

## Appendix: On-line Publication Only

**Table A1 Gender Composition of Programs in CTHSS**

CTE Program	Female	Male	Percent Male
Automated Manufacturing	25	29	53.7%
Automotive Technology	160	775	82.9%
Bioscience Environmental Technology	63	28	30.8%
Biotechnology	27	21	43.8%
Carpentry	236	610	72.1%
Collision, Repair and Refinishing	115	248	68.3%
Criminal Justice and Protective Services	7	5	41.7%
Culinary Arts	672	352	34.4%
Culinary Arts and Guest Services	21	14	40.0%
Diesel and Heavy Duty Equipment Repair	11	40	78.4%
Digital Media	29	48	62.3%
Early Care And Education	26	1	3.7%
Electrical	162	799	83.1%
Electronics Technology	62	226	78.5%
Facilities Management	0	16	100.0%
Graphic Technology	218	131	37.5%
Hairdressing and Cosmetology	820	45	5.2%
Health Technologies	570	75	11.6%
Heating, Ventilation and Air Conditioning	53	391	88.1%
Hotel Hospitality Technology	6	0	0.0%
Information Systems Technology	102	440	81.2%
Marketing, Management and Entrepreneurship	44	27	38.0%
Masonry	67	132	66.3%
Mechanical Design & Engineering Technology	146	359	71.1%
Mechatronics	21	48	69.6%
Plumbing and Heating	99	577	85.4%
Plumbing, Heating, and Cooling	3	38	92.7%
Precision Machining Technology	192	593	75.5%
Pre-Electrical Engineering and Applied Electronics	14	33	70.2%
Sound Production	9	23	71.9%
Sustainable Architecture	95	85	47.2%
Tourism, Hospitality and Guest Services Management	27	3	10.0%
Welding And Metal Fabrication	11	56	83.6%

*Notes:* Data are courtesy of CTECS central office. Breakdown is districtwide and represents enrollment in grades 9 through 12 during the 2018-2019 school year.

**Table A2 Application Score Components**

Year	Total Score	Language Arts	Mathematics	Grades	Attendance	Leadership	Pers. Statement
2006							
Max Score (Weight)	100	20 (0.20)	20 (0.20)	40 (0.40)	20 (0.20)	0 (0.00)	0 (0.00)
2007							
Max Score (Weight)	100	21 (0.21)	21 (0.20)	48 (0.48)	10 (0.10)	0 (0.00)	0 (0.00)
2008							
Max Score (Weight)	100	21 (0.21)	21 (0.20)	48 (0.48)	10 (0.10)	0 (0.00)	0 (0.00)
2009							
Max Score (Weight)	106	21 (0.21)	21 (0.20)	48 (0.48)	10 (0.10)	3 (0.03)	3 (0.03)
2010							
Max Score (Weight)	106	21 (0.20)	21 (0.20)	48 (0.45)	10 (0.09)	3 (0.03)	3 (0.03)
2011							
Max Score (Weight)	120	21 (0.18)	20 (0.18)	48 (0.40)	10 (0.08)	10 (0.08)	10 (0.08)
2012							
Max Score (Weight)	120	21 (0.18)	20 (0.18)	48 (0.40)	10 (0.08)	10 (0.08)	10 (0.08)
2013							
Max Score (Weight)	120	21 (0.18)	20 (0.18)	48 (0.40)	10 (0.08)	10 (0.08)	10 (0.08)

Numbers in parentheses represent the weight attached to each component when calculating the total application score.

**Table A3: Labor Market Match Rate by Quarters Male Students**

Quarters Count	Observed in Labor Market	
	No	Yes
1	53.57	46.43
2	42.05	57.95
3	40.32	59.68
4	40.80	59.20
5	42.42	57.58
6	38.22	61.78
7	37.26	62.74
8	38.89	61.11
9	40.58	59.42
10	37.86	62.14
11	37.26	62.74
12	37.80	62.20
13	40.06	59.94
14	37.38	62.62
15	36.89	63.11
16	37.22	62.78
17	39.50	60.50
18	37.79	62.21
19	37.83	62.17
20	38.25	61.75
21	41.37	58.63
22	39.19	60.81
23	39.23	60.77
24	39.43	60.57
25	41.67	58.33
Total	40.42	59.58

*Notes:* Table presents the fraction of the sample of male applicants observed in the labor market in a given quarter where quarters are enumerated starting in the first quarter of the calendar year five years after starting high school.

**Table A4: Labor Market Match Rate by Quarters Female Students**

Quarters Count	Observed in Labor Market	
	No	Yes
1	52.88	47.12
2	41.54	58.46
3	40.14	59.86
4	39.36	60.64
5	40.69	59.31
6	38.43	61.57
7	37.37	62.63
8	37.98	62.02
9	39.66	60.34
10	38.49	61.51
11	37.48	62.52
12	37.69	62.31
13	39.37	60.63
14	38.38	61.62
15	37.61	62.39
16	37.71	62.29
17	39.23	60.77
18	40.28	59.72
19	40.28	59.72
20	40.10	59.90
21	41.29	58.71
22	40.65	59.35
23	40.65	59.35
24	40.84	59.16
25	42.23	57.77
Total	40.32	59.68

*Notes:* Table presents the fraction of the sample of female applicants observed in the labor market in a given quarter where quarters are enumerated starting in the first quarter of the calendar year five years after starting high school.

**Table A5: Cross-reference between NAICS Codes and CTE focused Industry Categories**

(1)	(2)	(3)	(4)
NAICS Two Digit Code	NAIC Industry Label	CTE Based Industry	ACS Percent Female
11	Agriculture, Forestry, Fishing and Hunting	Delete	18.6
21	Mining, Quarrying, and Oil and Gas Extraction	Delete	6.2
22	Utilities	Operation Support	12.6
23	Construction	Construction	6.0
31-33	Manufacturing	Manufacturing	23.4
42	Wholesale Trade	Wholesale Trade	24.7
44-45	Retail Trade	Retail Trade	47.9
48	Transportation and Warehousing	Transportation	21.6
49	Postal, Couriers and Warehousing/storage	Transportation	25.9
51	Information	Professional	40.8
52	Finance and Insurance	Professional	69.8
53	Real Estate and Rental and Leasing	Professional	43.5
54	Professional, Scientific, and Technical Services	Professional	53.0
55	Management of Companies and Enterprises	Professional	55.6
56	Administrative and Support and Waste and Remediation Services		
561	Administrative and Support Services		
5611	Office Administrative Services	Office Support	NA
5612	Facilities Support Services	Operation Support	NA
5613	Employment Services	Office Support	43.0
5614	Business Support Services	Office Support	65.5
5615	Travel Arrangement and Reservation Services	Office Support	54.4
5616	Investigation and Security Services	Operation Support	25.4
5617	Services to Buildings and Dwellings	Operation Support	19.9
5619	Other Support Services	Office Support	39.6
562	Waste Management and Remediation Services	Operation Support	12.2
61	Educational Services	Education	59.1
62	Health Care and Social Assistance		
621	Medical Offices, Centers and Labs	Health	82.3
622	Hospitals	Health	75.8
623	Other Medical Facilities	Health	79.9
624	Social Assistance		
6241	Individual and Family Services	Public/Social Services	72.3
6242	Community Food and Housing, and Emergency Other Relief Services	Public/Social Services	56.8
6243	Vocational Rehabilitation Services	Public/Social Services	47.9
6244	Child Day Care Services	Education	94.0
71	Arts, Entertainment, and Recreation	Services	45.4
72	Accommodation and Food Services	Services	53.2
81	Other Services (except Public Administration)		
811	Repair and Maintenance	Operation Support	9.1
812	Personal and Laundry Services	Services	76.2
813	Religious, Grantmaking, Civic, Professional,	Public/Social Services	52.0
814	Private Households	Services	91.0
92	Public Administration	Public/Social Services	21.4
99	Not Labelled	Delete	NA

*Notes* : The percent female is based on self-reported or imputed NAICS industry code from a national sample of the ACS from 2013-2018 for workers aged 19-26 who worked at least 27 weeks last year and on average at least 20 hours per week. Percent female is not presented for industries 5611 and 5612 because those industries are not identified in the ACS.

**Table A6: Summary Statistics by Whether in the Labor Market Sample**

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
	Not Observed in the Labor Market				Observed in the Labor Market			
	Below Threshold		Above Threshold		Below Threshold		Above Threshold	
Female	0.484		0.508		0.443		0.438	
	Male BW 15		Female BW 15		Male BW 15		Female BW 15	
	Below Threshold	Above Threshold	Below Threshold	Above Threshold	Below Threshold	Above Threshold	Below Threshold	Above Threshold
Asian	0.02	0.02	0.01	0.01	0.01	0.01	0.01	0.01
Black	0.23	0.18	0.24	0.20	0.22	0.17	0.29	0.25
Hispanic	0.37	0.35	0.42	0.41	0.36	0.30	0.48	0.44
Free Lunch	0.74	0.65	0.82	0.73	0.68	0.57	0.84	0.76
English Learner	0.09	0.07	0.14	0.09	0.08	0.04	0.11	0.07
8 <sup>th</sup> Grade CMT-Reading	225.42	239.35	219.59	235.24	221.78	237.15	218.30	233.06
	(28.86)	(28.97)	(27.16)	(26.61)	(27.72)	(26.56)	(25.07)	(25.33)
8 <sup>th</sup> Grade CMT-Math	227.08	242.84	217.52	234.38	225.25	242.39	214.69	231.98
	(29.19)	(27.88)	(26.05)	(26.93)	(26.86)	(26.65)	(25.08)	(25.42)
8 <sup>th</sup> Grade CMT-Writing	218.17	229.60	225.17	239.10	218.15	230.44	223.96	235.91
	(27.23)	(29.26)	(26.13)	(27.05)	(26.20)	(25.87)	(24.82)	(25.47)
Total Application Score	54.59	67.21	53.04	66.36	51.80	65.10	52.38	65.92
	(10.86)	(10.90)	(11.17)	(11.08)	(10.81)	(10.64)	(11.16)	(11.16)
Observations	1,083	1,891	1,016	1,960	4,825	8,681	3,839	6,783

*Notes:* Table presents summary statistics from the CTECS applicant samples on student demographics, test scores and application score by gender, whether above or below the threshold for admission and whether observed in the labor market sample or not. Columns 1-4 present summary statistics for students not observed in the labor market sample, and columns 5-8 present statistics for students observed in the labor market sample. All means are presented for students within a 15 point bandwidth of the RD cutoff core. Standard deviations for test and applications cores are presented in the row immediately below the sample means.



**Table A8: Pairwise Linear Probability Estimates: No Covariates**

Outcome	(1)	(2)	(3)	(4)	(5)
	Manufacturing	Transportation	Professional	Services	Construction
Offer	0.0988*** (0.0213)	Male Students 0.00836 (0.0102)	0.0517*** (0.0164)	0.0232 (0.0223)	0.0823*** (0.0283)
Observations	73,869	59,648	60,167	83,536	71,427
Share Relative to Trade	0.323	0.161	0.169	0.401	0.300
		Female Students			
Offer	0.00783 (0.0145)	0.00826 (0.0118)	-0.0288** (0.0142)	0.0168 (0.0219)	0.0122* (0.00682)
Observations	0.089	0.084	0.163	0.493	0.017
Share Relative to Retail	0.844	0.067	0.543	0.032	0.666

*Notes* : Table presents pair-wise linear probability estimates for the probability that a student is observed in the industry listed in the corresponding columns relative to being observed in retail. Top panel presents estimates for sample of male students. Bottom panel presents estimates for sample of female students. All estimates are based on a reduced form RD specification using local linear regression and a 1.5-point bandwidth. All specifications include CTECS school-by-year fixed effects and resident 8th grade school district fixed effects. Robust standard errors, clustered at the school-by-year and district levels in parentheses. \*\*\* p<0.01, \*\* p<0.05, \* p<0.1

**Table A8: Pairwise Linear Probability Estimates: No Covariates (Continued)**

	(6)	(7)	(8)	(9)	(10)	(11)
Outcome	Wholesale Trade	Operation Support	Office Support	Public / Social Service	Education	Health
			Male Students			
Offer	0.00784 (0.0137)	0.0313 (0.0217)	0.0397*** (0.0121)	0.0194 (0.0122)	0.0241** (0.0102)	0.0412** (0.0203)
Observations	0.134	0.255	0.179	0.103	0.088	0.154
Share Relative to Trade	0.569	0.216	-0.430	-0.124	0.114	0.281
			Female Students			
Offer	0.0121 (0.00902)	-0.00274 (0.00994)	0.0235** (0.0104)	-0.00602 (0.0156)	-0.0114 (0.0171)	-0.00259 (0.0158)
Observations	0.031	0.076	0.157	0.196	0.163	0.401
Share Relative to Trade	0.432	0.200	-0.287	-0.086	0.218	0.546

**Table A9: Pairwise Linear Probability Estimates: Alternative Bandwidth**

	(1)	(2)	(3)	(4)	(5)
Outcome	Manufacturing	Transportation	Professional	Services	Construction
Offer	0.0810*** (0.0268)	Male Students BW 10 0.0167 (0.0185)	0.0301 (0.0229)	0.00900 (0.0235)	0.0680** (0.0318)
Observations	52,770	43,036	43,545	59,794	50,959
		Male Students BW 12			
Offer	0.0823*** (0.0243)	0.0132 (0.0151)	0.0429** (0.0186)	0.0284 (0.0266)	0.0866*** (0.0311)
Observations	61,574	50,015	50,249	69,622	59,538
		Female Students BW10			
Offer	0.000151 (0.0149)	0.00458 (0.0122)	-0.0325* (0.0192)	0.0169 (0.0244)	0.0148** (0.00572)
Observations	34,947	34,960	38,237	62,509	32,520
		Female Students BW 12			
Offer	-0.00239 (0.0148)	0.000585 (0.0109)	-0.0296* (0.0171)	0.0212 (0.0195)	0.0183*** (0.00637)
Observations	40,817	40,676	44,552	73,233	37,889

*Notes* : Table presents pair-wise linear probability estimates for the probability that a student is observed in the industry listed in the corresponding columns relative to being observed in retail. Top 2 panels presents estimates for sample of male students. Bottom 2 panels presents estimates for sample of female students. All estimates are based on a reduced form RD specification using local linear regression and the bandwidth listed at the top of each panel. All specifications include the full set of individual controls listed in Table 3 . All specifications include CTECS school-by-year fixed effects and resident 8th grade school district fixed effects. Robust standard errors, clustered at the school-by-year and district levels in parentheses. \*\*\* p<0.01, \*\* p<0.05, \* p<0.1

**Table A9: Pairwise Linear Probability Estimates: Alternative Bandwidth (Continued)**

	(6)	(7)	(8)	(9)	(10)	(11)
Outcomes	Wholesale Trade	Operation Support	Office Support	Public / Social Service	Education	Health
			Male Students BW 10			
Offer	-0.00771 (0.0200)	0.0271 (0.0281)	0.0199 (0.0155)	0.0273* (0.0138)	0.0224 (0.0137)	0.0499* (0.0289)
Observations	41,800	48,757	43,891	40,292	39,774	42,771
			Male Students BW 12			
Offer	0.0104 (0.0158)	0.0372 (0.0249)	0.0358** (0.0142)	0.0386** (0.0148)	0.0202 (0.0125)	0.0452* (0.0249)
Observations	48,535	56,357	50,916	46,684	45,955	49,700
			Female Students BW10			
Offer	0.00375 (0.0108)	-0.0110 (0.0152)	0.0299** (0.0124)	-0.0364* (0.0214)	0.0252 (0.0260)	-0.0122 (0.0227)
Observations	33,002	34,693	37,841	39,932	38,347	54,220
			Female Students BW 12			
Offer	0.00554 (0.0107)	-0.00526 (0.0127)	0.0129 (0.00957)	-0.0165 (0.0160)	-0.0111 (0.0190)	-0.0205 (0.0168)
Observations	38,491	40,433	44,131	46,373	44,566	62,619

**Table A10: Pairwise Linear Probability Estimates: Alternative Industry Definitions**

Outcome	(1)	(2)	(3)	(4)	(5)
	Manufacturing	Transportation	Information	Finance/Insurance	Real Estate
Offer	0.0968*** (0.0207)	Male Students 0.00964 (0.0106)	0.00244 (0.0106)	0.0126* (0.00662)	0.0224** (0.0106)
Observations	73,869	59,648	52,329	51,909	52,724
Share Relative to Trade	0.323	0.161	0.044	0.036	0.051
		Female Students			
Offer	0.00367 (0.0143)	0.0085 (0.0115)	0.00204 (0.0114)	-0.0182 (0.0120)	0.00481 (0.00679)
Observations	48,565	48,289	45,492	47,203	45,431
Share Relative to Retail	0.089	0.084	0.027	0.063	0.026

Notes: Table presents pair-wise linear probability estimates for the probability that a student is observed in the industry listed in the corresponding columns relative to being observed in retail. Top panel presents estimates for sample of male students. Bottom panel presents estimates for sample of female students. All estimates are based on a reduced form RD specification using local linear regression and a 15-point bandwidth. All specifications include CTECS school-by-year fixed effects and resident 8th grade school district fixed effects. Robust standard errors, clustered at the school-by-year and district levels in parentheses. \*\*\* p<0.01, \*\* p<0.05, \* p<0.1

**Table A10: Pairwise Linear Probability Estimates: Alternative Industry Definitions (Continued)**

	(6)	(7)	(8)	(9)	(10)	(11)
Outcome	Scientific/Technical	Management	Arts/Entertainment	Accommodation/ Food	Construction	Wholesale Trade
			Male Students			
Offer	0.0236** (0.0101)	0.00476** (0.00239)	0.0249* (0.0131)	0.0148 (0.0244)	0.0828*** (0.0273)	0.00722 (0.0135)
Observations	52,998	50,267	54,983	76,234	71,427	57,785
Share Relative to Trade	0.056	0.005	0.090	0.344	0.300	0.134
			Female Students			
Offer	-0.0269*** (0.00882)	-0.00205 (0.00375)	0.00166 (0.0114)	0.0115 (0.0224)	0.0122* (0.00672)	0.0114 (0.00877)
Observations	47,145	44,573	47,543	76,160	45,005	45,658
Share Relative to Trade	0.062	0.007	0.069	0.419	0.017	0.031

**Table A10: Pairwise Linear Probability Estimates: Alternative Industry Definitions (Continued)**

	(12)	(13)	(14)	(15)	(16)	(17)
Outcome	Utilities	Admin/Support/ Waste/Remediation	Public Admin	Other Services	Education	Health
			Male Students			
Offer	0.00950* (0.00533)	0.0604*** (0.0187)	0.0270** (0.0110)	-0.0133 (0.0180)	0.0167 (0.0101)	0.0387* (0.0205)
Observations	50,373	72,131	52,545	58,653	54,436	61,983
Share Relative to T1	0.007	0.307	0.048	0.147	0.081	0.193
			Female Students			
Offer	0.000467 (0.000783)	0.0155 (0.0109)	-0.0101 (0.00913)	0.0305* (0.0167)	-0.0138 (0.0129)	0.000841 (0.0167)
Observations	44,252	55,533	44,978	53,734	48,305	87,279
Share Relative to T1	0.000	0.203	0.016	0.177	0.084	0.493

**Table A11: Industry Choice Effects on Males by Admissions Threshold Tertiles**

Outcome	(2)		(3)		(4)		(5)	
	Manufacturing	Transportation	Professional	Services	Construction			
	Male Students							
Offer	0.107*** (0.0292)	0.0229 (0.0174)	0.0683*** (0.0242)	0.0477* (0.0273)	0.122*** (0.0357)			
Offer*Top Tertile	-0.0124 (0.0313)	-0.00786 (0.0204)	-0.0216 (0.0279)	-0.0226 (0.0234)	-0.0433 (0.0337)			
Offer*Bottom Tertile	-0.0199 (0.0404)	-0.0277 (0.0247)	-0.0250 (0.0290)	-0.0276 (0.0294)	-0.0445 (0.0457)			
Observations	73,867	59,646	60,166	83,533	71,427			
Share Relative to Trade	0.323	0.161	0.169	0.401	0.300			
	Female Students							
Offer	0.0239 (0.0194)	0.0378** (0.0168)	0.000569 (0.0273)	0.00885 (0.0231)	0.00674 (0.00538)			
Offer*Top Tertile	-0.0256 (0.0214)	-0.0226 (0.0208)	-0.0341 (0.0265)	0.0208 (0.0266)	0.00660 (0.00591)			
Offer*Bottom Tertile	-0.0261 (0.0267)	-0.0564*** (0.0190)	-0.0343 (0.0295)	-0.0199 (0.0239)	0.00330 (0.00673)			
Observations	48,557	48,284	52,874	87,166	45,000			
Share Relative to Retail	0.089	0.084	0.163	0.493	0.017			

Notes: Table presents pair-wise linear probability estimates for the probability that a student is observed in the industry listed in the corresponding columns relative to being observed in retail. The first and second pages present estimates for different industries, and the first and second panel on each page presents results separately by gender. The second and third row in each panel interact offer with whether the admissions threshold for the student's cohort and application school places them in the top or bottom tertile. All estimates are based on a reduced form RD specification using local linear regression and a 1.5-point bandwidth. All specifications include the full set of controls listed in Table 3. All specifications include CTHSS school-by-year fixed effects and resident 8th grade school district fixed effects. Robust standard errors, clustered at the school-by-year and district levels in parentheses. \*\*\* p<0.01, \*\* p<0.05, \* p<0.1

**Table A11: Industry Choice Effects on Males by Admissions Threshold Terciles (Continued)**

Outcome	(6) Wholesale Trade	(7) Operation Support	(8) Office Support	(9) Public /Social Service	(10) Education	(11) Health
			Male Students			
Offer	0.00909 (0.0179)	0.0260 (0.0319)	0.0423** (0.0205)	0.0169 (0.0207)	0.0211 (0.0129)	0.0394 (0.0239)
Offer*Top Tercile	-0.00594 (0.0194)	0.0162 (0.0293)	0.00681 (0.0207)	0.0173 (0.0273)	0.00532 (0.0167)	0.00635 (0.0236)
Offer*Bottom Tercile	0.00449 (0.0257)	-0.00445 (0.0329)	-0.0202 (0.0261)	-0.0514** (0.0256)	-0.0111 (0.0216)	0.0130 (0.0287)
Observations	57,784	67,129	60,897	55,739	54,854	59,148
Share Relative to Trade	0.134	0.255	0.179	0.103	0.088	0.154
			Female Students			
Offer	0.0172 (0.0105)	0.0291 (0.0222)	0.0480** (0.0163)	0.00545 (0.0237)	0.00514 (0.0231)	0.00339 (0.0266)
Offer*Top Tercile	-0.00183 (0.0104)	-0.0460** (0.0222)	-0.0378** (0.0183)	-0.0146 (0.0276)	-0.0219 (0.0216)	-0.000468 (0.0290)
Offer*Bottom Tercile	-0.0197 (0.0129)	-0.0295* (0.0177)	-0.0164 (0.0221)	-0.00576 (0.0250)	0.00307 (0.0255)	-0.0261 (0.0327)
Observations	45,652	47,874	52,491	55,013	52,870	73,848
Share Relative to Trade	0.031	0.076	0.157	0.196	0.163	0.401

**Table A12: Pairwise Linear Probability Estimates: Heterogeneity Analysis Male Students**

	(1) Free Lunch	(2) Not Free Lunch	(3) Black or Hispanic	(4) Not Black or Hispanic	(5) Central City	(6) Not Central City
Manufacturing	0.0743*** (0.0212)	0.0819*** (0.0257)	0.0782*** (0.0237)	0.0760*** (0.0259)	0.0326 (0.0213)	0.116*** (0.0271)
Transportation	0.00958 (0.0117)	0.00376 (0.0149)	0.0248** (0.0111)	-0.00292 (0.0154)	-0.00744 (0.00952)	0.0254 (0.0192)
Professional	0.0461*** (0.0142)	0.0389* (0.0230)	0.0599*** (0.0128)	0.0364 (0.0226)	0.0391** (0.0153)	0.0616*** (0.0235)
Services	0.0119 (0.0111)	0.0166 (0.0169)	0.0300** (0.0131)	-0.00239 (0.0165)	0.00969 (0.0142)	0.0174 (0.0159)
Construction	0.0273 (0.0222)	0.124*** (0.0322)	0.0218 (0.0204)	0.124*** (0.0289)	-0.00991 (0.0176)	0.127*** (0.0332)
Wholesale Trade	-0.00650 (0.0113)	0.0265 (0.0265)	0.00598 (0.0169)	0.00701 (0.0248)	0.00515 (0.0157)	0.0148 (0.0236)
Operation Support	0.0129 (0.0177)	0.0442 (0.0296)	0.0379* (0.0207)	0.0106 (0.0264)	0.000987 (0.0249)	0.0498* (0.0257)
Office Support	0.0351*** (0.0124)	0.0213 (0.0139)	0.0353** (0.0146)	0.0246 (0.0158)	0.0161 (0.0167)	0.0445** (0.0171)
Public / Social Service	-0.00342 (0.0120)	0.0330 (0.0204)	0.0106 (0.00776)	0.0130 (0.0170)	-0.00274 (0.0130)	0.0204 (0.0149)
Education	0.0115 (0.0126)	0.0541*** (0.0148)	0.0294* (0.0177)	0.0255* (0.0134)	0.0135 (0.0216)	0.0372*** (0.0131)
Health	0.0189 (0.0182)	0.0447*** (0.0134)	0.0321 (0.0209)	0.0292** (0.0130)	0.0176 (0.0211)	0.0398*** (0.0149)

*Notes:* Table presents pair-wise linear probability estimates for the probability that a male student is observed in the industry listed in the corresponding rows relative to being observed in retail trade. All estimates are based on a reduced form RD specification using local linear regression and a 15-point bandwidth. Columns 1 and 2 split the sample based on whether a student is eligible for free or reduced price meals. Columns 3 and 4 split the sample based on whether a student is Black or Hispanic (column 3) or some other race/ethnicity (column 4). Columns 5 and 6 split the sample based on whether a student resides in one of Connecticut's five largest urban cities. All specifications include CTECS school-by-year fixed effects, resident 8<sup>th</sup> grade school district fixed effects and the full set of individuals controls listed in Table 3 (other than the covariate listed in the top row). Robust standard errors, clustered at the school-by-year and district levels in parentheses. \*\*\* p<0.01, \*\* p<0.05, \* p<0.1

**Table A13: Pairwise Linear Probability Estimates: Heterogeneity Analysis Female Students**

	(1) Free Lunch	(2) Not Free Lunch	(3) Black or Hispanic	(4) Not Black or Hispanic	(5) Central City	(6) Not Central City
Manufacturing	0.00173 (0.0106)	-0.00676 (0.0186)	0.00533 (0.0105)	-0.00876 (0.0180)	-0.000944 (0.0116)	-0.00313 (0.0153)
Transportation	0.00988 (0.0107)	0.0203 (0.0176)	0.0141 (0.0109)	0.0180 (0.0201)	0.0156 (0.0112)	0.0109 (0.0168)
Professional	-0.0209* (0.0111)	-0.0179 (0.0278)	-0.0214 (0.0152)	-0.00979 (0.0230)	-0.0130 (0.0166)	-0.0339 (0.0209)
Services	0.00706 (0.0151)	0.0136 (0.0134)	0.0178 (0.0148)	0.000832 (0.0126)	0.0222* (0.0130)	-0.00265 (0.0157)
Construction	0.0107** (0.00539)	0.0362*** (0.00998)	0.00986* (0.00533)	0.0330*** (0.00957)	0.0101* (0.00558)	0.0197*** (0.00719)
Wholesale Trade	0.00848 (0.00915)	0.0350* (0.0201)	0.00906 (0.00931)	0.0339* (0.0182)	0.0220** (0.00936)	0.00979 (0.0143)
Operation Support	-0.000412 (0.00749)	0.000911 (0.0201)	0.00190 (0.00747)	-0.00220 (0.0212)	0.000398 (0.0105)	-0.00250 (0.0159)
Office Support	0.0233** (0.00946)	0.0149 (0.0148)	0.0199* (0.0106)	0.0304 (0.0186)	0.0306** (0.0128)	0.00941 (0.0148)
Public / Social Service	-0.00529 (0.0203)	0.0112 (0.0263)	-0.000830 (0.0170)	0.0124 (0.0211)	0.0143 (0.0190)	-0.0169 (0.0170)
Education	-0.0229 (0.0181)	0.0294 (0.0268)	-0.0169 (0.0178)	0.00906 (0.0249)	-0.0148 (0.0198)	-0.0197 (0.0212)
Health	-0.0113 (0.0165)	0.0370* (0.0220)	-0.00112 (0.0182)	0.0183 (0.0193)	0.0111 (0.0144)	-0.000112 (0.0170)

*Notes:* Table presents pair-wise linear probability estimates for the probability that a female student is observed in the industry listed in the corresponding rows relative to being observed in retail trade. All estimates are based on a reduced form RD specification using local linear regression and a 15-point bandwidth. Columns 1 and 2 split the sample based on whether a student is eligible for free or reduced price meals. Columns 3 and 4 split the sample based on whether a student is Black or Hispanic (column 3) or some other race/ethnicity (column 4). Columns 5 and 6 split the sample based on whether a student resides in one of Connecticut's five largest urban cities. All specifications include CTECS school-by-year fixed effects, resident 8<sup>th</sup> grade school district fixed effects and the full set of individual controls listed in Table 3 (other than the covariate listed in the top row). Robust standard errors, clustered at the school-by-year and district levels in parentheses. \*\*\* p<0.01, \*\* p<0.05, \* p<0.1

**Table A14: Linear Probability Estimates with All Other Industries as Basis**

Outcome	(1)	(2)	(3)	(4)	(5)
	Manufacturing	Transportation	Professional	Services	Construction
Offer	0.0272*** (0.00958)	Male Students -0.00609* (0.00322)	0.00965* (0.00496)	-0.0173 (0.0118)	0.0301** (0.0116)
Observations	204,056	204,056	204,056	204,056	204,056
Industry Share	0.117	0.05	0.050	0.164	0.105
		Female Students			
Offer	0.000985 (0.00339)	0.00247 (0.00352)	-0.0112** (0.00509)	0.0118 (0.0111)	0.00371** (0.00143)
Observations	167,266	167,266	167,266	167,266	167,266
Industry Share	0.026	0.024	0.052	0.257	0.005

*Notes* : Table presents pair-wise linear probability estimates for the probability that a student is observed in the industry listed in the corresponding columns relative to being observed in any other industry. Top panel presents estimates for sample of male students. Bottom panel presents estimates for sample of female students. All estimates are based on a reduced form RD specification using local linear regression and a 15-point bandwidth. All specifications include CTECS school-by-year fixed effects and resident 8th grade school district fixed effects. Robust standard errors, clustered at the school-by-year and district levels in parentheses. \*\*\* p<0.01, \*\* p<0.05, \* p<0.1

**Table A14: Linear Probability Estimates with All Other Industries as Basis (Continued)**

Outcome	(6)	(7)	(8)	(9)	(10)	(11)
	Wholesale Trade	Operation Support	Office Support	Public / Social Service	Education	Health
			Male Students			
Offer	-0.00713 (0.00451)	-0.00128 (0.00770)	0.00603 (0.00474)	0.000954 (0.00394)	0.00284 (0.00259)	0.00908 (0.00626)
Observations	204,056	204,056	204,056	204,056	204,056	204,056
Industry Share	0.038	0.084	0.053	0.028	0.024	0.045
			Female Students			
Offer	0.00234 (0.00285)	-0.00102 (0.00331)	0.00774* (0.00420)	-0.00187 (0.00555)	-0.00552 (0.00662)	-0.00344 (0.0101)
Observations	167,266	167,266	167,266	167,266	167,266	167,266
Industry Share	0.009	0.022	0.049	0.0644	0.052	0.018

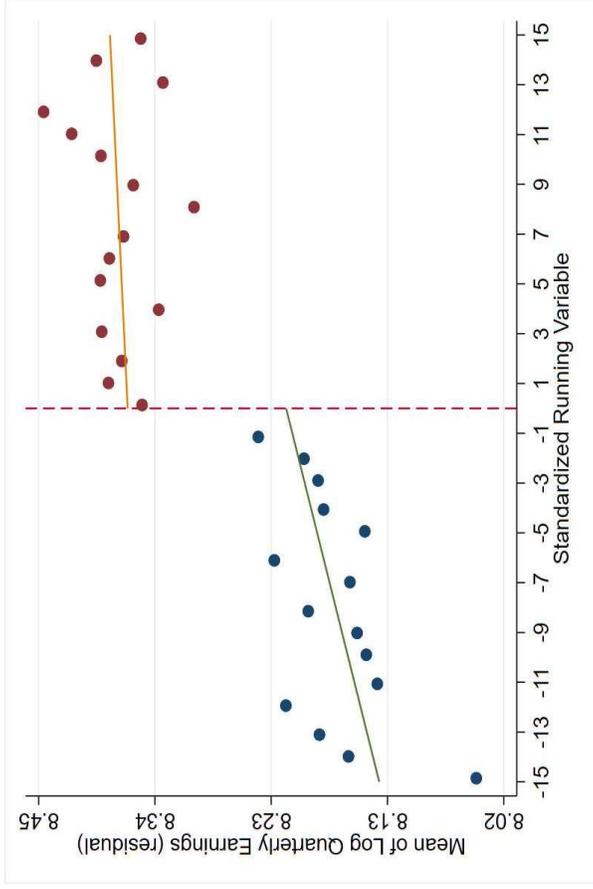
**Table A15: Industry Earnings Fixed Effects as Outcome**

Sample	(1)	(2)	(3)	(4)	(5)	(6)	(7)
	Full Sample	Free Lunch	Not Free Lunch	Black or Hispanic	Hispanic	Central City	Not Central City
				Male Students	Not Black or Hispanic		
Offer	0.0470*** (0.0105)	0.0350*** (0.0116)	0.0510*** (0.0191)	0.0259*** (0.0128)	0.0700*** (0.0156)	0.0132 (0.0105)	0.0652*** (0.0132)
Observations	204,057	117,586	86,470	97,631	106,424	66,086	137,968
				Female Students			
Offer	-0.00646 (0.00651)	-0.0135** (0.00680)	0.0215 (0.0175)	-0.0118 (0.00744)	0.0234 (0.0157)	-0.0194*** (0.00720)	0.00858 (0.00984)
Observations	167,279	127,974	39,305	117,770	49,507	78,482	88,796

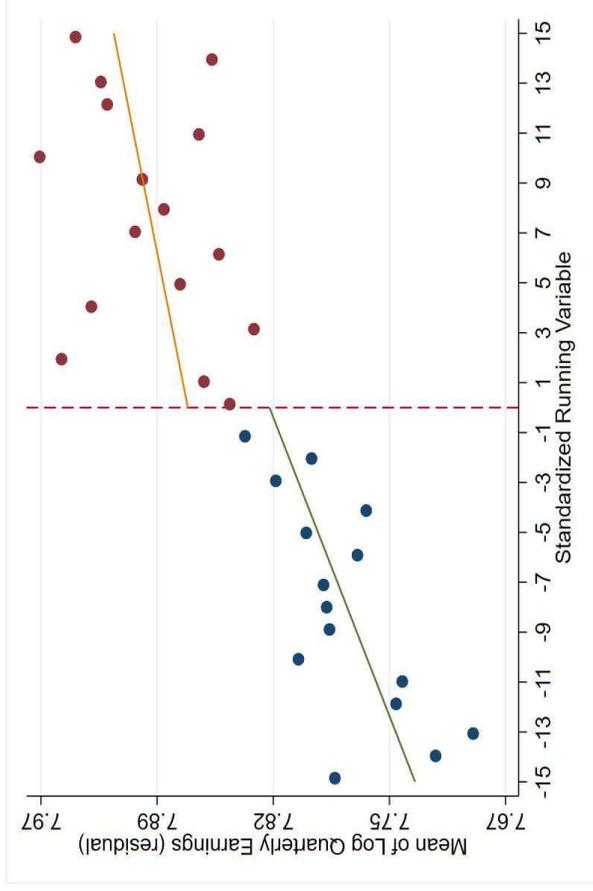
*Notes:* Table presents alternative models of industry choice where the dependent variable is the quarterly earnings fixed effect associated with the industry and the dependent variable is set to zero for retail trade, which is the omitted industry in the earnings models. Top panel presents estimates for male students while the bottom panel presents estimates for female students. Column 1 presents estimates for the full sample, columns 2 through 7 present subsample estimates in pairs for free and reduced price lunch eligible or not, student is either black or Hispanic or not, student resides in one of Connecticut's five largest urban cities. All estimates are based on a reduced form RD specification using local linear regression and a 15-point bandwidth. All specifications include the full set of individual controls listed in Table 3. All specifications include CTECS school-by-year fixed effects and resident 8<sup>th</sup> grade school district fixed effects. Robust standard errors, clustered at the school-by-year and district levels in parentheses. \*\*\* p<0.01, \*\* p<0.05, \* p<0.1

Appendix Figure 1: Reduced Form Graphs Quarterly Earnings

Panel A: Log Quarterly Earnings Male Students



Panel B: Log Quarterly Earnings Female Students



Notes : The scores forming the horizontal axis have been re-centered by subtracting the threshold for each school and year from the scores associated with the applicants from those schools and years. These figures document the logarithm of average quarterly earnings for each score value. Earnings are based on applications from 8th graders from 2006-2011 who matched in at least one quarter to the labor market data.

**Table A16: Offer Earnings Premiums by Industry Robustness Tests (Retail Omitted)**

	(1) No Covariates		(3) Bandwidth 12		(5) Bandwidth 10	
	Male	Female	Male	Female	Male	Female
Offer	0.0559** (0.0256)	0.0825*** (0.0274)	0.0567** (0.0258)	0.0765* (0.0413)	0.0412 (0.0332)	0.0868* (0.0448)
*Manufacturing	0.0607** (0.0298)	-0.0110 (0.0535)	0.0483 (0.0343)	0.000764 (0.0516)	0.0678* (0.0397)	0.0193 (0.0677)
*Transportation	0.129** (0.0552)	-0.012 (0.0785)	0.127** (0.0520)	0.0240 (0.0704)	0.0965* (0.0523)	0.0282 (0.0756)
*Professional	0.164*** (0.0461)	-0.0860* (0.0455)	0.174*** (0.0474)	-0.107** (0.0510)	0.167*** (0.0493)	-0.101** (0.0497)
*Services	0.029 (0.0371)	-0.00927 (0.0291)	0.0319 (0.0436)	-0.0254 (0.0376)	0.0662 (0.0570)	-0.0245 (0.0483)
*Construction	0.184*** (0.0372)	0.202 (0.203)	0.182*** (0.0402)	0.0514 (0.210)	0.166*** (0.0435)	0.153 (0.254)
*Wholesale Trade	0.0154 (0.0569)	-0.00310 (0.155)	-0.0180 (0.0638)	0.0479 (0.173)	0.00121 (0.0736)	0.0399 (0.203)
*Operation Support	0.0982** (0.0490)	0.00534 (0.0779)	0.0722 (0.0494)	0.00935 (0.0820)	0.0958 (0.0586)	-0.00887 (0.0968)
*Office Support	0.133*** (0.0470)	0.0301 (0.0443)	0.104** (0.0435)	0.0425 (0.0622)	0.120** (0.0513)	0.0343 (0.0608)
*Public / Social Service	-0.120 (0.0958)	0.0311 (0.0520)	-0.127 (0.105)	0.0149 (0.0554)	-0.0734 (0.118)	-0.0117 (0.0568)
*Education	-0.141 (0.101)	-0.119* (0.0648)	-0.0911 (0.0919)	-0.0827 (0.0668)	-0.0597 (0.104)	-0.0784 (0.0686)
*Health	-0.0436 (0.0658)	-0.0568 (0.0345)	-0.0289 (0.0572)	-0.0484 (0.0367)	-0.0216 (0.0629)	-0.0505 (0.0489)
R-Square	0.179	0.093	0.186	0.099	0.187	0.100
Observations	204,467	167,611	170,902	141,469	146,353	121,512

*Notes* : Table presents reduced-form estimates of the interaction of offer with the industry dummy variables where the dependent variable is the log of quarterly earnings and the omitted or reference industry is retail. All estimates are based on a RD specification using local linear regression . Models 1 and 2 present estimates for male and female students omitting covariates. Models 3 and 4 present estimates for an alternative bandwidth of 12 test score points, and Models 5 and 6 present estimates using a 10 point bandwidth. All specifications include CTECS school-by-year fixed effects, resident 8<sup>th</sup> grade school district fixed effects, and quarter and year fixed effects. Robust standard errors, clustered at the school-by-year and district levels in parentheses. \*\*\* p<0.01, \*\* p<0.05, \* p<0.1

**Table 17: Earnings by Industry with Alternative Industry Definitions**

	(1)	(2)	(3)	(4)
	Male Students		Female Students	
	Industry Interaction with Offer			
	Interactions	Conditional on Retail	Interactions	Conditional on Retail
Offer	NA	0.0556** (0.0253)	NA	0.0683** (0.0331)
Retail	0.0556** (0.0255)	NA	0.0683** (0.0332)	NA
Manufacturing	0.116*** (0.0298)	0.0604** (0.0284)	0.0646 (0.0563)	-0.00368 (0.0501)
Transportation	0.186*** (0.0546)	0.130** (0.0555)	0.0583 (0.0856)	-0.01 (0.0747)
Information	0.223** (0.104)	0.167 (0.106)	-0.275 (0.168)	-0.343** (0.166)
Finance/Insurance	0.274** (0.124)	0.218* (0.122)	-0.0561 (0.0538)	-0.124* (0.0658)
Real Estate	0.155* (0.0861)	0.099 (0.0900)	0.157 (0.131)	0.0884 (0.129)
Scientific/Technical	0.231** (0.107)	0.175* (0.103)	0.00701 (0.0765)	-0.0613 (0.0808)
Management	0.377 (0.563)	0.321 (0.558)	-0.127 (0.183)	-0.195 (0.179)
Arts/Entertainment	0.135 (0.0818)	0.0794 (0.0785)	0.0451 (0.113)	-0.0233 (0.110)
Accommodation/Food	0.0926** (0.0435)	0.037 (0.0423)	0.0719** (0.0282)	0.00359 (0.0357)
Construction	0.247*** (0.0373)	0.191*** (0.0367)	0.302 (0.229)	0.234 (0.210)
Wholesale Trade	0.0665 (0.0521)	0.0109 (0.0597)	0.0474 (0.138)	-0.0209 (0.144)
Utilities	0.251 (0.200)	0.195 (0.195)	-1.488*** (0.0985)	-1.557*** (0.0876)
Admin/Support/ Waste/Remediation	0.142** (0.0552)	0.0867* (0.0473)	0.103 (0.0663)	0.0349 (0.0466)
Public Administration	-0.253 (0.168)	-0.308* (0.174)	0.0751 (0.237)	0.00672 (0.241)
Other Services	0.167** (0.0649)	0.111* (0.0633)	0.021 (0.0451)	-0.0474 (0.0452)
Education	-0.0639 (0.106)	-0.119 (0.100)	0.0415 (0.127)	-0.0269 (0.131)
Health	0.0077 (0.0432)	-0.0479 (0.0508)	0.0471* (0.0239)	-0.0213 (0.0300)
R-Square		0.181		0.092
Observations		205,125		167,839

Notes: Table presents reduced-form estimates for offer interacted with census defined industry sectors where the dependent variable is the log of quarterly earnings. All estimates are based on a RD specification using local linear regression and a 15-point bandwidth. Columns 1 and 2 present estimates for the sample of male students. Columns 3 and 4 present estimates for the sample of female students. Columns 1 and 3 present the effect of offer separately for each industry, while Columns 2 and 4 present the same estimates relative to the estimated effect of offer on the omitted category of retail trade. All specifications include CTECS school-by-year fixed effects, resident 8th grade school district fixed effects, quarter and year fixed effects and the full set of controls listed in Table 3. Robust standard errors, clustered at the school-by-year and district levels in parentheses. \*\*\*  $p < 0.01$ , \*\*  $p < 0.05$ , \*  $p < 0.1$

**Table A18: Earnings by Cohort/School Application Threshold Terciles**

	(1)	(2)	(3)	(4)	(5)	(6)
	Male Students			Female Students		
	Baseline	*Top Tercile	*Bottom Tercile	Baseline	*Top Tercile	*Bottom Tercile
Offer	0.110*** (0.0370)	-0.0214 (0.0329)	0.00717 (0.0382)	0.0636** (0.0267)	-0.0212 (0.0227)	0.0136 (0.0314)
R-Square		0.183			0.098	
Observations		204,466			167,598	
Industry Specific Effects						
Offer	0.0223 (0.0462)	0.0268 (0.0472)	0.0762 (0.0471)	0.0173 (0.0425)	0.0511 (0.0428)	0.131** (0.0546)
Manufacturing*Offer	0.145** (0.0623)	-0.118 (0.0794)	-0.147 (0.0959)	0.174 (0.115)	-0.254* (0.134)	-0.194 (0.188)
Transportation*Offer	0.225 (0.160)	-0.142 (0.174)	-0.0824 (0.196)	-0.0146 (0.167)	0.0730 (0.179)	-0.104 (0.251)
Professional*Offer	0.230* (0.126)	-0.0590 (0.145)	-0.102 (0.162)	0.0898 (0.113)	-0.160 (0.129)	-0.308 (0.203)
Services*Offer	0.0601 (0.0624)	0.000497 (0.0706)	-0.215** (0.107)	0.0426 (0.0603)	-0.0357 (0.0638)	-0.0862 (0.0771)
Construction*Offer	0.387*** (0.0698)	-0.303*** (0.0815)	-0.0548 (0.127)	0.132 (0.272)	0.126 (0.336)	0.892** (0.387)
Wholesale Trade*Offer	-0.0148 (0.108)	0.0352 (0.146)	0.117 (0.225)	-0.586*** (0.194)	0.849*** (0.266)	0.518 (0.351)
Operation Support*Offer	0.151 (0.0937)	-0.0554 (0.147)	-0.0990 (0.139)	0.325* (0.189)	-0.348* (0.209)	-0.529** (0.239)
Office Support*Offer	0.166* (0.0846)	-0.0929 (0.117)	0.0298 (0.110)	0.224** (0.0938)	-0.250*** (0.0932)	-0.250 (0.164)
Public/Social Service*Offer	-0.298 (0.225)	0.303 (0.320)	0.0152 (0.252)	0.0287 (0.102)	0.00708 (0.113)	-0.0100 (0.148)
Education*Offer	-0.0416 (0.322)	-0.135 (0.316)	-0.0597 (0.382)	-0.0311 (0.0826)	-0.121 (0.125)	-0.0802 (0.135)
Health*Offer	-0.0171 (0.103)	-0.0412 (0.139)	-0.0572 (0.132)	0.0735 (0.0631)	-0.166* (0.0869)	-0.273*** (0.0917)
R-Square		0.185			0.099	
Observations		204,466			167,598	

Notes: Table presents reduced-form estimates where the dependent variable is the log of quarterly earnings. All estimates are based on a RD specification using local linear regression and a 15-point bandwidth including industry fixed effects. Panel 1 includes controls for offer and interaction of offer with dummies for whether the admission threshold for the cohort and school implies that the observation is in the bottom or top tercile based on threshold. Panel 2 includes controls for offer, industry, offer interacted with industry and the interaction of these variables with the threshold tercile dummies. Columns 1-3 present estimates for the male subsample with column 1 containing estimates for the omitted category (middle tercile), column 2 presenting estimates for the top tercile interactions, and column 3 presenting the bottom tercile interactions. Columns 4-6 present the same results for the female subsample. All specifications include CTECS school-by-year fixed effects, resident 8th grade school district fixed effects, quarter and year fixed effects and the full set of controls listed in Table 3. Robust standard errors, clustered at the school-by-year and district levels in parentheses. \*\*\* p<0.01, \*\* p<0.05, \* p<0.1

**Table A19: Earnings by Industry: Heterogeneity Analysis Male Students**

	(1) Free Lunch		(2) Not Free Lunch		(3) Black or Hispanic		(4) Not Black or Hispanic		(5) Central City		(6) Not Central City	
	Level	Inter- actions	Level	Inter- actions	Level	Inter- actions	Level	Inter- actions	Level	Inter- actions	Level	Inter- actions
Offer	0.0383 (0.0263)		0.0815 (0.0512)		0.0469 (0.0376)		0.0480 (0.0438)		-0.00197 (0.0286)		0.0743* (0.0383)	
Manufacturing	0.734*** (0.0333)	0.0681** (0.0267)	0.754*** (0.0519)	0.0306 (0.0531)	0.782*** (0.0494)	0.0385 (0.0503)	0.683*** (0.0398)	0.0872** (0.0421)	0.735*** (0.0606)	0.0361 (0.0339)	0.729*** (0.0385)	0.0628 (0.0392)
Transportation	-0.114* (0.0638)	0.129** (0.0568)	-0.222*** (0.0753)	0.154 (0.110)	-0.0499 (0.0549)	0.105 (0.0673)	-0.294*** (0.0741)	0.187* (0.0953)	-0.161* (0.0898)	0.249*** (0.0843)	-0.119** (0.0504)	0.0530 (0.0661)
Professional	0.209*** (0.0543)	0.201*** (0.0660)	0.314*** (0.0895)	0.0871 (0.103)	0.244*** (0.0639)	0.167** (0.0805)	0.255*** (0.0753)	0.168** (0.0843)	0.282*** (0.0657)	0.137 (0.0858)	0.213*** (0.0620)	0.186*** (0.0632)
Services	-0.239*** (0.0431)	0.0338 (0.0435)	-0.391*** (0.0594)	0.0658 (0.0599)	-0.186*** (0.0564)	0.00788 (0.0561)	-0.428*** (0.0475)	0.104** (0.0469)	-0.226*** (0.0692)	0.0698 (0.0704)	-0.325*** (0.0422)	0.0174 (0.0330)
Construction	0.535*** (0.0434)	0.231*** (0.0428)	0.652*** (0.0567)	0.129** (0.0507)	0.572*** (0.0643)	0.188** (0.0721)	0.565*** (0.0517)	0.220*** (0.0513)	0.594*** (0.0747)	0.193** (0.0792)	0.580*** (0.0476)	0.193*** (0.0467)
Wholesale Trade	0.594*** (0.0497)	-0.0278 (0.0800)	0.502*** (0.0737)	0.0732 (0.0843)	0.634*** (0.0565)	-0.0481 (0.0969)	0.468*** (0.0690)	0.0991 (0.0852)	0.612*** (0.0573)	0.0814 (0.0838)	0.528*** (0.0618)	-0.00973 (0.0768)
Operation Support	0.172** (0.0748)	0.00255 (0.0674)	0.123* (0.0624)	0.189*** (0.0698)	0.147* (0.0792)	0.0202 (0.0850)	0.141*** (0.0500)	0.159*** (0.0576)	0.212** (0.0937)	0.00437 (0.0774)	0.125** (0.0514)	0.141*** (0.0526)
Office Support	-0.522*** (0.0503)	0.117* (0.0625)	-0.418*** (0.0851)	0.0989 (0.0765)	-0.473*** (0.0523)	0.0741 (0.0582)	-0.516*** (0.0804)	0.193** (0.0765)	-0.473*** (0.0726)	0.0780 (0.0864)	-0.524*** (0.0533)	0.169*** (0.0541)
Public / Social Service	-0.150** (0.0752)	-0.0669 (0.0830)	0.105 (0.149)	-0.245 (0.171)	-0.0794 (0.0707)	-0.0645 (0.0850)	-0.00803 (0.161)	-0.173 (0.168)	0.0195 (0.0501)	-0.105 (0.0852)	-0.0907 (0.133)	-0.107 (0.148)
Education	0.155 (0.137)	-0.0622 (0.117)	0.300 (0.188)	-0.233 (0.188)	0.186* (0.109)	-0.0843 (0.143)	0.260 (0.178)	-0.189 (0.183)	0.190 (0.152)	0.0199 (0.124)	0.222* (0.127)	-0.220 (0.148)
Health	0.312*** (0.0536)	0.0595 (0.0745)	0.295*** (0.101)	-0.211* (0.112)	0.352*** (0.0625)	0.0268 (0.0741)	0.224** (0.107)	-0.127 (0.124)	0.456*** (0.0667)	-0.0301 (0.109)	0.205*** (0.0648)	-0.0285 (0.0720)

*Notes:* Table presents reduced-form estimates for the sample of male students where the dependent variable is the log of quarterly earnings. All estimates are based on a RD specification using local linear regression and a 15-point bandwidth. Each pair of columns (e.g. columns 1 and 2 under model 1) present the results from a single regression where the first column presents the estimated coefficients on the uninteracted industry fixed effects and the second column presents the estimated coefficients on the interaction between the offer indicator and the industry fixed effect. Models 1 and 2 split the sample based on whether a student is eligible for free or reduced price meals, models 3 and 4 based on whether a student is Black or Hispanic or other race/ethnicity, and models 5 and 6 based on whether a student resides in one of Connecticut's five largest central cities. In all specifications the omitted or reference industry is retail trade. All specifications include CTECS school-by-year fixed effects, resident 8<sup>th</sup> grade school district fixed effects and the full set of individual controls listed in Table 3 (other than the covariate listed in the top row). Robust standard errors, clustered at the school-by-year and district levels in parentheses. \*\*\* p<0.01, \*\* p<0.05, \* p<0.1

**Table A20: Earnings by Industry: Heterogeneity Analysis Female Students**

	(1) Free Lunch		(2) Not Free Lunch		(3) Black or Hispanic		(4) Not Black or Hispanic		(5) Central City		(6) Not Central City	
	Level	Inter- actions	Level	Inter- actions	Level	Inter- actions	Level	Inter- actions	Level	Inter- actions	Level	Inter- actions
Offer	0.0752** (0.0321)		0.117 (0.0754)		0.0608* (0.0343)		0.113* (0.0648)		0.0610 (0.0475)		0.0795 (0.0482)	
Manufacturing	0.811*** (0.0573)	-0.0163 (0.0571)	0.883*** (0.121)	0.0588 (0.127)	0.860*** (0.0811)	-0.0553 (0.0720)	0.805*** (0.0798)	0.0858 (0.0877)	0.769*** (0.0590)	0.0691 (0.0994)	0.867*** (0.0712)	-0.0195 (0.0758)
Transportation	0.0860 (0.0601)	-0.0149 (0.0801)	0.0373 (0.159)	-0.0181 (0.174)	0.121** (0.0606)	-0.0306 (0.0929)	-0.0792 (0.133)	0.0608 (0.177)	0.114** (0.0571)	0.00536 (0.0836)	0.0265 (0.101)	-0.0169 (0.119)
Professional	0.528*** (0.0473)	-0.0454 (0.0440)	0.773*** (0.106)	-0.181 (0.124)	0.602*** (0.0587)	-0.0462 (0.0700)	0.578*** (0.0960)	-0.170* (0.0999)	0.596*** (0.0739)	-0.00740 (0.0591)	0.581*** (0.0663)	-0.111* (0.0666)
Services	0.0306 (0.0371)	-0.0136 (0.0308)	-0.000663 (0.0708)	0.0623 (0.0809)	0.0115 (0.0335)	0.0250 (0.0227)	0.0519 (0.0622)	-0.0452 (0.0740)	0.0570 (0.0480)	-0.0395 (0.0476)	0.000732 (0.0417)	0.0403 (0.0412)
Construction	0.609*** (0.186)	0.134 (0.241)	-0.145 (0.394)	0.825* (0.424)	0.593** (0.236)	0.202 (0.286)	0.0930 (0.163)	0.506** (0.194)	0.731*** (0.259)	0.0312 (0.298)	0.165 (0.174)	0.500** (0.206)
Wholesale Trade	0.403*** (0.0801)	0.0111 (0.130)	0.413 (0.359)	0.0203 (0.363)	0.346*** (0.102)	0.123 (0.153)	0.567** (0.282)	-0.199 (0.302)	0.193** (0.0852)	0.284 (0.174)	0.586*** (0.169)	-0.170 (0.188)
Operation Support	0.198*** (0.0728)	-0.0243 (0.0793)	0.279** (0.121)	0.0248 (0.122)	0.199*** (0.0747)	0.00754 (0.0840)	0.214 (0.133)	-0.0238 (0.149)	0.251*** (0.0863)	0.0114 (0.0724)	0.162 (0.106)	-0.00308 (0.108)
Office Support	-0.279*** (0.0350)	-0.00829 (0.0476)	-0.455*** (0.111)	0.276** (0.128)	-0.306*** (0.0410)	0.0440 (0.0565)	-0.312** (0.147)	0.0284 (0.164)	-0.257*** (0.0370)	-0.101* (0.0553)	-0.374*** (0.0784)	0.204*** (0.0728)
Public / Social Service	-0.0594 (0.0647)	0.0185 (0.0715)	-0.298* (0.151)	0.132 (0.167)	-0.0822 (0.0655)	0.0765 (0.0631)	-0.133 (0.132)	-0.153 (0.150)	-0.00707 (0.0780)	0.0421 (0.0715)	-0.233*** (0.0875)	0.0551 (0.0706)
Education	0.307*** (0.0681)	-0.0942 (0.0843)	0.212** (0.0900)	-0.0618 (0.122)	0.282*** (0.0595)	-0.0538 (0.0657)	0.294*** (0.104)	-0.180 (0.139)	0.317*** (0.0941)	-0.173 (0.108)	0.269*** (0.0776)	-0.0771 (0.101)
Health	0.578*** (0.0348)	-0.0542 (0.0351)	0.576*** (0.0940)	-0.0328 (0.102)	0.590*** (0.0365)	-0.0462 (0.0356)	0.571*** (0.0662)	-0.0664 (0.0816)	0.577*** (0.0657)	-0.0293 (0.0627)	0.586*** (0.0404)	-0.0804 (0.0535)

*Notes:* Table presents reduced-form estimates for the sample of female students where the dependent variable is the log of quarterly earnings. All estimates are based on a RD specification using local linear regression and a 15-point bandwidth. Each pair of columns (e.g. columns 1 and 2 under model 1) present the results from a single regression where the first column presents the estimated coefficients on the uninteracted industry fixed effects and the second column presents the estimated coefficients on the interaction between the offer indicator and the industry fixed effect. Models 1 and 2 split the sample based on whether a student is eligible for free or reduced price meals, models 3 and 4 based on whether a student is Black or Hispanic or other race/ethnicity, and models 5 and 6 based on whether a student resides in one of Connecticut's five largest central cities. In all specifications the omitted or reference industry is retail trade. All specifications include CTECS school-by-year fixed effects, resident 8<sup>th</sup> grade school district fixed effects and the full set of individual controls listed in Table 3 (other than the covariate listed in the top row). Robust standard errors, clustered at the school-by-year and district levels in parentheses. \*\*\* p<0.01, \*\* p<0.05, \* p<0.1

**Table A21: Share of Quarters with Earnings**

	(1)	(2)	(3)	(4)
	Male		Female	
	Level	Offer Interactions	Level	Offer Interactions
Offer	-0.00231		-0.00794	
	-0.0106		(0.0109)	
Manufacturing	0.0736***	-0.0281	0.0867***	-0.0585***
	-0.0169	-0.0192	(0.0252)	(0.0214)
Transportation	-0.0484***	0.00285	-0.0429*	0.0217
	-0.0124	-0.0194	(0.0249)	(0.0298)
Professional	-0.0145	0.017	0.0185	0.00112
	-0.0211	-0.0226	(0.0239)	(0.0289)
Services	-0.0175*	-0.00794	-0.0204***	0.0130
	-0.01	-0.0131	(0.00571)	(0.0101)
Construction	0.00438	0.0380*	0.0176	0.0445
	-0.0171	-0.0211	(0.0563)	(0.0605)
Wholesale Trade	0.00844	0.0385	0.0608	-0.0254
	-0.0238	-0.0351	(0.0543)	(0.0675)
Operation Support	-0.0278*	0.0262	-0.00728	-0.0336
	-0.0153	-0.0203	(0.0226)	(0.0442)
Office Support	-0.104***	0.00851	-0.0798***	0.0226
	-0.0271	-0.0217	(0.0164)	(0.0258)
Public / Social Service	-0.00195	-0.015	-0.0151	0.0112
	-0.0283	-0.0287	(0.0159)	(0.0200)
Education	-0.00727	-0.00521	0.0129	-0.0280
	-0.03	-0.0358	(0.0145)	(0.0201)
Health	0.0816***	-0.0299	0.0755***	-0.0201**
	-0.0169	-0.02	(0.00809)	(0.00937)
Control Mean	0.545	0.545	0.571	0.571
Std. Dev	(0.252)	(0.252)	(0.237)	(0.237)
R-Square		0.262		0.351
Observations		10,601		8,103

*Notes:* Table presents reduced-form estimates where the dependent variable is the ratio of the number of working quarters and the feasible number of quarters of working. All estimates are based on a RD specification using local linear regression and a 15-point bandwidth. Columns 1-4 present estimates for sample of male students. Columns 5-8 present estimates for sample of female students. Models 1 and 4 present estimates that exclude industry fixed effects. Models 2 and 5 present estimates that add industry fixed effects. The omitted or reference industry is retail. Models 3 and 6 each contain two columns presenting estimates based on a specification that includes industry fixed effect, shown in the first column, and those fixed effects interacted with the offer indicator, shown in the second. All specifications include CTECS school-by-year fixed effects, resident 8th grade school district fixed effects, quarter and year fixed effects and the full set of controls listed in Table 3. Robust standard errors, clustered at the school-by-year and district levels in parentheses. \*\*\* p<0.01, \*\* p<0.05, \* p<0.1

Table A22. Occupation to CTECS Program Match

Occ Code	Occupation Description	CTECS Program 1	CTECS Program 2
111021	General and operations managers	No Relevant Program for ACS Occupation	
1110XX	Chief executives and legislators	No Relevant Program for ACS Occupation	
112011	Advertising and promotions managers	No Relevant Program for ACS Occupation	
112021	Marketing managers	No Relevant Program for ACS Occupation	
112022	Sales managers	No Relevant Program for ACS Occupation	
112030	Public relations and fundraising managers	No Relevant Program for ACS Occupation	
113012	Administrative services managers	No Relevant Program for ACS Occupation	
113013	Facilities managers	No Relevant Program for ACS Occupation	
113021	Computer and information systems managers	Information Systems Technology	
113031	Financial managers	No Relevant Program for ACS Occupation	
113051	Industrial production managers	No Relevant Program for ACS Occupation	
113061	Purchasing managers	No Relevant Program for ACS Occupation	

Notes. This table presents our manual match between IPUMS Census occupation definitions for the first two CTECS programs, where up to five programs can be matched to an occupation, but most occupations match to zero or one program. The first two columns present the IPUMS Census occupation code and occupation description. The next column presents the first match to a CTECS program in CTE, and the last column presents the second match. If there is no match, column three lists "No Relevant Program for ACS Occupation", and in that case or if there is only one relevant program column four is left blank.

113071	Transportation, storage, and distribution managers	Diesel and Heavy Duty Equipment Repair	Automotive Technology
113111	Compensation and benefits managers	No Relevant Program for ACS Occupation	
113121	Human resources managers	No Relevant Program for ACS Occupation	
113131	Training and development managers	No Relevant Program for ACS Occupation	
119013	Farmers, ranchers, and other agricultural managers	No Relevant Program for ACS Occupation	
119021	Construction managers	Carpentry	Heating, Ventilation and Air Conditioning
119030	Education and childcare administrators	Early Care And Education	
119041	Architectural and engineering managers	Mechanical Design & Engineering Technology	Sustainable Architecture
119051	Food service managers	Culinary Arts	Culinary Arts and Guest Services
119070	Entertainment and recreation managers	Tourism, Hospitality and Guest Services Management	
119081	Lodging managers	Tourism, Hospitality and Guest Services Management	Hotel Hospitality Technology
119111	Medical and health services managers	Health Technologies	
119121	Natural sciences managers	Biotechnology	Bioscience Environmental Technology
119141	Property, real estate, and community association managers	Tourism, Hospitality and Guest Services Management	Hotel Hospitality Technology
119151	Social and community service managers	Early Care And Education	
119161	Emergency management directors	Bioscience Environmental Technology	
1191XX	Other managers	Tourism, Hospitality and Guest Services Management	
131011	Agents and business managers of artists, performers, and athletes	Marketing, Management and Entrepreneurship	Graphic Technology
131021	Buyers and purchasing agents, farm products	No Relevant Program for ACS Occupation	
131022	Wholesale and retail buyers, except farm products	Marketing, Management and Entrepreneurship	

131023	Purchasing agents, except wholesale, retail, and farm products	Marketing, Management and Entrepreneurship
131030	Claims adjusters, appraisers, examiners, and investigators	No Relevant Program for ACS Occupation
131041	Compliance officers	No Relevant Program for ACS Occupation
131051	Cost estimators	No Relevant Program for ACS Occupation
131070	Human resources workers	No Relevant Program for ACS Occupation
131081	Logisticians	No Relevant Program for ACS Occupation
131082	Project management specialists	No Relevant Program for ACS Occupation
131111	Management analysts	No Relevant Program for ACS Occupation
131121	Meeting, convention, and event planners	No Relevant Program for ACS Occupation
131131	Fundraisers	No Relevant Program for ACS Occupation
131141	Compensation, benefits, and job analysis specialists	Marketing, Management and Entrepreneurship
131151	Training and development specialists	No Relevant Program for ACS Occupation
131161	Market research analysts and marketing specialists	No Relevant Program for ACS Occupation
131199	Business operations specialists, all other	No Relevant Program for ACS Occupation
132011	Accountants and auditors	No Relevant Program for ACS Occupation
132020	Property appraisers and assessors	No Relevant Program for ACS Occupation
132031	Budget analysts	Marketing, Management and Entrepreneurship

132041	Credit analysts	No Relevant Program for ACS Occupation	
132051	Financial and investment analysts	No Relevant Program for ACS Occupation	
132052	Personal financial advisors	No Relevant Program for ACS Occupation	
132053	Insurance underwriters	No Relevant Program for ACS Occupation	
132061	Financial examiners	No Relevant Program for ACS Occupation	
132070	Credit counselors and loan officers	No Relevant Program for ACS Occupation	
132081	Tax examiners and collectors, and revenue agents	No Relevant Program for ACS Occupation	
132082	Tax preparers	No Relevant Program for ACS Occupation	
1320XX	Other financial specialists	No Relevant Program for ACS Occupation	
151211	Computer systems analysts	Pre-Electrical Engineering and Applied Electronics	Information Systems Technology
151212	Information security analysts	Pre-Electrical Engineering and Applied Electronics	Information Systems Technology
151221	Computer and information research scientists	Pre-Electrical Engineering and Applied Electronics	Information Systems Technology
151230	Computer support specialists	Pre-Electrical Engineering and Applied Electronics	Information Systems Technology
151241	Computer network architects	Pre-Electrical Engineering and Applied Electronics	Information Systems Technology
151244	Network and computer systems administrators	Pre-Electrical Engineering and Applied Electronics	Information Systems Technology
15124X	Database administrators and architects	Pre-Electrical Engineering and Applied Electronics	Information Systems Technology
151251	Computer programmers	Pre-Electrical Engineering and Applied Electronics	Information Systems Technology

151252	Software developers	Information Systems Technology	Information Systems Technology
151253	Software quality assurance analysts and testers	Pre-Electrical Engineering and Applied Electronics	Information Systems Technology
151254	Web developers	Pre-Electrical Engineering and Applied Electronics	Information Systems Technology
151255	Web and digital interface designers	Pre-Electrical Engineering and Applied Electronics	Information Systems Technology
151299	Computer occupations, all other	Pre-Electrical Engineering and Applied Electronics	Information Systems Technology
152011	Actuaries	No Relevant Program for ACS Occupation	
152031	Operations research analysts	No Relevant Program for ACS Occupation	
1520XX	Other mathematical science occupations	No Relevant Program for ACS Occupation	
171011	Architects, except landscape and naval	Mechanical Design & Engineering Technology	Sustainable Architecture
171012	Landscape architects	Sustainable Architecture	Facilities Management
171020	Surveyors, cartographers, and photogrammetrists	Digital Media	
172011	Aerospace engineers	Pre-Electrical Engineering and Applied Electronics	
172041	Chemical engineers	Biotechnology	Bioscience Environmental Technology
172051	Civil engineers	Mechanical Design & Engineering Technology	
172061	Computer hardware engineers	Electronics Technology	Pre-Electrical Engineering and Applied Electronics
172070	Electrical and electronics engineers	Electronics Technology	Pre-Electrical Engineering and Applied Electronics
172081	Environmental engineers	Bioscience Environmental Technology	Biotechnology
1720XX	Biomedical and agricultural engineers	Biotechnology	Bioscience Environmental Technology
172110	Industrial engineers, including health and safety	Mechanical Design & Engineering Technology	Health Technologies

172121	Marine engineers and naval architects	Mechanical Design & Engineering Technology	
172131	Materials engineers	Mechanical Design & Engineering Technology	Sustainable Architecture
172141	Mechanical engineers	Mechanical Design & Engineering Technology	
1721XX	Petroleum, mining and geological engineers, including mining safety engineers	Mechanical Design & Engineering Technology	
1721YY	Other engineers	Mechanical Design & Engineering Technology	
173011	Architectural and civil drafters	Sustainable Architecture	Mechanical Design & Engineering Technology
17301X	Other drafters	Mechanical Design & Engineering Technology	
173023	Electrical and electronic engineering technologists and technicians	Pre-Electrical Engineering and Applied Electronics	Electronics Technology
17302X	Other engineering technologists and technicians, except drafters	Pre-Electrical Engineering and Applied Electronics	Electronics Technology
173031	Surveying and mapping technicians	Graphic Technology	
191010	Agricultural and food scientists	Culinary Arts	Culinary Arts and Guest Services
191020	Biological scientists	Biotechnology	Bioscience Environmental Technology
191030	Conservation scientists and foresters	Biotechnology	Bioscience Environmental Technology
1910XX	Other life scientists	Biotechnology	Bioscience Environmental Technology
192010	Astronomers and physicists	No Relevant Program for ACS Occupation	
192021	Atmospheric and space scientists	No Relevant Program for ACS Occupation	
192030	Chemists and materials scientists	Biotechnology	Bioscience Environmental Technology
192041	Environmental scientists and specialists, including health	Bioscience Environmental Technology	Biotechnology
19204X	Geoscientists and hydrologists, except geographers	No Relevant Program for ACS Occupation	

192099	Physical scientists, all other	No Relevant Program for ACS Occupation	No Relevant Program for ACS Occupation
193011	Economists	No Relevant Program for ACS Occupation	No Relevant Program for ACS Occupation
193033	Clinical and counseling psychologists	No Relevant Program for ACS Occupation	No Relevant Program for ACS Occupation
193034	School psychologists	Early Care And Education	Early Care And Education
19303X	Other psychologists	No Relevant Program for ACS Occupation	No Relevant Program for ACS Occupation
193051	Urban and regional planners	Sustainable Architecture	Sustainable Architecture
1930XX	Other social scientists	No Relevant Program for ACS Occupation	No Relevant Program for ACS Occupation
194010	Agricultural and food science technicians	Culinary Arts	Culinary Arts
194021	Biological technicians	Biotechnology	Biotechnology
194031	Chemical technicians	Biotechnology	Biotechnology
1940XX	Environmental science and geoscience technicians, and nuclear technicians	Biotechnology	Biotechnology
1940YY	Other life, physical, and social science technicians	Biotechnology	Biotechnology
195010	Occupational health and safety specialists and technicians	Health Technologies	Health Technologies
211011	Substance abuse and behavioral disorder counselors	Early Care And Education	Early Care And Education
211012	Educational, guidance, and career counselors and advisors	Early Care And Education	Early Care And Education
211013	Marriage and family therapists	No Relevant Program for ACS Occupation	No Relevant Program for ACS Occupation
211014	Mental health counselors	Early Care And Education	Early Care And Education
211015	Rehabilitation counselors	No Relevant Program for ACS Occupation	No Relevant Program for ACS Occupation
211019	Counselors, all other	Early Care And Education	Early Care And Education
211021	Child, family, and school social workers	Early Care And Education	Early Care And Education
211022	Healthcare social workers	Health Technologies	Health Technologies
			Early Care And Education

211023	Mental health and substance abuse social workers	Health Technologies	Early Care And Education
211029	Social workers, all other	Early Care And Education	
211092	Probation officers and correctional treatment specialists	Criminal Justice and Protective Services	
211093	Social and human service assistants	No Relevant Program for ACS Occupation	
21109X	Other community and social service specialists	Health Technologies	Early Care And Education
212011	Clergy	No Relevant Program for ACS Occupation	
212021	Directors, religious activities and education	No Relevant Program for ACS Occupation	
212099	Religious workers, all other	No Relevant Program for ACS Occupation	
231012	Judicial law clerks	Criminal Justice and Protective Services	
2310XX	Lawyers, and judges, magistrates, and other judicial workers	No Relevant Program for ACS Occupation	
232011	Paralegals and legal assistants	Criminal Justice and Protective Services	
232093	Title examiners, abstractors, and searchers	No Relevant Program for ACS Occupation	
232099	Legal support workers, all other	Criminal Justice and Protective Services	
251000	Postsecondary teachers	Early Care And Education	
252010	Preschool and kindergarten teachers	Early Care And Education	
252020	Elementary and middle school teachers	Early Care And Education	
252030	Secondary school teachers	Early Care And Education	
252050	Special education teachers	Early Care And Education	
253041	Tutors	Early Care And Education	
2530XX	Other teachers and instructors	Early Care And Education	
254010	Archivists, curators, and museum technicians	Tourism, Hospitality and Guest Services Management	

254022	Librarians and media collections specialists	Digital Media	
254031	Library technicians	No Relevant Program for ACS Occupation	
259040	Teaching assistants	Early Care And Education	Digital Media
2590XX	Other educational instruction and library workers	Early Care And Education	Digital Media
271010	Artists and related workers	Digital Media	Graphic Technology
271021	Commercial and industrial designers	No Relevant Program for ACS Occupation	
271022	Fashion designers	Marketing, Management and Entrepreneurship	Hairdressing and Cosmetology
271023	Floral designers	No Relevant Program for ACS Occupation	
271024	Graphic designers	Graphic Technology	Digital Media
271025	Interior designers	Marketing, Management and Entrepreneurship	
271026	Merchandise displayers and window trimmers	Marketing, Management and Entrepreneurship	
27102X	Other designers	Marketing, Management and Entrepreneurship	Hairdressing and Cosmetology
272011	Actors	No Relevant Program for ACS Occupation	
272012	Producers and directors	No Relevant Program for ACS Occupation	
272021	Athletes and sports competitors	No Relevant Program for ACS Occupation	
272022	Coaches and scouts	No Relevant Program for ACS Occupation	
272023	Umpires, referees, and other sports officials	No Relevant Program for ACS Occupation	
272030	Dancers and choreographers	No Relevant Program for ACS Occupation	

272041	Music directors and composers	No Relevant Program for ACS Occupation	
272042	Musicians and singers	No Relevant Program for ACS Occupation	
272091	Disc jockeys, except radio	Digital Media	Sound Production
272099	Entertainers and performers, sports and related workers, all other	No Relevant Program for ACS Occupation	
273011	Broadcast announcers and radio disc jockeys	Sound Production	Digital Media
273023	News analysts, reporters, and journalists	No Relevant Program for ACS Occupation	
273031	Public relations specialists	No Relevant Program for ACS Occupation	
273041	Editors	No Relevant Program for ACS Occupation	
273042	Technical writers	No Relevant Program for ACS Occupation	
273043	Writers and authors	No Relevant Program for ACS Occupation	
273091	Interpreters and translators	No Relevant Program for ACS Occupation	
273092	Court reporters and simultaneous captioners	Criminal Justice and Protective Services	
273099	Media and communication workers, all other	Digital Media	Hotel Hospitality Technology
274021	Photographers	No Relevant Program for ACS Occupation	
274030	Television, video, and film camera operators and editors	Digital Media	
2740XX	Other media and communication equipment workers	Digital Media	Hotel Hospitality Technology
291011	Chiropractors	No Relevant Program for ACS Occupation	
291020	Dentists	Health Technologies	

Culinary Arts and Guest Services

	Dietitians and nutritionists Optometrists	Culinary Arts No Relevant Program for ACS Occupation
291031	Dietitians and nutritionists	Culinary Arts
291041	Optometrists	No Relevant Program for ACS Occupation
291051	Pharmacists	No Relevant Program for ACS Occupation
291071	Physician assistants	Health Technologies
291081	Podiatrists	Health Technologies
291122	Occupational therapists	Health Technologies
291123	Physical therapists	Health Technologies
291124	Radiation therapists	Health Technologies
291125	Recreational therapists	Health Technologies
291126	Respiratory therapists	Health Technologies
291127	Speech-language pathologists	Early Care And Education
29112X	Other therapists	Early Care And Education
291131	Veterinarians	No Relevant Program for ACS Occupation
291141	Registered nurses	Health Technologies
291151	Nurse anesthetists	Health Technologies
291181	Audiologists	Health Technologies
2911XX	Nurse practitioners, and nurse midwives	Health Technologies
291210	Physicians	Health Technologies
291240	Surgeons	Health Technologies
291291	Acupuncturists	Health Technologies
291292	Dental hygienists	Health Technologies
291299	Healthcare diagnosing or treating practitioners, all other	Health Technologies
292010	Clinical laboratory technologists and technicians	Health Technologies
292031	Cardiovascular technologists and technicians	Health Technologies
292032	Diagnostic medical sonographers	Health Technologies
292034	Radiologic technologists and technicians	Health Technologies
292035	Magnetic resonance imaging technologists	Health Technologies

29203X	Nuclear medicine technologists and medical dosimetrists	Health Technologies
292042	Emergency medical technicians	Health Technologies
292043	Paramedics	Health Technologies
292052	Pharmacy technicians	Health Technologies
292053	Psychiatric technicians	Health Technologies
292055	Surgical technologists	Health Technologies
292056	Veterinary technologists and technicians	Health Technologies
29205X	Dietetic technicians and ophthalmic medical technicians	Health Technologies
292061	Licensed practical and licensed vocational nurses	Health Technologies
292072	Medical records specialists	Health Technologies
292081	Opticians, dispensing	No Relevant Program for ACS Occupation
292090	Miscellaneous health technologists and technicians	Health Technologies
299000	Other healthcare practitioners and technical occupations	Health Technologies
311121	Home health aides	Health Technologies
311122	Personal care aides	Health Technologies
311131	Nursing assistants	Health Technologies
31113X	Orderlies and psychiatric aides	Health Technologies
312010	Occupational therapy assistants and aides	Health Technologies
312020	Physical therapist assistants and aides	Health Technologies
319011	Massage therapists	No Relevant Program for ACS Occupation
319091	Dental assistants	Health Technologies
319092	Medical assistants	Health Technologies
319094	Medical transcriptionists	Health Technologies
319095	Pharmacy aides	Health Technologies
319096	Veterinary assistants and laboratory animal caretakers	No Relevant Program for ACS Occupation
319097	Phlebotomists	Health Technologies

31909X	Other healthcare support workers	Health Technologies
331011	First-line supervisors of correctional officers	Criminal Justice and Protective Services
331012	First-line supervisors of police and detectives	Criminal Justice and Protective Services
331021	First-line supervisors of firefighting and prevention workers	Criminal Justice and Protective Services
331090	Miscellaneous first-line supervisors, protective service workers	Criminal Justice and Protective Services
332011	Firefighters	Criminal Justice and Protective Services
332020	Fire inspectors	Criminal Justice and Protective Services
333011	Bailiffs	Criminal Justice and Protective Services
333012	Correctional officers and jailers	Criminal Justice and Protective Services
333021	Detectives and criminal investigators	Criminal Justice and Protective Services
333050	Police officers	Criminal Justice and Protective Services
3330XX	Fish and game wardens and parking enforcement officers	Criminal Justice and Protective Services
339011	Animal control workers	Criminal Justice and Protective Services
339021	Private detectives and investigators	Criminal Justice and Protective Services
339030	Security guards and gambling surveillance officers	Criminal Justice and Protective Services
339091	Crossing guards and flaggers	Criminal Justice and Protective Services
339093	Transportation security screeners	Criminal Justice and Protective Services

339094	School bus monitors	Criminal Justice and Protective Services	Early Care And Education
33909X	Other protective service workers	Criminal Justice and Protective Services	
351011	Chefs and head cooks	Culinary Arts	Culinary Arts and Guest Services
351012	First-line supervisors of food preparation and serving workers	Culinary Arts	Culinary Arts and Guest Services
352010	Cooks	Culinary Arts	Culinary Arts and Guest Services
352021	Food preparation workers	Culinary Arts	Culinary Arts and Guest Services
353011	Bartenders	Culinary Arts	Culinary Arts and Guest Services
353023	Fast food and counter workers	Culinary Arts	Culinary Arts and Guest Services
353031	Waiters and waitresses	Culinary Arts	Culinary Arts and Guest Services
353041	Food servers, nonrestaurant	Culinary Arts	Culinary Arts and Guest Services
359011	Dining room and cafeteria attendants and bartender helpers	Culinary Arts and Guest Services	Tourism, Hospitality and Guest Services Management
359021	Dishwashers	Culinary Arts	Culinary Arts and Guest Services
359031	Hosts and hostesses, restaurant, lounge, and coffee shop	Tourism, Hospitality and Guest Services Management	Culinary Arts and Guest Services
359099	Food preparation and serving related workers, all other	Culinary Arts	Culinary Arts and Guest Services
371011	First-line supervisors of housekeeping and janitorial workers	Facilities Management	
371012	First-line supervisors of landscaping, lawn service, and groundskeeping workers	Facilities Management	
372012	Maids and housekeeping cleaners	No Relevant Program for ACS Occupation	
37201X	Janitors and building cleaners	Facilities Management	
372021	Pest control workers	No Relevant Program for ACS Occupation	
373011	Landscaping and groundskeeping workers	No Relevant Program for ACS Occupation	
373013	Tree trimmers and pruners	No Relevant Program for ACS Occupation	

37301X	Other grounds maintenance workers	No Relevant Program for ACS Occupation	
391000	Supervisors of personal care and service workers	Health Technologies	Hairdressing and Cosmetology
392011	Animal trainers	No Relevant Program for ACS Occupation	
392021	Animal caretakers	No Relevant Program for ACS Occupation	
393010	Gambling services workers	Tourism, Hospitality and Guest Services Management	Facilities Management
393031	Ushers, lobby attendants, and ticket takers	Tourism, Hospitality and Guest Services Management	
3930XX	Other entertainment attendants and related workers	Tourism, Hospitality and Guest Services Management	
394031	Morticians, undertakers, and funeral arrangers	Tourism, Hospitality and Guest Services Management	
3940XX	Embalmers, crematory operators and funeral attendants	Health Technologies	
395011	Barbers	Hairdressing and Cosmetology	
395012	Hairdressers, hairstylists, and cosmetologists	Hairdressing and Cosmetology	
395092	Manicurists and pedicurists	Hairdressing and Cosmetology	
395094	Skincare specialists	Hairdressing and Cosmetology	
39509X	Other personal appearance workers	Hairdressing and Cosmetology	
396010	Baggage porters, bellhops, and concierges	Tourism, Hospitality and Guest Services Management	
397010	Tour and travel guides	Tourism, Hospitality and Guest Services Management	
399011	Childcare workers	Early Care And Education	
399031	Exercise trainers and group fitness instructors	Early Care And Education	
399032	Recreation workers	Tourism, Hospitality and Guest Services Management	

399041	Residential advisors	No Relevant Program for ACS Occupation	
399099	Personal care and service workers, all other	Hairdressing and Cosmetology	Early Care And Education
411011	First-line supervisors of retail sales workers	No Relevant Program for ACS Occupation	
411012	First-line supervisors of non-retail sales workers	No Relevant Program for ACS Occupation	
412010	Cashiers	No Relevant Program for ACS Occupation	
412021	Counter and rental clerks	No Relevant Program for ACS Occupation	
412022	Parts salespersons	Automotive Technology	Diesel and Heavy Duty Equipment Repair
412031	Retail salespersons	No Relevant Program for ACS Occupation	
413011	Advertising sales agents	Marketing, Management and Entrepreneurship	
413021	Insurance sales agents	Marketing, Management and Entrepreneurship	
413031	Securities, commodities, and financial services sales agents	No Relevant Program for ACS Occupation	
413041	Travel agents	Tourism, Hospitality and Guest Services Management	
413091	Sales representatives of services, except advertising, insurance, financial services, and travel	No Relevant Program for ACS Occupation	
414010	Sales representatives, wholesale and manufacturing	Automated Manufacturing	Precision Machining Technology
419010	Models, demonstrators, and product promoters	No Relevant Program for ACS Occupation	
419020	Real estate brokers and sales agents	Marketing, Management and Entrepreneurship	

419031	Sales engineers	Pre-Electrical Engineering and Applied Electronics	Mechanical Design & Engineering Technology
419041	Telemarketers	No Relevant Program for ACS Occupation	
419091	Door-to-door sales workers, news and street vendors, and related workers	No Relevant Program for ACS Occupation	
419099	Sales and related workers, all other	No Relevant Program for ACS Occupation	
431011	First-line supervisors of office and administrative support workers	No Relevant Program for ACS Occupation	
432011	Switchboard operators, including answering service	No Relevant Program for ACS Occupation	
432021	Telephone operators	No Relevant Program for ACS Occupation	
432099	Communications equipment operators, all other	Sound Production	
433011	Bill and account collectors	Marketing, Management and Entrepreneurship	
433021	Billing and posting clerks	No Relevant Program for ACS Occupation	
433031	Bookkeeping, accounting, and auditing clerks	No Relevant Program for ACS Occupation	
433051	Payroll and timekeeping clerks	No Relevant Program for ACS Occupation	
433061	Procurement clerks	No Relevant Program for ACS Occupation	
433071	Tellers	No Relevant Program for ACS Occupation	
4330XX	Other financial clerks	No Relevant Program for ACS Occupation	
434031	Court, municipal, and license clerks	Criminal Justice and Protective Services	No Relevant Program for ACS Occupation
434041	Credit authorizers, checkers, and clerks	No Relevant Program for ACS Occupation	

434051	Customer service representatives	No Relevant Program for ACS Occupation
434061	Eligibility interviewers, government programs	No Relevant Program for ACS Occupation
434071	File clerks	No Relevant Program for ACS Occupation
434081	Hotel, motel, and resort desk clerks	Tourism, Hospitality and Guest Services Management
434111	Interviewers, except eligibility and loan	No Relevant Program for ACS Occupation
434121	Library assistants, clerical	Early Care And Education
434131	Loan interviewers and clerks	No Relevant Program for ACS Occupation
434141	New accounts clerks	
434161	Human resources assistants, except payroll and timekeeping	Marketing, Management and Entrepreneurship
434171	Receptionists and information clerks	No Relevant Program for ACS Occupation
434181	Reservation and transportation ticket agents and travel clerks	Tourism, Hospitality and Guest Services Management
434XXX	Correspondence clerks and order clerks	No Relevant Program for ACS Occupation
434YYY	Other information and records clerks	No Relevant Program for ACS Occupation
435011	Cargo and freight agents	No Relevant Program for ACS Occupation
435021	Couriers and messengers	No Relevant Program for ACS Occupation
435031	Public safety telecommunications	Criminal Justice and Protective Services Information Systems Technology
435032	Dispatchers, except police, fire, and ambulance	No Relevant Program for ACS Occupation
435041	Meter readers, utilities	Electrical Electronics Technology

435051	Postal service clerks	No Relevant Program for ACS Occupation	
435052	Postal service mail carriers	No Relevant Program for ACS Occupation	
435053	Postal service mail sorters, processors, and processing machine operators	No Relevant Program for ACS Occupation	
435061	Production, planning, and expediting clerks	No Relevant Program for ACS Occupation	
435071	Shipping, receiving, and inventory clerks	Automated Manufacturing	Mechatronics
435111	Weighers, measurers, checkers, and samplers, recordkeeping	No Relevant Program for ACS Occupation	
436011	Executive secretaries and executive administrative assistants	No Relevant Program for ACS Occupation	
436012	Legal secretaries and administrative assistants	Criminal Justice and Protective Services	
436013	Medical secretaries and administrative assistants	Health Technologies	
436014	Secretaries and administrative assistants, except legal, medical, and executive	No Relevant Program for ACS Occupation	
439021	Data entry keyers	No Relevant Program for ACS Occupation	
439022	Word processors and typists	No Relevant Program for ACS Occupation	
439041	Insurance claims and policy processing clerks	No Relevant Program for ACS Occupation	
439051	Mail clerks and mail machine operators, except postal service	No Relevant Program for ACS Occupation	
439061	Office clerks, general	No Relevant Program for ACS Occupation	
439071	Office machine operators, except computer	No Relevant Program for ACS Occupation	
439081	Proofreaders and copy markers	No Relevant Program for ACS Occupation	

439111	Statistical assistants	No Relevant Program for ACS Occupation	
439XXX	Other office and administrative support workers	No Relevant Program for ACS Occupation	
451011	First-line supervisors of farming, fishing, and forestry workers	No Relevant Program for ACS Occupation	
452011	Agricultural inspectors	No Relevant Program for ACS Occupation	
452041	Graders and sorters, agricultural products	No Relevant Program for ACS Occupation	
4520XX	Other agricultural workers	No Relevant Program for ACS Occupation	
453031	Fishing and hunting workers	No Relevant Program for ACS Occupation	
454011	Forest and conservation workers	No Relevant Program for ACS Occupation	
454020	Logging workers	No Relevant Program for ACS Occupation	
471011	First-line supervisors of construction trades and extraction workers	Carpentry	Electrical
472011	Boilermakers	Heating, Ventilation and Air Conditioning	Welding And Metal Fabrication
472031	Carpenters	Carpentry	
472040	Carpet, floor, and tile installers and finishers	Carpentry	
472050	Cement masons, concrete finishers, and terrazzo workers	Masonry	
472061	Construction laborers	Carpentry	
472070	Construction equipment operators	Carpentry	
472080	Drywall installers, ceiling tile installers, and tapers	Carpentry	
472111	Electricians	Electrical	
472121	Glaziers	Carpentry	
472130	Insulation workers	Carpentry	

472140	Painters and paperhangers	Carpentry	
472151	Pipelayers	Plumbing and Heating	Plumbing, Heating, and Cooling
472152	Plumbers, pipefitters, and steamfitters	Plumbing and Heating	Plumbing, Heating, and Cooling
472161	Plasterers and stucco masons	Masonry	Carpentry
472181	Roofers	Carpentry	
472211	Sheet metal workers	Welding And Metal Fabrication	
472221	Structural iron and steel workers	Welding And Metal Fabrication	
472231	Solar photovoltaic installers	Electronics Technology	
472XXX	Brickmasons, blockmasons, stonemasons, and reinforcing iron and rebar workers	Masonry	
473010	Helpers, construction trades	Carpentry	
474011	Construction and building inspectors	Carpentry	
474021	Elevator And Escalator installers and repairers	Electronics Technology	
474031	Fence erectors	Carpentry	
474041	Hazardous materials removal workers	No Relevant Program for ACS Occupation	
474051	Highway maintenance workers	No Relevant Program for ACS Occupation	
474061	Rail-track laying and maintenance equipment operators	No Relevant Program for ACS Occupation	
4740XX	Other construction and related workers	Carpentry	Plumbing and Heating
475020	Surface mining machine operators and earth drillers	Diesel and Heavy Duty Equipment Repair	
475032	Explosives workers, ordnance handling experts, and blasters	No Relevant Program for ACS Occupation	
475040	Underground mining machine operators	No Relevant Program for ACS Occupation	
4750XX	Other extraction workers	No Relevant Program for ACS Occupation	
4750YY	Derrick, rotary drill, and service unit operators, and roustabouts, oil and gas	Plumbing and Heating	
491011	First-line supervisors of mechanics, installers, and repairers	No Relevant Program for ACS Occupation	

492011	Computer, automated teller, and office machine repairers	Electronics Technology	Pre-Electrical Engineering and Applied Electronics
492020	Radio and telecommunications equipment installers and repairers	Electronics Technology	Pre-Electrical Engineering and Applied Electronics
492091	Avionics technicians	Electronics Technology	Pre-Electrical Engineering and Applied Electronics
492092	Electric motor, power tool, and related repairers	Electronics Technology	Pre-Electrical Engineering and Applied Electronics
492097	Audiovisual equipment installers and repairers	Electronics Technology	
492098	Security and fire alarm systems installers	Electronics Technology	
49209X	Other electrical and electronic equipment mechanics, installers, and repairers	Electronics Technology	Diesel and Heavy Duty Equipment Repair
493011	Aircraft mechanics and service technicians	Diesel and Heavy Duty Equipment Repair	Automotive Technology
493021	Automotive body and related repairers	Collision, Repair and Refinishing	Automotive Technology
493022	Automotive glass installers and repairers	Automotive Technology	Collision, Repair and Refinishing
493023	Automotive service technicians and mechanics	Automotive Technology	Collision, Repair and Refinishing
493031	Bus and truck mechanics and diesel engine specialists	Diesel and Heavy Duty Equipment Repair	Collision, Repair and Refinishing
493040	Heavy vehicle and mobile equipment service technicians and mechanics	Diesel and Heavy Duty Equipment Repair	Collision, Repair and Refinishing
493050	Small engine mechanics	Automotive Technology	Collision, Repair and Refinishing
493090	Miscellaneous vehicle and mobile equipment mechanics, installers, and repairers	Automotive Technology	Collision, Repair and Refinishing
499010	Control and valve installers and repairers	Precision Machining Technology	Diesel and Heavy Duty Equipment Repair
499021	Heating, air conditioning, and refrigeration mechanics and installers	Heating, Ventilation and Air Conditioning	Plumbing, Heating, and Cooling
499031	Home appliance repairers	No Relevant Program for ACS Occupation	

499043	Maintenance workers, machinery	Precision Machining Technology	Mechanical Design & Engineering Technology
499044	Millwrights	No Relevant Program for ACS Occupation	
49904X	Industrial and refractory machinery mechanics	Mechanical Design & Engineering Technology	Diesel and Heavy Duty Equipment Repair
499051	Electrical power-line installers and repairers	Electrical	
499052	Telecommunications line installers and repairers	Information Systems Technology	Electrical
499060	Precision instrument and equipment repairers	Precision Machining Technology	Automated Manufacturing
499071	Maintenance and repair workers, general	No Relevant Program for ACS Occupation	
499091	Coin, vending, and amusement machine servicers and repairers	No Relevant Program for ACS Occupation	
499094	Locksmiths and safe repairers		Mechanical Design & Engineering Technology
499096	Riggers		
499098	Helpers--installation, maintenance, and repair workers		
4990XX	Other installation, maintenance, and repair workers		
511011	First-line supervisors of production and operating workers	Automated Manufacturing	Mechatronics
512020	Electrical, electronics, and electromechanical assemblers	Electrical	Electronics Technology
512031	Engine and other machine assemblers	Automotive Technology	Diesel and Heavy Duty Equipment Repair
512041	Structural metal fabricators and fitters	Welding And Metal Fabrication	Precision Machining Technology
5120XX	Other assemblers and fabricators	Welding And Metal Fabrication	Mechanical Design & Engineering Technology
513011	Bakers	Culinary Arts	Culinary Arts and Guest Services

513020	Butchers and other meat, poultry, and fish processing workers	Culinary Arts	Culinary Arts and Guest Services
513091	Food and tobacco roasting, baking, and drying machine operators and tenders	Culinary Arts	Culinary Arts and Guest Services
513092	Food batchmakers	Culinary Arts	Culinary Arts and Guest Services
513093	Food cooking machine operators and tenders	Culinary Arts	Precision Machining Technology
513099	Food processing workers, all other	Culinary Arts	Culinary Arts and Guest Services
514020	Forming machine setters, operators, and tenders, metal and plastic	Automated Manufacturing	Welding And Metal Fabrication
514031	Cutting, punching, and press machine setters, operators, and tenders, metal and plastic	Automated Manufacturing	Welding And Metal Fabrication
514033	Grinding, lapping, polishing, and buffing machine tool setters, operators, and tenders, metal and plastic	Automated Manufacturing	Welding And Metal Fabrication
51403X	Other machine tool setters, operators, and tenders, metal and plastic	Automated Manufacturing	Welding And Metal Fabrication
514041	Machinists	Automated Manufacturing	Welding And Metal Fabrication
514050	Metal furnace operators, tenders, pourers, and casters	Automated Manufacturing	Welding And Metal Fabrication
5140XX	Model makers, patternmakers, and molding machine setters, metal and plastic	Automated Manufacturing	Welding And Metal Fabrication
514111	Tool and die makers	Precision Machining Technology	Automated Manufacturing
514120	Welding, soldering, and brazing workers	Welding And Metal Fabrication	Precision Machining Technology
514XXX	Other metal workers and plastic workers	Welding And Metal Fabrication	Precision Machining Technology
515111	Prepress technicians and workers	Graphic Technology	Digital Media
515112	Printing press operators	Graphic Technology	Automated Manufacturing
515113	Print binding and finishing workers	Automated Manufacturing	
516011	Laundry and dry-cleaning workers	No Relevant Program for ACS Occupation	
516021	Pressers, textile, garment, and related materials	Hairdressing and Cosmetology	

516031	Sewing machine operators	No Relevant Program for ACS Occupation	
516040	Shoe and leather workers	No Relevant Program for ACS Occupation	
516050	Tailors, dressmakers, and sewers	No Relevant Program for ACS Occupation	
516060	Textile machine setters, operators, and tenders	Automated Manufacturing	Mechanical Design & Engineering Technology
516093	Upholsterers	No Relevant Program for ACS Occupation	
51609X	Other textile, apparel, and furnishings workers	Precision Machining Technology	
517011	Cabinetmakers and bench carpenters	Carpentry	
517021	Furniture finishers	Carpentry	
517041	Sawing machine setters, operators, and tenders, wood	Carpentry	
517042	Woodworking machine setters, operators, and tenders, except sawing	Carpentry	Precision Machining Technology
5170XX	Other woodworkers	Carpentry	
518010	Power plant operators, distributors, and dispatchers	Electrical	Pre-Electrical Engineering and Applied Electronics
518021	Stationary engineers and boiler operators	Plumbing and Heating	Plumbing, Heating, and Cooling
518031	Water and wastewater treatment plant and system operators	Bioscience Environmental Technology	Biotechnology
518090	Miscellaneous plant and system operators	No Relevant Program for ACS Occupation	
519010	Chemical processing machine setters, operators, and tenders	Automated Manufacturing	Bioscience Environmental Technology
519020	Crushing, grinding, polishing, mixing, and blending workers	Masonry	
519030	Cutting workers	Precision Machining Technology	
519041	Extruding, forming, pressing, and compacting machine setters, operators, and tenders	Precision Machining Technology	

519051	Furnace, kiln, oven, drier, and kettle operators and tenders	Welding And Metal Fabrication	Masonry
519061	Inspectors, testers, sorters, samplers, and weighers	Precision Machining Technology	
519071	Jewelers and precious stone and metal workers	Welding And Metal Fabrication	
519080	Dental and ophthalmic laboratory technicians and medical appliance technicians	Health Technologies	
519111	Packaging and filling machine operators and tenders	Mechatronics	Automated Manufacturing
519120	Painting workers	Carpentry	
519151	Photographic process workers and processing machine operators	Precision Machining Technology	Graphic Technology
519160	Computer numerically controlled tool operators and programmers	Automated Manufacturing	Pre-Electrical Engineering and Applied Electronics
519191	Adhesive bonding machine operators and tenders	Precision Machining Technology	Automated Manufacturing
519194	Etchers and engravers	Precision Machining Technology	Mechatronics
519195	Molders, shapers, and casters, except metal and plastic	Precision Machining Technology	Automated Manufacturing
519196	Paper goods machine setters, operators, and tenders	Automated Manufacturing	
519197	Tire builders	No Relevant Program for ACS Occupation	
519198	Helpers--production workers	No Relevant Program for ACS Occupation	
5191XX	Miscellaneous production workers, including equipment operators and tenders	Precision Machining Technology	Automated Manufacturing
531000	Supervisors of transportation and material moving workers	Diesel and Heavy Duty Equipment Repair	Automotive Technology
532010	Aircraft pilots and flight engineers	No Relevant Program for ACS Occupation	

532020	Air traffic controllers and airfield operations specialists	No Relevant Program for ACS Occupation
532031	Flight attendants	Tourism, Hospitality and Guest Services Management
533011	Ambulance drivers and attendants, except emergency medical technicians	No Relevant Program for ACS Occupation
533030	Driver/sales workers and truck drivers	No Relevant Program for ACS Occupation
533051	Bus drivers, school	No Relevant Program for ACS Occupation
533052	Bus drivers, transit and intercity	No Relevant Program for ACS Occupation
533053	Shuttle drivers and chauffeurs	No Relevant Program for ACS Occupation
533054	Taxi drivers	No Relevant Program for ACS Occupation
533099	Motor vehicle operators, all other	No Relevant Program for ACS Occupation
534010	Locomotive engineers and operators	No Relevant Program for ACS Occupation
534031	Railroad conductors and yardmasters	No Relevant Program for ACS Occupation
5340XX	Other rail transportation workers	No Relevant Program for ACS Occupation
535020	Ship and boat captains and operators	No Relevant Program for ACS Occupation
5350XX	Sailors and marine oilers, and ship engineers	Mechanical Design & Engineering Technology
536021	Parking attendants	Tourism, Hospitality and Guest Services Management
536030	Transportation service attendants	Tourism, Hospitality and Guest Services Management
536051	Transportation inspectors	Mechanical Design & Engineering Technology

536061	Passenger attendants	Tourism, Hospitality and Guest Services Management
5360XX	Other transportation workers	No Relevant Program for ACS Occupation
537021	Crane and tower operators	No Relevant Program for ACS Occupation
537051	Industrial truck and tractor operators	Diesel and Heavy Duty Equipment Repair Automotive Technology
537061	Cleaners of vehicles and equipment	Automotive Technology Collision, Repair and Refinishing
537062	Laborers and freight, stock, and material movers, hand	Automotive Technology
537063	Machine feeders and offbearers	No Relevant Program for ACS Occupation
537064	Packers and packagers, hand	No Relevant Program for ACS Occupation
537065	Stockers and order fillers	No Relevant Program for ACS Occupation
537070	Pumping station operators	Plumbing and Heating Plumbing, Heating, and Cooling
537081	Refuse and recyclable material collectors	Diesel and Heavy Duty Equipment Repair Automotive Technology
5370XX	Conveyor, dredge, and hoist and winch operators	No Relevant Program for ACS Occupation
5371XX	Other material moving workers	Automotive Technology Diesel and Heavy Duty Equipment Repair

**Table A23: Summary Statistics for Industry Match Statistics**

	(1)	(2)	(3)	(4)	(5)
	American Community Survey			Applicant Sample	
	Overall	Male	Female	Male	Female
Full Sample	0.776	0.868	0.678	0.780	0.701
	(0.345)	(0.387)	(0.300)	(0.386)	(0.333)
Manufacturing	1.272	1.363	1.037	1.339	1.244
Retail	0.328	0.411	0.236	0.349	0.283
Transportation	0.428	0.452	0.369	0.494	0.586
Professional Services	0.569	0.684	0.441	0.599	0.451
Construction	0.915	0.916	0.913	0.989	0.983
Wholesale Trade	1.079	1.143	0.550	1.079	1.079
Operation Support	0.772	0.849	0.600	0.781	0.792
Office Support	0.765	0.862	0.486	0.787	0.765
Public/ Social Service	0.524	0.657	0.423	0.595	0.575
Education	0.865	0.891	0.852	0.891	0.914
Health	0.825	0.866	0.811	0.839	0.828

*Notes.* Table presents mean measure of the industry average of the occupation match (number of matches between an occupation and CTECS programs) overall and by major industry category based on the national occupational representation in each industry using the 2019 American Community Survey. Columns 1, 2 and 3 present the average match for the full ACS sample, the male sample and the female sample, respectively. Columns 4 and 5 present the average match for the male and female CTECS applicant sample

**Table A24: Industry Program Match Conditional on High School Experience**

Sample Model	(1)	(2)	(3)	(4)
	Male		Female	
	Baseline	HS Experience	Baseline	HS Experience
Offer	0.0453*** (0.0109)	0.0424*** (0.0118)	0.00356 (0.00642)	0.000100 (0.00883)
High School Experience		0.0168** (0.00777)		0.0212* (0.0109)
HS Industry Experience		0.00630 (0.00849)		-0.0145 (0.0124)
High School Experience*Offer		-0.0192 (0.0128)		-0.00228 (0.0101)
HS Industry Experience*Offer		0.0244** (0.00958)		0.00662 (0.00850)
Observations		204,654		167,452
R-squared		0.053		0.031

Notes: Table presents models of occupation to CTECS program match for a worker's specific industry choice. The first panel presents an estimate of the match on offer. The second panel presents estimates on the interaction of offer with indicator variables for all major industry categories including retail and the variable offer itself is excluded so all estimates are relative to a zero effect of offer on industry match. Columns 1 and 3 present estimates from Table 7 for males and females, respectively. Columns 2 and 4 present estimates in a model that also includes controls for indicators of high school work experience and high school work experience in the major industry category plus these two controls interacted with offer. Robust standard errors, clustered at the school-by-year and district levels in parentheses. \*\*\* p<0.01, \*\* p<0.05, \* p<0.1

**Table A24: Industry Program Match Conditional on High School Experience (Continued)**

	(1)	(2)	(3)	(4)
	Effects of Offer By Industry Category			
Sample	Male		Female	
Model	Baseline	HS Experience	Baseline	HS Experience
Offer	-0.376*** (0.0144)	-0.336*** (0.0112)	-0.408*** (0.0119)	-0.380*** (0.0107)
High School Experience		0.0282*** (0.00724)		0.0307** (0.0119)
HS Industry Experience		0.0154* (0.00815)		-0.0113 (0.0127)
High School Experience*Offer		-0.0460*** (0.00781)		-0.0443*** (0.0115)
HS Industry Experience*Offer		0.000906 (0.00799)		0.0158 (0.0120)
Manufacturing*Offer	0.971*** (0.00893)	0.972*** (0.00890)	0.959*** (0.0184)	0.960*** (0.0184)
Transportation*Offer	0.149*** (0.0236)	0.152*** (0.0235)	0.300*** (0.0330)	0.301*** (0.0330)
Professional*Offer	0.228*** (0.0121)	0.230*** (0.0121)	0.153*** (0.0111)	0.154*** (0.0111)
Services*Offer	0.632*** (0.00709)	0.632*** (0.00703)	0.690*** (0.00585)	0.690*** (0.00587)
Construction*Offer	0.703*** (0.00444)	0.704*** (0.00443)	0.784*** (0.00809)	0.784*** (0.00812)
Wholesale Trade*Offer	0.417*** (0.00557)	0.420*** (0.00564)	0.504*** (0.0127)	0.505*** (0.0130)
Operation Support*Offer	0.425*** (0.0209)	0.427*** (0.0210)	0.494*** (0.0147)	0.496*** (0.0147)
Office Support*Offer	0.242*** (0.00539)	0.245*** (0.00535)	0.282*** (0.00860)	0.284*** (0.00858)
Public/Social Service*Offer	0.411*** (0.0133)	0.413*** (0.0133)	0.507*** (0.00763)	0.508*** (0.00768)
Education*Offer	0.535*** (0.00681)	0.537*** (0.00695)	0.628*** (0.00596)	0.628*** (0.00599)
Health*Offer	0.489*** (0.00439)	0.490*** (0.00436)	0.536*** (0.00407)	0.537*** (0.00411)
Observations	204,056	204,056	167,266	167,266
R-squared	0.492	0.492	0.511	0.511

**Table A25: Earnings by Industry controlling for High School Experience**

Sample Model	(1)	(2)	(3)	(4)
	Baseline	Male Experience	Baseline	Female Experience
Offer	0.0545** (0.0249)	0.113*** (0.0297)	0.0750** (0.031)	0.110*** (0.0394)
High School Experience		-0.439*** (0.0278)		-0.542*** (0.0256)
HS Industry Experience		0.930*** (0.0221)		0.948*** (0.0182)
High School Experience*Offer		-0.129*** (0.0249)		-0.0579* (0.0325)
HS Industry Experience*Offer		0.0620*** (0.0231)		0.0146 (0.0185)
Manufacturing*Offer	0.0627** (0.0280)	0.0476* (0.0279)	-0.00455 (0.0503)	-0.0136 (0.0460)
Transportation*Offer	0.130** (0.0556)	0.139*** (0.0522)	-0.0101 (0.0744)	-0.00463 (0.0697)
Professional*Offer	0.167*** (0.0459)	0.159*** (0.0438)	-0.0744 (0.0485)	-0.0713* (0.0394)
Services*Offer	0.0321 (0.0369)	0.0298 (0.0330)	0.00165 (0.0294)	0.00157 (0.0278)
Construction*Offer	0.189*** (0.0367)	0.158*** (0.0316)	0.235 (0.210)	0.213 (0.163)
Wholesale Trade*Offer	0.0150 (0.0556)	0.0157 (0.0484)	-0.0249 (0.145)	-0.0683 (0.137)
Operation Support*Offer	0.102** (0.0501)	0.102** (0.0469)	0.00365 (0.0752)	-0.00957 (0.0604)
Office Support*Offer	0.128*** (0.0469)	0.153*** (0.0427)	0.0400 (0.0438)	0.0548 (0.0569)
Public/Social Service*Offer	-0.116 (0.0947)	-0.104 (0.0922)	0.0335 (0.0547)	0.0351 (0.0528)
Education*Offer	-0.136 (0.0968)	-0.113 (0.103)	-0.117 (0.0711)	-0.124* (0.0714)
Health*Offer	-0.0349 (0.0601)	-0.0327 (0.0531)	-0.0550 (0.0359)	-0.0591* (0.0344)
R-Square	0.184	0.232	0.098	0.143
Observations	204,467	204,467	167,611	167,611

*Notes:* Table presents reduced-form, RD local linear regression estimates of the interaction of offer with major industry category indicator variables where the dependent variable is the log of quarterly earnings. Columns 1 and 3 present the estimates from Table 6 panel 2 for the male and female subsamples. Columns 2 and 4 present estimates for the same model except that controls are added for indicators of high school work experience, high school work experience in the major industry category, and these two controls interacted with offer. Robust standard errors, clustered at the school-by-year and district levels in parentheses. \*\*\* p<0.01, \*\* p<0.05, \* p<0.1

**Table A26: Move to High Paying Industry as Dependent Variable with No Controls**

Sample	(1) Male	(2) Female
Baseline Model		
Offer	0.0848*** (0.0178)	0.00292 (0.0194)
Observations	10,656	10,568
R-squared	0.074	0.073
Includes Initial Industry Fixed Effects		
Offer	0.0840*** (0.0175)	0.00267 (0.0193)
Observations	10,656	10,568
R-squared	0.079	0.075
Effects of Offer By Initial Industry Category		
Retail*Offer	0.0970*** (0.0191)	0.00213 (0.0226)
Transportation*Offer	0.0542 (0.0331)	-0.0191 (0.0768)
Services*Offer	0.0642** (0.0247)	-0.0119 (0.0230)
Office Support*Offer	0.117** (0.0476)	0.0863* (0.0439)
Public/Social Service*Offer	0.105 (0.0652)	0.0136 (0.0323)
Education*Offer	0.0156 (0.0554)	0.0510 (0.0434)
Observations	10,656	10,568
R-squared	0.079	0.075

*Notes:* Table presents models of a change in the worker's industry category choice from low paying to high paying industry from the first to the last quarter of earnings observed. The first two panels present an estimate of the likelihood of offer on moving to a high paying industry with the second panel adding initial industry fixed effects. The third panel presents estimates on the interaction of offer with indicators for lower paying major industry categories the variable offer itself is excluded so all estimates are relative to a zero effect of offer on move to high paying industry. Column 1 presents estimates for males and column 2 for females. The sample only includes individuals observed in lower paying industries for the first quarter of labor market earnings. All estimates are based on a reduced form RD specification using local linear regression and a 15-point bandwidth. All specifications include CTECS school-by-year fixed effects and resident 8<sup>th</sup> grade school district fixed effects. The models in the second and third panels also include major industry category fixed effects. Robust standard errors, clustered at the school-by-year and district levels in parentheses. \*\*\* p<0.01, \*\* p<0.05, \* p<0.1

**Table A27: Earnings Changes with Move to High Paying Industry with No Controls**

Sample	(1)	(2)
	Male	Female
Baseline Model		
Offer	0.0286 (0.0479)	0.0404 (0.0688)
Move to High Paying Industry	0.357*** (0.0523)	0.235*** (0.0706)
Offer*Move to High Paying Industry	0.0112 (0.0567)	0.0582 (0.0700)
Observations	10,650	10,563
R-squared	0.168	0.131
Includes Initial and Final Industry Fixed Effects		
Offer	0.0486 (0.0506)	0.0368 (0.0638)
Move to High Paying Industry	0.149** (0.0664)	0.0995 (0.0942)
Offer*Move to High Paying Industry	-0.0361 (0.0545)	0.0404 (0.0684)
Observations	10,629	10,547
R-squared	0.271	0.275

*Notes:* Table presents models of a change in the worker's quarters log earnings between earliest and latest quarters of work as a function of whether moved from low paying to high paying industry category between the first and last quarter of earnings observed. Earliest and latest quarter earnings are based on the maximum of earnings in that quarter or the immediately following or preceding quarter for the first and last quarters, respectively. All specifications include CTECS school-by-year fixed effects, resident 8<sup>th</sup> grade school district fixed effects, year and quarter of earliest earnings fixed effects, year and quarter of latest earnings fixed effects, number of quarters since expected high school graduation until quarter of earliest earnings fixed effects and number of quarters since expected high school graduation until quarter of latest earnings fixed effects. The models in the second panel also includes initial major industry category fixed effects and final major industry category fixed effects. Robust standard errors, clustered at the school-by-year and district levels in parentheses. \*\*\* p<0.01, \*\* p<0.05, \* p<0.1

**Table 28: Earnings by Industry by Timing**

	(1)	(2)	(3)	(4)
	Male Students		Female Students	
	Baseline	Industry FE's	Baseline	Industry FE's
Offer	0.136*** (0.0392)	0.0896** (0.0345)	0.0564* (0.0304)	0.0784** (0.0314)
Later Quarters	0.0606*** (0.0205)	0.0476** (0.0194)	0.0686*** (0.0188)	0.0642*** (0.0197)
Offer*Later Quarter	0.0051 (0.0209)	0.00971 (0.0199)	0.00512 (0.0226)	-0.00322 (0.0228)
R-Square	0.106	0.189	0.06	0.106
Observations	140,515	140,109	105,678	105,548
Industry*	Offer	Offer*Later	Offer	Offer*Later
Retail	0.0339 (0.0368)	-0.000715 (0.0477)	0.0681 (0.0466)	-0.0193 (0.0480)
Manufacturing	0.0977* (0.0582)	-0.00957 (0.0360)	0.151 (0.116)	-0.140 (0.125)
Transportation	0.153 (0.0936)	0.0507 (0.109)	0.120 (0.182)	-0.0177 (0.165)
Professional	0.290*** (0.0891)	-0.0821 (0.116)	-0.0410 (0.0855)	0.0234 (0.0902)
Services	0.0622 (0.0481)	0.0729 (0.0504)	0.127*** (0.0448)	-0.0507 (0.0429)
Construction	0.280*** (0.0608)	-0.0843 (0.0609)	0.221 (0.329)	0.298 (0.289)
Wholesale Trade	-0.0391 (0.0689)	0.0445 (0.0779)	0.249 (0.235)	-0.185 (0.263)
Operation Support	0.104 (0.101)	0.0641 (0.0650)	0.0359 (0.102)	0.200 (0.159)
Office Support	0.176* (0.0902)	0.0374 (0.103)	0.223*** (0.0691)	-0.0269 (0.106)
Service	-0.0469 (0.139)	0.0614 (0.163)	0.123 (0.0779)	0.0912 (0.0822)
Education	0.0802 (0.136)	-0.335** (0.158)	-0.0905 (0.131)	0.122 (0.115)
Health	0.0482 (0.0760)	0.00528 (0.0966)	0.0234 (0.0598)	0.0385 (0.0648)
R-Square	0.193		0.109	
Observations	140,109		105,548	

*Notes:* Table presents reduced-form estimates where the dependent variable is the log of quarterly earnings. The sample is restricted to application cohorts 2006 to 2009, dropping later application cohorts with less labor market experience. A dummy variable called later is created that is one except for the first three quarters of earnings in our sample, i.e. quarters starting the first quarter of the year following a five year graduation from high school and up to three years later, and this variable is interacted with offer. All estimates are based on a RD specification using local linear regression and a 15-point bandwidth. Models 1 and 2 present estimates for the sample of male students. Models 3 and 4 present estimates for the sample of female students. Models 1 and 4 present estimates that exclude industry fixed effects. Models 1 and 3 present estimates for models without industry fixed effects, and models 2 and 4 included industry FE's and the interaction of these fixed effects with offer. The omitted or reference industry is retail. All specifications include CTECS school-by-year fixed effects, resident 8<sup>th</sup> grade school district fixed effects, quarter and year fixed effects and the full set of controls listed in Table 3. Robust standard errors, clustered at the school-by-year and district levels in parentheses. \*\*\* p<0.01, \*\* p<0.05, \* p<0.1