Like Nobody’s Business

An Insider’s Guide to How US University Finances Really Work
14. Outcomes & Futures

14.1 What are the financial benefits of a degree?

I am as eager as any professor to proclaim that the value of earning a degree is not primarily about earning money. Understanding our world, an educated citizenry, the life of the mind, solving society’s grand challenges, saving lives, and so forth, these are absolutely the good and right reasons to pursue higher education. The fact remains, however, that in today’s world a college education is the broadest, fastest, and straightest way to a higher-paying job and a rewarding career. Anecdotes about self-made millionaires who didn’t go to college notwithstanding, there are no rigorous studies that provide any evidence to the contrary—zip, zero, none. The title of a recent piece summed it up: “Please Stop Asking Whether College Is Worth It” (Newton 2018a). All the reliable evidence points plainly and repeatedly to the economic benefits of obtaining a university degree, including a liberal arts degree, and even of completing just some college, versus not gaining any post-secondary education at all. We’ll delve into all that in a minute, but why, then, do we see respected news media running articles that create doubt or directly contradict what we know? Well, many of those articles are about the high sticker price of elite private institutions and/or the associated student debt (and as we’ll see below, the payoff for attending an elite school versus any other isn’t as clear) and the headline-writers know that we are suckers for stories of individual exceptionalism (Steve Jobs was a college dropout, etc.) or ones implying that we can buck the system. So, anecdotes aside, completing a college or university degree, even with reasonable debt, bestows clear financial benefits.

The core point is illustrated in Figure 14.1, which shows the progression in annual earnings by education level. Bachelor’s degree recipients make 56% more than

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1 Which, obviously, is why so many students choose to invest sizable sums of money and many years on our campuses. Despite our lofty goals, this is the essential value proposition of higher education, the *sine qua non* of the university’s existence. Consider this thought experiment: what if people with degrees earned no more or even less than those without, would students still be beating a path to our door? Of course not. Universities would be curious places outside of the mainstream, so few and far between that most current academics wouldn’t be working there. It’s worth mentioning again Clark Kerr’s observation that I noted in Chapter 1: contrary to conventional wisdom, the university did not descend from the Acropolis to the Agora, from the high ideals of learning to the commercial pursuits of the market, but rather the other way around—by serving a market we can create a place of scholarly learning—the university has always found itself in a tension between the two.

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individuals with only a high school diploma and they contribute 82% more in all forms of taxes. Advanced degree-holders can earn a lot more, especially people with professional degrees, while the situation is dire for those who don’t complete high school. The basic pattern of this chart is repeated for dozens of related metrics such as lifetime earnings, retirement income, charitable contributions, years of children’s education, volunteering, voting, and community involvement; exactly the opposite pattern is seen for measures such as unemployment, family income under the poverty line, lack of health insurance, smoking, and incarceration (Trostel 2015). Regarding unemployment, in 2018 the rate was 2% for people with a bachelor’s degree or higher and double that for those with just a high school diploma, while in 2010 at the height of post-recession unemployment those rates were 4.7% and 10.4% respectively (Ma et al. 2019). The premium of obtaining any kind of post-secondary qualification thus goes well beyond the purely financial benefit and is observed across a wide range of socio-economic variables.

![Figure 14.1](image-url) 2018 median earnings and estimated tax payments of full-time year-round employees aged 25 and older, by education level. Estimated taxes paid at each income level include federal income, social security, Medicare, state and local income, sales, and property. Source: College Board (Ma et al. 2019).

With the cost of attending a university increasing over recent decades, one might think that the college wage premium would show a matching decrease, but the opposite is true: the college wage premium has increased in real terms as the income gap has widened in recent decades (Figure 14.2). Wages for high-school graduates have been stagnant for fifty years while wages for college graduates have risen almost 20% in inflation-adjusted dollars. The difference between the two, the college wage premium,
has consequently grown from about $20,000 in 1970 to about $30,000 in 2018, with most of that rise occurring during the economic expansion of the 1990s (which included the rise of technology sector). The premium lasts for an entire career, and it is possible to calculate the rate of return on the investment in a bachelor’s degree. Naturally, the cash flow is negative for the first several years while the individual is getting the degree and then it rises later. Taking these and other factors into account, the return on a college degree was about 8% in the 1970s, rising after that until reaching and staying in the 14–16% range since the turn of the millennium (Abel and Dietz 2019). Therefore, the investment in going to college is at least as good as the long-run stock market return and as much as double that rate in recent years—literally one of the best investments one can make.

Figure 14.2. Average annual wages of graduates holding only a bachelor’s degree and those holding only a high school diploma, as well as the college wage premium (i.e., the difference), in 2018 dollars. Source: NY Fed (Abel and Dietz 2019).

So far, we’ve looked at the data overall, but the financial returns on higher education will of course vary with several other factors. What about the dueling propositions that (1) higher education is a pathway to the middle class or (2) that it merely reproduces inequality? As Figure 14.3 illustrates, getting a degree makes a positive difference on mobility at all income levels and, owing to their size, public institutions do most of the moving (Reber et al. 2020). Adult children from families in the lowest income quintile move to higher income quintiles themselves in roughly equal proportions if they receive college degrees, whereas they remain overwhelmingly in the lowest income quintiles if they do not obtain a college degree. Perhaps less expected, adult children from families in the highest income quintile move to lower income quintiles, also in
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roughly equal proportions, if they do not receive college degrees, while those with college degrees remain overwhelmingly in the upper income quintiles. So, the positive and negative economic mobility induced by higher education is evident within one generation at all income levels—the first proposition is true. Regarding the second proposition, recall that college-going rates for students from low-income families are lower than for those from high-income families (see Section 7.2), so the income-based inequality of access to higher education ironically also reproduces that inequality (Witteveen and Attewell 2017a). Both are true simultaneously, and they underline the importance of increasing access to college for students from low-income families.

![Economic mobility of adult children with and without a college degree from families with low and high income. Source: Brookings (Haskins 2016).](image)

Obviously, the major subject of one’s degree can also make an appreciable difference in earnings. Humanities and liberal arts degrees, in particular, seem to attract unfair attention for lower salaries and/or high unemployment rates. Few of these stereotypes really hold water, as shown by the wage and unemployment data in Figure 14.4. Education majors dominate the lowest salary bands, especially in mid-career earnings—it’s no surprise that our K-12 school systems have such a challenge attracting and retaining teachers. While they are underpaid, education majors at least have the consolation of having the lowest unemployment rates. Other bachelor’s degrees with low compensation include the performing arts (with the lowest starting salaries), fine arts, theology and social services. Of those, the fine arts also have a high unemployment rate, so perhaps only the passion-of-the-starving-artist stereotype has any basis in the data. The upper end of the wage distribution is populated mostly by technical fields: engineering of many kinds, economics, finance, accounting, and
information systems. General business and business management majors are pretty much at the median, not as high as many may think. It turns out that many liberal arts majors are in the middle of the pack salary-wise, along with some sciences. As recent studies have confirmed, financially, liberal arts majors are as good a choice as many others and negative perceptions about liberal arts colleges and liberal arts majors are not well-founded (Hill and Pisacreta 2019; Rossman et al. 2020).

Figure 14.4. FY2017 early career (ages 22–37) and mid-career (ages 35–45) median wages for full-time workers with a bachelor's degree only, by major, with highest ten (H) and lowest ten (L) unemployment rates. Source: NY Fed (Federal Reserve Bank of New York 2019).
A third subdimension to the financial returns of a degree is the institution from which one graduates (technically you can attend several institutions and transfer courses, but the university on your résumé that awarded the degree is typically the one that counts). More specifically, how much does graduating from a selective institution affect earnings? This is another one of those college and university issues where popular perception and evidence don’t always align. In certain economic classes the social pressure to attend the most selective institutions is intense and it can be a fraught process.² There is a constant stream of media articles ranking institutions on their graduates’ earnings, and to make matters worse, even the US Department of Education’s College Scorecard website lists earnings after graduation; at least it provides a range rather than a single average (US Department of Education 2020a). Of course, those earnings summaries are strongly influenced by fields of study offered, family income, demographics, geography, and what is termed “signaling”—the premium employers will pay for a graduate from an institution that is hard to get into. Any of these factors and others can strongly bias simple tabulations of earnings by school, and not surprisingly in such lists we see an earnings premium at expensive, elite institutions, or state flagships over smaller regional colleges, and so on. These same factors also feed into the rankings game—that exasperating topic gets a section all of its own, coming up next (Section 14.2).

Still, beyond perceptions of prestige and supposed quality, what is the selectivity effect on earnings after controlling for the confounding factors? Because rigorous research that controls for potential biases requires specialized surveys or cohort data over many years, there is only a handful of such studies for the US. An influential study of 27 institutions, mostly elite privates and a few top public flagships, found that among that group the overall selectivity effect on earnings was effectively zero (Dale and Krueger 2014). The study did find that Blacks, Hispanics, and first-generation graduates earned more if they graduated from the most selective schools in the study. A follow-on study confirmed the overall non-effect for men, but also found that women graduates of selective colleges had higher earnings than those from the (somewhat) less selective institutions in that small set, due in part to their greater workforce participation (Ge et al. 2018). Moving to a much broader set of schools, a recent nationally representative study of the selectivity effect on earnings for two cohort surveys, ten years and four years after graduation, found important earnings differences attributable to selectivity, as illustrated in Figure 14.5. However, the authors stressed how uneven those earnings payoffs are, with strong gender differences at equivalent institutions, contrasts by major, and the effects of family background (Witteveen and Attewell 2017b). The upshot is that for those in the rarified air of being admitted to the

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² The 2019 college admissions scandal, which included a number of celebrities, and in which dozens of wealthy families are alleged to have committed fraud and provided millions of dollars in bribes, shows the intensity of the social pressure and the lengths to which some people will go for entry into the “right” school.
nation’s most elite institutions, there are positive financial effects for people of color and women, but for affluent parents and (generally white, male) students, the anxiety and almost absurd hair-splitting in choosing among those schools have essentially no financial (or academic, for that matter) benefit—it’s all about prestige and signaling. However, for most students planning to attend most universities and colleges there is some financial advantage to attending a highly selective institution, but choice of major, academic preparation and other factors are just as important.

![Figure 14.5. Average effects of college selectivity on earnings after controlling for multiple pre-college, college, and post-college factors, for bachelor’s degree recipients representing a broad range of institutions four years and ten years after graduation. Source: Witteveen and Attewell (2017b).](image)

14.2 Do university rankings have a financial impact?

If you want to have some nerdy fun at a cocktail party with a bunch of academic types, simply toss college rankings into the conversation and then stand back to enjoy what happens next. I guarantee an opiniated exchange. As part of a professional and popular culture in which rankings are ubiquitous, universities have a love-hate relationship with college rankings aimed at potential students and their parents, as well as with those that purport to assess research performance. If our program or institution does well in some ranking, well-known or obscure, naturally we proclaim our greatness from the rooftops (or at least our websites and press releases); if we don’t appear as high as we believe we should, then we criticize the shallowness of the exercise, the terrible choices of metrics used, and how rankings can’t measure what really counts anyway. There’s more to it, of course, so allow me a brief dissertation on the pitfalls
of ranking as important context, and I promise we will return to our question about whether or not rankings have a financial impact.

The fundamental drawback with many kinds of ranking is that they reduce a multidimensional question to a one-dimensional answer. This is also why they are so appealing—they (appear to) make a complex decision simple and easy. What is the best restaurant in the nation? The best car? The best state to live in? Because it’s a matching problem, the soundest response is to determine best at what (attributes) and best for whom (needs). Unfortunately, websites and magazines that provide choice and complexity as the answer don’t sell nearly as well as those that impose a one-size-fits-all answer, as the college guide industry found out when US News & World Report did just that in the 1980s. Many emulators and alternative rankings have sprung up since then; reputational surveys were the main source of information early on, but US News and most others now include publicly available and/or survey-response metrics in their weighting schemes. Research rankings, while largely playing to the industry instead of students and families, have followed much the same path.

Reputational rankings were (and still are) widely criticized, and justly so. Although it seems to make intuitive sense to ask “experts” what they think of the competition, most are poorly informed about current characteristics at other institutions and instead they provide biased opinions relying on informal and uneven knowledge: for example, where their friends happen to be, their own field or group, and previous rankings (Bastedo and Bowman 2010); inappropriate information, such as research prowess rather than quality of undergraduate instruction, or vice versa; and lagging, self-reinforcing notions of prestige. This latter attribute is the most pernicious because it creates stereotypical groups at the top, middle and bottom of the ranking that resist change and confer a halo effect independent of the data.3

Using data is a well-intentioned improvement over reputation although it isn’t really possible to obtain comprehensive data on precisely what students and families would like to know. Beyond cost and location, they place primary importance on academic quality, something that is hard to pin down. The rankings partially approximate quality via metrics such as faculty/student ratios, amount of academic support, retention and graduation rates, alumni giving, and student selectivity (i.e., acceptance rate, yield, class rank, standardized test scores). Allocate some reasonable but completely arbitrary weights to each metric and, presto, you have a ranking that boils the “best” institutions down to a single number.

3 Where do you think Princeton Law School might rank against other law schools—probably in the top 20, like Princeton itself and many of its programs? Well, you’d be wrong, because Princeton doesn’t have a law school. This marvelous anecdote on the halo effect in reputational rankings was uttered derisively by John Sexton, then the law dean at NYU (and subsequently its president), when he suggested where survey recipients for law school rankings would place the fictitious program. His rhetorical point was later proved correct by the judge who started Cooley Law School in Michigan; he surveyed 100 of his colleagues to see where they might place it on a list of 10 schools that included some big-name schools and some lesser-known ones, including Cooley. Also on his list was Penn State, which they ranked roughly in the middle, even though Penn State did not have a law school at the time (Harper 2013).
The single number is a core critique, and it holds for alternative rankings that emphasize value or mobility too. There are other critiques. Consistency and false precision are often raised—change your weights or update the noisy data each year and you’ll find institutions moving up and down the rankings, sometimes dramatically. And you will be shocked—shocked—to learn that universities and programs attempt to manipulate their statistics in order to improve their standing. For example, the percentage of alumni giving can be improved by asking every recent graduate to donate even just $1, or class sizes can be changed to ensure that there is a greater proportion just under the threshold, etc. Yet other criticisms underline how college rankings further promote the economic inequality between campuses that we saw in Section 7.2 (Wermund 2017). There are so many rankings being published that, in a twist of (apparently unrealized) irony, there are now rankings of rankings.

University research rankings embraced the emergence of digital publication and citation data and have mostly dropped reputational components. Still, they likewise combine metrics using arbitrary weightings to produce their annual lists and many of the same critiques apply. An added complication for program and department rankings is that disciplines align differently at every institution, and there is no way to divide up the continuum of knowledge into a consistent set of discrete disciplinary fields, and when you try there are serious lumping/splitting issues. Are neuroscience and psychology one giant field or two, or should they be further subdivided? How does one count a research paper that falls into multiple areas? What about influential books in the humanities versus the rapid-fire and cutting-edge publications in computer science that don’t even make it into research journals anymore? Is a science-focused university “better” at research than one that is more oriented to the arts and humanities? The list goes on, but the rankings generally gloss over most of these issues, define their own fields and weightings, and drive on.

This can lead to meaningless comparisons and occasionally preposterous results. Two quick examples from my own university demonstrate the point. First, we are frequently top-ranked in water resources by one ranking, but in other rankings that field is variously within hydrology, civil engineering, earth science or environmental science. Our main department in this field used to be called Hydrology and Water Resources but it has since combined with another into Hydrology and Atmospheric

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4 The film Casablanca contains dozens of delightful quotes including the one paraphrased here about gambling in Rick’s Café. Other notables include these six in the top 100 movie quotes (to stick with the ranking theme), more than any other film: “Here’s looking at you, kid.” (#5); “I think this is the beginning of a beautiful friendship.” (#20); “Play it, Sam. Play ‘As Time Goes By.’” (#28) that is often misquoted as “Play it again, Sam.”; “Round up the usual suspects.” (#32); “We’ll always have Paris.” (#43); and, “Of all the gin joints in all the towns in all the world, she walks into mine.” (#67). And now, because we cannot resist ranked lists, you want to know the same two things anyone else does—your favorite quote’s rank and which one came out on top. You can look up the former and all the rest on AFI’s website (American Film Institute 2019). For your edification and apropos our discussion of rankings, number one is “Frankly, my dear, I don’t give a damn.” from Gone with the Wind.
Sciences. So, are we number 1 or 20 or 50? Indeed, we have strength and distinction in a wide range of interdisciplinary water issues, but our ranking is completely dependent on how finely the fields are defined and is unconnected to a campus unit, which is not much use to students, researchers or administrators. Second example, the Shanghai subject rankings came out just a few days before this writing (Shanghai Ranking Consultancy 2020), and a couple of my department colleagues in Geography were grousing about how some other universities’ programs could possibly be ranked higher than us. The most egregious case was Stanford at number 5 in the US—as one colleague pointed out in dismay, it has no Geography department and just one part-time card-carrying geographer. The rankings define the field so broadly as to be nonsensical for any practical purpose.

We are almost done with my exposition on important rankings issues before we discuss their financial impact. For the coup de grâce it is time to return to student-oriented rankings and face a straightforward fact revealed in the data. Despite the many variables that go into college rankings, the cold reality is that they basically measure just one thing: selectivity based on general academic preparation, i.e., standardized test scores (Wai et al. 2018a; 2018b). Figure 14.6 shows the overlapping distributions of 25th and 75th percentile SAT scores (combined Math plus Verbal, including the converted ACT equivalent where applicable) by institution rank in the US News ranking. The approximately 200 schools each in the National University ranking and Liberal Arts College ranking are plotted together. The relationship is simple and essentially linear, with correlations near 0.9, meaning that SAT selectivity explains 80% of the variance ($R^2$) in US News rankings. The same study found essentially parallel results for 5 other college rankings, including some that don’t even use the SAT in their metrics (Wai et al. 2018a). So, important point number one, no matter the ranking approach, it will end up replicating the SAT distribution of colleges, which is to say the academic preparation of their students. Important point number two, which we know intuitively and also from Section 7.2, there is massive overlap in students’ general academic preparation up and down the rankings of the schools that generally end up in the top 200 lists, and therefore the rankings cannot provide any meaningful separation between them, at least not anything close to the rank order precision that they are selling. While the top 30 or so in each list are distinct in their profiles from the bottom 30, most schools in between are hard to tell apart. We can go beyond the top 200 lists and look back at the identical interquartile ranges for all the schools in our data set by type (Figure 7.4). We saw that the R3-M3 institutions (that generally do not appear in the top rankings lists) indeed have a student academic preparation profile that is distinct from the major research universities and private baccalaureate colleges, within an overall pattern that is consistent with the notion of broad differentials bracketing plenty of overlap.
Figure 14.6. Overlapping distribution of 25<sup>th</sup> and 75<sup>th</sup> percentile SAT (Math + Verbal) scores by institution rank in the 2014 US News & World Report rankings of National Universities and Liberal Arts Colleges, including percent variance explained ($R^2$) for each. ACT scores were converted to SAT equivalents where applicable. Note that tied ranks have a corresponding number of neighboring missing ranks. Source: Wai et al. (2018a).

Now that we know that rankings are fraught with issues and that they mostly replicate an institution’s underlying student academic preparation, one has to wonder why schools participate in the rankings and pay them attention at all. They do so because of the circular logic of an arms race: prospective students and parents use the rankings, which means they factor into the intense competition to gain and maintain prestige by recruiting the academically best-prepared students possible. Therefore, in addition to the benefits of bragging rights when an institution’s ranking ticks upward, it’s reasonable to hypothesize that schools might see an enrollment-related financial benefit or loss with a shift in rank, and they may change their spending as part of the jostling for position.

The research literature on the financial impacts of rankings is small, and those studies sometimes focus only on smaller subgroups of schools. Nonetheless, their findings are sufficient to help us understand the basic connections, as illustrated in Figure 14.7. Starting at the top, we know already about the very strong link between rankings and SAT, and not surprisingly the same goes for acceptance rate that is closely connected to academic preparation and selectivity (Meredith 2004; Wai et al. 2018a). As we might expect given what we learned about the earnings of graduates in the previous section (Section 14.1), absent the controls on all the biasing factors, there is a strong link between ranking and earnings (Dunlop 2018). Moving on to the heart of the question, there is a moderately strong statistical relationship to institutional expenditures, and
while there are differences between large universities and baccalaureate colleges, investment in instruction is the primary area in which institutions alter their spending (roughly 7–9% more) when they move to a higher category or rank (Kim 2018). The pay of many university presidents includes performance incentives, and a few explicitly call out improvements in rankings. Several studies find no generalizable link or only partial links depending on study design and controls, such as recent work (Yeung et al. 2019) that identified a roughly 1% increase in pay per rank increase for presidents at public universities (but not private universities or liberal arts colleges).

Regarding price and cost, one of the original studies in this area focused on small top-ranked schools only and found no link to sticker price (presumably because lower price would signal lower quality for these schools) but it did identify a moderately strong link to discounted tuition after aid (a 1% reduction for each drop in rank of 2 to 3 places; this also reduced net tuition), which is a less visible way to recruit students from a pool that may see a quality or quantity decline with lower rankings (Monks and Ehrenberg 1999).

On a related note, a recent study found that random samples of alumni ratings were a better predictor of graduates’ income and well-being than popular college rankings and, interestingly, that higher total cost of attendance actually predicts lower satisfaction (Rothwell 2019). Additionally, if you’re wondering what kind of resources would be needed to make a large move in the rankings, say from 35 to the top 20, one study did that for the US News rankings and found, unsurprisingly, that it would
take hundreds of millions of dollars annually in highly focused investments (Gnolek et al. 2014). On a per-student FTE basis, this roughly aligns with the kind of money separating the highest-ranked schools from the rest.

After all this, you might be wondering if there are any rankings that are worth a look at all. There are, and they are the ones that provide categorical ratings rather than over-precise numerical rankings, often grouping schools into tiered bands or categories with transparent supporting information. Several popular college guides follow this model, as do the rankings for research universities that are still informally known as the Lombardi rankings after one of the originators (The Center for Measuring University Performance 2018). These all provide a good sense of where institutions are placed on various metrics without the headline-grabbing distractions of the latest questionable best-of lists.

14.3 What is the economic impact of a university?

It’s almost axiomatic that universities are understood to be economic engines, locally, regionally and nationally. When I worked in university tech transfer, a wise colleague once clarified that, technically, the university is not the engine—instead, it produces the fuel for the engine. The indirect nature of the link to economic vitality is a critically important distinction. The prime mission of a university is not to create a vibrant economy directly, it is to create and transmit knowledge, largely by producing educated graduates. Those graduates do the vast bulk of creating and adding value that enables the growth of companies and jobs. Yes, universities can grow their own workforces and they can have secondary missions to produce technologies and spinoff companies, but those things generally represent a drop in the proverbial bucket compared to the total activity of an institution’s graduates. Their knowledge and insights are the fuel required to run and grow the contemporary economy. In any case, the point of the metaphor is that universities bring intellectual, cultural, and other kinds of value to their community, including financial value, and many universities like to demonstrate what they are worth by calculating their economic impact.

We see these numbers all the time, whether it’s the travel industry or the local manufacturing sector that contributes X billion dollars annually to the local economy. Exactly the same kinds of calculations are made to estimate the local economic contribution of a university. Importantly, most economic impact models focus on measurable spending and they ignore those (difficult to measure) broader human capital benefits of an educated workforce. The estimation process involves enumerating the fate of every dollar the university spends (e.g., employees’ consumption spending, institutional contracts for services, contributions to state and local taxes) and using a multiplier to include the knock-on impacts. What’s a multiplier? Let’s say the university pays for some minor construction work performed by a local contractor: for every dollar spent on the contracting company, some of that dollar stays locally in
the form of wages, taxes and materials, and some leaves the region as other taxes or materials not locally produced; of those local expenditures, the same cycle happens in turn, and so on in decreasing local amounts. That is the multiplier, and it is typically between 1 and 2. You may see incorrectly-labeled multipliers running as high as 10 or more, perhaps reflecting gross return to budget (“for every dollar the state spends at ABC State University, it sees 9 dollars in return” for an institution that gets 10% of its funding from the state), or the number of times the dollar cycles through the local economy, but those are not multipliers. Multipliers are derived from national studies and are adjusted for industry and location. The relevant multipliers, times the appropriate estimated contributions by category, will together add up to the total economic impact.

Ordinarily, an economic impact calculation is done by technical experts using complex estimation software, but the essence of the process can be shown using the simple worked example described in Table 14.1, which is based on a detailed example (Ambargis et al. 2014). In line 1, we can see that our example university has an operational expense budget of $750M. As we saw in Chapter 3, this set of expenses includes everything the institution spends on instruction, research, public service, academic support, student services, institutional support, financial aid, and auxiliary enterprises. Because we are using what is known as a Type II multiplier that accounts for between-sector effects and local household spending effects, we need to adjust the base amount to omit what local households spend at the university, thereby identifying just the new dollars entering the region. About 20% of the students are from the local region, so we multiply the base by 0.80 to reflect only the out-of-region students, resulting in an adjusted base of $600M. We will use a multiplier of 1.7 for university spending, which results in a total impact of $1,020M for this category.

<table>
<thead>
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<th>Line</th>
<th>Category</th>
<th>Base ($)</th>
<th>Local Margin</th>
<th>Adjusted Base ($)</th>
<th>Multiplier</th>
<th>Total Impact ($)</th>
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<td>Operational Expenses</td>
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<td>0.80</td>
<td>600.0</td>
<td>1.7</td>
<td>1,020.0</td>
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<tr>
<td>2.</td>
<td>Capital Investments</td>
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<td>0.14</td>
<td>1.4</td>
<td>1.6</td>
<td>2.2</td>
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<tr>
<td>3.</td>
<td>Student Spending</td>
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<td>0.85</td>
<td>6.0</td>
<td>1.5</td>
<td>8.9</td>
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<td>4.</td>
<td>Visitor Spending</td>
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<td>1.6</td>
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<td>TOTAL</td>
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<td>609.0</td>
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*imputed overall multiplier

The next category is the university’s capital investment, which includes things like major equipment and building construction. For our example we’ll assume a $10M investment in a new computer system, shown in line 2 of Table 14.1. The purchase is
from a local vendor but the equipment is actually manufactured outside the region; based on typical wholesale margins we’ll use 14% as the local share, which represents $1.4M in local spending. We use a multiplier of 1.6 for this sector that results in an impact of $2.2M for the capital category, obviously far less than the impact from operational expenses because the computer hardware was produced outside of the region.

Line 3 captures the effect of student spending on items like books and supplies, restaurants, groceries, entertainment, housing, etc. This information can be gathered from the university’s survey of student spending, taking care to count only what is spent locally in the region and not at the university (i.e., excluding meal plans and residence halls). In practice we would use local margins, adjusted amounts and the relevant multipliers for each spending sub-category and add them up for an overall impact; for simplicity here, we’ll assume an average local adjustment of 85% retained locally that results in an adjusted base of $6M, with an average multiplier for the whole category of 1.5, giving us an estimate of $8.9M for the impact of student spending.

Visitor spending must be directly attributable to the university, such as visiting parents, conference attendees, or out-of-town patrons of campus sporting or arts events (those particular impacts are smaller and tougher to estimate because of their one-time nature). Visitor spending goes primarily to lodging and restaurants, the bulk of which are local in nature, while shopping purchases must be adjusted to the appropriate local retail margin. In line 4, we assume 80% on average across the category and apply it to base visitor spending of $2M (also estimated from survey data) for an adjusted amount of $1.6M. We use an average multiplier of 1.8 for the category, again for simplicity, which leads us to an impact of $2.9M for visitor spending.

The total amounts are on line 5, where total base spending of $769M ends up at $609M after adjustments to count only the funds that stay in the economy of the local region. The total estimated economic impact of that spending is $1,034M, which if we divide it by the adjusted base gives us an imputed multiplier of 1.7 overall. For our example university, it could claim that it contributed just over $1B to the economy of the local region. Naturally, that’s a relatively large proportion of economic activity if this campus is located in a college town versus it being located in a major city.

The impact calculation described above is the contribution-based version and it tends to be the most generous approach. Imagine adding up all the contribution-based impacts for every enterprise in a region—you would get a number larger than the local economy because you’d be double-counting (or triple or more) many of those multiplier effects across the different sectors. More sophisticated economic impact models can account for the input costs more conservatively, and they can calculate only the net new and retained dollars in the region attributable to the university—essentially what would be lost if it didn’t exist and those services were not consumed or spent elsewhere (Christophersen et al. 2014). Now, in that case, why would an institution want to decrease the estimated size of its impact—surely a university
would want the biggest number possible, especially a public university that could use the impact number in its arguments for more resources from the state? It turns out, as I mentioned earlier, that decision-makers see these kinds of economic impact estimates from all quarters, and unrealistic numbers will simply produce disbelief. So, it’s important to present economic impact figures properly, noting assumptions, the definition of the local region, and avoiding the multiple pitfalls that can lead to double-counting (Siegfried et al. 2007). It’s also smart to augment the narrow economic impact number with additional economically-related data (e.g., patents, licenses, and startups) as well as information on graduates and knowledge production to address the fundamental point regarding development of human capital and its societal benefits. Unfortunately, it is hard to capture these effects in local regions (because, for example, graduates move away and are substituted in from other universities, and there is a scale mismatch in contribution to the number of people with degrees in the national economy), so these overall societal benefits of higher education tend to accrue at broader regional and national scales instead (Moretti 2004; Rothwell 2015; Florida 2016; Valero and Van Reenen 2019).

14.4 Our business model: what is it and how do we manage it?

The term “business model” came into vogue during the late 1990s as the dot.com boom was underway, although the concept has been around for much longer. The question “What is your business model?” is often a proxy for “How do you make money?” that in turn depends on the answer to “For whom do you add value?” For universities the answers are simple, at least on the surface: we add value for students and society and they pay us for it (although the relative proportions have changed considerably, see Chapters 2 and 4). Some universities rely on people paying more for prestige, others rely on volume at value pricing, others on niche specialties, and so on. Prestige can come from selectivity and/or research prowess—in other words, not just knowledge delivery, but knowledge discovery (by the way, the business model for research is for sponsors to offset the cost of research, as we saw in Chapter 8). Looking across the US higher education landscape, there are many permutations on the basic business model that has been in place seemingly forever.

But the winds of change are always blowing: correctly anticipating, or failing to anticipate, changes in the environment and how a university adds value can lead to greater success or to failure. Current examples of the former include schools that have embraced online education, while some non-elite small liberal arts colleges are examples of the latter (we’ll cover more on this in the following sections of this chapter). These changes can be evolutionary as above, or more revolutionary as we’ve seen with the digital revolution in other sectors (nobody wants to be Kodak making film when digital cameras took over). Much has been written on disruptive innovation since Clayton Christensen coined the term (Bower and Christensen 1995), which was based on the
observation that “one of the most consistent patterns in business is the failure of leading companies to stay at the top of their industries when technologies or markets change.” While established players are focused on sustaining innovation and becoming better in their own niche for those they currently serve, new upstarts, often with an initially lower-quality product, focus on an underserved niche or adding a new kind of value (remember when Netflix started, you had to wait days for the DVD to arrive in the mail, and even when they started streaming video it was relatively poorer quality—as the value improved, people switched away from neighborhood video rentals and we know what happened to Blockbuster in the end). The hard part is knowing what will be a fad versus what represents a deeper change: a recent example in higher education was the debut of MOOCs that fizzled initially but that haven’t yet disappeared either (see Section 6.11). There are dozens of essays in the technology-will-revolutionize-higher-ed’s-business-model genre, such as one topical piece wondering if universities will go the way of CDs and cable television (Smith 2020).

The most eloquent and insightful writing I know of regarding business models doesn’t use the term at all: Peter Drucker, the famous scholar of organizations and management, called it the Theory of the Business in a 1994 article (Drucker 1994). Paraphrasing him, at its core is the idea that what we call a business model is a set of assumptions upon which the university has been built, is being run, that shape its behavior, determine its choices about what to do and what not to do, and characterize what the university believes are valuable outcomes. It also includes assumptions about the markets in which the university operates, the students and stakeholders it serves versus its competitors, their values and behavior, the changing role of technology, the university’s own strengths and weaknesses, and assumptions about what society pays a university to do. Drucker’s point is that every organization has a theory of the business, and he cites the genesis of the modern comprehensive research university by Wilhelm von Humboldt in 1809 as a powerful example of what a clear, consistent, and focused theory can enable. He goes on to describe how checked and unchecked assumptions about the theory of the business explains successes and failures of well-known organizations.

With this broader view we can see that there are almost countless ways in which the business model assumptions of all universities and colleges, as well as individual institutions, are being challenged today. Can we assume that students and families will continue to want a four-year residential experience? Are we pricing ourselves out of the market? Who is serving the students (of all ages and backgrounds) who don’t attend our institution? Do we focus on the one thing we do best, or do we diversify our offerings and delivery channels? And of course, how is technology reshaping almost everything in higher education, and what does it mean for the sector and our institution?

Answering those questions for our own institutions will give us a clearer picture of our current business models and where they are headed, which brings us to
something called the “iron triangle,” also known as the unattainable triangle or the triple constraint. The iron triangle is essentially a lay Theory of Production: it describes the principles by which a university selects the quantity and quality of outputs it wants (graduates, knowledge) and the quality and quantity of inputs it will employ (factors of production such as labor and facilities and their associated costs, as well as the number and academic preparedness of its students). The iron triangle of higher education is illustrated in Figure 14.8. It is essentially the higher education version of the faster-better-cheaper triangle from project management, except in our case it summarizes the constraints of access instead of time, along with quality, and cost. These three management constraints for higher education, quality, access, and low cost, constitute a three-way trade-off in which it is impossible to maximize all three vertices simultaneously. As Arne Duncan (2009), US Secretary of Education at the time, put it, “I often hear that managing the multiple missions of higher education today is akin to being caught in the infamous ‘iron triangle.’ Every college president and every governing board wants to simultaneously improve quality, increase access—and yet constrain costs. To college executives, these three sides of the iron triangle—quality, access, and cost—often seem like mutually conflicting choices. Elevating quality raises costs. Increasing access can dilute quality. And reducing costs impairs both quality and access. ... In the standard formulation, the only way out of the iron triangle is to secure unlimited resources, either in the form of bigger endowments or state and federal support.”

Figure 14.8. Schematic of the iron triangle of higher education, illustrating the three-way trade-offs between improving quality of education, increasing access to the institution, and constraining costs.

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5 Healthcare has essentially the same iron triangle as higher education: improving quality of care, expanding access to patients, and lowering costs.
In addition to external resources that can help buy an institution out of the dilemma, or at least ameliorate the compromise, many have touted the promise of technology to do the same. New instructional technologies definitely have the capacity to modify each corner of this triangular playing field but, more precisely, that change will depend on how higher education providers implement the technology in a business model. Revisiting my point above regarding disruption, new providers or existing institutions that want to shift their advantage in the iron triangle will often do so by focusing on an underserved market niche and/or by contributing a new kind of value. A successful new offering redefines the quality-access-cost proposition to students and families in such a way that they increasingly choose it over existing options (more on this in the following sections, 14.5 and 14.6).

There are also constant changes in the iron triangle as institutions adapt and compete in a dynamic market, so even if an institution chooses its point of compromise in the triangle, its relative position compared to other schools will therefore shift over time. Make no mistake, the compromise point is a deliberate choice, whether it is made actively or passively, overtly or covertly. Few institutions are upfront about the point or points of the triangle that they choose not to maximize: elite institutions are by definition highly selective/low access and expensive, but they can offset a small part of their access compromise and related perceptions by offering scholarships to increase access; a particular kind of for-profit school, many of which have since shrunk or closed, maximized access while they compromised on quality and used the availability of federal loans to offset cost. Most other types of institution are somewhere in the middle, such as large public universities that are able to balance moderate access with good quality at modest cost. As someone who works at such an institution, we would never say that out loud—we are proud to offer a world-class education for many qualified students at a very affordable rate (certainly for in-state students), but it is also true that we are not as accessible as a regional comprehensive campus, our students don’t get all the qualities of an elite private education, and our classes cost more than similar ones at the local community college.

Because institutions are continually evaluating and evolving their business models, experimenting with novel approaches and technologies while dealing with the realities of production in the iron triangle, and because US higher education is highly competitive and highly segmented across many dimensions of the market, there are good odds that the sector will be sufficiently innovative to survive and succeed. That’s the sector—individual schools are a different story as they do or don’t adapt to inevitable change—without doubt some new stars will emerge as others fade. But we should not be complacent about the sector either, because we all have blind spots: what if our highly regionalized sector is consumed by a national or international megabrand (think local mom and pop stores before and after Walmart, or local bookstores before and after Amazon). It’s worth closing with a caution to be vigilant about our business model, because as Drucker (1994) said, “Some theories of the business are so powerful that they last for a long time. But eventually every one becomes obsolete.”
14.5 Which schools are most at risk for closing, especially with COVID-19?

Colleges and universities close for one simple reason: their revenues cannot keep up with expenses and eventually they run out of cash. Historically, the number of closures (and related mergers) is small relative to the size of the higher education sector, just a few per year when there is not a larger financial crisis underway (Education Dive 2020). While college closures make headlines, the typical annual rate represents just a fraction of 1%. College closures in recent years have been limited to small nonprofit private colleges, with the notable exceptions of several much larger for-profit institutions that collapsed after student loan scandals (see Sections 4.5 and 7.12). There are two broad reasons that small colleges have been the most affected: (i) structurally speaking, they are the most vulnerable size of institution because small institutions typically have a narrower revenue diversity than large institutions, which both limits income options and reduces their ability to downsize and cut expenses, and also because there are simply fewer functions and areas available to cut—a shrinking small college gets to the point where it is below a viable size before a large institution does; (ii) the market for non-elite small colleges has been challenging, more so for those in small towns “off the interstate” that have struggled to diversify into professional and other revenue-generating programs relative to their urban counterparts. Is it only small colleges that need to worry, or might another economic downturn increase the closure risk for other kinds of schools?

As I write, it is the fall of 2020 and the COVID-19 pandemic is still in full swing. Lots of financial unknowns remain, even as institutions manage their way through the academic year, hoping to keep as much of their tuition revenue intact as they can despite widespread shifts to online delivery and limited in-person classes, along with weaker enrollment. It’s only natural that talk of more widespread college closures has increased, just as it did during the Great Recession. There are some important differences between the two economic events for higher education. During and after the recession that began in FY2009, college enrollment-related revenues did not plummet despite other budgetary stresses, and therefore the college closure numbers were not especially large. As often happens in economic downturns, some people turned to higher education to obtain a first or second degree, which helped to bolster otherwise weaker institutional finances. However, the enrollment and tuition situation resulting from the COVID-19 pandemic is quite different, because the anticipated enrollment decreases directly affect tuition revenue, room and board revenue, in-state/out-of-state shifts, and discounting (Burke 2020). Any prognoses I utter here are made in the early days of the financial fallout for higher education, and by the time you see this in print as a reader you will have the considerable benefit of hindsight.

Whether caused by the pandemic or by more prosaic struggles with their financial situation in other years, institutions can undertake a variety of actions to shore up
revenue and to cut costs, many of which apply to both situations. At the moment these include special scholarships to keep students enrolled (Johnson and Edwards 2020), lowering tuition and moving to online instruction (Whitford 2020c), hoping for stimulus funding (Seltzer 2020c), adjusting to the reality of fundraising declines (Whitford 2020a), undertaking furloughs and layoffs (The Chronicle of Higher Education 2020), making cuts to athletics programs (Rishe 2020), and dealing with new costs for cleaning facilities and disease testing for students and employees (Lederman 2020). Other actions in the mix include early retirement/voluntary separation programs, reducing employee benefits, endowment drawdowns, elimination of administrator, staff and non-tenured faculty positions, and abolishing underperforming academic programs (Lederman 2020). On the revenue side, institutions that rely on endowments experienced a major drop in the stock market as the pandemic emerged, and although the market had largely recovered by summer of 2020, the future is murky with much market uncertainty. Discounting has also continued apace (Whitford 2020b). Public institutions are anticipating the effects of lower state revenues and associated appropriations to higher education, which are expected to be lower for several years as the pandemic-related economic downturn plays out. This pattern was the case during the Great Recession, when the market recovery (that dictates endowment income) happened much faster than for state budgets (and the revenue they supply for public universities), a contrast of one or two years versus five to ten, with some of the latter never returning to pre-recession levels (see Section 4.7).

It’s a fool’s errand to predict which specific institutions in poor financial shape will or will not actually close in the coming few years—even with the added financial stress of the pandemic—although it doesn’t stop some trying (Brown 2020). No analyst has access to sufficiently detailed and up-to-date financial information for every institution to make definitive pronouncements about exactly which institutions will close, and the specter of imminent closure can itself help bring about heroic measures that sometimes lead to a reprieve at the eleventh hour. For example, Sweet Briar College staved off an announced closure in 2015 with a historic fundraising effort, among other things (Woo 2018). However, it is possible to identify institutions exhibiting signs of serious financial risk using indicators from the comprehensive national-level data in IPEDS. Although that dataset has a reporting lag of a couple of years, it nonetheless enables assessments of financial risk for all institutions. Such studies appear from time to time, including ratings from the Federal Government and private companies that name names and that have been heavily criticized (Seltzer 2020b). A recent book on the topic specifically outlined key indicators and presented a financial stress test for colleges (Zemsky et al. 2020), and you can look up any institution using an online tool (D’Amato 2020). Understandably, there is now even wider interest in the possibility of campus closures given the anticipated financial fallout of the pandemic in FY2021 and beyond (Kelchen 2020).
We’ve covered all the essential variables mentioned in such studies earlier in this book, and they each attempt to capture financial health using key factors and their trends (Lyken-Segosebe and Shepherd 2013; Parthenon-EY 2016; Raymond 2019; Zemsky et al. 2020). If you’ve read through the earlier chapters, you won’t be surprised to learn that there is no one-size-fits-all metric, and that it takes a set of indicators to make a fuller assessment. So, we’ll work through an example and do exactly that: assemble a set of relevant variables and trends that we will then combine to create an index of institutional financial risk. This is not a fully comprehensive list, but it does include a number of the main indicators mentioned in the literature:

- **First-year enrollment**: the size of the incoming class is a leading indicator of overall enrollment, and a shrinking first-year cohort (in the absence of higher net tuition per student) will lead to less income in the current year and subsequent years as the smaller cohort moves through;

- **Overall enrollment**: a measure of institution size and the basis of net tuition revenue, with a sustained declining trend portending serious income challenges;

- **Retention rate**: a low and/or decreasing retention rate directly affects overall enrollment and tuition revenue, and may signal additional issues with instruction or student support;

- **Share of students enrolled in online programs**: an institution without online programs has one less alternative revenue source;

- **Discount rate**: institutions struggling with enrollment often try to help recruitment by making larger financial aid offers, and thus a high or increasing discount rate reduces net revenue and can signal trouble;

- **Share of total revenue from tuition**: a high or increasing dependence on tuition revenue indicates low or diminishing income from other sources that could otherwise augment the revenue portfolio;

- **Share of total revenue from auxiliary enterprises**: some institutions can become overly reliant on residence hall and dining revenues, so a larger share of auxiliary revenue can flag problems;

- **Expenditures per student**: if enrollments are shrinking and the institution is not simultaneously cutting back on expenditures, the resulting rise in expenditures per FTE will be unsustainable;

- **Endowment**: the size of the endowment is a proxy for endowment payout, with a small endowment contributing little to overall revenue and a declining endowment relative to others likely signaling a drawdown to cover operating expenses.
For each of these indicators we can choose to use the value for the most currently available year (FY2018 as of this writing) as well as recent trend data—I’ve picked the five-year trend FY2014–FY2018. To make the data easily comparable, the basic amount and the slope of the trend for each indicator are converted into percentile ranks. It is then a simple matter of creating a composite index of financial risk, which in our example I’ve done by tallying the number of indicators falling into the riskiest decile (i.e., the worst 10% for that indicator across all institutions). So, for example, if the trend of an institution’s first-year enrollment placed it among the worst 10% of institutions, its index score would increase by 1 count. If that same institution also placed among the highest 10% in share of total revenue from tuition, its index score would increase by 1 more, for a total of 2 indices in the riskiest decile. There are multiple ways to construct such an index, using a weighting scheme for example, or going into the next decile bands. Bearing in mind that each indicator is noisy and imprecise, and therefore not wanting to over-engineer the exercise, I prefer something that is simple to understand and interpret. So, we’ll go with the straightforward tally in our example.

With our approach in place, the only thing left to decide is which indicators to include in the index. Again, there is no single correct answer and in practice one would construct a set of simpler and more complex combinations. I decided to go with the following for our example: the five-year trends for all of the above indicators except for online enrollment, and the basic amount for discount rate, shares of revenue from tuition and from auxiliaries, and the share of online enrollments. I didn’t select the remaining basic amounts because they would overly emphasize institution size, and I didn’t include the trend in online enrollment because there are many schools with no online programs and the current amount of online activity seems most relevant. Reasonable people may differ on these choices, but give or take an indicator or two the overall results are not dissimilar.

The results for our index as described are illustrated in Figure 14.9, which includes both the percentage and actual number of institutions with risk indicator tallies by type of institution. It’s important to see both the relative share of institutions at some financial risk as well as the absolute numbers of those institutions. Both public and private BAS institutions have high percentage counts on our index, but there are relatively few public baccalaureate colleges and about ten times as many private ones, with the result that there are dozens of private baccalaureate colleges with 3 or more indicators in the riskiest deciles. The same logic applies to the R3-M3 private universities—they are the most numerous of all the institution types in our data set (over 400) and even with a somewhat lower share of institutions at risk they have similarly high absolute numbers of those institutions. Although none of our indicators explicitly highlighted institution size, it’s clear that schools with a higher composite financial risk index are overwhelmingly comprised of smaller institutions. The combined number of R1 and R2 institutions on the risk radar is less than 10. Thus, as we’ve seen in many of the previous chapters, there are key market and business factors leading to a higher proportion of smaller institutions exhibiting indicators of financial stress.
The obvious next question is how many of these schools registering on the index might actually close? One way to get a feel for that is to look at institutions in our data set that have indeed closed; there are 9 that have closed since 2016 (Education Dive 2020). As it happens, 1 was a public baccalaureate college while all the others were private, of which 6 were R3-M3 institutions and 2 were baccalaureate colleges.
Four of the closed schools had 4 and 5 indicators in the riskiest deciles on our composite index, although the other scores range from 0 to 7 (the one with 0 was a separately-reporting branch campus that had several indicators in the second-riskiest decile). Scores of 4 or 5 are therefore concerning but imprecise—there are as many as 75 institutions with an index of 4 or more. Many of those institutions will be resourceful and will make the hard decisions to scope their expenditures to their revenues, and they will survive. Despite valiant attempts, others may not be able to generate enough cash to pay for minimal operations and they will have to close. That number is far smaller than 75, as we’ve only seen two or three closings per year for the period covered by the data and immediately afterwards. Thus, the imprecision in this sort of exercise is worth underlining again—just because dozens might be in the danger zone that caused others to close does not mean that those dozens will also close. That’s worth a follow-on repeat of something else already mentioned, that institution-specific details and behaviors make a critical difference to survival or closure when an institution is in an existential crisis.

Yet, if financial conditions suddenly worsen, as is currently anticipated with a decrease in tuition revenue due to the effects of COVID-19, then that will obviously ratchet up the financial stress for all institutions and it may be a “last straw that breaks the camel’s back” for a greater number of at-risk institutions than we would otherwise expect. It’s worth underlining the imprecision yet again, because a slight change in the construction of the index or the indicators will drive the overall assessment higher or lower, even if the broad patterns are similar. That said, if we see a couple of closings per year in “normal” years then a major revenue shortfall (say, 10%, 20% or even 30%) as a result of the pandemic will surely increase the number of closings.

14.6 What are the long-term financial futures for higher education?

As the quip says, it’s difficult to make predictions, especially about the future. It’s as true for the future of higher education as anything else, although that hasn’t slowed the production of articles and books on the topic that prognosticate on the future of the sector. Our time-focus here is the longer view, a decade or two, trying to understand the broader forces and trends at work that will affect both the academic and financial business of universities, intertwined as they inevitably are.

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6 This mistake is a version of the ecological fallacy, which is to incorrectly infer conclusions about individuals based on group-level data. Here, it intersects with its cousin, the exception fallacy, which is to incorrectly infer conclusions about a group based on an unusual individual. Two respective examples to illustrate the distinction: small colleges have higher financial risk indicators overall, so a specific small college is at higher financial risk (ecological fallacy); this individual small college closed, so all small colleges are at risk of closure (exception fallacy).

7 Being trained in weather and climate where predictions are part of the trade, I heard this humorous saying early in my career. Although I’d always heard it attributed to Yogi Berra, the “philosopher of baseball,” it turns out that many people are alleged to have coined the phrase including Niels Bohr, Samuel Goldwyn, and Mark Twain, but it is likely a Danish proverb (O’Toole 2013).
If we’ve seen anything in the trends that we’ve covered section by section in this book, it is that very few components of higher education have remained static—virtually every aspect of how the money works in and around universities has shifted and is shifting in some way. Whether it was the GI Bill, massive state investments and enrollment growth in the 1960s and 1970s, expansion of Pell grants, federal research investment, state funding decreases since the 1980s, the expanding role of philanthropy, or the online transformation currently underway, institutions are continually having to adapt and compete. In the international arena, the second half of the twentieth century saw the ascendancy of US higher education and research relative to the UK and Europe’s prior dominance, and although the US is still pre-eminent it seems that fast-growing China is an emerging and potentially even more dominant competitor.

Opinions on the future of higher education variously cover almost a dozen subtopics (and I say opinions as they are usually informed insights rather than representing results from the formal research literature). Most of them deal with the implications of several fairly obvious trends, while some commentators point out relevant but less-commonly mentioned elements; none of them will be a surprise for readers who have spent time with the earlier chapters of this book. Hyperbole is a defining feature of many of these opinion pieces because bold claims attract readers. Thus, as we go through them below, I have tried to temper the exuberance where necessary and highlight aspects that deserve consideration:

- **Smaller institutions will struggle and more will close:** Clayton Christensen’s claim of nearly a decade ago that half of the 4,000 colleges and universities in the US would be bankrupt by now (Lederman 2017) forces one to paraphrase Mark Twain’s famous line to say that rumors of higher education’s demise have been greatly exaggerated. Overstatement notwithstanding, he was calling attention to the potential for disruptive innovation as evidenced by the challenged business model and poor financial health indicators for smaller institutions, particularly for the non-elite privates, that we’ve seen throughout this book and especially in the previous section. Based on those data, it’s easy to see why several commentators believe that well-endowed, highly selective liberal arts colleges will survive while the private nonprofit sector overall will experience a decline, and that mergers are unlikely to save them either (Mintz 2019a; Witt and Coyne 2019).

- **Demographic enrollment decreases:** Traditional higher education can see its entering class coming with an eighteen-year advance notice as the demographic baby booms and busts make their way through the K-12 system. When demographers and enrollment managers model future class-sizes they include not only birth cohort size but likely college-going rates, geographic differences, immigration and more. Nationally, we are on a high school graduate plateau that began in about 2010 and that will start to decline around 2026, and for areas like the Northeast and Midwest the numbers
of college-going high school graduates will dip by 10–20% (Fox 2019). To the previous point on small institutions, these enrollment differences will fall unevenly across types of institutions (Conley 2019), so competition for recruitment is therefore likely to increase in that way as well as across geographic regions.

- **Online and digital instructional technologies will continue to expand:** As with almost every other sector, the digital revolution is transforming higher education. While the simplistic and overhyped early prophecies about online providers rapidly upending higher education in a parallel to the newspaper business were false, there are few observers that doubt the deep and widespread implications of digital instructional technologies for teaching and institutional business models. Interestingly, the COVID-19 pandemic has simultaneously accelerated adoption of hybrid online education and where it adds value, while also highlighting exactly what students dislike about online and what they value about the in-person experience. There will be shifting demand for both in the future and institutions will be jockeying for position accordingly—it’s all about which institutions adopt these technologies and approaches, how far the transformation goes, and how fast it occurs. Section 6.11 describes the changes underway in online education and how it is being incorporated complexly depending on each kind of institution’s market niche. We shouldn’t forget that it’s not just online delivery but other related technologies such as adaptive learning, interactive textbooks, virtual environments and more that are part of this transformation, even for in-person classes. One major unknown in the online space is the role of consolidation. Higher education is relatively unconsolidated compared to many other sectors because of its intrinsic structure (at least for public institutions), with several state systems representing the largest consolidated entities. There are no dominant national brands or chains, and it is unclear if higher education will continue in that mode (e.g., online news outlets although there is some consolidation) or if in the longer run the nature of online technology will produce a set of dominant players (e.g., retail with Amazon and Walmart).

- **Credentialing and unbundling are not yet a major force:** An in-person campus experience is the ultimate bundled service, with classes, a learning community, room and board, teaching, research, arts and culture events, athletics, and social life all in one package for four years (Roth 2020). At about the same time MOOCs burst on the scene, educational technology pundits were heralding the great unbundling of college (Selingo 2013) and promoting (digital) credentials for courses and even micro-credentials for the equivalent of course subtopics. This view seems to emanate most strongly from the technology sector and employers; for example, Apple’s Tim Cook...
has mentioned that coding is a skill that is easily credentialed and that only half of the company’s employees have a four-year degree (Eadicicco 2019). Universities are definitely offering one-off courses (and have for decades) and MOOCs are still evolving their niche now that the hype has died down (Impey 2020). While unbundling, like online more broadly, undoubtedly expands access to those who are wanting or able to undertake less than an entire degree, there are no strong signs yet of a great unbundling that realigns higher education and changes the core demand for degrees.

- **Stratification and differentiation will continue:** We’ve made distinctions between types of institutions throughout this book, and for good reason, because as we’ve seen, those differences have been intensifying over time. Universities that do well in their niches are likely to continue doing well, such as the top public and private research campuses, elite liberal arts colleges, and specialized institutes of technology: they have diverse revenue streams, more tenured faculty, impressive facilities, and an ability to recruit academically well-prepared students (Mintz 2019b). In contrast, the types of institutions with serious resource challenges are struggling, such as small private colleges and public regional campuses. The amplification of differences is seen in enrollments, student preparedness and selectivity, part-time and non-tenured versus tenured faculty ratios, private endowments versus public funding, and more. This situation has been termed higher education’s “gilded age” in which wealth and prestige are increasingly concentrated at elite campuses while the disparity grows between those institutions and the rest—essentially the middle class of US higher education will increasingly be divided between the rich getting richer and the poor getting poorer (Rosenberg 2019). Some think that institutions that succeed despite these pressures will be innovative and entrepreneurial in their approach to developing new niches in the higher education ecosystem, whether that be specialized training programs for industry, opening up national and international markets (physical or virtual), focusing on career-oriented majors and job skills, and changing delivery modes away from the fixed semester (Mintz 2019c).

- **Research will need to be appropriately prioritized:** Research is a net expense to universities and colleges, whether it is funded research or scholarship without external grants, as we saw in Chapter 8. Federal grants do not fully reimburse the complete overhead costs of research, and faculty workload allocation to research is subsidized from other revenue sources such as tuition, state, or investment income. While higher education’s research productivity and prowess has never been higher, the majority of institutions play a relatively minor role and they incur subsidy costs to do so. While it is in their academic interest to foreground research and scholarship,
the association of research with academic prestige is such that not many universities and colleges are willing to state outright that research is not their priority, even if that is the reality of their business model, niche, and financial situation. As a recent paper projected, smaller institutions in particular will need to restrict research activities in order to focus on the core educational mission (Rouse and Lombardi 2018).

- **New models and brands will emerge:** In the early days of online higher education, its low-cost and implied (but incorrect) low-quality image kept many top public and private universities out of the game. If MOOCs did anything, they associated the top university brands with low-cost online instruction in a way that arguably expanded rather than diluted their brands, preserving important aspects of their exclusivity (the elite in-person experience). There is some debate that this trend may be the equivalent of a luxury brand being sold at an outlet store, the very act of which undermines the high-price to high-quality equivalency that the market assumes (Newton 2018b). That narrow issue aside, a number of major universities have developed and are continuing to develop big names and market share in the domestic and international online space (e.g., Southern New Hampshire University, Maryland, and Purdue; more about international coming next), a trend that seems set to continue, especially in online professional master’s and continuing education (Mintz 2019a). A small number of new models are being tried as well, like Minerva and Foundry, both for-profit and out of Silicon Valley, the former in an elite mold and the latter aimed at basic management skills training (Blumenstyk 2018). Other possible models are pure speculation, such as dreamy elitist cyborg mashups between major tech companies and top institutions—think Apple-MIT, or Facebook-Harvard (Walsh 2020).

- **Global education is still a growth market:** While we may be reaching peak US higher education, there’s a long way to go until we reach peak global higher education, as it has been cleverly phrased (Kim 2019). Higher education enrollments are expected to double, triple and even quadruple in some parts of the world (Calderon 2018). Despite the ups and downs of domestic politics, international relations, pandemic travel restrictions, and economic conditions more broadly, some US universities have made the international market a significant part of their business strategy. The same is true of universities in many other high-income countries, with Australia being the most visible. While recruitment of international students to in-person (and online) programs in the US will continue, the international growth market is largely in-country rather than having students move to a university in the US or elsewhere. Based on experiences of the last decade or two, significant participation in satisfying international demand will probably
not be satisfied via expensive physical campuses abroad that duplicate their home institutions (see Section 6.12). Instead, it appears that major scaling will more likely involve collaborations with local institutions and a blend of online and in-person delivery, such as the microcampus approach (Redden 2017; Calderon 2018).

- **Climate change risks will need to be addressed:** Climate change arrives not with the slow-moving averages but with extreme events. Campuses need to plan for the financial (and of course other) impacts of elevated climate risks, such as sea-level rise, floods, severe weather, record heat, wildfires, and disease, as well as less obvious impacts such as insurance changes, shifting utility costs, more frequent brownouts and blackouts, local water quality impacts for those with their own water supplies, and travel disruptions. Many of these risks involve physical infrastructure and thus they cannot be addressed overnight and they may require significant capital (Gardner 2019). In addition to fossil fuel divestment (see Section 13.5), many institutions have implemented recycling programs, added solar panels, and built or retrofitted energy-efficient buildings to mitigate future climate change. Of course, many universities are already involved in preparing their students and society for climate disruptions. Still, climate impacts to the institutional bottom line have not received as much attention. There is a strong business case for climate resilience planning (Holland 2015) and campuses will increasingly need to prioritize lowering climate risk as part of facilities and financial planning. For many, this will need to include collaboration with their neighboring communities (Woodside 2018).

- **Universities will need to face athletics costs and football injuries:** We covered athletics extensively in Chapter 12, and it’s plain that many institutions with challenging budgets will not be able to continue subsidizing athletics programs at current levels. This is as true for many Division I institutions as it is in lower divisions. For high-profile conferences, athlete compensation is on the horizon too (Anderson 2020a). Furthermore, it appears that the mounting evidence of health issues in football from concussion and subsequent brain disease is leading to mounting legal spending and the anticipation of greater risk of lawsuits and associated damages (Seltzer 2019c). Taken together, it appears that institutions will be facing tough decisions about athletics in the coming decades.

- **Higher education’s trend towards a private good will be challenged:** Although many people in US public higher education (and not a few outside it too) see it as a public good, one where all of society benefits from educating many individuals, the evident reality of decades of decreases in state funding per student underlines its increasing treatment as a private good, one where the
benefits of the education accrue primarily to the individual. Federal support for students and for research (at public and private institutions) has been much stronger, although not always keeping pace with need either. These trends were covered in Chapters 4 and 8. While the overall slide towards even less state support does not yet seem over, the related increases in costs to students, along with increased prices at private institutions, eventually brought calls for free or low-cost college education to the forefront of the national policy debate during the 2020 election cycle. There are a myriad policy details and plans, such as first-dollar, last-dollar, and debt-free, two-year versus four-year institutions, and more (Mangan 2019; see also Box 7.2). Unsurprisingly, the public-good/private-good view of who should pay for college has partisan dimensions (Kreighbaum 2019a), with candidates and think-tanks arraying their proposals and arguments on both sides (Anderson 2019; Whistle 2020). Whatever the immediate outcomes, it is clear that the policy battleground is established and won’t be going away in the foreseeable future.

Higher education is a large and complex sector with many examples of schools already inventing new approaches that both create and respond to the various trends I’ve mentioned. Some authors have even taken to blue-sky speculation about what kinds of new university might emerge (Jaschik 2019a). I am hopeful that institutions will face these futures as an ensemble of challenges and opportunities, adapting and innovating as they have always done.