Bobbing for Bad Apples: Accreditation, Quantitative Performance Measures, and the Identification of Low-Performing Colleges

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ABSTRACT

Recent trends in higher education have increased interest in improving accountability in U.S. higher education beyond current accreditation practices. Many proposed solutions include using quantitative-performance measures like graduation and default rates to assess performance, but questions remain about how such a system could fit-in with existing accreditation efforts. Using a unique dataset of accreditation actions, we examine the relationship between outcomes of the current accreditation system with those of a hypothetical quantitative evaluation system. We find that schools facing accreditation sanctions are, on average, low-performing on the quantitative outcomes. However, using prior accreditation actions to set quantitative-performance benchmarks results in a substantial portion of the higher education sector being implicated. These results suggest that quantitative-performance systems and qualitative accreditation efforts assess distinct, complementary types of institutional quality. We conclude with a consideration of how the two might be used together and a discussion of concerns about data and equity.

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Abstract

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On his visit to the United States in 1882, Oxford professor August Freeman recorded that, "One

of the first things that strikes the stranger is the amazing number of universities and colleges…We can

hardly be wrong in inferring that the degrees granted by some of these institutions cannot be worth very

much… And perhaps we should not be wrong if we were to infer that it would be a gain if some of these

degree-giving bodies were abolished or merged" (1883, p. 178). Freeman's observations accurately

reflect the historical truism that, in America, higher education has always been a growth industry.

Attending this steady institutional growth has been a near constant concern for institutional quality and

for where the authority to regulate that quality ought to reside. As Freeman observed, these issues ran

headlong into American federalism. While "loath to say a word…against the powers of the several States,"

Freeman offered, "it is surely not unreasonable to hint that the right of granting degrees should be

assumed only by authority of the federal power. For a degree is surely a national thing" (1883, p. 179).

This issue of how to balance the country's uniquely open approach to regulating colleges with the

need to protect students from lower-quality colleges all while respecting the rights of institutions, states,

and the federal government has remained a considerable challenge for more than a century. Since the

1970s, American higher education policy has relied on a—distinctly American—"triad" system of

oversight and accountability involving voluntary accreditation, state government control through

institutional charters and professional licensing boards, and federal government oversight exerted

primarily through Title IV of the Higher Education Act (Harcleroad, 1980). While long considered

imperfect, recent concerns about the rising price of college; increased student debt; reduced public

funding of support for higher education; and concern that students are not learning useful skills have

amplified concerns about whether the triad is robust enough to protect the interests of student

consumers and American taxpayers (e.g. Flores, 2017; Kelchen, 2018).

Concern over lax enforcement—too many schools held to too little account—has resulted in criticism of accreditation standards and in calls for an increased focus on outcomes-based, market-driven accountability (e.g. Spellings, 2006). Following developments in a variety of private and public sectors including K-12 education, this "shift to outcomes" has resulted in a push to use more data and develop better metrics (e.g. Moynihan, 2008; Osborne & Gaebler, 1992; Tröhler, Meyer, Labaree, & Hutt, 2014). This information is intended to enable institutional accountability and to allow students and the broader public to make more informed decisions about the performance of schools receiving public money. One major challenge, however, is how to design an accountability system using quantitative-performance measures that responds to the limitations of the existing system and that credibly differentiates between good and bad performance in a way that is sensitive to the variety of institutional missions and constituencies of American higher education.

In this article we aim to provide a clearer description of the challenge of designing a quantitative evaluation system by studying how a regulatory effort based on quantitative performance measures would differ from, and perhaps compliment, the current regulatory system. In particular, we take up the task of greatest concern to policymakers and the general public: How can quantitative measures be used to identify the "lowest performing" postsecondary institutions.

One central problem in implementing a quantitative performance system is where to establish the thresholds for various outcomes below which an institution might be deemed "low performing." Qualitative determinations like accreditation are subjective and susceptible to charges of inconsistency, but bright-line quantitative measures are susceptible to critiques that they reify arbitrary cut-points. We address this problem in our analysis by starting from a point that nearly every agrees on: current accountability efforts are too lenient in their assessment of college performance. Therefore, as one approach, we assume that colleges that *have* faced accreditation sanctions (e.g. warnings or loss of accreditation) are very likely to be low-performing. We can then use these accreditation judgements,

lenient though they may be, as a starting point for calibrating performance thresholds for a quantitative

evaluation system—using the statistical profile of schools that faced accreditation actions to identify

similar schools that did not. These thresholds give us a starting point to compare accreditation and

quantitative-performance evaluation systems, and perhaps suggest ways the two systems might work in

tandem to successfully identify low-performing schools.

Using data on recent accreditation actions, and federal postsecondary performance data, we

answer three main research questions: (1) How do schools that faced accreditation sanctions perform on

various quantitative performance measures? (2) Using these quantitative performance measures, how

many accredited schools perform worse than schools in accreditation trouble when compared to the

lowest performing, highest performing, or average school that faced accreditation sanctions? And

conversely (3) how many schools in accreditation trouble would be identified as low performing under an

accountability system that classified schools according to their quantitative-performance outcomes?

In answering these questions, this article makes several contributions to the literature on

postsecondary accountability, the consequences of quantification, and the measurement of

postsecondary quality. First, the few prior attempts to examine the work of accreditors have looked

either at outcomes from a subset of all accreditors (e.g. Flores, 2016) or limited their analysis to

accreditation actions contained in public data (e.g. Government Accounting Office, 2014), resulting in an

incomplete picture of the operation of the current accreditation system. We improve on these prior

efforts by compiling and using multiple sources of accreditation data to produce a more comprehensive

database of accreditation actions for our analysis. Second, this more complete account provides a basis

for comparing accreditor actions to quantitative measures of institutional performance to a degree of

detail not possible in earlier work. Doing so provides an opportunity to compare the performance of the

existing accreditation system (one that is likely to persist for the foreseeable future) to hypothetical

designs for new quantitative accountability systems. This comparison offers fresh insight about the extent

to which accreditors and quantitative performance measures align and diverge in their assessment of institutional performance. A clear account of the respective capacities of these systems, like the one provided here, we believe must be the starting point for future examinations how to develop more robust and complimentary accountability systems.

Accreditation and Quantitative Performance Measures

Although the means of achieving their stated purposes are quite different, the current accreditation system and proposed quantitative-performance accountability systems have remarkably similar aims. As shown in Table 1, there is a great degree of overlap between the purposes of accreditation, and the stated aims, for example, of the Obama administration's proposed, outcomes-based college rating system (CRS). Indeed, both systems aim to provide information for students about college quality, ensure that colleges meet particular standards, and spur college improvement (Hegji, 2014, U.S. Department of Education, 2014). These similarities make comparisons between outcomes reached by accreditation agencies and outcome-based measures worthy of consideration.

[Insert Table 1 here]

Where the two systems differ, however, is in the way that they approach their assessment of colleges. Accreditation happens via qualitative self- and peer-assessment, while quantitative-performance accountability typically attaches monetary consequences to under-performance on numerical-performance metrics. These differences reflect the different institutional logics that shape the way actors think about and approach their work under each system. While both are grounded in a compliance-based logic of state monitoring, accreditation activities are characterized by the professional logics of peer-review, organizational learning, and improvement (Brown, 2017). Quantitative-performance measures do not incorporate these professional norms but instead emphasize the views of consumers and taxpayers through the market-based logic of performance and incentives (Burke 2005; Brown, 2017). To illustrate how these differing logics inform the design of their respective monitoring systems, consider that

accreditation process involves both the self-study and peer review of the professional administration of an institution. In contrast, quantitative measures like those in in the College Scorecard highlight the salaries of the school's graduates and the percentage of students paying down their student loan debt. In the former, the emphasis is on standards maintained and enforced by people within the institutions. In the latter, the emphasis is on the market logic of consumer's return on investment. These varied logics have important implications for how each system responds to low-performing institutions. Understanding these differences is an important first step in understanding the results produced by each system.

The Current Accreditation System

College accreditation began in the early 1900s as an informal, voluntary system of establishing basic distinctions among institutions and codify basic standards for admission and completion. This accreditation was used as a way for institutions to qualify their professors for Andrew Carnegie's lucrative faculty pension plan, administered by the Carnegie Foundation for the Advancement of Teaching (Rudolph, 1960/1990). While maintaining institutional and professional standards remained a goal of accreditation, following World War II, the federal government, rather than develop its own quality-enforcement agency, began using accreditation as a way of ensuring the quality of institutions that received federal money (Harcleroad, 1980). Since the Higher Education Act of 1965, accreditation has been one of the criteria to determine an institutions eligibility for Title IV funding, primarily via student financial aid. Over time, the purposes of accreditation have evolved further as new institutional types, programs, and expectations have developed. The result is now an accreditation system that embodies the needs of the state to monitor institutions and of institutions to maintain of the professional norms of their field.

In the accreditation system's current form, the accreditation of whole institutions is performed by federally-recognized regional or national accrediting agencies. As a general rule, regional accrediting agencies typically accredit public and private institutions, while national agencies accredit for-profit and

career-oriented institutions (Eaton, 2015). In a typical accreditation review, institutions first conduct a

self-assessment of their performance, which forms the basis for a site visit conducted by administrators

and faculty members from peer institutions (Eaton, 2015). Institutions are assessed in several areas

including fiscal and administrative capacity; facilities and equipment; faculty; curricula; and student

achievement (20 U.S.C. § 1099b(a)(5)).

A successful accreditation review typically results in 10 years of accreditation before another

review is required (Kelchen, 2018). Less successful reviews may result in additional scrutiny or a shorter

accreditation term. The most serious sanction an accrediting agency can take against a low-performing

institution is to revoke its accreditation, meaning that the institution would no longer be eligible to

receive federal Title IV funding meaning a student cannot receive federal financial aid funds if they attend

that university. A Government Accountability Office (GAO) report found that, over a four-and-a-half-year

period, 8 percent of institutions were cited for not meeting accreditor standards, while 1 percent had

their accreditation revoked (GAO, 2014). Most of the terminations were for financial capability issues at

non-degree granting institutions (GAO, 2014). Although, academic quality infractions were the most

common at public and not-for-profit institutions, there is only weak evidence that accrediting bodies

sanction schools with worse student outcomes (GAO, 2014).

While many believe these outcomes reflect overly lenient approach to accreditors' oversight

responsibilities, the accreditation system with its structure of peer-assessment, sensitivity to individual

school missions, and an ethos of supporting institutional improvement embodies a professional logic that

does not support the strict sanctioning of low performance (Brown, 2017). Indeed, accreditors appear

unwilling to resort to the "nuclear option" of eliminating an institution's Title IV eligibility (The Triad,

2013) and hesitate to issue minor sanctions in order to avoid potential lawsuits (Reauthorizing the Higher

Education Act, 2015). Thus, although there is dissatisfaction with the rigor of accreditation—as Secretary

Duncan put it, accreditors are "the watch dogs that don't bite" (Stratford, 2015)—it may be that the

system is not currently designed to respond satisfactorily to current demands for more rigorous

accountability.

Quantitative-Performance Measures and Accountability

Developing alongside the growing sense that accreditation agencies were not doing enough to

regulate institutions in the face of rising college costs, state and federal governments increasingly

expected institutions to produce information to allow for their evaluation by the public and to be held

responsible for their organizational results (Burke, 2005; Zumeta, 1998). As in the private sector (e.g.

Osborne & Graeber, 1992), the use of quantitative-performance measures was intended to direct

institutional attention to important outcomes often through financial incentives and to direct public

attention to institutions' relative performance on these measures. Adoption of quantitative performance

systems was often seen by lawmakers as a way to produce better outcomes and efficiency by introducing

market logics to higher education oversight while preserving institutional autonomy and as a way to

provide a more objective means of assessing performance and making consequential decisions (Porter,

1996; Frederickson & Fredrickson, 2006; Moynihan, 2008).

During the 1980s and 1990s, the vast majority of states adopted some form of higher education

performance system involving either performance reporting, performance funding, or performance

budgeting (McLendon, Hearn, & Deaton, 2006). This interest in performance metrics continued in the

2000s as many states sought to retool their performance funding systems (Dougherty et al., 2014;

Rabovsky, 2012; Tandberg & Hillman, 2014) and as major foundations launched efforts aimed at pushing

states to improve their data practices and adopt performance funding plans (Complete College America,

2009; see also Hearn, McLendon, & Mokher, 2008).

The federal government, likewise, sought to raise the availability and visibility of school

performance data over the last three decades by creating new data reporting requirements and new

public-facing platforms for the public to access the collected information: In the 1990s the federal

government required schools to report cohort default rates; the Spellings Commission (2005) called for increased transparency and accountability for measures of institutional performance; and the Obama administration developed the College Scorecard and worked to design a college rating system that would, like state performance funding policies, tie federal financial backing to student outcomes (U.S. Department of Education, 2014).

The increased use of performance metrics has raised questions about the nature of their influence on the systems they monitor. While there is strong evidence that the information provided about public sector institutions by performance metrics influences private individual behavior in the context of, for example, charitable giving (Figlio & Kenny, 2009), school choice (Hastings & Weinstein, 2008), and health insurance selections (Dafny & Dranove, 2008), many scholars express concerns that the logic of performance management is inconsistent with democratic governance (e.g. Radin, 2006) and is incapable of adequately handling the multi-faceted missions and complex administrative structures of modern government (e.g. Frederickson & Frederickson, 2006). This limited ability to manage institutional complexity without reducing it to a single metric or organizational logic is a particular concern in the application of quantitative-performance metrics to institutions of higher education that have multiple and varied constituencies, multi-faceted missions, and complex governance structures (Burke 2005). The problem is further amplified by attempts to create explicit performance rules. Though the rules themselves may be designed to provide a more objective way of separating high and low-performing institutions, they may be open to the charge of unfairly privileging certain aspects of the institutional mission over others, of disadvantaging institutions for the populations they serve, or, more generally, of assigning arbitrary importance to specific performance thresholds. For instance, on-going debates about the development of the gainful employment rules reflect each of these concerns (Fain, 2013).

A related set of concerns stems from the belief that performance metrics are not ineffectual, but rather that they work too well—inducing undesirable individual and institutional responses in an effort to

improve performance indicators (e.g. Campbell, 1976). For example, institutional responses to ranking

systems have led schools to alter their organizational processes and values (e.g. Espeland & Sauder, 2016;

Strathern, 1997) and, in the context of public K-12 education, school districts developed a wide variety of

strategies to game accountability metrics associated with No Child Left Behind (e.g. Figlio & Loeb 2011).

Given these prior experiences there are legitimate concerns that a similar response would occur in higher

education if a full-blown quantitative evaluation system were ever implemented, especially if it were tied

to federal funding (Deming & Figlio 2016). Evidence from the implementation of federal cohort default

rate rules, tied like accreditation to Title IV eligibility, suggests that while overall rates are generally

declining, schools may be achieving this result by advising students to engage in behavior that is

beneficial from the perspective of the institution's performance metrics but perhaps not in the student's

own best interest (Kelchen & Li, 2017). Likewise, responses to Obama's proposed College Rating System

were replete with such concerns (e.g. Field, 2014).

Substitutes or Complements?

Having considered the operation of the current accreditation system and the arguments and

concerns related to a quantitative evaluation system, we now turn to the task of considering how they

might be joined together within the existing accountability triad. Given that accreditation is the lynchpin

of that system—state and federal policies are often built on top of accreditor determinations—we are

interested in investigating how the results of an evaluation system based on quantitative performance

measures from currently available data would compare with those derived from past accreditation

actions. Though they are clearly different systems—drawing on different institutional logics and different

data sources—comparing their respective evaluation of schools could shed light on whether the two

systems work toward the same performance goals, but to different degrees, or if they judge institutions

differently and so prompt thinking about how they might best be used in tandem to increase

accountability pressure in American higher education.

For instance, based on the common belief that accreditors succeed in identifying low-performing

schools but, bowing either to political, public, or membership pressure, do so far less often than they

should, it is possible that the statistical profile of schools that had accreditation actions against them

could be used to "benchmark" a quantitative performance evaluation system. That is, to use the

quantitative profile of the schools that *did* receive accreditation sanction to identify statistically similar

schools that, perhaps undeservedly, escaped accreditors notice. In this scenario, a quantitative

performance system could be used to address the problem of the sleepy accreditation watchman.

Likewise, it is possible that using available statistical data will identify sets of schools that are clear outliers

in terms of their performance. In this scenario, the quantitative performance system could serve as a

further tool of accreditors or as additional policy lever for lawmakers and regulators.

In the work that follows, we aim to compare accreditor actions with school performance based

on a variety of quantitative-performance measures in order to determine to what extent these

assessments of institutional performance align, or—to the extent that they differ—the different types of

colleges they identify as low performing. We focus on net price, graduation rates, and cohort default

rates as our primary quantitative-performance measures of interest. These outcomes are common to

policy conversations about postsecondary accountability, and most recently were included in the

discussions of President Obama's proposed college rating system (U.S. Department of Education, 2014).

<center>Data</center>

Accreditation Data

Our primary source for data on the accreditation status of institutions is the Database of

Accredited Postsecondary Institutions and Programs from the U.S. Department of Education.[1] This

database, which we refer to as the "ED data," comprises all accreditation actions reported to ED since the

early 1900s and contains school-identifying variables, including the identification variable that allows the

data to be liked with the Integrated Postsecondary Education Data System (IPEDS), as well as information

about the type of accreditation (institutional or programmatic), the accrediting agency, the last

accrediting action taken by the agency, and the dates of accreditation.

As a supplemental source of accreditation data, we also use data collected directly from 10 major

regional and national accrediting bodies by the Center for American Progress (Flores, 2016). These data

were collected between 2012 and 2015 directly from online, public notices of actions taken by each of

the accrediting bodies. They provide a good complement to the ED data because, in many cases, they

include actions that were not required to be reported to ED. Even though they do not cover actions taken

by all accrediting bodies, these data add nuance not included in the full ED accreditation dataset. We

refer to this dataset as the "CAP data." Together, these two datasets represent the most complete

accreditation data analyzed in scholarly research.

College Scorecard Data

We merge the accreditation data with data from the College Scorecard, which aggregates and

generates data from several sources including IPEDS, the National Student Loan Data System, the Federal

Student Aid Data Center, and other data sources from the Department of Treasury and ED. The scorecard

data is useful for two purposes. First, it provides basic descriptive information about institutions,

including their control and degree length, the size of their undergraduate enrollment, and the

racial/ethnic composition of the student body. Second, it provides outcome data that have been

suggested as measures by which institutions might be held accountable. These include graduation rates in

150% of expected time[2]; three-year cohort default rates; and net price. The three-year cohort default

rate gives the percent of borrowers who entered repayment on a Federal Stafford or Direct Stafford/Ford

loan in a given year who then defaulted on their loans within the next three years. Net price gives the

total cost of attendance minus the average amount of grant/scholarship aid received by students.

Data Delimitations

We focus our analysis on the institutional accreditation of Title IV-level institutions (which may be multi-campus). Programmatic accreditation also exits, but it is typically granted to specific training programs such as nursing to indicate that they meet the standards of their industry. Our focus on institutional accreditation is consistent with discussions of outcomes-based postsecondary accountability that have focused on rating complete institutions.

Further, we consider only degree-granting, two- and four-year colleges and universities. This is first because non-degree institutions are unique in form and function from two- and four-year degree granting colleges so it would not make sense to hold them accountable with the quantitative performance standards. Second, our data does not include the reasons for accreditor sanctions. Yet, when it comes to comparing accreditation actions or quantitative performance measures, we would prefer to focus on sanctions related to academic quality rather than financial capability. Given that we know that most financial capability sanctions occur among non-degree-granting colleges (GAO, 2014), we exclude them from our analysis.

The ED and CAP data include multiple observations per year. We collapse the data into academic years to align it with the College Scorecard data. For the ED data, an academic year includes actions reported from August through June of the following year. Because of apparent reporting delays, June accreditation actions in the CAP data are aligned with the subsequent academic year in order to better match the ED data. We limit our analysis to actions taken between the 2011-12 and 2014-15 academic years reflecting the years for which we have both CAP and ED data and the availability of our outcomes measures.

In order to allow for a clear comparison between schools that did and did not face accreditation action, the final data was reduced to one observation per institution. For institutions that faced accreditation sanction, we keep the observation for the academic year in which the accreditation action occurred. For institutions with no accreditation actions, we keep the observation from 2014-15. The

choice of 2014-15 rather than other years does not qualitatively affect our findings because institutional performance was relatively consistent in the four years of the data.

Accreditation Actions

We group institutions into four categories for our analysis. The first group consists of colleges who have had their institutional accreditation "withdrawn," "terminated," or are "no longer recognized" by their accrediting agency. Any school that has one of these as its last action is categorized as having lost its accreditation. In a few cases, there are schools that regain accreditation after appeal. We treat these schools as having lost their accreditation under the original action, even though the institution continues to operate.

The second group, within the ED data, consists of institutions that are listed as under "probation." These institutions offer an example of colleges that are performing poorly enough to be of concern to accreditors even if that performance is not enough to revoke accreditation While probation has long been a tool used by accrediting agencies to incentivize compliance with agency standards, it is only recorded as an accountability action in the ED data since 2012-13. Within the CAP data, we consider probation as part of a group of "major actions" that accreditation bodies take that are just short of revoking accreditation. Flores (2016) notes in describing the CAP data that these actions may vary in name ranging from "show cause" to "probation", but they all represent an expression of serious concern on the part of the accrediting body.

The third group, which is only available in the CAP data, describe "minor actions" taken against offending institutions. These include actions such as "warnings" and "heightened monitoring" that indicate concern for the performance of an institution, but not at a level that would warrant one of the major actions described above.

Finally, we consider colleges in both datasets that are operating in good standing with their accreditors and who have no record of adverse accreditation action.

Missing Data

Although reporting to IPEDS is mandatory for Title IV institutions, many schools do not submit more than just basic identifying information. For example, 15 percent of the graduation rate data are missing. The missing data problems are worse, perhaps predictably so, in schools that have lost their accreditation or are on probation. Thirty-two percent of these schools (in the ED data) are missing graduation rate data. We have no recourse to impute the missing data values for most of our variables because they are the primary outcome of our study. Instead we report the statistics for the observations for which we have data. We believe the available data still allow us to provide an illustration of colleges with varying accreditation status.

Method

Our method is primarily descriptive. We give descriptive statistics for each outcome of 150% graduation rate, 3-year cohort default rate, and net price. We also calculate regression-adjusted graduation and default rates. These provide expected graduation and default rates for each institution based on institutional type and student body composition. We create these by first calculating:

$$Rate_{ij} = \beta_0 + \beta_1 perPell_{ij} + \beta_2 perBlk_{ij} + \beta_3 perHisp_{ij} + \beta_4 perAsn_{ij} + \beta_5 enroll_{ij} + \beta_6 control_{ij}$$
$$+ \beta_7 level_{ij} + \gamma_j + \varepsilon_{ij}$$

In other words, for each institution (*i*) in the year they are observed (*j*), we predict graduation (or default) rate, controlling for percent Pell recipients; percent Black, Hispanic, and Asian; total enrollment; institutional control (public, private, or for-profit); level (2- or four-year); and year fixed effects. This specification reflects known correlates of graduation and default rates (e.g. Hillman, 2014; Scott, Bailey, & Kienzl, 2006) and the fixed effects correct for varying conditions between years that might affect the graduation rates of all schools in that year.

We use the coefficients from this regression to predict expected graduation and default rates using an institution's own characteristics, which we then compare to a school's actual graduation rate and present as the percentage points an institution's graduation or default rate was over/under its prediction.

With these quantitative performance metrics, we then work to compare schools with accreditation actions taken against them and schools that perform poorly in the quantitative metrics. This occurs first by finding the worst, average, and best performance among the groups of schools with each accreditation action taken against them and finding how many accredited schools performed worse than those benchmarks. Finally, using the quantitative performance measures as our guide, we look for obvious cut points in the data that would include, for example, all colleges that lost their accreditation. Specifically, we look at how many of each type of institution that had accreditation actions taken against them perform relative to the top and bottom quartile of performance on our regression-adjusted measures, as well as how many schools underperformed relative to prediction.

Results

Basic descriptive statistics (means, column percent, and counts) for each of the analytical groups of colleges in each dataset are found in Table 2. In the ED data, accreditors took 79 actions against institutions. More of the probation actions reported were undertaken by regional accreditors, while national accreditors terminated twice as many accreditations as regional accreditors. Consistent with their respective roles, national accreditors took more actions against for-profit institutions, particularly two-year institutions, while regional accreditors mostly focused their actions on public and not-for-profit institutions. Generally, public institutions had the fewest actions taken against them.

Colleges that lost their accreditation tended to have larger black student populations and fewer Hispanic and Asian student populations relative to schools that maintained their accreditation. Colleges that were put on probation tended to have a slightly higher percentage of Pell recipients, at least among regionally-accredited institutions.

[Insert Table 2 here]

Similar patterns held in colleges described by the CAP data. In the wider array of accreditation actions recorded in the CAP data, there were 440 accreditation actions taken against institutions. 198 of these were minor, 211 were major, and 20 involved a termination of accreditation. Similar to the ED data, regional accreditors were much more likely to take minor actions than national accreditors (198 instances vs. 11 instances), but each type terminated the same number of accreditations. Further, nearly all of the actions taken by national accreditors were against for-profit institutions. Also parallel to the ED data, college with higher percentages of Black students were more likely to lose their accreditation, while institutions that had major actions taken against them had higher percentages of Pell recipients.

We report the remainder of our results by institution level and control rather than by accreditor type because the categories are so closely aligned.

Average Performance on Outcomes-Based Measures

Table 3 summarizes how institutions in each of our analytical groups performed on average in our five college outcomes-based measures: average net price, graduation rate in 150 percent of expected time, performance relative to a regression-adjusted graduation rate, three-year cohort default rate, and performance relative to a regression-adjusted default rate. We present these measures separately for two- and four-year colleges, and by institutional control for each of our two data sources.

[Insert Table 2 here]

In the ED data, four-year colleges that lost their accreditation cost students about as much, on average, as schools that maintained their accreditation (roughly $19,000), while colleges that were put on probation cost less (roughly $16,500). In the CAP data, schools that lost their accreditation, at both the two- and four-year level were more expensive that schools that kept their accreditation.

In terms of student outcomes, in both datasets, four-year institutions that had their accreditation terminated or had other actions taken against them had lower graduation rates than those who

maintained their accreditation. Four-year institutions in the ED data that lost their accreditation or were put on probation have lower graduation rates—37 percent and 31 percent respectively—relative to the average 48 percent six-year graduation rate at accredited four-year institutions. These disparities remain even after accounting for institution characteristics. Schools that lost their accreditation and probation schools fell between 12 and 13 percentage points below their expected rate. This trend was largely driven by private and for-profit colleges, which underperformed expected graduation rates regardless of accreditation action. The converse was true at two-year institutions.

The opposite was true at two-year colleges, where colleges in accreditation trouble generally had higher graduation rates than those not in trouble in both datasets. However, at two-year colleges, the public and private institutions that lost their accreditation, actually over-performed their graduation expectations by an average of 15 percentage points in the ED data.

With respect to default rates, four-year institutions in the ED data generally had higher default-rates if they were put on probation or lost their accreditation (13.7 and 12.8 percent) than if they kept their accreditation (8.9 percent). This higher rate could not be explained by the students those institutions served—four-year colleges in accreditation trouble had higher default rates than the regression-adjusted predictions by over 1.5 percentage points. The data was thinner at the two-year level, but where we do have data, we see that public-two-year colleges that lost their accreditation had *lower* default rates than those who kept it or were put on probation. This was also true, on average, for two-year colleges in the CAP data.

With few exceptions related to low numbers of observations, the average performance of four-year colleges in both the CAP and ED data mostly align with the judgement of accreditors. However, these averages occlude the full distribution of institutional performance. They fail to reveal the extent to which there are accredited schools that, according to these measures, are indistinguishable from schools in

accreditation trouble. That is, whether accreditation actions can help benchmark outcomes-based measures.

Table 3 also shows that, in addition to this concern about the distribution of performance, accreditation bodies appear to identify nearly the opposite schools than expected at the two-year level. Among two-year colleges in the ED data, schools that lost accreditation graduated their students at *higher* rates—although not when adjusting for the composition of the student body—and graduated students *less* likely to default on their loans than schools that maintained their accreditation. One explanation for this stark contrast with four-year institutions is that ED graduation rates essentially treat transfer students as drop-outs. For this reason, institutions that work to help their students transfer to four-year colleges will look like they are graduating fewer students than institutions with no similar transfer mission. Likewise, if students transfer from two- to four-year colleges, and take additional loans to help pay for the additional years of schooling, they will inherently be at a higher risk of defaulting on those loans, which may also explain why accredited two-year colleges have higher default rates—it may be precisely because these schools that are doing a good job of transferring students to four-year colleges.

Thus, even before we consider the number of accredited schools not meeting the standards of schools that were in accreditation trouble, we can divergence between the results accreditation and outcomes-based systems. To wit, schools with generally "good" performance on graduation and default rate outcomes are treated differently by accreditors between two- and four- year colleges. This distinction reveals either important nuance that accreditors bring to their evaluations, or a seeming blindness to performance outcomes.

Benchmarking Quantitative-Performance Measures.

Thus far we have been examining how well schools that have had an accrediting action taken against them compare on average with those schools that remained in good standing with their

accreditors. If one challenge of developing a parallel system based on quantitative performance is how to

establish the threshold of "low-performing," then it is worth considering how many colleges have similar

outcomes to schools in accreditation trouble. Ideally, we would hope that the accreditation actions allow

us to home in on a statistical profile that could be rigorously and reliably monitored through an

outcomes-based system. If on the other hand, lots of schools look statistically like those that faced

accreditation sanctions, it might raise questions about the credibility of the benchmarks. That is, if too

many schools are identified as "failing," then the distinction ceases to carry meaning and its application to

specific institutions ceases to be an effective mechanism for inducing change.

To examine how many schools look statistically similar to those who had accreditation actions

against them, in Table 4 (and 5), we compare the performance of four-year (two-year) institutions that

maintained their accreditation to that of the lowest performing school that lost its accreditation that we

observe for each outcome; the average performance of the schools we observe that lost their

accreditation; and the highest performing school that lost its accreditation. We repeat these same three

comparisons using schools given probation/major action and minor action rather than those that lost

their accreditation.

[Insert Table 3 here]

Even relative to the lowest performing school that lost its accreditation across each of the three

outcomes, a substantial number of institutions that still have their accreditation in the ED data perform

worse. For example, over six percent of accredited four-year colleges, roughly 151 institutions, have

graduation rates lower than the single lowest graduation rate among the schools that lost their

accreditation. The comparisons are even less flattering if we compare schools to the average

performance of institutions that lost their accreditation. Anywhere from 24 to 31 percent of institutions

with accreditation in good standing perform worse than the average school that lost its accreditation on

graduation rate, graduation rate relative to predication, and default rate; and over half have higher net

prices. Finally, a substantial majority of accredited four-year colleges perform worse than the *highest* performing college that lost its accreditation across all four measures. Comparisons to schools on probation appear only slightly more favorable, with roughly one-in-five accredited colleges performing worse than the average school on probation across most measures.

The type of school implicated by each comparison varies by the outcome used. Public institutions, predictably, are less likely to be labeled as low-performing under net-price based metrics. Public institutions are more likely than private institutions to be identified as low-performing using graduation rate alone, but are less likely to be labeled as such when judged relative to their regression-adjusted prediction. Meanwhile, private schools look better using raw default rates than they do with comparisons to predicted default rates. Four-year, for-profit fare the worst in almost every comparison.

Similar relative patterns hold in the CAP data as in the ED data, though in most cases fewer accredited schools perform worse than the benchmarks set by schools with accreditation actions taken against them. However, all institutions in the CAP data have lower graduation performance, regardless of adjustment, than the schools given minor sanctions. Such high performance of minor action schools suggests that accreditation bodies might use this action as a way of sanctioning what are otherwise well-performing schools for minor evaluation problems.

With respect to the two-year colleges in Table 5, for-profit colleges tended to perform better than public and private colleges on both graduation outcomes (for example, roughly 13 percent had lower graduation rates than the average graduation rate of a two-year college that lost accreditation, relative to 84 percent of public colleges). And depending on the comparison, private two-year colleges tended to perform well on each of the default-rate measures.

[Insert Table 5 here]

It may be desirable to hold schools accountable based on their performance on multiple measures. As an example of this, Figures 1 and 2 give scatterplots of graduation and default rate

performance for four-year (Figure 1) and two-year colleges (Figure 2) based on the control of the

institution (public, private, or for-profit). We indicate on each plot where the performance on each

outcome of the lowest-, average-, and highest-performing colleges at each level that lost their

accreditation. Figure 1 shows, for example, that 4 colleges perform worse than the lowest performing

four-year college that lost accreditation on both graduation and default rate measures. One of these

schools is public while 3 are private. 430 four-year schools perform worse on both measures than the

average four-year college that lost accreditation. Thus, even comparing accredited schools to schools that

lost their accreditation across multiple measures at the same time marks a great deal of these schools as

low-performing.[3] The same rough pattern is depicted in the CAP data, except that there is less variation in

the default rates of schools in accreditation trouble in the CAP data than in the ED data (Appendix Figure

A1).

[Insert Figure 1 here]

[Insert Figure 2 here]

Figure 2 shows a stark divide on graduation rate measures between public-and for-profit two-

year colleges. Most public two-year colleges have three-year graduation rates less than 45 percent, while

for profit schools almost uniformly have graduation rates higher than 45 percent. This dichotomy means

that when we look at the 868 accredited schools performing worse on both measures than the average

two-year schools that lost their accreditation, the vast majority of them are public institutions. If one of

the unspoken goals of postsecondary accountability is to crack down on for-profit community colleges,

rating them on graduation rate and default rates, as currently measured, does not appear to be not the

way to do it. Again, the CAP data shows a similar pattern, displayed in Appendix Figure A2.

Accreditation Performance Relative to Quantitative Thresholds

A slightly different way to consider the relative performance of the accreditation system to a quantitative

system would be to consider how well quantitative measures distinguish between colleges using obvious or

natural cut points in the data rather than schools that lost accreditation. To illustrate this test, we compare

schools on both regression-adjusted graduation and default rates. In Table 6, we give the percentage of schools in

each of our analytical groups whose performance versus predicted graduation and default rates fell in the bottom

25 percent of colleges according to their level (two- or four-year schools), those schools that underperformed

relative to their prediction at all, and those who were in the top 25 percent of their comparison group—these are

common data delineations, but we note there are no obvious clusters in the data that suggest natural alternative

divisions. We would hope that in creating these broad evaluative categories the system could, at the very least,

group those with accreditation actions against them in with the lowest category group.

[Insert Table 6 here]

Among the institutions in the ED data, roughly 25 percent of accredited two- and four-year schools fall in

the top and bottom 25 percent of graduation and default rate performance relative to prediction, as would be

expected. However, none of the cut points in either measure perform well at separating schools that had

accreditation actions taken against them. They get the closest in identifying the few schools that lost their

accreditation—for example, 80 percent of four-year colleges that lost their accreditation in the ED data, and 100

percent of the ones in the CAP data, underperformed on the graduation measure. However, this measure is less

good among two-year colleges, two-thirds of the colleges that lost accreditation in the ED data were in the top 25

percent of all two-year colleges with respect to their graduation rate relative to prediction. Similarly, 36 percent

of the colleges on probation in the ED data were in the top 25 percent of overall two-year college performance.

Perhaps reflecting that the CAP data appears to capture a relatively lower performing set of

institutions in general, a greater proportion of the CAP data schools in accreditation trouble

underperform relative to prediction than in the full ED dataset. In fact, all of the (eight) four-year CAP

schools that lost their accreditation were underperforming with respect to their graduation rates.

However, the cut points did not distinguish well among colleges with other accreditation actions against

them. For example, over half of the CAP data four-year colleges with major actions taken against them, were in the top-25% of four-year colleges in terms of the default rate performance relative to prediction.

Discussion

We conducted this analysis to examine the extent to which either accreditation actions might be used to benchmark quantitative performance measures, or quantitative performance measures could be used to distinguish between institutions with accreditation actions taken against them. While these were each reasonable possibilities, our results suggest neither of these uses is likely to be fruitful in practice: the schools flagged by accreditors did not possess a unique statistical profile; and schools, far from coalescing into discrete performance groups, fell on a nearly continuous line on available outcome metrics. Even when using input-adjusted outcome measures to create broad categories of performance, we found that schools marked for sanction by accreditors would rarely have stood out in a quantitative-performance system. In other words, there was very little alignment between the work of accrediting bodies and quantitative measures of institutional performance.

These findings underscore a major challenge in the design of quantitative accountability systems: calibrating the identification of low performing schools in justifiable ways. While quantitative systems are clearly helpful in removing the political pressure associated with the subjective identification of low-performing schools because they do so by objective rules, what Porter (1996) calls "mechanical objectivity, but how to set these rules remains unclear. In many critiques of accreditation actions there is an assumption of the overly-permissive watchman who is too frequently willing to look the other way either out of professional courtesy, public pressure, or fear of conflict or lawsuits. If this were the case, then a quantitative system might be used to produce more reliable enforcement of these standards. But our results indicate that accreditors' judgments are not easily captured or reproduced by available quantitative information. Indeed, our attempt to generalize on the basis of the statistical performance of schools identified for accreditation sanction led to a seeming over-identification of schools. This is

problematic as it diminishes the effectiveness of being identified as low-performing. As Figlio and Loeb

(2011) explain in the context of NCLB potentially identifying *all* schools as not meeting "adequate yearly

progress," "accountability systems that set standards such that a massive fraction of schools would likely

fail may be perceived as incredible by educators who do not believe that central authorities would shut

down schools…on a grand scale" (389)—indeed, the creation of a waiver policy was ultimately used to

avert this outcome.

The seeming inability of outcome measures to piggyback on the judgements of accreditors or to

provide clear distinctions between higher- and lower-performing schools, suggests that the best way

forward for the development of a future quantitative evaluation system may be the setting of bright-line

thresholds. This is consistent with Deming and Figlio (2016)'s assessment of the lessons to be learned by

American higher education from the decades of accountability policy enacted at the K-12 level. They

argue that the best system design will seek to set a single, relatively permissive standard but will enforce

it vigorously. Though any specific threshold may be subject to challenges that it has been "arbitrarily" set,

as was recently the case with the gainful employment rule (Fain, 2013), such threshold measures have

proved effective at generating institutional and market pressures. For instance, the introduction and slow

ratcheting up of cohort default rate rules over several decades has led to a general decline in the overall

rates of default (Kelchen, 2018). While these rules do not work perfectly—there is evidence that schools

have attempted to game the system and rules can still change in response to political pressure—they

have succeeded in weeding out some of the worst offending programs and spurred institutional change

in others (Kelchen & Li, 2017). There is the additional benefit that debates about the "acceptable"

performance threshold, squarely frame what is, ultimately, a normative question: when it comes to

consumers and taxpayers, how much risk is too much?

Beyond this threshold question, there are several additional difficult issues that any future

quantitative system of accountability will need to address concerning issues of data quality, equity, and

how accreditation efforts might be used in quantitative-performance measures before it can be

considered viable addition to our current system. The next step then is to think about how these systems

complement each other. We identify several issues below that are key to making this work possible.

Data Challenges

A successful system to quantitative measurement requires the production of better, higher

quality information about colleges. One remaining roadblock, evident in our analysis, to implementing

any system based on quantitative-performance measures successfully is that existing data is currently too

weak to support it. Some of these weaknesses, such as transfers counting against school graduation rates,

are known by ED and presumably could be addressed (U.S. Department of Education, 2014). Indeed,

recent changes to the graduation rate calculations have included more non-traditional student

populations, but still struggle to account for students who transfer away from two-year colleges

(Lederman, 2017). Of greater concern, however, is that even though graduation rate data has been

collected and reported in IPEDS since the 2000-01 school year, it is missing entirely for nearly a quarter of

the schools in our analysis. Three-year cohort default rate data, although only collected more recently,

also shows similar rates of non-response. The missing data problems compound themselves when we

consider that 40 percent of schools are missing *either one* of the graduation rate or default rate

measures. Though a more robust system might extract higher rates of compliance, reporting this data is

already required by law. As with accreditors who are limited in their ability to exert pressure short of the

outright removal of accreditation, calibrating the appropriate level of sanction for non-data response may

prove challenging.

Equity Challenges

There is a legitimate concern that the current accreditation system is too lax and may give a pass

to some schools simply because of their historical reputation or their standing within a community even

when the school is providing students with low-quality educational opportunities and taxpayers with high

risk educational investments. It makes sense, then, that we try to use a quantitative performance system to try and improve institutional performance. But one major concern for any quantitative evaluation of U.S. higher education is that it not unfairly penalize schools serving non-traditional students, especially those who struggle to access and afford higher education. Our analysis demonstrated that schools facing accreditation sanctions serve higher proportions of Black students than other schools. Additionally, no fewer than two million Pell recipients attend either two- or four-year colleges that perform worse than the average performance of schools that faced accreditation sanctions (authors' calculations).

These are large numbers and if an accountability system is to be successful, it must avoid two pitfalls with these students. First, it has to ensure that institutions are not incentivized to close their doors to these students, who typically have lower graduation rates regardless of where they attend, in an attempt to raise their ratings performance. Second, these (and all) students would need advice about where they can successfully enroll, if the schools they currently choose are so low-performing.

There is the additional concern that the introduction of more robust systems based on quantitative performance may create a policy environment in which it becomes more challenging to have honest conversations about the structural reasons behind individual school statistics or that the values embedded in the evaluation system press schools to constrain or abandon parts of their mission. Our results suggest the possibility that these problems are not just theoretical. For instance, we found that that public and for-profit two-year schools performed fundamentally differently in terms of graduation and default rates. It is not hard to come up with reasons why this might be—different missions, stakeholders, opportunity structures, or levels of commitment to the public good. While proposed outcomes systems have tended to avoid the identification of specific categories of schools and have tended to remain silent on potential explanations for differences in school performance, it is not clear that this is wise. Consistent with the existing distinction between regional and national accreditors and with recent calls for the federal government to expand the number and character of authorized

accreditors to allow for greater innovation in educational programs (e.g. Kelly & James, 2014), it may make sense to segment any quantitative-performance evaluation system by institutional type.

Complementary Systems

Had our analysis revealed that the judgment of accreditors and the quantitative-performance variables had collectively homed in on a discrete set of schools, it would have been possible to conclude that these two systems—one expert, one statistical—had converged on a definition of school quality. In that case an argument could be made that an outcomes-based system provides a simpler, more cost-effective, and possibly more transparent method of applying accountability pressure. However, we find a divergence that suggests the statistical and peer-qualitative judgements are operationalizing different constructs of school quality. This would imply that it would be unwise to eliminate one system in lieu of the other—they each appear to offer an important perspective on institutional operation and performance.

This distinctiveness suggests that quantitative-performance measures might be used to strengthen the qualitative assessments of accreditation bodies. If one of the qualities of the current accreditation system is its sensitivity to a wide array of institutional missions and contexts, then that judgement might be used to temper the bright-line system we discuss above. For example, accreditation teams could use discretion and expert judgment—for example, considering the populations a school serves or recent improvement efforts—to determine whether the performance institutions on either side of the bright-line cutoff warrants sanction. Quantitative outcome measures might also provide the opportunity to employ a more nuanced set of sanctions. Given the reluctance of accreditors to resort of removing a colleges accreditation entirely, gradated thresholds within quantitative performance measures, or multiple years of infractions could be used to determine consequences that stop short of complete termination of accreditation. For example, a college in its first year of low graduation rates might get a warning, but in a second or third year, or with even lower graduation rates, might see its Title

IV funding reduced by 10 percent. Alternatively, low-performing institutions might be subject to a different set of rules like enforcing an 80-20 rule at low-performing for-profit institutions rather than a 90-10 rule.

One potential challenge to the possibility of sustaining two, non-redundant systems, is that there is a risk that one system ultimately "disciplines" the other so that the two converge—effectively eliminating the value of one or both systems. Scholars of quantification have long noted that rhetorical power of quantitative information—a power that is not necessarily contingent on its technical merit (e.g. Carruthers & Espeland, 1991). Especially in instances where professional expertise is weak or professional standards are uncertain, the impulse toward numbers-based decision making can be quite strong (e.g. Carson, 2007; Porter, 1996). In these instances, emphasizing the plain meaning of numbers can be a way of heading off claims of politics or bias but it can also be a way of side-stepping larger questions of morality or incommensurable value claims (e.g. Fourcade, 2011). These are not just theoretical concerns: to increase pressure on accreditation bodies, ED has moved to create scorecards for accreditation agencies with the goal of allowing for direct comparison of accreditors' performance (Fain, 2016). Given that different accreditors serve different constituencies and have different systems of value and evaluation, the possibility of an evaluation monoculture developing is real and considerable.

Future Research

Given the public availability of both postsecondary accreditation outcomes and a wide array of quantitative performance outcomes, there is a promising future research agenda in this area. This work can and should continue to make contributions to the literature on the effects of quantification and accountability by working to answer questions about how accreditors can (and perhaps do) use quantitative performance measures to improve their work, or how institutional behavior shifts in response to quantitative accountability pressures. This data can also be used to provide a new look into the work of accrediting bodies, providing more detail about how accreditors differ in their standards, or

which accreditors are most effective in promoting the performance of their member institutions. Finally,

future research can work to answer more fundamental questions about how much of the various

quantitative measures the public cares about are under the direct control of an institution—and thus a

fair and useful accountability lever—or are instead a consequence of the types of students an institution

serves, or other situational characteristics of an institution. Related to these issues are questions about

how to benchmark the performance of colleges, and what colleges it is appropriate to compare a given

institution to.

Conclusion

There is general agreement that the current accreditation system is not currently working to

address major concerns about the performance of the U.S. higher accreditation system. Accreditors have

too many different responsibilities and too few tools to secure the outcomes expected by lawmakers in

the public. Despite the failure of the Obama administration's proposed college rating system, it is clear

that pressures to increase postsecondary accountability are not diminishing. It seems equally clear that,

despite its shortcomings, the accreditation system is unlikely to be eliminated or dramatically

restructured. The most productive way forward, therefore, is to try to develop new systems that can

complement the efforts and improve the capacity of accreditors and provide them new tools to

productively promote improvement in low-performing schools. Our work suggests that neither

accreditors nor quantitative performance measures on their own are likely to fulfill the nation's

accountability needs. Future work should endeavor to find ways of developing stricter quantitative

scrutiny of colleges while preserving the discretion and expert judgment accreditors bring to their work. .

Notes

[1] Downloaded October 1, 2016 from http://ope.ed.gov/accreditation/GetDownLoadFile.aspx.

2 These rates have been criticized for including only first-time, full-time, degree seeking students and for poorly tracking student transfers (U.S. Department of Education, 2014).

3 Note that the threshold-setting school is not the same for each measure. The lowest performing school based on the graduation rate of the schools that lost its accreditation is not the same schools as the lowest performing school in terms of default rate. Yet there are colleges that are performing worse than both of these schools on both measures.

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Table 1

PURPOSES OF ACCREDITATION AND PROPOSED COLLEGE RATING SYSTEM

Selected Purposes of Accreditation	Proposed Purposes of College Rating System
• "Assist prospective students in identifying acceptable institutions"	• "Help students and families make informed choices about searching for and selecting a college"
• "Verify that an institution or program meets established standards"	• "Help colleges and universities measure, benchmark and continue to improve across shared principles of access, affordability, and outcomes"
• "Help to identify institutions and programs for the investment of public and private funds"	• "Enable the incentives and accountability structure in the federal student aid program to be properly aligned to these key principles"
• "Create goals for self-improvement…and stimulate a general raising of standards among educational institutions"	

Sources: Hegji (2014), p. 1, U.S. Department of Education (2014), p. 1

Table 2

DESCRIPTIVE STATISTICS FOR INSTITUTIONS, BY ACCREDITATION ACTION AND ACCREDITOR TYPE

ED Data	Lost Accreditation			Probation			Maintained		
					Accreditor Type				
4-year	All	Regional	National	All	Regional	National	All	Regional	National
Public (%)	0.0	0.0	0.0	3.3	5.1	0.0	14.0	21.6	0.0
N	0	0	0	2	2	0	761	711	0
Private (%)	20.6	37.5	5.6	32.8	51.3	4.6	30.9	38.5	18.6
N	7	6	1	20	20	1	1676	1266	337
For-profit (%)	5.9	6.3	5.6	8.2	10.3	0.0	14.4	9.9	22.0
N	2	1	1	5	4	0	780	325	398
2-year									
Public (%)	20.6	43.8	0.0	26.2	28.2	22.7	19.4	27.6	5.5
N	7	7	0	16	11	5	1050	907	99
Private (%)	8.8	12.5	5.6	3.3	5.1	0.0	3.1	1.0	5.0
N	3	2	1	2	2	0	166	32	91
For-profit (%)	44.1	0.0	83.3	26.2	0.0	72.7	18.3	1.6	48.8
N	15	0	15	16	0	16	990	51	884
Enrollment									
Total undergrad enrollment	633.3	931.6	36.8	1361.4	1899.5	456.5	3266.4	4847.9	442.1
% Pell recipients	50.9	46.2	60.4	54.2	53.9	54.8	49.3	42.0	62.6
% Black	21.4	15.8	32.5	23.8	24.1	23.4	17.1	14.7	21.1
% Hispanic	6.1	4.7	8.9	14.9	14.8	15.0	14.2	13.5	15.3
% Asian	0.6	0.7	0.5	3.8	4.3	3.1	3.4	3.8	2.8
N	18	6	12	61	39	22	4,859	3,292	1,810

CAP Data	Lost Accreditation			Major Action			Minor Action			Maintained		
					Accreditor Type							
4-year	All	Regional	National	All	Regional	National	All	Regional	National	All	Regional	National
Public (%)	0.0	0.0	0.0	6.6	14.1	0.0	10.5	11.1	0.0	10.6	15.7	0.0
N	0	0	0	14	14	0	22	22	0	42	42	0
Private (%)	50.0	80.0	0.0	17.5	37.4	0.0	40.7	40.4	45.5	25.7	37.8	0.8
N	8	8	0	37	37	0	85	80	5	102	101	1
For-profit (%)	12.5	0.0	10.0	14.7	3.0	25.0	7.2	7.1	3.1	12.9	7.1	24.6
N	1	0	1	31	3	28	15	14	1	51	19	32
2-year												
Public (%)	25.0	10.0	0.0	23.2	41.4	7.1	37.3	39.4	0.0	25.7	36.7	3.1
N	2	1	0	49	41	8	78	78	0	102	98.0	4
Private (%)	20.0	10.0	30.0	4.3	4.0	4.5	2.4	2.0	9.1	2.3	2	3.1
N	4	1	3	9	4	5	5	4	1	9	5.0	4
For-profit (%)	12.5	0.0	60.0	33.7	0.0	63.4	1.9	0.0	36.4	22.9	1	68.5
N	1	0	6	71	0	71	4	0	4	61	2.0	89
Enrollment												
Total undergrad enrollment	2316.6	4437.3	195.8	26.6	4606.4	910.9	5664.5	5996.1	178.7	3912.3	5241.9	867.9
% Pell recipients	54.5	54.7	54.3	59.1	48.5	68.5	46.9	45.9	63.9	51.9	47.0	63.0
% Black	27.3	40.8	16.7	25.1	24.2	25.9	24.8	24.7	26.9	23.0	22.5	24.2
% Hispanic	5.8	8.3	3.3	18.8	20.8	16.9	16.2	16.0	19.3	17.0	16.1	12.1
% Asian	3.7	5.9	1.4	3.3	4.8	2.0	3.6	3.8	1.6	3.3	3.8	2.3
N	20	10	10	211	99	112	209	198	11	397	267	130

Table 3

Average Quantitative Performance, by Last Accreditation Action, Level, and Control

ED Data	Net Price ($)				Graduation Rate (%)				Grad Rate Relative to Prediction (%)				Default Rate (%)				Default Rate Relative to Prediction (%)			
4-Year Institutions	All	Public	Private	For-profit	All	Public	Private	For-profit	All	Public	Private	For-profit	All	Public	Private	For-profit	All	Public	Private	For-profit
Lost Accreditation	19,022	-	19,088	18,760	37.1	-	42.6	15.0	-12.1	-	-4.8	-41.2	12.8	-	6.2	26.0	1.7	-	-2.5	10.2
Probation	16,479	10,380	16,755	18,034	31.0	37.6	31.1	28.3	-13.2	23.3	-14.3	-24.6	13.7	19.3	13.4	14.0	3.6	0.6	4.9	-0.2
Accredited	18,963	12,629	20,821	22,038	48.0	43.5	53.9	36.9	0.7	13.3	-0.3	-12.8	8.9	8.4	6.4	14.8	-0.6	-2.4	0.4	-0.9
2-year Institutions																				
Lost Accreditation	12,038	11,089	1,201	14,635	61.5	72..85	74.0	50.0	15.2	36.6	20.0	-3.4	16.1	16.1	-	-	2.2	2.2	-	-
Probation	11,025	8,201	7,038	14,569	41.9	24.8	2.9	65.4	-3.7	-10.5	-47.6	9.3	9.9	17.5	-	11.4	-0.4	5.1	-	-5.0
Accredited	12,599	7,370	18,614	17,591	43.5	27.1	56.6	60.3	-0.7	-7.6	3.6	6.6	15.7	18.1	8.4	14.5	0.9	5.3	-1.0	-3.1

CAP Data	Net Price				Graduation Rate				Grad Rate Relative to Prediction				Default Rate				Default Rate Relative to Prediction (%)			
4-Year Institutions	All	Public	Private	For-profit	All	Public	Private	For-profit	All	Public	Private	For-profit	All	Public	Private	For-profit	All	Public	Private	For-profit
Lost Accreditation	19,679	-	18,677	24,691	30.7	-	29.9	34.2	-14.2	-	-12.9	-20.3	11.0	-	10.7	21.1	-0.1	-	1.1	12.0
Major Action	17,678	8,361	17,789	22,572	35.1	33.4	31.8	40.9	-6.6	9.6	-11.4	-10.4	15.9	9.4	13.7	21.4	2.4	-6.4	4.0	4.9
Minor Action	18,023	11,703	19,227	21,999	39.4	38.6	42.3	27.1	-4.4	12.3	-5.7	-24.2	12.1	11.9	11.7	14.8	1.3	-2.8	3.1	-1.2
Accredited	17,344	10,609	19,881	19,713	41.0	39.5	43.9	37.4	-1.7	15.7	-4.5	-13.2	12.0	10.9	9.7	18.0	0.8	-3.7	2.3	2.3
2-year Institutions																				
Lost Accreditation	17,212	3,304	19,436	20,830	44.6	31.4	40.3	57.8	-10.3	-20.3	-21.2	11.2	11.5	21.1	8.3	-	3.6	12.0	0.8	-
Major Action	14,156	6,223	12,599	20,188	44.0	24.6	43.3	61.0	-1.0	-12.6	-9.0	10.2	19.4	15.3	6.0	23.5	2.2	1.6	-6.7	3.3
Minor Action	7,419	6,411	16,114	16,201	23.1	19.6	44.8	63.0	-14.8	-17.0	-2.3	12.3	16.1	15.7	16.9	22.7	2.0	1.8	4.4	3.8
Accredited	11,475	6,788	19,111	19,342	37.1	22.3	48.3	57.3	-6.7	-14.0	-5.1	3.9	18.3	16.8	12.8	20.7	3.8	4.5	2.7	2.9

Table 4

PERCENT OF FOUR-YEAR ACCREDITED INSTITUTIONS WITH QUANTITATIVE PERFORMANCE LOWER THAN COMPARISON GROUP,

BY LAST ACCREDITATION ACTION

ED Data	Lowest Performing				Average Performance				Highest Performing				N
Lost Accreditation	All	Public	Private	For-profit	All	Public	Private	For-profit	All	Public	Private	For-profit	
Net Price	32.1	31.0	39.1	51.5	51.0	6.0	60.4	69.8	70.4	31.0	80.8	91.8	*2,556*
Graduation Rate	6.2	3.1	2.7	1.3	31.4	33.0	20.5	56.6	70.1	77.0	80.2	86.8	*2,453*
Grad Rate Relative to Prediction	2.7	0.0	1.0	1.5	23.8	5.9	21.4	55.7	56.9	28.5	60.7	83.4	*2,452*
Default Rate	1.2	0.9	1.3	1.3	27.3	18.1	23.2	68.2	62.9	69.7	47.2	89.3	*2,872*
Default Rate Relative to Prediction	2.9	2.4	3.9	1.5	22.9	15.1	23.5	29.7	79.7	55.7	94.3	76.5	*2,600*
Probation													
Net Price	20.4	0.4	27.8	26.8	63.6	18.6	75.8	87.6	99.9	99.6	100.0	100.0	*2,556*
Graduation Rate	2.7	0.8	2.7	5.3	21.5	20.6	13.5	41.7	86.4	92.3	80.2	93.8	*2,453*
Grad Rate Relative to Prediction	0.7	0.0	1.0	0.9	22.7	5.0	19.0	53.8	91.8	80.8	96.1	95.3	*2,452*
Default Rate	0.1	0.0	0.1	0.3	22.3	16.1	9.5	55.5	83.3	92.1	73.9	94.3	*2,872*
Default Rate Relative to Prediction	0.1	0.0	0.1	0.2	13.7	11.2	15.4	13.1	99.2	99.6	99.9	97.6	*2,600*
CAP Data													
Lost Accreditation													
Net Price	14.1	2.4	18.4	18.4	32.1	2.4	44.8	39.5	74.4	31.0	90.8	89.5	*156*
Graduation Rate	7.4	7.1	6.6	8.9	44.8	52.4	40.8	44.4	86.5	88.1	80.3	95.6	*163*
Grad Rate Relative to Prediction	1.8	0.0	1.3	4.4	31.9	7.2	31.6	55.6	65.0	21.4	77.6	84.4	*163*
Default Rate	35.1	33.3	20.4	69.1	47.7	46.2	34.4	78.6	64.6	71.8	50.5	90.5	*174*
Default Rate Relative to Prediction	19.6	2.6	20.5	34.1	50.0	15.4	60.3	63.4	80.4	53.8	94.9	78.0	*158*
Major Action													
Net Price	1.9	0.0	2.6	2.6	49.4	7.1	63.2	68.4	100.0	100.0	100.0	100.0	*156*
Graduation Rate	1.8	0.0	1.3	4.4	28.2	23.8	23.7	40.0	92.0	90.5	89.5	97.8	*163*
Grad Rate Relative to Prediction	0.6	0.0	0.0	2.2	30.1	7.1	28.9	53.3	95.1	88.1	97.4	97.8	*163*
Default Rate	0.0	0.0	0.0	0.0	25.3	7.7	17.2	59.5	97.1	100.0	94.6	100.0	*174*
Default Rate Relative to Prediction	0.6	0.0	1.3	0.0	37.3	10.3	41.0	56.1	100.0	100.0	100.0	100.0	*158*
Minor Action													
Net Price	1.9	0.0	2.6	2.6	45.5	2.4	59.2	65.8	96.2	88.1	100.0	97.4	*156*
Graduation Rate	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	*163*
Grad Rate Relative to Prediction	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	*163*
Default Rate	0.0	0.0	0.0	0.0	43.1	38.5	30.1	76.2	97.1	100.0	94.6	97.6	*174*
Default Rate Relative to Prediction	0.0	0.0	0.0	0.0	39.9	10.3	44.9	58.5	99.4	100.0	100.0	97.6	*158*

Table 5

PERCENT OF TWO-YEAR ACCREDITED INSTITUTIONS WITH QUANTITATIVE PERFORMANCE LOWER THAN COMPARISON GROUP,

BY LAST ACCREDITATION ACTION

ED Data		Lowest Performing				Average Performance				Highest Pefroming			*N*
Lost Accreditation	All	Public	Private	For-profit	All	Public	Private	For-profit	All	Public	Private	For-profit	
Net Price	9.5	0.2	26.1	17.6	22.7	0.2	47.1	44.5	35.3	2.5	68.9	67.1	*2,019*
Graduation Rate	13.7	25.4	6.7	1.1	49.4	83.7	27.5	13.2	67.6	90.9	50.8	43.2	*2,007*
Grad Rate Relative to Prediction	0.8	0.0	5.8	1.0	34.7	53.4	26.7	14.4	64.0	85.0	47.5	42.3	*2,006*
Default Rate	6.7	9.6	3.1	4.6	64.4	80.1	16.4	56.5	92.8	98.7	60.2	92.1	*1,793*
Default Rate Relative to Prediction	11.2	19.5	3.9	4.3	43.9	70.8	25.8	20.7	72.9	94.5	64.1	53.4	*1,789*
Probation													
Net Price	5.1	0.0	16.0	9.3	30.7	1.3	58.8	59.4	98.8	97.7	58.8	99.8	*2,019*
Graduation Rate	2.9	4.9	4.2	0.6	43.0	75.9	21.7	8.3	83.2	94.0	68.3	72.8	*2,007*
Grad Rate Relative to Prediction	0.4	0.0	2.5	0.6	32.1	48.9	26.7	13.5	89.6	91.5	81.7	88.5	*2,006*
Default Rate	1.5	1.7	0.0	1.4	58.7	72.5	14.8	52.1	97.5	99.5	82.0	98.0	*1,793*
Default Rate Relative to Prediction	1.0	1.7	0.8	0.4	34.8	58.9	15.6	14.5	94.2	100.0	100.0	87.7	*1,789*
CAP Data													
Lost Accreditation													
Net Price	12.3	0.0	25.0	9.4	36.2	0.0	25.0	34.0	93.9	1.0	87.5	96.2	*163*
Graduation Rate	14.4	24.5	12.5	0.0	58.3	59.1	37.5	7.1	79.4	98.0	62.5	54.3	*180*
Grad Rate Relative to Prediction	0.1	0.0	12.5	0.0	44.1	68.6	25.0	10.1	79.3	96.1	62.5	56.5	*179*
Default Rate	70.8	67.9	33.3	77.6	87.0	86.4	50.0	91.0	98.1	97.5	100.0	98.5	*154*
Default Rate Relative to Prediction	38.6	35.8	33.3	42.4	76.5	81.5	83.3	69.7	85.6	95.1	83.3	74.2	*153*
Major Action													
Net Price	1.8	0.0	25.0	3.8	16.6	0.0	100.0	56.6	99.4	99.0	100.0	100.0	*163*
Graduation Rate	4.4	6.9	12.5	0.0	50.0	83.3	25.0	4.3	93.9	99.0	87.5	87.1	*180*
Grad Rate Relative to Prediction	0.0	0.0	0.0	0.0	38.0	59.8	25.0	7.2	96.6	98.0	100.0	94.2	*179*
Default Rate	0.7	1.2	0.0	0.0	60.4	53.1	16.7	73.1	99.4	98.8	100.0	100.0	*154*
Default Rate Relative to Prediction	0.7	1.2	0.0	0.0	62.1	61.7	66.7	62.1	100.0	100.0	100.0	100.0	*153*
Minor Action													
Net Price	1.8	0.0	12.5	3.8	19.0	0.0	25.0	54.7	92.0	87.3	100.0	100.0	*163*
Graduation Rate	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	*180*
Grad Rate Relative to Prediction	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	*179*
Default Rate	0.0	0.0	0.0	0.0	79.2	76.5	50.0	85.1	99.4	98.8	100.0	100.0	*154*
Default Rate Relative to Prediction	0.0	0.0	0.0	0.0	69.3	71.6	66.7	66.7	98.0	98.8	100.0	97.0	*153*

Table 6

GRADUATION AND DEFAULT RATE PERFORMANCE RELATIVE TO REGRESSION-ADJUSTED EXPECTATION,

BY LAST ACCREDITATION ACTION, LEVEL, AND CONTROL

Graduation Rate

ED Data — Percent in Bottom 25% vs. Predicted | Percent Below Predicted | Percent in Top 25% vs. Predicted

	Bottom 4-Year All	Public	Private	For-profit	Bottom 2-Year All	Public	Private	For-profit	Below 4-Year All	Public	Private	For-profit	Below 2-Year All	Public	Private	For-profit	Top 4-Year All	Public	Private	For-profit	Top 2-Year All	Public	Private	For-profit
Lost Accreditation	40.0	-	25.0	100.0	16.7	0.0	0.0	33.3	80.0	-	75.0	100.0	33.3	0.0	0.0	66.7	0.0	-	0.0	0.0	66.7	100.0	100.0	33.3
Probation	56.5	0.0	56.3	0.8	39.4	50.0	100.0	20.0	82.6	0.0	93.8	0.8	63.6	81.3	100.0	40.0	17.4	1.0	6.3	0.2	36.4	18.8	1.0	60.0
Accredited	24.9	6.5	21.6	55.7	23.6	34.7	25.0	10.8	47.9	19.5	50.0	78.7	57.7	80.6	45.0	33.3	25.8	49.8	20.5	7.9	25.5	12.0	43.3	38.5

CAP Data

	Bottom 4-Year All	Public	Private	For-profit	Bottom 2-Year All	Public	Private	For-profit	Below 4-Year All	Public	Private	For-profit	Below 2-Year All	Public	Private	For-profit	Top 4-Year All	Public	Private	For-profit	Top 2-Year All	Public	Private	For-profit
Lost Accreditation	50.0	-	40.0	100.0	50.0	100.0	66.7	0.0	100.0	-	100.0	100.0	50.0	100.0	66.7	0.0	0.0	-	0.0	0.0	16.7	0.0	0.0	50.0
Major Action	45.5	14.3	51.7	56.5	25.0	49.0	42.9	1.8	63.6	28.6	75.9	69.6	52.7	85.7	71.4	21.4	18.2	50.0	6.9	13.0	28.6	10.2	28.5	44.6
Minor Action	32.4	9.1	28.8	85.7	50.6	56.4	0.0	0.0	60.8	22.7	68.2	85.7	92.0	96.2	80.0	25.0	14.7	45.5	6.1	7.1	3.4	1.3	20.0	25.0
Accredited	31.9	7.1	31.6	55.6	25.6	39.2	25.0	5.7	27.1	14.3	65.8	82.2	71.1	95.1	62.5	37.1	21.5	59.5	10.5	4.4	11.1	2.9	25.0	21.4

Default Rate

ED Data — Percent in Bottom 25% vs. Predicted | Percent Below Predicted | Percent in Top 25% vs. Predicted

	Bottom 4-Year All	Public	Private	For-profit	Bottom 2-Year All	Public	Private	For-profit	Below 4-Year All	Public	Private	For-profit	Below 2-Year All	Public	Private	For-profit	Top 4-Year All	Public	Private	For-profit	Top 2-Year All	Public	Private	For-profit
Lost Accreditation	33.3	-	50.0	0.0	20.0	20.0	-	-	66.7	-	100.0	0.0	20.0	20.0	-	-	33.3	-	0.0	100.0	20.0	20.0	-	-
Probation	4.5	0.0	0.0	25.0	27.3	0.0	-	50.0	27.3	0.0	23.5	50.0	54.5	20.0	-	83.3	54.5	0.0	58.8	50.0	27.3	40.0	-	16.7
Accredited	24.8	52.7	9.2	27.0	26.2	4.7	34.4	45.6	56.7	75.2	50.7	51.1	46.6	19.0	65.6	70.2	30.5	17.5	35.1	34.0	23.0	10.3	10.1	8.4

CAP Data

|	Bottom 4-Year All	Public	Private	For-profit	Bottom 2-Year All	Public	Private	For-profit	Below 4-Year All	Public	Private	For-profit	Below 2-Year All	Public	Private	For-profit	Top 4-Year All	Public	Private	For-profit	Top 2-Year All	Public	Private	For-profit
Lost Accreditation	33.3	-	50.0	0.0	0.0	0.0	0.0	-	66.7	-	50.0	100.0	25.0	0.0	33.3	-	33.3	-	50.0	0.0	25.0	100.0	0.0	-
Major Action	18.9	69.2	3.0	14.3	22.1	30.4	80.0	11.3	36.5	84.6	30.3	21.4	36.3	39.1	80.0	30.6	54.1	7.7	60.6	67.9	37.2	45.7	20.0	32.3
Minor Action	19.7	47.6	11.0	28.6	20.5	21.1	0.0	25.0	43.6	71.4	31.7	71.4	27.7	27.6	0.0	50.0	48.7	23.8	58.5	28.6	38.6	39.5	33.3	20.0
Accredited	19.5	53.8	4.3	21.4	13.6	4.9	16.7	23.9	46.6	84.6	35.5	35.7	24.7	18.5	33.3	31.3	44.3	10.3	51.6	59.5	35.1	35.8	16.7	35.8
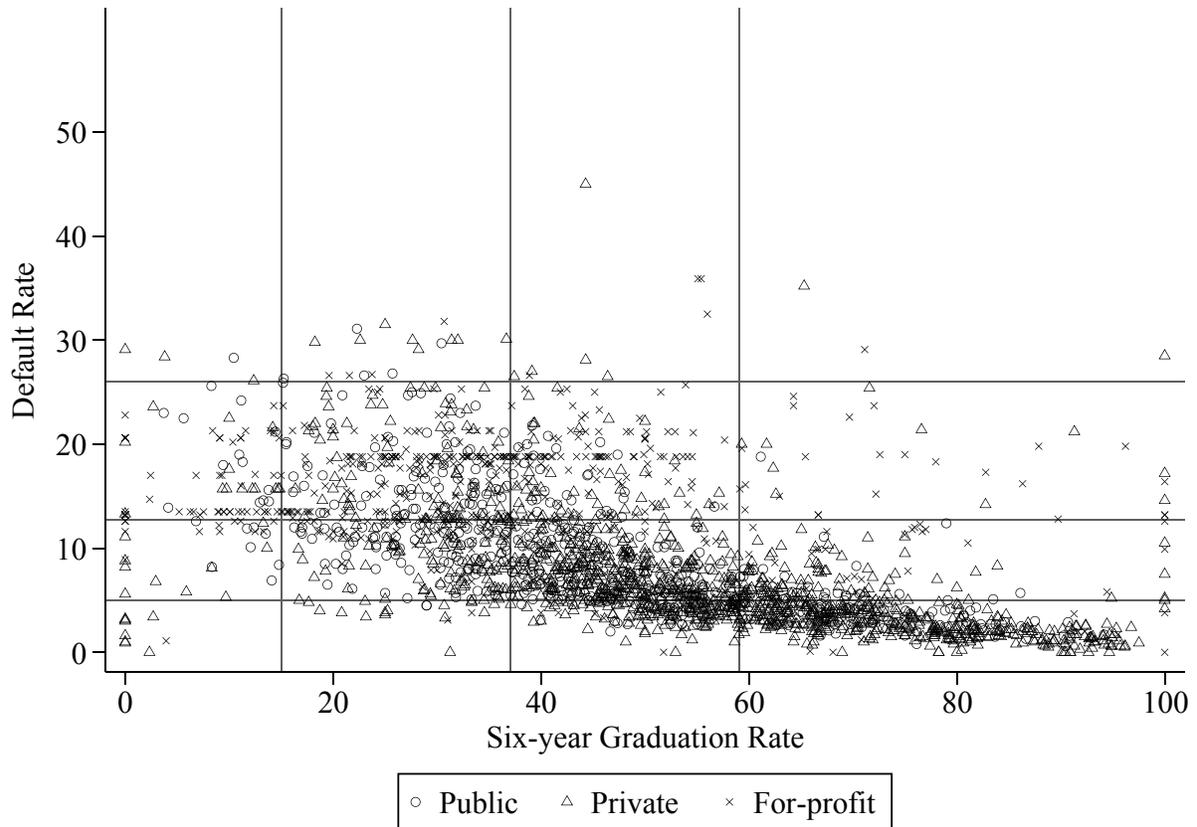
Figure 1. Accredited Four-Year College Graduation and Default Rate Performance. Lines indicate the

performance on each outcome of the lowest, average, and highest performing institutions that lost their
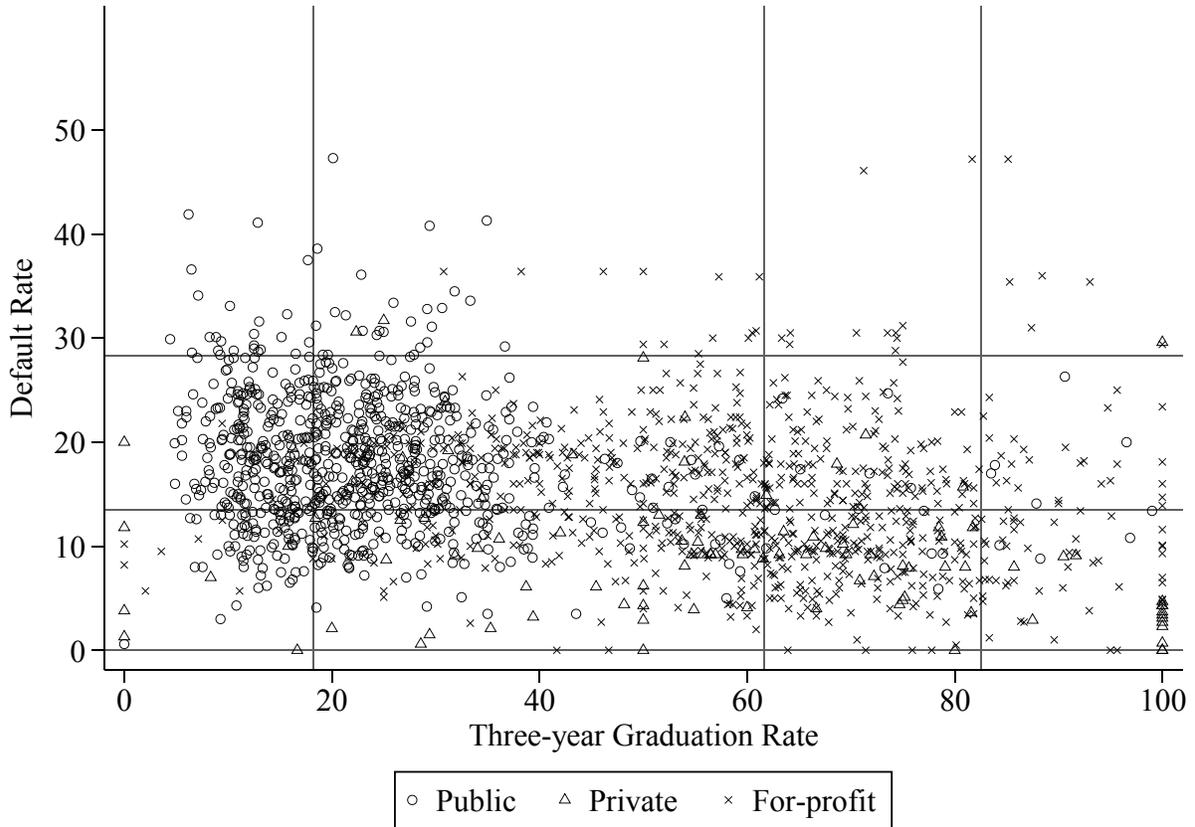
accreditation.

Figure 2. Accredited Two-Year College Graduation and Default Rate Performance. Lines indicate the

performance on each outcome of the lowest, average, and highest performing institutions that lost their
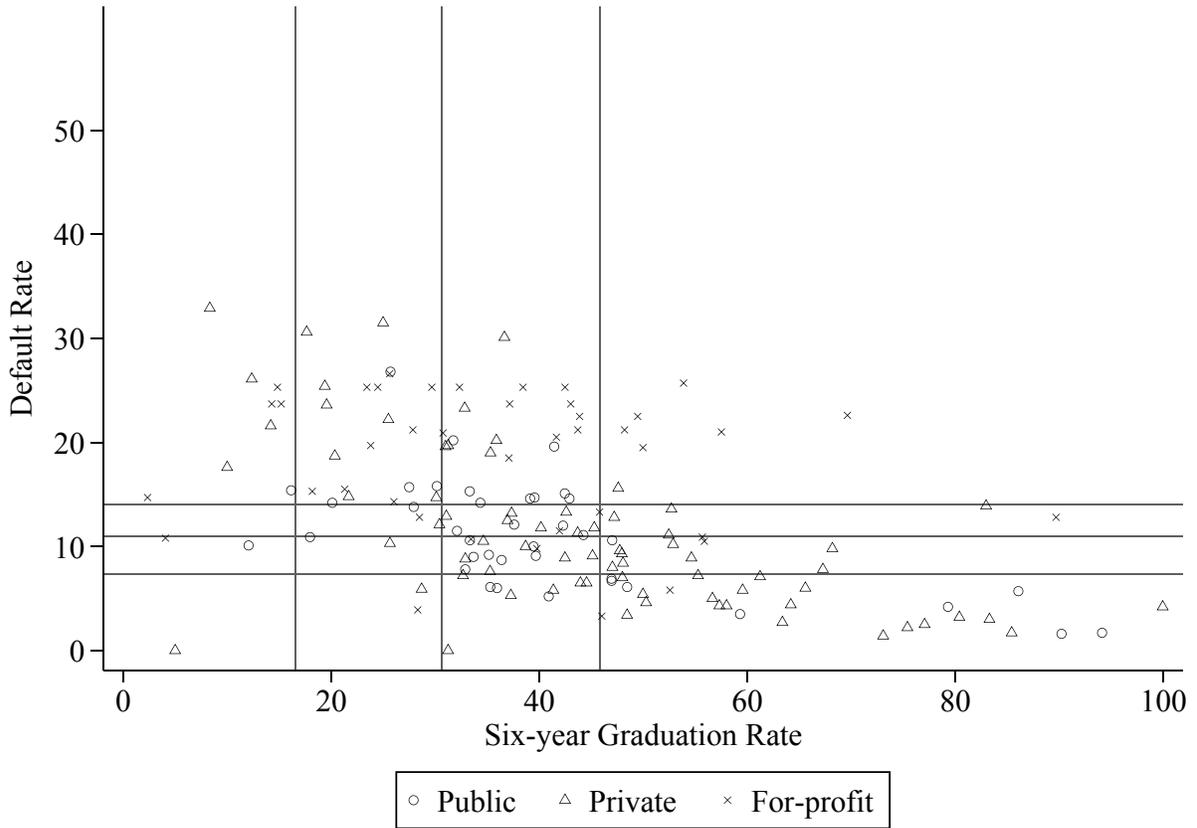
accreditation.

Appendix

Figure A1. Accredited Four-Year College Graduation and Default Rate Performance, CAP Data

Lines indicate the performance on each outcome of the lowest, average, and highest performing

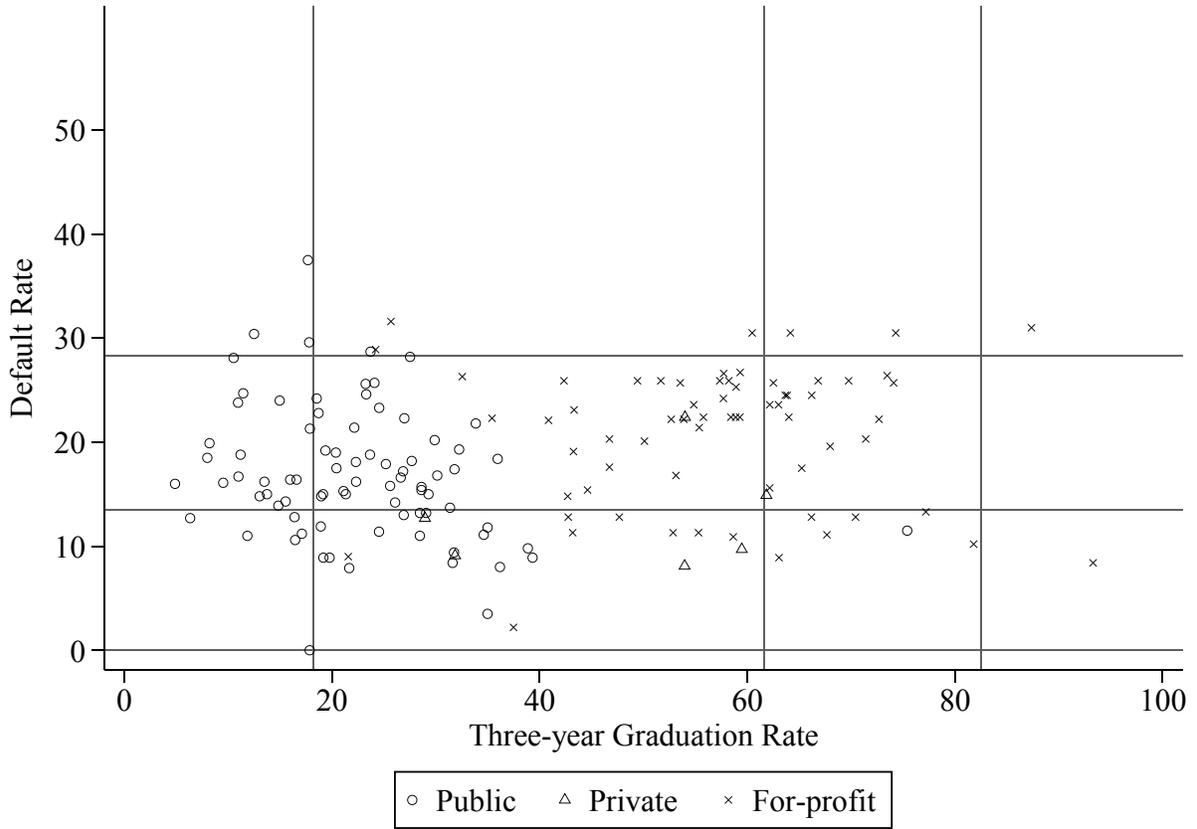institutions that lost their accreditation.

Figure A2. Accredited Two-Year College Graduation and Default Rate Performance, CAP Data.

Lines indicate the performance on each outcome of the lowest, average, and highest performing

institutions that lost their accreditation.