)	(0.186)	(0.088)	(0.213)	(0.075)	(0.230)
Observations	14,043	14,040	14,043	14,040	14,043	14,040	14,043	14,040
R-squared	0.329	0.181	0.301	0.171	0.226	0.122	0.335	0.183

* Significant at $p < .05$; ** significant at $p < .01$; *** significant at $p < .001$.
GPA is grade point average. SBA is Smarter Balanced assessment.
Note: Both unadjusted and adjusted models are linear probability models and include school fixed effects, which account for students' senior year high school. The adjusted model uses propensity score weighting. Adjusted sample size does not include two treatment students who were dropped because their propensity score was higher than the maximum or less than the minimum propensity score of the control group. Numbers in parentheses are robust standard errors.
Source: Authors' analysis of data from the Oregon Department of Education, Higher Education Coordinating Commission, National Student Clearinghouse, and Portland metro area districts.

Table C10. Impact of the offer of an Oregon Promise award on postsecondary outcomes among 2015/16 and 2016/17 high school graduates in the Portland metro area who applied and were eligible for Oregon Promise, compared with nonapplicants (does not include grade point average in analysis)

	Enrolled in college within six months		Enrolled in college within two years		Persisted in first year		Still enrolled or completed by 2019/20	
Regression result	(1) Unadjusted	(2) Adjusted	(3) Unadjusted	(4) Adjusted	(5) Unadjusted	(6) Adjusted	(7) Unadjusted	(8) Adjusted
Student offered award	0.259***	0.245***	0.219***	0.206***	0.154***	0.145***	0.087***	0.087***
	(0.008)	(0.008)	(0.007)	(0.007)	(0.009)	(0.009)	(0.010)	(0.010)
Female	0.050***	0.045***	0.044***	0.032***	0.050***	0.045***	0.082***	0.085***
	(0.007)	(0.008)	(0.007)	(0.007)	(0.008)	(0.009)	(0.008)	(0.010)
American Indian/Alaska Native	0.014	0.017	0.004	0.015	0.026	0.017	0.016	0.011
	(0.030)	(0.034)	(0.030)	(0.031)	(0.031)	(0.039)	(0.032)	(0.045)
Asian	0.023	0.029	0.004	0.013	–0.015	0.001	0.054***	0.090***
	(0.013)	(0.015)	(0.012)	(0.013)	(0.014)	(0.018)	(0.014)	(0.020)
Black	0.075***	0.066**	0.070***	0.047*	0.031	0.024	0.064***	0.065**
	(0.017)	(0.021)	(0.017)	(0.019)	(0.018)	(0.022)	(0.017)	(0.024)
Latinx	–0.008	0.002	–0.012	–0.005	–0.011	–0.005	–0.024*	–0.018
	(0.011)	(0.013)	(0.011)	(0.011)	(0.012)	(0.014)	(0.012)	(0.016)
Multiracial	0.030	0.036*	0.036*	0.028	0.011	0.035	0.029	0.040
	(0.016)	(0.018)	(0.014)	(0.016)	(0.017)	(0.020)	(0.017)	(0.024)
Pacific Islander	–0.128**	–0.124*	–0.178***	–0.175***	–0.021	–0.020	–0.082*	–0.092
	(0.039)	(0.052)	(0.040)	(0.051)	(0.040)	(0.051)	(0.040)	(0.058)
Ever eligible for the National School Lunch Program	–0.101***	–0.070***	–0.103***	–0.068***	–0.073***	–0.051***	–0.131***	–0.109***
	(0.009)	(0.010)	(0.008)	(0.008)	(0.010)	(0.011)	(0.010)	(0.012)
Ever received special education services	–0.035***	–0.016	–0.030**	–0.020	–0.028**	–0.030*	–0.023*	–0.010
	(0.009)	(0.011)	(0.009)	(0.010)	(0.010)	(0.013)	(0.010)	(0.014)
Ever in migrant education program	–0.075***	–0.071**	–0.083***	–0.079***	–0.057**	–0.047	–0.059**	–0.067*
	(0.020)	(0.025)	(0.021)	(0.024)	(0.020)	(0.026)	(0.018)	(0.027)
Current English learner student	–0.013	–0.012	0.013	0.012	0.016	0.035	–0.000	0.005
	(0.019)	(0.022)	(0.019)	(0.020)	(0.019)	(0.023)	(0.019)	(0.026)
Former English learner student	0.019	0.004	0.040***	0.021	0.042***	0.034*	0.029*	0.015
	(0.011)	(0.013)	(0.011)	(0.012)	(0.012)	(0.014)	(0.012)	(0.016)
Ever suspended or expelled during high school	–0.071***	–0.057***	–0.064***	–0.049**	–0.079***	–0.072***	–0.064***	–0.077***
	(0.013)	(0.017)	(0.013)	(0.016)	(0.013)	(0.019)	(0.011)	(0.019)

Regression result	Enrolled in college within six months		Enrolled in college within two years		Persisted in first year		Still enrolled or completed by 2019/20	
	(1) Unadjusted	(2) Adjusted	(3) Unadjusted	(4) Adjusted	(5) Unadjusted	(6) Adjusted	(7) Unadjusted	(8) Adjusted
Average attendance rate during high school	0.920***	0.883***	0.730***	0.639***	0.838***	0.759***	1.020***	1.081***
	(0.068)	(0.090)	(0.068)	(0.080)	(0.071)	(0.095)	(0.066)	(0.104)
Scaled SBA math score	0.039***	0.038***	0.030***	0.031***	0.018***	0.015*	0.056***	0.062***
	(0.005)	(0.006)	(0.005)	(0.005)	(0.005)	(0.007)	(0.005)	(0.007)
Scaled SBA reading score	0.018***	0.015*	0.024***	0.020***	0.028***	0.027***	0.029***	0.031***
	(0.005)	(0.006)	(0.005)	(0.006)	(0.005)	(0.007)	(0.005)	(0.008)
Took dual-credit course	0.074***	0.066***	0.050***	0.043***	0.131***	0.125***	0.081***	0.072***
	(0.009)	(0.010)	(0.008)	(0.009)	(0.009)	(0.011)	(0.009)	(0.012)
Took direct-enrollment course	0.103***	0.114***	0.117***	0.122***	0.076***	0.074***	0.025*	0.035*
	(0.010)	(0.011)	(0.009)	(0.010)	(0.011)	(0.013)	(0.012)	(0.014)
Took Advanced Placement course	0.156***	0.112***	0.147***	0.101***	0.095***	0.065***	0.148***	0.120***
	(0.010)	(0.012)	(0.010)	(0.011)	(0.011)	(0.013)	(0.010)	(0.014)
Took International Baccalaureate course	0.115***	0.078***	0.127***	0.092***	0.015	–0.011	0.137***	0.096***
	(0.016)	(0.020)	(0.016)	(0.018)	(0.017)	(0.021)	(0.016)	(0.023)
Attended more than one school in high school	–0.060***	–0.057**	–0.052***	–0.045**	–0.073***	–0.084***	–0.039**	–0.049*
	(0.014)	(0.018)	(0.014)	(0.016)	(0.014)	(0.019)	(0.013)	(0.019)
Attended a charter school during high school	–0.011	–0.019	0.012	0.006	0.020	0.042	0.012	0.041
	(0.029)	(0.032)	(0.027)	(0.027)	(0.029)	(0.035)	(0.028)	(0.038)
2015/16 senior	0.000	0.010	–0.002	0.007	–0.005	0.001	0.004	–0.003
	(0.007)	(0.009)	(0.007)	(0.008)	(0.008)	(0.010)	(0.007)	(0.010)
Grade 12 school indicator	Included	Included	Included	Included	Included	Included	Included	Included
Constant	–0.222**	–0.130	0.005	0.152	–0.081	0.036	–0.442***	–0.482***
	(0.070)	(0.093)	(0.070)	(0.083)	(0.073)	(0.098)	(0.068)	(0.106)
Observations	14,043	14,033	14,043	14,033	14,043	14,033	14,043	14,033
R-squared	0.291	0.221	0.272	0.206	0.207	0.150	0.280	0.191

* Significant at $p < .05$; ** significant at $p < .01$; *** significant at $p < .001$.

SBA is Smarter Balanced assessment.

Note: Both unadjusted and adjusted models are linear probability models and include school fixed effects, which account for students' senior year high school. The adjusted model uses propensity score weighting. Adjusted sample size does not include two treatment students who were dropped because their propensity score was higher than the maximum or less than the minimum propensity score of the control group. Numbers in parentheses are robust standard errors.

Source: Authors' analysis of data from the Oregon Department of Education, Higher Education Coordinating Commission, National Student Clearinghouse, and Portland metro area districts.

Table C11 answers research question 2c: What were the impacts among all seniors from all Oregon public high schools who graduated in 2015/16 or 2016/17?

Table C11. Impact of the offer of an Oregon Promise award on postsecondary outcomes among all 2015/16 and 2016/17 high school graduates who applied and were eligible for Oregon Promise, compared to nonapplicants

	Enrolled in college within six months		Enrolled in college within two years		Persisted in first year		Still enrolled or completed by 2019/20	
Regression result	(1) Unadjusted	(2) Adjusted	(3) Unadjusted	(4) Adjusted	(5) Unadjusted	(6) Adjusted	(7) Unadjusted	(8) Adjusted
Student offered award	0.291***	0.273***	0.253***	0.235***	0.144***	0.130***	0.101***	0.099***
	(0.004)	(0.004)	(0.004)	(0.004)	(0.004)	(0.004)	(0.004)	(0.005)
Female	0.056***	0.053***	0.052***	0.049***	0.041***	0.040***	0.073***	0.080***
	(0.003)	(0.004)	(0.003)	(0.004)	(0.003)	(0.004)	(0.003)	(0.005)
American Indian/Alaska Native	0.002	0.005	0.009	–0.001	0.007	0.000	–0.006	–0.019
	(0.010)	(0.014)	(0.011)	(0.013)	(0.011)	(0.014)	(0.010)	(0.015)
Asian	0.036***	0.037***	0.035***	0.033***	0.016	0.016	0.067***	0.092***
	(0.008)	(0.010)	(0.008)	(0.009)	(0.009)	(0.011)	(0.009)	(0.012)
Black	0.103***	0.100***	0.115***	0.096***	0.066***	0.056***	0.079***	0.105***
	(0.011)	(0.014)	(0.011)	(0.012)	(0.012)	(0.015)	(0.011)	(0.017)
Latinx	0.003	0.010	0.004	0.008	–0.006	–0.002	–0.012*	–0.010
	(0.005)	(0.006)	(0.005)	(0.006)	(0.005)	(0.007)	(0.005)	(0.007)
Multiracial	0.030***	0.029**	0.027***	0.019*	0.011	0.010	0.019*	0.025*
	(0.008)	(0.010)	(0.008)	(0.009)	(0.009)	(0.011)	(0.008)	(0.012)
Pacific Islander	–0.056*	–0.058*	–0.072**	–0.063*	–0.019	–0.018	–0.037	–0.031
	(0.022)	(0.028)	(0.022)	(0.027)	(0.022)	(0.029)	(0.021)	(0.030)
Ever eligible for the National School Lunch Program	–0.104***	–0.082***	–0.104***	–0.077***	–0.072***	–0.054***	–0.128***	–0.120***
	(0.004)	(0.005)	(0.004)	(0.004)	(0.004)	(0.005)	(0.004)	(0.006)
Ever received special education services	–0.022***	–0.011*	–0.025***	–0.013**	–0.013**	–0.002	–0.010*	0.000
	(0.004)	(0.005)	(0.004)	(0.005)	(0.004)	(0.006)	(0.004)	(0.006)
Ever in migrant education program	–0.012	–0.013	–0.012	–0.014	–0.014	–0.012	–0.016	–0.019
	(0.009)	(0.011)	(0.009)	(0.010)	(0.009)	(0.012)	(0.008)	(0.012)

Regression result	Enrolled in college within six months		Enrolled in college within two years		Persisted in first year		Still enrolled or completed by 2019/20	
	(1) Unadjusted	(2) Adjusted	(3) Unadjusted	(4) Adjusted	(5) Unadjusted	(6) Adjusted	(7) Unadjusted	(8) Adjusted
Current English learner student	–0.006	–0.003	0.009	0.006	0.023*	0.035*	0.005	0.017
	(0.010)	(0.014)	(0.010)	(0.013)	(0.010)	(0.014)	(0.009)	(0.016)
Former English learner student	0.015*	0.011	0.028***	0.018**	0.035***	0.033***	0.032***	0.039***
	(0.006)	(0.007)	(0.006)	(0.007)	(0.006)	(0.008)	(0.006)	(0.009)
Ever suspended or expelled during high school	–0.056***	–0.050***	–0.061***	–0.052***	–0.054***	–0.064***	–0.054***	–0.073***
	(0.005)	(0.007)	(0.005)	(0.006)	(0.005)	(0.007)	(0.004)	(0.007)
Average attendance rate during high school	0.743***	0.810***	0.612***	0.653***	0.740***	0.887***	0.806***	1.067***
	(0.030)	(0.043)	(0.031)	(0.040)	(0.031)	(0.047)	(0.028)	(0.048)
Scaled SBA math score	0.041***	0.034***	0.037***	0.030***	0.033***	0.030***	0.055***	0.059***
	(0.002)	(0.003)	(0.002)	(0.003)	(0.003)	(0.004)	(0.002)	(0.004)
Scaled SBA reading score	0.033***	0.033***	0.038***	0.034***	0.038***	0.035***	0.037***	0.046***
	(0.003)	(0.003)	(0.002)	(0.003)	(0.003)	(0.004)	(0.003)	(0.004)
Scaled SBA math score squared	–0.000	–0.001	–0.004***	–0.003	–0.007***	–0.007***	0.006***	0.006**
	(0.001)	(0.002)	(0.001)	(0.002)	(0.001)	(0.002)	(0.001)	(0.002)
Scaled SBA read score squared	0.002	0.002	–0.000	0.001	–0.002	–0.003	0.010***	0.013***
	(0.001)	(0.002)	(0.001)	(0.002)	(0.001)	(0.002)	(0.001)	(0.002)
Took dual-credit course	0.091***	0.078***	0.071***	0.059***	0.188***	0.158***	0.097***	0.091***
	(0.004)	(0.005)	(0.004)	(0.004)	(0.004)	(0.005)	(0.004)	(0.005)
Took direct-enrollment course	0.141***	0.149***	0.141***	0.144***	0.087***	0.076***	0.057***	0.063***
	(0.004)	(0.005)	(0.004)	(0.005)	(0.005)	(0.005)	(0.005)	(0.006)
Took Advanced Placement course	0.136***	0.107***	0.128***	0.099***	0.087***	0.068***	0.140***	0.120***
	(0.004)	(0.005)	(0.004)	(0.005)	(0.005)	(0.006)	(0.005)	(0.006)
Took International Baccalaureate course	0.110***	0.078***	0.111***	0.085***	0.045***	0.018	0.120***	0.099***
	(0.009)	(0.011)	(0.009)	(0.010)	(0.009)	(0.012)	(0.009)	(0.013)
Attended more than one school in high school	–0.051***	–0.050***	–0.047***	–0.046***	–0.054***	–0.064***	–0.043***	–0.056***
	(0.005)	(0.008)	(0.006)	(0.007)	(0.006)	(0.008)	(0.005)	(0.008)

Regression result	Enrolled in college within six months		Enrolled in college within two years		Persisted in first year		Still enrolled or completed by 2019/20	
	(1) Unadjusted	(2) Adjusted	(3) Unadjusted	(4) Adjusted	(5) Unadjusted	(6) Adjusted	(7) Unadjusted	(8) Adjusted
Attended a charter school during high school	–0.016	–0.006	–0.011	–0.007	0.000	–0.002	–0.014	0.001
	(0.010)	(0.013)	(0.010)	(0.012)	(0.011)	(0.015)	(0.010)	(0.016)
Senior year high school in suburb	–0.068*	–0.093*	–0.104**	–0.139**	–0.093**	–0.142**	–0.052**	–0.043
	(0.028)	(0.046)	(0.034)	(0.050)	(0.029)	(0.051)	(0.020)	(0.046)
Senior year high school in town	–0.055*	–0.047	–0.106***	–0.108*	–0.103***	–0.142**	–0.054**	–0.053
	(0.025)	(0.049)	(0.029)	(0.048)	(0.026)	(0.046)	(0.019)	(0.040)
Senior year high school rural	–0.162***	–0.322***	–0.225***	–0.409***	–0.180***	–0.270***	–0.095***	–0.176***
	(0.027)	(0.051)	(0.035)	(0.055)	(0.032)	(0.054)	(0.021)	(0.043)
Senior year high school locale unknown	0.006	0.047	0.012	0.075	0.025	0.048	–0.014	0.039
	(0.024)	(0.049)	(0.029)	(0.048)	(0.026)	(0.048)	(0.020)	(0.042)
2015/16 senior	0.013***	0.016***	0.012***	0.010**	–0.002	–0.011*	0.011***	0.002
	(0.003)	(0.004)	(0.003)	(0.004)	(0.003)	(0.004)	(0.003)	(0.005)
Grade 12 school indicator	Included	Included	Included	Included	Included	Included	Included	Included
Constant	–0.239***	–0.282***	0.004	–0.013	–0.264***	–0.317***	–0.470***	–0.709***
	(0.048)	(0.072)	(0.051)	(0.070)	(0.050)	(0.075)	(0.043)	(0.071)
Observations	68,715	68,713	68,715	68,713	68,715	68,713	68,715	68,713
R-squared	0.340	0.241	0.316	0.224	0.260	0.169	0.298	0.199

* Significant at $p < .05$; ** significant at $p < .01$; *** significant at $p < .001$.
SBA is Smarter Balanced assessment.
Note: Both unadjusted and adjusted models are linear probability models and include school fixed effects, which account for students' senior year high school. The adjusted model uses propensity score weighting. Adjusted sample size does not include two treatment students who were dropped because their propensity score was higher than the maximum or less than the minimum propensity score of the control group. Numbers in parentheses are robust standard errors.
Source: Authors' analysis of data from the Oregon Department of Education, Higher Education Coordinating Commission, and National Student Clearinghouse.