Higher Education Governance as a Barrier to Cost Containment

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Introduction

The network of incentives driving higher education’s economic performance is not properly aligned with the public interest.¹ This conclusion follows from two discouraging trends in higher education. First, college affordability has declined among an increasingly large share of middle class households.² Second, a growing body of evidence suggests the quality of undergraduate education is also declining.³ The public might tolerate rising cost accompanied by rising quality, but rising cost and declining quality is a dangerous trend that cannot be continued. But the news is not all bad. The good news is higher education responds to economic incentives. Get the incentives right and economic performance improves. Higher education reform is not hopeless.

The objective of this chapter is to identify the incentive network within and around higher education; this network drives cost higher and leads to lower quality. Understanding the incentives reveals opportunities for reform. I consider both the incentive structure inside each institution and the external incentive structure that binds all higher education institutions together in competition for students and public support. The entire incentive network—also referred to as “higher education governance”—includes the governance of individual institutions (tenure policies; compensation policies; and the role of faculty, administrators, and boards), oversight and support from federal and state governments (regulation and subsidies), accreditation agencies (the “captured regulators”), and the peculiar nature of what economists term “experience goods” competition (which occurs when there is uncertainty about the quality of service provided in absence of experience, as is the case with higher education). As we will see below, many facets of the governance structure push higher education toward higher costs, minimal transparency about outcomes, and a low level of quality control.
But reform will demand more than simply “getting some of the incentives right.” Indeed, the governance problem is analogous to the legendary Gordian Knot; attempts to unravel the knot are defeated since pulling one strand merely tightens the knot elsewhere. By this property, the famous knot defeated all its challengers’ attempts until Alexander the Great famously cleaved it in two with his sword. Now, I am not suggesting that Alexander’s brute force solution is appropriate in this case, since there are many things that are right with America’s higher education system. For example, reforms must preserve the quality of our graduate programs and the quality and quantity of scientific research produced by these institutions.

Rather, the wisdom offered by Alexander’s solution resides in attacking the problem as a whole, not wasting time pulling individual strings that are quickly offset by incentives that pull in the opposite direction. In practice, this means reform must reveal the current network’s core architecture and then realign the complete incentive structure with the public interest.

The paper proceeds as follows. The governance superstructure is defined by four established theories of higher education cost. I argue that Bowen’s rule is the most significant driver of college costs and that Bowen’s rule identifies two major information problems: too little information about value-added per student for both individual instructors and institutions as a whole and an absence of the performance metrics required to control the pursuit of self-interest by higher education insiders. Due to this incentive structure, student subsidies have the opposite impact from what is intended: subsidies drive costs higher and place a growing burden on middle class households. I then detail other unexpected effects due to the incentive structure, including: 1) public institutions have better cost control than private institutions; 2) the most serious cost problem is excess overhead; 3) the center mass of the self-interest problem is with administrators and governing boards; and 4) competition from for-profit education is unlikely to improve
economic performance. In the end, the higher education financial problem is not too little money (indeed, a good case can be made that too much money relieves institutions of the need to use resources efficiently; fundraising in higher education is like giving more of the same substance they abuse to addicts) but a governance structure that is a barrier to cost containment.

Why are Costs High…and Getting Higher?

The higher education cost literature contains four theories that seek to explain rising cost: 1) government regulation; 2) bundling services previously not supplied with higher education; 3) Baumol’s cost disease; and 4) Bowen’s Rule. Together, the four theories are a complementary network, with each one identifying factors that contribute to rising cost. These theories are the pillars on which the adverse incentive structure rests.

Government Regulation

Government imposes unfunded mandates on higher education that can have adverse consequences on cost and sometimes on quality. Title IX, which banned gender discrimination in athletic programs, is a federal mandate that increased cost. Regulations regarding learning or physical disabilities force similar cost increases. But these costs are often accompanied by social benefits. In other words, government mandates are not necessarily all dead weight loss. Sometimes regulation can solve an economic coordination problem, where individual institutions have little incentive to adopt a new policy even if widespread adoption would provide considerable social benefit. Well-designed government regulation can help to solve such coordination problems.
Bundling Services

Colleges and universities provide a variety of services to both students and the public beyond simple classroom instruction. They provide housing, food service, entertainment, travel, health services, and insurance. Beyond this there is an increasing array of special purpose institutes and off-campus community outreach programs. These services are bundled into a single package. When observers invoke extravagant campus facilities to explain rising college costs, they identify a broader concept from economic theory: the efficiency of bundled services.

Economic theory reveals that bundling services (or tying contracts) can be efficient under some circumstances and can have anti-competitive effects under others. Specifically, if there are externalities in production or consumption of two goods, the public is better off if the two goods are tied by bundling. (Externalities in production mean the cost of each good is lower if they are produced and sold together than if they are produced and sold separately. Similarly, if individuals derive extra satisfaction from consuming two goods in combination, they are better off if the goods are packaged and sold together.) An example of a beneficial bundling arrangement is packaging foreign travel with the education service provided by colleges and universities via study abroad programs. On the other hand, education insiders may abuse bundling when it is in their personal interest to do so (the pursuit of self-interest by insiders is termed an “agency problem” in economics) When faculty members oversee study abroad programs, they receive expensive personal benefits from these programs since the institution pays their expenses.

Bundling can also have anti-competitive effects when 1) it facilitates price discrimination and 2) it serves as a barrier to entry. Exclusivity conveys considerable pricing power. The pricing power of exclusivity is enhanced by tying other services to the primary service (exclusive
education). In order to have access to the exclusive good, consumers will pay more for both the bundled good and the exclusive good than they would be willing to pay for the two goods sold separately. For example, an exclusive institution builds luxurious new residence halls and elaborate new dining facilities then requires all students attending the institution to live on campus and eat at the new dining hall. This eliminates local competition for both housing and food service. The rationale given is that living and eating on campus is an essential part of the “college experience.” Notice this policy reduces student choice, as students are not allowed to choose which part of the experience they want or can afford.

Bundling services also creates barriers to competition from institutions in lower quality tiers as it simultaneously raises cost per student. In order to compete for students and public/private support in a higher quality tier, the institution must offer a larger package of goods and services. At first, the potential entrant into a higher tier must offer packaged goods at a loss, which requires that the potential entrant has considerable reserves initially. Moving up the quality tier, therefore, typically requires a “transformational” endowment gift—often a prohibitively high barrier.

*Baumol’s Cost Disease*

The two most significant cost theories are Baumol’s cost disease and Bowen’s Rule. Baumol argues that service industries are subject to fixed proportions production which limits their ability to substitute capital for labor in production. Examples are string quartets, a teacher for each classroom, and a doctor for each patient visit. When labor costs rise, the institution cannot substitute cheaper capital for more expensive labor and costs tend to rise as productivity remains the same.
At the same time, rising productivity in the rest of the economy means real wages paid to productive workers will increase economy-wide. This puts the service industries in a bind: they must pay higher real wages or risk losing good employees. Higher wages without increases in productivity leads to higher cost. Therefore, the essential features of Baumol’s cost disease are static productivity and rising real wages driven by real wages in the rest of the economy. Under the Baumol hypothesis, productivity (student-to-staff ratios) should not change in higher education and real wages should only increase when real wages increase in the rest of the economy.

However, productivity in higher education did not remain constant from 1987 to 2008. Indeed, based on student-to-staff ratios, productivity declined dramatically. Further, real median household income was stagnant for the past three decades, while real wages in higher education rose steadily. The data are not consistent with Baumol’s cost disease, meaning the theory cannot explain all the increases we see in higher education costs.

Bowen’s Rule

Bowen’s rule theorizes that colleges and universities raise all the money they can and spend all the money they raise on projects that might conceivably improve quality. The economics behind Bowen’s rule follow from the combined effects of nonprofit status, competition over experience goods, and unresolved agency problems.

Nonprofit Status. The purpose of a nonprofit institution is to provide more services to people who are underserved by the for-profit sector. These institutions are given tax exempt status and asked to provide as much service as possible. As nonprofit organizations, they must follow a balanced budget financial model; hence, service output is capped by available revenue.
When the revenue cap is lifted, service output and costs rise. This sets in motion what Bowen calls the revenue to cost spiral.

*Experience Goods.* An experience good is any good or service whose quality is unknown before it is purchased; the consumer must “experience” the service before she can determine its quality. Quality uncertainty is fundamental to experience goods markets. Economic theory reveals that an experience good market is efficient when 1) consumers purchase the service frequently; 2) they can determine quality immediately after purchase; 3) they abandon quality cheaters immediately; and 4) there are only two parties to each transaction. When the efficiency conditions are met, quality reputations are the primary means of competition. Moreover, when consumers have enough information to separate high quality providers from low quality providers, price accurately reflects quality.

The higher education incentive structure satisfies none of the four efficiency conditions. Consumers do not have enough information to separate low value-added providers from high value-added providers, and socially preferred transactions between high quality providers and high quality buyers do not take place. This is a classic information-based market failure. Therefore, even if all competitors in higher education were for-profit firms, there would still be a serious market failure that has to be addressed by regulatory intervention.

There are several unique features associated with experience goods markets. The most prominent one is that consumers associate higher cost with higher quality. Since customers cannot observe quality before the service is purchased, they use price as a proxy for quality. In higher education this is known as the Chivas Regal effect, based on an expensive scotch whiskey that built its exclusive brand name on high prices. The association of price with quality leads to a particularly perverse incentive: the more a college or university spends per student, the more
consumers associate that institution with higher quality. Recall: Bowen’s rule holds that colleges and universities raise all the money they can and they spend all the money they raise on projects that seemingly enhance quality. By pointing vividly to the core problem, consumer uncertainty about value-added, the Chivas Regal effect is the perfect enabler of Bowen’s rule.

A corollary to the Chivas Regal effect is any attempt by a single competitor to lower cost will be interpreted as an attempt to lower quality. This assumption is a classic coordination failure in economics. In other words, disentangling cost reduction from quality reduction requires intervention. Otherwise, institutions will not attempt to lower cost on their own.

The second feature of experience goods markets is costs are higher than they would be if consumers were certain about product quality, and the more uncertain consumers are the higher is the cost premium. In higher education, students may not know the quality of their purchase until decades after graduation. Notice also that if higher education institutions bundle entertainment with education, they make it more difficult for students to separate the two benefits.

This uncertainty is exacerbated by the absence of vigorous competition between institutions based on documented value-added. This seems peculiar because undergraduate value-added is the first priority among parents and taxpayers (those who pay for higher education), so why do we not observe value-added competition? The reason can be traced to the first and second criterion for efficient competition: consumers must purchase frequently and be able to quickly evaluate quality after purchase. When consumers quickly recognize the value-added, the provider gets a quick return from quality improvement. In higher education, it takes generations of steadily producing high quality graduates before the institution gets a reputation for high quality.
The planning horizon for real quality improvement in higher education spans the tenure of multiple presidents and board memberships. An individual president or board membership receives little credit or recognition for being one in a series of presidents or boards that patientely sees a program into fruition. On the other hand, the individual president or board membership can invest heavily in fundraising, public relations activities, sports, or physical plant where their personal career benefits are immediate. Real quality enhancement takes time, patience, and dedication to core academic values, something not consistent with careerism in administration (another agency problem).

The nature of experience goods explains a lot of what we observe in higher education. It explains why reputations are important and why transparency is an issue. Unfortunately, it also explains why the elite institutions with high quality reputations do not take the lead in higher education reform; they have nothing to gain from such an undertaking and considerable benefit to lose by the task. If they provide objective information about their value-added, it could damage their reputation. Hence, they have no incentive to be transparent. This is a very serious problem since all of higher education looks to the elite institutions for guidance and what might be termed “best practices;” they are in a position to do a lot for reform. Finally, these adverse effects are rooted in uncertainty about value-added; make value-added more transparent and many problems will disappear.

*Agency Problems.* The third component of Bowen’s rule is unresolved agency problems. In economics, we call the pursuit of self-interest by insiders an “agency problem.” The agent is someone who is hired by a principal (stockholder, voter, patient, client) to make decisions for the principal. All too frequently, the agent serves his own interest instead. If the agent’s interests are not properly aligned with the principal’s interests, the agent may make decisions in her own
interest and at the principal’s expense. Stockholders have an agency problem when they hire managers to run companies, voters have an agency problem when they “hire” politicians to represent them, and patients have an agency problem whenever they leave medical decisions to their doctors. Agency problems exist everywhere and nonprofit institutions are no exception, as is frequently demonstrated by scandals at charities and religious organizations.

The critical levers on agency problems are 1) the amount of information available to principals regarding the behavior of agents; 2) the use of appropriate incentive contracts in the absence of information; and 3) the strength of natural constraints on adverse agent behavior. Note that this is also an asymmetric information problem similar to the experience goods market. If principals have perfect information about the agents’ behavior, they can protect themselves; the less information they have the more vulnerable they are to abuse. As a result, good performance metrics are an essential part of effective agency monitoring.

The performance metric among for-profit firms is well-defined. Agency abuse always results in higher costs and higher costs always reduce profits, so agency abuse in for-profit firms always shows up as lower profits. The performance metrics for higher education are poorly specified and are compromised by the nature of experience goods competition. The natural metric would be cost per student, but experience good competition flips that metric upside down: agency problems in higher education always lead to higher cost, but consumers associate higher cost with higher quality.

Incentive contracts are an important contract device used to bring the agent’s interest in line with the principal’s interest. Specifically, an incentive contract ties the agent’s financial gain directly to outcomes where the principal benefits. Incentive contracting in higher education is abundant in its rarity and where it is observed the incentives are perverse with respect to the
public interest. As a group, faculties tend to be suspicious of incentive contracting. The notion that one would be willing to do more for more compensation seems to mark that person as “unclean” in the eyes of some faculty members. Paying class overload premiums to willing individuals is an underutilized incentive. On the whole, equity models and faculty exceptionalism prevent a wider use of incentive contracts among faculty members.20

One does observe incentive contracting among senior administrators; unfortunately, the incentives are associated with raising more money rather than using current resources efficiently. From Bowen’s rule, we know that increasing revenue simply increases cost; hence, aggressive fundraising just raises higher education cost without improving efficiency. Reputations dominate in experience goods competition and efficient resource allocation leads to controversy. Controversies damage reputations, which incentivizes governing boards to studiously avoid controversies. Governing boards know controlling costs will be controversial.

The presence or absence of natural/institutional constraints on agency behavior is an important factor in limiting the damage done by agency abuse. For example, the well-organized market for corporate control constrains agency abuse in corporations. Similarly, elections constrain agency abuse among politicians. There are no comparable constraints on agency abuse in higher education; control of higher education institutions is not contestable in any meaningful sense and governing boards are not subject to general election.

Third parties with a financial incentive to monitor behavior also constrain agency behavior. Among publicly held for-profit firms, private investors, money managers, banks, security analysts, and private equity firms have a financial incentive to monitor each firm. Opposition political parties have a strong incentive to monitor the behavior of politicians. But, third parties have little incentive to monitor higher education institutions. The news media also
constrain agency abuse; unfortunately, the media has a well-developed taste for agency stories in business and politics, but little interest in higher education agency stories.

Government regulation also limits agency abuse. Government oversight of business is extensive when compared to higher education since there are numerous agencies tasked with for-profit oversight responsibilities. The Securities and Exchange Commission (SEC), the Federal Trade Commission (FTC), the Occupational Safety and Health Administration (OSHA), the Environmental Protection Agency (EPA), the Food and Drug Administration (FDA), the Internal Revenue Service (IRS), and the Federal Reserve System are examples. Only the Department of Education—and to a lesser extent the IRS—has oversight responsibilities in higher education. The difference between the full disclosure requirements imposed on for-profit firms by government agencies and the absence of disclosure requirements on colleges and universities when they sell students an increasingly expensive education is a stark contrast indeed.

In a perfect world, each group of agents in higher education (faculty, administrators, and board members) would monitor the other groups’ behavior. This model is popularly known as “shared governance.” Unfortunately, it has been undone by administrators, who simultaneously convinced boards that faculty will not tolerate intrusion into academic policy and faculty that boards will not tolerate faculty meddling in their jurisdiction. As it stands now, shared governance is fragmented governance. Further, board members view direct communication with faculty as a breach of the “chain of command;” effectively shutting off any possibility of joint faculty/board monitoring of administrator agency abuse. This gives administrators a free hand.

Another broken traditional constraint on agency abuse is the accreditation process. Under the current regime, accreditors are “captured regulators.” The relationship between accreditors and institutions should be at arms-length. But, in reality, the members of each accreditation team
come from other institutions, and they know that they will also be subject to accreditation review. They consider their own interests as essentially the same as the interests of those they are expected to regulate. This is a structure that seems purpose-driven not to be effective.

*Internal and External Cost Drivers: Which Group is the Culprit?*

Of the four cost theories, two arise from outside higher education and two come from decisions taken by education insiders. Government mandates and Baumol’s cost disease reflect forces outside higher education that cause costs to rise inside higher education. A moment’s reflection reveals why this must be true: higher education is embedded in the macro-economy and it would be impossible for that macro-economy not to have an impact on cost.

Alternatively, Bowen’s rule and bundling activities come from decisions taken by higher education insiders. Since the external cost theories tend to absolve higher education of responsibility for rising costs, there is a tendency for higher education to insist they are the real culprits in this story. Since all four theories have sound economic foundations, the issue is in fact an empirical question. What proportion of the total change in costs per student over a defined interval can be attributed to external versus internal effects? My own work on this question suggests Bowen effects are larger than Baumol effects: for every $1.00 in cost attributable to Baumol effects, about $2.00 can be attributed to Bowen effects.²¹

**Two Information Problems**

The cost theories reveal two generic information problems in higher education: uncertainty about value-added and insufficient information to control agency abuse. Cost can be lowered and quality improved with more information about value-added and by devising more precise
performance metrics to control agency abuse. From the nature of experience goods markets we know that institutions have no incentive to provide this information and every incentive to oppose the resolution of these information problems. Hence, they complain continuously about rankings reports, as they complain about attempts to measure teaching productivity, or attempts to make operations more transparent.

The Value-Added Information Problem

The first information problem is value-added by teacher and by institution. Metrics and accountability regimes do not have to be perfect in order to be efficient;\textsuperscript{22} indeed, perfection is inefficient in an uncertain universe.\textsuperscript{23} For example, there is a thriving academic market for senior scholars, but the market for distinguished senior teachers does not exist because there is little reliable information about teaching productivity. In contrast, there is reliable information about scholarly productivity, and while the information about scholarly productivity is not perfect, it is efficient. The information vacuum surrounding teaching productivity prevents the formation of a viable market for senior teachers. Without that market, the incentives are hopelessly corrupted.

The consequences of this particular market failure are enormous. Since one does not gain higher income or recognition from exceptional teaching, professors spend too much effort on research, value-added unravels, “mission creep” constantly leads to the duplication of graduate programs, there are few Ph.D. programs that emphasize teacher training rather than research, there is adverse selection in terms of those who choose academic careers, and there is a wasteful explosion of dubious research output.\textsuperscript{24}
It is worth noting how contrary this is to what those who pay for higher education would prefer. If asked, representative parents and taxpayers would say they want higher education’s first priority to be maximizing value-added. Increased research output might not find its way into their top five priorities. If they fully understood the explosion of published research in areas that reflect faculty consumption activities rather than social investments in knowledge, they would be appalled by the waste.\textsuperscript{25} If you want teachers to maximize value-added, you must give them a clear career track that leads to recognition and reward.

Finding metrics to measure the human capital value-added by both individual teachers and institutions is the key that unlocks the governance problem. A single metric will not do; it has to be a system of metrics.\textsuperscript{26} Further, it will take experimentation to get it right. Experimentation will have to be imposed on higher education since they have no incentive to undertake the effort on their own. This is an area where technology could be very useful.

The National Survey of Student Engagement (NSSE) would be a good place to start. Through comprehensive student surveys at individual institutions, NSSE quantifies critical education outcomes like student study time per week, the number of writing assignments in each course, availability of faculty outside of class, whether faculty maintain their office hours, and opportunities to work as teams. Today, cooperation with NSSE is voluntary, and those who cooperate with NSSE hold most of the information close and release only the information that places them in a favorable light. Notably, it is the elite institutions and the institutions in the lowest quality tier that refuse to allow NSSE on their campuses. The reason is obvious: neither group has anything to gain from this information. In order to relieve the information deficit, participation in NSSE should be mandatory for every institution and all the information should be released.
Agency Abuse and Information

The second major information deficit relates to economic performance. The primary deficit here is a financial metric that plays the same role as does profit in identifying agency abuse in publicly held corporations. Economic theory reveals that college affordability declines when the change in the net price of attendance exceeds the change in household income (see endnote 2). College affordability improves when the change in net price of attendance is less than the change in household income. If institutions are rewarded on the basis of this metric—or other financial performance metrics directly linked to the public interest—they have an incentive to control cost.

Other financial reporting reforms are necessary, however. As it currently stands, falsely reporting financial results to either the National Center for Education Statistics (NCES) or the IRS results in few adverse consequences. We know from numerous scandals regarding data reported to college rankings that institutions are not above gaming the system. Consider the consequences visited upon a publicly held corporation if it falsely reports its financial results in order to game financial markets.

Finally, detailed staffing data is indispensable in any effort to keep financial reporting honest among nonprofit institutions. Accounting definitions can be manipulated and expenditures made in one category can be charged to another category, but it is much harder to mislead if the monitor has detailed staffing counts by function along with the history of salaries paid in each function. As it stands now, we have detailed data on faculty staffing and faculty salaries, but there is very little data on administrator staffing and salaries. This asymmetric treatment played a significant role in the bloating of overhead between 1987 and 2008.27
Anomalous Consequences of the Existing Incentive Structure

The current incentive structure leads to a series of unexpected consequences, consequences that are contrary to what conventional wisdom implies. I explore these cautionary implications in the following subsections.

The Adverse Incentive Effect in Student Subsidies

The purpose of need-based financial aid is to increase access to higher education. Theoretically, if the government lowers the net price of attendance to low income students through a direct subsidy, more students will attend college and access will improve. The critical assumption here is that the price of attendance is independent of the subsidy.28 One might reasonably assume this if the subsidized good was a global commodity, such as soy beans or oil. However, the assumption is unlikely to be valid if the providers have pricing power—the ability to set prices rather than have the price set for them by competition in the marketplace. A provider with pricing power knows the subsidized consumer has increased ability to pay and can adjust his price to capture all or part of the increased ability to pay. If all of the increased ability to pay is captured by the provider, the purpose of the subsidy is defeated. In the case of higher education, college access among low income households would not improve.

This issue is known as the “Bennett hypothesis.” William Bennett, the former U.S. secretary of education, argued this point in a New York Times article entitled “Our Greedy Colleges.”29 Attempts to test the hypothesis led to mixed results: some found little or no evidence and others found evidence to support the hypothesis.30 In each case, researchers looked for evidence that a subsidy increase in one year leads to an increase in price in the following year. If you adopt a longer time perspective, the results are clear: between 1987 and 2008, all of
the real increases in student subsidies were recaptured by higher tuition/fees and room/board charges net of subsidies.\textsuperscript{31}

Need-based aid and merit-based aid increased during this period, and as attendance prices increased more need-based aid was concentrated in the hands of lower income households. During the same period, the competition for the best students intensified, resulting in increasing merit-based aid flowing to exceptional students. In addition, many states adopted new merit based aid programs that were not means tested. Since student achievement is strongly correlated with household income, merit-based aid became progressively more regressive. As a consequence, student financial aid tended to be concentrated in the lowest income quintile and the higher income quintiles, leaving middle income families—who have stagnated real incomes—to deal with rising attendance prices. This has serious consequences for economic mobility since households have to pass through middle income status on their way to higher incomes.

Under the current incentive system, increasing subsidies in the form of either direct subsidies or increased access to debt financing lifts the cap on revenues available to higher education and by Bowen’s rule this means costs will rise as the cap is lifted. The dramatic increase in student debt is the natural consequence, as is the frustration of government policy.\textsuperscript{32}

Public/Private Institutions and Cost Control

Some may expect private institutions to 1) have better cost control and 2) be more attentive to their clientele than comparably situated public institutions. My experience leads me to conclude the latter expectation is true, but my studies reveal that public institutions do a better job of controlling costs than do private institutions.
Consider Carnegie I and II private and public research universities. These are the elite research universities that educate almost 4 million students each year. The academic cost per student, the overhead cost per student, and the total cost per student are over twice as high at private research universities as they are at public research universities. Further, between 1987 and 2008 real total cost per student increased by $32,061 at private universities and $13,806 at public universities. Note in each case we are talking about cost per student, not the price of attendance.33

Over the same period, FTE student enrollments at private research universities were a little more than half the enrollment at public universities, even though both types of institutions saw those total enrollments rise by almost 30 percent. Similarly, both types of institution expanded the size of their graduate programs relative to their undergraduate programs, although the private institutions more than doubled the size of their graduate programs while the public institutions increased their graduate programs by about 40 percent. The cost levels and the changes in total cost observed in the research universities are similar to the cost relationship between public four-year institutions and private four-year institutions; cost per student is much higher and increases by larger amounts in the private institutions.

The primary reason for the cost differences is that public institutions are subject to better arms-length cost monitoring than are private institutions. First, substantial parts of the public institutions’ budgets are in direct competition with other demands on state resources such as prisons, Medicaid, and pensions. The budgets for private institutions do not compete directly with other uses except through household budgets, and many of the private universities have substantial endowments. Second, there is more direct financial oversight from state governments
than from private boards. On balance, the monitoring of agency behavior is greater at public than at private institutions.

The differences in total cost per student and the differences in the increases in those costs suggest that all government effects in higher education are not adverse effects, as one might argue based on the government mandates cost theory. There are important roles for government to play in higher education, although the government’s current efforts are organized around subsidies, promoting college attendance, and advocating for higher education. In contrast with what the SEC, FTC, Justice Department, and the FDA do to insure corporate economic performance, the government does very little to promote improved higher education economic performance.

**Bureaucratic Entropy and Staffing Patterns**

The term “bureaucratic entropy” was first applied to the tendency of municipal employment to grow faster than the city’s population.34 As a result, the cost of city services per citizen increases, even if real public service wages/benefits remain constant. If public service wages/benefits also increase, the increase in cost per citizen rises even faster. The anomalous part of “bureaucratic entropy” is that the cost of city services ought to be subject to increasing returns to scale (the staffing ratio should go down as the population grows). Further, in the long term the real cost per citizen should decline as technology improves.

Bureaucratic entropy is avoided in for-profit firms since the most senior governing groups (management and the board) have a strong personal stake in minimizing costs (profits cannot be maximized unless costs are minimized). The personal stake in cost minimization does not exist in government or the world of non-profits. In general, secular increases in staffing ratios
are evidence of bureaucratic entropy—the chronic disease of government and non-profit institutions. Bureaucratic entropy is an agency problem: those who manage costs have no incentive to minimize those costs.

Not surprisingly, real wages/benefits per staff member in higher education increased steadily from 1987 to 2008; indeed, they rose faster than median household incomes. The data reveals that staffing/student ratios increased in each staff category except one, and they increased significantly and consistently in some categories. In other words, higher education labor productivity _declined_ from 1987 to 2008. This is definitely not the picture painted by Baumol’s cost disease, but it is what one would expect from bureaucratic entropy and Bowen’s rule.

Table 1 contains changes in constant dollar total cost per student and staffing ratios for private liberal arts colleges, public masters-program universities, private research universities, and public research universities from 1987 to 2008. Changes in total cost per student at private institutions are more than twice the change in cost per student at comparable public institutions; the public institutions spend less per student and they keep their cost increases lower than do private institutions. The proportion of the total change in cost accounted for by changes in overhead varies from a low of 47 percent at private universities to a high of 68 percent at public masters-program universities. The private research universities more than doubled the size of their graduate programs during this period, which is the reason overhead costs were less than 50 percent of the total cost increase at those universities.
Table 1: Changes in Higher Education Cost and Staffing, 1987-2008

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<th>Private Colleges</th>
<th>Public Masters(^b)</th>
<th>Private Universities(^c)</th>
<th>Public Universities(^c)</th>
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### Academic % Change

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<th>Public Universities(^c)</th>
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<td></td>
<td>84.2</td>
<td>61.2</td>
</tr>
</tbody>
</table>

### Overhead % Change

<table>
<thead>
<tr>
<th></th>
<th>Private Colleges</th>
<th>Public Masters(^b)</th>
<th>Private Universities(^c)</th>
<th>Public Universities(^c)</th>
</tr>
</thead>
<tbody>
<tr>
<td>FTE Executive</td>
<td>26.8</td>
<td>-6.3</td>
<td>52.0</td>
<td>10.3</td>
</tr>
<tr>
<td>FTE Professional</td>
<td>85.5</td>
<td>59.4</td>
<td>57.2</td>
<td>58.1</td>
</tr>
<tr>
<td>FTE Nonprofessional</td>
<td>-21.9</td>
<td>-26.4</td>
<td>-22.8</td>
<td>-28.0</td>
</tr>
</tbody>
</table>

### Ratio of Tenure

<table>
<thead>
<tr>
<th></th>
<th>Private Colleges</th>
<th>Public Masters(^b)</th>
<th>Private Universities(^c)</th>
<th>Public Universities(^c)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Track/Admin % Change</td>
<td>-42.8</td>
<td>-45.8</td>
<td>-26.7</td>
<td>-30.2</td>
</tr>
</tbody>
</table>

| Number of Institutions | 227              | 269                   | 60                          | 146                         |

\(^a\) Constant 2008 dollars.  
\(^b\) Carnegie Masters-program universities.  
\(^c\) Carnegie I and II research universities.  
(Source: IPEDS website, custom tables, by group, for 1987, 2008, and various intervening years.)
The changes in staffing patterns are most revealing. All staffing ratios were calculated as the number of staff members per 100 FTE students. From 1987 to 2008, each type of institution experienced an increase in enrollment between 20 and 30 percent. If the colleges and universities had maintained the same level of productivity they achieved in 1987, the percent changes in staffing ratios reported in Table 1 would all be zero. If they improved productivity, all the changes would be negative. With the exception of nonprofessional employees, most of the staffing ratios increased. The most consistent increase is in nonacademic professional employees, which increased from 57 percent to 86 percent. Except for public masters-program universities, the executive staffing ratio increased between 10 and 52 percent. As a whole, each type of institution dramatically increased the number of administrators per student.

The changes in academic staffing patterns are also revealing. The increases in contract teaching faculty ratios varied from 25 to 94 percent; each type of institution expanded their use of full-time non-tenure track faculty over this period. The research universities made a similar commitment to part-time teachers. The largest increase in the tenure track faculty staffing ratio was at private research universities and most probably represents the more than doubling in the size of their graduate programs. The other institutions made modest increases in their tenure track faculty staffing ratios. The public masters-program universities significantly reduced their tenure track faculty staffing ratios.

In general, all sectors economized on the use of tenure track faculty by using contract and part-time faculty more intensively. Further, they raised the productivity of nonprofessional staff by reducing those staffing ratios. The nonprofessional staff category includes clerical/secretarial, skilled crafts, technical staff, and service/maintenance staff. The decline was uniform and persistent over all four nonprofessional categories. Administrators and governing boards made
conscious decisions to improve productivity in the nonprofessional staff categories from 1987 to 2008 at the same time they were lowering productivity in administrator overhead.

Administrative functions are not subject to fixed proportions and they are subject to scale economies. Other things equal, the administrative staffing ratios should have declined as enrollment increased by over 20 percent. Most puzzling was a revolution in overhead cost reduction among for-profit firms that occurred during the period from 1987 to 2008. While the rest of the economy was shrinking overhead, higher education was investing heavily in more overhead. This seems inconsistent with growing public concern about value-added. The staffing results are consistent with Bowen’s rule but not consistent with Baumol’s cost disease; Bowen’s rule is therefore more important than Baumol’s cost disease as an explanation.

The Center Mass of the Agency Problem

Any agent who has control over expenditures is a potential source of trouble. The center mass of the problem must reside in the hands of those with the most control over resources. One would not expect to find a serious agency problem among nonprofessional staff members, simply because they have little control over expenditures. Contract faculty and part-time faculty are employed at will and the conditions under which part-time faculty struggle reveal they have little influence over campus policies. So, that leaves three groups of agents: tenure track faculty, administrators, and governing boards.

The tenure track staffing data in Table 1 reveals that only one type of institution—the public masters-program universities—actually used contract faculty and/or part-time faculty to replace tenure track faculty when they added faculty in response to enrollment growth; all the rest increased their tenure track staffing ratios, although mostly by modest amounts. This reveals
that tenure track faculties have some influence on resource decisions. However, the modest changes in tenure track staffing relative to administrator staffing strongly suggests the faculty’s priorities are not decisive.

Consider the ratio of tenure track faculty members to administration members (executives plus professional staff). In 1987 the ratio was greater than or equal to 1 for private colleges, public masters-program universities, and public research universities. At private research universities in 1987, the ratio was well below 1, and administrators already outnumbered tenure track faculty by a considerable margin. By 2008, all of the tenure track/administrator ratios were less than 1. At both public and private research universities in 2008 the ratio of administrators to tenure track faculty was over 2 to 1. The political weight of tenure track faculty priorities declined during the period of accelerating costs.

Legal control of expenditures resides in the hands of administrators and governing boards. They hire/fire employees and set contract terms. Therefore, changing higher education governance in order to improve economic performance should start where the problem resides: among administrators and governing boards. Why did governing boards allow an explosion in overhead at the same time many board members energetically reduced overhead in their own businesses?

I do not minimize the agency problems created by tenure track faculty members. Those problems are real and they cause costs to rise and quality to decline. The mutual nonaggression pact between students and faculty over grades and teaching evaluations is an example of serious agency problems. Grade inflation has a particularly corrosive effect on value-added since low grading standards drive out high standards. Other faculty agency problems are idiosyncratic abuse of the core curriculum, the campus calendar, teaching loads, and class sizes.
Administrations and boards have the legal authority and fiduciary responsibility to resist these trends, but they do not because resistance is an admission the institution has a problem. Any institution that admits problems damages its reputation relative to all the other institutions that refuse to recognize problems. This is the heart of reputation competition in experience good markets—one cannot admit there are problems.

**Can For-profit Competition Improve Performance?**

A popular assumption within the reform movement is competition from for-profit higher education will improve higher education’s economic performance. There are two reasons why that may not be true. First, for-profit higher education must contend with the same incentives created by experience good competition. Suppose one converted all colleges and universities to for-profit firms, would that change economic performance? Consumers would still be uncertain about service quality, and they would still use cost as a proxy for quality. Firms would still have an incentive to withhold information about quality, which means that quality cheating would still be an issue. As pricing power increased, quality would continue to unravel. Ironically, if the for-profit industry brought with it the same degree of regulation that publicly held corporations currently face, industry performance would likely increase. No matter what the objective of the institution might be, there is still a market failure due to the economics of experience goods. This market failure must be addressed before performance will improve.

The second reason why performance may not improve is due to the length of time it takes to establish a reputation as a high quality provider. In higher education, old is good; reputations for quality are built by generations of successful alumni. A for-profit potential entrant would have to spend generations exceeding expectations by providing a high quality experience at a
low price in order to build a reputation as a high quality provider. This is why current for-profit entry is at the bottom of the quality tier, even though all the real profit potential is at the top of the quality tier. Furthermore, leadership for “best practices” comes from the top of the quality tier, not from the institutions at the bottom. The threat from for-profit potential entry faced by Harvard, Princeton, or Yale is essentially non-existent; potential entry has no bearing on the decisions taken by these institutions. The elite institutions have a profound “first mover advantage” over any newcomers.

**Observations and Suggested Solutions**

What should we take away from the foregoing analysis?

*Observations*

Some costs are imposed on higher education from the outside, while other costs arise from internal decisions taken by the academy. The internal decisions account for a larger cost share than do the external forces. The essential cause of high cost and declining quality is insufficient information about teaching value-added and chronic agency abuse.

Agency problems always lead to higher cost and frequently lead to lower quality when higher quality requires more effort from the agents. The central mass of the agency problem resides with administrations and governing boards. Higher education’s long history of exceptional cost increases is the latent print of serious, unresolved agency problems.

The agency problem is created by too little information about economic performance (both cost and quality). Economic performance metrics directly linked to the public interest are available. No single metric is perfect, but a system of imperfect metrics will be efficient in the
sense that the public interest will be better served by those performance metrics. The academy’s assertion that metrics have to be perfect is specious and driven by self-interest.

The experience goods market failure and the unresolved agency problems create a significant coordination failure\textsuperscript{40} that prevents single competitors or groups of competitors from effectively competing on the basis of higher value-added at lower cost.\textsuperscript{41} Consumers assume attempts to lower costs are attempts to lower value-added and the length of time it takes a competitor to prove it is providing higher quality at a lower cost makes that individual strategy unworkable.

\textit{Suggested Solutions}

The two information failures are the heart of the college cost/quality problem: teaching value-added and the information/institutions required to control agency abuse. The value-added problem can be resolved by a metric system sufficient to establish a market for senior or master teachers. The system should be modeled on the productivity metrics that make the market for senior scholars possible. The solution to the agency problem is disclosure requirements similar to those imposed on for-profit firms. Further, the disclosure standards will need to have teeth.

The first priority should be value-added by institution and by instructor. Measuring value-added by institution is a simpler task. I would start by requiring every institution (private and public) to participate and reveal the results from the annual NSSE survey. The second step here is third party (other than the institutions or the teacher) metrics to evaluate individual teacher value-added. The Princeton Review’s 300 Best Professors is an interesting start. Web-based teaching competitions by subject area are a promising prospect, as is peer reviewed class offerings. Digital technology makes all of this more cost effective. The metrics should be
patterned after the metrics used to evaluate scholars and should be constructed with what is needed to establish a market for master university teachers in mind.

A required parallel development is a system of economic performance metrics: truth in financial disclosure, detailed staffing and salary/benefits disclosure, historical data on total cost and net price of attendance with respect to household incomes, and the adoption of incentive contracting that is consistent with the public interest.

Finally, the agency problem will not be resolved until a new campus charter is in place. That charter must place more emphasis on cost control, less emphasis on raising money, make board members’ more responsible for controlling cost, make board compositions more contestable, set professional standards for all staff, and clearly define faculty, administrator, and board roles in governance. This new governance charter must make it easier to dismiss any employee who is underperforming and make the reallocation of existing resources a seamless process.
“Economic performance” refers to higher education’s historical record in terms of cost and quality of services rendered.

Research reveals that when the dollar increase in the net attendance price exceeds the dollar increase in household income the household’s original higher education quality choice is no longer within the household’s budget constraint, household utility declines, welfare declines, and the household must choose a lower quality education experience (Martin and Gillen, 2011a). This problem is aggravated by trends in student subsidies over the past four decades. Institutions committed more and more student support to merit scholarships over this period and state governments directed more student scholarships to merit support. Since student performance is directly related to household income, more support is going to higher income families than to traditional middle class families.


An economic coordination problem occurs when the economic incentives are insufficient or create a negative “first-mover” incentive. This is the case with respect to any single institution actively cutting costs in higher education. Therefore, if a single institution dedicates itself to take all the appropriate steps, it will not be able to maintain those changes on its own – there is a major “first mover disadvantage” in reform.


The best way to understand the impact of exclusivity on pricing power is to consider an exclusive night club where a bouncer screens patrons before they are admitted. Surprisingly, this situation is quite analogous to higher education. The bouncer is “casting” each nights experience by admitting the most desirable patrons; the patrons themselves are part of the production process, just as students are inputs in their own education process. If a patron (student) is admitted, he is unlikely to balk at the cover charge or the price of drinks.

This is in contrast to for-profit firms who expand output only if there is a reasonable prospect of higher profits.

Efficiency means the service is produced at the lowest possible cost and none of the providers are earning economic rents.


Consumers have enough information to distinguish between labor market signals produced by elite institutions over the signals sent by institutions in the lower quality tiers. Hence, the “quality” tiers in higher education are based on labor market signals, not human capital value-added.

The current dominance of higher education by nonprofit institutions is an example of the “survivor principle.” The survivor principle is evolved structures that persist tend to be optimal. Hence, the flawed nonprofit character of higher education may be less flawed than a comparably regulated for-profit solution. This does not mean that for-profit institutions cannot improve competition at the margin; it does suggest, however, that an unregulated for-profit industry is likely to be worse than what we have now.

The people employed in higher education are no more, nor any less prone to agency abuse than any other group of people. The point here is the constraints on agency problems one expects to find are simply not there in higher education.

In experience goods markets providers have more information about true quality than do consumers and in the agency problem agents have more information than do the principals.
Equity in higher education refers to faculty preferences for uniform compensation. Faculty exceptionalism is the notion that faculty members are not subject to the same human weaknesses that trouble business people and politicians.


Information is costly and the marginal cost of information rises as more information is obtained. The efficient level of information is found where the marginal cost of information is equal to the marginal benefit of more information. Therefore, perfect information is almost always inefficient; there is an optimal level of ignorance.


In addition to NSSE discussed below part of the metric system must include feedback from students through evaluations or online resources such as RateMyProfessor.com, pre and post testing, inter-collegiate peer reviewed teaching, and more local and national prizes for exceptional teaching. In order to establish a market for senior teachers, the information will have to come from third parties (not the candidate or her home institution) the same way information about scholarship comes from third parties.


Every dollar spent per student has an opportunity cost, that dollar could be spent on other public and private goods and services. Therefore, the total social cost per student is the total cost per student; while the net price of attendance includes only part of the total cost, the cost paid by private households with children currently in college.


2001); Maureen Murphy Nutting, “Part-Time Faculty: Why Should We Care?,” *New Directions for Higher Education* 123 (200): 33-39.

37 In the author’s models of public research university cost from 1987 to 2008, academic, overhead, and total cost are all lower the higher is the ratio of tenure track faculty to administrators. Preliminary results suggest this is also true among private research universities. This evidence and other evidence suggests economic performance improves the more balanced is shared governance.


39 Conventional competition theory suggests a credible potential entry threat tends to moderate the monopolist’s behavior, causing the firm to set prices just below the price that would trigger entry. Potential entry in higher education is not a credible threat.

40 This problem is conceptually similar to the coordination problem that existed in the coal mining industry prior to the 1969 Farmington Mine disaster. Coal mining is a very competitive, low-margin business. Any producer that unilaterally increased mine safety could not stay in business; hence, the cost of mine safety had to be imposed on the entire industry at the same time through regulation. Quality regulation (information regulation) should be imposed on higher education for the same reason.

41 The only institutions that could do this are the elite institutions. Unfortunately, they have no incentive to do so.