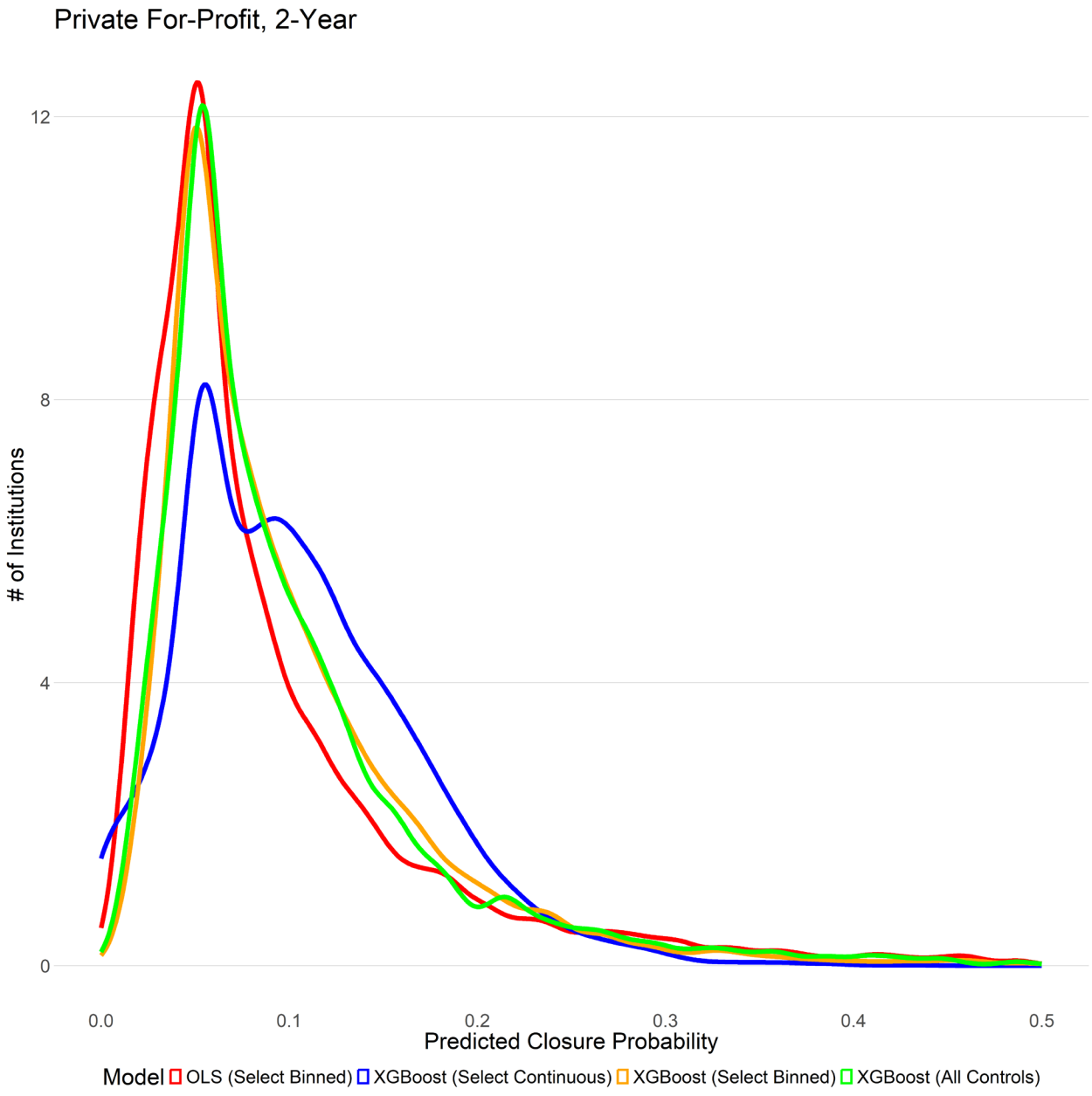
Appendix A

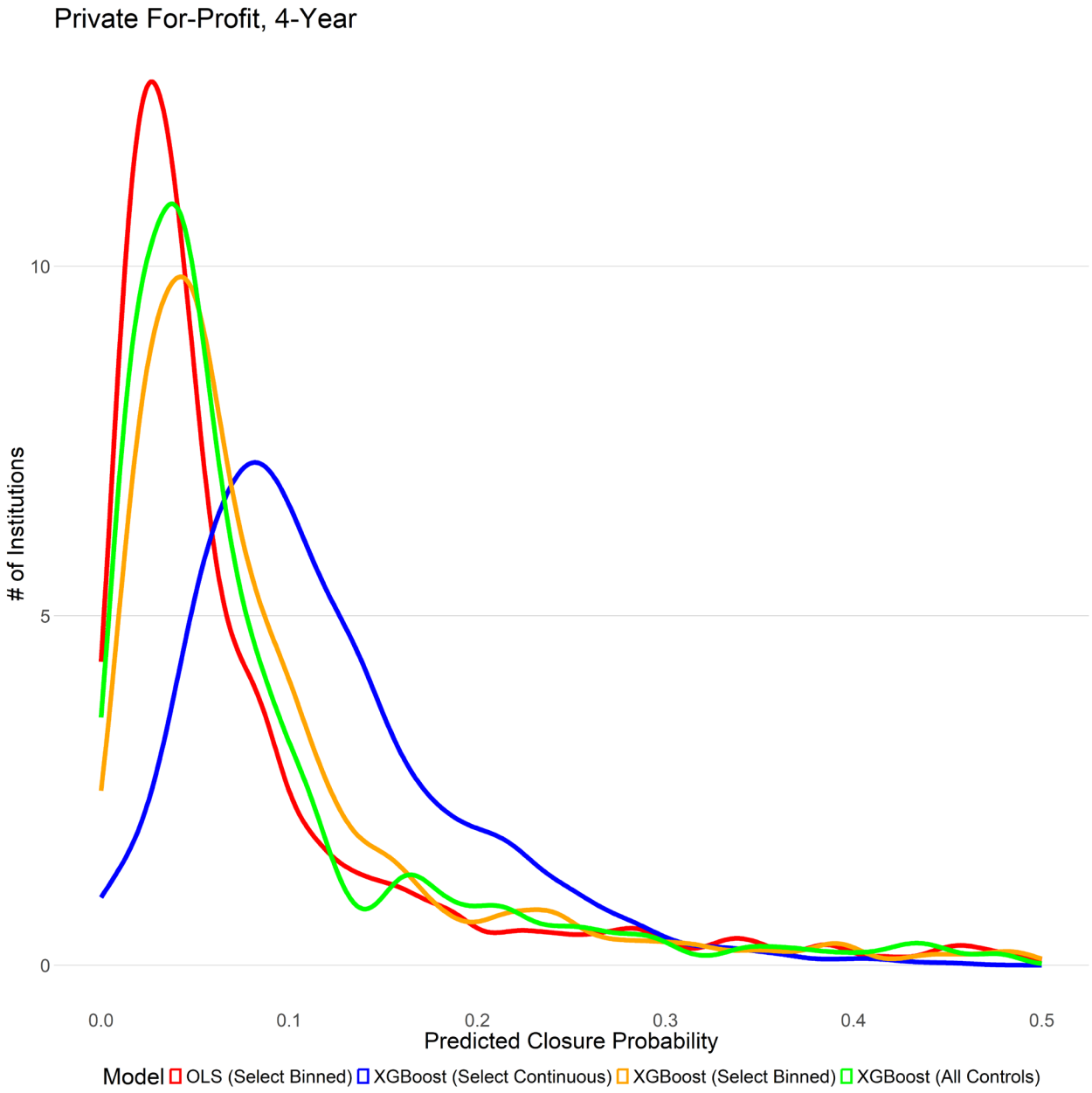
Figure A1a - Distributions of Closure Predictions by Model, Private For-Profit Two-Year, 2002-2023



Source: Authors' calculations based on IPEDS, PEPS Closed School Reports, College Scorecard, Federal Student Aid, U.S. Bureau of Economic Analysis, U.S. Census Bureau, and U.S. Bureau of Labor Statistics data, 1996–2023

Notes: Notes: Models estimated or trained on 75 percent of institution-year observations; distribution of predicted values reported for remaining evaluation observations (25 percent).

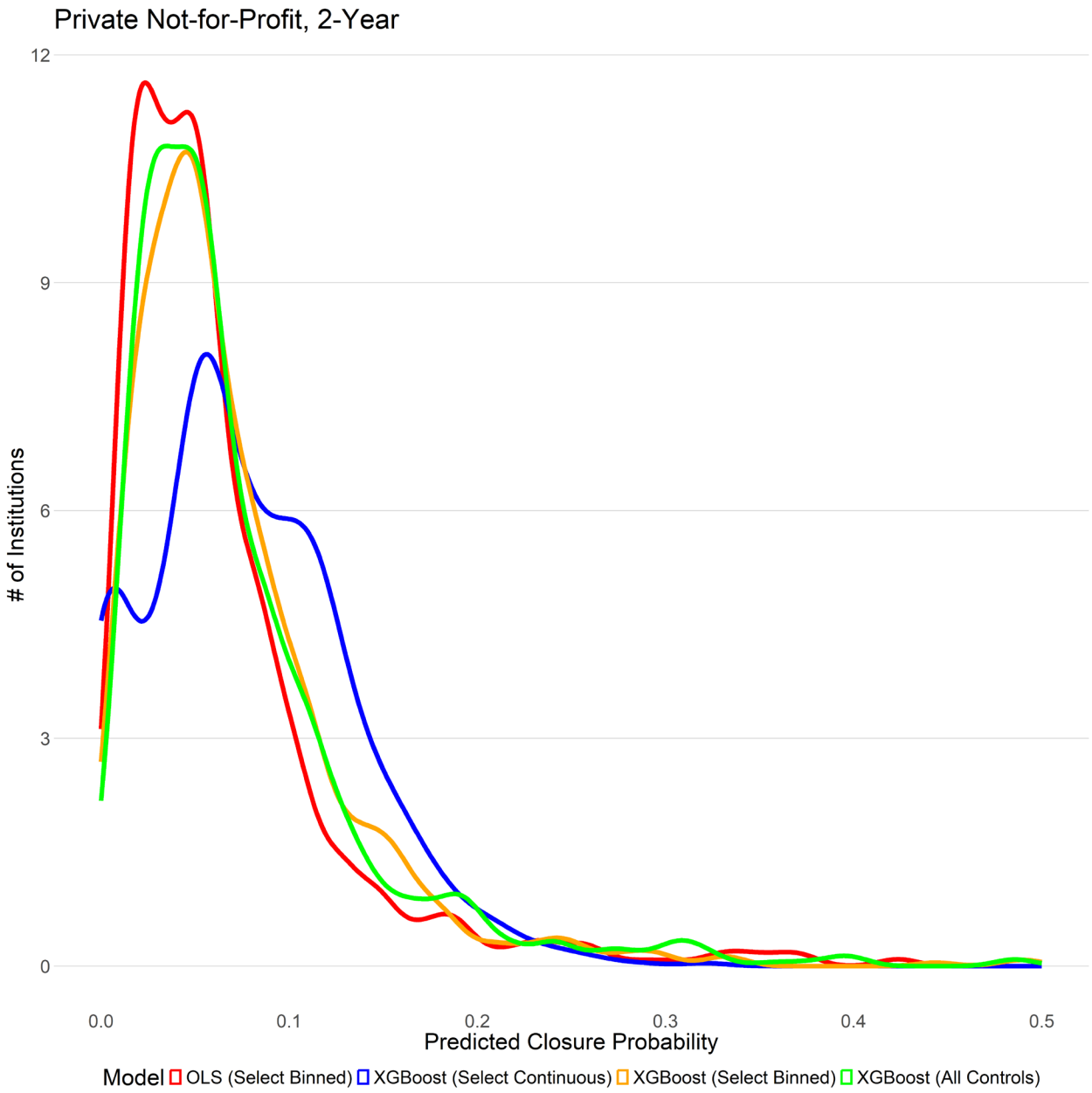
Figure A1b - Distributions of Closure Predictions by Model, Private For-Profit Four-Year, 2002–2023



Source: Authors' calculations based on IPEDS, PEPS Closed School Reports, College Scorecard, Federal Student Aid, U.S. Bureau of Economic Analysis, U.S. Census Bureau, and U.S. Bureau of Labor Statistics data, 1996–2023

Notes: Notes: Models estimated or trained on 75 percent of institution-year observations; distribution of predicted values reported for remaining evaluation observations (25 percent).

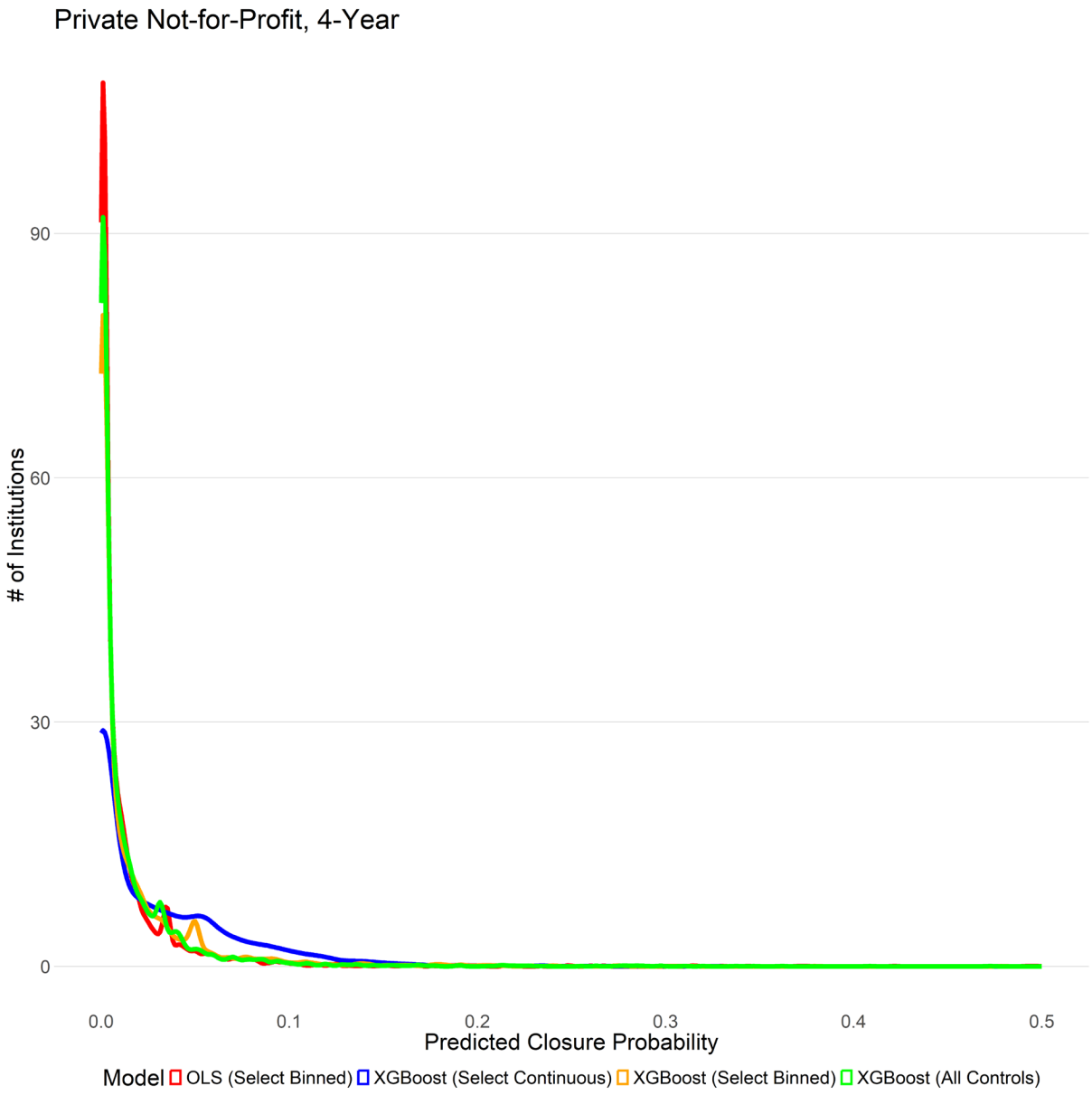
Figure A1c - Distributions of Closure Predictions by Model, Private Nonprofit Two-Year, 2002–2023



Source: Authors' calculations based on IPEDS, PEPS Closed School Reports, College Scorecard, Federal Student Aid, U.S. Bureau of Economic Analysis, U.S. Census Bureau, and U.S. Bureau of Labor Statistics data, 1996–2023

Notes: Notes: Models estimated or trained on 75 percent of institution-year observations; distribution of predicted values reported for remaining evaluation observations (25 percent).

Figure A1d - Distributions of Closure Predictions by Model, Private Nonprofit Four-Year, 2002–2023



Source: Authors' calculations based on IPEDS, PEPS Closed School Reports, College Scorecard, Federal Student Aid, U.S. Bureau of Economic Analysis, U.S. Census Bureau, and U.S. Bureau of Labor Statistics data, 1996–2023

Notes: Notes: Models estimated or trained on 75 percent of institution-year observations; distribution of predicted values reported for remaining evaluation observations (25 percent).

Table A1 – Descriptive Statistics, 2002–2023

		Never-Closed Institutions			Closed Institutions (2 yrs Earlier)		
Covariate Type	**Covariate**	**Mean**	**Median**	**% w/ Data**	**Mean**	**Median**	**% w/ Data**
Accountability Metrics	Heightened Cash Monitoring (Level 2)	1%	No	100%	1%	No	100%
	Financial responsibility composite score	2.3	2.5	37%	1.8	2.0	5%
Financial Performance	Operating margin	4.1%	9.2%	79%	-44.8%	3.0%	10%
	Persistently negative operating margin	15.7%	No	69%	35.5%	No	28%
	YOY change, operating margin	0%	0%	77%	-2%	0%	10%
	Days cash on hand (DCOH)	170.3	11.4	100%	10.1	0.0	100%
	YOY change, DCOH	-339%	0%	99%	-2158%	0%	100%
	Debt ($mil)	94.9	5.4	59%	2.3	0.0	4%
	EBIDA ($mil)	19.0	1.7	79%	0.2	0.0	10%
	Debt to EBIDA	-123.2	0.9	54%	-4.6	0.0	4%
	Debt to assets	2399.7	0.0	75%	0.0	0.0	12%
	YOY change, debt to assets	-1%	0%	74%	-2%	0%	12%
	Unrestricted net assets ($mil)	72.2	2.1	93%	2.7	0.0	16%
Revenue	Total revenue ($mil)	138.8	23.3	93%	6.1	1.5	16%
	YOY change, total revenue	5%	2%	92%	-13%	-2%	16%
	Revenue 10% lower than 5-year high	40%	No	92%	86%	Yes	16%
	Tuition/total revenue	48%	45%	93%	77%	86%	16%
	Auxiliary/total revenue	7%	4%	75%	3%	0%	8%
	Investment revenue/total revenue	3%	0%	93%	1%	0%	16%
	Gifts, grants, contracts/total revenue	4%	0%	82%	1%	0%	16%
Expenses	Total expenses ($mil)	130.5	22.6	93%	6.5	1.5	16%
	Instructional/total expenses	40%	37%	93%	45%	38%	16%
	Scholarships/total expenses	16%	13%	93%	6%	0%	16%
	Interest/total expenses	1%	1%	79%	1%	0%	10%
	Depreciation/total expenses	5%	5%	79%	3%	2%	10%
Staff	Total staff	689.0	195.0	94%	33.7	11.0	18%
	YOY change, total staff	3%	1%	91%	-8%	0%	18%
	Instructional/total staff	50%	50%	89%	52%	50%	13%
	Full-time/total staff	66%	68%	94%	75%	77%	17%
Enrollment	Total enrollment (12-month)	5190.0	1257.0	95%	214.2	0.0	99%
	YOY change, 12-month enrollment	3%	0%	92%	-38%	-58%	94%
	Undergraduate/total enrollment	87%	100%	93%	97%	100%	44%
	Enrollment 10% lower than 5-year high	41%	0%	94%	93%	100%	99%
	3 consecutive years of >5% enrollment drops	3%	0%	94%	21%	0%	93%
County Controls	Population (mil)	1.1	0.4	92%	1.5	0.8	96%
	Personal income per capita ($)	46670.8	42450.0	92%	52095.9	47541.0	96%
	Unemployment rate	1%	0%	95%	0%	0.1	99%
	Poverty rate	15%	14%	93%	14%	0.1	97%
	# of Observations			110,559			1,263

Source: Authors' calculations based on IPEDS, PEPS Closed School Reports, College Scorecard, Federal Student Aid, U.S. Bureau of Economic Analysis, U.S. Census Bureau, and U.S. Bureau of Labor Statistics data, 2002–2023

Notes: Number of observations reflects the 2002–2023 sample; many covariates are missing at much lower rates for the subsample used for some of the analysis (2006–2020). Examples include the financial responsibility composite score and financial data. Never-closed institutions are included in the sample each year they reported being in operation. The 1,263 closed institutions are observed once, two years before closure, because the data is predominantly missing in the year of actual closure.