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**THE WANING OF AMERICA'S HIGHER EDUCATION ADVANTAGE:
INTERNATIONAL COMPETITORS ARE NO LONGER NUMBER TWO AND
HAVE BIG PLANS IN THE GLOBAL ECONOMY***

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ABSTRACT

The United States has long enjoyed being on the cutting edge in its devotion to building a vibrant higher education sector. After a century of leading the world in participation rates in higher education, however, there are strong indications that America's advantage is waning. The academic research enterprise remains relatively vibrant. However, participation and degree attainment rates have leveled off and are showing signs of actual decline in a number of major states with large populations—and this seems to be more than just a bump or short-term market correction. Other competitive nations, and in particular key members of the European Union, along with China, India and other developing economies, are aggressively nurturing their higher education systems, expanding access, and better positioning themselves in the global economy. They have been trying harder, while in the US public funding for higher education has declined. The nation's international and domestic concerns lie elsewhere. In addition to outlining these reasons that America's higher education advantage is waning, this article also discusses the possible consequences.

The sole superpower presently on earth may not have lost all of his clothes, but he has lost at least his shirt and probably more. The US has the maladies of a mid-life crisis and glimmers of a fading—if not irreversibly lost—colonial empire: the debacle in Iraq, astounding increases in the national debt and lackluster exports, a school system perpetually struggling with finances and performance, out-of-control medical costs, and a growing disparity between rich and poor. Perhaps it is appropriate to claim that those currently in control of both houses of Congress and the White House are pretty good at

* This essay is adapted from *The Conditions for Admission: Access, Equity, and the Social Contract of Public Universities* (Stanford: Stanford University Press, forthcoming Spring 2007).

cutting government, but they don't know how to run it. One result is that some of America's big problems—solutions to which are essential for long-term economic competitiveness and socio-economic mobility—languish or go unrecognized.

The problems with American schools, which in fact are tied to the larger problems of American society, have long been a focal point of national concern. Now, attention needs to include as well the plight of the nation's universities and colleges—particularly public institutions that enroll some 80 percent of all students.

Higher education has long been a bright spot in the American experience. However, there are alarming indicators of stagnation and actual decline in US participation rates in higher education, particularly among younger students. More importantly, and again largely unrecognized by a US political environment that seemingly rejoices in its isolationism, is the relative position of the US when compared to many members of the European Union, and the Organisation for Economic Cooperation and Development (OECD) in general, in tertiary participation and degree completion rates.

China and India and a number of other non-OECD nations are also making huge strides in nurturing their indigenous human capital, but they have a long ways to go to reach the participation rates found in the US and a core of European nations and commonwealth partners like Canada and Australia.

Europe in particular is making a collective drive to no longer be second in fostering a well-educated workforce. Although they have many problems of their own, it is apparent that they are trying harder and without the distraction of large-scale military ventures abroad or the burdens of debt levels and trade imbalances that plague the US.

Europeans tend to view the political and institutional changes within the EU as slow-going and fraught with bureaucratic hurdles and perhaps unanswerable questions—like accepting or not accepting Turkey into the EU fold. Each bump in the road is accompanied by a sense of doubt and self-criticism. But from an American viewpoint, there has been steady progress that is bringing concrete results.

In contrast, the US—once defined by a great flexibility in its institutions and characterized by a willingness to change—is now beleaguered by limited horizons, constantly on the lookout for cutting rather than building for the future. It is a gross exaggeration to say that the respective roles of the US and EU have been switched, but this does contain some truth. Using the yardstick of higher education—a once real and symbolic advantage for the nation—how far has the US fallen? How far have the EU and others progressed?

The Individual in the Postmodern Economy

“In the technological society,” wrote the famed British sociologist A. H. Halsey in 1960, “the system of higher education no longer plays a passive role; it becomes a determinant of economic development and hence stratification and other aspects of social structure.”¹ At that time, it was widely recognized that America had taken the lead among the world's nations in creating mass higher education, in making universities and colleges a necessary component for economic prosperity and social equality. The diversity of institutional types (public and private, two- and four-year, vocational and

liberal arts), their ubiquity, and their general affordability existed in no other part of the world. As a result, and in concert with societal norms that have decidedly ignored class distinctions, America gained the most productive labor force in the world and enjoyed an unparalleled level of socioeconomic mobility among its population.

Broad access, high levels of productivity, the ability of students to bank credits and matriculate between institutions, the diversity of institutional types, and the general understanding of the social contract of universities (i.e., their greater purpose in society)—these are among the great strengths of America's pioneering higher education systems. At the root of the social contract of American universities has been the concept of pushing *and* facilitating demand for higher education through a variety of institutional types, but largely through a great array of public colleges and universities.

In a 1971 survey of American higher education for the Carnegie Commission on Higher Education, British university administrator Sir Eric Ashby saw bumps in the road for America's leadership position, with demand growing and problems of financing around the corner—an accurate prediction. Yet he also sensed a trajectory “toward a conclusion with the inevitability of the plot in Tolstoy's *War and Peace*. The conclusion is universal higher education, equality of opportunity, proliferation of graduate education and research, corporate involvement in helping to resolve the dilemmas of society.”²

After a century of leading the world in participation rates in higher education, however, America's advantage is waning. The academic research enterprise remains vibrant. But participation and degree attainment rates have leveled off and are showing signs of decline—seemingly more than just a bump or short-term market correction. Ashby optimistically thought in 1971 that the next phase of American higher education was to finance and plan expansion, “until privileged and underprivileged children of similar ability have similar opportunities to go to college.”³ But we find that these disparities are growing.

Meanwhile, other nations, particularly those in the OECD, are attempting as a matter of government policy to match or exceed US participation rates and to more fully integrate higher education into national economic and social policy. They have many problems of their own, but it is the political will and trajectory of their efforts that offers a sharp contrast to the US. Within the context of their own political culture and national development, many of the OECD nations, particularly the members of the European Union, have looked across the Atlantic and sought inspiration and models. They have set national and multi-national goals for higher-education reforms intended to increase participation rates, degree attainment, and targets for investment in basic and applied research. And their efforts are paying off. For the first time since the late 1800s, America no longer has the world's highest rate of young students going on to a postsecondary institution.⁴

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Here is an alarming trend that has implications both for socioeconomic mobility in the United States and for national economic competitiveness. What are the factors for explaining this waning of America's leadership position in promoting access to higher

education? What are America's competitors attempting to achieve? And what course might the US pursue?

Participation Rates and Competitors

In large part because of the investment and development of public higher education in the US, there has been a steady increase in participation rates in some form of postsecondary education among those aged eighteen to twenty-four over the past century. Yet things have changed. America is arguably no longer a clear leader in providing a high-quality, accessible, and generally affordable higher-education system. In some important measures, the United States is on the verge of falling behind. Among younger students, many EU countries have now approached the participation rates of the United States or, in a few cases, have exceeded them. America's higher-education system is still relatively vibrant, but the trajectory has flattened.

On average, the postsecondary participation rate for those aged eighteen to twenty-four in the United States is a mere 34%, according to a recent study by the Education Commission of the States. Rhode Island has the highest rate at 48%, while Alaska has the lowest at 19%.⁵ In California, Florida, and Texas—states with large and growing populations—approximately 36%, 31%, and 27%, respectively, attend some form of postsecondary education. And in the majority of states, these rates have steadily declined over the last decade.

In contrast, within a comparative group of fellow OECD countries, on average almost 50% of this younger age group participate in postsecondary education, and most are enrolled in programs that lead to a bachelor's degree. Perhaps most importantly when compared with other industrialized nations, in 2002 the United States ranked only 13th in the percent of the population that enters postsecondary education and then completes a bachelor's degree or higher.⁶ In other words, the US has decently competitive rates of participation in tertiary education, but meager and declining rates of actual degree attainment.

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In some states, such as California, access to higher education for the traditional age cohort has declined significantly over the past two decades. In 1970 in California, some 55% of high school graduates moved directly to tertiary education, among the highest figures in the nation; in the year 2000 the rate was a mere 48% and it appears to be declining. This drop has occurred in an economic environment that needs a labor pool with more postsecondary training and education. In the US, there are healthy increases in the participation rate of older students—important for lifelong learning in the post-modern economy and for facilitating socioeconomic mobility. But even in this regard, a number of OECD countries are consciously attempting, through national policies, to expand participation and to meet or exceed the rates found in the US.⁷

Yet another indicator of America's decline is a study of the degree attainments of the high school graduating classes of 1972 and 1992. Those who graduated from high school in 1972 were more likely to gain a bachelor's degree over a twelve-year period

than those who received a secondary diploma twenty years later. This fact held true for both Euro-Americans and Asian Americans. There were, however, increases in degree attainment rates for Latinos and African Americans—evidence of a rising middle class and perhaps the benefits of affirmative action. Women also increased their degree attainment. A similar pattern is evident for those achieving a master's and professional degree or a doctorate: declines for Euro-Americans and Asian Americans, and generally increases for African Americans and women, but, interestingly, a decline for Latinos.⁸

In contrast, higher-education participation and degree completion rates have increased considerably since 1990 in most European countries. As in the US, the rub is that governments are attempting to reshape their higher education systems while almost universally reducing government subsidies on a per-student basis.

In England, for example, while participation rates climbed remarkably in the past decade, nearly reaching 50% (depending on how one is counting), subsidies have been more than halved per student. In his study of financing higher education in the UK, David Palfreyman calls this phenomenon the “retreat of the taxpayer.”⁹ Significantly, the Labour Government has publicly recognized that higher education is under-funded in England and has taken steps to re-invest, largely through a compact of increased government funding and allowing universities to increase fees.

Within the European Union, the push to increase participation rates in higher education transcends national borders. So important is the expansion and support of universities for EU nations that many are now integrating degree standards (like the American model) under the 1999 Bologna Agreement, creating a new pan-European framework for supporting research—the new European Research Area, recently established by the European Commission. European Ministers of Education convened in Bologna to seek common higher education reforms. The objective was to “ensure that higher education and research in Europe adapt to the changing needs of society and advances in scientific knowledge,” and to “increase international competitiveness of a European system of higher education.”¹⁰

While EU participants seek their own cultural and education institutions, clearly they look to the American model.¹¹ Early in the effort to create mass higher education in the US, colleges and universities embraced a framework in which students could collect course credits earned at one or more higher education institutions, eventually leading to a degree. The development of multi-campus systems within states with common or coordinated admissions policies significantly expanded the ability of students to enter one system and progress to another on their path to a degree.

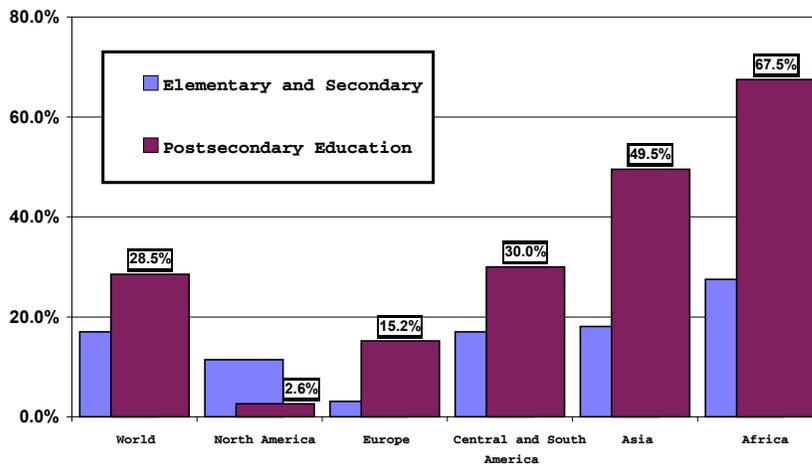
A recent study indicates that 33% of all students who gain bachelor's degrees in the US did so after attending two or more higher education institutions. Some 28% of all students who gained their degree from the same institution they first entered took courses *en route* at another institution.¹²

Creating a European version of American degree standards and matriculation is a key component of the Bologna Agreement. It seeks a pan-European solution creating comparable degrees and a “credit accumulation and transfer system” (CATS). Thus far, national responses to Bologna have varied considerably, with initially only a few of the EU participants (Italy and Germany) attempting to revamp their degree structure and with others considering it. European integration is a complicated political process with

many conundrums, obstacles, and no clear end result. But it is also a powerful force that, along with the rise of China as an economic powerhouse, may significantly alter the world economy.

As part of a host of reforms related to European integration under the European Union, the Bologna process emphasizes higher education as a tool of economic development and competitiveness, and the persistent concern of most European countries with mitigating class differences has resulted in a surge in participation rates—particularly over the last two decades. To some extent, the higher-education community in each country has been a reluctant or ambivalent partner in these government-initiated attempts to increase access. The results, however, are astounding. HE enrollment has grown by over 30% in England over the past two decades, and in France by a staggering 72%.¹³

Figure 1
Percentage Change in Student Enrollment by Area of World: 1990-97



Source: Organisation for Economic Cooperation and Development, *Education at a Glance*, August 2001

Another indicator of the differences between the US and EU higher education markets is illustrated in Figure 1, which provides data on enrollment increases by major continents. Even with significant population growth in North America (dominated by the US), overall postsecondary enrollment grew by only 2.6% between 1990 and 1997—this at a time when immigration has contributed to an 11.4% overall increase in the number of students in elementary and secondary schools. In sharp contrast, European higher-education enrollment has increased 15.2% over this short seven-year period, while growing at only 3.1% at the elementary and secondary levels.

One sees even greater increases in Africa, Asia, and Central and South America. Such significant percentage increases in these parts of the world, however, also reflect relatively recent large-scale increases in schooling in “developing” nations. Few regions of the world match the postsecondary participation rates in the US and in the EU, although government initiatives may change this landscape shortly. Yet large markets exist for higher education outside the US—markets that both public and private colleges and universities in the US, England, Australia, and other countries are trying to tap.

The OECD also estimates the role of education in increasing labor productivity, measured as GDP per person employed. One important cause of rising economic productivity is educational attainment of the working population, which also heavily influences technological progress. In the 1990s, the US ranked 6th in terms of the role of educational attainment in productivity growth, behind Portugal, the UK, Italy, France, and Finland. In previous decades it had ranked number one. “By many measures, since 1980, the quality of the U.S. workforce has stagnated, or its growth has slowed down dramatically,” recently noted economists Pedro Caneiro and James J. Heckman.¹⁴

There are other indicators that America’s leadership position is faltering. Relative to most other nations who are our economic competitors, significantly smaller proportions of college-age students are entering scientific fields. In 2004, China had six times the number of college graduates in engineering as the US. Combined, India and China produced approximately one million engineering graduates a year, with the US and Europe producing only 170,000 combined. In China, the national government is engaged in a large-scale effort to expand higher education via both building native institutions and cleverly created limited partnerships with foreign providers—partnerships where the national government retains significant institutional control.

In the midst of its rise as a major economic player in the world, China also has stated an intention to eventually create 20 MIT’s—a mighty task, to be sure. At the same time, many high technology-based conglomerates, including IBM and Nokia, have started new research and development centers in major Chinese cities and in other developing economies where higher education is growing, such as in India, and where academic programs are largely focused on science and technology.

There is increasing evidence that the quality of these academic programs, and the clusters of research expertise that entices international companies, is growing and becoming increasingly competitive with US institutions and research centers.

There is increasing evidence that the quality of these academic programs, and the clusters of research expertise that entices international companies, is growing and becoming increasingly competitive with the US institutions and research centers. This has led critics of shrinking state and federal funding for higher education in the US to argue that the nation is on the brink of losing its long dominance in basic science. For example, of the articles in the world’s top physics journal published in 1983, 61% were authored by scholars in American universities; in 2003, that proportion dropped to 29%.¹⁵

Yet others see benefits in what appears to be the edge of a sea-change. The increased quality and concerted efforts of governments to build their higher education sectors means a more rich global market for scientific and technological expertise—many of who are and will be drawn to the US. Some even predict a “glut of technically sophisticated human capital.” But few policymakers, thus far, would view growing and significant reliance on the international market for scientific and technical labor and innovation as sound long-term national economic policy—in essence, turning one’s back on native talent.

As the global production of scientists and engineers grows, the rise of new high-technology industries and research clusters outside of the traditional hegemony is altering the flow of talent. Some worry that the US’s ability, as well as that of Europe, to

attract global talent will, in relative terms, decline. As a recent OECD report notes, how can the US retain “a strong knowledge economy without a stronger education system?”¹⁶ Higher education is not just a tool for meeting immediate labor needs for promoting economic innovation—although that is an important role; it also is a vital route for socio-economic mobility and for creating a more inclusive society and promoting democracy itself.

Explaining the Stagnation

What factors contribute to this erosion in American education? There is no one cause, but rather an array of interrelated causes. However, one can boil them down to four main factors. One is the stagnation and, in many states, even significant decline in high school graduation rates, in turn pushing down the demand for higher education. A second cause is declining political interest and government investment in public higher education (where some 80% of all American students are enrolled). That factor helps generate a third cause, increased fees without adequate increases in financial aid. And a fourth cause is the possibility that all mature higher education systems, such as that in the United States, may reach a point of equilibrium—a leveling off of participation rates, reflecting in some measure a point of saturation. The following discusses each of these factors.

Secondary Attrition Rates

As noted, the US has among the highest secondary-school dropout rates among OECD countries. A 2005 study by Paul E. Barton estimates that the percentage of US students who complete high school is possibly as low as 66.1%, down from a peak of 77% in 1969. Burton and others insist that estimates by the US Department of Education of high school completion rates have been routinely exaggerated.

In more optimistic times, it was thought that the US might reach a high school completion rate of 90%—a goal set by President George H. W. Bush and the nation’s governors in 1990. However, between 1990 and 2000, the completion rate declined in forty-three states, and in ten states it declined precipitously—by more than 8%. In only seven states did it increase.¹⁷ There are few indications that the trend has bottomed out. Among the causes cited in a growing body of literature are not only significant socioeconomic shifts in the American population, but the overall vitality and focus of America’s high schools.

Many argue that increased high school dropout rates, and hence the declining pool of potential college students, relates to inadequate curricular demands among a large proportion of the nation’s secondary schools—particularly, but not exclusively, in lower-income communities. One assessment is that 40% of American high school graduates are not prepared for college work. A 2004 survey of all fifty states by Achieve Inc. reports that no state “requires every high school student to take a college and work-preparatory curriculum to earn a diploma. While some states offer students the option to pursue a truly rigorous course of study, a less rigorous set of course requirements remains the standard for almost every state. Only Arkansas, Indiana, and Texas have made or will soon make a college-preparatory curriculum the norm.”¹⁸

The role of male students is yet another wrinkle in the story of America's alarmingly high secondary attrition rates, and an indicator of stagnant or even declining postsecondary participation rates. Males are more likely than females to drop out of high school. They tend to get lower grades than females and take fewer college-preparatory courses. Females are now the majority in chemistry and advanced math courses. In 1960, males represented 64.1% of all college and university students; they now represent less than 43%. A similar trend can be seen among the other OECD countries.¹⁹

There is some evidence that this phenomenon reflects pent-up demand by and the opening of the job market to females. But increased enrollment by the female cohort is more exaggerated in the US, correlating with rising levels of poverty, the complexities of growing immigrant populations, and other social factors not clearly understood.

High school attrition rates are tied to socioeconomic trends *and* public investment patterns. There have been significant demographic changes in the United States over the past four decades, along with a significant increase in the gap between the rich and the poor and, arguably, erosion in the financial position of the middle class. "Economic inequality in the United States is higher today than at any time in the past sixty years," notes a 1999 study by economists Claudia Goldin and Lawrence F. Katz. "One would have to return to the period just before our entry into World War II, still during the Great Depression, to find inequality measures comparable in magnitude to those at the current time."²⁰ In 1999, some 34 million people, or 12.4% of the population, lived below the poverty line; that figure is creeping upwards.

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Shifts in demography and income have influenced the socioeconomic mix and in turn the college-going rates of various subgroups. Some immigrant groups have fewer real and perceived opportunities and expectations of entering postsecondary institutions; other immigrant groups lack the *cultural capital* but also exhibit a substantial drive to enter public higher education—most notably, recent Asian immigrant groups.

Most significantly, blacks and Mexican immigrants and their children have extremely low high school graduation rates relative to the general population. In border states such as Florida, Texas, and California, the low participation rates of the fastest growing minority group, Chicano/Latinos, pose a major problem. And for reasons even more complex, African American high school and college participation rates correlate even more directly with economic status.

Low access and degree rates mean, of course, a long-term exclusion from the mainstream of American economic and social life—a pattern experienced, for a variety of causes, by a significant portion of African Americans. Nationally, only 14.7% of Chicano/Latinos have earned either an associate or higher degree; for African Americans, the number is 20.0%; and for Asian Americans and Euro-Americans the number is 50.5% and 33.6% respectively.²¹

Economic Swings and Political Priorities

Economic downturns and shifts in political priorities are additional factors for explaining the general stagnation of participation rates among the younger age cohort. After years of building mass education systems, many states have shifted much of their energy toward other policy problems—the escalating cost of Medicare and prisons and the debates over tax reform and immigration, for example; all are arguably viewed as a higher priority among state and federal lawmakers than is higher education.

Also, the federal government has reduced over time the level of funding available for financial aid relative to the cost of tuition in both public and private institutions. Despite opinions to the contrary, tuition at public higher education institutions has grown at a rate roughly equivalent to the rate of inflation in most other service industries; yet the amount of aid provided by both federal and state governments, either as grants or as loans, has been well below the general rate of inflation.

As a result, financial aid provided by institutions (at public universities, largely generated by the tuition paid by more affluent students) has grown substantially. Yet arguably this relatively new source for financial aid is, thus far, inadequate in reducing the economic barriers for lower- and many middle-class families. And increases in tuition at public colleges and universities have not been enough to offset large declines in state investment in higher education on a per-student basis.

Government has entered an era of attempting to control or reduce services, not to increase them or help shape the labor market, except for demanding that schools increase testing in an attempt to raise performance. This shift in priorities, combined with deep recessions over the past three decades, has contributed to a significant decline in state and federal investment in public higher education.

“State support for public higher education on a per-student basis has dropped steadily,” laments David Ward, president of the American Council for Education, “and, at the federal level, there has been a dramatic shift in the emphasis from grants to loans for promoting college access. As a result, the United States has witnessed an unraveling of the successful higher-education financing partnership among government, institutions, and families that has served our nation so well over the last century.”²²

Fees and Access

Public institutions have attempted to make up for a portion of the decline in government investment and the impact of rising costs by raising tuition. In 1980, fees and tuition made up approximately 15% of public university operating costs; they grew to about 28% by 2000. At the same time, student debt has increased. In the face of rising fees at both public and private institutions, the policies of government and colleges and universities have arguably made things worse. The federal government has moved precipitously toward loans over grants—most recently raising the interest rates in a move largely calculated to reduce the federal debt; many institutions, particularly the privates, have also devoted more of their own institutional financial aid to “merit” over “need” based grants and loans.

As a result of the combination of these forces, two-thirds of the students graduating from college now have student loans, carrying an average debt of close to \$20,000—an

increase of 60% in just seven years. Graduate students carry average debt of \$45,000. Almost every college-qualified, high-income high school graduate enrolls within two years, while more than 20% of qualified low-income students do not go to college at all.²³

Not surprisingly, the net cost of attending a college or university is taking a larger share of family income and at a disproportionate rate. One estimate indicates that the net cost of attending a college or a university (fees minus financial aid) absorbs 38% of the total income of families and individuals in the lowest-income quintile, and that the figure is 45% in the second-lowest quintile. Families in the middle-, fourth-, and highest-income quintiles devote only 30, 20, and 14% of their family income to college costs, respectively.²⁴

Much Congressional criticism of increased tuition has stressed the impact on middle-income families of a reduced entitlement. But arguably the biggest influence is on the growing number of low-income Americans. Rising fees, for example, appear to be accentuating the tendency for students from more affluent families to congregate at the higher-priced and most prestigious colleges and universities, both public and independents.²⁵ “At a time when the financial payoffs of a college education have risen,” notes Rupert Wilkinson in his study of the history of financial aid in the US, “widening the economic gulf between college graduates and others, many qualified young people are not going to college because of lack of money and fear of debt.”²⁶

It has long been assumed that higher tuition fees in public and private institutions will negatively influence access among lower-income groups. As fees at public institutions began to creep up in the 1980s, one study published in 1987 indicated that for every increase of \$100 at a four-year institution, one might postulate an almost 1% decrease in participation among 18- to 24-year-olds.²⁷ A 1995 study on price sensitivity indicated that a \$1,000 increase at four-year institutions resulted in a decline in demand by lower-income students of 1.4%.²⁸ Both studies indicated the obvious: lower-income students are the most sensitive to price changes. As a group, part-time students—many of whom are from lower- or middle-class backgrounds—are the most sensitive to fee increases.

There are indications that students are now less price sensitive than in earlier decades, in part because the value of postsecondary education has increased, fueling a greater understanding and cultural acceptance that students and their families need to pay for educational services—and to plan for it. There is a great need for expanded research on the relationship between tuition levels and affordability and access.

Unfortunately, there are very few good studies focused on micro-economic questions related to pricing and student (consumer) choices in higher education within the modern context. For example, might an overall decline in resources for public institutions, and resulting reductions in academic staff and the number of courses offered, be a bigger threat to access than moderate increases in fees over time? Might access and equity be achieved best by raising the costs for the affluent to attend selective public universities and redirecting the resulting augmented resources to both improve the undergraduate experience and expand financial aid for the needy? It is a complex problem with many social and economic variables; nonetheless, there are economic models that could provide guidance. It is perhaps not an overstatement to say that we are entering a new era of moderate or high fees at public institutions without a strong sense of what may transpire.

Market Saturation?

Two other explanations for the leveling off and marginal declines in higher-education participation rates in the US are worth exploring. One explanation is that perhaps there is a point at which a national higher-education system serves all those capable of benefiting from a university or college education. As a national system approaches this thus-far inconceivable point, increases in participation rates inevitably slow down and eventually level off.

Perhaps there is a point at which a national higher-education system serves all those capable of benefiting from a university or college education; as it approaches this thus-far inconceivable point, increases in participation rates inevitably slow down and eventually level off.

This model assumes a certain limit in the intellectual powers of the general population—an argument reiterated in historical debates over the purpose and proper scope of higher education. The problem with this concept is, of course, that in building our mass higher-education systems—particularly in the United States—we have essentially redefined higher education to mean a vast array of academic and applied programs. Old arguments of the intellectual capability of the general population are rendered nearly meaningless. Further, America's commitment to course accumulation and the transfer function exudes the idea that people develop their talents and intellectual ability at different rates and different ways. The model also assumes a match of supply (institutions and programs) with demand. Lack of supply means an artificial suppression of demand and participation rates.

Another explanation is more relevant: Perhaps the perceived value of higher education for potential students has declined relative to other potential pursuits. In the 1970s, a provocative study by Richard Freeman, an economist at Harvard, discussed the cycles of the labor market, the demand for higher education, and the notion of the "over-educated" American.²⁹ Two factors colored Freeman's analysis, and that of other higher-education observers. First, demographic projections indicated that the number of young people entering elementary schools would decline throughout the 1970s and perhaps beyond, meaning an eventual decline in postsecondary enrollments. Second, the job market for college and university graduates appeared to wane considerably.

The boom era of the 1950s and 1960s, in which participation rates increased considerably, created an oversupply of graduates, thought Freeman. This surplus, combined with shifts in the economy, including declining demand for teachers and for technical and professional fields once funded by robust federal R&D budgets, meant a leveling of jobs in which a college or graduate education was useful or required.

Freeman offered two important observations. Not only could there be an oversupply of higher-education graduates, there could also be cycles of undersupply and oversupply if the main objective were to directly relate participation and degree production rates to immediate employment and, in turn, economic growth. Why push demand and the associated costs for individuals, government, and society, if there was no evidence of employment demand? And why encourage individuals to postpone entering the job market if their investment of time and money—essentially, time lost in gaining an

income—would not result in suitable employment and measurable economic benefits? Freeman argued that governments and higher education institutions needed to more adroitly monitor the market for graduates (both generally and in specific fields like engineering) and at times possibly reduce participation in higher education.³⁰

However, the predicted long-term decline in higher-education enrollment demand and in participation rates did not happen—at least, not until the 1990s, for the reasons discussed previously. The projected decline in the college-age cohort, based then on relatively meager birth rates and a brief flattening in school enrollments, was offset by unpredicted increases in America's total population—again, largely fueled by immigration. In turn, many immigrant groups have proven the most insatiable consumers of education, clearly seeing college as a route to socioeconomic mobility. Today, for example, 54% of undergraduates at the University of California have at least one parent who is an immigrant; some 25% were born in another country. At the Berkeley campus, 64% of the undergraduate student body has at least one parent who is an immigrant.³¹

Generally, Freeman and others, including most higher education leaders in the United States, significantly underestimated the growing demand for higher education among every kind of student—undergraduate, graduate, professional, and adult learners training for a specific purpose or simply for edification. The market for students with a bachelor's or professional degree also grew, although it was much more mixed for graduate students in social science and the humanities.³²

The question, then, is whether the contemporary flattening of participation rates, and in some states the actual decline, is the result of temporal or long-term market forces or of social and economic forces, including the declining quality of secondary schools, rising tuition rates, and lagging financial aid programs. In other words, have government policies combined with social woes in the United States artificially constrained participation rates?

Do Participation Rates Matter?

Particularly since World War II, a growing number of studies have shown the relative importance of increasing participation rates in higher education. Developing *human capital* for both economic and social benefits was an idea as old as the nation itself, but it was not until the 1960s that economists began to offer significant analysis of its key role in economic development. Garry Becker and T.W. Schultz famously offered evidence that more than 30% of the increased per-capita income between the 1930s and the 1960s was attributable to increased schooling, and that investment in a college-educated workforce provided a greater rate of return than any other single investment, such as machinery. They also predicted that the private rate of return of an individual attending and graduating from college would grow substantially when compared to those who attained only a high school diploma.³³

The following discusses public and private benefits, debates regarding supply and demand, and the role of higher education in building a culture of aspiration in modern economies. All demonstrate that participation rates do matter, and will likely be a key factor in creating both more equitable and economically competitive nations.

Private and Public Benefits

The work of Becker and Schultz and others spawned a significant body of economic research on human capital formation and the role of education in the US economy, with increasing interest in the link of investment in higher education with technological innovation. A 1999 study by Claudia Goldin and Lawrence F. Katz estimated that during the last century about a quarter of US growth in income per worker was due to the rise in educational attainment.³⁴

Similarly, David Mitch found that investment in secondary and postsecondary education in Europe over the last century had a large impact on general economic growth, although not as large as in the US.³⁵ “Education plays an important role in accounting for the time pattern of economic growth and the cross-country variation in income per capita,” explains economist Elhanan Helpman.³⁶ And that assertion holds not just for those who attend college; there is evidence that in US cities with large concentrations of college graduates, wages are higher for other workers. “This implies,” noted Helpman, “that the social rate of return on higher education is higher than the private rates of return.”³⁷

Other recent studies continue to demonstrate the importance of college participation rates and how they produce both private and public benefits vital to nations, particularly those with post-modern economies. The private benefit afforded individuals who participate in higher education, and particularly those who graduate with a degree, has continued to grow.³⁸ While salaries for all Americans have generally been stagnant over the past five years, the gap between the lifetime income of college graduates and that of high school graduates has continued to grow; the income gap is also, not surprisingly, growing dramatically between college graduates and the nation's growing pool of high school dropouts. In 2004, the workforce population over age twenty-five with a bachelor's degree had an average personal income of \$48,400; those with a high school diploma earned on average only \$23,000.³⁹

Those who attend college have, in addition, much higher rates of employment and much greater opportunities for both social and economic mobility and status. They also have longer lifespans and vote at higher rates than other portions of the population. Their children are more likely to attend and graduate from college, so the previous generation essentially passes on the cultural capital that spawns a general desire for education and self-improvement.

Arguably, the public benefit of high participation rates is even more important. Society has a vested interest in generally encouraging a significant proportion of the population to go to college and gain a degree because college education creates a more flexible, talented, and productive workforce, encourages both social and economic equity, and reduces unemployment rates and welfare rolls. It places a downward pressure on crime rates, increases social tolerance, and correlates with high voter participation and rates of charitable giving. These are all general benefits that are now widely recognized by national governments and higher-education leaders and advocates.

Balancing Supply and Demand

Understanding that these benefits are substantial for both the individual and society, we confront Freeman's question: Can there be too many overly educated individuals who,

encouraged to enter higher education, subsequently discover that they cannot find the appropriate employment? Critics of the government and of higher-education officials and academics who profess the panacea of education have also asked whether there is a finite percentage of the population actually capable of participating in higher learning. As noted, historically this was a component of the debate over the expansion of higher-education access in the US—since gone out of vogue.

In the 1930s, Robert Maynard Hutchins provocatively opposed the idea of the community college in part because he thought the number of those who could adequately participate in higher education was rather small. Later, promoting greater participation, President Harry Truman's commission on education stated in 1947 that "at least 49 percent of our population has the mental ability to complete 14 years of schooling," and another 32% could complete a bachelor's degree in a liberal arts or professional field.⁴⁰ At the time, 19% of all 18- to 21-year-old Americans were participating in some form of postsecondary education—many on the GI Bill.

Some thirty years after Freeman's analysis, in a critique of British policies on boosting higher-education participation rates, Alison Wolf, a professor at King's College in London, expressed a concern that the Labour Government in England was pursuing an irrational quest. The Labour Party's 1997 manifesto stated a goal of having 50% of all younger students participating in higher education (in some form). Similar goals exist in many other European Union countries (there is no stated goal in the United States at the federal or state levels). In France, there is a goal that some 80% of the secondary school population should enter the *baccalaureate* level; Germany has a more modest 40% target, and Sweden 50%.⁴¹

Targets are in part framed by the structure of their postsecondary systems. In an age of increased global competition, as Wolf observes, national governments and political leaders have become unrealistically enamored with pushing demand for higher education. In the rush to promote education as a key component of national economic policy, they are focused on access and graduation rates, are generally unconcerned about the quality of their educational enterprises, and, she notes, largely lack any true understanding of a limited market for university graduates.

Wolf's argument, like Freeman's, targets the match between the number of postsecondary graduates and labor-market needs. She is skeptical about the link of productivity and economic growth to pushing participation in higher education.⁴² There is the possibility of diminishing rates of returns among countries with mature education systems and advanced economies: "The main conclusion must be that, while (almost) nobody would deny that education creates 'human capital', the relationship between this and what happens in the labour market, or the real economy, is far more complex than a simple input-output model."⁴³

The fascination of governments, and economists, with developing human capital relates to tenets of *new growth* theory—essentially, that post-modern economies are driven by "knowledge accumulation," leading to technological innovation and adoption. Higher education produces much of the science and know-how required to produce innovation and the future workers to apply it in the marketplace.

In large part, Wolf's concern is with overly aggressive ministries in Europe that are increasing their regulatory powers and expectations for their national higher-education

systems, without adequately funding the enterprise. Specifically, she advocates that “governments need to abandon their love affair with quantitative targets.”⁴⁴

There are two important and related questions to consider. First, can a nation, or state, provide (and fund) too much higher education? And second, should governments and higher-education institutions attempt to more aggressively regulate access and graduation to more directly fit immediate and projected labor market needs?

Certainly there is a need for national systems, and in turn individual institutions, to correlate their degree production to match, in some form, existing and perceived labor needs in a country—particularly in professional fields. And there is, therefore, a need also to moderate enrollment and degrees in areas where there is no clear job market for students. In a number of European countries with traditional ties to command economies (where the national government has played a heavy hand in regulating its economy) and where public higher education is dominant, national ministries of education (and not institutions themselves) have set quotas and targets for how many students should enter a particular field—sometimes by limiting admissions to specific universities and colleges or by restricting funds for student positions.

But it is also clear that anticipating market needs is a precarious endeavor. For instance, one can clearly identify the lack of trained nurses in the job market and a corresponding inadequacy, at the moment, in the capacity of postsecondary education institutions to produce a suitable supply. In more general fields, such as the humanities, social sciences, and most fields of science and engineering, it is far less clear. Particularly at the undergraduate level, students gain knowledge and skills with wide and often serendipitous uses over their working lives.

A Culture of Aspiration

On the opposite side of the command economy is the decentralized model, which one might sum up as, “let the market decide.” Most OECD countries, including the US, have “open admissions” systems. Governments support some grouping of postsecondary institutions—often vocational, but in countries like France including universities—open to all graduates of secondary schools. In a growing number of nations, a secondary diploma is not a requirement for a growing array of postsecondary programs—again, as in the US, largely applied and vocational. There are, of course, constraints on the ability of students to enter specific universities or other institutions, determined by admissions standards, financial aid, institutional financial resources, and physical capacity and other limits. But most nations are committed to broad access and aggressively pushing demand. Why?

The reasons transcend immediate or even long-term job-market needs, or the recognition that most workers will change jobs numerous times in the course of their working lives, often with the need for retraining under the rubric of *lifelong learning*. The primary reason is the desire to promote a *culture of aspiration*, which in turn influences socioeconomic mobility and creates a more talented and entrepreneurial population, global competitiveness, and the hope for a more prosperous and equitable society.⁴⁵

This ethos is front and center for many European Union member states in their conscious efforts to boost participation rates and refashion their national higher-education systems—often battling the legacy of overt class distinctions and biases. “All

those who have the potential to benefit from higher education should have the opportunity to do so," states an influential white paper issued by the Labour Government in England in 2003. "This is a fundamental principle which lies at the heart of building a more socially just society, because education is the best and most reliable route out of poverty and disadvantage."⁴⁶

In effect, the goal of most post-modern governments, with only the tacit and sometimes reluctant support of the higher education community, is even larger in scope: to make broad access to higher education, or at least the opportunity for it at virtually any age, a part of citizenship. Just as compulsory education has moved from the elementary school level to the first two years of secondary school in most OECD countries, perhaps it will eventually include some form of postsecondary education. The economic arguments for such a policy shift are, in the contemporary era, not convincing—not all jobs require such an expansion. But the extension of compulsory laws to secondary schools in the early twentieth century was not explicitly formulated for economic reasons alone; rather, it related to broad ideas of citizenship, to fostering equality and socioeconomic mobility, and to assorted other national priorities—including the integration of immigrant populations in America.

Cultural differences abound in the socioeconomic aspirations of the population in different nations. In part because of the relatively low social consciousness of class differences, the historically robust nature of its economy, demographic trends (including succeeding surges of immigrants), and arguably because of its particular mass higher education system, one sees incredibly high rates of socioeconomic aspirations among Americans. Indeed, their aspirations exceed the ability of the contemporary economy to actually fulfill their expectations.

Data from the OECD indicates that the occupational expectations of fifteen-year-olds are that by age 30, 80% will have high-skilled jobs that require postsecondary education. Only 8% will have white-collar low-skilled jobs; a meager 6% expect to be in low-skilled service and manual labor jobs. In contrast, 57% of those in the United Kingdom expect to have high-skilled and professional jobs; in Sweden, the figure is 63%; in Germany and France, 49%.⁴⁷

Analysis of labor needs in post-modern economies like that of the United States indicates that the job expectations of America's youth are probably unrealistic. According to one projection, only 20.9% of the US job market in 2010 will require a bachelor's degree or higher. Only 12.6% of the jobs will require sub-baccalaureate degrees and credentials. That leaves some 69.8% of the job market requiring no training or training via employers.⁴⁸

Yet encouraging educational aspirations benefits the individual, society, and the economy. Generally, estimates of the future educational needs of a national workforce outline minimum requirements.⁴⁹ In an analysis of the difficulties of projecting the need for college graduates, John Bishop notes that the Bureau of Labor Statistics and others have a track record of underestimating market demand. "The task of projecting the number of jobs 'requiring a college degree' into the future is essentially impossible," he notes. Employers set out minimum requirements for a particular job, but almost always desire the most educated and competent worker they can possibly get.

To be sure, in creating a caste of over-qualified workers (the term “over-educated” seems to relegate education to a strictly vocational purpose), there are dangers—in terms of an over-investment in an individual’s education and training and in the potential mismatch of personal ambitions with actual job possibilities. The archetypal example is the history or English Ph.D. who has invested eight to ten years in post-baccalaureate education, only to drive a taxi in the immediate aftermath of attaining the degree. Yet we also know that the post-modern economy is constantly changing, and most workers will switch jobs numerous times during their careers; in the face of that fact, it is reasonable to assume that for most workers, the more education, the better.

The old paradigm—once a factory worker, always a factory worker; or once a plumber, always a plumber—is no longer the case. Education, and postsecondary education in particular, offers an avenue for general edification, with its own merits for the individual *and* the possibility of additional socioeconomic mobility in the future. From a purely economic viewpoint, it offers the best chances for improving worker productivity and for fostering the entrepreneurial ethos. And while there are limits in the job market for those with higher-education degrees, there is also evidence that they are more likely at least to be in the labor force. For example, in the US, participation rates among 25- to 64-year-olds with upper secondary education is about 60%; among those with postsecondary education experience, it is 88%; and for those with university-level experience, the rate exceeds 90%.⁵⁰

One might also argue that robust levels of postsecondary education, and the promise of access, is particularly important in post-modern economies that are experiencing large increases in immigration.

One might also argue that robust levels of postsecondary education, and the promise of access, is particularly important in post-modern economies that are experiencing large increases in immigration. The dynamic in relatively open societies, and developed economies, is that immigration of foreign nationals relates not only to job opportunities and improved standards of living, but also correlates with rising educational levels of native populations, a corresponding expansion of high-skilled service and high-technology sectors, and a general leveling of native birth rates.

While some immigrant groups are highly educated and fill job needs in high-skilled and professional areas, more often they provide a labor force for low-skilled jobs that grows as the national economies of these countries grow. This is a dynamic long prevalent in the United States but relatively new in the European Union and other OECD countries. Robust mass higher education systems are vital for the assimilation of new immigrant populations, as well as other disadvantaged groups. They help to mitigate a sense of permanent lower or ethnic class or caste. As the process of globalization continues, marked by increasingly open markets and the open flow of people, education in all its forms will increase as a tool of creating a healthy, relatively equitable, and productive society.

In 1960, in the midst of the Cold War paradigm, John W. Gardner, then president of the Carnegie Corporation, insisted on the centrality of creating a culture of aspiration:

If the man in the street says, 'Those fellows at the top have to be good, but I'm just a slob and can act like one'—then our days of greatness are

behind us. We must foster a conception of excellence that may be applied to every degree of ability and to every socially acceptable activity. A missile may blow up on its launching pad because the designer was incompetent or because the mechanic who adjusted the last valve was incompetent. The same is true of everything else in our society. We need excellent physicists and excellent mechanics, excellent cabinet members and excellent first-grade teachers. The tone of our society depends upon a pervasive, an almost universal, striving for good performance.⁵¹

Economists and sociologists are increasingly interested in the question of how one accounts for societies characterized by high levels of social aspiration, actual socioeconomic mobility, and economic growth and technological innovation. How can we account for economic growth and social progress, and the differences among nations?

One widespread interpretation, and building on Becker and earlier work on human capital, is that those political cultures who build and expand institutions over time, such as higher education and also democratic legal frameworks, are the key factors that account for historical differences in the economic performance of nations. Further, investment rates in these institutions (politically and economically) will influence future performance and the competitive position of nations and regions. In other words, particular political cultures both create particular social and economic institutions and are fundamentally shaped by them over time. It is a long-term and cumulative investment.⁵²

Globalization and supranational entities and international frameworks, such as the EU and the pending General Agreement on Trade and Services (GATS), are tugging at the once dominant role of nation states in shaping political culture and institutions. Yet nations remain the most significant influence on the extent and vibrancy of educational institutions—particularly in more advanced economies that are developed in large part because of previous investment rates in education.⁵³

A Matter of Priorities?

Whether or not one agrees with the highly interventionist efforts of national governments in the EU to corral and direct their tertiary institutions, it is obvious that among the EU nations higher education is a major policy issue—along with economic development, trade, taxes, social welfare programs, military interventions, and globalization. For example, to establish a new fees and bursary (financial aid) program in England, in 2004 Prime Minister Tony Blair risked a close vote in Parliament, barely winning passage. Under parliamentary rules, failure of the bill would have meant the likely downfall of his government. Blair and the Labour government have consistently made education a top priority.

The contrast with the US is stark; with the exception of political battles in America over admissions to a few selective public universities, higher education is not a high profile national issue. While EU countries are engaged in national and international debates regarding the future of higher education, setting goals for expanding access, considering and implementing alternative funding schemes, and negotiating cooperative initiatives between nations, such as the Bologna Agreement, American higher education remains a second-tier political issue.

The crisis of the publics—the under-funding and under-investment in public colleges and universities, which are the primary providers of postsecondary education—is not a mainstream political issue. For this and a variety of other reasons, the US has become relatively complacent in maintaining its higher education advantage.

Notes

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⁴ Organisation for Economic Co-operation and Development, "Education at a Glance 2003: Briefing Notes, United States," 16 September 2003.

⁵ Sandra Ruppert, *Closing the College Participation Gap*, Education Commission of the States, 2003.

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⁸ Clifford Adelman, *Principal Indicators of Student Academic Histories in Postsecondary Education: 1972-2000* (Washington DC: Institute of Education Sciences, US Department of Education, 2004) 20.

⁹ David Palfreyman, *The Economics of Higher Education: Affordability and Access, Costing, Pricing and Accountability* (Oxford: Oxford Centre for Higher Education Policy Studies, 2004) 5-10.

¹⁰ "European Higher Education Area: Joint Declaration of the European Ministers of Education, Bologna," 19 June 1999. Signed by 31 representatives of 29 EU member states, the Bologna Declaration declares that by 2010 the following aims shall be reached: 1. A system of easily readable and comparable degrees shall be introduced, supported by the implementation of the Diploma Supplement; 2. Higher education course systems shall be based on two consecutive cycles: the undergraduate cycle, lasting three years, shall qualify students for employment, whereas the graduate cycle shall lead to Master's and/or doctorate degrees; 3. In order to ensure student mobility through the transferability of their achievements, a credit system similar to ECTS shall be launched; credits shall also be obtainable in non-HE contexts such as life-long learning; 4. Student mobility and free movement shall be promoted; 5. European co-operation in quality assurance shall be established; 6. The European dimension shall be promoted in HE through curricula, inter-institutional co-operation and mobility schemes for both students and teachers/researchers.

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³⁴ For an impressive synthesis of these and other studies, see Elhanan Helpman, *The Mystery of Economic Growth* (Cambridge, MA: Belknap Press, 2004) 42.

³⁵ David Mitch, "The Rise of Mass Education and Its Contribution to Economic Growth in Europe, 1800-2000," Fourth European Historical Economics Society Conference, Merton College, Oxford.

³⁶ *Ibid.*

³⁷ *Ibid.*

³⁸ The growth of secondary schooling in the early twentieth century, when college-going rates were relatively low, provided the first major boost in income. "The returns to education were in fact higher in 1914 than in 1939, and the enormous expansion in secondary schooling beginning in the 1910s was a contributing factor to the decrease in educational returns," note Claudia Goldin and Lawrence F. Katz. "Inequality and the returns to education across the entire century, therefore, first declined before their more recent and steep ascent," beginning in the 1960s. Golden and Katz, *op. cit.*

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