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Where Is Student Debt Highest?

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Many students in the US borrow money to help finance their higher education. Almost 70 percent of all students graduating from four-year colleges in 2012 had student loan debt (Dunlop Velez and Woo 2017). Americans owed over $1.38 trillion in student loan debt at the end of 2017, an increase from $0.55 trillion a decade earlier.[1] In addition, debt levels have risen rapidly for graduates of all types of postsecondary programs.[2]

Although there is great focus on student debt at the national level, the geographic distribution of debt receives less attention.[3] In this brief, we fill this gap by answering two research questions:

- In which regions and states are college students most likely to borrow to pay for their postsecondary studies?
- How does student debt relate to the cost of attending college in those states?

We use two datasets to identify the regions and states with the largest shares of college students with student debt. We find that **the Midwest and the Northeast are the two regions with the highest shares of college students borrowing.** New Hampshire, Maine, and Pennsylvania are among the states with the largest shares of undergraduates borrowing, and New Mexico, Wyoming, and California are among those with the lowest shares.

To investigate how student debt relates to the cost of attending a public four-year institution in a state, we define the average cost of attending public college as the average public four-year in-state tuition and fees minus the average state grant aid provided to students. We find that **the share of college enrollees borrowing in a state is highly correlated with the cost of attending a public four-year college in that state.** New Hampshire—a state with high student debt—has the highest average cost of attending a four-year public institution, and Wyoming—a state with low student debt—has the lowest.

BOX 1

Data and Definitions

We use credit bureau data consisting of a random 2 percent sample of seven years (2010–16) of depersonalized consumer data from a major credit bureau. Consumers were chosen based on the last two digits of their personal identification numbers (assigned by the credit bureau for internal use). The information was collected for each August from 2010 through 2016, creating panel data with seven snapshots for each consumer. All records were stripped of personally identifiable information, and no data on race/ethnicity, gender, or income were included (see Li and Goodman 2015 for more details).

The data included the zip code, age, and student loan status (deferred, open, or derogatory) of each consumer. We do not know if the consumer is enrolled in college or what type of institution he or she attends. To address this limitation, we enrich our data with information from the American Community Survey (ACS).

The state of residency of college students in the credit bureau data might be misrepresented for out-of-state students, who may report their parent's state of residency in their credit files. Because of this limitation, we also investigate the geographic distribution of student debt using the Department of Education's College Scorecard.[a]

We restrict our credit bureau analysis to adults ages 19 to 22. Individuals are considered to have a new student loan in the past year if they experienced an increase in deferred student loans of any type (federal or private) greater than $250 from the previous year. The population of college students ages 19 to 22 in a state is estimated using the ACS.

The share of college enrollees with new student debt in a state is the estimated number of adults ages 19 to 22 with a new student loan (from the credit bureau data) divided by the number of students ages 19 to 22 enrolled in college (from the ACS). The average amount borrowed in a state is the average deferred student loan of any type (federal or private) acquired in the past year among adults ages 19 to 22 with new student debt. To address the noisiness of the series for smaller states, we take the average of the share and amount of student debt over the three years from 2014 to 2016.

Further evidence is provided by the Department of Education's College Scorecard data, which are based on federal reporting from institutions, data on federal financial aid, and tax information. Student loans are measured at the institutional level, not at the student level. We gather information on the share of undergraduate students who received federal loans in a year at each institution. Using the number of undergraduate students enrolled in each institution, we estimate the share of undergraduates in a state receiving federal student loans. The data only contain information on median student loan amount at the institutional level at the time of college separation (no information on the average amount of student loans for all enrollees).

The average cost of attending college is the average in-state tuition and fees at public four-year institutions minus the average state grant aid per full-time equivalent undergraduate student. Tuition information is from the College Board's Annual Survey of Colleges. Aid information is from the Annual Survey Report on State-Sponsored Student Financial Aid from the National Association of State Student Grant and Aid Programs.

[a] "College Scorecard," US Department of Education, accessed March 23, 2018, https://collegescorecard.ed.gov/.

We discuss the distribution of student debt across the country and the cost of attending college, but this brief does not address the long-term consequences of student debt. We hope future work can

identify how the cost of attending college in a state relates to the return on investment for students and the likelihood of repaying student debt.

Results

The Midwest and the Northeast are the two regions with the highest shares of college students borrowing (figure 1). Based on the credit bureau data, we estimate that 45 percent of college students ages 19 to 22 in the Northeast and 44 percent of those in the Midwest had used student loans in the previous year to finance their education. The College Scorecard data show a similar pattern, with 48 percent of undergraduate students in the Midwest and 45 percent in the Northeast taking federal student loans.

New Hampshire, Maine, and Pennsylvania are among the states with the largest shares of undergraduates borrowing, according to the credit bureau and College Scorecard data. New Hampshire in particular has the highest share of college students with student loans in both datasets. Between 2014 and 2016, about 58 percent of college students in New Hampshire had used student loans in the previous year to finance their studies.

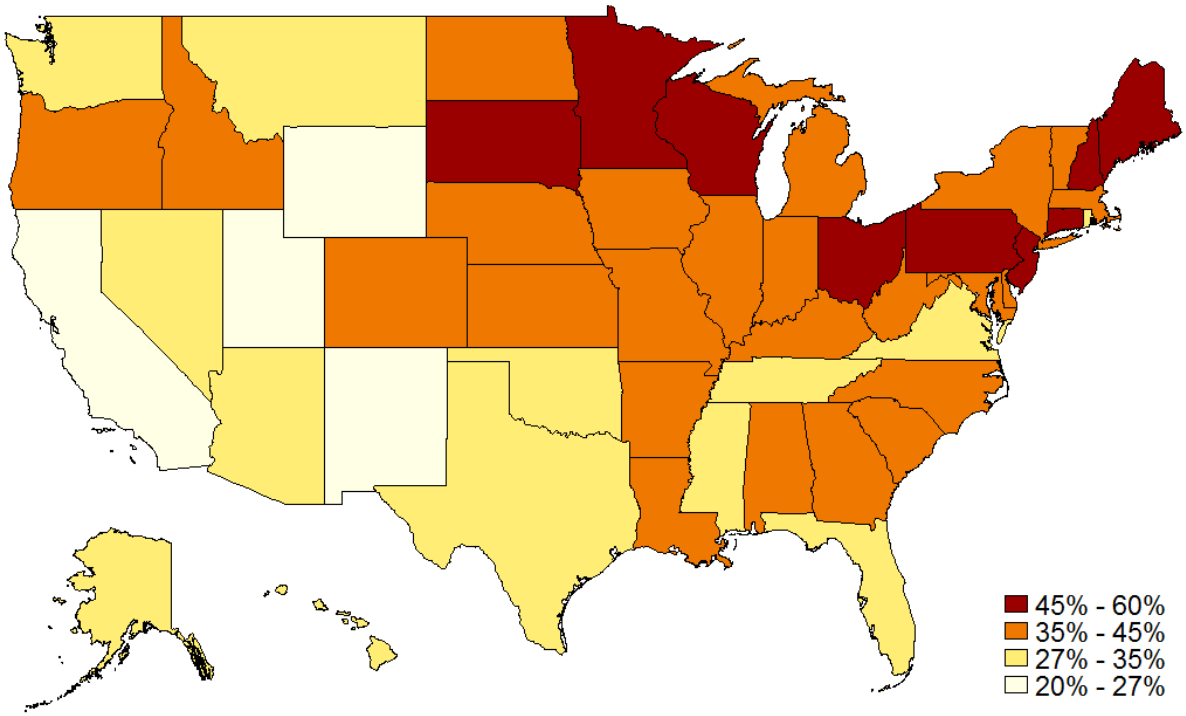
The Western region of the country has the lowest share of college enrollees borrowing according to both the credit bureau and College Scorecard data. There, only 26 percent of college students in the credit bureau dataset and 28 percent of those in the College Scorecard data had used student loans in the preceding year.

In terms of specific states, New Mexico, Wyoming, and California consistently have among the lowest shares of college students borrowing in both datasets. Only 23 percent of Californian college students used student loans in the previous year to finance their education (figure 1).[4]

FIGURE 1

Student Debt among College Students Is Concentrated in the Midwest and Northeast

Share of college students with new student debt, 2014–16



Sources: Credit bureau data (from August of each year) and American Community Survey data from 2014 to 2016.
Notes: Sample restricted to adults ages 19 to 22. The share of college students with new student debt is the estimated number of adults ages 19 to 22 who took out any kind of student loan in the previous year (per the credit bureau data) divided by the total number of college students ages 19 to 22 (per the American Community Survey). We take the average over a three-year period to address the noisiness of the data for smaller states. See box 1 for details.

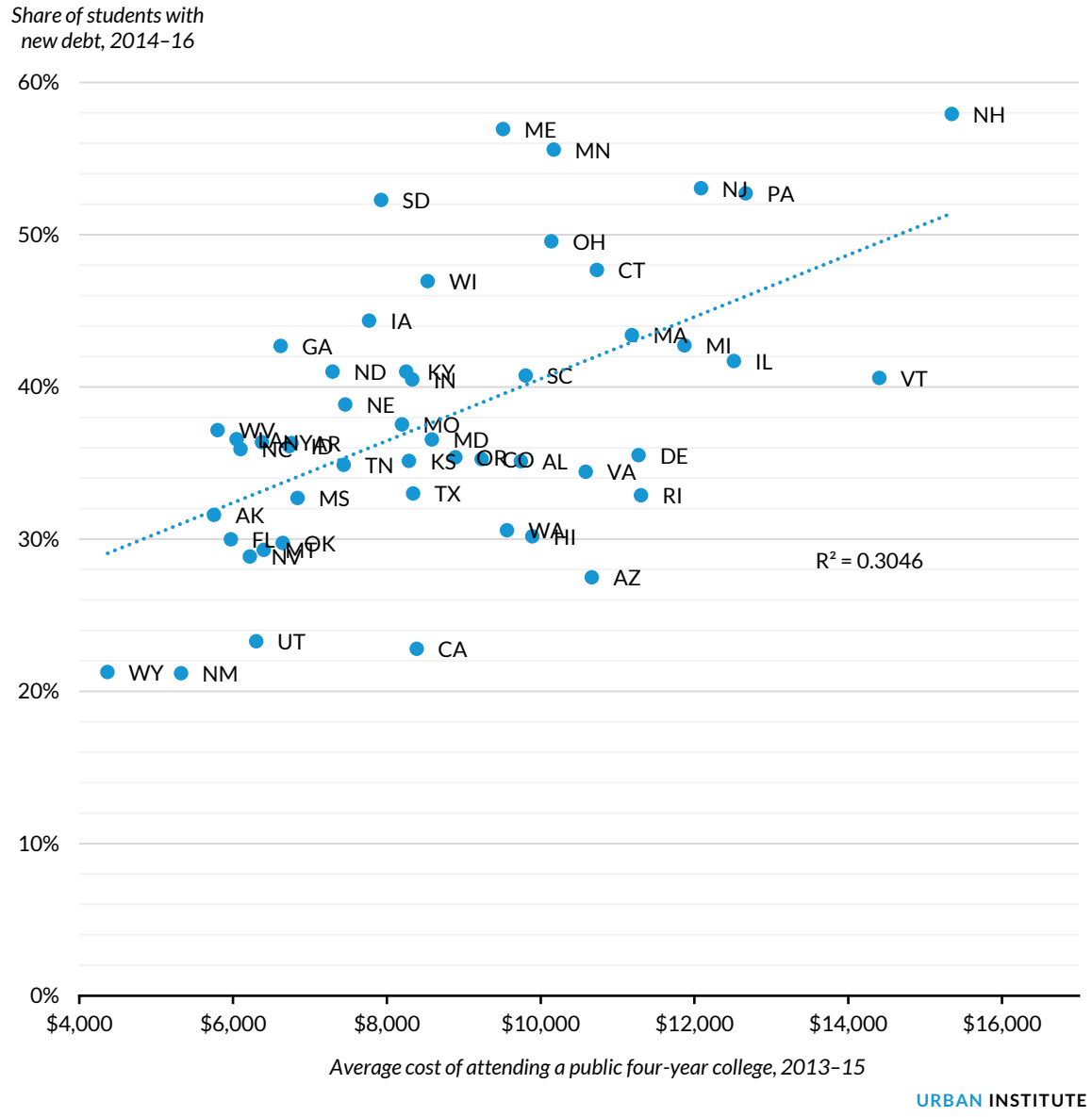
What state characteristics can explain the geographic variation in student borrowing? We find that the share of college students borrowing is highly correlated with the cost of attending a public four-year college in a state (see figures 2 and 3, which use the credit bureau and College Scorecard data, respectively). States with high tuition for four-year colleges and little financial assistance typically have a large share of college students using student loans to finance their education.

Using our cost measure, we find that students in New Hampshire experience the highest cost of attending a four-year public institution. Despite having one of the highest median family incomes in the country, a large share of these students use student loans. On the other end of the spectrum, Wyoming has the lowest cost of attending a public four-year college and is among the states with the lowest share of college students using loans, according to both the College Scorecard and credit bureau data.

FIGURE 2

Student Debt Increases with the Cost of Attending a College

Share of college students with new student debt and "net tuition price"



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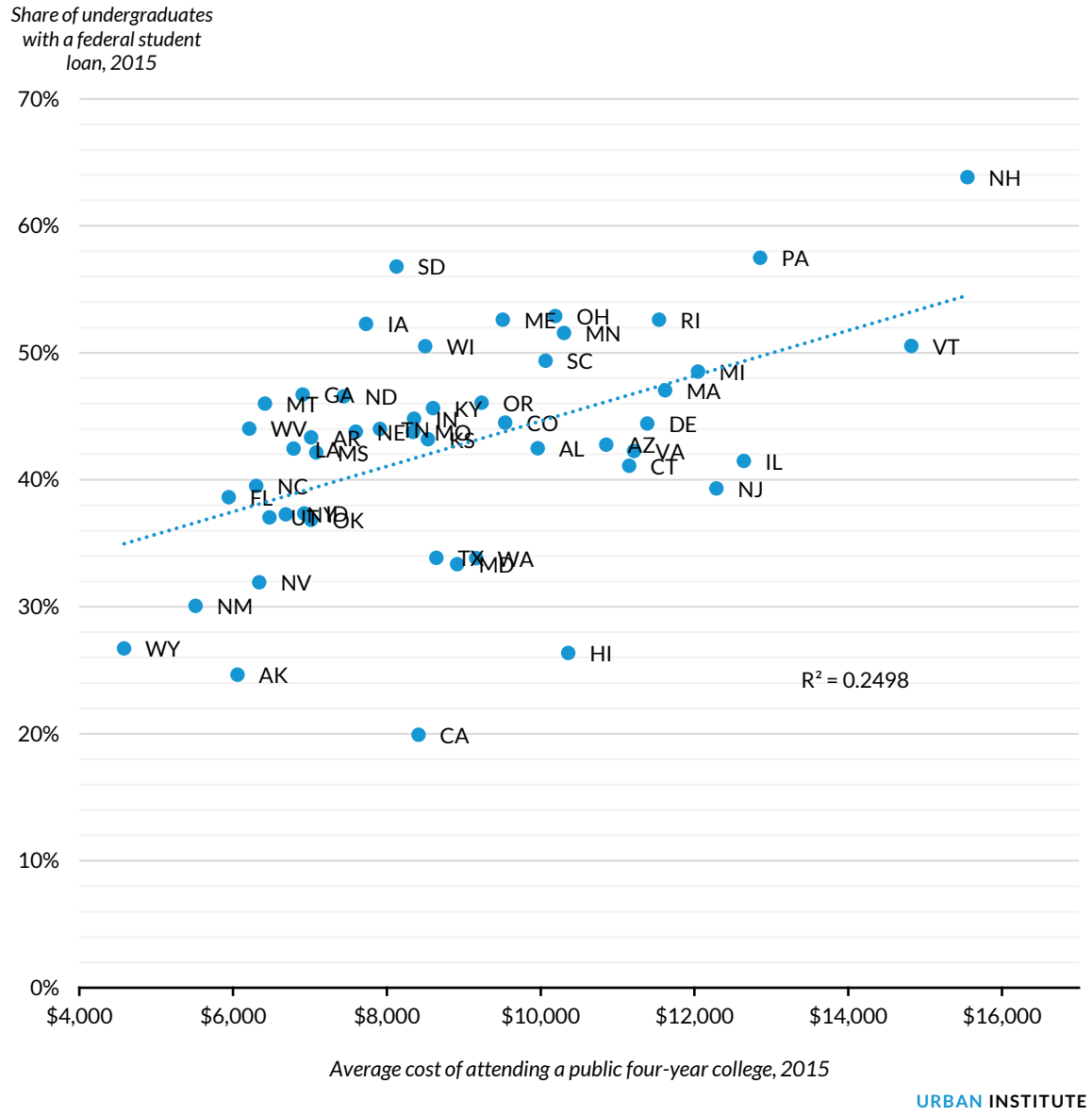
Sources: Credit bureau data (from August of each year) and American Community Survey data from 2014 to 2016 and College Board and National Association of State Student Grant and Aid Programs data from 2013–14, 2014–15 and 2015–16.
Notes: Sample restricted to adults ages 19 to 22. The share of college students with new student debt is the estimated number of adults ages 19 to 22 who took out any kind of student loan in the previous year (per the credit bureau data) divided by the total number of college students ages 19 to 22 (per the American Community Survey). The average cost of attending a public four-year college is the average in-state tuition and fees at such institutions minus the average state grant aid per full-time equivalent undergraduate student in 2017 dollars. We take the average over a three-year period to address the noisiness of the data for smaller states. The District of Columbia is not included. See box 1 for details.

FIGURE 3

Federal Student Loan Borrowing Increases with the Cost of Attending College

Share of undergraduates with federal student loans and "net tuition price"



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Sources: College Scorecard, College Board, and National Association of State Student Grant and Aid Programs data from 2015 to 2016.

Notes: Federal student loans are calculated for all undergraduates enrolled within a single academic year. The average cost of attending a public four-year college is the average in-state tuition and fees at such institutions minus the average state grant aid per full-time equivalent undergraduate student in 2017 dollars. **The** District of Columbia is not included. See box 1 for details.

Using the credit bureau data, we also investigate the geographic distribution of the average amount borrowed in the past year (figure 4). We find that students from the Northeast borrowed most—an

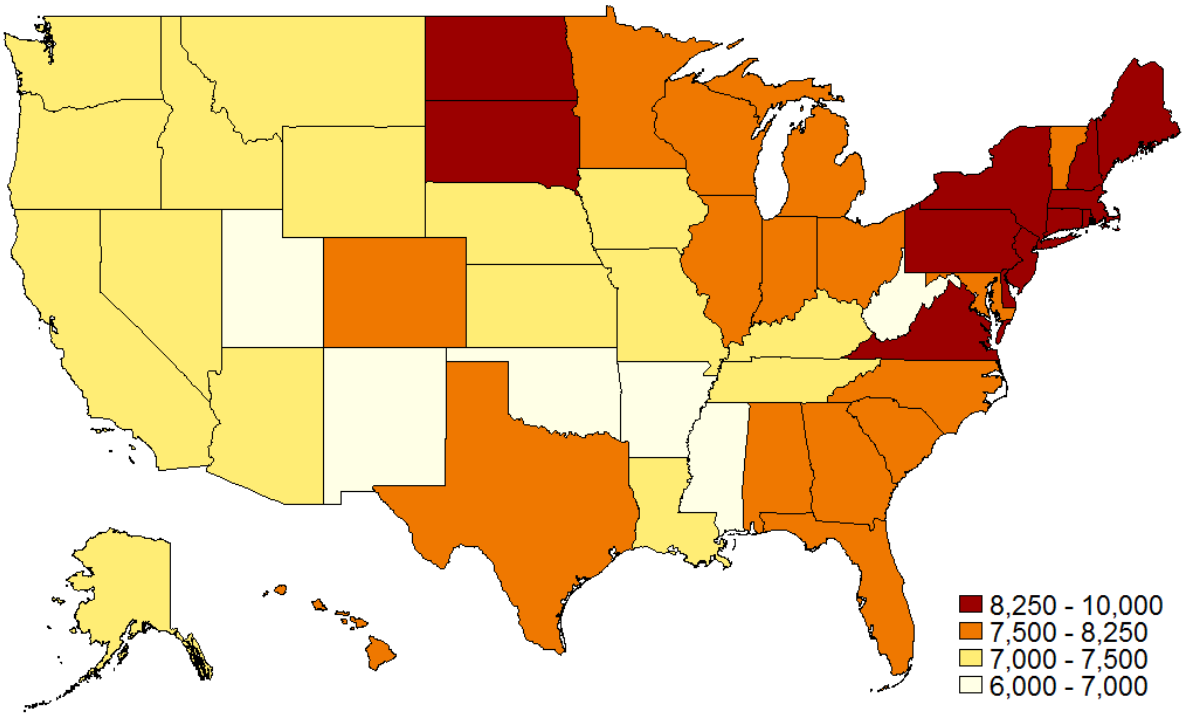
average of $8,749 per year. The average amount bowered is lowest in the Western states, with an average of $7,284.

Delaware, Pennsylvania, and New Hampshire have the highest average amounts borrowed. Borrowers in Delaware took out, on average, $9,470 in student loans per year between 2014 and 2016. Average loan amounts are lowest in Utah and New Mexico, with borrowers in Utah taking out an average of $6,033 in loans per year between 2014 and 2016.[5]

FIGURE 4

Loan Amounts Are Larger in the Northeast

Average amount of student debt borrowed in the past year (among borrowers), 2014–16 (dollars)



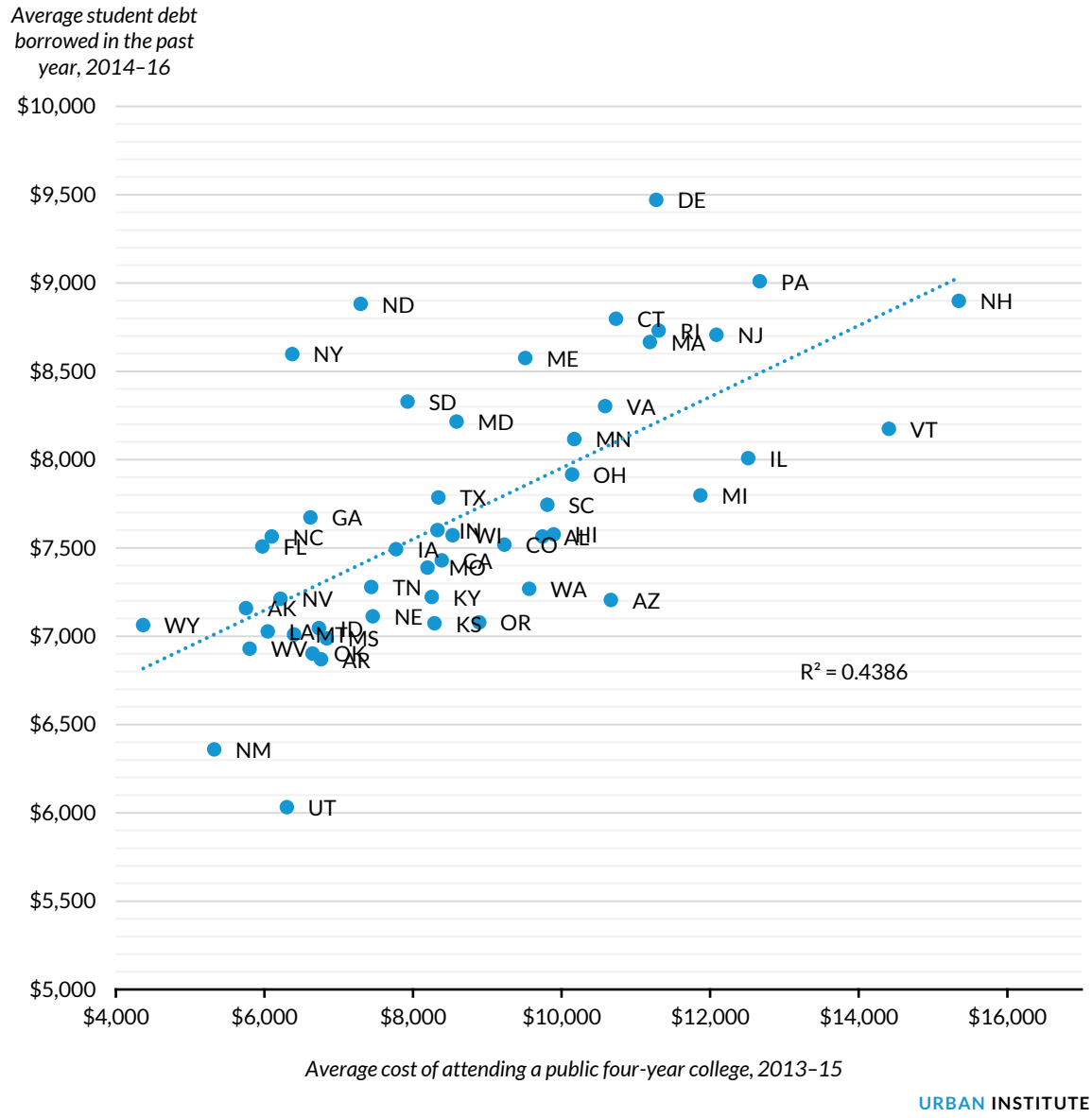
Source: Credit bureau data (from August of each year) from 2014 to 2016.
Notes: Sample restricted to adults ages 19 to 22 with new student loans. The average amount borrowed in a state is the average student loan acquired in the previous year among borrowers in 2017 dollars. We take the average over a three-year period to address the noisiness of the data for smaller states. See box 1 for details.

Students from states where college is more expensive borrow more (figure 5), and the largest average loans are in high-cost states such as New Hampshire and Pennsylvania. For instance, we estimate that borrowers in Pennsylvania took out, on average, $9,009 in student loans per year between 2014 and 2016; the average cost of attending a four-year public university in the state was about $12,700. Students from low-cost states borrowed the least. For example, in New Mexico, a low-cost state, the average amount of borrowed in the previous year was $6,359.

FIGURE 5

Loan Amounts Increase with the Cost of Attending a College

Average amount of student debt borrowed in the past year among borrowers and "net tuition price"



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Sources: Credit bureau data (from August of each year) from 2014 to 2016 and College Board and National Association of State Student Grant and Aid Programs data from 2013–14, 2014–15, and 2015–16.

Notes: Sample restricted to adults ages 19 to 22 with new student loans. The average amount borrowed in a state is the average student loan acquired in the previous year among borrowers in 2017 dollars. The average cost of attending a public four-year college is the average in-state tuition and fees at such institutions minus the average state grant aid per full-time equivalent undergraduate student, also in 2017 dollars. The District of Columbia is not included. See box 1 for details.

Conclusion

There is considerable geographic variation in the use of student loans to finance postsecondary studies. Students from New Hampshire, Maine, and Pennsylvania are among the most likely to take out education loans, and students from New Mexico, Wyoming, and California are among the least likely to borrow. Differences among states in the cost of attending a public four-year college can explain part of this variation.

We present new statistics on the distribution of student debt and the cost of attending college, but it is out of the scope of this study to discuss whether students borrow too much or too little in specific regions. If the financial return on a college education is high enough, it is possible that students in a state would be *more* likely to take out loans to finance their education but *less* likely to default on those loans.[6] We hope future work can identify the effects of college degrees on the long-term incomes of students in different states and the likelihood they will repay their debts.

Notes

1 See the "Non-Housing Debt Balance" chart at "Household Debt and Credit Report," Federal Reserve Bank of New York, accessed March 23, 2018, https://www.newyorkfed.org/microeconomics/hhdc.html.

2 "Student Debt," Urban Institute, April 2017, http://collegeaffordability.urban.org/after-college/student-debt.

3 One of the few exceptions is the Project on Student Debt from the Institute for College Access & Success. The project focuses on students graduating from four-year institutions and does not account for those who dropped out or graduated from a two-year institution. See "State by State Data," The Institute for College Access & Success, accessed March 23, 2018, https://ticas.org/posd/map-state-data.

4 The Project on Student Debt (see note 1) reports that the share of 2016 graduates from four-year public and private nonprofit institutions with loan debt ranged from 43 percent in Utah and 45 percent in Wyoming to 75 percent in South Dakota and 77 percent in West Virginia. These state rankings are likely to differ from our data because our measures include students from two-year institutions and for-profit institutions as well as students who do not graduate. We also examine the share of students borrowing in a given year, whereas the Project on Student Debt reports on the share of students graduating with any debt.

5 The Project on Student Debt rankings of loan amounts by state are more consistent with our data than their rankings of shares of students with debt.

6 Indeed, "Debt in America, an Interactive Map" shows that some regions with high rates of student debt have a low share of adults with student debt in collections, https://apps.urban.org/features/debt-interactive-map/.

References

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Breno Braga is a senior research associate at the Urban Institute and a research affiliate at IZA in Germany. His articles have been published in academic journals including the *Journal of Labor Economics* and *American Economic Review: Papers & Proceedings*. His work has been cited by media outlets such as the *New York Times*, the *Atlantic*, and *Bloomberg*. He received his PhD in economics from the University of Michigan, his MA in economics from the Pontifical Catholic University of Rio de Janeiro, and his BA in economics from the Federal University of Rio de Janeiro.

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