ABSTRACT

In past decades the planning process in higher education was based on certainties and assumptions about the source of funds, enrollments and enrollment distribution, levels of expenditures, and faculty. Today, none of these certainties remain. The uncertainties of today involve declining enrollments after 1980, society's capacity to effectively use the many college graduates projected between now and 1980, the future of private institutions, and even some recently established state and community colleges, and society's willingness to finance higher education. These uncertainties are examined in respect to their implications for the financing of higher education. The declining birth rate and the uncertain job market for college graduates have created a new demography and enrollment projections reflect this. This includes the shift in enrollment from private to public institutions. The ultimate victim of this uncertainty may be the diversity that has been the hallmark of the American higher education system in the past.

(JMF)
Dynamics of Higher Education

OLD ASSUMPTIONS AND NEW UNCERTAINTIES IN THE PLANNING PROCESS

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The following paper was delivered by Dr. Doi on Tuesday, July 10 at the 1973 NACUBO Annual Meeting in Chicago. Dr. Doi's presentation, addressed to the theme "Dynamics of Support for Higher Education," was basic to discussions held in subsequent concurrent sessions. These sessions dealt with the specific problems of complex public institutions, complex private institutions, single purpose public institutions, and single purpose private institutions.

Assume for the moment that business officers have been asked to develop for each of our respective states a ten-year plan for higher education, 1975-1985. What assumptions should we make to project total enrollments for each year, the enrollment distribution between public and private institutions, between four-year colleges and community colleges, between graduate and undergraduate schools, and the distribution among various fields? What assumptions should we make about changes in numbers of faculty members, changes in levels of expenditures, and changes in amounts from various sources of funding (especially from the federal government and student tuition)?

I have been asking myself these questions and find them mind-boggling, even though I am by no means unfamiliar with the techniques of developing ten-year plans and projections. Like many business officers, making various plans and projections has been a part of my professional duties. But those techniques, in particular the assumptions and data employed, were for a wholly different era of American higher education. It was an era in which enrollment growth was a certainty; and oftentimes when we did err in our projections, it was in the direction of underestimates.

None of these certainties are with us today. Practically the only certainty left is that higher education will exist a decade from now; but any statement we might make about enrollments, about numbers of private and public institutions, the distribution of enrollments in
programs, and the proportion of funds from various sources, must be attended by many qualifying statements. It is true that any forecasting requires such statements, but in the past two decades we were at least reasonably confident, if not very confident, that the conditions specified by our qualifying statements would hold.

To give an illustration, in estimating the need for expansion of publicly-supported institutions in a given state, the general procedure was to estimate an increase in numbers of high school graduates likely to attend college. In addition to the number of high school graduates, a key estimate was an increase in the proportion likely to attend college. When the total annual increase in number was–thus determined, we would subtract from that figure the number that the private colleges within the state could enroll (which was always, substantially smaller than the estimates of increase in high school graduates going to college) and announce the remainder as the new population to be served by the public segment of higher education. In states such as New York, it was important to estimate the numbers of high school graduates who migrated to other states, which was substantial and viewed as a loss of talent to the state and a measure of the state’s inadequacy of opportunities for higher education. The estimate for a within-the-state expansion for graduate education was a bit more complex, involving less reliable estimates; but in the context of the projected need for additional faculties for the expansion of higher education and the manpower demands of a burgeoning industrial-military-scientific complex, a persuasive case for expansion could be made, and indeed was.

**Former Assumptions in the Planning Process**

From the initial estimates of need, planning went on to determine what proportion of additional students could be handled by the existing public institutions, what proportion by new ones to be established, what facilities and staff were needed, and how much money the expansion entailed. What were some of the major assumptions involved in all this?

1) That there would be an increase in the proportion of high school graduates going to college.
2) That society had a vast unfilled need for services of the college educated, whether from two-year or four-year programs, or from professional or graduate schools.
3) That the expansion of public sector higher education would not harm the private sector since the increase in enrollments were beyond the capacity of the latter to handle.
4) That needs of the people could be better served by the distribution of enrollments among many state colleges, state universities, and community colleges, rather than among the number that then existed.
5) That the community, the state, and the federal government valued higher education sufficiently to fund all this.

These assumptions were often made explicit in our planning reports, and by and large we were correct in having made them. The proportion of high school graduates enrolling in college did increase (from 52 percent in 1960 to 63 percent in 1970), as did the proportion of eighteen year olds graduating from high school. Even while private higher education fretted about the “tuition gap” between it and the public sector, many private colleges were growing in size, and new ones were being founded. In 1955 the Office of Education listed 1,203 private institutions; by 1965, the number had grown to 1,409; and for 1972 the number reported was 1,493.

According to reports of the National Center for Educational Statistics (NCES), the number of institutions in the public sector rose from 655 in 1955 to 821 by 1965; and by 1972 the number of public institutions stood at 1,193. In seventeen years more than 850 new institutions were established—approximately 300 in the private sector and 550 in the public sector.

Graduates in nearly all fields experienced little difficulty in finding employment suitable to their education; and economists computed various estimates of increased earnings attributable to increases in education. Also, we were correct in assuming that people valued higher education. In one way or another, funds were raised for new campuses, new buildings, greatly expanded faculties, new programs of student aid, instruction, research, and service.

But what of the next ten years? What shall we say are our assumptions? How certain are we that enrollments will begin to decline by 1980, or shortly thereafter? How certain are we that enrollments between 1970 and 1980 will increase? How certain are we of society’s capacity to effectively use the many, college graduates projected between now and 1980? How certain are we of the future of our private institutions, and even of the future of some of our recently established state and community colleges? How confident are we that society will be willing to finance the massive edifice of higher education that we have created?

I should like to examine the bases of some of these uncertainties and their implications for the financing of higher education. Ultimately, all paths seem to lead to three questions: What is it that we really know about our own enterprise? What is in our power to do—that is, what aspects of the future are within higher education’s capacity to control? What is it that we in higher education really value about our own enterprise?
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The New Demography and Enrollment Projections

I would like to examine what today is being propagated as the new certainty of the next ten years, namely that college enrollments will continue to increase until about 1980 and then begin to decline. The obvious empirical basis for this prediction is population statistics—a rise in the number of eighteen year olds and then a gradual decline.

What is not so obvious is that prediction also involves the assumption that people will attend college at the same rate as in recent years. When the prediction takes the form of enrollment projections, this assumption is usually identified. For example, NCES-based its projection of college enrollment for each year between 1970 and 1980 on the assumption that enrollment, expressed as a percentage of the population from eighteen to twenty-one years old, will follow the 1960-1970 trend. This means that as the population of eighteen to twenty-one year olds grows, so will graduate enrollments and all other categories of enrollments. Similarly, NCES forecasts an average increase of one percent per year between 1970 and 1980 in the proportion of eighteen year old high school graduates; this rate of increase represents our recent experience.

How much confidence do we have that the recent past is a reliable guide for the future? How much weight should we give to the many reports of difficulties experienced by college graduates and Ph.D.s in obtaining employment suitable to their education? The answer is something more than zero, but how much? A precise weight cannot be given except in the vein of pure guesswork, but something more than intuition suggests caution in the years immediately ahead.

We have had many studies of “why students go to college.” Although the studies have never produced the kinds of data that reduce all doubts, there is good reason to believe that the increase in the proportion of high school graduates entering college in the last decade was propelled by the high prospect of jobs, both after college and after graduate school. Virtually every major survey of “reasons for attending college” showed that between two-thirds and three-fourths of the respondents, including students and parents, gave “better jobs” or some specific vocational objective as their principal reasons. The pursuit of “self-improvement” or a “liberal education” was a distant second.

In 1960 Professor Robert Havighurst of the University of Chicago noted these reasons for college attendance and spoke of their implications for the future, when the sheer numbers of college graduates might strain the capacity of the labor market. He also suggested that higher education should begin to emphasize nonvocational reasons for college attendance. Some sixteen years later higher education is no longer confident that society has an infinite capacity to utilize effectively the college educated, or that students currently enrolled in programs that prepare them for specific occupations will find openings awaiting them on graduation. And we have learned precious little about what college really does for a student when we divorce him from a career-oriented program of study. Psychologists have produced many pages of print speaking of the alienated, of youth’s search for self-actualization, and of the personality characteristics of college students. But these pages tell very little about why a student should go to college.

Let me emphasize that I am not predicting that the proportion of high school graduates entering college will decrease in the years immediately ahead. Rather, the point is that the present high proportion (more than 60 percent of all eighteen year olds graduating from high school) has been largely fueled by high prospects for economically and socially satisfying careers at the end of
college or graduate school; that those prospects are today not as high as they were except in a few fields, most notably the health professions; that this change must be taken into account in assessing the reliability of predictions for increase in college enrollments; and that we have yet to provide as convincingly a case for a "liberal education" as we have for a "career-oriented education."

The new demography has also made clear another assumption that undergirded our thinking about higher education and our lower schools. The two are intimately linked in that together they comprise a self-feeding system. This system took in raw talent, processed it, and eventually employed a significant proportion of the finished product. Many programs in higher education were, and to this day are, geared to prepare their graduates primarily for service in schools and colleges. For example, for nearly two decades between 25 and 30 percent of each year's college graduating class could have found employment teaching in elementary and secondary schools. For this to have continued and also for the Ph.D.s of many of our university programs to have continued to obtain employment in higher education required that the base of our population, the newly born, each year exceed in number those born the previous year.

For this coming year and at least until 1980, school teaching provides openings for no more than 12 to 15 percent of those who will graduate from college. The graduates will number a million or more each year. In the meantime, "innovative" and "experimental" programs for this and that "new" or "emerging career" will be created. As fiscal officers, you will have to concern yourselves with their funding. Also, even assuming the demand will be there, a small percentage of each year's million or more graduates is likely to turn a shortage into a surplus within a few years. This will pose for fiscal and academic officers the problems of start-up and shutdown for short-lived instructional programs.

By 1980, higher education may have solved the problem of how to relate college to "emerging careers" and "new career patterns." It may by then be able to give a more definitive statement of the outcomes of a liberal education and what transpires between student and college relative to those outcomes. It may also have translated the idea of "continuing education" into programs which sustain a large and continuous flow of middle-aged students seeking professional retooling, a new career, or simply intellectual stimulation. But there is much that we must yet learn about the financing and economics of "continuing education."

Assume, as is predicted, that enrollments across the nation will generally cease to grow and will perhaps decline. Please note that I say "generally" because even in the bleakness predicted for the 1980s, enrollments will grow in a few states currently experiencing a high in-migration of all age groups. There is very little that higher education can do to control the differential effects on college enrollments stemming from population movement. There are, however, two other types of enrollment shifts that are within our control, which if permitted to occur can alter the shape and character of American higher education.

Enrollment Shifts in American Higher Education

The first has already been the subject of much recent discussion—decline in the enrollments of private colleges and universities. That there has occurred a major shift in the proportion of students enrolled in public and private institutions is not a point of real concern, except to the most die-hard advocates of private higher education. Most of us knew this would happen when we planned for the expansion of the public sector of higher education. And private higher education did share in the "Golden Years" of the 1960s, when enrollment grew from 1.5 million in 1960 to more than 2.0 million by 1970 and when, as previously indicated, the number of institutions also increased. But the prediction for the immediate future is that enrollments in private colleges will decline while public higher education will still be experiencing an increase. The principal reason given for this (and the softening of enrollment growth in private higher education which was observed in the mid-1960s) is the "increasing tuition gap." This gap is currently estimated to be approximately $1,500. Less frequently mentioned, perhaps because it is more difficult to substantiate, is that a significant number of institutions in the public sector is seen as qualitatively equal or superior to many private institutions. Assuming that our private colleges and universities face an uncertain future in which the likelihood of their survival is low, what should be our posture?

How much do we, as educators, value private higher education? Aside from rhetoric extolling the priceless value of private higher education, how much are the leaders of state colleges and universities willing to "give up" by way of state funds which they look upon as theirs? How much of their yet unfulfilled plans for expansion are they willing to abort if evidence of harm to nearby private institutions begins to appear?

Bear in mind that the recent expansion of public higher education was launched with the expectation that the then existing private colleges would not suffer; in fact, a decade ago it was not uncommon to hear the function of public higher education described as "residual" relative to private higher education—that is, the expansion of public higher education to be primarily in terms of what the private sector could not do.
If our action is to save private higher education, should that action apply equally to all private colleges and universities? Should those perceived as being of lesser quality than others in the public sector be given a death warrant? If so, which public institution or institutions should be used as the cutoff standard—the state university, the institution of middle quality, or the one of lowest quality? If it be a public institution other than the one deemed lowest in quality, then what of public institutions that fall below that standard? Should they not also be given a death warrant? And, of course, what shall we use as measures of quality?

I raise these questions in a manner not meant to offend sensibilities, but I am struck by how little we know about our own enterprise; how little there is on which we might be able to agree and act if the life or death of an institution or a program is concerned. The certainty of growth and the certainty of funding that attended it afforded higher education the privilege of vast ignorance about itself. In the name of diversity, we have tolerated a wide range of variances and at times have even defended some without knowledge of the consequences. As Professor Kenneth Boulding of the University of Colorado put it not too long ago, higher education is without knowledge of its capacity for producing effluence. All systems—social, biological and mechanical—produce effluence, some more than others. Higher education is virtually unique in its ignorance of this fundamental fact.

It is not that I fear that the worst may come and higher education may have to pick and choose its survivors, or that it may have to elect a method of salvage that without naming institutions helps some and others not enough; what I fear is that we may have to do so in ignorance or pass the buck to others who will have to do it, with greater courage perhaps, but with no more knowledge.

The second type of enrollment shift that can alter the shape of the future of higher education is that between and among institutions of high perceived status and those of lesser status. A characteristic of institutions of high perceived status is that they admit only a fraction of the total pool of applicants. It is generally recognized, although precise data are not easy to come by, that our leading state universities have developed such pools of applicants, in the course of which they have escalated their admissions standards. What will our state universities do under conditions of general enrollment decline? Will they hang fast to their present admission standards? Or will they begin to lower them, gradually at first but enough over time to obtain a desired level of enrollment?

If the latter, then how will the state colleges respond? Will they hang fast to their recently escalated standards or will they move in the direction of "open door" colleges? If the latter, then with what effects on the nearby community college?

Enrollment shifts between and among public state institutions have less often been seen as a problem than the shifts between public and private higher education. Indeed such shifts were anticipated as new state and community colleges were created, but they were not seen as a problem when growth was a certainty. However, given the very close relationship between enrollments and legislative appropriations in most states, a softening of enrollment growth in the public sector can bring about a de-escalation of admissions standards among the high status state universities and a reciprocal response on those below them.

Which will the state universities value more, the high academic standards which are based on high admissions requirements or large enrollments which may be essential to sustain their level of state support? Or will they have a choice since the majority of states are now with either a state-wide governing body or a coordinating board? Might such boards and state institutions be able to wrest higher education free of the tie between appropriations and enrollments, which may soon turn from a help to a major hindrance?

How much do we know about the ecology of higher education, the subtle dependencies that exist between and among institutions? Do we know enough to effect at each phase of growth and decline an efficient equilibrium among them? Probably not. Yet I think that is what we need to know in order to guide higher education through the decade ahead.

Diversity and its Significance for Finance

Diversity is a distinguishing mark of American higher education. We are accustomed to speaking of it as a virtue; and I would be the last to say that it is not so, notwithstanding my earlier remarks that not everything conducted in the name of diversity can be taken to produce beneficial outcomes.

The financing of higher education is part and parcel of that diversity. We can describe fiscal diversity in a dozen different ways: different in tuition, in unit expenditures, in capacities of students to pay for their education, in dependence on funds from local, state, and federal governments, in endowment and gift income, in amount of indebtedness, in faculty salary levels, in scholarship budgets, in volume of research funds, and in total budgets, to name a few. These diversities can generally be found among institutions within a given state, between types of institutions, and between and among states.
This fact of diversity poses two major difficulties. The first is that we are dealing with not one but many different kinds of fiscal problems. The problems are simple only in the sense that we mean one thing—money; but they are complex in that no one funding program (except an omnibus program) will serve all or even most institutions equally well. To further complicate matters, proposals for this or that solution are imbedded in deeply-held values by one or more segments of higher education and society. Professor Howard Bowen of the Claremont Graduate School recently presented a cogent analysis of the major values implicit in various forms of funding—grants to students (freedom of choice), general institutional grants (autonomy for the institution), student loans (instill a sense of responsibility for one's own education), and so on. I am persuaded by his argument that no one solution is acceptable in our society.

The second difficulty is that the diversity of higher education renders concerted action for legislation extremely difficult. A decade ago those same diversities existed, but those were the "Golden Years." It was, as I noted earlier, a time when the future was so bright that we could speak of the function of public institutions as "residual" and find smiles on the faces of leaders of both private and public higher education. It was an era marked by cooperation and the burying of ancient fears among the leaders of diverse institutions. State and private university presidents relaxed their stance against the establishment of new state colleges and community colleges. Some went so far as to extoll the proposed development in the name of diversity—the state universities have one function, the independent colleges another, the state colleges still another, and the community colleges still another.

With the loss of certainty of enrollment growth and the anticipated tightening of public purse strings, will the ancient fears rise once more, perhaps with renewed vigor? Will the coming decade be marked by impassioned speeches by leaders of private institutions that charge state colleges and universities with uninhibited expansionism at taxpayers' expense and by equally impassioned speeches by state university presidents that they are more accountable; or that if private colleges want more state funding, they should join the state system; or that before private colleges turn to the state for funding, they should be made more efficient and stop claiming superior quality because of small class size and low student-faculty ratios? Will the advocates of the voucher system, the advocates of more loans, the advocates of general institutional grants, and other advocates continue separately to argue their cause? Or will they remember the cooperation that contributed to the emergence of the "Golden Years," join ranks, and work for state and federal funding legislation which might enable, if not all, at least most of them to survive the uncertain years ahead? Answers to these questions will comprise a major dynamic of financing in the years ahead.

Efficiency and the Future

Let us assume once more for the sake of argument that the worst happens—that enrollments decline, that enrollment begins to shift from the private to the public and from the less prestigious public to those with greater perceived status, and that our leaders have forgotten how to cooperate. Will efficiency in the sense of reducing unit costs and cost-cutting save the day for hard-pressed institutions?

The answer for a private institution might be yes only if it started with enough fat to sustain it until the new dawn. The fat can only be trimmed once, and a private institution that a decade ago had resorted to the Ruml-Morrison "plan" (titled the "Memo to the College Trustee") and had failed to develop additional fat in the last few years is not likely to make it through a second and perhaps more severe and prolonged famine. The paradox of efficiency for a private institution is that if it is efficient now it is dead tomorrow.

As long as a college's population distribution resembles a pyramid with the base always larger than the next level and if it could enroll a few additional students each year or hold the count even, a private college could survive on the Ruml-Morrison plan, not easily, but it could be done. What it cannot survive is a loss of paying students. The prolonged decline in births over the past twelve years has produced a population distribution profile that for education is likely to result in a period of gradual decline and famine, then a period of feasting, then once again a period of famine.

The new meaning of efficiency for private higher education, all other things being equal, is that during the "Golden Years" it learned to build slack (or fat) into its system, then use it to survive the "Hungry Years." To put it bluntly, during the "Golden Years" it should concentrate not on cutting costs and economy drives, but on increasing its capital, its pool of admissions applicants; and the quality of its faculty.

Public institutions, in particular the great state universities, seem long ago to have learned the principle of building slack into their systems. Low student-faculty ratios, low space utilization rates, and low faculty-secretary ratios, for example, are the principal means of storing fat into an organization during good times since most states prohibit the accumulation of cash reserves. A few, however, manage to create endowments and a flow of private gifts which are oftentimes exempt from state
control. Such "restricted income" (and I have never been
certain whether the restriction applied to usage or to
state purview) and the slack built up during good times
afford the state universities a degree of autonomy during
days of troublesome governors and legislators.

No public institution of significance is likely to face
extinction in the near future. Yet the possibility of an
overexpanded system of public higher education must be
entertained in the decade ahead.

A more immediate concern of public institutions
may be the increased harassment over specific issues of
efficiencies such as class size and teaching loads. The
qualitative effects of increases in class size and teaching
loads are subtle, and thus far even while it might appear
to be a logical step for state universities, few are
attending seriously toward identifying those effects. The
"efficiency cultists," as Stephen Bailey of the American
Council on Education has chosen to call them, abound
by the hundreds these days, and, no doubt, will be doubly
active when NCHEMS completes the final versions of its
many reports. Rhetoric alone will not stop them. What
they demand are facts.

The Real Uncertainty

Throughout this examination of the uncertainties of
the next decade, I have addressed issues in the manner
of yesterday's man of higher education, all the while
stating that things are no longer what they were.

The preceding analyses of things we know and do
not know, raised questions, and generally suggested that
somehow it is in our power as professionals to create for
higher education a new future. But that is the posture of
a man of yesterday.

The posture ignores what may indeed turn out to be
the most important fact of higher education for this
coming decade—the shift in the base of power from
the campus to the state, and from the campus and the
state to the federal government.

While yesterday students were demonstrating for
involvement and power and faculty members were
expounding theories of university governance, there
came on rather silent feet the real new captains of power
in American higher education—the state-wide boards
for higher education and the federal government. At the
state level, public and private higher education alike are
now coordinated and controlled in varying degrees; at
the federal level, all higher education is rapidly taking on
the characteristics of a "regulated" enterprise.

So much has already been said of this development
that no further elaboration is needed except to state that
with the loss of our autonomy, it makes little sense to talk
of accountability, for the dynamics of this coming decade
and the next may not be ours to make and control. In
that lies the greatest uncertainty of all.

Dr. Doi's remarks were transcribed at the annual
meeting. His text, as delivered, is available on tape
cassettes from the NACUBO national office for $5.00.