

Appendix Table 1. The Ratios (in Percents) of Fall Enrollment to the Population Aged 18 to 24 Years Old by Institution Type
New England and the United States, 2014

	Public		Private				Total
	Four-year	Two-year	Four-year		Two-year		
			Nonprofit	For-profit	Nonprofit	For-profit	
United States	26.3	20.4	12.6	4.0	0.1	0.9	64.3
New England	20.0	14.4	33.2	1.1	0.1	0.1	69.0
Connecticut	19.1	15.7	20.1	2.6	0.0	0.0	57.5
Maine	27.0	16.0	18.6	1.4	0.3	0.4	63.6
Massachusetts	17.8	14.5	39.9	0.5	0.2	0.2	73.0
New Hampshire	21.9	11.6	47.5	1.7	0.1	0.0	82.8
Rhode Island	21.5	15.0	34.7	0.0	0.0	0.0	71.1
Vermont	29.1	8.9	26.5	0.6	0.0	0.0	65.1

Sources: National Center for Education Statistics, Digest of Education Statistics; U.S. Census Bureau.

Appendix Table 2. Estimated Regression Coefficients on State Appropriations per Full-time-equivalent Student

	A. Effect of State Appropriations on Tuition and Fees of Public Institutions				Net Tuition and Fees per Full-time-equivalent Student
	Sticker-price Tuition and Fees				
	Full-time Undergraduate		Full-time Graduate		
	In-state	Out-of-state	In-state	Out-of-state	
Doctoral Institutions	-0.137***	-0.263***	-0.107**	-0.170**	-0.170***
Master's Institutions	-0.102	-0.171	-0.0484	-0.147	-0.106
Bachelor's Institutions	0.244	-0.223			-0.0918
Associate's Institutions	-0.0683				0.0797

Source: Author's calculations.

Notes: (1) Each cell reports the estimates on state appropriations per full-time-equivalent student in a regression of the column variable for each institution type. Each regression specification includes control variables of federal grants and contracts less Pell Grants per full-time-equivalent student; private gifts, grants, and contracts per full-time-equivalent student; state unemployment rate (except for regressions of out-of-state tuition); institution and year fixed effects; as well as a constant.

(2) All financial variables are in thousands of 2012 dollars.

(3) * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$.

	B. Effect of State Appropriations on Expenditures of Public Institutions				
	Education and Related Expenditures	Instructional Expenditures	Instructional Faculty per 100 Full-time-equivalent Students	Research Expenditures	Public Service Expenditures
Doctoral Institutions	0.488***	0.290***	0.0795***	0.109***	0.0742**
Master's Institutions	0.558***	0.290***	0.151***	0.00768	0.0371***
Bachelor's Institutions	0.626***	0.181*	0.170***		0.0145
Associate's Institutions	1.022***	0.555***	0.348***		0.0262

Source: Author's calculations.

Notes: (1) Each cell reports the estimates on state appropriations per full-time-equivalent student in a regression of the column variable for each institution type. Each regression specification includes control variables of federal grants and contracts less Pell Grants per full-time-equivalent student; private gifts, grants, and contracts per full-time-equivalent student; state unemployment rate; institution and year fixed effects; as well as a constant.

(2) All financial variables are in thousands of 2012 dollars.

(3) * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$.

C. Effect of State Appropriations on Degree Completions of Public Institutions

	Doctoral Degrees Granted	Master's Degrees Granted	Bachelor's Degrees Granted	Associate's Degrees Granted
Doctoral Institutions	0.0127**	0.0807***	0.0280	
Master's Institutions		-0.0109	0.156**	
Bachelor's Institutions			0.152	
Associate's Institutions				0.566***

Source: Author's calculations.

Notes: (1) Degrees granted are per 100 full-time-equivalent students.

(2) Each cell reports the estimates on state appropriations per full-time-equivalent student in a regression of the column variable for each institution type. Each regression specification includes control variables of federal grants and contracts less Pell Grants per full-time-equivalent student; private gifts, grants, and contracts per full-time-equivalent student; state unemployment rate; institution and year fixed effects; as well as a constant.

(3) All financial variables are in thousands of 2012 dollars.

(4) * p<0.10, ** p<0.05, *** p<0.01.

D. Effect of State Appropriations on Approved Patent Applications and Research Expenditures of Public Doctoral Institutions

	Approved Patent Applications per 1,000 Full-time-equivalent Students	Research Expenditure per Full-time-equivalent Student	Research Expenditure on Wages and Salaries per Full-time-equivalent Student
Using No Instrumental Variable (IV)	0.0236**	0.150***	0.129***
Using Z_{it}^1 as the IV	0.0532***	0.186***	0.154***
Using Z_{it}^2 as the IV	0.0746***	0.214***	0.105**

Source: Author's calculations.

Notes: (1) The sample includes 103 public doctoral institutions.

(2) See equations 6 and 7 in Zhao (2018b) for the construction of the IVs, Z_{it}^1 and Z_{it}^2 , respectively.

(3) The specification for the first column includes controls for net tuition and fees per full-time-equivalent student; federal grants and contracts per full-time-equivalent student; private gifts, grants, and contracts per full-time-equivalent student; federal appropriations per full-time-equivalent student; investment return per full-time-equivalent student; local appropriations per full-time-equivalent student; total full-time-equivalent students; institution and year fixed effects; as well as a constant.

(4) The specifications for the second and third columns include controls for net tuition and fees per full-time-equivalent student; federal grants and contracts per full-time-equivalent student; private gifts, grants, and contracts per full-time-equivalent student; federal appropriations per full-time-equivalent student; investment return per full-time-equivalent student; local appropriations per full-time-equivalent student; institution and year fixed effects; as well as a constant.

(5) All financial variables are in thousands of 2012 dollars.

(6) * p<0.10, ** p<0.05, *** p<0.01.