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Cover Page Footnote

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Institutional and State-Level Factors Related to Paying Back Student Loan Debt Among Public, Private, and For-Profit Colleges

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In this study, we examine whether institutional-level characteristics, student demographics, and state conditions are associated with student loan repayment rates and cohort-level loan default rates. We separately explore these characteristics for each of four higher education sectors: public 2-year colleges, for-profit colleges, public 4-year colleges, and private 4-year colleges. We conduct a series of multiple linear regressions on a sample of 2,375 colleges. Estimates suggest that across all sectors except at for-profits, colleges enrolling a higher percentage of historically underrepresented students, including first-generation and African American/Black students, report lower repayment rates. Additionally, a higher percentage of students enrolled who file as independents for tax purposes, as well as lower levels of family incomes among independent students, and lower graduation rates are all associated with lower repayment rates, across all four sectors. With the exception of for-profit colleges, the factors associated with higher cohort default rates include a smaller percentage of Asian students, a larger percentage of first-generation students, and lower median household incomes at the state level. Factors related to one-year and five-year loan repayment rates are similar, indicating that students who struggle to make progress on repaying their loans soon after leaving college continue to struggle in the future.

Keywords: Higher education, higher education finance, accountability, financial aid

Driven by the \$1.54 trillion in outstanding federal student loan debt as of March 2020 (Federal Reserve Bank of New York, 2020), the issue of whether students can repay their loans has received much attention in recent years. The federal government currently holds colleges accountable for their students' ability to manage their educational debt through the cohort default rate (CDR) metric. This metric captures the percentage of borrowers who default on their federal student loans within three years of entering repayment, with a borrower being classified as in default if they fail to make any payments on federal subsidized or unsubsidized student loans during a 360-day period.

The federal government can end a college's access to federal student loans in cases where default rates are over 40% for a given cohort or pull access to all federal financial aid (grants and loans) if default rates are over 30% for three consecutive cohorts (Federal Student Aid, 2017a). Yet a very small percentage of colleges are at serious risk of losing federal financial aid as a result of high loan default rates, and this percentage has decreased significantly over time (Jaquette & Hillman, 2015). In the 2017 CDR data release (covering cohorts that entered repayment in Fiscal Years 2012-2014), just ten small colleges faced the possibility of losing aid (Federal Student Aid, 2017b).

In an effort to hold more colleges accountable for student outcomes, policymakers in Washington have proposed a number of 'risk sharing' bills that would require colleges to pay for a portion of loans that are not repaid (see National Association of Student Financial Aid Administrators (2020) for a current list of legislation). To this point, the best publicly-available institution-level data on student loan repayment comes from the U.S. Department of Education's College Scorecard, which was first released in the fall of 2015. The Scorecard's loan repayment rate metric reported the percentage of borrowers who paid back at least \$1 in principal on their federal subsidized or unsubsidized loans, measured one, three, five, and seven years after leaving college and entering repayment. As a result, the repayment rate captures students in two different situations who are unable to repay their loans. The first is students who may be able to avoid default in the short term, but are at risk of defaulting on their loans at a later date. The second is students who are enrolled in income-driven repayment plans and are making their required payments, but their income is low enough that their payments fail to reduce the loan's principal. Both situations represent risks to the taxpayer since loans will not be fully repaid, even though income-driven repayment is a better outcome for students than defaulting.

Most research on the relationship between colleges' characteristics and student loan outcomes has focused on defaults as the metric of interest (e.g., Deming et al., 2012; Gross et al., 2009; Hillman, 2014, 2015; Jackson & Reynolds, 2013; Lochner & Monge-Naranjo, 2015; Looney & Yannelis, 2015). These studies have consistently found that after controlling for student demographic and institutional characteristics, for-profit institutions and community colleges have higher default rates than public and private nonprofit 4-year colleges. Yet because for-profit colleges have generally faced more scrutiny from the federal government than other sectors of higher education, including several rules that primarily or solely apply to that sector (such as the 90/10 rule and gainful employment), it is possible that for-profit colleges took extra steps to reduce their default rates—steps that other institutions did not take (Kelchen, 2018). However, little research has examined whether the factors affecting both student loan repayment rates and default rates differ *across* types of institutions (Belfield, 2013; Kelchen & Li, 2017), and no study has explored whether these factors differ *within* institutional types, a topic which we address.

Another important contribution of our study is that we were able to compare factors affecting a metric that was reported to the public each year (CDRs) relative to another metric that was not known to colleges until 2015 (loan repayment rates). Research from the public administration field shows that organizations respond strategically to performance accountability systems by solely focusing on the outcomes being measured, to the extent that these outcomes become less meaningful indicators of performance (e.g., Courty & Marschke, 2008; Jakobsen et al., 2018; van Thiel & Leeuw, 2002). Some colleges with high default rates have engaged in default management practices that often encourage students who are facing financial difficulties to use deferment or forbearance options for their loans (U.S. Government Accountability Office, 2018). These practices can help students avoid default in the short term (lowering institution-level default rates), but also increase the outstanding loan balance students must repay, as interest continues to accumulate.

In this study, we used data from the College Scorecard and the U.S. Department of Education's Office of Federal Student Aid to examine whether the factors/characteristics affecting cohort default rates (a high-stakes accountability measure) differ from those affecting student loan repayment rates (which were not available to colleges or the public during the period that we studied) within different types of colleges.

We investigated the following research questions:

- (1) How are institutional factors related to student loan repayment rates and to cohort default rates for the following sectors of higher education: public 2-year, for-profit, public 4-year, and private, nonprofit 4-year?
- (2) Are these same institutional factors more associated with student loan repayment rates or cohort default rates?
- (3) Do the relationships between institutional factors and loan repayment rates by sector differ between one and five years after a student leaves college?

Literature Review

Existing research has examined how student demographics, other institutional characteristics, and state-level economic conditions are associated with student loan debt and default rates, with a smaller literature base examining the relationship between these factors and repayment rates. In this section, we summarize key findings from prior studies.

Factors Relevant to Borrowing and Loan Default

More studies have examined the relationship between race/ethnicity and student loan borrowing and default rates than any other demographic characteristic. With respect to race, Black students were more likely to borrow for college, take on higher debt burdens, and default at higher rates than white students (Addo et al., 2016; Grinstein-Weiss et al., 2016; Gross et al. 2009; Hillman, 2014; Jackson & Reynolds, 2013; Lochner & Monge-Naranjo, 2015; Scott-Clayton & Li, 2016). The percentage of Black students at an institution was

also related to institutional default rates, with higher percentages associated with higher default rates (Belfield, 2013; Hillman, 2015; Ishitani & McKittrick, 2016; Kelchen & Li, 2017). For members of other racial/ethnic groups, there exists less of a consistent relationship with debt or default metrics. Both Hispanic and Asian students were less likely to be willing to borrow than white students, after controlling for family income (Boatman et al., 2017; Cunningham & Santiago, 2008; Kelchen & Li, 2017). There is no evidence that an institution's percentage of Hispanic students was associated with default rates, although a higher percentage of Asian students was associated with lower default rates (Hillman, 2015; Ishitani & McKittrick, 2016; Kelchen & Li, 2017).

Research has suggested that female students were more willing to borrow and to take out larger loans than male students (Boatman et al., 2017; Chen & Wiederspan, 2014; Miller, 2017). Yet institutions enrolling higher percentages of female students generally had similar or lower default rates compared to institutions enrolling smaller percentages of female students (Gross et al., 2009; Kelchen & Li, 2017). First-generation and lower-income students were more likely to take on debt and more likely to default on loans (Chen & Wiederspan, 2014; Hillman, 2014; Houle, 2013; Jackson & Reynolds, Lochner & Monge-Naranjo, 2015; Looney & Yannelis, 2015). A higher percentage of first-generation students and lower family incomes among federal student aid recipients were both associated with higher default rates (Kelchen & Li, 2017), as was the percentage of an institution's Pell recipients (Belfield, 2013).

Higher institutional graduation rates have been shown to be associated with lower default rates at four-year colleges (Webber & Rogers, 2014), but have not been examined for community colleges or for-profit institutions. Finally, state-level economic conditions play an important role in the likelihood of loan default. Kelchen and Li (2017) found that higher state poverty rates were associated with higher default rates, although after controlling for poverty rates, higher unemployment rates were associated with lower default rates. Ishitani and McKittrick (2016) found that higher state-level unemployment rates were associated with greater loan default rates.

Factors Relevant to Loan Repayment

Only two studies have examined the relationship between institutional characteristics and student loan repayment rates. Belfield (2013) used a 2010 data release by the U.S. Department of Education (in conjunction with gainful employment regulation negotiations) that defined repayment rates as the percentage change in overall student loan principal across all borrowers over a four-year period. The author concluded that a similar set of factors that were associated with default rates were also associated with repayment rates.

Kelchen and Li (2017) used College Scorecard data to examine whether the factors affecting repayment and default rates were statistically different from each other across all colleges with available data. They concluded that a number of factors, such as the percentage of Black, independent, and first-generation students, as well as higher state poverty rates and higher unemployment rates were all predictive of a higher cohort default rate, yet even more strongly predictive of a higher non-repayment rate (or a higher percentage of students failing to repay principal on their loans). Compared to public colleges, private and for-profit colleges tended to have a higher percentage of students failing to repay principal. Yet this work did not examine whether the importance of institutional factors differed *within* particular college sectors—the gap we aim to fill.

Data

In this study, we examined the extent to which institutional characteristics were associated with student loan repayment rates and cohort default rates within four separate sectors of higher education: public 2-year colleges, for-profit colleges, public 4-year colleges, and private, nonprofit 4-year colleges. In addition, we studied whether the association between institutional characteristics and loan repayment rates differed between sectors at one and five years after students leave college.

Outcome Variables

We used data on two cohorts of students who entered repayment on their federal student loans during fiscal years 2010 and 2011. These students left college (by either graduating or dropping out) six months prior to entering repayment. We chose to focus on this particular cohort of students because they left college and entered the workforce after the Great Recession and subsequent economic recovery. Therefore, the ability to repay loans would be less likely influenced by external economic shocks.

We created a *non*-repayment rate by subtracting the repayment rate from one. The non-repayment rate is defined as the percentage of borrowers at an institution who failed to repay at least \$1 of principal on their student loan balance (Council of Economic Advisers, 2017). A non-repayment rate ensures better comparability with the cohort default rate because both represent a negative outcome; non-repayment measures the percentage of borrowers who failed to repay principal on their loan balance (although have made at least one payment), and default measures the percentage of borrowers who have failed to make any payments during the last 360 days. The College Scorecard reports the repayment rate for each institution one, three, five, and seven years after students enter repayment (which occurs six months after leaving college, regardless of whether a degree was earned). The one-year repayment rate was measured at the end of fiscal years 2011 and 2012, the three-year repayment rate was measured in 2013 and 2014, and the five-year repayment rate in 2015 and 2016. We did not use the Scorecard's seven-year repayment rate because it was unavailable for the cohort investigated, and the most recent cohort with available data left college during the peak of the Great Recession. Additionally, prior research has shown that the factors affecting repayment rates remain stable at five and seven years into repayment (Kelchen & Li, 2017).

The second outcome variable analyzed was the cohort default rate (CDR), the percentage of student borrowers who defaulted on their loans. We used the reported two-year cohort default rate for students entering repayment in fiscal years 2010 and 2011 and measured at the end of fiscal years 2011 and 2012, respectively. We averaged the two cohorts' default rates in order to identify the same students and same time period as the one-year repayment rate. Although the federal government has now moved to a three-year default rate (comparable to a two-year repayment rate in the College Scorecard), no other default rates were available that aligned with available repayment rate metrics.

Institutional and State-level Factors/Covariates

Motivated by prior studies discussed in the literature review, we explored characteristics capturing the enrollment profile of students at each institution. From the Integrated Postsecondary Education Data System (IPEDS), we included the percent of undergraduates who were awarded Pell grants, the percent of first-time, full-time undergraduates who were awarded institutional grant aid, and the percent of first-time, full-time undergraduates who were awarded student loan aid as a proxy for students' financial circumstances.¹ We also included the percent of undergraduate students who filed as independents (versus dependents) for financial aid purposes, using data from the College Scorecard. To account for student demographics, we added IPEDS data on the percent of undergraduates belonging to each of the following racial groups: Asian, African American/Black, and Hispanic/Latino, with white students as the omitted category. We additionally

¹ Data on the percent of all undergraduates receiving institutional grant aid was not available, so we used the percent of first-time, full-time undergraduates. The percent of first-time, full-time undergraduates receiving loan aid was a good substitute for the percent of all undergraduates receiving loan aid (which had substantial missing data); the two variables had correlations between 0.78 and 0.88 across years. Additionally, while there are substantial differences in FAFSA filing rates across sectors of higher education (such as between community colleges and for-profit colleges), the differences within sectors are likely smaller.

controlled for the percent of female undergraduates (from IPEDS) and the percent of first-generation undergraduates (from Scorecard), defined as having neither parent with any postsecondary education experience. We added the logged value of total undergraduate enrollment from IPEDS to control for institutional size.

To account for a student's ability to repay loans based on income, we included both the average family income for independent students and the average family income for dependent students from Scorecard. Income data is based on when students were enrolled in college, as opposed to their earnings after college. Since tuition and fees at an institution is related to the amount of student debt incurred, we controlled for resident tuition rates for public institutions and tuition rates for private institutions, from IPEDS. Lastly, we added from IPEDS the institution's graduation rate, or the percent of degree/certificate-seeking students who graduated within 150% of a normal program length. We used graduation rates from 2010-11 to match the years in which students in repayment would have graduated, while all other characteristics were from the 2008-09 academic year to reflect circumstances during which students were still enrolled. This short lag period for institutional characteristics, particularly to account for students who earned shorter credentials, is consistent with prior research (Deming et al, 2012; Ishitani & McKittrick, 2016; Kelchen & Li, 2017).

Our dataset additionally included state-level covariates that may be linked to students' abilities to repay their loans, introduced in the literature review. We collected data on the state unemployment rate from the Bureau of Labor Statistics and the median household income from the Current Population Survey (CPS). To account for educational attainment and wealth, we controlled for the percent of state residents over age 24 who held a bachelor's degree or higher, and the percent of total state residents living below the poverty line, both from the CPS. We used state-level variables corresponding to the year that repayment was measured to reflect economic and demographic conditions present during the time when students were repaying their loans (i.e. 2011 state conditions for the 2011 repayment rate, 2015 state conditions for the 2015 repayment rate). All financial variables (family income of independent and dependent students, tuition and fees, state median household income) were logged and CPI-adjusted to 2016 dollars.

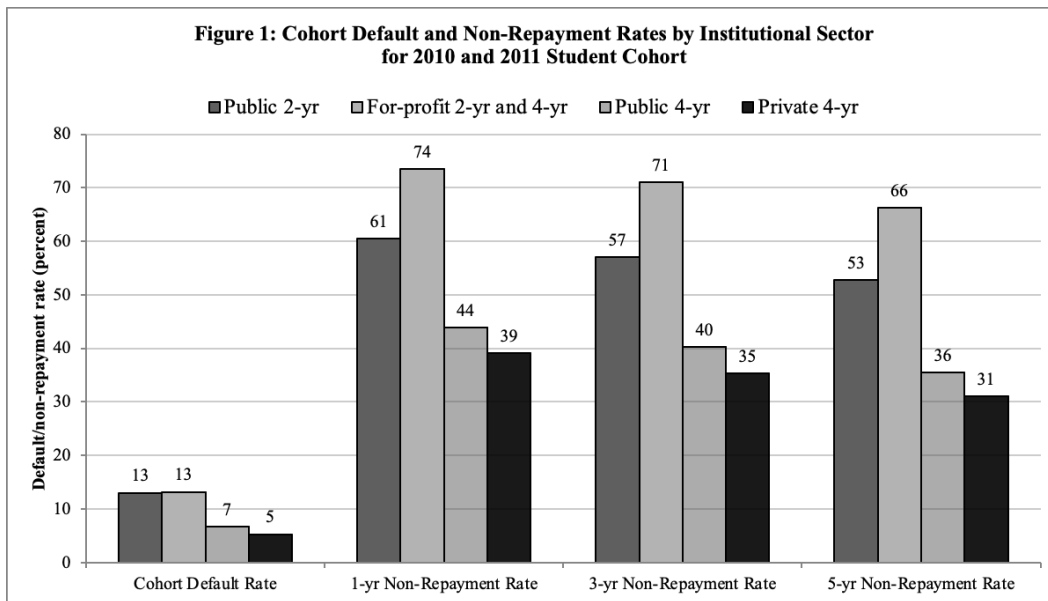
Institutional Sectors and Sample

We began with the 3,480 degree-granting institutions in the College Scorecard during the 2011-12 academic year, using the "predominant undergraduate degree conferred" variable to keep institutions that predominantly awarded associate's degrees or bachelor's degrees, and exclude institutions that predominantly granted certificates, graduate degrees, were "not classified", or were missing "predominant undergraduate degree conferred" (mostly beauty schools). We also excluded institutions that reported offering all academic programs exclusively via distance education (online only) in the 2011-12 academic year, the first year this data was collected in IPEDS. We then restricted our sample to institutions that had reported a one-year, three-year, and five-year repayment rate, along with cohort default rates for 2010 and 2011. This resulted in a sample size of 2,910 colleges. The decline in the sample size can be attributed to the exclusion of colleges that do not participate in federal student loan programs, colleges that had closed or consolidated, and colleges enrolling too few students for the Department of Education to release data on repayment rates. Since there were only 68 private, 2-year institutions in the sample, we chose to exclude those institutions. We further restricted our sample to institutions that had all covariates of interest, which resulted in our analytic sample of 2,375 colleges.

We divided our sample into the following sectors: public 2-year colleges ($n = 638$); for-profit, 2-year and 4-year colleges ($n = 339$); public 4-year colleges ($n = 521$); and private, nonprofit 4-year colleges ($n = 877$). We combined for-profit colleges that awarded primarily associate's degrees and bachelor's degrees because default rates and loan repayment rates were similar across these categories and because nearly all for-profit colleges have minimally selective admissions standards, thus enrolling similar types of students.

Figure 1 displays the cohort default rate, one-year non-repayment rate, three-year non-repayment rate, and five-year non-repayment rate for the cohort of students entering repayment in 2010 and 2011, for each

sector. Because the relationships between institutional and state-level factors and both three-year and five-year repayment rates were similar, we focus on the one-year and five-year rates in the remainder of this paper.



The cohort default and repayment rates present markedly different pictures of whether students are able to manage their debt burdens. Among public 2-year colleges, 13% of students entering repayment in 2010 and 2011 had defaulted on their loans, although 61% had not made any progress towards paying down principal. Non-repayment rates were highest among students who attended for-profit colleges, with 74% of students having made no payments towards principal one year into repayment. Among public 4-year colleges, one-year non-repayment rates were lower at 44%, and lowest among students who attended private 4-year colleges (39%). The longer that students were out of college (and the more years they had to start making payments), the lower the percentage of students in non-repayment; the three-year and five-year non-repayment rates were lower than the one-year repayment rates across all four sectors. When the five-year non-repayment rate was measured (in 2015 for the 2011 cohort), the highest rates of non-repayment were still among students who had attended for-profit colleges, followed by public 2-year colleges, while public 4-year and private 4-year colleges reported notably lower non-repayment rates.

Summary statistics for all variables in this study are displayed by institutional sector in Table 1. The percent of undergraduates receiving Pell grants was highest among for-profit colleges in the sample, with a mean of 55%. Among public 2-year colleges, 28% of undergraduates received Pell grants, which was similar to the 29% of undergraduates who were recipients at both public and private 4-year colleges. For-profit colleges also enrolled the highest proportion of students receiving federal loans (81%), compared to only 26% at public 2-year colleges, whereas, public 4-year colleges had 53% of students receiving loans, and private 4-year colleges had 68%. Private 4-year colleges awarded institutional grants to the majority of students enrolled, at 83%, notably higher than colleges in the other three sectors. For-profit colleges enrolled the highest proportion of African American/Black students, and 2-year colleges and for-profit colleges enrolled relatively larger proportions of Hispanic/Latino students compared to the 4-year colleges. The percent of Asian and female students were similar across all sectors. Students enrolled at private 4-year colleges had the highest family income (for independent and dependent students), followed by public 4-year colleges, for-profit colleges, with the lowest incomes reported among 2-year college attendees. Interestingly, graduation rates were highest at for-profit colleges at 60%, compared to 55% at private 4-year colleges, 47% at public 4-year colleges, and only 25% at public 2-year colleges.

Table 1

Summary Statistics								
Variable	Public 2-year		For-profit		Public 4-year		Private 4-year	
	Mean	SD	Mean	SD	Mean	SD	Mean	SD
<i>Outcome Variables</i>								
Non-repayment rate (1-year)	0.61	0.11	0.74	0.12	0.44	0.15	0.39	0.17
Non-repayment rate (3-year)	0.57	0.11	0.71	0.12	0.40	0.15	0.35	0.16
Non-repayment rate (5-year)	0.53	0.10	0.66	0.12	0.36	0.14	0.31	0.15
Cohort default rate (2-year)	0.13	0.04	0.13	0.05	0.07	0.04	0.05	0.04
<i>Institution-Level Covariates</i>								
Percent receiving Pell grants	0.28	0.12	0.55	0.19	0.29	0.13	0.29	0.15
Percent receiving institutional grants	0.16	0.18	0.15	0.22	0.39	0.21	0.83	0.22
Percent receiving loans	0.26	0.21	0.81	0.16	0.53	0.17	0.68	0.17
Percent filing as independents	0.47	0.13	0.64	0.20	0.25	0.14	0.26	0.20
Percent Asian	0.05	0.09	0.03	0.04	0.05	0.07	0.04	0.05
Percent African American/Black	0.11	0.12	0.20	0.19	0.14	0.22	0.13	0.20
Percent Hispanic/Latino	0.11	0.15	0.11	0.14	0.07	0.12	0.06	0.07
Percent female	0.58	0.08	0.57	0.25	0.55	0.09	0.59	0.13
Percent first generation	0.50	0.07	0.52	0.09	0.37	0.09	0.34	0.11
Undergraduate enrollment	12,183	11,993	2,215	6,768	11,870	9,504	2,857	3,437
Family income of independents	18,982	4,375	20,530	5,705	22,537	4,901	27,570	10,897
Family income of dependents	39,148	12,480	44,517	14,167	64,718	16,727	74,028	19,354
Tuition and fees	3,007	1,830	18,597	7,992	7,206	2,569	25,427	8,677
Graduation rate (2010)	0.25	0.16	0.60	0.43	0.47	0.17	0.56	0.18
<i>State-Level Covariates</i>								
State unemployment rate	0.09	0.02	0.09	0.02	0.08	0.02	0.09	0.02
State household income	45,600	6,623	44,623	5,367	44,858	6,841	45,631	6,780
State percent with BA degree	0.29	0.04	0.28	0.04	0.28	0.05	0.29	0.05
State poverty rate	0.15	0.03	0.15	0.02	0.15	0.03	0.14	0.03
Number of colleges	638		339		521		877	

Data sources: College Scorecard (repayment and default rates, percent filing as independents, percent first generation, family income), Bureau of Labor Statistics (state unemployment rate), Current Population Survey (other state-level covariates), Integrated Postsecondary Education Data System (all others).

Notes:

(1) Institutional variables are for the 2008-09 academic year unless noted, while state covariates are shown for 2011.

(2) All financial variables are adjusted for inflation into 2016 dollars using the Consumer Price Index.

Method

We conducted a series of multiple linear regressions to explore the association between institutional characteristics and cohort default rates as well as repayment rates. We conducted the following analysis for each sector of institutions:

$$y_i = \alpha + \beta_1 \mathbf{X}_{1i} + \beta_2 \mathbf{X}_{2i} + \varepsilon_i \quad (1)$$

where y_i is the one-year non-repayment rate or the two-year cohort default rate of the 2010 to 2011 cohorts for institution i , \mathbf{X}_{1i} is a vector of institution-level covariates in 2008 (with the exception of the graduation rate, which was measured in 2010), and \mathbf{X}_{2i} is a vector of state-level covariates in 2011 (Angrist & Pischke, 2009). We clustered standard errors at the parent level represented by the Office of Postsecondary Education Identification (OPEID) number because default and repayment rates are reported by OPEID. Therefore, multiple child institutions (IPEDS UnitIDs) may share the same default and repayment rates (although we used UnitID to identify institution-level covariates). We conducted separate models analyzing the five-year non-repayment rates, with the same 2008 values of institution-level covariates and state-level controls corresponding to the year of the non-repayment rate (2015 values).

We then conducted a t -test of means on the coefficients of all significant covariates to compare whether the effect sizes of coefficients significantly differed between the one-year non-repayment rate and the two-year cohort default rate. This procedure was intended to determine whether certain covariates had a stronger association with repayment rates or with default rates, within each of the four institutional sectors.

Limitations

Several limitations of our study are worth noting. First, the data sources we relied on reported data at the institution level and not at the student level. Therefore, we could not follow the loan repayment trajectory of individual students or assess whether individuals with certain demographic characteristics (e.g. first-generation college student) were more likely to default on loans or more likely to repay their loans. A second limitation is inherent in the College Scorecard repayment data, which disproportionately excluded small private colleges, community and technical colleges, and for-profit colleges, since many of these colleges did not have enough borrowers to report a repayment rate.

Third, while our dataset covered repayment and default behaviors of students who left college *after* the Great Recession, the borrowing behaviors of these students *during* college may have been influenced by the recession. Our results may be less generalizable to cohorts that attended and left college in a strong economy due to differences in students borrowing patterns. Finally, more than 20% of all borrowers in the federal Direct Loan system were enrolled in income-driven repayment plans as of late 2015 (Furman & Black, 2016). The growth of income-driven repayment plans means that if a borrower's income is low relative to their outstanding debt, the borrower can be current on their loan repayments without paying down any principal, which would increase the institutional non-repayment rate. However, data on income-driven repayment rates for individual colleges was not available at the time of our study.

Results

Institutional and State Factors Associated with One-Year Non-Repayment Rates

In Table 2, we display estimates for the one-year non-repayment rate outcome for the cohort of students entering repayment in 2010 and 2011 across each of the four institutional sectors. Across all sectors, institutions with a higher percent of students filing as independents for financial aid purposes (versus as dependents) experienced higher rates of non-repayment. At public 4-year and private 4-year colleges, a higher percent of Asian students enrolled was significantly related to *lower* non-repayment rates.

Table 2
Factors Associated with One-Year Non-Repayment Rates

	Public 2-year	For-profit	Public 4-year	Private 4-year
Percent receiving Pell grants	-0.01 (0.04)	0.02 (0.04)	0.06 (0.07)	0.06 (0.04)
Percent receiving institutional grants	0.00 (0.02)	0.03 (0.02)	0.02 (0.01)	-0.02 (0.02)
Percent receiving loans	0.12*** (0.03)	0.11*** (0.03)	0.02 (0.02)	0.00 (0.02)
Percent filing as independents	0.31*** (0.03)	0.35*** (0.04)	0.13*** (0.03)	0.17*** (0.02)
Percent Asian	-0.02 (0.04)	-0.19 (0.19)	-0.17** (0.06)	-0.19** (0.06)
Percent African American/Black	0.23*** (0.03)	0.05 (0.03)	0.34*** (0.02)	0.32*** (0.02)
Percent Hispanic/Latino	0.05 (0.03)	-0.01 (0.05)	0.01 (0.03)	0.18*** (0.04)
Percent female	0.06 (0.06)	-0.03 (0.02)	0.05 (0.04)	-0.02 (0.02)
Percent first generation	0.30*** (0.07)	0.13 (0.09)	0.41*** (0.07)	0.29*** (0.04)
Undergraduate enrollment (log)	0.02*** (0.00)	0.01** (0.00)	0.02*** (0.00)	-0.00 (0.00)
Family income of independents (log)	-0.11*** (0.02)	-0.11*** (0.03)	-0.03* (0.02)	-0.03*** (0.01)
Family income of dependents (log)	0.05 (0.03)	-0.04 (0.03)	0.00 (0.03)	-0.08*** (0.02)
Tuition and fees (log)	-0.01 (0.01)	0.07*** (0.01)	0.00 (0.01)	0.03** (0.01)
Graduation rate (2010)	-0.10*** (0.02)	-0.05*** (0.01)	-0.26*** (0.03)	-0.22*** (0.03)
State unemployment rate	0.30 (0.26)	0.74* (0.35)	0.49* (0.19)	0.53** (0.18)
State median household income (log)	-0.10* (0.05)	-0.11* (0.05)	-0.12** (0.04)	-0.02 (0.03)
State percent with BA degree	0.06 (0.14)	0.14 (0.15)	0.23* (0.10)	0.12 (0.10)
State poverty rate	0.45** (0.17)	0.17 (0.25)	0.33* (0.15)	0.34** (0.12)
R squared	0.60	0.69	0.88	0.87
N (Colleges)	638	339	521	877

Standard errors in parentheses

* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

On the other hand, a higher percent of African American/Black students enrolled at an institution was associated with significantly *higher* non-repayment rates at public 4-year colleges, private 4-year colleges, and public 2-year colleges. For every 10-percentage point increase in the share of Black student enrollment, there was a 2.3-percentage point increase in one-year non-repayment rates at public 2-year colleges (from a mean of 61% to 63.3%, based on Table 1), a 3.4-percentage point increase at public 4-year colleges (from 44% to 47.4%), and a 3.2-percentage point increase at private 4-year colleges (from 39% to 42.2%) (calculated using Tables 1 and 2).

Public 2-year, public 4-year, and private 4-year colleges that enrolled a higher proportion of first-generation students consistently reported higher non-repayment rates, yet this relationship did not hold among for-profit colleges. Characteristics representing race and first-generation status did not appear to matter for non-repayment rates at for-profit colleges, perhaps because for-profit colleges serve primarily adult learners from lower-income families. Higher graduation rates for students across all four sectors were associated with lower rates of non-repayment. Students who obtain degrees are more likely to be employed and to earn higher wages (Ma et al., 2016), and thus are more capable of repaying loans. The inverse relationship between graduation rates and non-repayment rates was largest among public 4-year and private 4-year colleges, with a decrease in non-repayment of 2.6- and 2.2-percentage points, respectively, for each 10-percentage point increase in graduation rates (Table 2, columns 3 and 4). Based on the mean values from Table 1, this was equivalent to a 44% non-repayment rate changing to 41.4% at public 4-years, and a 39% non-repayment rate changing to 36.8% at private 4-years. At community colleges, a 10-percentage point increase in graduation rates was associated with a 1.0-percentage point decline in one-year non-repayment, and a 0.5-percentage point decline among for-profit colleges (Table 2, columns 1 and 2).

Some of the institutional characteristics we examined were associated with one-year non-repayment rates for only certain sectors. For instance, a higher percent of students taking out loans was associated with significantly higher rates of non-repayment at public 2-year and for-profit colleges, but not at public or private 4-year colleges.

For-profit colleges, public 4-year, and private 4-year colleges located in states with higher unemployment rates reported higher rates of non-repayment, which is logical considering that a weaker economy would create more barriers to staying current on loan repayments. For colleges located in states with higher poverty rates, an increase in non-repayment rates was observed for public 2-year colleges, public 4-year colleges, and private 4-year colleges, though not among for-profit colleges. The lack of significance for the for-profit sector could be because of the presence of large providers that enroll students online and in multiple branches across the country that report as one consolidated unit. In short, indicators of a weak state economy were strongly predictive of higher rates of one-year non-repayment among borrowers who attended college in that state.

Institutional and State Factors Associated with Two-Year Cohort Default Rates

Turning to our analysis of the cohort default rate, we display estimates in Table 3 for the same group of students who entered repayment in 2010 and 2011. A higher percent of students filing as independents was associated with higher rates of loan default at public 2-year colleges and for-profit colleges, yet with lower default rates at private 4-year colleges. Consistent with our finding that the racial demographics of an institution's students is relevant for loan repayment rates, we also found that racial demographics matter for loan default rates. For example, a 10-percentage point increase in the share of Asian students enrolled was associated with a 0.4-percentage point decline in default rates at public 2-year colleges (from a mean of 13% to 12.6%), with the same decline at public 4-year colleges (from 7% to 6.6%) and private 4-year colleges (from 5% to 4.6%) (calculated using Tables 1 and 3).

Table 3
 Factors Associated with Two-Year Cohort Default Rates

	Public 2-year	For-profit	Public 4-year	Private 4-year
Percent receiving Pell grants	0.04 (0.02)	0.03 (0.02)	0.07*** (0.02)	0.02 (0.02)
Percent receiving institutional grants	0.02 (0.01)	0.00 (0.01)	0.01* (0.00)	-0.02*** (0.01)
Percent receiving loans	0.07*** (0.01)	-0.03 (0.01)	-0.00 (0.01)	-0.00 (0.01)
Percent filing as independents	0.07*** (0.02)	0.10*** (0.02)	0.01 (0.01)	-0.02*** (0.01)
Percent Asian	-0.04* (0.02)	0.01 (0.05)	-0.04*** (0.01)	-0.04** (0.01)
Percent African American/Black	-0.04** (0.01)	0.02 (0.02)	0.05*** (0.01)	0.05*** (0.01)
Percent Hispanic/Latino	-0.03* (0.01)	0.01 (0.02)	-0.00 (0.01)	0.01 (0.01)
Percent female	-0.04 (0.03)	-0.05*** (0.01)	-0.02* (0.01)	-0.03*** (0.01)
Percent first generation	0.20*** (0.03)	-0.01 (0.05)	0.20*** (0.02)	0.10*** (0.01)
Undergraduate enrollment (log)	0.01** (0.00)	0.00 (0.00)	0.00 (0.00)	-0.00 (0.00)
Family income of independents (log)	-0.04*** (0.01)	-0.03* (0.01)	-0.02*** (0.01)	-0.01** (0.00)
Family income of dependents (log)	-0.01 (0.01)	-0.00 (0.02)	0.03** (0.01)	-0.03*** (0.01)
Tuition and fees (log)	-0.01* (0.00)	0.03** (0.01)	-0.00 (0.00)	0.01*** (0.00)
Graduation rate (2010)	-0.01 (0.01)	-0.01* (0.01)	-0.05*** (0.01)	-0.04*** (0.01)
State unemployment rate	-0.35** (0.12)	-0.43* (0.19)	-0.35*** (0.07)	-0.17** (0.06)
State median household income (log)	-0.05* (0.02)	-0.04 (0.03)	-0.04** (0.01)	-0.02* (0.01)
State percent with BA degree	0.06 (0.07)	0.06 (0.10)	0.03 (0.03)	0.08** (0.03)
State poverty rate	0.13 (0.10)	0.08 (0.13)	0.02 (0.05)	0.11* (0.05)
R squared	0.38	0.33	0.74	0.70
N (Colleges)	638	339	521	877

Standard errors in parentheses

* p < 0.05, ** p < 0.01, *** p < 0.001

While colleges enrolling higher proportions of Asian students tended to report lower cohort default rates, those enrolling higher proportions of Black students reported higher default rates, with the exception of public 2-year colleges. Every 10-percentage point increase in the share of Black student enrollment at public 2-year colleges was associated with a 0.4 percentage point *decline* in default rates (from a mean of 13% to 12.6%). By contrast, this same 10-percentage point increase in the proportion of Black student enrollment was associated with a 0.5 percentage point increase in default rates at both public 4-year colleges (from 7% to 7.5%) and private 4-year colleges (from 5% to 5.5%).

In addition, higher proportions of first-generation students enrolled were associated with higher default rates among all institutions except at for-profit colleges, consistent with findings on the relationship between first-generation student enrollment and one-year non-repayment rates. It appears that for-profit colleges are somehow fundamentally different, and their default rates are not affected by the racial composition of students nor first generation status. Higher family incomes among independent students— incomes which reflect the economic circumstances of these students—were related to lower default rates across all sectors. Surprisingly, we found that higher state unemployment rates during the period when students were repaying their loans was associated with lower default rates, which was counterintuitive since higher unemployment would provide fewer job prospects and reduce capacity to repay loans.

Comparing Factors Associated with Non-repayment of Loans and Loan Default

Next, we conducted a series of *t*-tests of means to determine whether the size of each coefficient from models analyzing the one-year non-repayment rate (Table 2) differed significantly from the size of the corresponding coefficient in models analyzing the two-year cohort default rate (Table 3). That is, within each of the four higher education sectors, among covariates that were significantly associated with either non-repayment rates or default rates (or both outcomes), we analyzed whether the covariate had a higher predictive power for one outcome versus the other.

Table 4 displays a number next to a covariate if it was significantly more associated with the one-year non-repayment rate than the two-year cohort default rate. This number is equivalent to the difference between the coefficient on non-repayment rates and the coefficient on default rates. A positive value indicates that the coefficient on the covariate was larger (or more positive) for non-repayment rates than for cohort default rates. For example, on the percent receiving loans measure among public 2-year colleges, the coefficient was 0.12 for the one-year non-repayment rate and 0.07 for the two-year cohort default rate, equivalent to a difference of 0.05. On the other hand, a negative value in Table 4 indicates that the coefficient was lower (or more negative) for non-repayment rates than for default rates. For example, on the family income of independents among public 2-year colleges, the coefficient was -0.11 for the one-year non-repayment rate and -0.04 for the two-year cohort default rate, equivalent to a difference of -0.07. In the only instance where a covariate had a significantly stronger association with default rates was the coefficient on the state unemployment rate among the public 2-year colleges sample, where the coefficient for one-year non-repayment rates was 0.30 and the coefficient for the two-year cohort default rate was -0.35, a stronger correlation in absolute terms, indicated by [0.65].

Table 4
Factors More Strongly Associated with One-Year Non-Repayment Rates than Two-Year Cohort Default Rates

Covariate	Public 2-year	For-profit	Public 4-year	Private 4-year
Percent receiving Pell grants				
Percent receiving institutional grants				
Percent receiving loans	0.05	0.14		
Percent filing as independents	0.26	0.25	0.12	0.19
Percent Asian			-0.18	-0.15
Percent African American/Black	0.27		0.29	0.27

Percent Hispanic/Latino	0.08			0.17
Percent female	0.10		0.07	
Percent first generation			0.21	0.19
Undergraduate enrollment (log)	0.01	0.01	0.02	
Family income of independents (log)	-0.07	-0.04		-0.02
Family income of dependents (log)	0.06			-0.05
Tuition and fees (log)		0.04		
Graduation rate (2010)	-0.09	-0.04	-0.21	-0.18
State unemployment rate	[0.65]	1.17	0.84	0.70
State median household income (log)			-0.08	
State percent with BA degree			0.20	
State poverty rate	0.32		0.31	0.23

Notes:

- (1) Only coefficients that were significantly different from each other at $p < .05$ are shown.
- (2) A positive coefficient means that the coefficient was larger (or more positive) for non-repayment rates than cohort default rates. The exception was the state unemployment rate for public 2-years, which was [0.65] more strongly associated with default rates than non-repayment rates.
- (3) A negative coefficient means that the coefficient was lower (or more negative) for non-repayment rates than cohort default rates.

The percent of an institution's students receiving loans was more strongly (positively) predictive of one-year non-repayment rates than default rates among public 2-year colleges and for-profit colleges. Across all sectors, the percent of students filing as independents was also more strongly (positively) associated with one-year non-repayment rates than default rates. This difference in coefficients ranged from 0.12 to 0.26 (Table 4). For public 4-year and private colleges, a larger share of Asian students was more strongly related to lower non-repayment rates, and this variable was also predictive of lower default rates. Among public 4-year and private 4-year colleges, a larger share of Black students was more strongly predictive of higher non-repayment rates over higher default rates. In contrast, at public 2-year colleges, a greater proportion of Black students predicted higher non-repayment rates, but lower default rates, with a stronger effect on non-repayment rates. The percent of first-generation students had a stronger association with higher non-repayment rates than default rates at public 4-year and private colleges.

Higher levels of family income among independent students were more strongly related to lower one-year non-repayment rates than lower default rates at public 2-year colleges, for-profit colleges, and private 4-year colleges. Among for-profit, public 4-year, and private 4-year colleges, higher graduation rates were associated with larger declines in non-repayment rates than declines in default rates. Furthermore, higher rates of state poverty were more strongly associated with higher non-repayment rates at public 2-year and 4-year colleges, while not being associated with default rates. At private 4-year colleges, higher state poverty rates were significantly more associated with higher non-repayment rates than higher default rates.

The institutional and state characteristics we investigated were nearly all more strongly associated with one-year non-repayment rates (Table 2) than two-year cohort default rates (Table 3), as represented by each model's R -squared statistic. Conceptually, the R -squared value represents the percentage of variation explained by a statistical model; it assesses the goodness of fit in a regression model by showing how well a model with covariates fits the data points compared to a baseline model with no covariates. The R -squared value ranges from 0 to 1, where higher values represent a better-fitting model. We report an adjusted R -squared value, which penalizes the original R -squared for each covariate added to the model (Tabachnick & Fidell, 2013). The R -squared values for the models predicting non-repayment were higher than for the models predicting default rates, a difference that was particularly noticeable among for-profit and public 2-year colleges—the two sectors that tended to have the highest default rates.

Institutional and State Factors Associated with Five-Year Non-Repayment Rates

In Table 5, we display estimates for covariates relating to five-year non-repayment rates, which were measured in 2015 for the cohort of students entering repayment in 2010 and 2011. We also examined whether significant differences existed within each sector in the coefficients for one-year and five-year repayment rates, but do not display results because differences were small and statistically insignificant.

As seen in Table 5 compared to Table 2, the institutional characteristics related to five-year and one-year non-repayment rates were similar. A larger percent of students taking out loans contributed to higher non-repayment rates at public 2-year colleges and for-profit colleges, even five years after students left college. At private 4-year colleges, a higher percent of students receiving Pell grants was related to higher five-year non-repayment rates, but not to one-year non-repayment rates. In all four sectors, a higher percent of independent students enrolled meant that institutions reported higher five-year non-repayment rates (Table 5), consistent with findings for the one-year non-repayment rate (Table 2). A higher percent of Asian students was associated with lower non-repayment rates, at one year and at five years, among public 4-year and private 4-year colleges, while a higher percent of Black students was associated with higher non-repayment rates at public 2-year, public 4-year, and private 4-year colleges at one- and five-years following repayment. Additionally, a larger share of first-generation students was predictive of higher one-year and five-year non-repayment rates across all sectors except at for-profit colleges.

Higher family incomes among independent students were related to lower five-year non-repayment rates across all four sectors, consistent with findings on one-year non-repayment rates, suggesting that income levels play a prominent role in ability to repay loans immediately after entering repayment and five years later. Higher graduation rates were associated with lower five-year and one-year non-repayment rates across all four sectors of colleges. Higher state unemployment rates and a higher percentage of state residents with a bachelor's degree were both associated with higher five-year non-repayment rates, but only for public 4-year and private 4-year colleges. Higher state household incomes were associated with lower longer-term non-repayment rates in both sectors of public higher education, but not for private for-profit and nonprofit colleges.

Table 5
Factors Associated with Five-Year Non-Repayment Rates

	Public 2-year	For-profit	Public 4-year	Private 4-year
Percent receiving Pell grants	0.07 (0.04)	0.02 (0.05)	0.08 (0.06)	0.10* (0.04)
Percent receiving institutional grants	-0.01 (0.02)	0.01 (0.03)	0.01 (0.01)	-0.03* (0.01)
Percent receiving loans	0.11*** (0.03)	0.11*** (0.03)	0.02 (0.02)	-0.02 (0.02)
Percent filing as independents	0.28*** (0.03)	0.34*** (0.03)	0.13*** (0.03)	0.14*** (0.02)
Percent Asian	-0.07* (0.03)	-0.11 (0.16)	-0.16*** (0.04)	-0.19*** (0.05)
Percent African American/Black	0.21*** (0.03)	0.05* (0.02)	0.28*** (0.03)	0.28*** (0.02)
Percent Hispanic/Latino	-0.02 (0.03)	0.02 (0.05)	-0.03 (0.03)	0.08* (0.04)
Percent female	0.02 (0.05)	-0.03 (0.02)	0.07* (0.03)	-0.01 (0.02)

Li & Kelchen: Paying Back Student Loan Debt

Percent first generation	0.36*** (0.06)	0.13 (0.07)	0.35*** (0.07)	0.25*** (0.04)
Undergraduate enrollment (log)	0.02*** (0.00)	0.01*** (0.00)	0.01*** (0.00)	-0.00 (0.00)
Family income of independents (log)	-0.09*** (0.02)	-0.12*** (0.03)	-0.05*** (0.01)	-0.02*** (0.01)
Family income of dependents (log)	0.02 (0.03)	-0.04 (0.03)	-0.02 (0.03)	-0.08*** (0.02)
Tuition and fees (log)	-0.03** (0.01)	0.07*** (0.01)	0.02 (0.01)	0.02* (0.01)
Graduation rate (2010)	-0.07** (0.02)	-0.04*** (0.01)	-0.23*** (0.03)	-0.19*** (0.02)
State unemployment rate	0.36 (0.46)	0.26 (0.64)	0.97** (0.34)	1.16*** (0.28)
State median household income (log)	-0.07* (0.03)	-0.08* (0.04)	-0.08*** (0.02)	0.00 (0.02)
State percent with BA degree	-0.02 (0.05)	0.05 (0.05)	0.16*** (0.04)	0.09** (0.03)
State poverty rate	0.25 (0.17)	-0.12 (0.23)	0.11 (0.14)	0.22* (0.09)
R squared	0.63	0.71	0.88	0.88
N (Colleges)	638	339	521	877

Standard errors in parentheses

* p < 0.05, ** p < 0.01, *** p < 0.00

Discussion

As colleges face increasing accountability pressures to demonstrate their value to students and policymakers alike (Kelchen, 2018), whether students are able to manage their loan burdens is of increasing importance. Yet prior research examining the relationship between institutional conditions or state economic conditions and student loan default and repayment rates has generally examined all higher education institutions in the same analysis. In this study, we take a more nuanced view by examining relationships within individual sectors of higher education. Our general conclusion is that although there are some important differences in the factors associated with default and non-repayment rates across sectors, the same broad factors are typically associated with these two sets of outcomes for each sector examined.

There are two important areas in which our findings differ across outcomes or sectors. The first area is that institutional characteristics tend to be stronger predictors of one-year non-repayment rates than two-year default rates, although this is less applicable to for-profit colleges. The weaker relationship with default rates suggests that colleges are most likely trying to manage their default rates by encouraging students to use deferment or forbearance options. While this technique can help lower a college's overall default rate, interest continues to accumulate on loan balances and students are faced with a larger amount of debt. The second area is that institutional-level and state-level characteristics explain far less of the variation in default and repayment rates at community colleges and for-profit colleges than at four-year colleges. This finding deserves further investigation to explain other factors associated with default and repayment.

Since repayment rate data were not released to the public until 2015, colleges did not have a similar incentive during the period of study to strategically manage repayment rates. Now that repayment rate data are available to the public and since future accountability policies may tie at least some federal financial aid to

repayment rates, colleges may choose to behave strategically. Two actions include nudging current students to borrow less money and encouraging former students to make larger payments that cover at least some of their principal. Yet limiting borrowing could adversely affect student outcomes such as credits completed and eventual educational attainment (Marx & Turner, 2019), while encouraging students to pay down principal could reduce the percentage of students enrolling in income-driven repayment plans even if it is in their best interest.

Future research is needed to examine whether colleges have already started to change their practices after the repayment rate metric was released and whether this has affected student outcomes such as retention and completion. Until there is more research in this area, financial aid practitioners should be cautious in recommending students to limit their borrowing. Financial aid offices could provide additional exit counseling to students beyond what is already required by the U.S. Department of Education regarding post-college payment options and their implications for students' financial well-being. However, there is little research on the effects of additional student loan exit counseling (Cox et al., 2018; Fernandez, 2016).

It is also important to examine whether colleges change their student debt management practices to focus on students on the brink of paying down principal and away from students at risk of default, as theory and research in other nonprofit sectors suggest that colleges will devote resources to students who are on the threshold of a given accountability metric (Lauen & Gaddis, 2016; Neal & Schanzenbach, 2010). If certain sectors (such as for-profit colleges) disproportionately respond to the presence of repayment rate data, the associations across sectors will differ in future repayment cohorts.

Another potential concern of moving from default rates to repayment rates for accountability purposes is the implications for historically underrepresented students. We find that the percentage of African American/Black students and the percentage of first-generation students are more strongly associated with lower repayment rates than cohort default rates in every sector except for-profit colleges. At private, nonprofit 4-year colleges, the percentage of female and Hispanic/Latino students is also more strongly associated with lower repayment rates at one year and five years. The policy concern is that colleges may disproportionately discourage students of color and first-generation students from borrowing in an effort to manage their loan repayment rates, or at institutions with selective admissions criteria, prevent disadvantaged students from enrolling. Community colleges serving larger percentages of students of color are already more likely to opt out of the federal student loan program (Cochrane & Szabo-Kubitz, 2016), and students at these institutions tend to complete fewer credits than similar institutions that do not opt out (Wiederspan, 2016). Policymakers and researchers should pay attention to how institutions serving more underrepresented students respond to an increased use of the repayment rate metric in policy discussions.

We also find that the factors affecting one-year and five-year non-repayment rates are similar for each sector of colleges, suggesting that students who had difficulty repaying principal from the start continue to have difficulties five years later. This is particularly true in the for-profit sector, where no student demographic characteristics had different relationships one and five years after entering repayment. The only factor that consistently differed across all four sectors of colleges was that the relationship between graduation rates and repayment rates is weaker at the five-year mark than the one-year mark. While these differences are modest, they suggest that the longer that students are out of college, whether they graduated remains important, but becomes a lesser determining factor in their ability to pay back loans. Given that most students take more than ten years to repay their loans (Woo et al., 2017), it would be useful for future iterations of the College Scorecard to include repayment rates looking beyond the seven-year rates that are currently tracked to see if the trends we find hold over a longer period of time. However, the moratorium on federal student loan payments in 2020 and 2021 due to the coronavirus pandemic complicates how repayment rates will be calculated and used in the future. Additionally, the 2019 and 2020 refreshes of the College Scorecard dataset did not include updated data on repayment rates. This needs to be addressed in future releases.

Regardless of whether default rates or loan repayment rates are used in federal accountability systems, it is clear that using an all-or-nothing structure to sanction colleges (either taking away all federal aid eligibility or levying no penalties) results in little political will to follow through with federal laws. Only 14 of the 46 colleges that were subject to CDR sanctions between 2014 and 2016 faced penalties (U.S. Government

Accountability Office, 2018), as both the U.S. Department of Education and members of Congress have taken actions to protect colleges that would have otherwise lost federal financial aid eligibility (Stratford, 2014; Wilkins, 2017), allowing low-performing colleges to maintain full access to federal funds. However, colleges that crossed the threshold for sanctions did see declines in enrollment relative to colleges just below the threshold, suggesting that students may be aware of potential quality concerns (Darolia, 2013).

Risk-sharing policies that would gradually phase in penalties for lower-performing institutions by requiring them to pay a portion of unpaid loans could help address this problem but deserve further study due to concerns about the implications for students and colleges (e.g., Kelchen, 2015; National Association of Student Financial Aid Administrators, 2020; Webber, 2017). Additionally, although we were not able to analyze this given available data, whether loan repayment is based on the number of students repaying loans or the dollar value of loans repaid is likely to affect a college's performance. Institutional leaders should closely monitor policy developments in this area as risk-sharing policies continue to be proposed.

Nexus: Implications for Practice

- The institutional factors affecting one-year and five-year loan repayment rates are similar, which suggests that colleges that are able to help their students immediately begin repaying principal will perform well on longer-term repayment metrics.
- However, there are some important differences across demographic characteristics and sectors of higher education in factors affecting shorter-term and longer-term repayment rates. Specifically, lower repayment rates among for-profit colleges are not associated with the usual characteristics of historical disadvantage that are associated with lower repayment rates at public 2-year, public 4-year, and private 4-year colleges: higher percentages of first-generation students and of African American/Black students. These differences between higher education sectors should be kept in mind as colleges consider ways to target outreach efforts to borrowers.
- How repayment rates are calculated in any federal effort to hold colleges accountable for their borrowers' outcomes (based on the number of borrowers or the amount of loan dollars) is likely to affect institutional performance, and income-driven repayment plans further complicate colleges' ability to respond to loan repayment rates.
- While the college-level repayment rates are still a fairly new measure, there is a possibility that colleges may find ways in the future to "game" the one-year and/or five-year repayment rates. Strategies include accepting and recruiting more students from more advantaged backgrounds in order to boost cohort-level repayment rates over time. These actions could reduce access for students from underrepresented backgrounds. Therefore, we advise caution for policymakers seeking to use repayment rates as a way to measure performance and to hold colleges accountable for their students' ability to repay loans.

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