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*In Pursuit of Prestige: Strategy
and Competition in U.S. Higher
Education, Technical Papers*

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Preface

This volume is a companion to *In Pursuit of Prestige: Strategy and Competition in U.S. Higher Education*, published by Transaction Press, 2001. This companion volume contains additional detail from a two-year study of higher education in the United States. The material here is organized into five appendices. The first four appendices offer expanded analyses of the four key revenue markets treated in the main text: student enrollments, research funding, public fiscal support, and private giving. The final appendix presents an analysis of the changes in degree production over the past two decades. The material throughout this volume assumes familiarity with the conceptual framework presented in the book and readers are cautioned not to read this work independently. All references here are to the bibliography of the book.

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Appendix A: The Market for Student Enrollments

In this appendix we discuss the main characteristics of the market for student enrollments. We first present an overview of market segments, discuss demand characteristics, outputs and outcomes, and finally market signals and information.

1. Customer Motivation and Market Segments

Students attending higher education institutions do so voluntarily and at personal cost, presumably because they wish to acquire at knowledge beyond that provided to them by primary and secondary schools. Given the millions of students who attend institutions of higher education, there are clearly a myriad of motivations which students as customers bring to this market.

While the ostensible purpose of higher education is to generate knowledge, many (most) students do appear to come to an institution with a final educational product in mind, typically in the tangible form of a degree or certificate. Further, although students may acquire knowledge, or a diploma reflecting that, the ultimate purpose of attending college for many is personal economic advancement—success in the labor market after schooling is complete. Attendance at college or a acquisition of a degree may be the means to that end, but the end is the social mobility, enhanced economic status and the higher salary which are believed to accompany education beyond high school.¹

¹ A degree can foster such advancement in one of two ways; as an indication and certification of the type of knowledge received, or simply as a signal of the social and intellectual capital of the student. Under the first perspective, students are interested in knowledge and pursue a degree because that is the only credible way to demonstrate that they have mastered a certain body of knowledge. Thus, the objectives

In this sense, students as customers of the higher education industry are purchasing an investment good. They must invest resources, both directly in the form of tuition and effort, and indirectly in the form of lost wages, in order to reap the benefits of higher salary over the course of their lives. Of course, not all students receive a degree or get a labor market payoff even though they experience the process of acquiring higher education for some period of time, and derive some utility from doing so. Thus, while part of the motivation for obtaining additional schooling beyond K-12 is an economic one (an investment with future payoff), the consumption benefits of college arising from the student lifestyle, peer interaction, etc., are also important. We observe institutions strategically paying attention to both the investment and consumption aspects of higher education in their quest to enroll students.

The fact that there are so many students in higher education with different needs and demands is part of the reason for the fact that there are thousands of institutions with different characteristics. From the perspective of the institutions, the market for student enrollments can be segmented in several ways. Traditional classifications most often segment the student market by the type of educational product sought, in particular the level of educational attainment as reflected in the credential awarded to the student by the institution (Associates, Bachelor's, Master's, Doctoral, Professional) or by the standard length of time required to complete a program (two-year or four-year).

of acquiring knowledge and achieving a degree are intertwined. The second perspective does not require that students value additional knowledge accumulation. Instead, they derive value from the sorting function of the institution (Spence, 1973). Achieving a degree from a particular institution to which admission is competitive provides potential employers with a signal of the quality of the student which can be translated into higher wages.

Most of the institutional leaders we talked to clearly delineate between students on the basis of degree program, particularly undergraduate, graduate, and professional. In most industries, firms have a strong sense of the productivity or revenue generation capability of different market segments. While academics and administrators might segment the student market along these lines it is interesting to note that it is not feasible with available data to divide higher education revenues (much less costs) according to these segments on a national level.

The general description of degrees pursued by students or offered by institutions provides the coarsest categorization of students and institutions. In addition, students can be categorized according to the nature of the program they pursue (i.e. academic, vocational or professional). Another way of categorizing students is by subject area of study. A student is not simply an undergraduate or a Ph.D. student, but an engineering undergraduate, a law student, or a Physics Ph.D. Student. Institutions often specialize in order to attract the focused students, or provide a broad array of offerings in order to attract the students interested in a general education. Many specialized institutions such as art, music, and culinary schools offer courses and degrees in a narrow range subject areas and compete for students who are interested in specializing in those areas. Liberal arts colleges specialize in a different way by offering a broad program of study that caters to students who don't want to focus on a specific field of study. At the other extreme are comprehensive offering programs in a wide range of subject area at a variety of different levels. Large comprehensive public universities common in most

states typically provide Bachelors, Masters, and Doctoral degrees in both academic and professional fields.

Administrators at institutions we visited noted that field of study is a particularly important distinction among graduate students, but not a significant for undergraduates. Many elite institutions may also see themselves as competing for graduate students in a particular science or humanities field (graduate students at one such institution told us that they had been attracted to the school by a particular distinguished professor's research, and by the overall reputation of some departments).

Many institutions we visited viewed full and part time students as distinct customers, requiring at the very least different marketing strategies to attract them to campus and different programs and services to serve them. Part time students-timers tend to be older, and most are working full time while attending school, so they require more flexible class schedules. Administrators also noted that different pedagogical strategies are often required to meet the needs of these students. Another distinction in the student market that is often correlated with part-time status is commuter versus residential status. The student focus groups suggested that students have definite preference as to whether they will live at home while they go to school or whether they will live on campus.

Whether or not it is an intentional specialization strategy, most of the institutions we visited were either "commuter schools" that drew a preponderance of their students from the local commuting area, had few or even no residential units for students and had little campus-based social life; or residential schools offering the "traditional

college experience". The traditional college experience is typically viewed as living with ones peers on campus in a residential dormitory maintained by the institution attended. Two-year colleges and public universities in major cities offer little in the way of the traditional college experience. Rather, students come to the institutions simply for classroom instruction and then return home. Because they do not offer those opportunities may not be attractive to students who are seeking that experience. Many of the institutions we visited actively courted both residential and commuter students, often with distinct programs. For example, at least two of the colleges had separate programs for day and evening students, where the former tended to be residential and the latter part-time, commuters.

A related distinction for students is their place of residence prior to attendance. This segments the market for students because residence status influences how much a student will pay at public institutions in their state of residence, and hence their willingness to pay to attend either a school outside of the state or a private institution. Residence status is also important from the perspective of the institution because almost all public institutions charge students whose primary residence is within the state less than they charge those students coming from elsewhere so that depending on state policies, enrolling out of state students can be a lucrative strategy. On the other hand, many states place restrictions on the number of out-of-state students the institution can enroll.

Part of the out of state group may be international students. Several institutions we visited emphasized the recruitment of such students because of the revenue they

generated either as out of state students (including at one prestigious community college oriented towards recruiting Asian students by emphasizing their lower cost but higher probability of transfer to four year colleges), or at privates where such students typically paid full tuition.

The market for students is also segmented to some extent by student characteristics such as sex, race/ethnicity, religion, age, family socioeconomic status, and ability. Whereas in the past, institutions of higher education were highly segregated by sex, race and religion, today most institutions of higher education enroll students from a wide variety of backgrounds. However, there are clearly some institutions which cater to particular types of students and their student body reflects this. There are a handful of women-only and men-only institutions, some institutions admitting mainly African-American students (historically black institutions or HBIs) and many which are overwhelmingly white, there are still others which are to some degree church (be it Jewish, Catholic, Evangelical, etc.) affiliated and stress theological teaching or at least a commitment to church values.

A defining feature of the market for students is the admissions standards required for entry to the institution and selectivity of the institution. For a large part of the sector only minimal academic standards are required - typically high school graduation or the equivalent - to pursue a two year degree programs at a public community college, and not even this is needed for many other programs. Many community colleges - by far the largest segment of the higher education industry - have "open access" policies which imply that individuals cannot be denied admission so long as they meet state

residency requirements and the minimum qualifications for admission. For admission to many four year institutions students not only select institutions but the institutions themselves are selective, primarily on the basis of the measured ability or academic (or athletic) potential of applicants. Students are evaluated in various ways but typically by some combination of high school coursework, grades and letters, and performance on a standardized test such as the ACT or SAT. While within an institution's student body there is often wide variation in ability level, some institutions are clearly more selective than others. Again this segmentation may be reflected in the quality of peer interaction and the learning experiences of students.

2. Demand Characteristics

The aggregate level of demand facing higher education as an industry is determined by the number of people who decide to purchase higher education at any given time. As in any market, demand is influenced by the size of the pool of potential purchasers, and the value the customer attributes the good or service net of the costs of purchasing it. Holding price and quality constant, the size of the pool of potential purchasers is influenced by demographic, social and economic factors. Because the probability that an individual enrolls in higher education is related to the individual's age, and it is highest between the typical college-going ages of 18-24, the size of the "college age" population will have a strong effect on the level of demand for higher education.

Social forces will also influence demand for higher education by making higher education a realistic and comfortable choice for groups that were formerly discouraged

from participating in the industry. For example, years ago many institutions did not welcome minority students or women students and as a result many women and minorities did not view higher education as a viable option. Opening higher education to these groups increases the probability that such individuals will decide to obtain higher education, hence increasing the pool of potential customers. Similarly, increased acceptance of mid-life career shifts increases demand for higher education among older people. Finally, political events, such as a war can impact demand for higher education. If some number of college-aged people are obliged to serve in the military, they are not free to purchase higher education. Economic factors amplify such social factors in influencing the demand for higher education.

Economic factors influence demand for higher education by influencing the perceived net value of higher education. In determining whether higher education is a good investment, a potential student will compare the costs associated with attending college with the benefits associated with it. Labor market shifts over the past decade or so has increased the wage premium for workers with some higher education relative to those with none (see for example, Bound and Johnson, 1992, Grogger and Eide, 1995). Changes in the labor market have also altered the return to schooling for particular groups. For example, as women's participation in the labor market increases, so does the payoff from and hence demand for higher education among women.

The perceived costs of higher education include such things as lost wages during the time a person is in school, the economic and social costs of attending an institution if it happens to be far away, as well as the actual costs of tuition and interest on money

borrowed to pay for tuition. Economic conditions such as recessions and periods of high unemployment can thus increase the pool of potential customers because the alternatives to higher education are less attractive (Betts and McFarland, 1995). Similarly, the declines in the number of people accepted into military service may have increased demand for higher education by reducing alternative opportunities. Clearly the aggregate pricing behavior of institutions of higher education influences the decision to attend college. All other things equal, the demand curve will be downward sloping so that higher average prices imply a lower level of aggregate demand. Increases in family income will also increase the underlying demand for higher education as will access to low-interest loans.

If the factors influencing the overall demand for higher education were not complicated enough, an examination of the factors determining the demand for education at a particular institution are even more difficult to discern. Higher education is a multidimensional good, and individuals have widely varied preferences over the different dimensions. There have been numerous attempts to model choice of college (Bishop, 1977, Manski and Wise, 1983, Brewer, Eide and Ehrenberg, 1997). Clearly price is one very important factor influencing the decision to attend a particular institution. Because price influences both the decision whether to attend college at all, as well as which college to attend, we discuss the impact of price on demand separately at the end of this section. The other obvious factor influencing a student's desire to attend a particular institution stem from educational objectives.

A person interested in simply taking a few classes in a vocational area or acquiring a two-year degree will not likely be interested in an expensive research university across the country. On the other hand, a person interested in working toward a Ph.D. will have to attend a doctoral granting institution. As mentioned above, higher education generates both immediate consumption benefits (the student enjoys the college experience) as well as long term investment benefits such as increases future earning potential, economic advancement, intellectual development, social skills development, physical development, specific knowledge, status/recognition, and a credential. These “products” have the feature that they require time to acquire - they are not so much tangible products but processes highly dependent on the individual undergoing them. At another level then, students care about their day to day experiences in college or university what economists would term consumption benefits. These include aspects of the lifestyle, networking and partying opportunities afforded by college, as well as specific campus services which enhance the schooling experience such as student services and counseling, sports, cultural activities, etc. Some students place more weight on the consumption benefits of college whereas others are more interested in the long term benefits. Consumption may mean different things to different people. Some may want to attend a “party school” where they can spend a minimum amount of time studying and a maximum amount of time socializing with friends. Others may view long nights engaged in philosophical discourse as a form of consumption and look for an institution where such activities dominate the social life. We also discussed how the long term benefits from higher education can stem from the actual transfer of

knowledge (a student learns a specific marketable skill) or from the fact that having a degree from a particular institution is in and of itself a signal of the intelligence and motivation of the individual. Some students may want to obtain a specific skill and have a specific career goal in mind (such as electrical engineering or cosmetology) whereas others may be interested in achieving the market signal. Those interested in obtaining the prestige that goes along with a degree from a specific institution generally do not have specific knowledge-based goals. Instead, they essentially trust that the education offered by the institution is “good” and will be viewed as such by future employers and society in general. As we will discuss later, these basic difference in student demands support heterogeneity among institutions related to their investment in reputation or prestige. P institutions cater to students who have a stronger interest in the signaling value of higher education and in the consumption benefits as well as the investment benefits of education, whereas R institutions tend to focus on students with specific knowledge based demands and an interest in the investment benefits of higher education.

Beyond these general difference in preference, there are countless factors influencing an individual. Individuals may have strong geographic preferences. For some, it may be very important that they be able to conveniently commute from their current home to the institution. In some cases, this proximity might determine not only where the student goes to school, but also whether they go. Distance to school is an important determinant of costs of attending. Most students attend a college in their home state, but they are more willing to travel further afield to attend highly selective

institutions. Calculations by Brewer, Eide and Ehrenberg (1997) using the high school class of 1982, for example, show that 86% of students who attended a public college came from within the state they went to high school (67% for the most selective schools, 89% for the least selective). 54% of students at private schools came from within the state: only 29% for elite schools, 58% for the least selective.

In general, we have little information on what are the most important elements of the higher education bundle for students. Students' preferences are observed most clearly in the choices they actually make as to the institutions they attend. If we regard institutions as offering different products, representing different bundles of characteristics, that can be clearly identified (and are known to the students?), the types of institutions we observe students attending reflects their preferences. We can also to some extent assess students' wants via survey data of high school students before they enter postsecondary schooling, and of those who subsequently attend. Of course as noted the choices of students are not unconstrained: in addition to a standard budget constraint, institutions can refuse to sell their product to any individual even if they can afford to go (i.e. there is two way selection).

Our discussions with students at institutions we visited suggest that the criteria students use to make their decisions vary widely. However, we did observe two distinct types of students: those for whom the decision to attend and institution of higher education was never in question, and those for whom it was. The students who struggled with the college attendance decision were generally attending an institution close to their home and community. Many of the community college students and

students at R institutions fell into this category. For these students, proximity to home, the cost of the institution, and the perceived economic payoffs were the most frequently cited reasons for choosing the institution they were attending. The students who never questioned whether they would attend an institution of higher education were found in all different types of institutions, from community colleges to research universities. The preferences of these students varied widely. Among undergraduate students, many clearly stated that they decided to go to the institution with the best reputation they could get into. Others were focused on price and only applied to public institutions in their state of residence. Some made trade-offs between price and the reputation of the institution. Some wanted a school with a strong Greek system, others wanted a school with no Greek system. Some wanted a large school, others a small one where they would get to know the faculty.

One further feature of demand is that it is “lumpy.” We observe to a great degree students beginning but not finishing a specified educational program. Students may change subjects within a program with a Masters) and change institutions (transferring from a 2 year to a 4 year institution). Demand is characterized by a great deal of movement into and out of the system (much more so than in other countries). Even so we still typically observe schooling as a multi-year commitment tied to the completion of a degree or certificate requiring a specified number of credits or courses.

3. Price: Tuition and Financial Aid

As mentioned above, price is a crucial factor both in the decision to attend any institution of higher education and in the decision of which institution to attend. In

order to evaluate the impact of price on these decisions, it is necessary to consider: what is the price of the product? In traditional industries, this question has an obvious answer—the price is stamped on the product or posted on a sign at the vendor location. However, in the higher education industry, the concept of price is much more difficult to understand. Most (but not all) institutions which offer schooling to students do so with an explicit monetary price attached - generally in the form of tuition. Similarly students are charged a variety of fees often for specified services such as use of laboratories, student activities/clubs, use of sports facilities, identification cards, etc. Many schools offer additional services including housing and meals to students for which they charge students room and board. Moreover, the true “price” of post-secondary schooling must include the opportunity cost of the student’s time, typically the labor market earnings foregone by being in school.

Almost all institutions of higher education in the United States impose charges on the students attending them, either in the form of tuition, fees and/or residence charges. Typically these charges are designed to partially offset the instructional and other costs associated with operating a college or university. In almost all cases the “sticker price” - the price which the student potentially could pay - of the institution does not reflect the cost of producing the product - neither the marginal cost nor the average cost. Rather institutions use supplemental income from other sources to cover their costs: large public subsidies in the case of publicly controlled institutions, and income from endowment or gifts in the case of independently controlled schools. Tuition charges may be set at state or system levels in the case of public institutions and by the Board of

Trustees of private institutions. The price charged to students is heavily subsidized in the case of public institutions by direct grants from state (or other levels) of government, and typically subsidized somewhat in the case of private institutions by the use of endowment funds, gifts, or transfers from affiliated entities such as churches. Whether the sticker price advertised by institutions to students actually has much economic basis is an interesting empirical issue - prima facie evidence suggests the setting of price has more to do with tradition and political expediency.

During the last 10 years the cost of attending college rose nationwide at more than double the rate of general inflation (college tuition and fees were up 256% from 1980-95 versus 80% in the CPI). During this period of rapid cost increase, family income grew at a much slower rate, and the value of federal and many state financial aid grants has failed to keep pace.² This has led to increasing reliance on loans on the part of students and dramatic increases in institutional aid especially for low income students to offset higher tuition. The GAO has reported that student loan volume has increased 435% over the past 15 years. (See McPherson and Schapiro, 1991, 1993)

Reductions in the growth of state appropriations for public institutions has led to an increasing reliance on revenue from tuition at these schools; a similar trend is evident at independent institutions. Although there are some signs that increases in tuition may be slowing, there remains widespread concern over the affordability of college as evidenced by numerous articles in the popular press and a national commission.

² Nearly two-thirds of all public institutions receive less state financial support than they did ten years ago according to a survey of 400 colleges and universities (American Council on Education, 1996).

However, stories of tuition price increases may be misleading as it is rare for students to pay the full posted “sticker” price for attendance at an institution; a large fraction of students receive financial aid in the form of grants and scholarships, work study, or subsidized or unsubsidized loans - from federal, state, private, or institutional sources - which partially offsets the posted tuition/fees payable.

While the average cost of a independent college (including room and board) was more than \$18,000 in 1995, the average student paid about half that. The nation’s huge investment in student financial aid is designed to ensure that all those who are academically qualified can undertake some form of post-secondary education. A recent report by the National Association of College and Business Officers (NACUBO) estimated that the tuition discount rate for freshmen –mostly in the form of institutional aid—had risen 31 percent since 1990. They found that while published tuition prices at the schools they examined had risen 42-48% since 1990, the net tuition charge had increased only 25-33 percent. The College Board in their “Trends in Student Aid: 1986-1996” found that only 29% of students attend colleges and universities where the tuition is \$6000 or more. Interestingly an American Council of Education Report in 1996 found that of 1000 adults, all overestimated the actual average price of college.

In considering student demand one needs therefore to focus on both the net price (tuition/fees less financial aid) and the attributes of the schooling product being purchased. The tuition charged a student less the financial aid received determines to some extent whether that individual can attend college, what type of college they attend, and for how long. One important issue in focusing on the net price is that it will vary

across individuals attendance the same institution. It is also not known with certainty until a student has completed the admissions process and been notified of financial aid rewards. One feature of this market therefore is both the wide variation in price paid for the product and uncertainty over what that price will be for a given individual. The interaction between financial aid and tuition/fees determines the net income an institution receives from students, which in turn influences the programs that can be offered, the quality of student services provided, and the caliber of personnel that institutions can hire

Although conceptually it seems clear that tuition and financial aid policy has important effects on both institutions and students, is this borne out by the evidence? There is a vast academic literature which has explored this issue. While generally confirming the importance of net price in influencing student behavior in the expected direction, the evidence is much less definitive on the magnitude of the effects. There are also important gaps in our understanding of the ways in which tuition and aid may have differential effects, the role of information, and the effects of tuition and aid on students of different racial/ethnic groups.

There are three major questions which have been examined. First, does financial aid promote access to college? Second, does financial aid broaden the choice of college? Third, does financial aid influence persistence/retention? Most studies have focused on the effects of federal aid policy on low-income students since this has been the major policy initiative of past two decades and the issue for which most pertinent data are available. Econometric studies, for example, which typically use cross section

data, show that enrollment of low-income students is perhaps 20-40% higher as a result of grants, with less than half this effect for higher income students. The greater sensitivity of low income students to changes in aid (and/or tuition) relative to higher income groups is a common result. But there is a wide range of estimates, and these differ by type of aid, sex, race, and level of academic achievement. There is also some evidence that a large portion of grant aid represents pure subsidy - in other words, many students receiving aid would have been enrolled in college had they not received aid. Analyses of time-series trends in enrollment has produced more controversial findings.

Student aid should allow students to attend a wider range of institutions than would be possible in the absence of aid. The analysis of the effects of aid on choice is very complex, however. Broadly speaking, the evidence from econometric analyses again suggests that aid has the intended effect. Students are more likely to attend an institution which makes a higher aid offer and hence aid can change the relative attractiveness of competing institutions. Anecdotal evidence from the institutional perspective confirms this: many schools, particularly in the independent sector, devote considerable resources to packaging financial aid offers in order to attract the students they wish to attend their school. With regard to persistence, Leslie and Brinkman (1988) reach the conclusion that the overall effect of aid is to enable recipients to persist as well as non-recipients but that there may be differential effects over time and by type of student. Higher levels of aid and grants rather than loans increase persistence. Again, though, there is a wide range of estimates. Overall, it would appear that "student decisions to enroll in college respond positively, and nontrivially, to both price cuts and

aid increases” and that “decisions about where to attend school also respond nontrivially to changes in the relative prices of schooling alternatives.”

4. Outputs and Outcomes

In the introduction, we defined the higher education industry as consisting of institutions that produce degrees. However, it is clear that academic degrees are not the primary intended student-based outcomes of the industry, but merely a visible signal of those outcomes. Indeed, no institution explicitly stated the production of degrees as a primary goal of the institution, and only one institution, a public institution offering only external degrees, suggested indirectly that helping students obtain a degree was an objective of the institution.

The process of schooling in general, and of acquiring higher education in particular has a variety of well know effects on both individuals and society. A useful taxonomy of instructional outcomes which affect students is given by Hopkins (19XX). He divides outputs into three broad groups: *Cognitive attributes* - the level of general knowledge, level of knowledge in a chosen field, basic language arts skills, critical thinking, and reasoning, general -intelligence; *Affective attributes* - self concept satisfaction with educational experience, citizenship, values, achievement motivation; *Tangible attributes* - earnings, awards, affiliations, avocations, grade point average, level of educational attainment, flexibility of employment, areas of career interest.

Students may or may not attain one or more of these attributes as a consequence of their schooling. Few of these outcomes are explicitly measured, however, by either the institution or others. Even if they were measured, it would be difficult to determine the

“value added” by higher education—the fraction of an individual’s current level of such attributes that were accumulated during the time he or she was acquiring higher education as opposed to the fraction that the individual already possessed when they began higher education. Moreover, because education is an experiential good, it would be even more difficult to attribute some fraction of the value added to the activities of the institution of higher education as opposed to the effort of the student. Because of these difficulties, the most commonly used “output” indicator is completion of a specified program of study typically signified by the award of a degree or diploma, based on satisfactory performance in a specific number and type of courses.

Although many have suggested “exit” tests of ability and skills learned from a given period of schooling or a specific program this is rarely done in the American system of higher education. However, recognition that the commonly used output measures fail to account for important elements of what the institution is producing has prompted several efforts directed toward gathering information to support more sophisticated measures of output. These alternative measures address these issues by examining things such as the percentage of graduating seniors who go on for advanced degrees, the percentage of freshmen who graduate and the standardized test scores of outgoing students. Public institutions in Florida and Wisconsin offer “Rising Junior” exams which test basic writing and math skills at the end of two years of higher education. Alverno College in Wisconsin has developed an elaborate and intensive testing scheme for assessing student progress in a variety of areas, and Northeast Missouri State administers the ACT COMP test to sophomores and compares the results with pre-

matriculation results to assess the learning that occurred during the first two years of the undergraduate program. Because the goals and objectives of community colleges are varied and the success of the institution can only be evaluated by comparing the intentions and preparation of the student with individual outcomes, student surveys can be particularly powerful measurement tools for these types of institutions. The British Columbia Student Outcomes Survey, which began over ten years ago, is an example of an intensive student survey effort.

The majority of higher education institutions have teaching as their primary mission. Their charge, most broadly conceived, is to transfer knowledge and skills from faculty/staff to students. Although it is not often stated as such, another goal of institutions, directly related to the first is to produce degrees. Most institutions would argue that they confer degrees in order to certify that knowledge or skills have been transferred—the degree is simply an clearly visible symbol of something that is difficult to demonstrate. No matter how one looks at it, the products and services that institutions of higher education provide to students are difficult to quantify. The transfer of knowledge is a service rather than a process per se.

There are numerous well-known problems inherent in defining outputs in service industries and in attributing outputs to the activities of the service provider (Dean and Kunze, 1992; Sherwood, 1994). One of the most basic problems is identifying the basic output unit; is it the service transaction (e.g. the teaching process), or is it the outcome (e.g. value added to the student in terms of increased knowledge or earning potential)? Further, it is not at all clear what constitutes transfer or precisely what we

mean by knowledge and skills. The fact that higher education is an experiential service introduces another complication, namely isolating the customer's contribution to the outcome from the provider's contribution. For example, a student's level of knowledge upon graduation will depend not only on the quality and quantity of teaching provided at the institution, but also on the student's level of knowledge when she entered the program, as well as how receptive she was to the teaching and how much effort she devoted to learning. Yet another complication stems multi-dimensional nature of the service provided to students by institutions of higher education. Students may receive a range of experiences over and above particular knowledge and skills, such as the interaction with other students, which are a key feature of the product offered by institutions.

For individuals, a large body of research suggests higher levels of schooling are associated with a range of positive outcomes: higher earnings, increased job mobility, more active citizenship, etc. The "rate of return" literature within economics has attempted to quantify the extent to which additional schooling beyond K- 12 "pays off" in the labor- market in terms of higher wages or earnings. This literature suggests an additional year of schooling is worth between 5-15% is additional wages/earnings at a point in time (See Grogger and Eide, 1995, Manski and Wise, 1983, and Leslie and Brinkman, 1988). The return may vary by type of college attend, whether a degree program is actually completed and a certificate/diploma acquired, or by major subject (in addition to varying by individual characteristics which receive differential rewards in the labor market such as race/ethnicity, age, sex, etc.).

There is a sociological literature detailing the impact of schooling on individuals in non-economic ways such as the effect on self esteem, citizenship behavior etc. (For a comprehensive review see Pascarella and Terrenzini (1991). Schooling also has broader impacts on society and the economy (on the latter see Sturm, 1994).

The struggle between the intended output of higher education and the ability to measure those outputs was reflected in discussions with administrators of institutions of higher education. No institution stated that its goal was to produce degrees or to produce high graduation rates, although such things are measured outputs of higher education. Although the diverse outputs of the higher education process are widely recognized, administrators at the institutions we visited articulated only a small set of these outcome related goals. In this regard, we noted a distinct difference between P, PS and R institutions. R institutions were focused on providing an education that would provide the greatest benefit to the student. Public R institutions also stressed the goal of access. One public comprehensive institution that serves a poor, "tri-ethnic" community articulated a commitment to be a "gateway for upward mobility". Another urban public comprehensive institution stated that public institutions should be judged according to the education level of their constituency, and promoted education within the community through open access to undergraduate programs and a commitment to remedial education. The student-related outputs provided by public R institutions are difficult to measure with current data, although the second institution mentioned is attempting to develop ways to measure the education level of the community. The private non-profit and proprietary R institutions also articulated a commitment to

customer needs, but rather than defining the “customer” as local citizens who might want to attend an institution of higher education, these institutions focused on individuals who are motivated to complete the specific program offered by the institution. These institutions offered highly specialized programs which would promote specific career aims of the students. The proprietary institutions spend a lot of time researching the needs of the local business community and it is student demand as well as labor market demand that drives the course offerings. Programs are designed specifically to develop marketable job skills, nonacademic as well as academic. After learning that potential employers are just as concerned about work-related habits and attitudes as well as technical training and academic knowledge, one proprietary institution adopted a mandatory attendance policy and provides attendance reports along with standard grades on the transcript.

At the proprietary institutions we visited, individual programs, and the institution as a whole are judged on the basis of job placement rates. Instead, many institutions stated goals such as “offering a quality education”, access, providing people with job prospects. With the exception of the public P institutions we visited, every public institution stressed the goal of providing access to higher education to the local or regional community. Although the specific goals of public, private and proprietary R institutions differ slightly, the focus of R institutions is to produce economic value added or consumption benefits to the student. These institutions are service oriented in the sense that they often try to make it as convenient as possible for students to achieve that value added. The administrator of one community college even noted the desire to

“offer education with the least disruption to daily activities”. The proprietary institutions and one private non-profit R institution operate year-round so as to allow the student to complete a degree program in the minimum amount of time. These institutions do not have a central campus, but operate out of a number of sites peppered throughout the community. These institutions also have extensive placement offices, student counseling centers and student services centers with convenient hours. Even the public R institutions are beginning to focus on these customer service attributes. One institution had made dramatic improvements in the registration process and other student services over the past five years and is now working to improve advising and academic support. Another institution was offering a number of degree programs off-campus, either at local community colleges or at the target population’s work sites in order to improve convenience. However, this institution acknowledged that the proprietary institutions still “beat us on customer service”.

P institutions may provide some value added to students and provide the customer with consumption benefits. What distinguishes them from R institutions, however, is their focus on the signaling aspect of the higher education output. A degree from a P institution is a screening device which is purported to convey a lot of information about the possessor of that degree. The articulation of educational goals at P institutions reflected esoteric and unmeasurable aims of educational excellence, “development of human beings and society as a whole through the cultivation and enrichment of the human mind and spirit”, “to deliver a quality liberal arts education into the 21st century and to make the institution a transformative experience for students”, to educate the

next generation of people who will conduct high-impact research, to develop students' talents and religious sense, and to provide world class teaching. Because of their P status, these institutions are able to attract students on the basis of their signaling activities, and their goals reflected a desire to maintain that status. However, because the factors contributing to prestige are ambiguous, administrators could point to few measures of success beyond the rankings and classifications that will be discussed in the next section.

PS institutions are not yet able to draw students entirely on the basis of their ability to provide a signal. Therefore, they are concerned with providing economic value added as well as consumption benefits to students while building their prestige. One undergraduate-focused PS institution stressed its aim of being a student-centered institution. One public institution emphasized the goal of training professionals for the local community, another stressed a goal of academic excellence geared towards employability, and yet another stressed a goal of offering the best undergraduate education in the state.

5. Information and Market Signals

In making their choice of educational program and institution, students utilize a variety of signals which provide information about the type of schooling available and the price and quality of that schooling. Most commonly known are the rankings or classification of schools by *Barron's*, *Peterson's*, *U.S. News and World Report* (and various other publications) of institutions or specific programs/fields of study within an institution (e.g. *Business Week* on graduate management/business schools). These are

based on a number of different criteria such as the average SAT/ACT of entering freshmen, the percentage of applicants who are admitted, the average high school rank of entering students, surveys of current and past students as to satisfaction with the school/program, surveys of academics, employers or others.

How important are these signals in, for example, determining which institutions individuals apply to? A study by McDonough et al. (1995), based on the Cooperative Institutional Research Program's 1995 Freshman Survey finds that 60% of all students do not incorporate rankings information into their college decision process. However, the students who do use the rankings are more likely to be high achieving students, be from high income families and families with college-educated parents, to file a high number of college applications (four or more), and to rate themselves within the top 10% among their peers in terms of academic ability. The students who use the rankings also differ with respect to features of an institution that they deem desirable. These students tend to be more concerned with a college's academic reputation, the school's social reputation, the success of the college's alumni in graduate school admissions and the college's reputation for graduates to land good jobs. Some institutions seem to take them seriously since they have perceived enrollment consequences. This sensitivity is likely only true for the top fifty four year institutions - a very small percentage of the total number of institutions or students. It is important to note that no such signals exist for students contemplating, attending two year colleges, particularly public community colleges. The signals here are more subtle.

Students often obtain information on schools from high school counselors, former peers at which school, friends and neighbors etc. What kinds of information are available and how does it vary by type of institution, region etc.? Institutions may have a “reputation” as to a specific specialty or be known as attentive to the needs of particular segments of students (e.g., part time, women, older students). The quantity of students (enrollment and enrollment changes) and the price of schooling (tuition) are themselves to some extent signals. It is not clear the extent to which students have detailed or accurate information of these when considering what institution if any to attend.

Appendix B: The Market for Research Funding

Faculty in many higher education institutions combine teaching with scholarly activities, including theoretical and experimental investigations and writing for publication. These activities are supported by a combination of institutional resources, faculty's own contributions of labor, and external sponsorship. This appendix examines the market for external sponsorship of research activities.

In 1994, colleges and universities reported research funding of \$17.2 billion, most supplied by agencies of the Federal government (National Science Foundation data).

1. Market Segments

The sponsored research market is segmented along largely disciplinary lines. Funders often earmark their budgets into categories that match academic disciplines such as biology, economics, or political science. These categories, in many cases, are far more specific: e.g., AIDS virus studies, economics of developing countries. Most research is funded in these disciplinary categories, although some research funding is targeted to policy areas that span disciplinary lines, such as poverty and international cooperation.

2. Demand Characteristics

Major funding for sponsored research comes from Federal government entities and foundations. These funders sponsor research in programs that are typically organized on disciplinary lines

Figure B-1 shows Federal sponsored research funding in the sciences and engineering by broad field.³ This data is collected annually for these fields. The survey does not cover sponsored research in the humanities and arts, although we believe these amounts to be small. The greatest support is in the life sciences field. Considering the major and well-publicized advances in medical research, this emphasis is understandable.

The figure compares 1973 and 1994 funding, adjusting for the general rate of inflation over that period.⁴ The physical, biological, and life sciences saw significant increase in funding over the past two decades. The social sciences, including psychology, saw no increases over the period. Social sciences have had a difficult time in the Federal funding process, with Congress threatening to withdraw all funding at some points.

Figure B-2 shows total sponsorship of research in higher education over time by source. The Federal government accounts for the vast majority of this funding. Again dollar figures are reported in constant dollars. Funding was fairly level through the 1970s. In the early 1980s, research funding began to grow steadily. There is now heightened concern that funding will stop growing, substantially increasing competition among higher education research institutions.

Sponsored research is supported through two major types of instruments: contracts and grants. Contracts obligate the institution to produce specified research deliverables,

³ Similar breakdowns by field are unavailable for the other sources of funding in the National Science Foundation survey.

⁴ Adjustments to constant dollars are made using the GNP price deflator.

whereas grants are more flexible. Grants usually propose a project for funding and allow substantial flexibility in carrying out the research.

Pricing of sponsored research is usually based on a cost recovery model. The institution recovers the “direct” costs of the project, including faculty labor, other labor, equipment, and supplies. In addition to direct costs, institutions can recover “indirect” costs of research, such as libraries, facilities, utilities, and general management. These indirect costs must be apportioned to research and other activities in order to receive reimbursement for the “allowable” portion of indirect costs.

As noted in the main text, institutional leaders and faculty perceive sponsored research as crucial to the advancement of institutional reputations. Because research is so valuable to the prestige of the institution, we believe it is common to price research at less than the cost recovery formula. One PS university said that they recognize that financing research is costly, but they hope to make up the money from state appropriations and private gifts.

Discounting is provided through reductions in direct and indirect costs. In some disciplines, for example, it is customary not to charge direct costs for the principal investigator’s labor. In others, a portion of the faculty labor is paid by the institution and a portion is “charged to the grant”. Institutions also vary in their policies regarding indirect cost recovery. Institutions (and faculty) that are eager for a desirable project discount the indirect cost rate to lower the total charge for the project.

Major funders try to influence indirect cost rates, or at least the portion they actually pay. The Federal government has issued numerous recent revisions to its policies on

the treatment of indirect costs, causing institutions to complain that the government is changing the rules of the game on reimbursement.

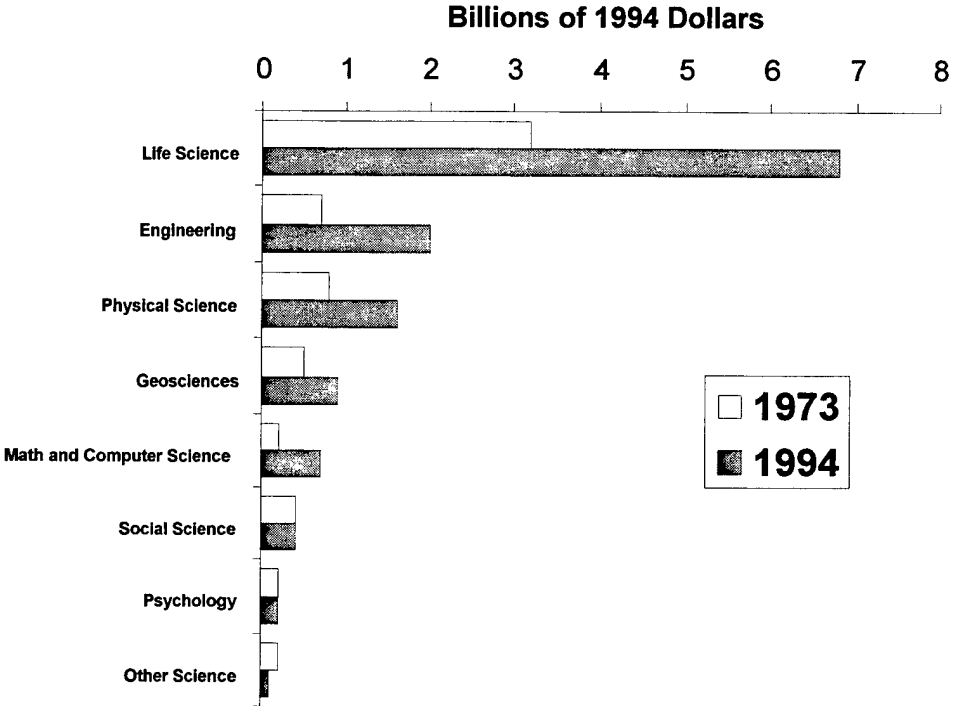


Figure B-1—Federal Sponsored Research Funding by Broad Field, 1973 and 1994

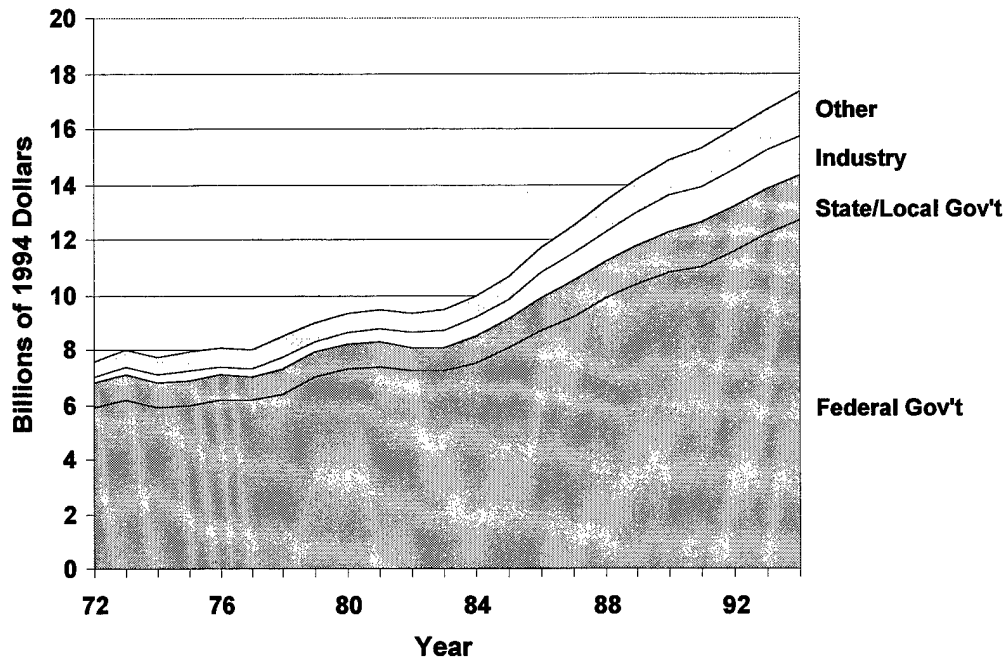


Figure B-2—Sponsored Research Funding by Source, 1972 to 1994

3. Outputs

Research is intended to produce new knowledge. The amount of knowledge created from a specific project and the value of that knowledge is notoriously difficult to assess, especially in the short run. Some surrogate measures exist: publication and citation counts, patents, licensing.

4. Performance Assessment

Assessment of research is vitally important to the institutions that focus on research goals. In such institutions, faculty tenure decisions often depend on research performance.

Institutions typically measure success at research not by a direct examination of the impact of the research, but rather by the perceived quality as judged by other scholars in the field. Refereed journals are a formal structure for reviewing research papers by other scholars in a system known as peer review. At a prestigious university, a junior faculty member must publish articles in refereed journals with selective standards. The number of such articles and the perceived influence of the articles on other scholars are key elements in tenure decisions at research-oriented institutions.

In some fields, such as English and History, longer works are published scholarly books. Peer review applies to scholarly books, though not in such a routine fashion as with journals. As with books intended for general audiences, book reviews are important in establishing the reputation of a scholar.

5. Information and Market Signals

There are organized rating systems for research department quality in the form of National Research Council rankings, prepared about once per decade. These rankings take account of publications, the impact of publications, and opinions of faculty in other institutions. But a major signal of research “quality” is the amount of funding, especially Federal sponsored research funding. Indeed, the most research-intensive Carnegie Classifications are defined on the basis of how much Federal sponsored research is performed. The institutions we visited acknowledged the importance of these Carnegie Classifications, and the amount of Federal research funding needed to qualify.

Because research is at least nominally priced on a cost recovery model, it is difficult to infer much from prices in this market. It appears that more established institutions can command somewhat higher prices, or perhaps more accurately, can offer somewhat lower discounts.

6. Strategic Behavior and Market Share

Most higher education institutions participate little or not at all in the research funding market. Funding is concentrated in a few institutions. In 1972, 10 institutions attracted 25% of Federal research funding; 29 attracted 50%. Over more than 20 years, this concentration has changed little. In 1994, 13 institutions accounted for 25%, and 35 for 50% of Federal research funding.

Figure B-3 shows the institutions in the four quartiles of funding in 1972 and how their share of funding changed over time. There has been some shift away from the largest 1972 schools toward schools that had smaller research programs, but altogether the pattern has changed little.

There is a public perception that many universities pursue a broad program of research. Our analyses calls this perception into question. Figures B-4 through B-6 present the results of an analysis of market share. For each of the eight broad fields shown in Figure B-1, we computed the number of schools that attracted at least 1% of the total Federal funding in the field. We made separate calculations for two time periods, 1973-75 and 1992-94. We selected three-year periods to minimize the impact of very short-term fluctuations.

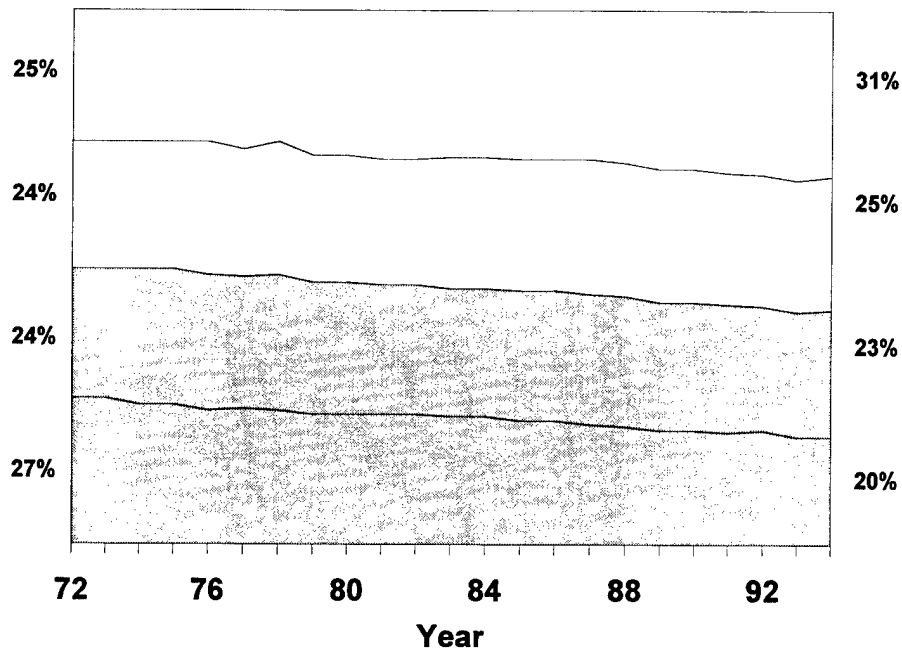


Figure B-3—Percentage of Federal Sponsored Research Funding by 1972 Quartiles

In each period, there are about 90 institutions with 1% share in at least one field. But about half of these have exactly one field. Very few are broad in the sense of commanding 1% market share in most fields. About 14 schools have 1% in 5 out of the 8 fields, a bare majority. These patterns do not change much between the two time periods.

But there is some movement by individual institutions. Figure B-6 compares the number of fields each institution between the two time periods. The graph is almost symmetrical, with gainers offsetting losers. But, it does skew in favor of gainers. In particular, there are 12 institutions that gain two or more fields, compared with 7 that lose two or more. The sole fact that overall research funding was rising during this

period cannot explain this feature, since market share is calculated in both periods as a fraction of funding available. So mere increases in funding would not induce redistribution, unless there were changes in strategy as well.

The increases in funding encouraged institutions to pursue research. This change in strategy is reflected in relatively more gains than losses in terms of fields.

But even in this period of growing resources, there were almost as many losers as gainers. If resources become more constrained, it is likely that the pursuit of research funding will be much more competitive, meaning that gainers will have to be at the expense of losers.

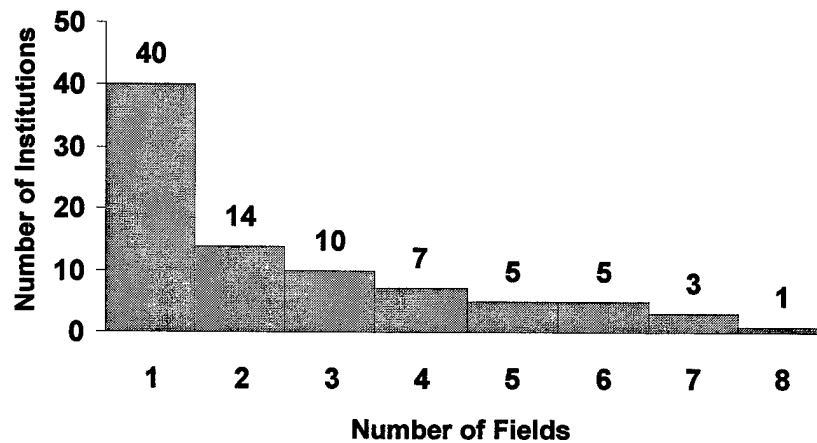


Figure B-4—Distribution of Institutions by Presence in Research, 1973-75

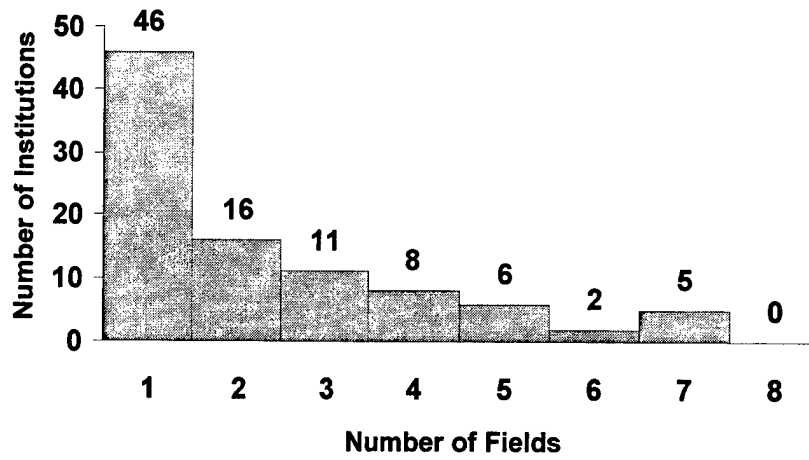


Figure B-5—Distribution of Institutions by Presence in Research, 1992-94

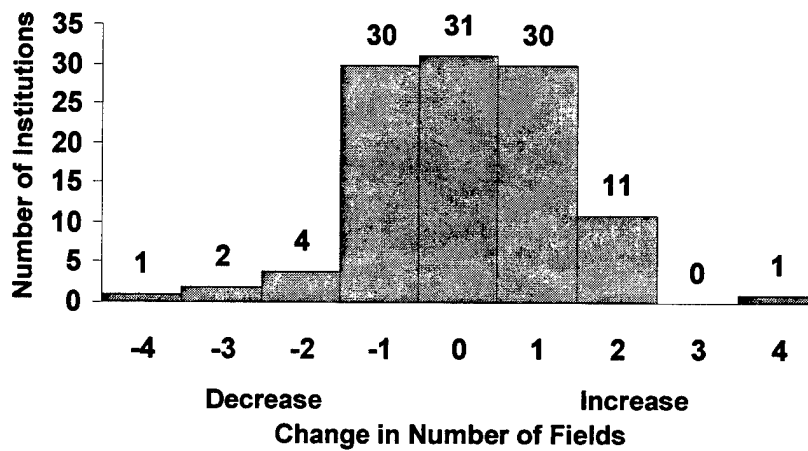


Figure B-6—Change in Presence in Research, 1973-75 to 1992-94

Appendix C: The Market for Public Fiscal Support

The U.S. higher education industry is marked by the presence of both private and public institutions providing the entire array of higher education outputs. In spite of such differences, most institutions of higher education in the United States receive some government fiscal support.⁵ The converse is also true - nearly all institutions receive some private fiscal support in the form of tuition, sales and services and private gifts. As a result, governments are *important* customers of all institutions but are not the *only* customers of any institutions. An industry analysis demands an understanding of the primary markets of an industry as well as the needs of major customers. In spite of the significant role that government funding plays in the industry, there is not an easily identifiable market for government fiscal support. Most observers readily acknowledge that the state sector is an important feature of the U.S. higher education system, but we currently have little understanding as to how and why government involvement in the higher education industry is important. The purpose of this chapter is to elucidate these issues and examine the impact that the relationship between government and higher education has on the industry.

Governments interact with institutions of higher education through markets, such as the market for research or the market for students, similar to the way in which other customers interact with institutions. In addition, governments provide resources to

⁵ There are approximately 250 private institutions in the 1994 IPEDS data base which reported receiving no revenue from government sources. Most of these institutions are religious schools, but there were also some two-year and liberal arts institutions reporting no government revenue. In addition, there a number

specific institutions through political and bureaucratic processes. Because governments are significant customers, it is crucial to understand their relationships with the industry: what do governments want from the higher education industry, to which institutions do they provide support and why, and how do they get what they want? Raising these questions, we can attempt to understand how the government influences the behavior of individual institutions and the higher education industry as a whole.

1. Market Segments

From the perspective of institutions, there are three distinct types of governmental customers: federal, state and local government. Together, governments provided over \$75 billion dollars to institutions of higher education in 1993-94, accounting for nearly 42% of the total revenue of the sector.⁶ Thus, it is clear that government support is extremely important to the higher education industry (See Table C-1). The federal government allocated approximately \$29.6 billion to institutions of higher education in forms captured in the IPEDS database. In addition, the federal government spent \$22.9 billion on student loan programs and college work-study programs. Although the interest subsidies provided through federal student loan programs are substantial and clearly impact students' ability to pay for higher education, the value of this subsidy to students in a given year is difficult to calculate. Moreover, information on student loans is not reported on an institution-by-institution basis in the IPEDS database.

of institutions which reported zero total revenue. These institutions were omitted from our institution-level analysis.

⁶ This figure includes tuition grants made directly to students, but does not include the value of the federal government student loan subsidies or the work-study program, which influences students' ability to pay tuition and hence total tuition revenue for the industry.

Table C-1: Public Support of Higher Education

	Private Institutions	Public Institutions	All Institutions
Total Revenue	59,655,000,000	108,460,005,000	168,115,005,000
From Federal Sources	9,404,153,000	20,215,825,000	29,619,978,000
From State Sources	2,260,706,000	41,738,022,000	43,998,728,000
From Local Sources	496,276,000	4,495,089,000	4,991,365,000

Because it is often interesting to distinguish the types of institutions to which federal resources flow, much of the analysis of federal funding patterns focuses on the funds that are captured through the IPEDS database in spite of the fact that they comprise approximately one-half of federal spending on higher education. Of federal funding to higher education excluding student loan subsidies, 76% was allocated through grants and contracts (including student tuition grant money), and 16% in the form of direct appropriations and funding for research and development centers. Fewer than 10% of all institutions of higher education receive appropriations from the federal government. With the exception of Howard University and Gallaudet University, which receive federal appropriations for and military academies, no institution received more than \$50 million in federal government appropriation in 1994. Beyond this set of institutions, federal appropriations are given mainly to research institutions (both public and private), tribal colleges and public two-year institutions in low income regions.

State governments allocated nearly \$44 billion and local governments nearly \$5 billion to institutions of higher education, comprising 26% and 3% of total industry revenue respectively (See Table C-1). Federal, state and local governments differ with

respect to the way they choose to allocate resources with state and local governments opting to support the institutions directly through appropriations and the federal government focusing on supporting the activities in which the institutions are engaged. Whereas only 16% of federal funding to higher education (excluding loan subsidies) is allocated through appropriations, 90% of state and 80% of local support is allocated through appropriations. Although several states (in particular, Pennsylvania, New York, New Jersey and Illinois) appropriate funds to private institutions most states reserve appropriations for public institutions.

Federal, state and local governments allocate their spending across institutions of higher education differently (See Table C-2). Federal funding to higher education is distributed to public and private institutions in proportion to their total share of industry revenue, suggesting that the market mechanisms through which federal resources tend to be allocated are not biased toward either type of institution. Private institutions capture 32.5% of federal allocations and public institutions 67.5%. Public R1 institutions receive the largest share of federal resources, followed by private R1 institutions and public two-year institutions. State and local government allocations to the higher education industry on the other hand do not correspond with the overall distribution of revenues. As expected, state and local funding is concentrated in public institutions -- 96% of state and 90% of local expenditures go to public institutions. The largest share of state government funding goes to public R1 institutions, followed by public C1 and public two-year institutions. The largest share of local funding (75.5%) goes to public two-year institutions.

Table C-2: Distribution of Public Support

Type of Control	Type of Institution	Share of Federal Spending	Share of State Spending	Share of Local Spending	Share of Total Revenue
Private	2YR	0.9%	0.3%	0.1%	0.9%
	ART	0.1%	0.0%	0.0%	0.3%
	BUS	0.3%	0.1%	0.0%	0.6%
	C1	2.6%	0.6%	0.1%	4.1%
	C2	0.5%	0.1%	0.0%	0.7%
	D1	0.9%	0.2%	0.1%	1.7%
	D2	1.0%	0.2%	0.1%	1.7%
	ENG	0.2%	0.0%	0.0%	0.2%
	HLT	0.1%	0.1%	0.0%	0.3%
	LA1	0.9%	0.2%	0.0%	2.8%
	LA2	2.2%	0.6%	0.0%	2.8%
	LAW	0.0%	0.0%	0.0%	0.1%
	MED	1.8%	0.2%	4.9%	2.1%
	N/A	0.0%	0.0%	0.0%	0.0%
	OTH	0.0%	0.0%	0.0%	0.1%
	R1	19.2%	1.0%	4.5%	14.6%
	R2	1.2%	0.1%	0.0%	1.9%
	REL	0.4%	0.0%	0.0%	0.5%
	TEA	0.0%	0.0%	0.0%	0.0%
TRI	0.1%	0.0%	0.0%	0.0%	
Private Total		32.5%	3.7%	9.9%	35.5%
Public	2YR	11.3%	19.7%	75.5%	11.2%
	ART	0.0%	0.1%	0.5%	0.1%
	BUS	0.2%	0.1%	0.0%	0.0%
	C1	7.0%	19.2%	2.6%	9.6%
	C2	0.5%	1.0%	0.1%	0.6%
	D1	1.6%	4.7%	1.4%	2.6%
	D2	3.2%	5.0%	0.3%	3.1%
	ENG	0.1%	0.3%	0.0%	0.1%
	HLT	0.0%	0.0%	0.0%	0.0%
	LA1	0.1%	0.2%	0.0%	0.1%
	LA2	1.2%	1.8%	0.3%	0.9%
	MED	3.9%	5.0%	0.8%	5.4%
	N/A	0.2%	0.4%	3.0%	0.3%
	OTH	4.3%	0.2%	0.0%	0.7%
	R1	29.3%	30.7%	4.2%	25.2%
	R2	4.5%	7.9%	1.1%	4.6%
	TEA	0.0%	0.0%	0.0%	0.0%
	TRI	0.2%	0.0%	0.1%	0.0%
	Public Total		67.5%	96.3%	90.1%

2. Customer Motivation

The objectives of governments in relation are difficult to quantify in part because “the government” is not an individual actor, but rather a clearinghouse for the demands of a variety of constituents. Because a larger constituent base often implies more heterogeneous constituent demands, the objectives of the federal and state governments will be less specific than those of local governments . As a result of the complications due to the political processes, customer demands can be more difficult to describe in a consistent and objectively rational way. Each level of government wants a variety of things from higher education. Some of the things governments want are easily identifiable and can be produced relatively quickly whereas others are amorphous and can be generated only over a long period of time.

Federal Demands

The aims of the federal government vis-à-vis the higher education industry include economic development and international competitiveness, promotion of equity and equal opportunity, political stability and the development of good citizens, the creation of basic knowledge which can form the basis for technological innovation, advisory services, policy analysis, applied research and development for specific purposes (particularly defense), the development of employment opportunities, and the promotion of culture and the arts. As suggested above, several of these demands are vague and difficult to quantify, and as a result it is difficult to evaluate the extent to which the sector meets these objectives.

The federal government is a political entity, and federal funding for research or for student education is influenced by political as well as economic or market considerations. For example, agencies may face strong political pressure to award a major research grant to an institution in a particular state, or Congress may need to break up the funding for a large project and allocate parts of it to institutions in several states in order to win enough political support for the project as a whole⁷. Political considerations can conflict with efficiency and effectiveness considerations. Politics also feeds into the nature of support available for students. Although research indicates that the college going decisions of low income students are most responsive to changes in the level of aid, federal financial aid programs have since the late 1970's expanded to assist middle and upper-middle class families at the expense of lower income families (Manski and Wise, 1983; McPherson and Schapiro, 1990 & 1991; Mortenson 1989 & 1990). To the extent that money is being given to support students who would have attended college anyway, the expansion of these programs does not likely advance the public good goal of access to higher education. However, this strategy probably does secure political support for financial aid programs in general.⁸ Because of the political considerations, the federal government will not always behave in the same way as an economically "rational" customer of the higher education industry.

⁷ See, Corde, Colleen, 'Congressional Earmarks for Colleges Increased by 49% for Fiscal 1997'. *Chronicle of Higher Education*, Vol. XLIII, No. 29, March 28, 1997.

⁸ For a general description of this political dynamic see, for example, Ellwood, John W. and Eric M. Patashnik (1993). "In Praise of Pork." *Public Interest* 110:19-33.
Wildavsky, Aaron (1992). *The New Politics of the Budgetary Process*. Harper Collins Publishers: New York.

State Demands

State government demands are not entirely different from those of the federal government, although their scope is normally limited by state boundaries. Spring suggests that states established public institutions under the Morrill Act for the purpose of providing vocational (as opposed to professional) education to the state population⁹. In a survey of recent trends in state higher education policy, Ruppert¹⁰ identifies five general categories of concerns into which state goals for higher education fall. These categories include educational quality and effectiveness; access/diversity/equity; efficiency; contribution to state needs; and connection and contribution to other education sectors in the state. In particular, states are interested in contributing to the state's economic competitiveness, providing jobs for the state economy and training the state workforce, improving the level of education of state residents, developing good state citizens and providing state residents with the opportunity for self-advancement. In addition to these general objectives, state governments also express more specific demands. For example, most states expect the higher education system to train teachers for the state secondary education system, or train workers for a specific industry, or providing research for a specific state-based industry. State governments also like institutions of higher education to provide services and entertainment to the local community such as cultural events and sports. While states are certainly interested in outcomes such as those described above, there are also political motivations

⁹ Spring, Joel H. (1995). "In Service to the State: The Political Context of Higher Education in the United States". In, Sommer, John, ed.

¹⁰ Ruppert, Sandra (1995). "Roots and Realities of State-Level Performance Indicator Systems". In, Gaither, G. (ed.), (1995). *Assessing Performance in an Age of Accountability: Case Studies*. San Francisco: Jossey-Bass.

concerning support for higher education. For example, it has been suggested that state governments provide subsidies to higher education as a means of distributing resources to the middle class¹¹. Citizens are also interested in certain aspects of the process of providing higher education (i.e. tuition and admission policies) regardless of outcomes. For example, a recent survey of Californians revealed strong public support for broad access to affordable higher education; 81% agreed with the statement that “We should not allow the price of a college education to keep students who are qualified and motivated to go to college from doing so.”¹²

Local government demands from higher education are even more limited in scope because local governments are largely concerned with demands not met by other levels of government. In general, the demands of the local government tend to be more specific and immediate than the general “public good” demands of state and federal governments. As a result, local governments are concerned with universal access to education and training services for the local community. A community’s priorities will depend on a number of factors, including age mix, income level, presence of immigrant communities, and urbanicity. For example, a community college in a suburban area with a growing elderly population might offer daytime continuing education classes for the community. Community colleges are the primary source of access to higher education for a large segment of the population. As such, they are more likely to be confronted with the task of making up for the failures of the secondary education

¹¹ Bowles, S. and H. Gintis. (1976). *Schooling in Capitalist America: Educational Reform and the Contradictions of Economic Life*. New York: Basic Books.

¹² Immerwahr, John (1997). “Enduring Values, Changing Concerns: What Californians Expect from Their Higher Education System.” California Higher Education Policy Center, March.

system, with educating immigrants and providing English as a second language training, and with retraining the workforce. In addition, local governments frequently want the community college to provide cultural and recreational activities to the population as well.

Although state and local governments often have needs and demands that are easily articulated if not measured, some of what they want from institutions of higher education is prestige and recognition for the state or region. For example, states may use the existence of prestigious state institutions of higher education as a selling point when trying to attract new business to the state. Politicians may emphasize their support for higher education during re-election campaigns. For the corporations, proximity to a prestigious institution may signal the ability of the region to provide a high-quality workforce or quality research activities. Similarly, cities or counties may be able to lure business to their community by stressing the benefits of proximity to a prestigious community college.

3. Demand Characteristics and External Determinants

Because in most cases the financial transactions between governments and the higher education sector do not involve the exchange of identifiable goods and services, the factors influencing “government demand” are difficult to specify. Whereas in traditional market transaction, the customer has some general sense of what they want and seek the best price for it, in the higher education context it appears that governments make decisions on the total amount of money to be spent for higher education and determine the general manner in which those resources should be spent.

As discussed in previous sections, some of the more market-oriented transactions between the government and institutions of higher education are price sensitive (e.g. the market for applied research). However, some government funding has properties often associated with gifts. In general, the governments decide on the total level of spending through a political process. As a result, both political as well as economic factors influence the total amount of money governments are willing to spend on higher education.

At the federal level, the overall health of the economy and the level of economic growth will influence the amount of total federal expenditures and hence federal funding for higher education. The fraction of the federal budget allocated to higher education has been declining over time, suggesting that higher education is declining as a national priority (NCES, 1995). The level of federal spending is also influenced by political considerations such as the salience of national security concerns, interest in balancing the federal budget, and public attitudes toward the role of government in the private sector and attitudes toward higher education in general. The end of the Cold War, the general pro-market and anti-government sentiment in the country, the political support for reductions in government spending and the public outrage over tuition increases in higher education have created a negative environment for public, particularly federal, funding of higher education.

During our site visits, we asked the president of each institution what they thought were the most significant challenges facing higher education in general. One of the most frequent responses related to a lack of public confidence in and support for higher

education. Most presidents attributed this to higher education's failure to demonstrate the relevance of what they do to society as a whole. Several presidents suggested that the role of research universities would need to be redefined for the post-Cold War environment. One expressed concern that the Congressional committee structure does not provide an advocate for scientific research, and that the government does not recognize the direct link between the global prominence of U.S. universities and federal support for research. With the Cold War over, there is less of pragmatic need for scientific research. One president cited the anti-intellectual sentiment in Congress as a major challenge to federal support for higher education.

Similarly, state government support for higher education is influenced by state economic conditions, in part because states are more reluctant than the federal government to incur debt to maintain spending levels in economic downturns.¹³ However, the implications of this is that public institutions of higher education receive fewer resources precisely when greater demands are being placed on them (i.e., to retrain displaced workers or to provide opportunities for people who would otherwise be unemployed). States are also influenced by political factors and public attitudes as well as demographic considerations. As a result, state institutions try to maintain positive relationships with constituents. The level of state funding for higher education will depend on whether the state population as a whole believes that public institutions are doing a good job in general meeting state needs. In most cases, constituent perceptions will be based on impressions from a few institutions—those with which the

constituent has had direct contact, the most proximate or the most publicly visible. For some constituents, the "contact" with the higher education sector may not come through educational activities at all but through sporting events, cultural activities or community outreach. Competition for state resources increases, institutions of higher education have to work harder to convince the public that they are deserving of public dollars.

Local funding for higher education is influenced by the health of the local economy (property values, business activity, income of residents) and the success of the institution or community college district in meeting the needs of local constituents.

Because the links between the institution and local community are so close, willingness to support the institution will be strongly influenced by the institution's ability to meet local demands.

4. Outputs and Outcomes

Government support for higher education has helped create a higher education system which is in many respects the envy of the world. Student financial aid, together with state appropriations which allow public institutions to maintain low tuition levels, have generated unparalleled access to higher education for the U.S. population. Over 20% of the American adults have achieved bachelors degree, and an additional 6% have an associate degree. The proportion of American adults with some higher education far exceeds the proportion in any other country. U.S. research universities attract students and researchers from around the world and have generated countless breakthroughs,

¹³ For example, in California, mandatory fees at public institutions of higher education increased dramatically between 1990 and 1994 when the California economy was suffering from a major recession. See, Immerwahr.

discoveries and awards. Government support for higher education has also allowed these institutions to play an important role as preservers of our cultural history and identity.

Although the U.S. higher education system is extremely strong and diverse and that public funding has certainly contributed to that strength, it is difficult to evaluate the marginal impact of that public support. In order to evaluate that marginal impact, it would we need to know what the industry produces with government support that it would not be able to produce without it. One of the problems is the time lag between spending and the realization of certain government objectives such as economic development and citizenship. The other problem is that the government is only one customer of the higher education industry and it is difficult to conjecture what would happen to the industry if public funding were cut dramatically. Somber¹⁴ suggests that government funding for higher education may have pushed the development of the industry in particular directions contrary to the interests of other customers of the industry, or that government support may indeed have no impact. “It would be absurd to argue that scientific achievements made with public support would necessarily have occurred in its absence, but it is equally absurd to ignore public investments in researches that have yielded nothing, or more ominously, that have had negative consequences. Among these negative consequences is the superenrichment of some fields of study over others and the subsequent trolling of the leadership and curricula of higher-education institutions in those directions desired by government elites.” (p.11).

It is easy to put forth counterfactual arguments and difficult to disprove such assertions. For example, Spring asserts that:

[t]he following generalizations can be made about the effect of government actions and policies on higher education in the twentieth century: 1) It undercut the role of the scholar as critical thinker; 2) It influenced the acceptance of vocational goals for higher education; 3) It promoted the role of universities and of scholars as managers of human resources; and 4) It reinforced the certifying role of universities and colleges by increasing access for youth cohort groups (p. 54)¹⁵.

It is beyond the scope of this research to test these hypotheses and conclusively determine that the industry would look completely different if not for government funding. Although the relationship between government funding for higher education and these outcomes is unclear, administrators at the institutions we visited in the context of our site visits strongly supported the notion that the higher education sector does benefit society in the ways suggested and expressed grave concern over current and potential decreases to government funding.

The importance of federal spending on student aid and student loan programs was by administrators in many of our case studies. One institution mentioned the uncertain future of the government's commitment to financial aid programs as a major challenge. Administrators at private institutions frequently expressed concern that institutions would not be able to continue to fill the gap between tuition and federal aid with institutional aid, or that declines in federal student aid would endanger need-blind admissions programs. Public institutions similarly expressed concern that declines in federal support would discourage student from pursuing higher education at all.

¹⁴ Sommer, John, Ed. (1995). *The Academy in Crisis: The Political Economy of Higher Education*. The Independent Institute: Oakland, CA.

¹⁵ Spring, Joel (1995). "In Service to the State". In Sommer, John (Ed.).

Administrators at one public comprehensive R institution stressed that dramatic cuts in state funding for higher education, which lead to extraordinary tuition increases has hurt access to higher education in the state. As evidence of reduced access, they pointed to declines in the system's enrollment, noting that many students really struggle to meet tuition payments and that higher tuition exclude poor people from the sector.

Interestingly, none of the community colleges expressed concern that the local governments would continue to support them.

5. Information and Market Signals

Just as other customers use market information to determine the institutions from which they will purchase services, so can governments use such information. However, government customers may have less flexibility to make use of that information that would other customers with similar degrees of market power. One reason governments have less flexibility is because bureaucratic decisionmaking process often lock them into particular funding strategies—at least in the short run. A second is that they have invested so many resources (both financial and political) in public institutions making it difficult to switch suppliers as easily as another customer might; although they still may use information in determining the amount of money they allocate for higher education. Local governments probably have the least flexibility to use market information to influence their resource allocation decisions. To the extent that they want to provide a local source of education for the population, they allocate resources to the local community college. In most communities, there are few alternatives for universal access. Thus the main decision for local governments is how much to spend on higher

education. If they perceive that the local institution is doing a good job, they may spend a lot, whereas if they perceive that it is not, they may spend a little. State governments have more flexibility in that there are many institutions, both public and private, which could provide different services to the state. States thus have real choices regarding which institutions to support and how. However, they may be restricted by laws and the existing funding mechanisms induce the government to fund public institutions. Those mechanisms can be changed, but such change is often difficult to engender both politically and institutionally. For example, a state could decide to stop granting money directly to institutions in the form of appropriations and direct all state funding to students, perhaps in the form of vouchers. Similarly, the federal government has an overwhelming choice of institutions that could provide different services. How do they decide which institutions will receive the resources and which will not?

As discussed in other chapters, many customers use external measures of prestige or quality signals such as NRC program rankings, Carnegie Classification or U.S. News and World Report Rankings in determining the institutions from which they will purchase goods and services. These play a role in the market for research, in which the federal government is the primary customer, but not in the market for federal student aid. Clearly this has a role in the market for state support as well. State governments appear eager to support institutions that are well regarded by peers and outside observers, and state funding mechanisms offer “higher status” institutions a premium over other institutions in the state.

The accreditation process is another source of information used by governments. Federal and state financial aid awards can be used only at accredited institutions. Beyond the accreditation requirement, state and federal government can impose various other restrictions on an institution's eligibility for student financial aid money. For example, many states do not allow state aid money to be used at proprietary institutions. However, a further attempt by the federal government to further restrict access to student loan funds have had mixed success. In 1990 congress enacted a Student Loan Default Prevention Initiative Act which was designed to bar student attending schools with high default rates from accessing federal student loans.¹⁶ The logic behind the Act was that schools with high default rates must not be providing students with adequate value added, and thus should not be eligible for the program. However, the GAO reported that as of September 30, 1994 250 of the 601 schools which had been barred from the Federal Family Education Program had administrative pending, and 111 schools had filed lawsuits over the default rate issues.

Governments, as major customers of higher education, can also request additional information directly from institutions which can help in determining which institutions they will support and impose conditions on that support. Institutions that accept federal research money must comply with OMB Circular A-21 accounting regulations, which are often chided as cumbersome and expensive. This is exacerbated by the fact that the government has become more aggressive in overseeing university accounting practices

¹⁶ See, General Accounting Office, *Student Loan Defaults: Department of Education Limitations in Sanctioning Problem Schools*, GAO/HEHS-95-99, June 19, 1995. In general, schools with default rates above 25% for three successive years can lose eligibility for student loan programs, and schools with default rates above 40% can lose eligibility for all federal student aid programs.

in order to better monitor the uses to which federal resources are put. Government research grants and contracts are normally of a cost plus nature. The government agrees to pay the direct costs of performing the research (i.e. labor, equipment, materials). In addition, they give the institution some percentage of those costs to support some of the general activities of the university which contribute to the institutions ability to perform R&D.¹⁷ In 1991 the government established a 26 percent cap on the reimbursements for certain administrative costs, and in 1993 tightened indirect cost accounting procedures.

Because public institutions of higher education are controlled by the state and subject to many government reporting and accounting rules, they report a wealth of information to the state. In an examination of state-level indicator systems, Richardson¹⁸ finds all states measure enrollment, retention rates, progression rates and graduation rates. In addition, most states also keep track of the number or proportion of students in remedial courses, the number or proportion of students exiting remedial courses and completing entry-level courses, total student credit hours, time to degree, total number of degrees, total contract hours of instruction, the number of continuing education activities, the dollar amount of external or sponsored research funds, and transfer rates between two-year and four-year programs. As we will discuss in subsequent sections, states frequently link funding to specific performance measures. State governments are becoming more aggressive in demanding information from institutions of higher education on the use of inputs, and on outcomes. Hines and

¹⁷ General Accounting Office, *University Research: Effect of Indirect Cost Revisions and Options for*

Hingham¹⁹ report that state mandates on faculty workload have become increasingly common. In 1995, 23 states required institutions to report faculty workload data publicly. Many states have started monitoring the performance of state institutions numerous dimensions from the number of degrees produced to average time to degree.

6. Strategic Behavior

In the context of market interactions in just about any industry, there is a natural tension between the customer and the provider of the good or service. The customer would like to maximize the value she receives from the good or service while minimizing the amount of money she surrenders to the provider. The provider meanwhile tries to maximize revenue while minimizing specific cost obligations. In most industries, customers develop strategies and take particular actions in order to improve their ability to maximize their net value from the transaction. Customers use market information to determine which providers are more likely to meet their needs at lowest cost or use their market power in order to negotiate better terms of trade between themselves and a particular provider. Providers can in turn exploit their market power or their reputation in order to insulate themselves from some of these factors or develop market strategies that will allow them to improve their position in this market.

Customer Strategies

Governments can employ two different mechanisms for increasing the chance that they get what they want from the higher education sector. The first is to exercise their

Future Changes. GAO/RCED-95-74, Mar. 6, 1995.

¹⁸ Richardson, Richard (1994). "Illinois." In, Ruppert, Sandra (ed.).

market power by threatening to reduce funding unless the institution does what the government wants. Governments can also compel institutions to do certain things. Governments can compel both public and private institutions through the legislative process by passing laws to which both public and private institutions are subjected. In addition, governments have property rights in certain public institutions which confer upon them additional power over the institution's activities .

The federal government has strong control rights over a small set of institutions, such as the military academies, which form an extremely specialized niche of the higher education industry. Beyond that, the federal government influences institutions by leveraging its market power and by compelling institutions through the legislative process. There appears to be little difference in the relationships that the federal government has with public as opposed to private institutions. The relationship between the federal government and the higher education industry is mediated mainly through market interactions. Because it is such a significant customer of the industry, its market power is very strong. For example, in restricting the set of institutions at which students can use federal aid, the federal government is essentially being a smart customer and only "purchasing" educational services from institutions that can demonstrate an ability to perform the function. Interestingly, the federal government often uses its power to forward social aims tangentially related to higher education, such as compliance with anti-discrimination laws in hiring and admissions. The federal government also uses legislative means to achieve these ends. For example, compliance

¹⁹ Hines, Edward and J. Russell Higham (1996). "Faculty Workload and State Policy". Paper presented at

with federal statutes such as the Equal Employment Opportunity Act, Title IX of the Educational Amendments preventing discrimination on the basis of gender in educational programs, or laws requiring institutions of higher education to file reports with the Department of Education on campus crime.²⁰ The number of such obligations has been increasing over time, and it is often argued that the satisfaction of government rules and regulations impose significant costs on institutions.²¹

Unlike the federal government, states emphasize direct appropriations to public institutions. In theory, this strategy allows states focus resources on a set of institution which will internalize state needs and be responsive to those needs. However, this strategy also puts the state in a poor bargaining position in the event that reality falls short of this ideal. In favoring a specific set of institutions (public) over others, states decrease their flexibility to seek services from other institutions if the public institutions fail to meet state needs. In the end, state funding is a continuous struggle, with institutions seeking more autonomy from the state and states seeking more accountability from institutions of higher education.²² State governments also influence public institutions of higher education in a more direct manner through the governance of the institutions. Both public and private institutions are governed by a Board of Trustees or some similar organization. However, the board members of private

the Annual Meeting of the Association for the Study of Higher Education.

²⁰ For detailed information on these and related issues, see Olivas, Michael (1997). *The Law and Higher Education: Cases and Material on Colleges in Court*. Carolina Academic Press: Durham, NC.

²¹ General Accounting Office, *Higher Education: Tuition Increasing Faster than Household Income and Public Colleges' Cost*, GAO/HEHS-96-154, August, 1996, p. 31.

²² McKeown, Mary (1996). "State Funding Formulas: Promise Fulfilled?" In Honeyman, Wattenbarger and Westbrook, Eds. *A Struggle to Survive: Funding Higher Education in the Next Century*. Corwin Press: Thousand Oaks, CA.

institutions normally act as advocates for the institution, whereas members of the board of public institutions are have a more adversarial relationship with the institution. The members of these boards may be elected by the public, by the legislature, or appointed by the State governor. The politicization of these boards is an issue which has received little attention in the research community, but one which has important implications for the state sector.²³

Several of the presidents we met with asserted that their governing boards had been relatively free from politicization, but expressed concern that there was no institutional guarantee against it. Interestingly, relationships with the boards of trustees were cited as a potential problem by public P and PS institutions, but not by R institutions. P and PS institutions viewed the imposition of political demands on the activities of the institution as a threat to institutional autonomy, whereas R institutions were more likely to view the political demands of trustees as legitimate constituent needs. The president of one midwestern research university noted that the governor would appoint people to the board of this university based on their experience with and interest in higher education, in recent years, these appointments have become increasingly politicized. The threat to institutional autonomy from the governing board as well as from the voters through the legislative process is witnessed in the recent conflict generated over University of California affirmative action policies. In 1996 the University of California Board of Regents instituted a policy prevent individual institutions from using race and ethnicity as a factor in admissions decisions even though this policy was

²³ See Dibiaggio, John A., Steven B. Sample and Gordon A. Haaland (1996). "Confessions of a Public

clearly opposed by the presidents of each of the university campuses. This threat to institutional autonomy was magnified by the 1996 passage of California Proposition 209 which among other things prevents public institutions from using race as a factor in admissions decisions.

Another way in which the government relationship impacts the autonomy of public institutions is through the government role in establishing tuition that public institutions can charge, and often also controls the number or proportion of out-of-state students who can be admitted to the institution. In so doing, states not only provide resources directly to public institutions, but they also limit the amount of revenue that they can earn from tuition. One public P institution was openly hostile to state tuition policies, and complained that every time they had proposed a tuition increase for the university, the state “bought out” that increase. Thus states can exercise a tremendous amount of control over the revenue generation capabilities of public institutions.

Recent state budget crises and anti-public sector sentiment in the population have heightened the level of scrutiny placed on public institutions of higher education. Many states are increasingly asking the institutions to which they give that money to be accountable for specific outcomes and processes of interest to the state. States are pursuing two different means of increasing that accountability. The first is through funding incentives and the other is through direct political influence or the exercise of control rights over the institution. For example, many state governments have started developing performance indicator systems in which state funding for higher education

University Refugee”, *Trusteeship*. May/June.

is dependent upon whether the institutions meet certain goals or targets, and other mechanisms for monitoring institutional accountability to the state.²⁴ To a certain extent, such policies reflect an attempt on the part of states to be more active consumers—to articulate what they want from the state higher education system and to monitor whether they are getting it. In some cases, institutions don't get what they expect. The state of Arkansas recently examined spending in institutions of higher education. "[S]tate officials expected to find many of the problems identified in the study but were surprised to see how bad some actually were."²⁵ The institutions were for example, spending much more than expected on remediation and on research, and less than expected on public service. In some cases, institutions were spending a disproportionate amount of money on small degree programs. Other states have taken a more interventionist stance and are compelling state institutions to meet specific "productivity" targets or mandating that specific departments and programs across the system be cut. For example, in 1993 the Ohio legislature approved a measure mandating a 10 percent increase in teaching loads in public colleges and universities.

States are also beginning to consider alternatives to increased support for public institutions to meet state education needs, there is some suggestion that states are beginning to look to the private sector to meet the growing demand for higher education rather than rely solely on the expansion of public capacity. Currently, there is tremendous variation across states in per student state funding to private institutions of

²⁴ Ruppert, Sandra (ed.) (1994). *Charting Higher Education Accountability: A Sourcebook on State-Level Performance Indicators*. Denver: Education Commission for the States.

²⁵ Schmidt, Peter (1997) "Arkansas Study Questions Public Colleges Use of State Funds", *The Chronicle of Higher Education*, Vol. XLIII, No. 22.

higher education is substantial in some states (such as NJ, NY, MI and MD) and nonexistent in others. For example, Georgia's HOPE scholarship program provides students with merit-based grants of \$3000 which can be used at private or public institution in the state. Tuition voucher programs are being discussed in Arizona, Colorado and Minnesota which would reallocate funding from institutions to students, who could take the resources where they chose (AASCU Report of the States, 1996). As we discuss in the next section, such a policies could have a significant impact on the industry.

Institutional Strategies

State support plays an small role in the revenue of private institutions and not surprisingly, none of the private institutions we visited mentioned service to the state as one of their major goals.²⁶ More interesting is that fact that within the set of public institutions, institutions differed significantly with respect to the emphasis they placed on state needs. In general, we found that all public institutions at least acknowledge the interests of the state when describing their institutional goals, stating some variation of "serving the needs of the public" as one of the major goals for which the institution is striving. The general goal of serving state needs was manifest in different ways at different institutions. Community colleges asserted a desire to serve the local community by providing access to higher education, training the workforce and providing cultural events and other services to the community. Institutions granting

²⁶ Many private institutions did mention service as a major goal, however, the community to be served might be a particular religious order, needy people in the local community or in the world. This is different from the goal of educating or serving the educational needs of people in a defined local or regional area.

bachelor's, master's and doctoral degrees mentioned a need to provide state residents with access to a quality education at a low cost, or providing citizens with the opportunity to succeed. Some institutions articulated this goal in terms of raising the economic and educational level of the region or state they serve.

Despite the apparent consistency across public institutions in terms of the articulation of the goal of serving state needs, there were distinct differences in the way these goals were framed and implemented. At R institutions, the objective of serving state or local needs seemed to motivate the activities of the institution. Many of these institutions were pursuing a favored position vis-à-vis the government, but they were doing so by demonstrating responsiveness to community needs. These institutions attempt to determine the specific nature of community wants and needs, incorporate what they learn into their academic and vocational programs and monitor the institution's success in meeting these needs. This strategy is further supported by enrollment-based funding mechanisms which push institutions to identify new demands in order to increase enrollment. For example, one R public institution developed credentialing programs for nurses and was offering these on site at local hospitals. The same institution had developed a special psychology program for police officers. R institutions stated goals such as "offering education with the least disruption to the student's lives" and to simply "provide post secondary education to the community."

Public P and PS institutions were not as much concerned with identifying and meeting the needs of state residents and state leaders as they were with improving their national, regional or local image and framing what they were doing in such a way that

the legislature and the public would view them as in support of state goals and objectives. The fundamental premise appeared to be that the institution was doing important things and that their activities would certainly benefit the state. Their main task was thus to convince the state or local government of this fact. When asked about the challenges they face, these institutions cited “communicating what we do to the public” and demonstrating the relevance of the institution’s research for society. One public PS institutions articulated the goal of “achieving international prominence in key programs of graduate study and research”, and to “be America’s leading partnership university.” One P public research university stressed the challenge of “addressing ourselves to an external environment that expects the same things from us but requires a different language”, and stated a need to bring the intellectual strength of the institution to the community. This institution was trying to fit it’s current activities into the perceived obligation.

Community colleges, which are dependent largely on state and local funding (20 % of funding comes from local sources and 44% comes from state sources), are extremely responsive to community needs. All the community colleges, even the institution we classify as P, were concerned about their reputation with the local government. The activity mix of the institutions depended on their location. For example, one community college was extremely isolated, located in the middle of several small communities which it serves. This institution focuses on providing education and training to students. Another community college, located in an affluent metropolitan area provides an entire array of services to the community including adult education/enrichment

courses, ESL courses, as well as sponsoring cultural and social events. Administrators at one institution mentioned “figuring out what societal needs we are supposed to be filling” as one of the major challenges facing them. Because support is tied to the local community, institutions normally have to be sensitive to the impact the institution has on the neighborhood, and have to work harder than other types of institutions to be a “good neighbor”. Several institutions mentioned public relations as an important challenge. Whereas most state taxpayers cannot witness the impact of each state university first-hand, local taxpayers are more likely to have direct contact with their local community college. Although all public two-year institutions highlighted the importance of reputation, we did observe one such institution that also exhibited P behavior. This institution had developed prestige in its local/regional market, boasting a high transfer rate to well-know four-year institutions in the area. This institution attracts students from throughout the metropolitan area in which it is located and sizable number of foreign students. Although the relative emphasis of prestige-building v. reputation-building is different from that witnessed in a P research institution, P community colleges do appear to reap gains from their prestige in terms of local community support, ability to pay professors higher salaries, etc.

7. Impact of Strategies

Government support for higher education has an impact on the activities of individual institutions and on the industry as a whole. At an aggregate level, there is a significant distinction between public and private institutions with respect to the fraction of total revenue that comes from government sources: on average public

institutions receive 56% and private institutions 17% of their total revenue from governments (See Table C-3). In public institutions, state financing accounts for the largest component of government support for higher education, followed by federal, and local support. In private institutions, federal financing accounts for the largest component of government support for higher education, followed by state, and local support. While these aggregate differences are striking, they obscure a substantial amount of variation. The fraction of total funding that public institutions receive from the government ranges from 100% to 6%, and the fraction that private institutions ranges from 100% to 0%.²⁷ Within the set of private institutions, there is a reasonable amount of variation in the fraction of funding from the government by Carnegie classification. For example, two-year private institutions receive 21% of their total revenue from government sources, 15% of which comes from the federal government. Private R1 institutions receive 22% of their revenue from government sources, 19% from the federal government. On the other hand, selective private liberal arts colleges (LA1) receive only 6% of their revenue from the government. Similar variation is evident among public institutions. Public two-year institutions are the most heavily dependent upon government resources, receiving on average 78% of their revenue from government sources, mainly from state sources and public R1 institutions receive only 46% of their revenue from government sources, mainly state and federal. As a result, state funding has different impacts on different institutions.

²⁷ Calculations based on the IPEDS database reveal that a large number of institutions (503 public and 70 private) reported receiving *more* than 100% of their revenue from government sources. This simple calculation reflects some of the fundamental problems involved in using the IPEDS data in examining the role that government revenue plays in institutions of higher education.

Table C-3: Importance of Public Support

Type of Control	Type of Institution	Fraction Revenue from Federal Sources	Fraction Revenue from State Sources	Fraction Revenue from Local Sources
Private	2YR	13.8%	7.3%	0.3%
	ART	4.4%	3.5%	0.1%
	BUS	8.6%	2.6%	0.1%
	C1	9.0%	3.6%	0.1%
	C2	9.8%	3.5%	0.1%
	D1	7.4%	2.6%	0.2%
	D2	8.4%	3.1%	0.1%
	ENG	12.3%	2.7%	0.1%
	HLT	3.3%	5.3%	0.0%
	LA1	4.2%	1.7%	0.0%
	LA2	11.1%	5.2%	0.0%
	LAW	1.3%	1.2%	0.1%
	MED	12.1%	2.9%	6.7%
	N/A	12.5%	3.3%	0.0%
	OTH	2.2%	1.0%	0.0%
	R1	18.6%	1.8%	0.9%
	R2	8.8%	0.8%	0.0%
REL	11.3%	0.6%	0.1%	
TEA	6.8%	1.7%	1.8%	
TRI	89.5%	2.1%	0.2%	
Private Total		12.9%	2.6%	0.8%
Public	2YR	14.2%	43.7%	19.9%
	ART	4.4%	32.2%	21.8%
	BUS	56.5%	32.6%	0.0%
	C1	10.3%	49.9%	0.8%
	C2	11.5%	46.8%	0.6%
	D1	8.5%	44.4%	1.6%
	D2	14.7%	40.3%	0.3%
	ENG	10.2%	56.6%	0.0%
	HLT	2.3%	57.0%	1.2%
	LA1	11.7%	46.0%	0.0%
	LA2	18.0%	47.7%	0.9%
	MED	10.3%	23.0%	0.5%
	N/A	10.6%	38.5%	30.9%
	OTH	83.2%	5.8%	0.2%
	R1	16.4%	30.3%	0.5%
	R2	13.9%	42.9%	0.7%
	TEA	34.4%	57.7%	0.1%
TRI	70.9%	7.0%	7.9%	
Public Total		14.8%	37.1%	4.1%
All institutions		14.1%	24.9%	3.0%

For the institutions that do compete in the market for federal research funding (mainly, R1 and R2 institutions), federal government support is an important element of total revenue (See Table C-3). Because the federal government is the single largest customer for research activities and there are a number of other institutions to which the federal government could and would turn to if one institution refused to respond to government demands, the federal government has significant power. To the extent that the costs of conducting federal research are fixed as opposed to variable, the government's power in the market for research will likely increase, at least temporarily, as the total amount of available federal research money declines.

While this market power might allow the government to get a "better price" for research activities, perhaps through lower indirect cost rates, the implementation of such a strategy could have deleterious effects for the sustainment of U.S. prominence in research. Even presidents of institutions that don't receive such funding cited this as one of the most significant challenges facing higher education. It costs a lot to maintain a first class research institution. The direct costs of conducting a study are dwarfed by the money needed to maintain and upgrade lab facilities, libraries, and technological infrastructure. The president of one research institution noted that U.S. universities will struggle to maintain their status as best in the world if federal funding is not maintained. An administrator at a specialized P research university noted that top graduate students in science and engineering are shunning academic careers because of the tremendous effort involved in getting research grants. Another president posited that ultimately,

declining support for research funding will force many existing research universities out of the business of research until only 20-25 serious research universities will remain.

Similar concern was expressed by all institutions about the impact of declining support for federal student aid. While there seems to be strong political support for student aid currently, a change to student financial aid programs could have a serious impact, particularly on institutions that are highly tuition dependent. None of the institutions we visited expressed concern about meeting these federal criteria to which these resources are linked, suggesting that federal restrictions play a role only at the most marginal institutions. However the proprietary institutions noted that federal requirements (including accreditation requirements) do tend to erect entry barriers for new proprietary institutions. This is an issue to which we will return later in the book. In spite of this recent attempt to limit institutional access to federal student aid programs, none of the institutions we visited in the context of our site visits expressed concern over their *eligibility* for student aid. However, proprietary institutions did mention that the eligibility requirements, especially the need for accreditation, serve as a substantial barrier to entry and suggested that this protected the public institutions from potential competition.

The emerging trend toward increased demands for accountability from state governments impacts institutional strategies in a complicated way. On the most simplistic level, these demands threaten the success of P strategies and support R strategies. Public R institutions, are by definition oriented toward identifying and serving the needs of their constituents and performance based funding mechanisms

which reward institutions for meeting state objectives. For these institutions, the biggest challenge is how they can measure and demonstrate the various ways in which they serve state needs, and many performance based funding mechanisms provide a system for that. For P and PS institutions however, these demands are often inconsistent with prestige-building activities because it requires them to devote resources to meeting specific government demands which are often unrelated to prestige. Several of the P and PS institutions we visited are responding to these demands with attempts to “educate” the public as to what they really do, to convince the legislature of the “special” nature of what they do, stressing that they serve “different” state needs which are not easily quantifiable and cannot be expected to meet the same targets as R institutions.

Because of their reputation and the resources they bring into the state, public P institutions often have a good deal of bargaining power vis-à-vis the state. This power provides them with the opportunity to negotiate different funding arrangements with the state, even in the face of strong accountability demands. In many states where performance indicator systems are being developed or other sorts of mandates are being instituted, the P institutions have been successful in inducing the states to modify the criteria to account for their special role in the state. PS institutions have the most to lose as states increase demands for accountability. These institutions witnessing the strong bargaining power that P institutions have with the state, they would like to be more like such institutions. One PS institution explicitly mentioned that they receive per student funding that is below the state average, and that they need to improve their status in

order to receive a bigger piece of the state higher education budget. However, these institutions don't currently have the cachet, and hence the bargaining power of the P institutions and are therefore a good deal of pressure to respond to existing state demands. As a result, they are torn between devoting resources to meet the demands of the public (and thus maintaining their reputation) and devoting resources toward activities to help them build prestige. In states where resources devoted to the higher education sector are expected to grow, institutions may find that it is worthwhile to invest in prestige in order to increase stature within the state and temper state demands to meet constituent needs which conflict with institutional autonomy. In states with declining college age populations or where state funding for higher education is not expected to grow, this strategy is more risky. Indeed, in these states, we witnessed institutions re-thinking the PS strategy and moving to an R strategy.

Perhaps in response to accountability demands placed on them by the state, some P public comprehensive institutions are pushing to diversify their revenue base in order to reduce their dependence on the state, although it is not clear whether these are empty threats intended to further increase the institution's bargaining power vis-à-vis the state, or an action being seriously considered.

Because private institutions receive such a small fraction of their revenues from the state, they do not view states as important customers but they do understand the important role of state government in shaping the higher education industry. While the goal in maintaining low tuition levels at public institutions may be to provide access to

higher education to all citizens, providing a subsidy (tuition discount) to all students who attend a public institution effects the market for higher education significantly.

While it is difficult to sort out cause and effect in such a complicated industry, a study by Quigley and Rubinfeld²⁸ uncovers some stark differences in this regard, and suggests that the actions of state governments can have a significant impact on an industry which has a strong regional concentration. Differences in per capita public enrollments per 1000 population range from 25.1 in GA to 61.7 in AZ (mean 39.3, coeff of variation 20.8%); per capita private enrollments per 1000 population range from 0 in WY and 0.32 in NV to 40.5 in MA. (coeff. of variation 78.2%). The authors categorize states according to the level of private and public enrollment levels and find that most states either specialize (rely mainly on the private or the public sector for education services), or provide little educational opportunity overall (mainly the southern states). States also differ in the fraction of total state funding for higher education that is allocated to students (in the form of financial aid) as opposed to institutions. Figure C-1 reflects this state variation.

Noting that in-state tuition rates vary positively with private per capita enrollments, Quigley and Rubinfeld suggest that states with a strong private sector charge higher public sector tuition because it is more important for states whose residents have few private-sector options to provide citizens with low-cost access to public sector education. However, it is also possible that the existence of low-priced public institutions limits the expansion of the private sector in the state, hence restricting per

²⁸ Quigley and Rubinfeld (1993).

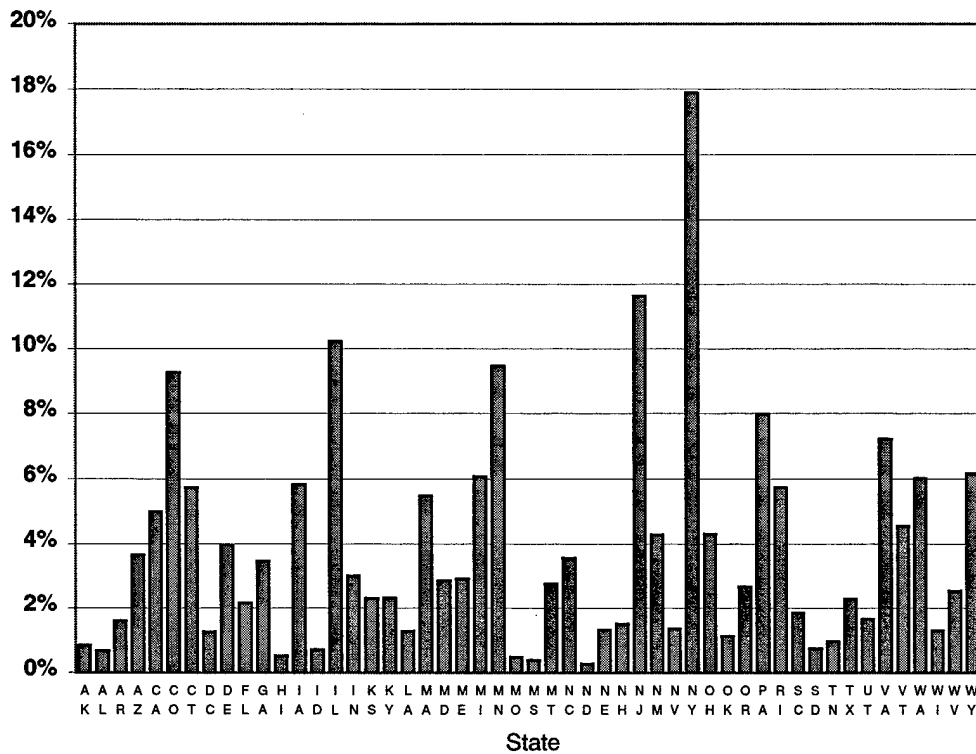


Figure C-1—Fraction of State Support for Higher Education Direct to Students

capita private sector enrollment. While this “chicken and egg” debate may be mute in states with stable populations of college-age students, it is of fundamental concern to states such as Florida, Minnesota, Wisconsin and most of the states in the Western region, which will experience a dramatic increase in the number of high school graduates over the next ten years. In these state, the questions of whether public supply limits private supply, and whether the state should promote the development of public as opposed to private capacity are of critical importance.

Our site visits reinforced this conjecture that state policies play a significant role in the higher education landscape. In one state which offers highly subsidized public

higher education, all private institutions mentioned state institutions as a primary source of competition for students and to a lesser extent state resources. Many acknowledged that they simply can't compete with the elite state publics for students because of the price differential, but provide a "second best" option for those in-state students who can't get into the top public institutions.

Administrators at a private institution in another state, which provides generous support to low-income students in the form of a grant which can be used at private or public institutions, argued that low tuition in the public institutions are making it more and more difficult for private institutions to draw upper and middle class students. Wealthy students continue to come and pay the full tuition, but while 85% paid full tuition 30 years ago, only 16% do today. The institution is able to draw low income students by offering them significant tuition discounts, and still get the state grant money. Noting that the average family income at their institution is lower than that of the students at the flagship state institution, the provost of this institution remarked ironically that "the privates are subsidizing needy kids; the state is subsidizing wealthy kids." In a third state which also provide highly subsidized public higher education but offers little support to students in the private sector, administrators at a private institution commented that they are currently able to generate a substantial amount of revenue from the programs they offer, but acknowledged that many of the programs would probably close if the state decided to offer similar programs at state institutions in the local area because students would not be willing to sacrifice the state subsidy in order to attend the private institution. Administrators suggested that even their most

successful programs would not be viable under direct competition from public institutions. A large part of this institution's strategy was to serve the need of the students who were not being served by the public sector, either because of rationing (especially in the case of professional schools) or because of a lack of program offerings.

At one R public comprehensive institution, administrators discussed the threat of competition for students from the proprietary sector. These administrators commented that they could probably beat the proprietary institutions on quality, since their faculty are better credentialed, but were struggling to respond to the proprietary sector's challenges in the area of student service. However, administrators noted that they would always be able to beat the proprietary institutions on price because of the state subsidy. They are certainly providing students with more convenience, but that the quality of the education is likely lower and but that with the state subsidy, their institution will certainly be able to beat the proprietary institutions.

With the costs of higher education increasing and resources for that purpose dwindling, many states, particularly those facing capacity constraints, are starting to reconsider their current approaches to providing higher education. Several states, such as Arizona, Minnesota and Colorado, are considering the development of tuition voucher programs for undergraduates which would provide students a subsidy at private as well as public institutions.²⁹ Other states have simply been decreasing the subsidy to public education. Changes in state funding for higher education will have a

²⁹ American Association of State Colleges and Universities, Report of the States, 1996.

significant impact on private as well as public institutions. Our site visits suggest that the private (both proprietary and non-profit) sector is poised to respond to growing opportunities

Appendix D: The Market for Private-Giving

The private sector, through both organizations and individuals, provides financial resources to the higher education industry in a variety of ways. At one extreme is unfettered, altruistic giving to higher education. At the other extreme is a complete quid pro quo relationship between the private sector and institutions of higher education in which the institution provides some good or service which is unrelated the core teaching and research functions of the institution. In between are a variety of pseudo-market relationships in which individuals or organizations essentially purchase teaching or research products or services from the institution of higher education, altruistic giving to institutions of higher education which is restricted to some specific purpose, or altruistic giving which is not a market transaction per se but which confers some (perhaps small) benefit on the donor. Figure D-1 provides some structure for thinking about different ways in which the private sector supports institutions of higher education.

One of the most significant challenges in analyzing the market for private giving is defining the boundaries of that market. Although we have the sense that an alumna writing a check to support her alma mater's capital campaign is engaging in private giving, whereas the corporation that purchases contract education services from the local community college is not engaging in private giving, there are a host of interactions between the private sector and institutions of higher education that fall between these two extremes. One analytically clean way of making a distinction is to focus only on donations to institutions of higher education for which the donor does not

receive, either directly or indirectly, a product or service commensurate with the value of the donation.³⁰ Included are grants in which the donor asks the institution to perform a specific function for the benefit of a large group or for society as a whole.

Altruistic Giving		Market Based Giving	
Restricted	Unrestricted	Related to Teaching, Research or Service Profit-making?	Unrelated to Teaching, Research or Service Profit-making?

Figure D-1—Types of Private Giving to Higher Education

Grants are similar to contracts in the sense that they entail an expectation that some teaching, research or service output will be produced; however, those expectations are much more vague. In many cases, the donor cannot specify the output ex ante, and gives the institution some flexibility in defining what an appropriate outcome might be. Grants frequently support basic or exploratory scientific and technical research, research on medical outcomes, public policy research, pilot tests of experimental teaching methods or public service activities. Because the outcome is uncertain, a significant amount of trust must exist between the institution and the provider of the

³⁰ Donors may get a small gift or other sort of benefit as a result of their gift, such as a free subscription to the university's magazine, access to the library or something of that nature. However, the market value of these gifts is normally not commensurate with the gift, and it would be difficult to make the argument that the donor was buying the gift.

grant. As a result, the prestige of the institution often plays a significant role in allowing it to win grants. The possibility of a single institution receiving subsequent grants from the same source if it demonstrates outcomes consistent with the expectations of the donor also

Gifts provide a much more flexible source of revenue to the institution and have the fewest strings attached, although donors often do specify a specific activity they would like to support. For example, a donor might want to fund a faculty position in philosophy, the construction of a new building for the business school, or a public service fellowship program for undergraduate students. Unlike grants and contracts, gifts normally support the *process* of teaching, research and service rather than a specific *outcome*. Gifts span the range from multi-million dollar sums from corporations or wealthy individuals to more modest donations from alumni or local community members; they may be designated for a specific purpose, for one of some set of purposes or may have no strings attached at all.

In adopting this definition of private giving, we are explicitly excluding private contracts with institutions of higher education³¹. This definition of private giving is consistent with the definition of private giving used in the Voluntary Support of Education (VSE) survey conducted by the Council for Aid to Education.

IPEDS data, which have formed to the basis for most of the analyses in the previous chapters, do not allow us to clearly distinguish between altruistic giving and the more market-based transaction between the private sector and institutions of higher

education. In particular, IPEDS records dramatically different types of institutional revenue from private sources into a category “private gifts, grants and contracts”, which includes completely altruistic giving as well as revenue from contract research or contract teaching which is definitely of a market nature. Because IPEDS data does not enable us to consider the role of private giving as distinct from revenue from the private sector, we rely in this chapter on national estimates of voluntary support for higher education based on responses to the VSE survey³², stressing that they are only estimates. We rely on IPEDS for information on institutional revenue from endowment.

1. Market Segments and Customer Motivation

Institutions of higher education received an estimated \$12.3 billion³³ in voluntary support³⁴ in 1994 and an additional \$3.7 billion in revenue from endowment income.

This accounted for 7.3% and 2.2% of the sector’s total revenue respectively. (See Table D-1). As Table D-1 indicates, the largest source of private giving to higher education is

³¹ Private contracts with higher education involve a market-based exchange between the institution and the client. These relationships may take a variety of forms and are discussed in other chapters of the book.

³² It is important to note that these national figures are only estimates based on the responses of institutions that do respond to the survey. The survey has a participation rate of about 45%, but this rate varies significantly by institution type: it is 84% for Research and Doctoral institutions, but only 11% for two-year institutions. CAE estimates that the survey captures 85% of total private giving to higher education suggesting that the survey is not representative of institutions that receive a low level of private support. Although it is impossible to evaluate the accuracy of these estimates, in comparing the VSE estimates to the IPEDS-based figures it is worth noting that that the VSE estimate of private giving to higher education exceeds the total amount of revenue institutions of higher education received from gifts, grants and contracts as reported in IPEDS.

³³ It is important to note that the VSE estimate of private giving to higher education exceeds the total amount of revenue institutions of higher education received from gifts, grants and contracts as reported in IPEDS.

³⁴ Voluntary support to higher education includes restricted and unrestricted gifts and grants (of any form) to an institution or its affiliated foundation, cash payments returned as contributions from salaried staff and insurance premiums paid by donors.

alumni donations, followed by non-alumni individuals, foundations and corporations. Religious organizations provide a small fraction of the total voluntary support. (See Table D-2).

Endowment earnings for the sector totaled \$3.6³⁵ billion in 1994, accounting for a little over 2% of total revenue for the sector as a whole. IPEDS data suggest that endowment income is extremely concentrated, with the top 10 institutions³⁶ accounting for almost 30% of all endowment income. The top 50 institutions in terms of endowment income account for 55% of the industry total and the top 100 account for 69%. Clearly, endowment income is a very important source of revenue for a small set of institutions, while it is an insignificant source of revenue for most institutions. As expected, endowment income is concentrated in private institutions, which receive 82% of the total endowment income for the higher education sector. On average, private institutions receive 4.7% of their total revenue from endowment income on average, as opposed to 0.6% in public institutions (See Table D-3).

³⁵ According to IPEDS figures.

³⁶ One of these "institutions" is the Office of the President of the University of California, which encompasses the nine University of California campuses.

Table D-1: Estimated Voluntary Support of Higher Education, by Source and Purpose, 1995
(Dollars in millions)

	1990		1994		1995		1994 adj. for CPI		1990 adj. for CPI	
	\$9,800	(100%)	\$12,350	(100%)	\$12,750	(100%)	1994	1994 adj. for CPI	1990	1990 adj. for CPI
Total Voluntary Support	\$9,800	(100%)	\$12,350	(100%)	\$12,750	(100%)	3.2	0.3	30.1	9.9
Sources										
Alumni	\$2,540	(26%)	\$3,410	(28%)	\$3,600	(28%)	5.6	2.5	41.7	19.7
Nonalumni Individuals	2,230	(23)	2,800	(23)	2,940	(23)	5.0	2.0	31.8	11.4
Corporations	2,170	(22)	2,510	(20)	2,560	(20)	2.0	-0.9	18.0	-0.4
Foundations	1,920	(20)	2,540	(21)	2,460	(19)	-3.1	-5.9	28.1	8.2
Religious Organizations	240	(2)	240	(2)	250	(2)	4.2	1.2	4.2	-12.0
Other	700	(7)	850	(7)	940	(7)	10.6	7.4	34.3	13.4
Purposes										
Current Operations	\$5,440	(56%)	\$6,710	(54%)	\$7,230	(57%)	7.7	4.7	32.9	12.3
Capital Purposes	4,360	(44)	5,640	(46)	5,520	(43)	-2.1	-4.9	26.6	6.9
Price Indices (1995=100)										
Consumer	84.5		97.1		100.0		3.0		18.4	
Higher Education (HEPI)	83.8		97.2		100.0		2.9		19.3	

(Figures in parentheses are percentages of total and may not sum to 100% due to rounding.)
HEPI (Higher Education Price Index) source: Research Associates of Washington

Source: Voluntary Support of Education 1995

Table D-2: Allocation of Support by Donor Groups, 1995

(100% = total from a source to all institution types)

Type of Institutions	Alumni	Other Individuals	Corporations	Foundations	Religious Organizations	Fund-Raising Consortia	Other Organizations	All Sources Combined
Research/Doctoral								
Private	39.4%	31.1%	28.8%	38.9%	19.0%	37.2%	23.6%	33.8%
Public	28.8%	26.0%	49.3%	30.8%	0.5%	10.55%	60.1%	34.2%
Masters								
Private	6.7%	8.4%	4.6%	6.4%	19.4%	13.5%	2.5%	6.6%
Public	2.1%	4.0%	5.2%	2.1%	0.1%	0.6%	3.7%	3.2%
Liberal Arts								
Private	21.2%	19.5%	5.4%	13.3%	35.0%	34.8%	3.0%	15.2%
Public	0.0%	0.2%	0.2%	0.1%	0.0%	0.5%	0.2%	0.1%
Specialized								
Private	1.2%	6.6%	1.8%	3.8%	25.0%	2.3%	2.6%	3.6%
Public	0.3%	2.4%	3.3%	3.6%	0.1%	0.2%	3.5%	2.2%
Two-Year								
Private	0.1%	0.5%	0.1%	0.2%	0.9%	0.3%	0.0%	0.2%
Public	0.1%	1.3%	1.3%	0.8%	0.0%	0.2%	0.8%	0.8%
Total All Institutions	100%	100%	100%	100%	100%	100%	100%	100%

(1,086 institutions)

Source: Voluntary Support of Education 1995

Table D-3: Distribution of Endowment and Private Source Revenue

Type of Control	Type of Institution	Fraction of total Endowment Earnings to Type	Fraction of total Gift, Grant and Contract Earnings to Type
Private	2YR	0.9%	0.5%
	ART	0.5%	0.9%
	BUS	0.2%	0.3%
	C1	4.6%	5.6%
	C2	0.9%	0.7%
	D1	1.6%	1.9%
	D2	2.0%	3.7%
	ENG	0.4%	0.8%
	HLT	0.2%	0.2%
	LA1	5.1%	15.6%
	LA2	5.0%	5.1%
	LAW	0.0%	0.1%
	MED	3.0%	1.9%
	N/A	0.0%	0.0%
	OTH	0.1%	0.2%
	R1	24.4%	37.7%
	R2	3.6%	4.8%
	REL	3.1%	2.8%
TEA	0.1%	0.0%	
TRI	0.0%	0.0%	
Private Total		55.9%	82.7%
Public	2YR	1.8%	0.5%
	ART	0.0%	0.0%
	BUS	0.0%	0.0%
	C1	3.1%	0.9%
	C2	0.2%	0.1%
	D1	1.8%	0.5%
	D2	2.2%	0.3%
	ENG	0.1%	0.0%
	HLT	0.0%	0.0%
	LA1	0.1%	0.0%
	LA2	0.3%	0.1%
	MED	4.9%	0.9%
	N/A	0.0%	0.0%
	OTH	0.0%	0.0%
	R1	25.5%	12.3%
R2	4.0%	1.5%	
TEA	0.0%	0.0%	
TRI	0.0%	0.0%	
Public Total		44.1%	17.3%

Because donors are such a heterogeneous group and do not expect a specific output from the institution, the motives of these givers are difficult to identify. The pattern of giving by different types of donors provides little assistance in clarifying this issue (See Table D-2). Donations from alumni, other individuals, corporations and foundations are concentrated in research and doctoral institutions, although a significant proportion of donations from individuals (both alumni and non-alumni), religious organizations, and to some extent foundations flow to liberal arts institutions as well. Each of the different groups of donors allocates very little of its total giving to two-year institutions.

Previous chapters of this book have highlighted the fact that in most markets it is difficult to articulate precisely what the customers of higher education want. The motivation of private donors is even more difficult to understand from an industry perspective. However, the reality is that people do donate a substantial amount of money to higher education and institutions have developed an elaborate system for tapping into and even increasing such donations. The president of one institution we visited suggested that major donors are motivated by several things: 1) a vague notion of helping students and improving the quality of the university, 2) "paying back" the institution for some perceived benefit they or society received 3) self-aggrandizement or memorialization 4) tax reasons.

While each of these factors certainly plays a role, the role is sure to be different for different categories of donors. To a certain extent, alumni donations are linked to the individual's experience at and tie to the institution. A person can make an alumni donation only to a small set of institutions. However, individuals can and often do

donate money to institutions other than those they attended (is there any literature on which institutions?). As suggested above, individuals may be motivated to donate by some desire for self-aggrandizement or memorialization, or simply by a desire to give something back to society. Corporations are in part motivated to donate money to institutions of higher education in order to cultivate a relationship with the institution. For example, companies that donate money to an institution are often given special access to students during the recruiting season (for example, early interview dates, etc.). Companies may also donate money in order to cultivate relationships with research programs at the institution or simply to support basic research that might be helpful to their business. Some companies may donate money to support education for the local community in the hopes of building the social and human capital of the region. Foundation support is normally motivated by a desire to support specific societal goals through support of research or teaching. Support from religious organizations is normally directed toward either religiously affiliated schools or toward religious activities within secular institutions.

Regardless of the particular motives of specific types of donors, there appears to be a common element to willingness to donate. Donors give money in the hopes that the funds will help institutions meet societal needs that are not being met fully through market mechanisms. However, donors are not willing to donate to just any institution—instead they direct resources toward institutions that they perceive to be

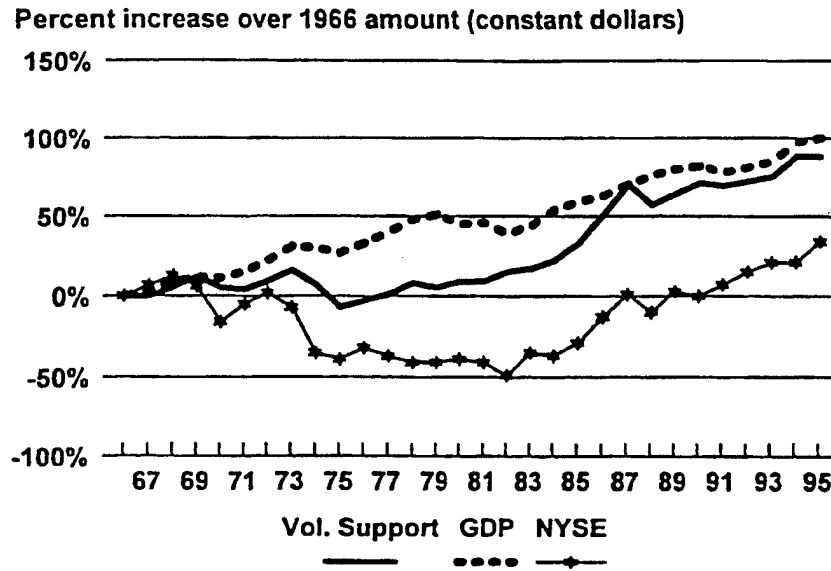
high-quality. Cook and Lasher³⁷ argue that, “individual donors have their own priorities. . . but genuine quality is obviously a fundamental part of the fund-raising mix. The implication for presidents is that they must make sure they have something of real substance to sell to donors, whether it is a commitment to maintain quality or a commitment to achieve quality.”(p.46) The link between donor perceptions of the institutions’ “quality” and willingness to donate was highlighted in many of our site visits. These visits suggested that quality can mean different things to different types of donors and to different types of institutions. Later in the chapter we will discuss some of the ways in which institutions convey and donors evaluate quality.

2. Demand Characteristics and External Determinants

Voluntary support for higher education appears to closely follow economic trends in general, and the NYSE index in particular. (Figure D-2). This reflects an intuitive notion that people and companies donate more money when the economy is performing well and they have greater wealth. This relationship lead to an sub-optimal situation in which institutions are better able to raise money from the private sector precisely at the time when students and other customers (students, businesses and even the government) are better able and willing to pay for higher education but less likely to be demanding is. As we noted in the section of government support for higher education, it is precisely when economic times are difficult when more people who are unable to pay the full cost of tuition will seek higher education in order to retool because their

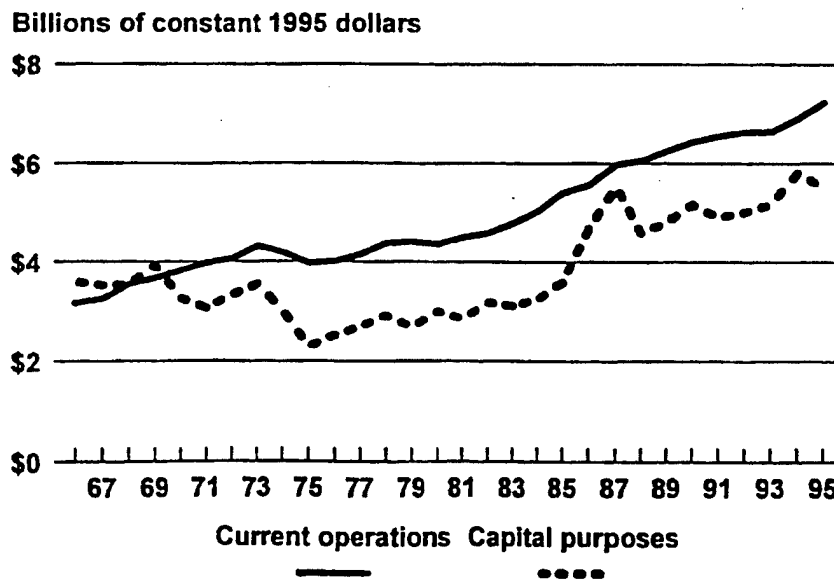
³⁷ Cook, W. Bruce and William F. Lasher (1996). “Toward a Theory of Fund Raising in Higher Education”. *The Review of Higher Education*, Vol. 20, No. 1, pp. 33-51.

Figure D-2: Estimated Voluntary Support of Higher Education, U.S. G.D.P., and Stock Prices



Source: Voluntary Support of Education 1995

Figure D-3: Estimated Voluntary Support by Major Purpose



Source: Voluntary Support of Education 1995

alternatives are not as good. However, this also when public funding as well as private giving to higher education is also reduced.

VSE analyses also suggest that the total value of private giving to higher education has been increasing over time. This increase is mainly due to increases in private giving for current operations as opposed to endowment. (Figure D-3). In addition to economic factors, the potential for donations to higher education is influenced by societal attitudes toward philanthropy as well as the competition from other non-profit organizations.

Although there is little research on the total capacity of the economy to support fundraising and relative emphasis that potential donors place on different charitable activities, at several of our site visits, concern was expressed over the impending welfare reform changes, the increased demands that would create for charitable giving in those areas, and the implications that would have for private giving to higher education. Social, demographic and historical factors also play an important role in fundraising. For institutions, such as community colleges, which have a local donor base, the wealth and general economic conditions of the local area will have an impact on the institutions ability to raise money. Similarly, alumni donations will be influenced by the wealth of students and alumni. Administrators at one large public institutions mentioned that the possibility for generating a high level of alumni donations was not good because the institution's alumni were not wealthy.

Administrators at a private institution noted that its alumni don't donate a lot of money because they tend not to pursue lucrative careers, tending to focus more on service-oriented careers. Several institutions expressed concern about the changing

demographics noting that there is a cultural aspect to philanthropy and that immigrants from Asian and Latin American countries are much less likely to donate.

Most of the private institutions we visited mentioned the Board of Trustees as important to revenue.³⁸ Again, these are individuals who have a good deal of knowledge and even some control over the use of their donations. One provost praised the “extraordinary financial backing” the board members give to the institution as well as their willingness to solicit companies and other individuals in support of the institution. At a small liberal arts institution, the Board of Trustees have formed an investment committee which monitors the endowment fund’s performance and recommends money managers. The Board of this institution has also played a crucial role in recent capital campaigns.

The tax-exempt status of most colleges and universities plays an important, but not well studied role in private gifts and grants to higher education. Several presidents we spoke with mentioned that they were worried about what would happen to private giving to higher education if there was no longer a tax deduction for such gifts. Similar concerns were expressed about the tax exemption for endowment earnings for institutions of higher education. Federal and state tax policies also play an important role in determining the level of private giving because it influences the marginal cost of these donations from the perspective of the donor. Weisbrod and Dominguez³⁹ find that

³⁸ The VSE suggests that gifts from governing board members account for 15% of all gifts from non-alumni individuals.

³⁹ Weisbrod, Burton A and Nestor D. Dominguez (1986). “Demand for Collective Goods in Private Nonprofit Markets: Can Fundraising Expenditures Help Overcome Free-Rider Behavior?” *Journal of Public Economics* Vol. 30, June pp. 83-95.

there is a negative correlation between the “price of donating” and the level of donations to non-profit organizations in general.

Minor changes to the tax law tend to impact private donations to higher education. The CEO at one proprietary institution noted that it is almost impossible to induce corporations to donate money to a proprietary institution. However, these institutions have a source of funding for growth not available to non-profit institutions: stock offerings. Whereas non-profit institutions seek relatively unrestricted private donations, or in the case of public institutions get public bond funding for capital projects, proprietary institutions are able to raise money for expansion through stock offerings. The ability to raise funds in this way depends crucially on the soundness of the business plan and expectations of the profitability of the investment.⁴⁰ We posit that this is quite different from the criteria used by donors to determine whether to donate money.⁴¹ While donors are concerned whether the investment will improve the quality of the institution in some sense, and whether other sorts of programs might better foster the objective, the funding criteria is likely much less stringent. As the proprietary sector grows in importance, it will be necessary to consider the implications of the differences for the nature of investment, the type of education delivered, etc.

Finally, public attitudes toward the higher education industry will also influence societal willingness to donate to the sector. To the extent that people donate money to something that they perceive to be “high quality” and a “good cause”, people will

⁴⁰ One proprietary institution we visited showed us a copy of their business plans for new sites, which included elaborate market research information.

donate more to higher education if they have a positive perception of it. While public perceptions of higher education are generally high, confidence in higher education is eroding in many quarters. There is a growing public perception that colleges and universities are removed from the mainstream. With the rapid rise in tuition and fees, society is increasingly questioning the efficiency and effectiveness of institutions of higher education. Even while economic returns to college education continue to increase, questions are being raised by students and employers as to the actual value of the education provided. Several of the presidents we met with in the context of our site visits stressed a decline in public confidence as one of the most significant challenges facing the higher education sector as a whole. This public attitude is likely to negatively impact private giving.

3. Outputs and Outcomes

While it is difficult to articulate what motivates donors to give money to higher education and what they expect to achieve, it is even more difficult to evaluate what the private giving actually achieves. This book has examined the higher education industry from an outsider's perspective, discussing customers, what they want from the sector and whether they get what they want. In so doing, we have not focused on the internal decision making and resource allocation processes within institutions of higher education. However, in order to understand the impact of private sector support for higher education on institutions, it is necessary to look inside that black box.

⁴¹ See Letts, Christine W., William Ryan and Allen Grossman (1997). "Virtuous Capital; What Foundations Can Learn from Venture Capitalists." *Harvard Business Review*, March-April, pp.36-44 for a discussion of some of these differences.

When engaging in a market-based transaction, customers are not really concerned with the production process itself or with what the organization does with its profit. Instead, the customer is concerned with price the organization charges relative to that charged by other organizations and with the value of the good or service provided. So long as the customer gets her money's worth, she does not care how the organization produced the product or what it does with the revenue. The "market for private giving" is completely different; here, what the "customer" does not want a specific product, but wants to be sure that the money has been put to good use. The donor wants to know that the donation "made a difference" and allowed the institution to do something it otherwise would not have been able to do.

Non-profit institutions spend whatever additional revenue they receive, and therefore it is trivially true that a private gift will allow the institution to do something that it otherwise would not have been able to do. The real question is what is that additional revenue supporting and is the result in line with the objectives of donors. It is useful to distinguish between two different types of donations: restricted and unrestricted. Most college graduates who have been solicited for donations by their alma mater are familiar with the concept of restricted donations. Donors are able to check a box specifying whether the use of donated funds is to be restricted to a particular use (e.g. financial aid). Larger donors will often donate money and specify the use to which those funds are to be put. For example, a donor may give an institution a certain amount of money to build a new library start a new academic program—the money can be used for nothing else. A significant proportion of gift and grant revenue

is restricted in some way. Indeed, over the last 15 years, unrestricted gifts to current operations have been roughly flat in constant dollar terms. Most of the growth in private giving to higher education has come from increases in restricted gifts to current operations. This suggests an increasing need on the part of donors to control the uses to which their donations are put and at the same time increases restrictions on institutional discretion. Donations to endowment can also be restricted so that the income generated from that part of the endowment can only be spent on a specific program or activity (See Table D-4). Table D-5 indicates that about 70% of private giving to higher education is restricted. Whereas restricted gifts and grants can be used only to support the specified purpose, institutions can use unrestricted gifts in whatever manner they see fit. Donors of unrestricted gifts give the institution the flexibility to make the most appropriate decisions about how to use the money.

Table D-4: Relative Significance of Support from Different Sources, 1995

(100% = total from a source to all institution types)

Type of Institutions	Alumni	Other Individuals	Corporations	Foundations	Religious Organizations	Fund-Raising Consortia	Other Organizations	All Sources Combined
Research/Doctoral								
Private	33.2%	21.3%	17.0%	22.1%	0.9%	0.6%	4.9%	100.0%
Public	23.9%	17.5%	28.7%	17.3%	0.0%	0.2%	12.3%	100.0%
Masters								
Private	28.9%	29.6%	13.9%	18.8%	4.9%	1.2%	2.6%	100.0%
Public	18.8%	28.6%	32.0%	12.4%	0.0%	0.1%	8.1%	100.0%
Liberal Arts								
Private	39.8%	29.7%	7.1%	16.8%	3.8%	1.3%	1.4%	100.0%
Public	10.15	30.7%	28.7%	17.5%	0.1%	2.2%	10.8%	100.0%
Specialized								
Private	9.7%	42.9%	9.9%	20.4%	11.6%	0.4%	5.2%	100.0%
Public	3.8%	24.7	29.6%	30.8%	0.1%	0.0%	11.0%	100.0%
Two-Year								
Private	11.6%	56.35	11.2%	13.4%	6.5%	0.7%	0.3%	100.0%
Public	3.3%	37.7%	32.2%	19.8%	0.0%	0.1%	6.8%	100.0%
Total All Institutions	28.5%	23.1%	19.9%	19.2%	1.7%	0.6%	7.0%	100.0%

(1,086 institutions)

Source: Voluntary Support of Education 1995

Table D-5: Voluntary Support by Purpose, 1995

(Dollars in thousands)

Purpose of Support	All Institutions Reporting				Core Group % Change in Total Support
	1994		1995		
	Amount	Average per Institution	Amount	Average per Institution	% Change in Average
Current Operations					
Unrestricted	\$1,229,274 (12.1)	\$1,248	\$1,414,817 (12.9)	\$1,303	4.4
Restricted	4,240,821 (41.9)	4,305	4,816,176 (43.8)	4,435	3.0
Total	\$5,470,095 (54.0)	5,553	\$6,230,993 (56.7)	\$5,738	3.3
Capital Purposes					
Property, Buildings and Equipment	\$1,259,898 (12.4)	\$1,279	\$1,436,493 (13.1)	\$1,323	3.4
Endowment:	338,214 (3.3)	343	325,913 (3.0)	300	(12.6)
Income Restricted Endowment:	3,018,386 (29.8)	3,064	2,970,513 (27.0)	2,735	(10.7)
Income Restricted Loan Funds	34,468 (0.3)	35	28,463 (0.3)	26	(25.1)
Total	\$4,650,966 (46.0)	\$4,722	\$4,761,382 (43.3)	\$4,384	(7.1)
Total All Purposes	\$10,121,061 (100.0)	\$10,275	\$10,992,375 (100.0)	\$10,122	(1.5)
No. Institutions Reporting:	985		1,086		922

(Figures in parentheses show percent of total in each column)

Seven Institutions reporting in 1994 did not provide complete breakdowns of gifts by purpose and are not included above

Source: Voluntary Support of Education 1995

On the face of it, it would appear that donors of unrestricted gifts have more trust in the institution or believe that the institution's priorities are in line with their own than do donors of restricted gifts. However, it is not clear that restricted private giving has a greater marginal impact than unrestricted giving on the programs to which the giving is restricted. Indeed, specific conditions must hold for private giving (even restricted private giving) to have a differential impact on the intended program: when the overall budget of the institution is so tight that the program could not be funded otherwise, or when restricted giving exceeds the total amount that the institution would have spent on the activity. As a simplified example to illustrate the point, consider a non-profit institution that receives \$100 million in revenue from sources other than private giving and whose basic operating costs equal \$95 million. This institution has \$5 million left which it can spend on special projects or programs. Imagine that the institution prioritizes its special projects in such a way that it would like to spend the first \$5 million in discretionary money on student financial aid, the second \$5 million on a new athletic facility, the third \$5 million on raises for the faculty. If the institution received no private donations, it would spend the remaining \$5 million on student financial aid and would not build the athletic facility or raise faculty salaries. Imagine now that the institution received \$5 million in donations restricted for student financial aid. The institution would spend that \$5 million that was donated for student financial aid, and spend the remaining \$5 million in "discretionary" revenue to build an athletic facility. In this case, the fact that the giving was restricted had no impact on the total amount the institution spent on financial aid because the restriction did not bind. However, if the

institution had received \$6 million in restricted giving for financial aid, then the restriction would have been binding and the restrictions would have induced the institution to spend \$1 million more than it otherwise would have on that program.

Because it is difficult to know institutional priorities and hence what they would have spent money on in the absence of restrictions or of private giving, it is almost impossible to evaluate precisely what private support for higher education buys. A cynical view is that it buys institutions relief from a need to focus on productivity improvement, or that it simply gives them money to spend on whatever they want by freeing up other resources that would have been spent on this program anyway. At the opposite extreme is the view that private giving to higher education completely supports activities that benefit society and would not have been otherwise supported. Reality likely lies in the middle of these extremes, however more research on internal decision making and resource allocation processes is necessary to elucidate this issue.

Private giving for endowment purposes generates the outputs of a flexible revenue source over the long run. Donors generally understand the short run use to which the revenue is being put, it is really the use to which the income from the endowment donation is put that is of interest to the donor. Just as gifts and grants to current operations may be restricted or unrestricted, so may a donor donate to an unrestricted endowment or to one for which the revenue generated by the funds is restricted to a specific purpose. A similar logic applies to the uses of endowment revenue. According to the VSE survey, approximately 30% of private giving to higher education was targeted

to the endowment. Although not literally private sector support for higher education, endowment earnings are an important source of flexible funds for an institution.

4. Information and Market Signals

Because the demands of the private donor are often vague and the financial decisions of institutions obscure, the quality of information exchange between buyer and seller in this market is not good. Throughout the non-profit sector, donors are beginning to ask how they can ensure that their donations are well spent (FN HBS ARTICLE). As mentioned above, institutions have responded to some of this pressure by allowing donors to restrict the purposes for which their gifts are used. Indeed, over the last 15 years, unrestricted gifts to current operations have been roughly flat in constant dollar terms. Most of the growth in private giving to higher education has come from increases in restricted gifts to current operations. This suggests an increasing need on the part of donors to control the uses to which their donations are put and at the same time increases restrictions on institutional discretion (See Table D-2).

Although we noted that such a practice by no means guarantees that the additional funds will indeed have a marginal impact in the specified area, this fact may not be clear to donors who take the assurance at face value. The trend may reflect the fact that the growth in private giving to higher education stems from groups who are less inclined to trust the institution's judgment as to how the resources should be used. The problem is that as long as the finance and accounting systems used by colleges and universities remain obscure, it will be difficult for donors to have any confidence that restricted donations are having the intended impact.

Another way for donors to increase their confidence that the institution is doing something they view as productive with the resources is to donate to institutions whose judgment they trust. Alumni have an intimate knowledge of an institution and are influenced to donate by their attitude toward their experience. In general, alumni are more likely to donate if they believe that they received a good education, made important contacts and relationships, and had a good time while they were at the institution. Therefore, institutions interested in increasing future alumni donations have an incentive to make sure that students are satisfied. Administrators at several institutions noted that the changing demographic mix of the student body or changes in the institution's mission tend to have a negative impact on alumni donations because alumni feel that the institution is not the same as the one they attended. For example, one institution witnessed a substantial drop-off in alumni donations when the institution acceded to the demands of current students to remove the crosses from the campus chapel. Another institution, which has already changed its official name several times in the past 25 years was contemplating another change, from "College" to "University". Although such a change would improve their general public image, they were concerned that it would negatively impact alumni relations because alumni tend to associate themselves with the name of the institution they attended. Administrators at a Midwestern liberal arts college were concerned about the dominance of fraternities and sororities over the campus social life, but were afraid that attempts to diminish the profile of these organizations would anger alumni donors and reduce private giving.

Alumni donations also rely on consistent contact with alumni. The administrator at the institution that had experienced a financial crisis expressed dismay at the fact that alumni relations had been allowed to atrophy during the crisis so that now links with alumni are almost non-existent. Although this institution would like to increase alumni donations, they are not optimistic about the prospects.

Other donors do not have such an intimate knowledge of the institution and look to other factors when considering whether to donate. One P institution which is concerned that it has not kept up with peer institutions in terms of fundraising noted that it was delaying a major capital campaign until it had developed a clear institutional mission and strategy for achieving that mission because people would be more likely to donate if they felt that the institution had a plan. Administrators at one liberal arts college that was interested in receiving foundation grants noted that foundations ask for a lot of information about the demand status of the institutions (such as the number of applicants, the GPAs and SAT scores of applicants, etc). This institution noted that foundations are not satisfied if the institution does not “look like other colleges” and are unwilling to support institutions that are trying to do something different.

Outsiders—people who have never attended a particular institution—will have less confidence in their ability to evaluate whether the institution is making appropriate resource allocation decisions. As mentioned earlier, such gifts are normally devoted by a desire to help an institution improve or maintain quality. As a result, donors may look to an institution’s current quality as a proxy for whether the institution has made good resource allocation decisions. As an administrator at a liberal arts college we visited

noted, no one wants to donate to an institution that is not financially healthy. Because different donors have different notions of what they want from higher education, they will likely use different measures of institutional quality. For example, corporations might donate to institutions that generate a lot of applied research in an area related to the company's business or produce graduates that are successful employees at the corporation. Foundations may look to institutional prestige in research in determining which institutions will receive grants. As a result, an institution's success in the market for private giving will depend crucially on its overall strategy.

5. Strategic Behavior

Private gifts, grants and contracts and endowment income play markedly different roles across the institutions we visited both in terms of the overall impact these private sources have on the institution as well as the combination of private sources (gifts, grants, contracts or endowment income) emphasized by that institution. With the exception of the proprietary institutions, all the institutions we visited were interested in increasing revenue derived from private giving. Although some had clearly made progress toward that goal, others were struggling with implementation of fund raising strategies. As in many other markets, we noticed a significant difference between P, PS and R institutions with respect to their strategic behavior in the market for private giving. Despite this interest, R institutions were much more likely to focus on more market-based relationships with the private sector, such as developing business partnerships, or providing contract teaching services whereas PS and P institutions were definitely emphasizing the more altruistic relationships with the private sector. We also

observed a distinction between public and private institutions, supporting the conjectures drawn from the national data on voluntary support to institutions of higher education.

Among the most significant of these is the growing realization of the importance of private sector support on the part of public institutions of higher education. In general, presidents and administrators at public institutions we visited articulated a need to increase private support either to compensate for declines in state funding for their institutions or for projected declines in enrollment. In several states, the new focus on fundraising has also been influenced by changes in state policy. Heretofore, many states and/or state higher education systems forbade public institution from soliciting private sector donations. Recently, several states have revoked such restrictions, and the president of one state institution we visited noted that the state is now requiring the institution to generate 10% of its revenue from private donations. Although the institutions we visited were only beginning to develop and implement strategies for actually increasing such support many appeared confident that they would be able to translate their visions into reality although they noted way that need changed the job of the president. The president of one public comprehensive university, who had been steering the institution for 7 years noted that he first assumed the position, fundraising was not even included in the job description, but that now he spends a significant amount of time fundraising.

The public institutions rely on the private sector giving to fund at least part of the construction of new facilities. Administrators of public institutions in all the states we

visited were acutely aware of the fact that the state either would not or could not provide for the construction of new facilities. Such capital constraints were especially important for institutions with plans to grow. These institutions felt the need to raise private support even more strongly. The need for private funding for facilities construction appears to be widespread. In the state of Florida this is encouraged through an explicit state policy whereby the state matches private donations to universities for construction purposes.

Whereas public institutions stressed the need for private donations for facilities construction, private institutions seemed more concerned about raising money to build the endowment. Because it has the potential to provide a steady stream of income to support the activities of the institution, increasing the endowment is considered to be the primary alternative to raising tuition. The presidents of several P and PS private institutions we visited, particularly those that operate in a regional or local market, expressed a great deal of concern over what they view as new competition for private donations from public institutions. One president remarked that it did not seem appropriate for the public to ask local business and private individuals for donations when they and all other state residents were already “donating” to the institution through taxes. This is an important public policy question which deserves attention as it will likely have profound implications, particularly for the less prestigious regional institutions.

The reasons for such concern are clear. Private donations are important in private institutions, particularly at liberal arts institutions. Table D-6 reflects the fact that

Table D-6: Importance of Private Source and Endowment Revenue

Type of Control	Type of Institution	Fraction of Total Revenue From Endowment	Fraction of total Revenue from Gift, Grant and Contract Earnings
Private	2YR	1.1%	6.1%
	ART	5.7%	8.1%
	BUS	1.0%	2.3%
	C1	3.0%	6.7%
	C2	2.2%	8.5%
	D1	2.5%	5.6%
	D2	4.6%	7.0%
	ENG	8.6%	10.3%
	HLT	1.9%	5.1%
	LA1	11.9%	11.0%
	LA2	4.0%	10.9%
	LAW	1.6%	2.1%
	MED	2.0%	8.5%
	N/A	0.1%	4.6%
	OTH	5.4%	6.7%
	R1	5.7%	10.2%
	R2	5.7%	11.9%
	REL	11.7%	35.8%
TEA	0.5%	22.4%	
TRI	1.1%	7.6%	
All Private Institutions		5.1%	9.5%
Public	2YR	0.1%	1.0%
	ART	0.0%	1.3%
	BUS	0.0%	0.0%
	C1	0.2%	2.0%
	C2	0.3%	2.1%
	D1	0.4%	4.2%
	D2	0.2%	4.4%
	ENG	0.0%	4.8%
	HLT	0.0%	15.1%
	LA1	0.4%	4.4%
	LA2	0.3%	1.9%
	MED	0.4%	5.5%
	N/A	0.0%	0.1%
	OTH	0.0%	0.4%
	R1	1.1%	6.2%
	R2	0.7%	5.3%
	TEA	0.0%	1.7%
	TRI	1.4%	5.5%
All Public Institutions		0.6%	4.1%
All Institutions		2.2%	6.1%

private donations account for about 20% of the expenditures of these institutions. For other private institutions, the fraction is smaller but still significant. Although there is no systematic evidence of a trend, major capital campaigns appear to be occurring with greater frequency. This is an area which certainly warrants further research. Almost every private institution was in the middle of a capital campaign to build the endowment, many of the institutions mentioned that the frequency of these campaigns was increasing dramatically. One institution even commented that they would be beginning another campaign as soon as they finished the current one.

6. Impact of Strategies on the Success of the Sector

The impact of increased attention to fundraising. On the one hand, private giving to higher education allows institutions to provide more services to constituents without increasing tuition. The unanswered questions are how much does it cost the institution to generate these flexible resources and to which constituent groups do these additional benefits accrue. The income generated from Harvard's endowment, which amounts to nearly \$400,000 per student in 1995, allows Harvard to provide students with education and services that it would not be able to provide were it to fund operations only from tuition and research revenue. However, it is also likely true that the faculty and staff reap benefits from this income through higher salaries and greater perquisites. In addition, private giving to higher education does fund activities that otherwise would not be provided by the institution.

However, a discussion of the implications of fundraising strategies for the higher education sector as a whole would not be complete without a discussion of the link

between fundraising strategies and the other strategies being pursued by the institution. In particular, fundraising appears to be a key element of the strategy of PS institutions for moving into the P category, and for P institutions to remain in that position.

The need for P institutions to attract private giving in order to maintain their status as P institutions was emphasized at all the P institutions we visited. In all cases the institutions were trying to increase private giving because other sources of revenue (federal research money, state appropriations or tuition) were either stable or declining. The relationship between the market for private giving and other markets is particularly vivid in primarily undergraduate P institutions which draw a significant proportion of their revenue from tuition. At one liberal arts college in the Midwest, increasing the endowment was articulated a critical element of the institution's strategy. This school was struggling to maintain and even improve the quality of the student body in the face of rising tuition and declines in its traditional in-state population base. Recognizing that many of the costs of operating the institution are fixed as opposed to marginal, they wanted to avoid the temptation of "dipping deeper in the applicant pool" in order to fill their class. Their current plan was to draw high quality students from more diverse backgrounds and from other states to the institution by offering them attractive financial aid packages. Administrators claimed that this method had been quite successful—that they had been able to attract students away from Ivy League colleges which heretofore have opted not to match such offers. Discussions with students supported this contention.

In spite of the financial stresses placed on this institution by the current environment, it was not taking aggressive measures to control spending. Positing that an attractive campus is a crucial element in an institution's ability to attract students, the board of trustees determined that this was not the time to be cutting costs and asked the administration to consider what discourages students from coming to this school. Administrators came up with a list and, the board approved a \$12 million "up front investment" in quality of life improvements such as student union and dorm renovations. In addition, the school has set up a \$5 million venture capital fund to promote local business in order to improve the small town in which the institution is located. The board of trustees of this institution had given the president permission to take larger payouts from the endowment over the short term to get things started, but stressed that over the long term a larger endowment would be required to sustain such a strategy. Administrators freely acknowledged that the success of this strategy hinged on their ability to stage successful capital campaigns.

PS institutions were looking to capital campaigns to provide them with the investment capital they need to move into the P category. However, whereas P institutions have the prestige that tends to build donor trust and attract private giving, PS institutions do not. An administrator of one public PS research university even acknowledged that their institution was not sophisticated enough to attract major private donations. We found that in general, PS institutions have to be more entrepreneurial in generating the private giving. One hybrid institution we visited was comprised of extremely R-like graduate programs and an undergraduate program (and certain

graduate programs) which had recently moved into the P category. This institution had been using surpluses from "market oriented" graduate programs to subsidize its undergraduate program in order to build its prestige. Having achieved a certain level of prestige, this institution is now focusing on capital campaigns to grow the endowment. Endowment revenue and other private giving will then be used to support the undergraduate program thus eliminating the need for such cross-subsidies and improving the competitiveness of the R-like programs.

Fundraising did not appear to be such an important strategy among the R institutions we visited. While these institutions were certainly interested in attracting gifts and grants, their institutional strategy did not depend on them so that gifts and grants were in some sense treated as windfall revenue. For example, one R liberal arts college had received a \$750, 000 grant to support undergraduate education in biology. This institution does have an endowment, but uses all the income generated toward student scholarships. Another R research institution does solicit private donations for the construction of new buildings, thus linking specific projects but not the overall institutional strategy to fundraising success. R institutions appeared to be much more focused on developing partnerships with businesses or expanding their market-type interactions with the private sector and generating flexible revenue for the institution in that way. These strategies will be discussed in subsequent chapters.

Institutions also turn to private giving to bail them out of financial crises. It is frequently noted that whereas it is commonplace for firms to go out of business in the private sector (and for new businesses to be created) there is relatively little entry and

exit in the higher education industry. Indeed, only 346 institutions (312 privates) have closed between 1969-70 and 1992-93 (NCES). In the course of our study, we visited an institution that was recently bailed out by a private organization after it had spent its endowment in order to survive. If not for the bailout, this institution would have likely been forced to close its doors. The president of this institution noted that it made sense for this organization, which was trying to develop a presence in higher education, to bail out an existing but financially troubled institution rather than try to create one on its own from scratch. As part of the bailout agreement, the donor organization appoints half of the members of the board of trustees, and hence has some input into the choice of administrators; thus while they don't control the institution, they certainly have some influence over the institution's activities. This may be an effective strategy because the start-up costs of opening a university, attracting students, achieving accreditation, etc. are enormous and this provides a significant barrier to entry. Reputation and name recognition are important assets—more valuable in some cases than the bricks and mortar of the institution.

With the exception of one research university which has relatively low rates of alumni participation in annual giving programs, private institutions did not mention alumni giving as a potential source of *growth* in private giving. Indeed, most private institutions mentioned specific challenges they face in trying to even maintain current levels of such giving. However even if alumni donations become a less crucial element of financial strategies, alumni donations can also play a role in the institution's reputation through the U.S. News and World Report rankings. U.S. News and World

Report examines the percentage of living alumni who donated to the institution's annual fund and this counts for 5% of the score upon which the overall rankings are based. This may lead institutions to try to wage a broad alumni donation campaign, encouraging alums to donate even a small amount of money, in order to increase their ranking. An administrator at one institution P institution that was displeased with its position in the most recent rankings expressed concern over the inclusion of this factor in the mix, noting that while their students are generally very happy with their experience at this institution, they do not tend to donate money because they generally pursue careers in which they don't make much.

Religious support was not a major source of revenue, even for the religiously controlled institutions. One institution did receive a "living endowment" from church donations, which accounted for about 4% of their total revenue currently. However, this amount is based on church donations which are allocated to all the universities supported by this denomination. If donations decline (administrators noted a general decline in denominationalism in America), so would the amount of this "living endowment". As a result, this institution is trying to build its own endowment to guard against such scenarios.

Endowment management is an important issue for those institutions fortunate enough to have a substantial endowment. Administrators at one P institution noted that their institution was at a disadvantage in the undergraduate market because of endowment management decisions made in the 1970s. In the 1960s this institution had one of the largest per-student endowments among liberal arts colleges, but in the 1970s

expanded its program offerings and overall size too rapidly and at the wrong time. By 1980 this institution had an endowment that was 30% of what it would have been had it followed the strategies of its primary competitors. As a result, this institution must now ask students to assume a larger share of the cost of their education than these competitors do. Another liberal arts college placed a substantial share of its endowment in risky investments and has not earned the return it could have on its endowment in recent years. Administrators at several institutions expressed concern that institutions have become addicted to the stock market increases and wonder what institutions will do when the market falls.

Appendix E: Changes in Degree Production Over Time

This Appendix contains results of an analysis of changes in the degree production structure of U.S. Higher Education between 1970 and 1994. Figures E-1 through E-4 depict the degree production of every active college and university. In each figure, the institutions are sorted in order of production. So each point on the curve depicts a single institution's production. The area under the curve (shaded) equates to the total degree production in the United States.

The first two figures compare Bachelor's degree production in 1970 and 1994. The second two compare PhD production over the same period. The qualitative differences between the two degrees are striking. Bachelor's degree production increased fairly uniformly across institutions. The largest institutions in 1994 produce more than the largest in 1970. Relatively few new institutions began granting Bachelor's degrees over this period.

The pictures for PhD degrees show another story entirely. The largest producers of PhDs in 1970 and 1994 are just about the same size. The substantial growth in degrees is accounted for by many new producers and growth among the smaller producers.

The results of this analysis corroborate our characterization of prestige-seeking behavior in U.S. higher education. PhD production and the associated research funding are strongly linked to prestige. Since overall research funding was growing during this period, many institutions were able to enter the prestigious research markets. It is equally notable that the existing prestigious institutions did not appear to increase their

production of doctorates. Since they possessed prestige already, their inward-looking focus promoted them to remain more or less as they were. Prestige-seeking institutions ramped up performance of research, or started entirely new research programs.

1970 Bachelor's Degrees

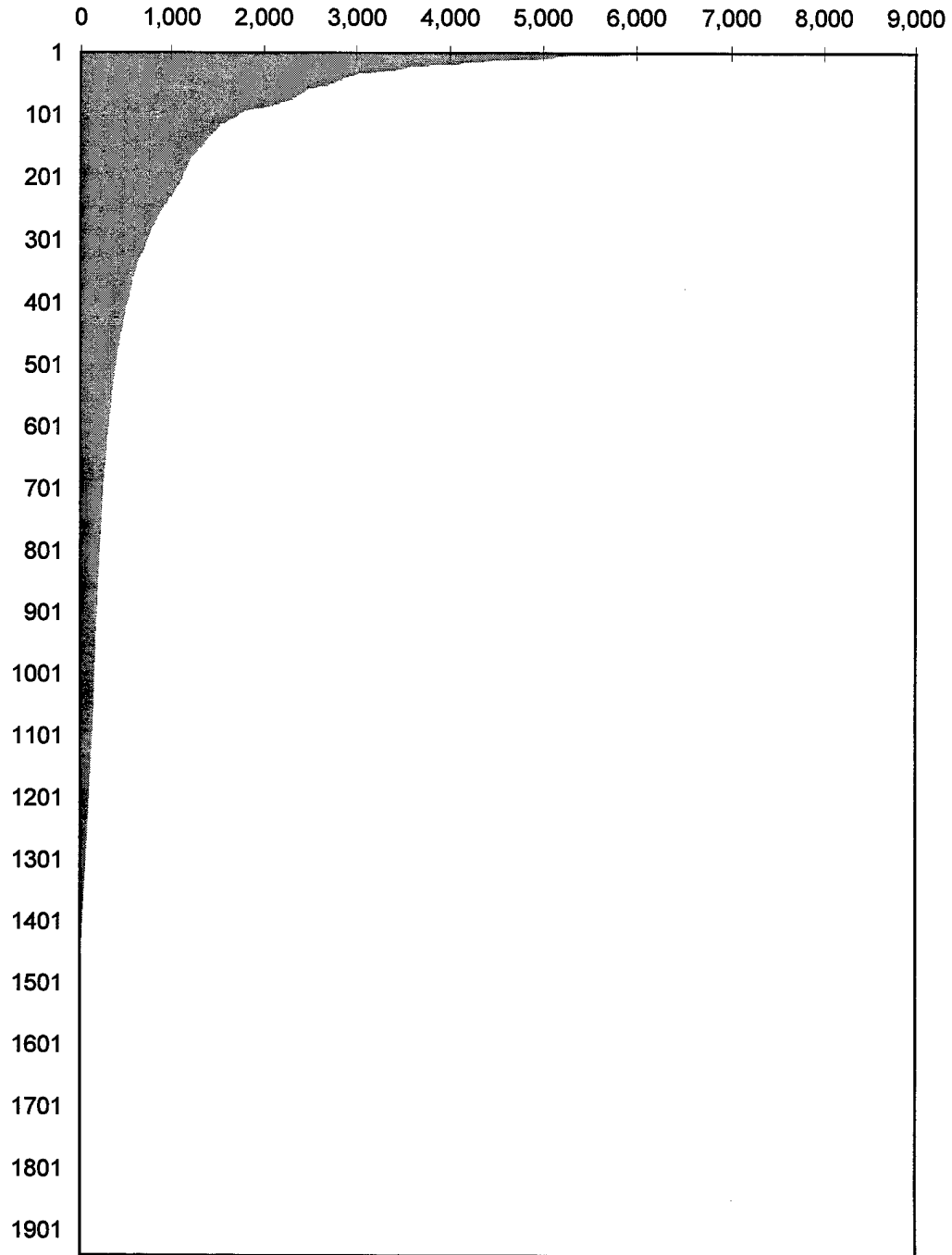


Figure E-1-Bachelor's Degree Production, 1970

1994 Bachelor's Degrees

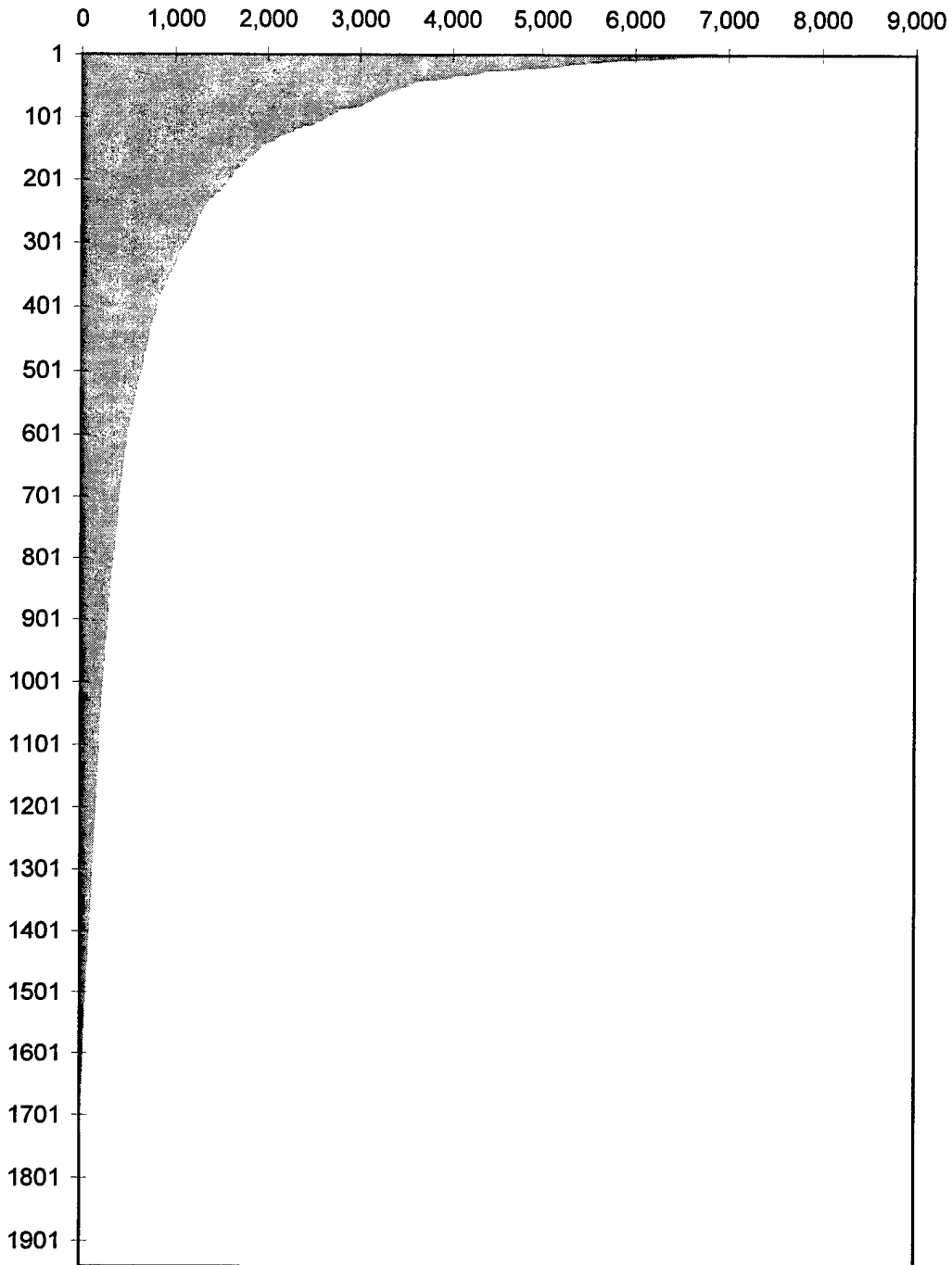


Figure E-2—Bachelor's Degree Production, 1994

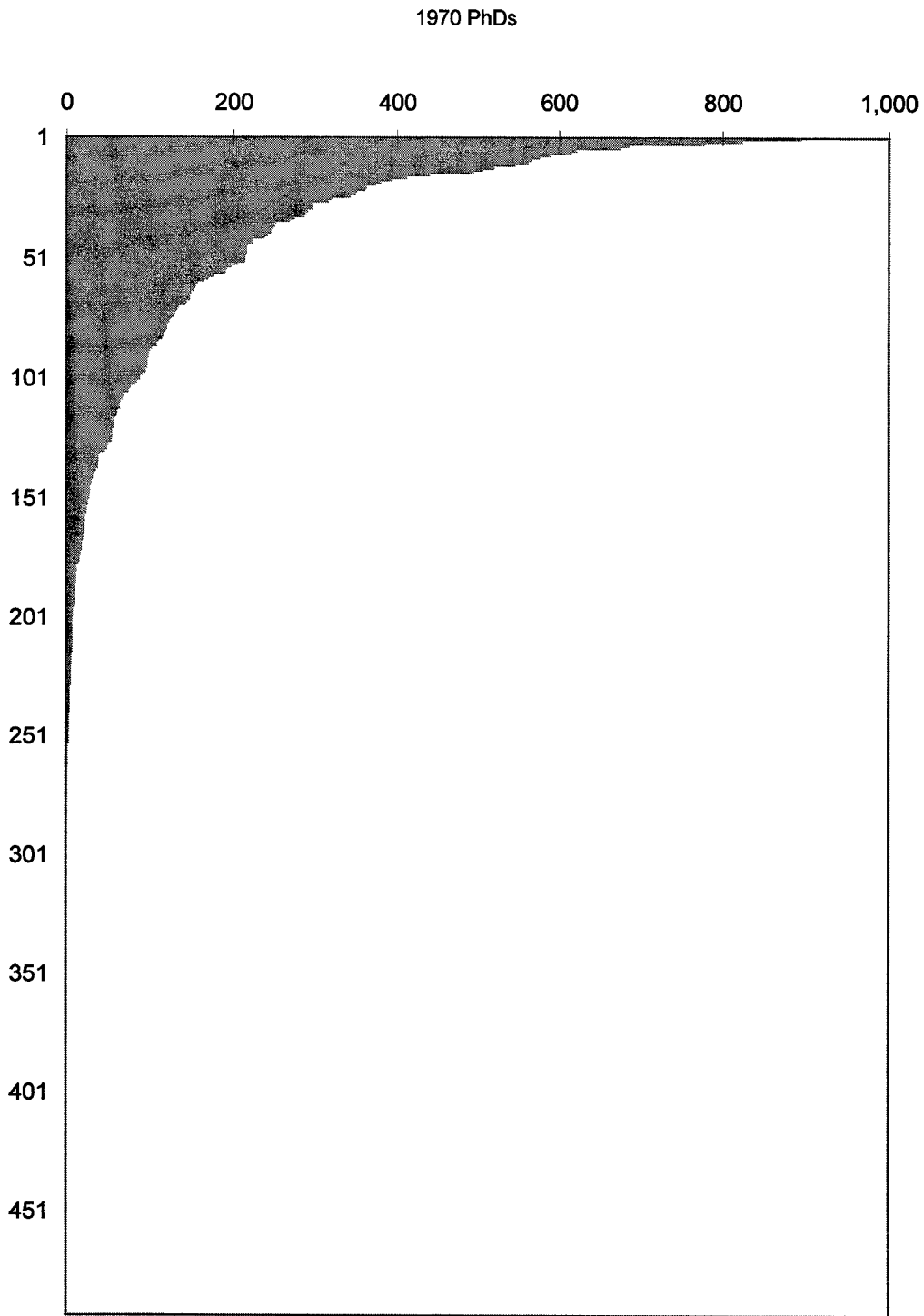


Figure E-3—PhD Production, 1970

1994 PhDs

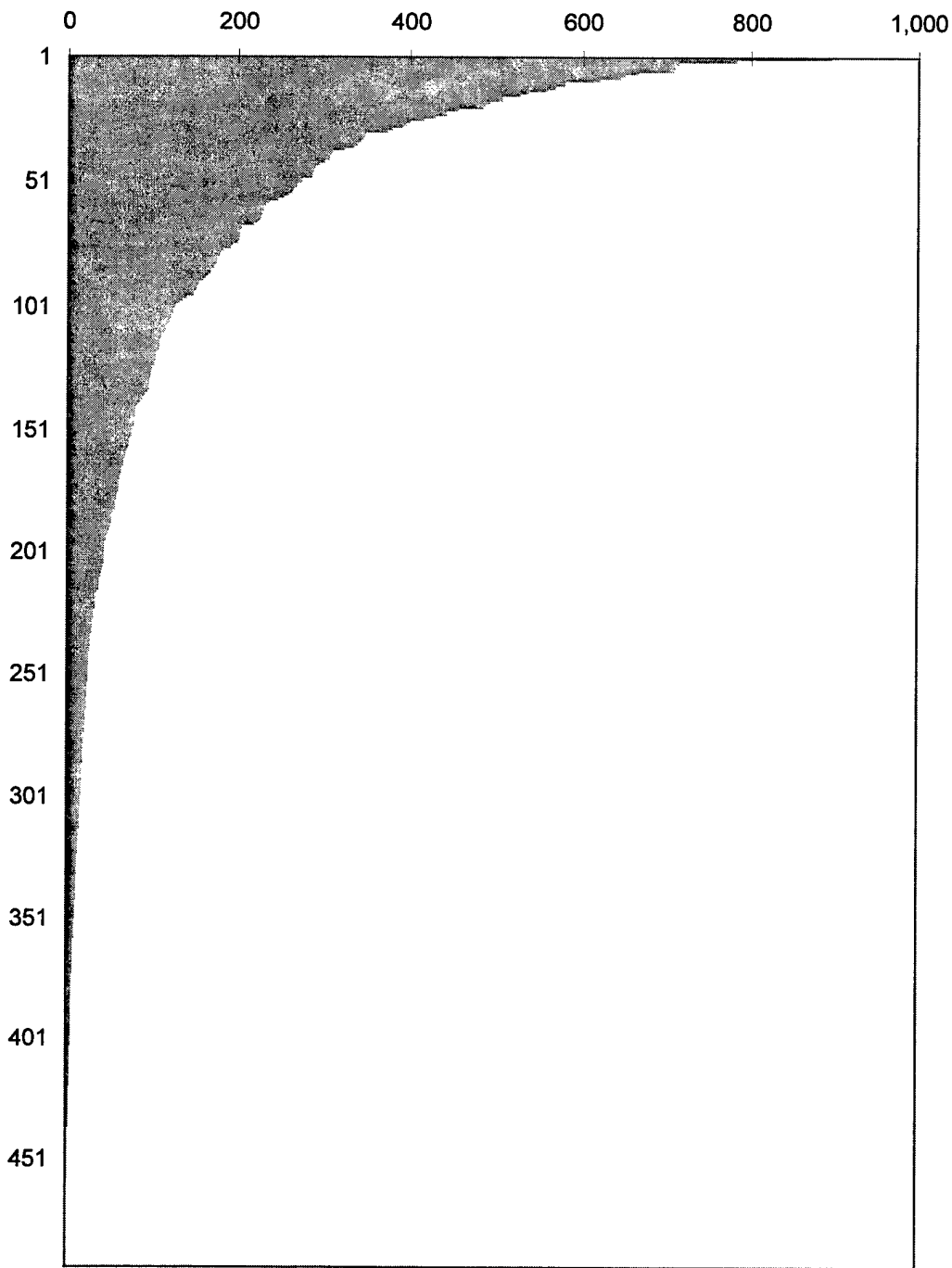


Figure E-4-PhD Production, 1994