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Financial Trends in Higher Education: The United States

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FINANCIAL TRENDS IN HIGHER EDUCATION: THE UNITED STATES

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Since 1990, privatization has been the dominant trend in American higher education. The onset of privatization reflected a change in the zeitgeist: engagement with private industry and capital markets, once viewed with deep suspicion, were embraced as a social duty as well as sources of revenue. Hence, universities now eagerly sponsor cooperative programs for education and research with corporations, and engage in commercial activities via research parks, patenting, start-up companies, and venture capital funds. Moreover, the spirit of capitalism has found a home in higher education in the form of for-profit universities, the fastest growing segment of this industry. But privatization has worked more fundamental change in the way Americans pay for higher education. The mushrooming of student financial aid in all its forms has transformed the economics of American higher education. For private colleges and universities, particularly the more prestigious ones, the privatization era has brought robust prosperity and confidence. In the public sector, privatization has meant a steady substitution of student-derived revenues for those provided by state governments. For institutions in both sectors, privatization has meant increased exposure to market forces.

The first decade of the twenty-first century has seen an intensification of these trends for the most part. This essay will examine these developments and relate them to the larger trends of the privatization era. Developments in the financing of American higher education will be viewed through three lenses: macro-trends since 1990 in the era of privatization; data on changes during this period; and description of the impact of the current economic downturn on the public and private sectors.

The sections that follow first describe the basic trends in enrollments, revenues and expenditures in institutions of higher education. The steady growth in real tuition prices has shifted the financing of higher education from state support to students and their families. This trend would not have been possible without the substantial growth in student financial aid, especially federal student loans. The system of student financial aid is now fundamental to the financing of higher education in the United States. However, its impact and utilization has been different in the private, non-profit sector, in the public sector, and in the private, for-profit sector. Finally, privatization has assumed quite different dynamics in funding and shaping academic research. The substantial autonomy of institutions of higher education in the United States has allowed them to adapt independently to changes in the sources and magnitudes of income, which has produced heightened responsiveness to market forces.

Trends in Enrollments, Prices, and University Revenues and Expenditures

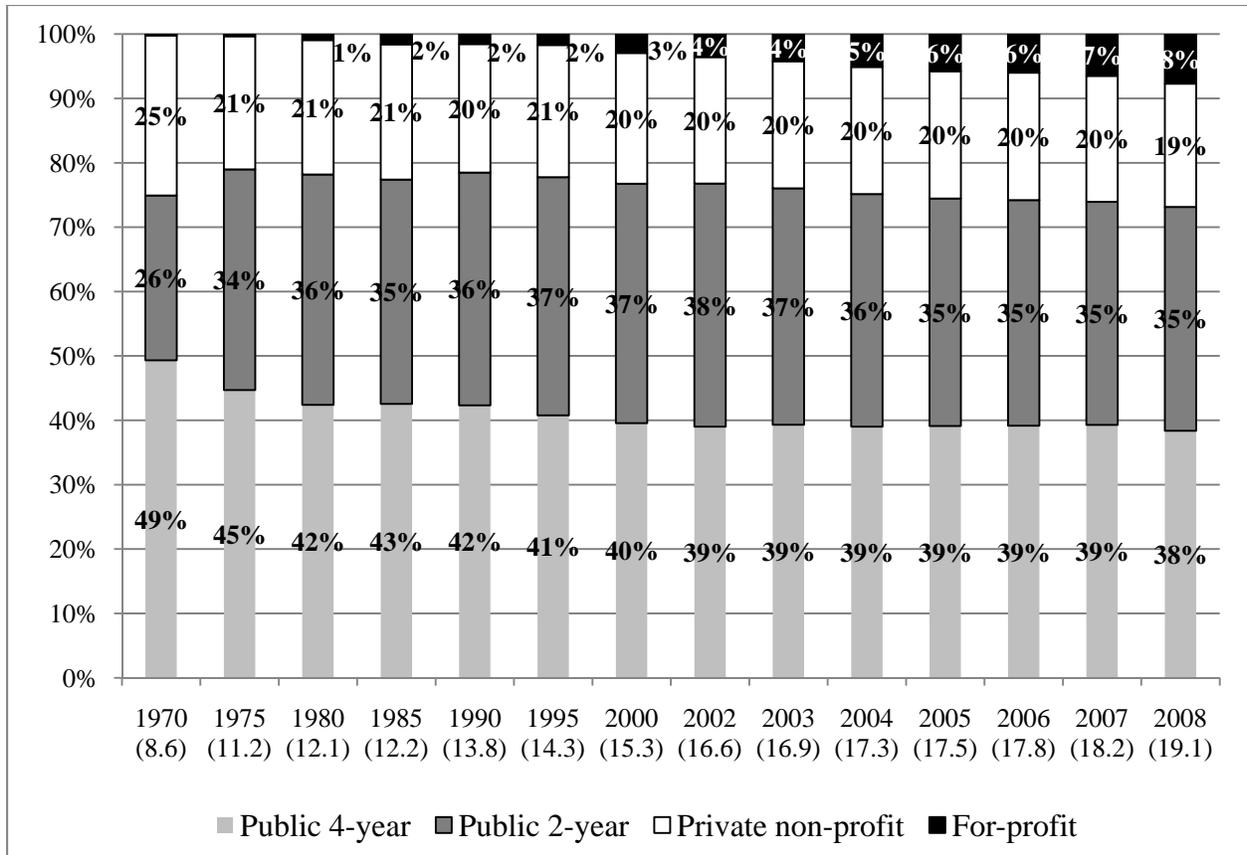
Enrollments

The United States has long had a mixed system of both public and private higher education institutions. Over more than 200 years, both public and private institutions have flourished, helping the United States to achieve the highest level of participation in postsecondary education in the world for most of the twentieth century (Organisation for Economic Co-operation and Development, 2009).

More recent decades have seen a third form of higher education institution develop and grow in the United States, the for-profit college. These institutions, which are organized as profit-making enterprises (either publicly held, through broad ownership of stock, or privately through more closely held ownership), have shown the fastest enrollment growth over the last three decades. The sector and its enrollments is dominated by large, corporate systems. Figure 1 shows the enrollment by major sector in American higher education for selected years from 1970 to 2008. In 1970s, approximately three-quarters of the 8.6 million students attending college were enrolled in public institutions, with two-thirds of these in 4-year universities (those awarding bachelor's degrees) and one-third in 2-year, or community colleges (those awarding sub-baccalaureate degrees and certificates). One-quarter of students were enrolled in private non-profit institutions, and only 0.2 percent were in for-profit institutions.

The major trend during the 1970s was the expansion of the community college sector, publicly-funded and controlled colleges that award degrees and other credentials below the bachelor's degree. Spurred on by the states who saw these colleges as a cost-effective mechanism for expanding access to higher education, new community colleges were built and existing ones were expanded. Overall enrollment in higher education during the 1970s grew from 8.6 to 12.1 million, or 41 percent, with community colleges increasing their market share from roughly one-quarter to one-third of all students, with concomitant reductions in the shares of both public and private non-profit 4-year institutions.

The 1980s was a period of slower growth, with total enrollments increasing only 14 percent over the decade with the relative shares among the sectors staying roughly constant. The for-profit sector began to increase its market share from 0.9 percent in 1980 to 1.5 percent in 1990. Enrollment growth again slowed in the 1990s, increasing only 11 percent, with the share for the for-profit sector again growing slightly to 2.9 percent.



Note: Total enrollment in millions shown in parentheses each year
 Source: National Center for Education Statistics (2010a), table 196

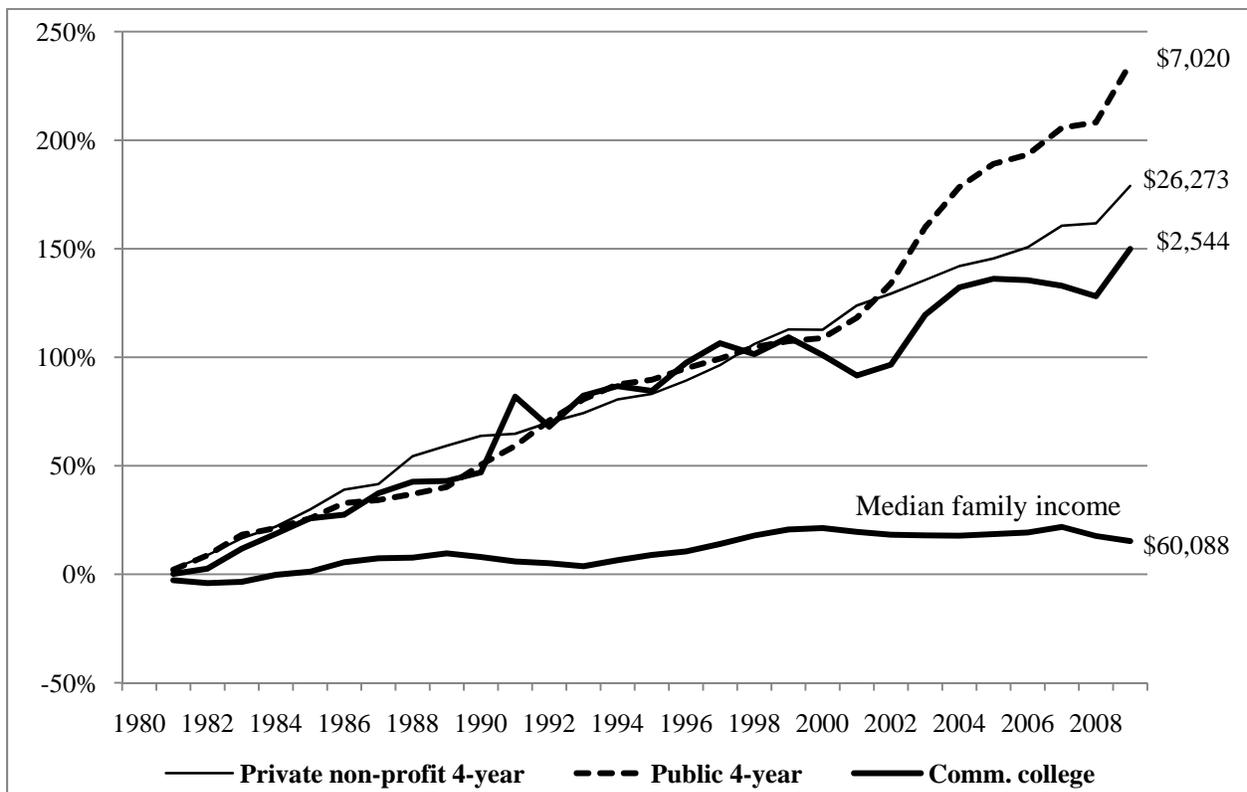
Figure 1: Fall enrollment shares by sector in degree-granting institutions, 1970 to 2008 (selected years)

The current decade has seen dramatic changes as compared to the prior two. The rate of enrollment growth overall has increased, with enrollments rising 25 percent between 2000 and 2008 (the most recent year for which data are available). This represents an annualized rate of growth of 2.8 percent, only slightly below the 1970s rate of 3.5 percent per year. The other major trend in the 2000s is the expansion of the for-profit sector, which saw its total enrollments increase from 450,084 in 2000 to 1,469,142 in 2008, a 226 percent increase. The sector’s share of overall enrollments increased from 2.9 percent to 7.7 percent, with the gains coming at the expense of all three of the other sectors.

This enrollment growth has occurred not solely because of population increases in the United States. The nation has also increased the participation rate in higher education. In 1970, 33 percent of all 18 to 24 year-olds who had graduated from high school were enrolled in postsecondary education. By 2008, this rate had increased by 47 percent (National Center for Education Statistics, 2010a table 204).

Tuition Prices

Concurrent with the increase in enrollments, the nation has seen in an increase in the relative price of attending college. Figure 2 shows the cumulative increase in tuition prices in the three largest college sectors, and median family income, between 1980 and 2008.² Prices and incomes are shown in constant (2009) dollars, taking inflation out of the measure. Prices in public 4-year institutions grew the fastest, a total of 235 percent over the 29-year period, followed by private 4-year colleges and universities (179 percent) and community colleges (150 percent). During the same period, the income of the median family in the country increased only 15 percent. Thus, college has become proportionately more expensive in relation to the ability of students and their families to pay for it.



Note: 2009 levels of each measure shown on the right
 Source: College Board (2009a); U.S. Census Bureau (2010)

Figure 2: Cumulative increase in average tuition prices and median family income (constant dollars), 1980 to 2009

The relationship between tuition prices and ability to pay, and how these have changed over time, is shown in Table 1. In 1980, a family with the median income in the nation would have had to spend 18 percent of that income to pay the tuition cost at the average private non-profit 4-

year university. The same family would have had to use only 4 percent and 2 percent of its income to pay the tuition at a public 4-year institution and community college, respectively.

Table 1: Tuition prices as a proportion of median income by sector, 1980 and 2009

Sector	1980 (in 2009 \$)		2009	
	Tuition	% of median income	Tuition	% of median income
Private non-profit 4-year	\$9,419	18%	\$26,273	44%
Public 4-year	2,094	4	7,020	12
Community college	1,018	2	2,544	4
For-profit	N/A	N/A	14,174	24

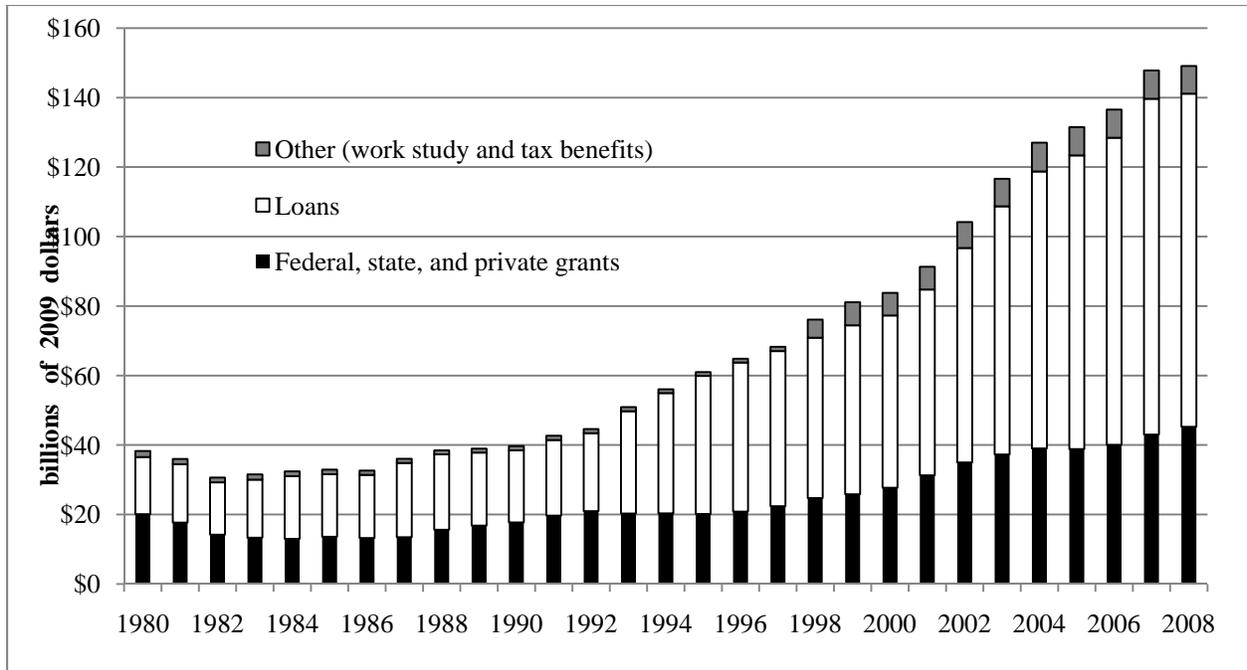
Source: Authors' calculations from figure 2

By 2009, these proportions had increased dramatically. A family at the median income level would have had to pay 44 percent of its earnings to afford the average-priced private non-profit 4-year university, or almost two and one-half the proportion of its income in 1980. In the public 4-year sector, the rise in the proportion of income need to pay the tuition was even greater, increasing three times from 4 percent in 1980 to 12 percent in 2009.

Financial Aid

Increasing tuition prices do not tell the whole story of college affordability for American students and their families. The United States has long had financial aid for students, awarded in different forms (loans, grants or scholarships, government-subsidized jobs on college campuses, and tax benefits) and from different sources (federal government, state governments, higher education institutions, and private entities). The federal government first began provision of broad-based financial aid in the forms of grants and loans to students with the passage of the Higher Education Act of 1965. This Act also had a provision, the State Student Incentive Grant program, which encouraged states to create their own grant programs. These programs, along with the continued expansion of institutionally-funded scholarships, have helped to subsidize the price paid by students for attending college and have also served to lessen the impact of rising “sticker” prices, or the amount charged by universities before any discount is provided.³

Figure 3 shows the amount of financial aid provided in each major category since 1980, in constant dollars (institutional grants are excluded, as they are treated as a discount off of tuition). In the early 1980s, federal, state, and private grants were the largest form of financial aid. But beginning in 1982, loans began to outpace grants, and since then they have remained the largest form of aid available to students to help them pay their costs of attending higher education.



Source: Authors' calculations from College Board (2009b)

Figure 3: Financial aid by category in constant dollars, 1980 to 2009

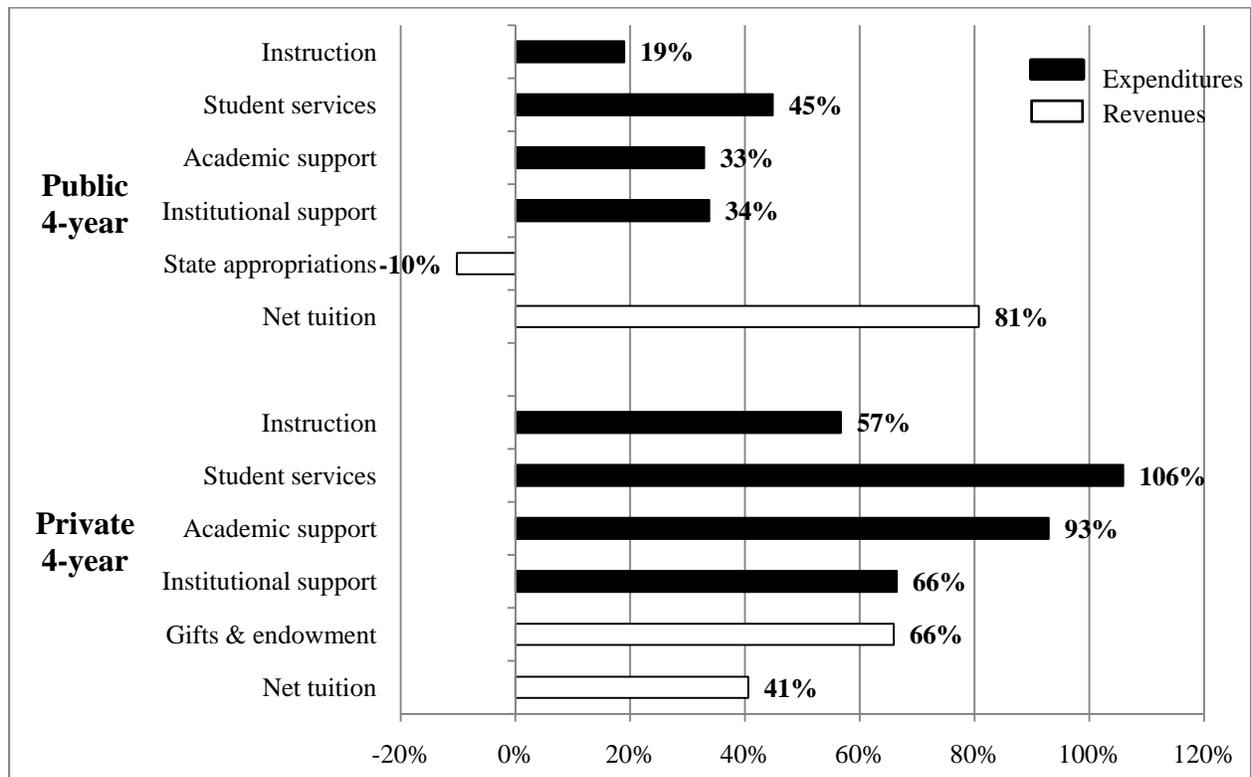
College and University Revenues and Expenditures

The increase in tuition prices, particularly in the public sectors, was not a random event. For most of the twentieth century, state appropriations have been the principal source of funding for public institutions. Since 1980, though, the proportion of revenues for public institutions provided by state funding has been in decline, as the rising tuition prices noted earlier have taken the place of the taxpayer-funded state support (Heller, 2002, 2004).

This trend has accelerated since 1990. Figure 4 shows the change in major expenditure and revenue categories on a per-student basis (in constant dollars) for both public and private 4-year institutions between 1990 and 2008. In the public sector, state appropriation (as measured in constant dollars and on a per-student basis) actually declined 10 percent during the period. In contrast, tuition revenue (net of institutional scholarships awarded) increased 81 percent. The increase in tuition revenue outpaced spending in four major expenditure categories, with instruction – the core teaching function of the university – increasing at the slowest rate, only 19 percent per-student.

In private institutions, both gifts and endowment income increased faster than net tuition revenue, as colleges greatly increased their tuition discounting (described in more detail later) and turned more to fund raising to help fund operations. In contrast, instructional spending increased only 57 percent, below the level of spending on other categories.

In both public and private colleges and universities, expenditures in other categories – services for students, academic support (which includes such things as libraries, research offices, and the like), and institutional support (buildings and ground maintenance, general administration, etc.) – all outpaced spending on instruction. This trend has been well documented and is due to the increasing demands on universities to support a wide array of student abilities, maintain an ever-growing physical plant, expanded infrastructure support for research and patent and licensing activities (discussed further in the next section), and manage an increasingly complex organizational calculus (Clotfelter, 1996; Ehrenberg, 2000).



Source: National Center for Education Statistics (2010b)

Figure 4: Change in per-student expenditures and revenues in constant dollars, FY 1990 to FY 2008

Implications

Privatization—the Financial Revolution.

The system of federal financial aid established by the Education Amendments of 1972 rested firmly on the principle of providing taxpayer support strictly on the basis of financial need. Thus, grants, loans, and even college work-study all had family income caps. However, a popular reaction soon emerged, invoking the pretext of rising costs (although inflation was the real culprit). The “middle-class squeeze” became the rallying cry for families that were supposedly

being priced out of higher education. Congress responded by passing the Middle Income Student Assistance Act. This act raised income limits for student grants (now, Pell Grants), which had little impact, and removed all income limitations for Guaranteed Student Loans, which had major consequences. The volume of loans quickly mushroomed, more than doubling to \$9 billion from 1977 to 1980 and becoming the largest component of federal student aid. Income caps were re-imposed in 1981, but the volume of GSLs did not decline—in fact it rose slowly until 1992, when terms were again liberalized, touching off another upward ratchet. Higher education had tapped into a new source of revenue—the future earnings of its students—and it would only encourage the ‘loan culture’ that this spawned. Congress obliged with new kinds of loans without subsidies or income caps (Hearn, 1993; John, 2003). (See Figure 5)

Figure 5: Federal and Private Student Loans, 1970-2006 (current \$).



SOURCE: Donald E. Heller, “The Impact of Student Loans on College Access” in College Board, *The Effectiveness of Student Aid Policies: What the Research Tells Us* (New York: College Board, 2008), p. 41.

At the same time, private universities discovered that they had the pricing power to raise tuition if it were accompanied by institutional grants to students with financial need. The combination of institutional financial aid from private institutions and easily available student loans created a system of finance for the private sector: *high-tuition/high-aid*. By using the standardized “expected family contribution,” plus any eligible grants and student loans, college financial aid offices could determine the maximum amount a student could afford to pay. Institutional financial aid, or tuition discounts, then could cover the difference between financial capacity and the official sticker price. Soon, only fairly wealthy students paid the listed tuition price at most private colleges, while others paid variable prices determined by the financial aid office. Colleges thus extracted the maximum revenue from each student, while avoiding price

resistance in the form of reduced demand. They were thus free to raise tuition for those who could afford it while providing an appropriate tuition discount for those who could not.

Public colleges and universities cannot engage in tuition discounting—technically, price discrimination—to any significant extent: they have too many middle-class students and too few wealthy ones. But they have compensated for stagnant state appropriations by also raising tuition, and they too benefited from the loan culture. Both actions helped to facilitate significant privatization of public higher education. In 1980, student tuition provided roughly 20 percent of operating funds for major universities, but in 2006 that figure was 43 percent. Thus, over one fifth of operating costs at four-year public universities were transferred to students, their parents, and their loans (Geiger, 2004, pp. 28-75).

Privatization brought a striking reversal of fortunes: in the current era private colleges and universities have fared much better than public ones, with the wealthiest institutions far outpacing the rest. Besides having the ability to raise prices, they have benefited greatly from gifts and the appreciation of their endowments. For public universities, competing with their private counterparts has been one factor driving rising costs.

Student loans have been an indispensable component of privatization. For FY2009, federal and private loans totaled \$96 billion, \$67 billion to undergraduates. This total exceeds all public state appropriations to higher education (\$78 billion), and nearly equals the total national tuition bill (net of discounts) of \$98 billion. The 2008 National Postsecondary Student Aid Study reported that 70 percent of students at 4-year public were receiving financial aid (average \$8,000-10,000), two-thirds as loans; more than 80 percent of private students received financial aid (\$16,000-19,000), roughly split between loans and tuition discounts (Chronicle of Higher Education, 2009, p. 13, 33; Wei et al, 2009). Most important, the post-1980 financial regime has allowed institutions in both sectors to dramatically raise the relative price of higher education. Table 1 shows tuition prices in both the public and private sectors rising dramatically and consistently after 1980. This rise contrasts starkly with the remarkable stability of relative pricing from 1960 to 1980. How have American universities been able to more than triple their sticker prices? The process was greatly abetted by a growing demand for places at prestigious colleges characterized by high prices, high expenditures, and selective admissions. Universities have also benefited from increasing overall demand for higher education, as the college wage premium – the extra earnings a college graduate receives as compared to that of a student who never attended college – has grown over the last three decades (Heller, 2001).

Revival of Elitism—the Selectivity Sweepstakes. The 1980s witnessed an intensification of the competition among students for places at prestigious, selective colleges and—reciprocally—competition among these colleges for the best students—the *selectivity sweepstakes*.⁴ These processes were scarcely new, but they had been overshadowed in the seventies by the prevailing anti-elitism and alienation. A number of factors undoubtedly favored this transformation of the zeitgeist:

- Revival of the job market and college wage premiums, particularly opportunities for highly paid careers

- Generational rebellion against the dour, anti-business rhetoric of the seventies
- Intense marketing efforts by colleges to boost applications and enrollments
- The beauty contest, or league tables first established by the *U.S. News & World Report* rankings in 1983.

However, such factors ignited and amplified fundamental market forces that had long been at work.

The prime mover in unleashing these market forces was the integration of a national market for higher education over the last 50 years (Hoxby, 1997). The enlargement of the market for selective institutions by itself tended to produce increased segregation of students by ability level. Top students, given greater choice, tended to prefer institutions promising academic quality in terms of faculty, facilities, and fellow students. Peer effects resulting from the latter, in fact, are particularly important due to the role that good students play in educating one another. Colleges and universities clearly recognize the value of such students and do all they can to attract them. Since the most effective inducement over the long run is academic quality, they chiefly resort to qualitative competition.⁵ Increased spending for the enhancement of quality serves not only its immediate purpose, but by attracting more top students it has an additional peer effect—a multiplier—which boosts quality further still.

Qualitative competition spurred private colleges and universities to augment educational spending through the policy of high tuition and high aid. The most prestigious institutions—those with high demand—have been best able to make this approach work to their advantage. In this respect, prestige helps to optimize tuition revenues. Prestige also appears to be a critical factor in attracting voluntary support. Prestige for these purposes comes in different forms. However, academic distinction, particularly in undergraduate education, seems to be the most potent factor in unlocking the generosity of alumni donors. High costs among private universities correlate closely with the prevalence of high-ability students. High levels of spending, in other words, promote higher student quality. This pressure for ever-more spending among the country’s wealthiest universities is now conventionally called the “arms race.”⁶ But for all institutions that can run in this race there are benefits to belonging with the ‘selective sector’—of competing in the selectivity sweepstakes.

A catalyst for creating these sweepstakes was the appearance in 1983 of the first ranking of colleges by *U.S. News & World Report*. The initial rankings were based solely on reputation, and thus mirrored wealth, selectivity, and visibility. Still, they proved enormously popular, and from 1987 they appeared annually with a more complex methodology and more numerous categories. For the leading private institutions, they soon carried significant consequences for the number of applications, the yield of matriculating students, and amounts of financial aid needed to recruit a class (Monks & Ehrenberg, 1999).

There is no strict definition of the selective sector. It is widely noted that perhaps 50 institutions actually reject more students than they accept, and few that still practice ‘need-blind’ admission. Rather, the distinguishing feature of the selective sector is qualitative competition: in the words of economist Gordon Winston, “competition in the input market for scarce students

(and faculty) quality that will improve a school's educational quality and position" (Winston, 1999, p. 30; see also Geiger, 2004, pp. 84-85).

In practical terms, the top of the selective sector is quite obvious, while its lower border is indistinct. Private research universities almost all belong. So do the top fifty liberal arts colleges, and a good number of less selective institutions that wish to be associated with them. Large public research universities belong in part; that is, they compete in the same input markets for students and faculty, even though they are much less exclusive in whom they admit.⁷ In addition, a handful of smaller public universities have attained recognition for selectivity and undergraduate quality. All told, perhaps 15 percent of first-year students at four-year institutions, drawn predominately from the top quartile of that cohort, matriculate in the selective sector. What is certain, student demand for these places has grown significantly during the current era. Reciprocally, the number of institutions engaged in qualitative competition has also grown appreciably, and, more tellingly, qualitative competition has grown far more intense. The effect has been a general migration of the most able students into the selective sector. This can be documented with rising SAT scores (against a stable distribution) and growing concentrations of the highest scoring students (700+ scores). Hence, one of the salient characteristics of the current era has been the growing differentiation of the selective sector from the rest of American higher education (Hoxby, 2009).

Economists have attempted to determine if attending a selective institutions enhances career prospects, and why. Findings are unequivocally positive on the first issue. For example, attending a tier one college (top 44 institutions) has a substantial positive effect on earnings, and attending a tier two institution (next 85) has a smaller positive effect. Moreover, these differentials have been increasing in the current era. As for explanations, the evidence seems to indicate that selective colleges are effective at identifying students with personal attributes conducive to successful careers, other things being equal, and that their college experience (treatment) has positive effects as well.⁸

Intensification of Academic Research. The current era for university research was symbolically launched in 1980 with two unrelated events. First, Congress passed the Bayh-Dole Act, which allowed universities to take ownership of inventions emerging from federally supported research. Then, the spectacular Wall Street debut of Genentech signaled the commercialization of biotechnology and touched off the biotech boom (Geiger, 1993, pp. 303-08).

The Bayh-Dole Act (University and Small Business Patent Procedures Act) was an important adjustment of patenting law that created a uniform policy toward inventions resulting from federally financed research. Enacted at the height of concerns over lagging U.S. economic competitiveness, it was explicitly intended to mobilize the fruits of university research for economic development and to make these fruits more accessible to small businesses. The Act required, among other things, that universities file U.S. patent applications on discoveries made with federally funded research and actively seek to commercialize them. Universities also had to share resulting income with inventors and devote the balance to research and educational purposes.⁹ Before Bayh-Dole, 25 universities had internal intellectual property offices for patenting and licensing; fifteen years later, every major university had one. Bayh-Dole itself was merely the most prominent of a series of enactments by federal and state governments intended

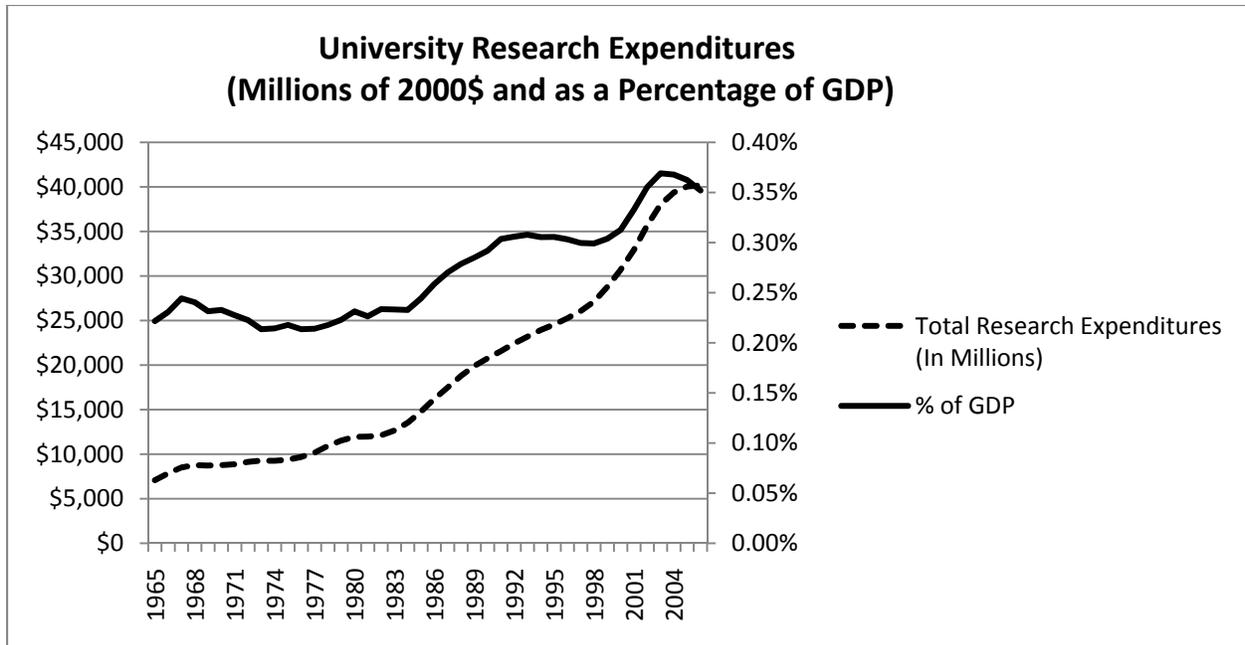
to mobilize academic research to develop and transfer technology to industry. This effort, however, derived credibility and urgency from the revolution in biotechnology.

The discovery of recombinant DNA in 1973 created the possibility of engineering living organisms, but the success of Genentech confirmed a new paradigm for university-industry research relationships.¹⁰ The breakthroughs in biotechnology emerged from the most basic kind of research; yet it pointed the way toward inventions of obvious usefulness. This relationship became increasingly common for “science-based technologies”—areas of pure science with clear commercial potential. In order to contribute to the economy, biotech inventions had to be protected by patents and then licensed to for-profit firms. This was not true for all university-spawned technologies, but biotech set the pattern for the patenting all university discoveries. New firms like Genentech, whether launched by faculty inventors or entrepreneurs (Genentech had both), proved the most appropriate vehicles for developing many science-based technologies. Hence, the rush of universities to establish Technology Transfer Offices. American universities were issued 250 patents in 1980 and 3,600 in 2003.

Patenting and licensing were the most visible outward manifestations of a reorientation of university research. A far larger movement supported research in collaboration with industry or in areas deemed ripe with future economic potential. The National Science Foundation led the effort to force-feed the development of emerging science-based technologies, as with the \$1 billion National Nanotechnology Initiative (2000-). State governments also joined this effort, seeking to stimulate academic research that would contribute to local economies. After a flurry of initiatives in the 1980s, a reaction of sorts occurred in the 1990s. However, by the end of that decade states were again promoting technology-based economic development with increasing enthusiasm. Industry has been generally receptive to these initiatives (although critical of the intellectual property claims of universities). The portion of university research funded by industry roughly doubled in the 1980s, from 3 to 6 percent, but has not risen beyond that level. However, the great rapprochement of universities and industry has been a marriage encouraged and sometimes arranged by government policies.

The growing economic relevance of academic research has been a boon to the country’s research universities. American society has provided relatively abundant resources in the expectations of furthering innovation and, ultimately, the competitiveness of American industry. Not that these resources have been targeted only on research with commercial potential. Rather, the federal science agencies, leading universities, and large corporate funders have generally realized the necessity of maintaining a healthy, balanced academic research system focused primarily on basic science. The result has been one of the most remarkable features of the current era: from 1968 to 1982 academic research grew from roughly \$8 to \$12 billion constant dollars (Figure 7). Since then it has risen on average by more than \$1 billion each year. University research has gained 1/8 percent (0.00125) of GDP in the current era—a 50 percent increase.

Figure 7



Although there has been a secular trend toward the extension of research to greater numbers of universities, the bulk of these research funds still flow to the laboratories of the same universities. Over the current era, this has produced a pronounced intensification of research. For 99 research universities, enrollments grew by 15 percent from 1980 to 2000, but real research expenditures grew by 128 percent (Geiger, 2004, p. 147). Increasingly, research has become an autonomous mission, only loosely linked (if at all) with undergraduate education. These universities have become critical centers of the knowledge economy, advancing the frontiers of knowledge while providing multiple services as repositories and disseminators. They have set the standard for what are now dubbed world-class research universities.

Rise of the for-profit sector¹¹

As described above, the for-profit sector of higher education has been the fastest growing during the current decade. This sector of American higher education lies at the opposite extreme from the selective sector described above. Whereas the selective colleges predominantly serve wealthy students with excellent primary and secondary schooling, the modal student in a for-profit colleges is from a poorer family and most likely has not had a positive experience in school. This clientele seeks education primarily for vocational training and to obtain a decent job. Most for-profit schools in the U.S. have been engaged in this kind of vocational or technical education, either for certificates, two-year associate's degrees, or bachelor's degrees. Another, more recent, clientele is working adults, who seek educational credentials for purposes of career enhancement. Traditional colleges and universities offer many programs of this type, but proprietary schools have found ways to compete effectively in this market. The pioneer was the University of Phoenix, founded in 1976, which now has the largest enrolment of any university in the country.

For-profit, vocationally-oriented education has a long history in the United States. Until recently, it could be described as exceedingly decentralised: thousands of independent trade schools offered mostly non-degree vocational courses. They competed to some extent with community colleges, but they largely compensated for the longstanding lack of effective public vocational education in the United States. What had been a fragmented industry is now dominated, at least for degree-granting programs, largely by corporations (Kinser, 2004).

Why have corporations only recently sought to invade education? In macro-economic terms there is a simple explanation. Education is the second largest industry in the country (after healthcare), comprising more than 7 percent of GDP. Seventy percent of these revenues are from public sources. Corporations have been drawn to education, not because they can build a better mousetrap or classroom, but in order to tap into this enormous reservoir of public funds.¹²

The University of Phoenix (corporate name: Apollo Group) is the poster child of the for-profit sector. It caters to working adults (students had to be 23 or older) and awards 76 percent of degrees in business and management. The niche Phoenix fills is defined less by content and more by the manner of delivery (Sperling & Tucker, 1997). Offering five-week modular courses to cohorts of students, Phoenix has minimised the opportunity costs as well as the effort required for earning its degrees. When a credential is the goal, education can be streamlined.

Unlike non-profit universities, for-profit education corporations replicate successful business plans by creating additional units, which are generally modest in size. Expansion is facilitated by the commodification of knowledge. The University of Phoenix has ‘unbundled’ the faculty role. Content is provided by professional course designers, who start with ‘learning objectives’ and then assemble materials that will fulfil those objectives. Everything must be pre-packaged and simplified so that the shifting corps of part-time teachers (actually, independent contractors) need only ‘deliver’ this material to students across the country.

The for-profit segment of the American market largely delivers what it promises - career-enhancing educational credentials. In this respect these institutions have developed and exploited distinctive segments of the market. At their best, they offer a credible service to clientele that are not well served by traditional institutions. And they have some vigorous defenders of that role (Sperling and Tucker 1997; Ruch 2001). However, across the spectrum of corporate universities, they can also be guilty of commodifying, or trivialising, knowledge, and of pedalling credentials of dubious worth, all at partial public expense.¹³ Of greater concern is that these practices are not confined to this particular market niche.

This issue leads back to growth, for it is growth that brings the greatest rewards to owners and managers. As they seek new markets in which to expand, the corporate universities increasingly intrude on the domain of traditional higher education. The fastest growing areas of for-profit enrolments are master’s degree courses and then bachelor’s degrees. Phoenix has lowered its age limit from 23 to 18, and has continued to expand by adding new campuses across the country. The competitive advantage of corporate universities lies in lower opportunity costs for students (greater convenience; less work), and in vocational focus on specific careers.

Conclusions

The current era was born amidst the financial turmoil of 1979-1982. At the time, it was impossible to perceive the long-term consequences of actions taken. Amid the noise of contemporary events, truly significant developments only become apparent in retrospect. Change occurred as institutions and individuals adapted to new conditions and learned from their experiences. The economic downturn that began in 2008 has brought even greater economic turmoil, but the nature and direction of subsequent financial trends clearly lies in the future. At this juncture, it is only possible to note the apparent dislocations and how they might affect the financial trends that have been described above.

The immediate financial effects of the great recession on higher education were evident by 2010. Wealthy private colleges and universities suffered losses to their endowments and to their confidence. For a change, the greatest damage was suffered by the largest, professionally run endowments. Still, the worst fiscal disasters struck state treasuries, and (unlike endowments) these dire conditions promise to worsen before any signs of improvement appear. Student demand shifted, as students at the margin migrated to less expensive sectors of the market. In addition, many young people who could not find jobs found college an attractive refuge. Thus, demand has grown appreciably among institutions with lower prices and lower expenditures. Of necessity, tuition has been increased in all sectors, with some huge percentage hikes at public universities. However, the two-year 32 percent increase at the University of California, or \$2,500, is less money than two years of 'normal' 4 percent increases at private research universities. Spiraling tuition everywhere has elicited greater need for student financial aid; while federal grant aid has expanded under the Obama administration much of the slack has been taken up in the form of loans. Thus, it would appear that the principal vectors of the previous era have persisted, if not accelerated; but this frenetic culmination of past trends may well presage future adaptations.

No evidence suggests that the bifurcation of U.S. higher education into selective and non-selective sectors will attenuate anytime soon. More likely, realignments may take place among institutions or sub-sectors within these spheres. The non-selective sector appears to be further emphasizing vocational offerings. The continuing disinvestment in public master's-level institutions will make it more difficult for them to sustain liberal arts departments; and job-market anxieties are likely to lure students toward professional majors, as they did in the 1970s. However, these institutions may find themselves defending a constricting market niche—more expensive than community colleges and less vocational than for-profit schools.

The decade of the 2010s should present expanding opportunities for community colleges. Already the favorites of the Obama Administration, which staged a White House celebration for them in October, 2010, the states are counting on community colleges to educate more students more cheaply. Their rapidly rising enrollments may bring stronger students to academic programs and greater possibilities for vocational ones, including new three- or four-year degrees. The challenge for community colleges will be to improve their poor record for transfer to baccalaureate degree programs and to develop robust-sub-baccalaureate credentials. Resources and execution could be limiting factors in accomplishing these tasks, but successful or not, the

community college sector seems destined to accommodate a larger share of postsecondary enrollments.

The most dramatic development in the open enrollment sector has been the rise of corporate for-profit institutions. Only 2.9 percent of enrollments in 2000, they comprised 7.7 percent in 2008 and have continued to gain market share. For undergraduates, this sector depends almost entirely on federal student aid; without it, many of the institutions would likely be forced to close. Tuition is high at these institutions, generally more than public universities; but they attract students through marketing and salesmanship, convenience, occupational targeting, as well as financial aid. As tuition rises in the public sector, and as more student financial aid becomes available, the for-profits become more competitive and more profitable. Moreover, as the for-profit sector expands it increasingly encroaches on the enrollment base of chiefly public institutions. For-profits focus on the most lucrative areas, such as MBA's, and thus pose a growing threat to public sector revenues. The goal of corporate college systems is expansion (Geiger, 2007). Thus, present trends favor their business plan—and their stock prices. They will continue to expand until the federal government limits their access to student financial aid. Recent efforts by the federal Department of Education to more tightly regulate this sector could threaten its continued growth, but it is yet to be seen whether the department will be successful in reining it in.

In the selective sector, the economic factors underpinning the high-tuition/high-aid model of private colleges and universities have all been affected. Due to endowment losses elite institutions have had to reduce their budgets, and hence their investments in superior quality. And, the downward ratchet of college choice means that the thin market for elite education is growing thinner. At the same time, the published price for a four-year bachelor's degree now exceeds \$200,000 (2010)—a staggering figure for the vast majority of households. Most of these private institutions entered the great recession in strong financial condition, and hence will not compromise their eminence anytime soon. But for the less wealthy half of this sector, the deterioration of the high-tuition/high-aid model could produce the kind of marketing crisis they endured in the 1970s.

The number of public institutions that belong with the selective sector has been growing steadily. They include most flagship research universities and an increasing number of smaller institutions that have acquired reputations for high standards and quality undergraduate programs. These institutions face cross-cutting forces--greater numbers of talented applicants, but state declining appropriations with which to sustain academic quality. Large flagship universities have long been evolving toward greater tuition dependence. Now more than ever their strategy is to raise tuition for state students and recruit larger numbers of out-of-state students (who pay 2-3 times more) in order to sustain their academic core. However, maintaining high quality in this situation requires additional revenue streams, particularly from research. These pressures have forced an “unbundling” of university tasks: universities have increasingly utilized non-tenure track faculty for undergraduate teaching so that regular faculty can engage in research, scholarship and advanced instruction (McPherson & Shulenburg, 2008, pp. 49-55; Geiger, 2010). Thus, the imperative of staying in the forefront of the advancement of knowledge has been, and is likely to continue, forcing internal differentiation in research universities.

Public universities have also sought revenues from intellectual property and involvement with technology-based economic development, which feeds these same forces. Such initiatives provide an interesting contrast with private research universities, which (outside of medical schools) have defensively abandoned new commitments and emphasized core constituencies. Public universities, as hard as it may appear under present conditions, will need to expand activities that bring external revenue streams in order to sustain and augment knowledge generating activities.

Such a scenario is predicated on continued public recognition of the crucial contribution of universities to our knowledge-based society. Thus far, reactions to the great recession have looked to the American competitive advantage in research and innovation to help alleviate economic woes. This attitude is similar to the response to the 1980 recession that produced Bayh-Dole and other structural adjustments, as well as new forms of support. However, these initiatives were followed by a steady drumbeat of criticism of academic research, which culminated in credible threats of severe cutbacks in the mid-1990s. The present recession has yielded no new programs to spur innovation (perhaps enough are already in place); but faith in the promise of economic dividends from academic research has remained strong, and so has funding (partly aided by special stimulus funds). Pressures to reduce or narrowly target federal support for research are almost certain to emerge before long. However, the economic value of universities is now beyond question. There is no substitute for the most advanced knowledge in a knowledge-based economy, and universities are the institutions that can best generate and disseminate such knowledge, as well as educate the experts needed to take advantage of it. Industries in which the United States leads the world—like biotechnology or software—did not exist at the beginning of the current era. Future prosperity will no doubt depend on the emergence of new and unforeseen knowledge-intensive industries. After the current belt-tightening passes, universities dedicated to the advancement of knowledge and most closely connected with advancing technological sectors are most likely to lead.

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² The College Board, the source of the data on tuition prices, did not track prices in the for-profit sector until recent years. Prices shown are for tuition and fees only (for in-state students in public institutions), and do not include the cost of living expenses.

³ See Heller (in press); Mumper (1996); and Wilkinson (2005) for analyses of the development and expansion of financial aid over the years.

⁴ The following draws from Geiger's (2004) *Knowledge and Money*, Chapter 3.

⁵ Economists measure quality in terms of wealth or spending, but students appreciate the effects of spending in campus amenities, etc. The alternative to qualitative competition (greater spending) is price competition, which in its cruder forms tends to restrict inputs, attract less qualified students, and diminish quality.

⁶ Gordon Winston (1999) writes of this situation, "hierarchy based on donative resources become highly skewed"; however, any attempt to opt out of the arms race would be "fiduciary irresponsibility": "in a positional market, there's [sic.] never too much of a good thing ... and in the hierarchy, wealth is fundamentally a good thing" (p. 27, 31).

⁷ For a working definition of the selective sector, social scientists have divided American higher education into seven tiers. Tier one consists of 44 institutions, all private except for the three military academies. Tier Two is 85 institutions, 65 private and 20 public research universities. See Soares (2007) for more detail.

⁸ These studies are summarized by Soares, 2007, pp. 130-35, 176-77; and analyzed further by Zhang(2005).

⁹ For background, see Geiger (1993), Mowery (2004).and U.S. General Accounting Office (1998).

¹⁰ The following draws from Geiger & Sá's (2008) *Tapping the Riches of Science: Universities and the Promise of Economic Growth*.

¹¹ Portions of this section have been adapted from Geiger (2007).

¹² The political battles surrounding this development are most conspicuous in primary and secondary education, where they revolve around vouchers, charter schools, and corporate management of school systems.

¹³ The responsibility for upholding educational standards in the United States falls to the regional accreditation bodies whose policies are by no means consistent (see Kinser, 2004) The non-acceptance of course credits from for-profit colleges by traditional institutions has been an embarrassing and growing problem for many of these schools, which they have sought to remedy through congressional legislation (Hechinger, 2005).