

In Search of Strategic Perspective: A Tool for Mapping the Market in Postsecondary Education

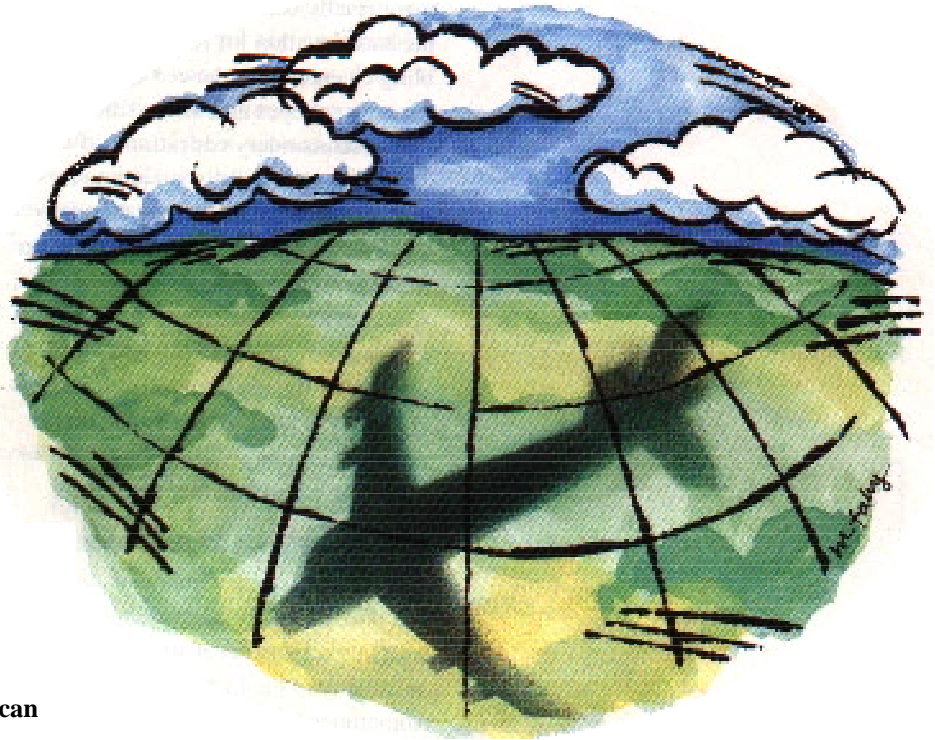
Higher education often sees itself as an enterprise so unabashedly complex that it can't be sorted, classified, or pigeonholed. In actuality, 20 years of public policy based on the precept that "student choice shall rule" has created a market for postsecondary education that can be readily described, even quantified.

New research from the National Center for Postsecondary Improvement (NCPI) provides a tool that institutions can use to describe that market, find their places within it, and identify what they need to do in the future.

Broadly applied, the theorem of Occam's razor holds that, while stories themselves are often complicated, the simplest explanation for a story's events is most likely the right one. Postsecondary education was once the exception that proved the rule, making a tidy explanation for the dramatic changes that have occurred over the last 50 years remarkably elusive.

Still, the facts of the story are often told. After World War II, the number and types of students pursuing a college education increased, as the number and kinds of colleges and universities expanded. Postsecondary education grew in its own *Field of Dreams*, believing "If we build it, they will come." Supported by unprecedented public investments in their facilities, research efforts, and instructional programs, institutions did build—and students did come, paying whatever price they were quoted in an effort to increase their own chances for personal as well as economic success.

Then, in the 1970s, institutions worrying that their expanded capacity had outpaced the demand for postsecondary education made demographics the watchword. Seeking to differentiate themselves in an increasingly crowded playing field, colleges and universities of every stripe became active marketeers in pursuit of the finite number of young people undertaking a four-year education. With the baccalaureate degree emerging as the standard educational credential for middle-class employment, postsecondary education also learned it could augment traditional-aged enrollments with those of adult learners returning to school for a degree or the kind of specialized job training that improves one's chances at work.



Beginning with this issue, The Landscape becomes the responsibility of the National Center for Postsecondary Improvement (NCPI)—a research center funded by the U.S. Department of Education's Office of Educational Research and Improvement (OERI).

NCPI's mission is to describe and analyze the changes taking place in postsecondary education, with the ultimate goal of helping institutions, policymakers, employers, students, faculty, and administrators navigate through this diverse and complex enterprise. The research presented in this issue emerges from our project on postsecondary student achievement and employment outcomes.

Patricia J. Gumpert
Executive Director, NCPI



These were also the conditions that, by the late 1980s, had created a true market for baccalaureate education, one shaped by student choices based on perceived outcomes. Occam's razor finally came to apply: the simplest explanation for the often troubling changes experienced by the nation's colleges and universities was that postsecondary education had become an industry fully subject to the pressures of an increasingly competitive market for enrollments. More than that—as the analysis presented in this special issue of *The Landscape* shows—this market can be readily described, even quantified, with implications for changing how institutions plan their futures and how public policy seeks to affect the postsecondary enterprise.

On Finding the Right Tools

The path to this understanding of the postsecondary education landscape as a market was surprisingly indirect—testimony to the fact that research sometimes takes unexpected turns. Eighteen months ago, as part of its efforts for the U.S. Department of Education's National Center for Postsecondary Improvement (NCPI), the Institute for Research on Higher Education at the University of Pennsylvania began developing a tool kit that individual colleges and universities might use to measure their impact on the subsequent lives of their graduates.

What became immediately apparent was that one design would not fit all—and that the traditional categories for aggregating groups of institutions (size, Carnegie Classification, control) were unable to explain the real differences in student outcomes observed in key national data sets documenting educational attainment and labor market outcomes.

Perhaps, the research team came to believe, there might be another, equally straightforward and efficient way of grouping institutions for the purpose of explaining the longer-term impacts of college attendance. The question that followed gave ultimate shape to the

research: To what extent are educational outcomes related to the nature and structure of the *market* for postsecondary education? The answer became a hypothesis positing the emergence of a segmented market in which an undergraduate education had become a commodity intrinsically linked to economic goals.

One “corner” of the market remained as before: traditional-aged students matriculating at largely residential campuses, seeking the kind of professional credentials that historically have guaranteed middle- or upper-middle-class status and economic security. In another corner was a harbinger of things to come: the emergence of user-friendly institutions that stress convenience and value for students of a variety of ages, those who increasingly mix work and learning while pursuing their degrees one or two courses at a time.

Pursuing this hypothesis meant transforming the research task from a delineation of the range of educational outcomes to the development of a “market taxonomy”—a continuum, really, that clustered institutions and grouped their students.

Describing the Indescribable

The first step was to devise a sorting methodology that would place colleges and universities into relevant market segments that reflected the contours of the market itself. To accomplish this end, the analytic framework would:

- use a limited number of data elements readily available for most baccalaureate institutions;
- measure, in some combination, market position and product rather than resources, reputation, or the quality of the student body—the distribution of these latter characteristics was to be explained by the taxonomy rather than vice versa; and
- have intuitive meaning to institutions, students, and their parents, as well as to public policymakers.

The resulting analytic framework

came to depend on just four sets of information, each regularly supplied by most of the nation's four-year institutions:

1. Admit and yield rates, reflecting the aggregate demand for an institution's undergraduate education. (These data are drawn from electronic files for the College Board's *The College Handbook*, or Peterson's *Guide to Four-Year Colleges* and Barron's *Profiles of American Colleges*, as substitute sources for information missing from the College Board, and are available in print form in the annual college guide publications of each of these organizations.)

2. Percentage of freshmen who graduate with a BA or BS in five years, reflecting the degree to which the educational experience provided by the institution is seen primarily as a period of continuous, full-time enrollment. (Data sources: College Board, or Peterson's and Barron's as substitute sources.)

3. Percentage of undergraduate enrollment that is part-time, reflecting the degree to which the institution accommodates students who have substantial commitments outside their pursuit of a postsecondary education. (Data sources: Integrated Postsecondary Education Data Systems (IPEDS), or the College Board as a substitute source.)

4. Ratio of number of BA/BS degrees awarded to total undergraduate enrollment, reflecting the degree to which the institution serves the one-course-at-a-time or "spot" market for postsecondary education. (Data sources: IPEDS, or the College Board as a substitute source.)¹

The next step was to divide institutions into market segments by calculating a "demand score"—the key element for measuring *market position*—for each of the 1,216 baccalaureate institutions with sufficient data and a full-time undergraduate enrollment of at least 300 students. (The actual construction of the "demand score," as well as the other measures used in the taxonomy, is represented at the end of

this *Landscape* in a worksheet that institutions may want to use to determine their own market segments.)

One way to conceptualize what the taxonomy tells us about the structure of the market for baccalaureate education is to visualize it as a paper airplane (Chart 1).

The right wing (Segments 6 and 7) represents the *convenience/user-friendly* part of the market and is served, within the population of baccalaureate institutions, by colleges and universities that teach large numbers of part-time and intermittent students who may or may not be seeking a degree. Colleges and universities serving these market segments are often those most

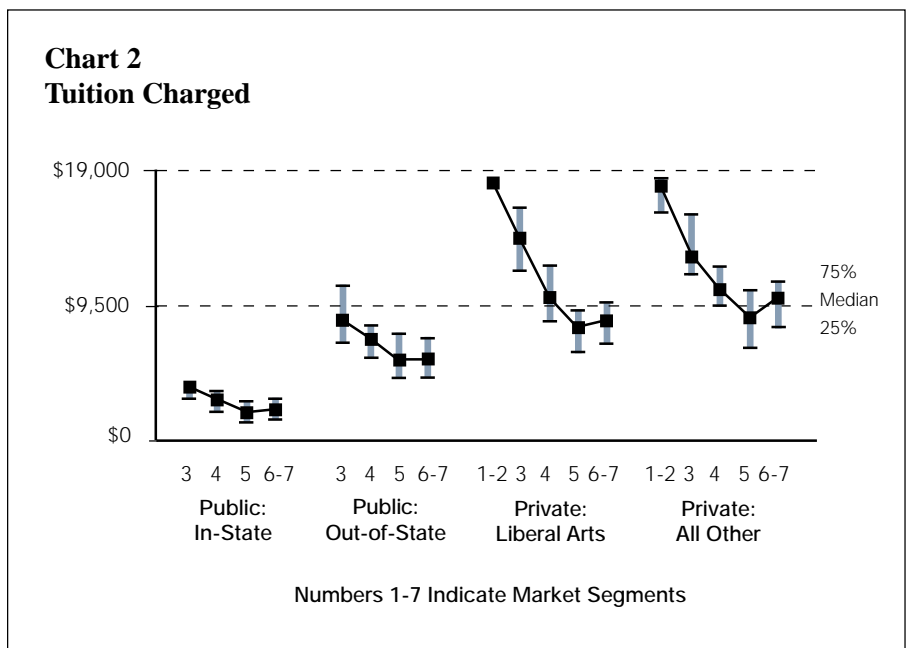
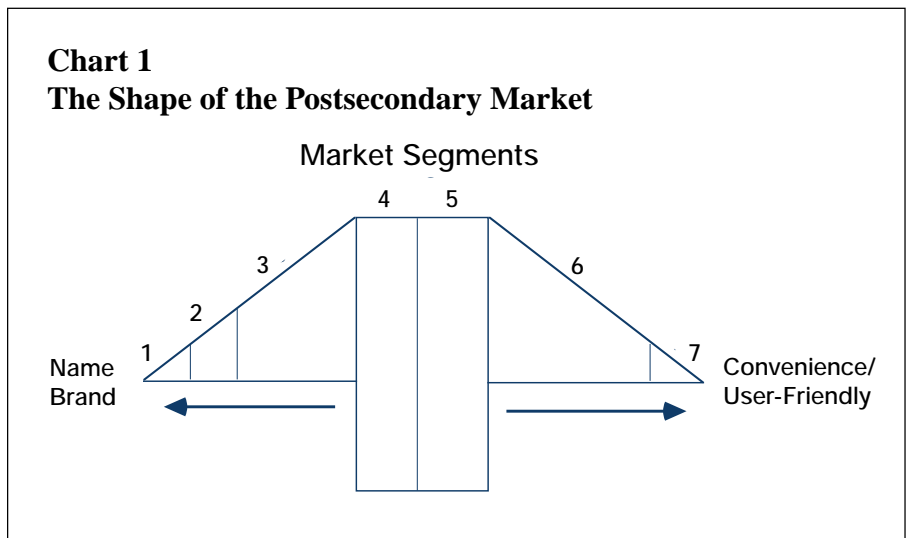
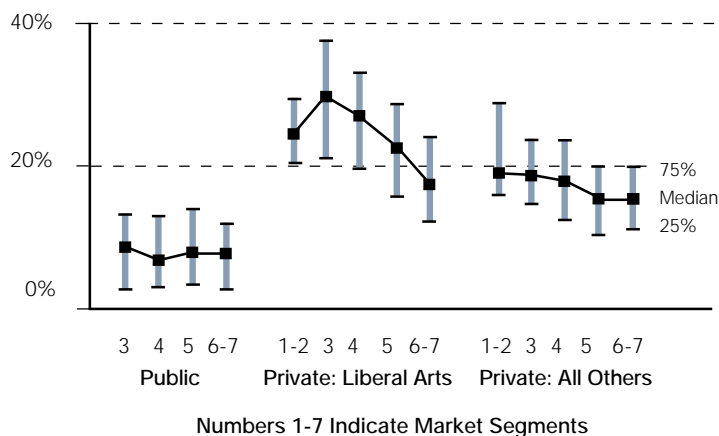


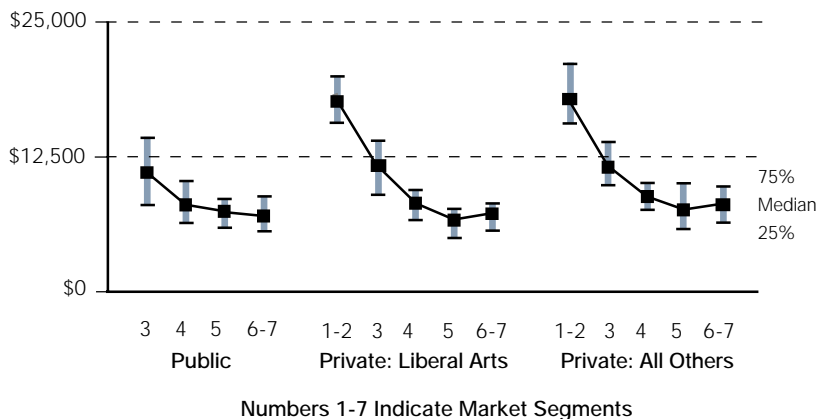
Chart 3
Institutional Financial Aid as a Percentage of Tuition Revenue



edge and skills. Here, the far edge (Segment 1) comprises a limited set of highly selective, very competitive institutions that provide their graduates with a kind of *medallion*, whose principal labor market value is realized upon matriculation to a graduate or professional school. Institutions in the next most competitive and selective sector of the market, Segment 2, similarly provide a *medallion* for entry to graduate and professional school, but do not have the same level of market demand. Segment 3 contains the bulk of the *name brand* institutions: selective colleges and universities that graduate a large proportion, but not most, of their undergraduates within five years. It is within this segment that the competition between public and private institutions is fiercest and the economic stakes for the individual institutions the highest.

The airplane's fuselage represents the core of the market: that part in which some students seek *name brand* experiences, while others pursue a baccalaureate education on a part-time, often intermittent, basis. Most institutions in the core serve local or metropolitan markets. Within the fuselage, the institutions on the left, Segment 4, tilt toward *name brand*-styled programs; those on the right, Segment 5, tilt toward the *convenience/user-friendly* part of the market. What is most interesting about these institutions is their need to serve both kinds of learners simultaneously—never an easy task.

Chart 4
Net Revenue Per Full-Time Equivalent (FTE) Student*



*All students, including graduate and graduate professional

likely to experiment with new programs, and to learn new ways to improve productivity, frequently through the extensive use of adjunct faculty.

The airplane's left wing represents the *name brand* part of the market. The education within this sector conforms to the classic idea of a four- or five-year baccalaureate career, which is often seen as preparatory work for graduate and professional education. In these segments, undergraduate education is seen as a "time away from home" and an experience that is as much about values as it is about knowl-

Testing the Taxonomy

What markets do first and foremost is set prices. The first question to ask, then, is: Are there substantial differences across the market segments in terms of the tuitions charged? Indeed, prices do vary by segment, lining up according to the most basic rule of thumb—the greater the demand, the higher the sticker price. The median undergraduate tuition charged by the 52 private institutions in Segments 1 and 2 (there were no public institutions in Segment 1, and only three public

institutions in Segment 2) for the 1994-95 academic year was just under \$19,000; the median sticker price for private institutions in Segment 3 was 75 percent of that charged in Segments 1 and 2; the median sticker price charged by Segment 4's private institutions was even less.

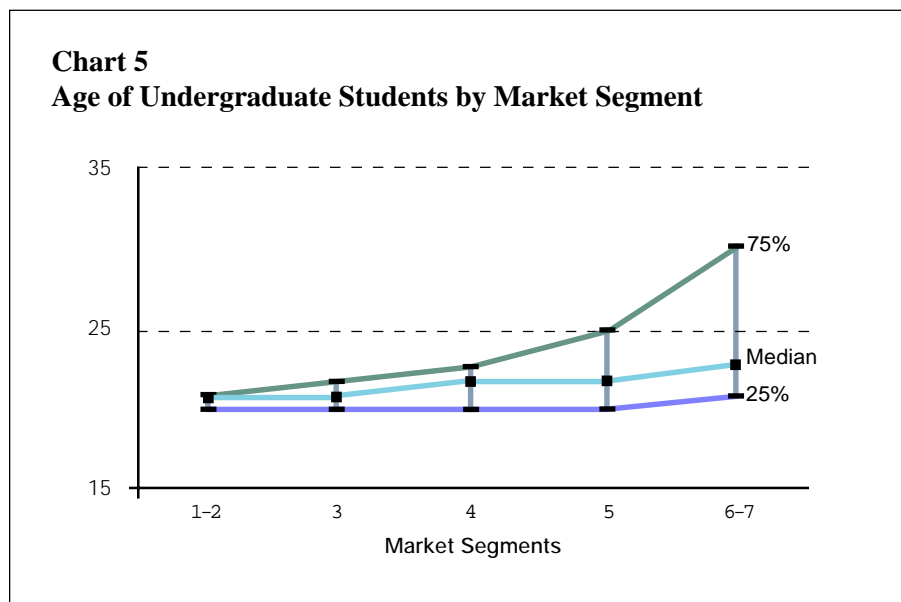
Chart 2 graphs the range of tuitions charged by colleges and universities in each of the segments for two classes of private institutions (Private/Liberal Arts and Private/All Other, which are principally research and comprehensive universities). Also represented in the chart are both in- and out-of-state tuitions for public institutions.² The graph reflects the extent to which public out-of-state tuitions are differentiated by segment—unlike the relatively flat structure of the public in-state market, in which one price is often charged for all institutions, regardless of the segment in which they compete. Instead, public out-of-state tuitions mirror the more pronounced price distinctions of the market for private postsecondary education across the seven segments.

In all but the Public/Out-of-State group, there is an “upturn” in the *convenience/user-friendly* part of the market, Segments 6 and 7. In the Private/All Other category, this upturn is substantial, suggesting that institutions in this corner of the market are learning how to price their educational offerings in such a way that they yield more revenue per student than institutions serving the core of the market.

For many students and families, it is not the sticker but the net price of a college education that matters, and Chart 3 graphs how much of tuition revenue is returned to students in the form of institutional financial aid. Within the public sector, discounting remains relatively low and undifferentiated by market segment. In the private sector, however, the differences are again substantial, particularly between private liberal arts colleges and all other private institutions competing for the same students in the same market

segment. Segment 3 private liberal arts colleges appear particularly vulnerable, with more than half of the institutions in the segment discounting their tuitions by 30 percent or more. The liberal arts colleges in Segments 1 and 2 discount tuitions at a higher rate than corresponding private universities. The wide variance around the median in each of the market segments suggests

Chart 5
Age of Undergraduate Students by Market Segment



substantial experimentation with how to set “net” prices (that is, the sticker price less financial aid).

The other “net” of importance is net revenue per full-time equivalent (FTE) student. Chart 4 graphs net revenue per FTE student, which includes all students, even graduate and graduate professional. Net revenue includes tuition revenue, endowment income, and public appropriations for instructional purposes—all less institutional financial aid, both restricted and unrestricted. The shape of the distributions is almost exactly the same for the three institutional groupings (Public, Private/Liberal Arts, and Private/All Other), suggesting that these categories are substantially less important than previously thought in explaining the differences among colleges and universities. It also reflects a surprisingly level playing field for all institutions that compete in the same market segment.

Chart 6
Distribution of Undergraduates by Ethnicity and Market Segment

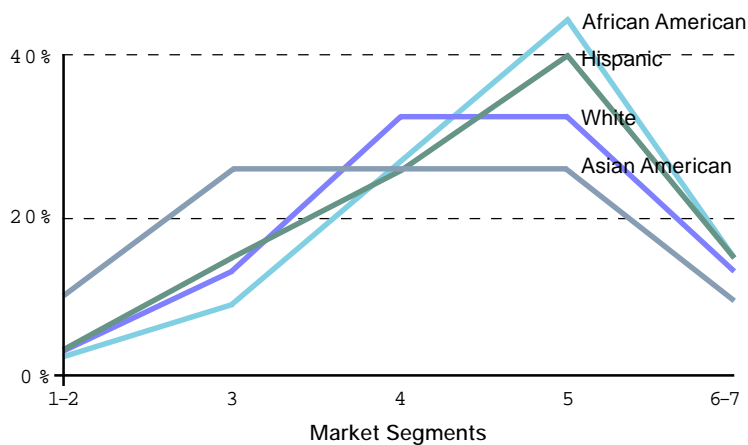
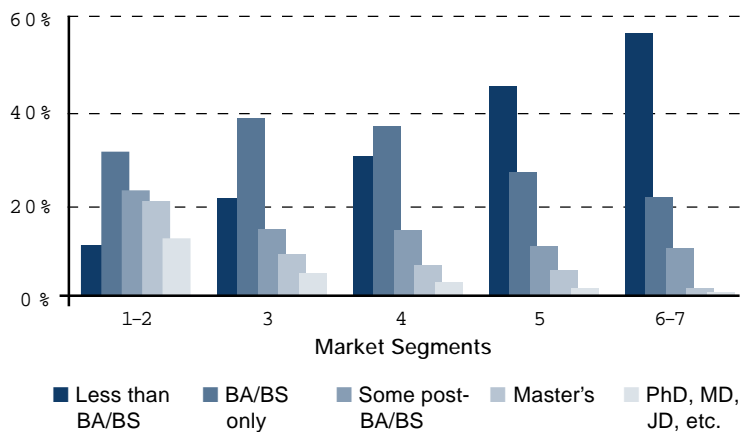


Chart 7
Educational Attainment 10 Years after High School, by Market Segment of Institution First Attended*



* Bars may not sum to 100 percent. The students with missing data were excluded from this chart.

Again, there is something of an upturn among the private colleges and universities serving the *convenience/user-friendly* part of the market, suggesting these institutions have adopted practices or learned lessons that have eluded institutions in Segment 5. These latter institutions may want to think about new pricing policies and practices—including new approaches to discounting—that are more appropriate for students who pursue a postsecondary education on a part-time or inter-

mittent basis.

It's Students That Matter

Markets are sets of transactions between buyers and sellers. The structure of a market for a particular set of goods is defined by the number and characteristics of the enterprises that compete with each other for customers and sales—in postsecondary education's case, for students and enrollments.

Two key student characteristics map to the continuum that underlies the market taxonomy. The first is age (Chart 5). Segments 1 and 2 are almost exclusively the preserve of the young—and Segments 3 and 4 to a slightly lesser extent. Segments 5 through 7, however, are increasingly characterized by older students. These data—drawn from the *National Postsecondary Aid Study* (NPSAS) conducted by the National Center for Education Statistics—may actually under-report older students' participation in postsecondary education, particularly those who enroll in courses as general, as opposed to matriculated, students. Even in the reported data, however, one out of every four undergraduates in the institutions that compose Segments 6 and 7 was more than 30 years old. On the other hand, the median age does not vary substantially across segments, reminding us that the *convenience/user-friendly* market is one that serves both the young and not-so-young alike.

The data detailing the distribution of undergraduates by ethnicity present an equally striking signature (Chart 6). In 1994-95, nearly half of African-American students and 40 percent of Hispanic students were enrolled in Segment 5 institutions. Altogether, 62 percent of African-American and 55 percent of Hispanic undergraduate enrollments were in the *convenience/user-friendly* wing of the market. The comparable figure for white undergraduates was 49 percent, and for Asian-American undergraduates, just 37 percent. More generally, the enrollment of Asian Americans is shifted toward the left, following the classic pattern of an

ethnic group seeking social and economic mobility through education.

These distributions take on added importance given the link between educational attainment and the market segment of the baccalaureate institution first attended (Chart 7). Ten years after high school, students who started at an institution in Segments 6 and 7 had less than a 40 percent chance of having completed at least a BA or BS degree. Students who started at an institution in Segments 1 and 2—for the most part proceeding directly from high school to college—had almost a 90 percent chance of having completed at least a BA or BS, and nearly a 60 percent chance of having already engaged in postbaccalaureate study. These data are drawn from the survey *High School and Beyond*, which has tracked a representative sample of members of the high school class of 1982 through three follow-ups: in 1984, 1986, and 1992.

The relationship between earnings and market segment extends the pattern, but in an unexpected way (Chart 8). Ten years after high school, the median annual salary and wages for holders of baccalaureate degrees without further education hardly differed across the first four segments, despite the fact that graduates of institutions in Segments 3 and 4 paid between 50 and 75 percent of the tuition paid by students attending institutions in Segments 1 and 2.

However, for members of the high school class of 1982 who had earned at least a master's degree by 1992, the payoff for college attendance proved to be quite different—not so much in the median wages earned, but in the compensation of graduates above the median of the distribution (Chart 9).³ What is clear is that the additional cost of attending a Segment 1 or 2 institution pays off by providing a substantially greater probability that graduates will enjoy an above-average salary—though nothing is guaranteed. If the student did not take the “medallion” earned by attending a highly competitive, highly selective institution and convert it into a professional post-

baccalaureate degree, the economic advantages expected to be attached to a Segment 1 or 2 degree did not materialize. It is the opportunity to catch the brass ring—a greater *probability* of catching it, to be precise—that is promised, not the prize itself.

Chart 8
Annual Salary/Wages 10 Years after High School:
College Graduates Without Postbaccalaureate Education,
by Market Segment of Undergraduate Institution

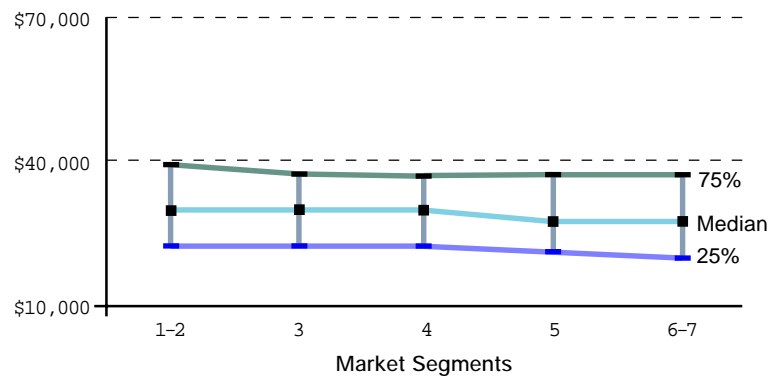
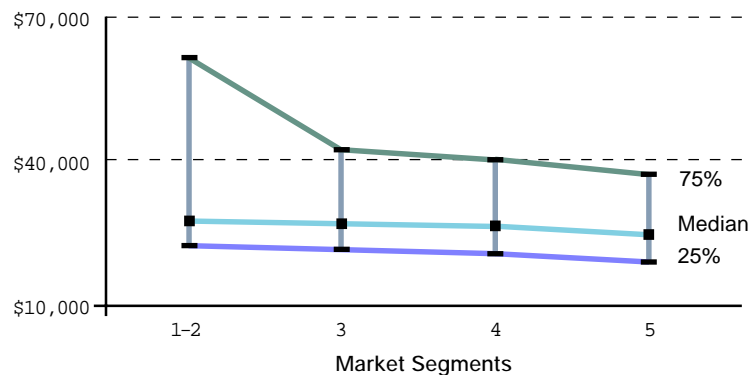


Chart 9
Annual Salary/Wages 10 Years after High School:
College Graduates with Postbaccalaureate Degrees,
by Market Segment of Undergraduate Institution



Labor market outcomes are not the only criteria by which the effectiveness of institutions should be judged. Civic engagement is increasingly being seen as something a successful college education ought to inculcate. In 1992, respondents were asked a series of questions about their civic engagement,

including whether or not they had voted in a recent election (Chart 10) and whether or not they were engaged in volunteer activities in their communities (Chart 11). In both cases, rates of participation for those who attended college followed, roughly, the same basic left-right ordering of the taxonomy itself.

In 1986, the members of the high school class of 1982 were also asked about their church-related (generally defined) volunteer activity, excluding participation in worship services (Chart 12). Here, too, the participation rates

for those who attended college were ordered, but in an opposite, nearly right-left direction. The students with the highest rates of participation in church-related activities started their baccalaureate educations in institutions in Segment 5. The lowest rates of participation were for students who attended Segment 1 or 2 institutions.

Taken together, these student attributes—age, ethnicity, educational attainment, wages and salaries, civic participation, and church-related activities raise a critical question: To what extent do institutions in different segments attract different kinds of students, and to what extent do these institutions contribute directly to the observed differences in outcomes? In other words, how much is postsecondary education a “screening” mechanism versus a means of bringing about “value-added” changes? The answer, no doubt, is that individual institutions do both in varying combinations. For some students, they are magnets; for other students, they are enablers; and for most students, they are accelerators of tendencies and interests that students bring with them.

Benchmarking in the Age of Ranking

At this point, a second quandary emerges. To many, the results derived from this clustering of institutions might look suspiciously like rankings. Although the taxonomy was specifically designed to classify institutions on a horizontal—not vertical—scale, the grouping of institutions into homogeneous market segments raises another question: How did the taxonomy compare with one of the most carefully watched accountings of postsecondary education institutions, the *U.S. News & World Report* rankings?

The market taxonomy largely replicated the groupings of institutions presented in the *U.S. News & World Report* rankings. Why do the two analyses correspond? Because what *U.S. News* annually reports as “quality rankings” of America’s best colleges

Chart 10
1992 Respondents Who Attended College: Percentage Voting in a Recent Election, by Market Segment of Institution First Attended

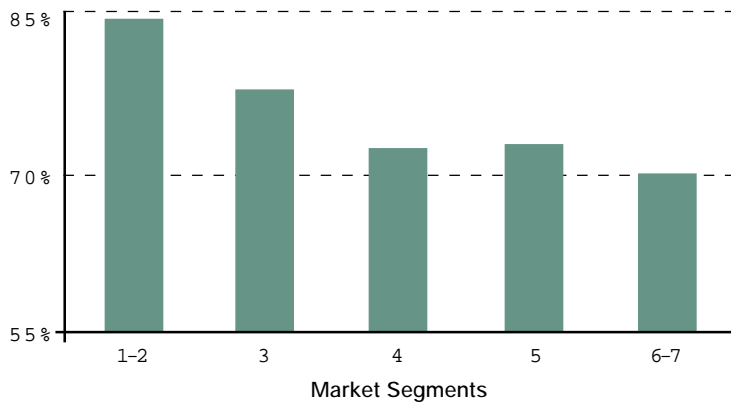
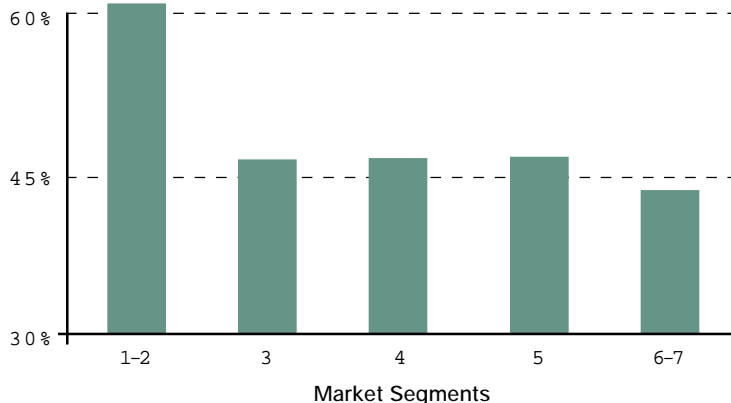


Chart 11
1986 Respondents Who Attended College: Percentage Engaged in Volunteer Activity, by Market Segment of Institution First Attended



and universities are instead indicators of market competition, principally among institutions in the *name brand* segments of the market.

What the taxonomy also provides is a description of baccalaureate education in its entirety. No longer is it necessary to give in to “rankings mania” by assuming that to be a good or quality institution, every college and university must look and act like a “top-ranked” institution. When post-secondary education is instead examined as a market, quite a different set of interpretations becomes possible—interpretations that ultimately reflect the differing missions that the market encourages institutions to pursue.

Not rankings, then, but a tool describing the entire market for baccalaureate education, is what can help shape institutional practice and public policy. Properly understood and employed, the taxonomy provides a framework for purposeful planning, yielding strategies that reinforce an institution’s strength in a given market—or even its ability to shift from one segment to another.

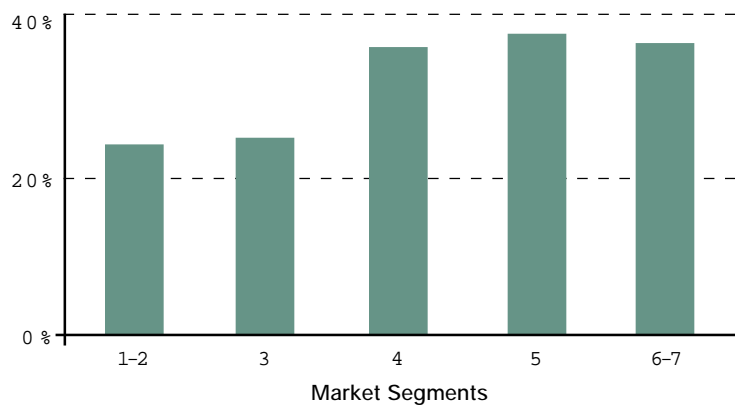
The taxonomy similarly serves as a framework for answering questions about price, cost, and access, and for assessing whether or not particular locales or markets enjoy a sufficient range of institutional choice. Finally, the market taxonomy provides a set of gauges for tracking changes in the market for baccalaureate education over time.

The taxonomy’s utility rests in part on its capacity to provide benchmarks for most of the characteristics institutions use when developing strategies. It is the taxonomy that documents how those characteristics are distributed across institutions and market segments—how institutional economies vary, how faculty are used and rewarded, and how resources are utilized. As with student outcomes, there is a distinctive ordering across the market, with institutions in the core segments standing midway between the market’s more pronounced edges. What follows is a series of displays presenting what,

in addition to the outcomes and financial indicators presented earlier, serves as an important set of benchmarks: the distribution of institutions, students, and three faculty characteristics (average salary, faculty-student ratios, and percentage of part-time faculty) across the market segments.

Chart 13 graphs the distribution of institutions across the taxonomy. From this perspective, the *name brand* market appears to be dominated by private institutions and the *convenience/user-friendly* market by public institutions. The core of the market, particularly in Segment 5, appears more evenly split.

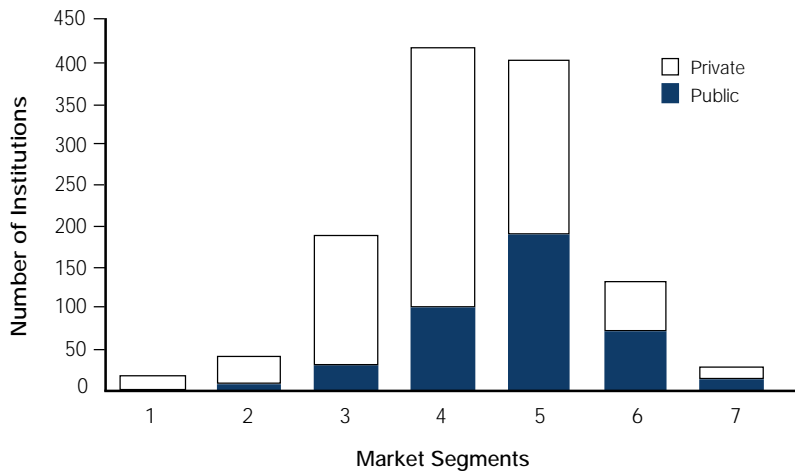
Chart 12
Percentage of 1986 Respondents Who Participated in Activities* Related to Religious Institutions, by Market Segment of Institution of First Enrollment



* The survey question asked about participation in church and church-related volunteer activities, excluding attendance at worship services; no denominations were specified.

When the focus is student enrollments, however, a different picture emerges. Chart 14 plots the number of undergraduate students attending public and private baccalaureate institutions in each segment. As in Chart 13, the far left wing of the market remains dominated by students attending private institutions, and the *convenience/user-friendly* wing by students attending public institutions. The key changes occur in Segment 3, which is more evenly divided, and Segments 4 and 5, which are dominated by students at-

Chart 13
Distribution of Institutions by Control
Within Market Classification



tending public institutions. It is in Segment 3 that the competition for students appears to be fiercest. At the same time, private institutions competing with public institutions in Segments 4 through 7 are likely to face a serious price disadvantage, leading to increased discounting, whose principal purpose is to attract sufficient enrollments.

The description of the market concludes with three faculty characteristics important for understanding how institutions differ across the market segments. The first is faculty salaries (Chart 15), which are again ordered across market segments within the three dominant sectors—Public, Private/Liberal Arts, and Private/All Other. Here, it is the highs and lows that are interesting—the substantial advantage enjoyed by faculty in private universities in Segments 1 and 2; the lower salaries paid to faculty in private colleges and universities in Segments 5, 6, and 7; the gap between faculty salaries for Segment 3 private liberal arts colleges and faculty salaries for the other institutions in the segment; and finally, the relative advantage enjoyed by faculty in public institutions in Segments 4 through 7.

Student-faculty ratios (Chart 16) mirror salaries, suggesting something

of a trade-off. In general, public institutions have higher student-faculty ratios than private competitors in the same market segments. Given that net revenue per student (Chart 4) is roughly equal across institutional sectors within a single market segment, the implication is that public institutions devote more of their resources to higher faculty salaries, to other-than-faculty expenditures, or to both.

The use of part-time faculty (Chart 17) adds a third dimension. In general, private institutions in Segments 1 and 2 are the least likely to use part-time faculty, while private institutions in Segments 5, 6, and 7 are the most likely. Public institutions follow the same general pattern, but lag behind their private competitors in all market segments in the use of part-time faculty. Given the fact that one-quarter of the private institutions in Segments 6 and 7 self-report that more than two-thirds of their faculty are part-time, one of the emerging characteristics of institutions serving the *convenience/user-friendly* market may prove to be the widespread use of part-time and adjunct faculty. These are faculty who, in some combination, are prepared to teach a variety of courses on relatively short notice, who are professionals teaching their practice specialties on a part-time basis, or who accept lower salaries than their full-time, tenure-track counterparts.

On Using the Right Tools

Because the taxonomy is a tool for first describing and then responding to the structure of the market for baccalaureate education, it serves no purpose to list the names of the institutions segment by segment. Indeed, if all the taxonomy does is satisfy the gossips among us, then the analysis fails. On the other hand, individual institutions will want to know and understand their market segment—that segment's students, deployment of faculty, and financial benchmarks, along with the specific challenges institutions in that segment face—in order to inform institutional practice. Policy-

makers, as well, can use the taxonomy to help answer the prevailing questions, particularly those of cost, that have dominated the public's attention.

Institutional Practice. The data necessary to determine an institution's market segment are readily available. At the conclusion of this *Landscape* are definitions and a worksheet for making the necessary calculations. Institutions may want to use the most recent data at their disposal, since they may have shifted segments over the last several years. For comparing an institution's performance to the segment benchmarks presented here, however, 1994-95 data must be used. The numerical data from which the charts in this *Landscape* are derived are available on the National Center for Postsecondary Improvement's Web site: <http://ncpi.stanford.edu>.

Once an institution has determined its market segment, the first questions to ask are: "Are we where we belong—or *think* we belong? How do we compare with our peers?" To answer those questions, the institution needs to check the benchmarks. Is its tuition close to the median for the segment? What about its faculty salaries? Student-faculty ratio? Utilization of part-time faculty? How many of its recent graduates sought a postbaccalaureate education within six years of graduation?

Once satisfied that it "knows" its segment, the institution needs to think through basic strategies. The most likely place to start is with the question of pricing, both sticker and net. Institutions that see themselves competing at a disadvantage within their current segment will want to ask, "What should we do to move up in our current segment or to shift to a segment more congenial with our aspirations?"

Institutions looking to shift leftward, toward the *name brand* part of the market dominated by full-time, traditional-aged students, will need to ask the "niche" questions: "Is there something we can do that others either do poorly or not at all?" Internally, these institutions will want to focus on

their retention rates, asking two basic questions: "Do those students who leave actually finish their degrees elsewhere? What can we do, either in terms of programs or external opportunities, to persuade them that their future lies with us?" Externally, given the dynamics of the market, the most likely niches that these institutions should develop will involve accelerated programs or programs linking undergraduate and post-baccalaureate professional education.

Chart 14
Number of Undergraduates Attending Public and Private Baccalaureate Institutions, by Market Segment

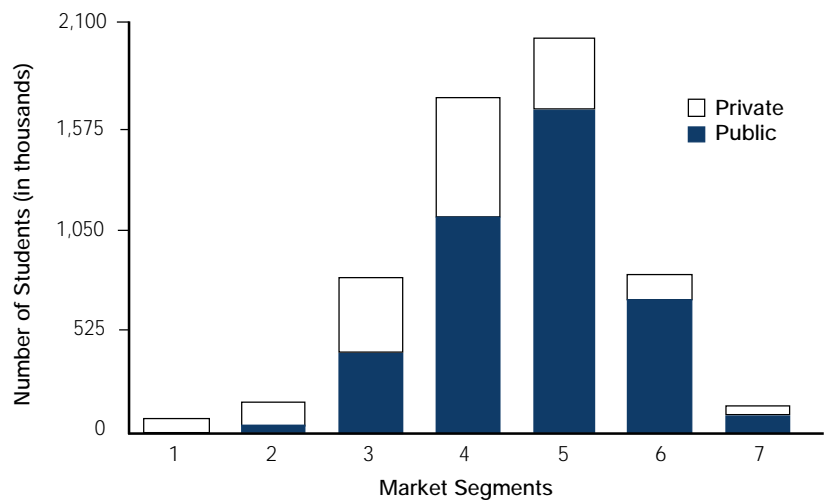
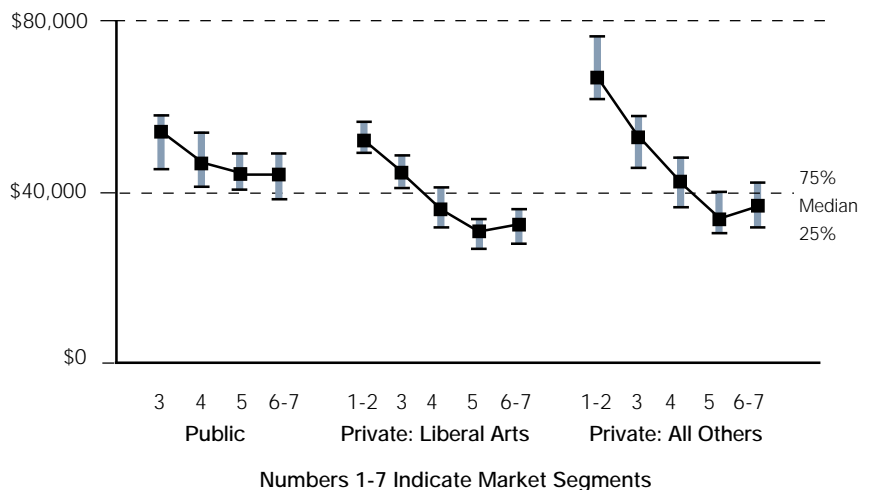


Chart 15
Average Salaries of Full, Associate, and Assistant Professors



On the other hand, institutions interested in strengthening their positions within the *convenience/user-friendly* part of the market will want to explore different kinds of questions—those more related to courses, to the role of distance and mediated learning, and to new ways of identifying short-

firms and enterprises that cannot choose between competing strategies. It is the dilemma of being “stuck in the middle”—a problem many institutions in the core or center of the market may feel they already face. Can institutions simultaneously serve both wings of the market—both traditional-aged, right-of-passage students primarily interested in a *name brand* kind of education most likely leading to further, postbaccalaureate study *and* students who pursue their educations one or two courses at a time, often at several local institutions? Will such different students in fact be satisfied with access to the same set of courses taught in the same way? Many of the institutions in the core of the market are large and diverse enough to serve both types of students, but will they in fact become two separate institutions, linked only by a common mailing address and the same president?

Public Policy. The makers of public policy are likely to look to the taxonomy to answer other questions. For the immediate future, the focus will be on cost and price, as the congressionally mandated National Commission on the Cost of Higher Education explores the causes and consequences of runaway tuitions over the last decade. As Chart 18 makes clear, institutions of every stripe increased their prices substantially faster than the underlying rate of inflation between 1989-90 and 1994-95. The average tuition at private institutions in Segments 1 and 2 increased by nearly \$3,000 (in constant 1994 dollars). Average tuition at public institutions increased less, having started with a lower base. In Segment 3, for example, public institutions increased their median sticker prices by more than \$1,400 (in constant 1994 dollars) for in-state students and \$2,300 (again, in constant 1994 dollars) for out-of-state students. Tuition increases were generally less in Segments 4 and 5 for all institutional categories. At the *convenience/user-friendly* end of the market, tuitions generally increased at a faster rate than

Chart 16
Ratio of Students to Faculty

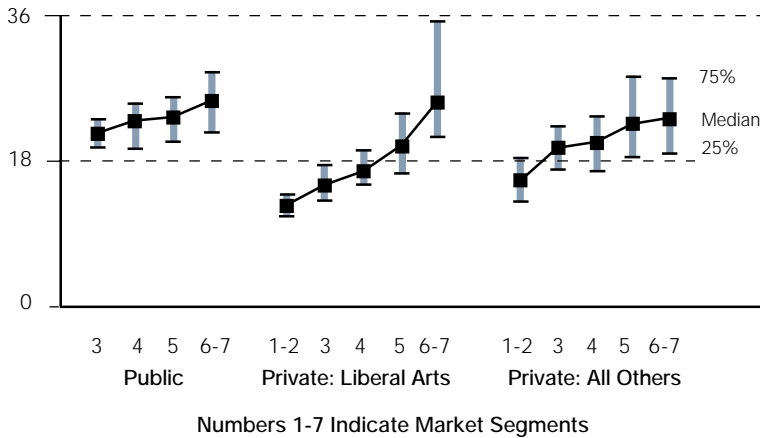
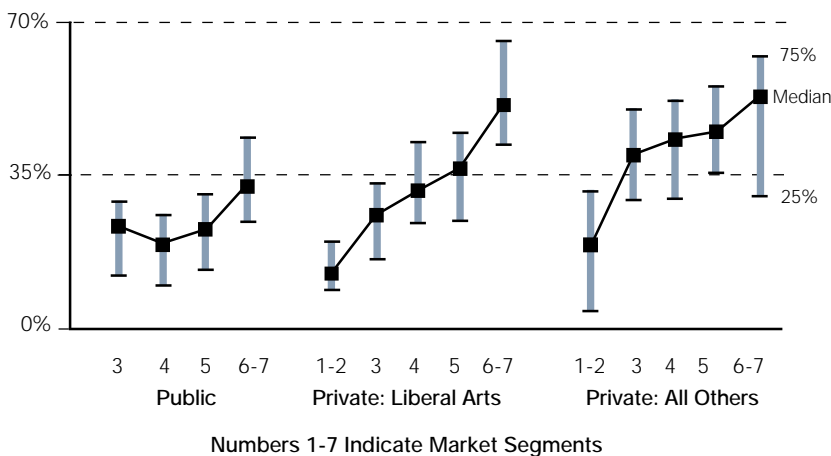


Chart 17
Percentage of Part-time Faculty



term trends within the growing market for vocational skills.

The economist Michael Porter, whose book *Competitive Strategy* is responsible for much of business's current focus on market structure and competitive advantage, worries about

in Segment 5, thus accounting for the upturns noted in Charts 2 and 4.

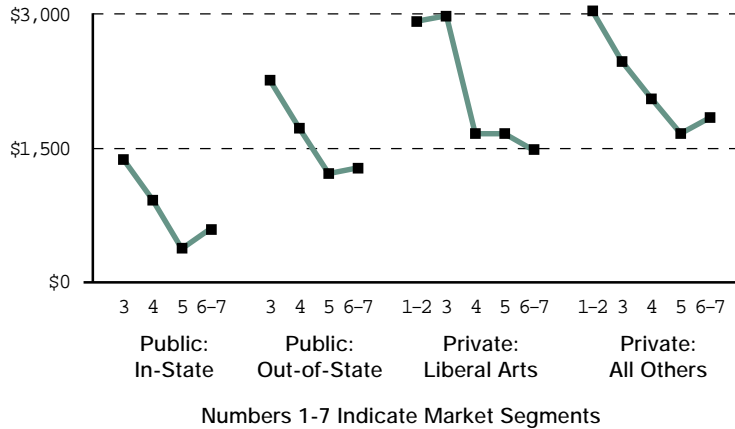
A different, and in some ways more interesting and important, picture emerges from Chart 19, which graphs these changes in terms of percentage increases. In the face of declining government appropriations, it was the public sector in which accelerated tuition increases were the most prevalent—more than a 60 percent increase in constant dollars in the median in-state tuition charged by public institutions competing at the *name brand* end of the market (Segment 3).

The private institutions in Segments 1 and 2 represent a special case of how the market works. Three factors most likely account for their more moderate percentage increases in tuition. First, they already charged hefty prices. Even greater price increases and the attendant publicity such charges would occasion might threaten the institutions' standing as charitable, tax-free organizations. And, it was not in their self-interest—to borrow a piece of economic jargon—to “clear the market” by charging the price that brought demand into equilibrium with supply. What gives these institutions extraordinary market position is the simple fact that so many more students want to attend them than the institutions have room to enroll. Excess demand allows these institutions to choose their customers carefully—those who will “do them proud” after graduation, thus furthering the demand for their unique brand of baccalaureate education. They are also the institutions in the best position to recoup forgone tuition revenues through endowment and gift income, demonstrating again the economic value of scarcity in a highly competitive market.

Perspectives on Mapping The Market

Indeed, what rules postsecondary education today is not profligacy—there are few wastrels and almost no villains, the media's portrayals notwithstanding—but markets and the

Chart 18
Increase in Median Tuition in Constant 1994 Dollars
from 1989-90 to 1994-95, by Sector and Market Segment

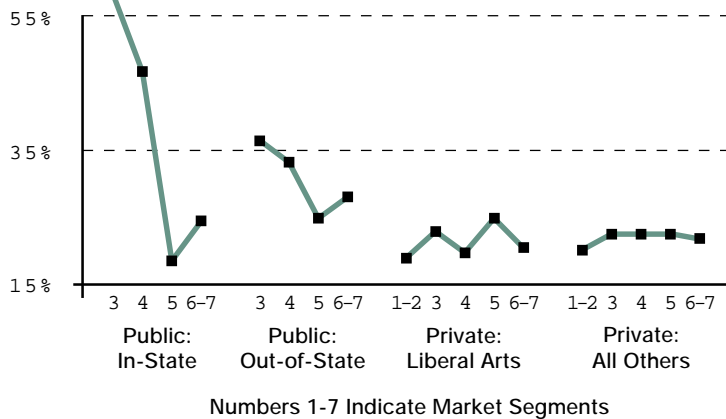


changing value of a college education. The demand for a college education has risen precisely because its possession has become an economic necessity, though, ironically, no longer a guarantee of economic success.

At the same time, the demand for postsecondary education has been transformed. Postsecondary education is no longer just for the young, no longer exclusively a rite of passage for 18- to 22-year-olds who attend college full-time for four or five years before starting careers and families of their own. Increasingly, today's college students are part of postsecondary education's new majority of part-time and intermittent learners who are older, frequently combine work and schooling, and, given the extraordinary range of institutions seeking their enrollments, are more likely to see themselves as shoppers buying their postsecondary educations one or two courses at a time. They have learned to search for the best price, the most convenient time, and the most appropriate place to take the next set of courses they think they require.

At the other end of the spectrum is the “brand name” part of the market, dominated by rite-of-passage students and the institutions they attend full-

Chart 19
Percentage Increase in Median Tuition in Constant 1994
Dollars from 1989-90 to 1994-95, by Sector and Market
Segment



time, living in on-campus residences and telling their parents and friends that they have “gone away” to school. What these students and their parents purchase are holistic experiences, including a variety of co-curricular activities, which are preparatory experiences in their continuing pursuit of extended educations.

However viewed, these are tough markets that are getting tougher—most institutions know well the difficulties they face if not the adaptations they

must make to ensure their own survival. What the taxonomy ultimately provides is a map that allows institutions to locate where they currently fall and to determine where they might go from there. Some may argue that the taxonomy takes Occam’s razor too literally, providing too simple an explanation for the complex set of issues that have driven the postsecondary enterprise. Others may argue that it is a constantly changing market, thus making any classification little more than a temporary expedient. But from the perspective of institutions in the trenches, those struggling to compete for resources and for enrollments, the market taxonomy will most likely represent a logic that rings true. □

*Robert Zemsky
 Susan Shaman
 Maria Iannozzi*

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Endnotes

- ¹ The market taxonomy is based primarily on data from the 1994-95 academic year. If data for that year were unavailable, data from other years were substituted. Only four-year institutions were included in the analysis; data collection for two-year institutions is under way.
- ² The number of public institutions in Segments 1 and 2 (a total of three) was too few to be included in this display and other analyses by institutional type.
- ³ The number of students from Segments 6 and 7 who had earned a postbaccalaureate degree within 10 years of graduation from high school was too few to be included in this analysis.

Market Segment Worksheet

You can use this worksheet—which replicates the method used to derive the market taxonomy—to determine an institution’s market segment, and then compare its financial and student data with the benchmarks of segment peers described in the article.

Placement in a particular market segment of the taxonomy is based on two sets of values, or “scores”: one measuring an institution’s position on the left edge, or *name brand* sector, of the market; and the other measuring position on the right edge, or *convenience/user-friendly* sector. The left-edge position is based on a calculated demand score (using admit and yield rates) from Box Z, and the percentage of freshmen matriculating in 1990 who graduated by the fall of 1995 from Box D. The right-edge position is determined

by the percentage of students enrolled part-time from Box N, and the ratio of the number of bachelor’s degrees awarded to total enrollment from Box P.

Follow the instructions at the top or bottom of each box to determine these values. To reproduce the analysis presented in this issue of *The Landscape*, use data from the 1994-95 academic year. You may also recalculate these values using more recent data to see if an institution has changed its market position.

After making all of the entries and computations, find the market segment by following the instructions on the next page. Compare both sets of calculated values with the entries in the tables provided. The tables contain the criteria used to sort institutions into their respective market segments.

<p>Number of Applicants for Fall 1994 Freshman Class</p> <p>A</p>	<p>Number of Admitted Students for Fall 1994 Freshman Class</p> <p>B</p>	<p>Number of Fall 1994 Freshmen</p> <p>C</p>	<p>Percentage of 1990 Freshmen Who Graduated by Fall 1995</p> <p>D</p>	<p>Full-time Undergraduate Enrollment, Fall 1994 (IPEDS)</p> <p>E</p>	<p>Part-time Undergraduate Enrollment, Fall 1994 (IPEDS)</p> <p>F</p>	<p>Total Undergraduate Enrollment, Fall 1994 (IPEDS)</p> <p>E + F</p>	<p>Number of Bachelor Degrees Awarded in 1994-95 (IPEDS)</p> <p>H</p>
<p>J</p> <p>Admit Rate</p> <p>$B \div A$</p>	<p>K</p> <p>Yield</p> <p>$C \div B$</p>	<p>1</p> <p>L</p> <p>For Computing Boxes S, T and W below</p>	<p>2</p> <p>M</p>	<p>N</p> <p>Percentage of Part-time Students</p> <p>$F \div G$</p>	<p>P</p> <p>BAs Awarded to Enrollment Ratio</p> <p>$H \div G$</p>		
<p>R</p> <p>Admit x Yield</p> <p>$J \times K$</p>	<p>S</p> <p>Excess Applicants</p> <p>$L \div R$</p>	<p>T</p> <p>1 - Admit Rate</p> <p>$L - J$</p>	<p>V</p> <p>(1-Admit) + Yield</p> <p>$T + K$</p>	<p>W</p> <p>Competitive Score</p> <p>$V \div M$</p>	<p>Z</p> <p>Demand Score</p> <p>$S \times W$</p>		

Worksheet continued on next page.

Market Segment Worksheet (continued)

Use the tables below to identify an institution's market segment. The column and row labels of both tables contain the criteria for determining the left-edge and right-edge market segments (or scores). Read the column labels from left to right, and the row labels from top to bottom. You will derive the institution's market segment from the entries in the table cells.

STEP 1: Determine your left-edge score.

Compare **Boxes Z** and **D** of the worksheet (on the previous page) with the column and row labels in the table below. Select the first column for which the value in **Box Z** meets the criteria; then find the first row for which the value in **Box D** meets the criteria. The cell at the intersection of the selected column and row contains the left-edge score.

5-Year Graduation Rate (Box D) ↓		Demand Score (Box Z) →			
		Greater than or Equal to 4.0	Greater than or Equal to 1.5	Greater than or Equal to 1.0	Less than 1.0
Greater than or Equal to	90%	1	2	3	4
Greater than or Equal to	85%	2	2	3	4
Greater than or Equal to	64%	3	3	3	4
Greater than or Equal to	50%	4	4	4	4
Less than	50%	5 or higher	5 or higher	5 or higher	5 or higher

Record your left-edge score in this box:

STEP 2: Determine your right-edge score.

Compare **Boxes N** and **P** of the worksheet (on the previous page) with the column and row labels in the table below. Select the first column for which the value in **Box N** meets the criteria; then find the first row for which the value in **Box P** meets the criteria. The cell at the intersection of the selected column and row contains the right-edge score.

Bachelor's Degrees to Under-graduate Enrollment (Box P) ↓		Percentage of Part-time Students (Box N) →		
		More than 35%	More than 25%	Less than or Equal to 25%
Less than or Equal to	10%	7	6	5 or lower
Less than or Equal to	15%	6	6	5 or lower
Greater than	15%	5 or lower	5 or lower	5 or lower

Record your right-edge score in this box:

STEP 3: Determine your market segment.

- If your left-edge score is "5 or higher," then your segment is determined by the right-edge score.
- If your right-edge score is "5 or lower," then your segment is determined by your left-edge score.
- If your right-edge score is "5 or lower," and your left-edge score is "5 or higher," your segment is 5.
- If your right-edge score is 6 or 7, and your left-edge score is 4 or less, then you should decide which segment (either 6 or 7) is most appropriate. In the analysis presented here, schools with a right-edge score of 6 or 7 and a left-edge score of 4 were placed in either Segment 6 or 7.

Record your final market segment in this box: