

Treading Water: What Happened to America's Higher Education Advantage?

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The U.S. was the pioneer in the movement toward mass higher education. But for a variety of reasons discussed in this chapter, the U.S. has stopped innovating and is arguably losing its first-mover advantage. Overall, national educational attainment levels remain torpid.² While the U.S. largely treads water in the race for human capital, dependent increasingly on foreign skilled labor in key economic sectors, other parts of the world are making major changes in their higher education systems, largely focused on expanding tertiary access, achieving more robust graduation rates, and competing more effectively for talent in the global market. The net result is a very different trajectory from that of the U.S.

International comparisons are fraught with difficulties, in part because there have been differing national views on what constitutes higher education, with the United States being the most liberal. Europeans, for example, tend to think of a

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² This essay is in part based on analysis first offered in "The Waning of America's Higher Education Advantage: International Competitors Are No Longer Number Two and Have Big Plans in the Global Economy," CSHE Research and Occasion Papers Series, CSHE.9.06. (June 2006), and since reiterated in a number of national studies.

distinct class of universities as constituting higher education, whereas in the United States, anything after secondary school is deemed tertiary education. Yet a host of national higher education reforms throughout the world and efforts to improve international data collection by agencies such as the OECD are beginning to offer a better picture and a better sense of trajectories.

The contemporary story of American higher education is also one of peaks and valleys, with many groups, particularly those with high economic and educational capital, finding their way to top-quality universities and colleges. As discussed here, the valleys are getting wider, and deeper for many groups, with increasing numbers of students failing to gain reasonable access to higher education, a fact that reflects larger disparities in American society. In short, the U.S. has now become a bit better than mediocre in getting students into higher education, and not very good relative to competitors in actual tertiary degree attainment—a malady that is finally garnering national attention with the Obama administration.

The Global Race for Access

Overall, the United States still retains a lead in the number of people with higher education experience and degrees. But at the younger age cohort, a different story emerges. On average, the postsecondary participation rate for those aged 18 to 24 in the United States has fluctuated between approximately 35 and 38 percent over the last decade, ticking up in the last few years.³ There is substantial variation among the states. In 2002, Rhode Island had the highest rate at 48 percent, and Alaska had the lowest at 19 percent. California, Florida, and Texas—states with large and fastest-growing populations—had approximately 36 percent, 31 percent, and 27 percent, respectively, attend some form of postsecondary education. In the majority of states, these participation rates have flattened or marginally declined over the last decade. More students today are part-time, and more are in two-year colleges; the wealthiest students are in the four-year institutions, and students from lower- and even middle-income families are now more likely to attend a two-year college, less likely to earn a bachelor's degree, and now take much longer to attain a degree than in the past.⁴

In contrast, within a comparative group of fellow OECD countries, many nations are approaching or have exceeded 50 percent of this younger age group participating in postsecondary education, and most students are enrolled in programs that lead to a bachelor's degree. Between 1995 and 2006, access rates into higher education among all OECD countries were an average of 20 percent, with a few countries, such as Poland and Finland, doubling the size of their university systems. Some 65 percent of young adults in Australia, Finland, Hungary, Ice-

³ See *Digest of Educational Statistics: 2006*, table 189.

⁴ Sandra Ruppert, *Closing the College Participation Gap*, Education Commission of the States, 2003; William G. Tierney, *State of College Admissions*, National Association for College Admissions Counseling, January 2005.

land, New Zealand, Norway, Poland, the Slovak Republic, and Sweden enter programs leading to the bachelor's degree.⁵ These are truly large increases that are largely due to two factors: major national government reforms to expand national higher education systems, and rising demand by students and growing markets for not only skilled labor, but also for workers who are knowledgeable about the world.

What would the U.S. need to do to increase educational attainment levels? It is not an exaggeration to say that the socio-economic health and vitality of the U.S. relies to a large extent on the future of the nation's public universities and colleges—where nearly 80 percent of all students are currently enrolled. America's population has continued to grow, reaching 300 million in 2006. A study by the Education Commission of the States estimates that some 2.2 million additional students will enter accredited public and private colleges and universities between 2000 and 2015 if national participation rates hold steady.

Yet current rates of participation within the traditional age cohort (18- to 24-year-olds) and older students (25 and older) are arguably too low. If the participation rates nationally were to reflect the best-performing states, the result would be 10.3 million additional students in accredited postsecondary institutions by 2015. This large difference in projected enrollment demonstrates how poorly many states, particularly heavily populated ones, are doing in their participation rates.⁶ It appears that this is not a short-term trend.

The United States still affords a much more dynamic higher education system than most nations. Students in the U.S. often transfer from one institution to another or delay entry into a postsecondary institution, coming in and out of higher education in the course of their lives. This system is much more forgiving than in the vast majority of other countries where young adults are often tracked into a university or nonuniversity path very early in their student careers, although this is also beginning to change. But many Americans and the growing number of immigrant groups are not getting their degrees.

The U.S. is one of the few OECD nations in which the older generation has achieved higher tertiary education rates than the younger population.⁷ A recent study looked at the tertiary degree attainment rates of the high school graduating classes of 1972 and 1992. On average, those who graduated from high school in 1972 were more likely to gain a bachelor's degree over a 12-year period. 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 or professional degree or a doctorate: declines for

⁵ The Organisation for Economic Co-operation and Development, *Education at a Glance 2008* (Paris: OECD, 2008).

⁶ The Organisation for Economic Co-operation and Development, *Education at a Glance 2006* (Paris: OECD, 2006), 42, 50.

⁷ OECD, *Education at a Glance 2006*, 32.

Euro-Americans and Asian Americans and, generally, increases for African Americans and women but, interestingly, a decline for Latinos.⁸

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, some 55 percent of all public high school graduates in California moved directly to tertiary education, among the highest rate in the nation; in the year 2000, the rate was a mere 48 percent, with the vast majority going into community colleges, most as part-time students and most destined never to attain a two-year degree, let alone a bachelor's.⁹ Since 2000, the college-going rate of high school graduates has probably declined further, influenced in part by the large number of high school dropouts. This has occurred in an economic environment in which demand for a labor pool with postsecondary training and education is expanding. A 2006 study estimates that by the year 2022, one in three new California jobs generated will require an associate's degree, bachelor's degree, or higher. Jobs requiring higher education are already growing faster than overall employment in the state.¹⁰

There is some good news. In the United States, there are healthy increases in the participation rate of older students over the past decade—important for lifelong learning in the postmodern economy and for facilitating socio-economic mobility. The United States also has among the highest rate of the labor force participating in some form of continuing education and training, such as non-degree and usually short programs often funded by employers. But even in this regard, a number of OECD countries are attempting through national policies to expand participation of older students with the goal of meeting or, better yet, exceeding the rates found in the United States.¹¹

Within the European Union, the push to increase participation rates in higher education transcends national borders. So important is the expansion of universities for E.U. nations that many countries are now integrating degree standards (like the American model) under the 1999 Bologna Declaration. That year, European ministers of education convened in Bologna to voluntarily seek common higher-education reforms, including creating comparable degrees, programs to ease student mobility between countries, and efforts at reviewing and improving the quality of academic programs. The objective of the declaration is to “ensure that higher education and research in Europe adapt to the changing

⁸ Clifford Adelman, *Principal Indicators of Student Academic Histories in Postsecondary Education: 1972–2000* (Washington, D.C.: Institute of Education Sciences, U.S. Department of Education, 2004), 20.

⁹ John Aubrey Douglass, “Investment Patterns in California Higher Education and Policy Options for a Possible Future,” CSHE Research and Occasional Papers Series, CSHE 5.02, April 2002.

¹⁰ Robert Fountain, Marcia Cosgrove, and Petra Abraham, “Keeping California’s Edge: The Growing Demand for Highly Educated Workers,” Campaign for College Opportunity, Oakland, California, April 2006.

¹¹ OECD, *Education at a Glance 2005*, (Paris: Organization for Economic Cooperation and Development, 2005), Indicator C6, 50.

needs of society and advances in scientific knowledge” and to “increase international competitiveness of a European system of higher education.”¹²

Since the initial adoption of the Bologna Declaration in 1999 by 20 European countries, additional countries have joined the process, demonstrating the willingness for Europe's universities to work together to create a common higher education and research area. As of May 2005, the total number of signatory countries in the Bologna Process was 45.

Although the rhetoric of markets and deregulation pervades much of the talk in Europe about how to promote higher participation rates, it is largely governments that are forcing reforms and creating bureaucratic regulatory regimes focused on access, productivity, and quality. Government wields a heavier hand in Europe than in the United States, in part because of historical and cultural differences: The development of public higher education in America has been a largely organic process of building institutions and creating self-regulated systems over a long time, whereas in Europe and most of the world, higher education was until the 1960s (and, arguably, later in many countries) an elite function forcibly transformed by governments. E.U. members seek their own “social contract” built around their cultural and educational institutions while looking to the American model for ideas.¹³

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 and India as economic powerhouses, will significantly alter the world economy and the flow of skilled labor. What is clear is that proactive national policies of E.U. members have produced 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. Higher education enrollment has grown by over 30 percent in England over the past two decades and in France by a staggering 72 percent.¹⁴

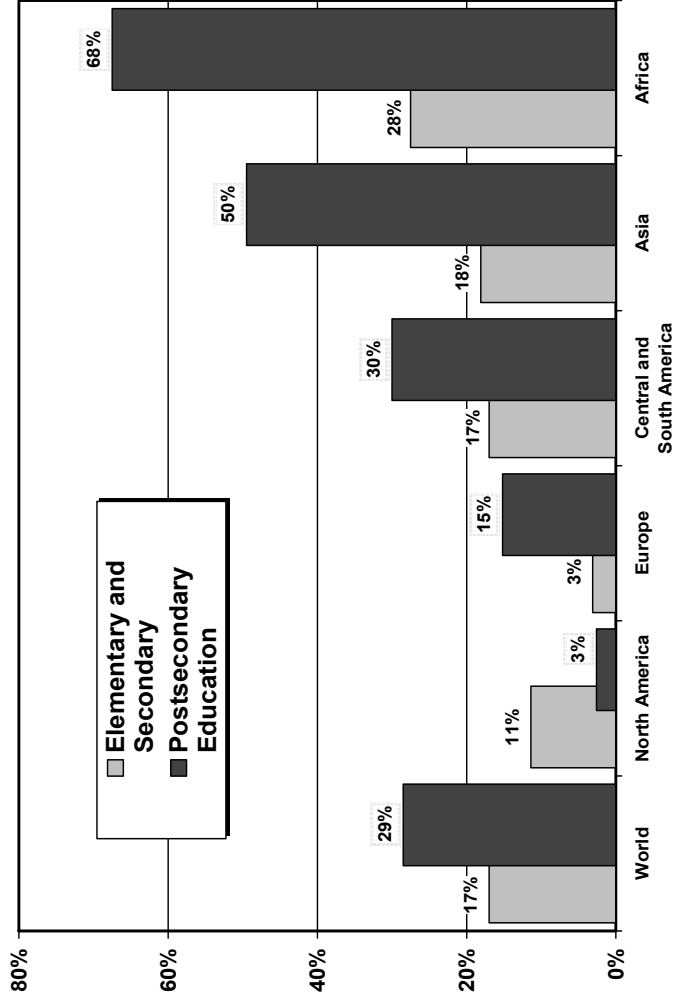
One indicator of the differences between the U.S. and E.U. higher education markets is illustrated in Figure 8.1, which provides data on enrollment increases by major continents in the previous decade. Even with significant population growth in North America (dominated by the United States), overall postsecondary enrollment grew by only 2.6 percent between 1990 and 1997—this at a time when immigration has contributed to an 11.4 percent overall increase in the number of

¹² European Higher Education Area: Joint Declaration of the European Ministers of Education, Bologna on June 19, 1999.

¹³ For a comparative look at European mass higher education and the influence of the American model, see Ted Tapper and David Palfreyman (eds.), *Understanding Mass Higher Education: Comparative Perspectives on Access* (London: Routledge Falmer, 2005).

¹⁴ Organisation for Economic Co-operation and Development, *Education at a Glance* (Paris: Organization for Economic Cooperation and Development, 2001).

Figure 8.1. Percentage Change in Student Enrollment by Area of World: 1990–1997



Source: Education at a Glance (OECD 2001).

students in elementary and secondary schools. In sharp contrast, European higher education enrollment has increased 15.2 percent over this short seven-year period, while growing at only 3.1 percent at the elementary and secondary levels. On the one hand, this reflects relatively slow population growth, and on the other, the significant emphasis on expanding access to tertiary education.

One sees even greater increases in Africa, Asia, and Central and South America. Such growth in these parts of the world reflects relatively recent large-scale increases in schooling in “developing” nations *and* the building of nascent higher education systems. Few regions of the world currently match the postsecondary participation rates in the United States, the European Union, and a collection of economies like Canada, Korea, and Japan. But this may slowly change.

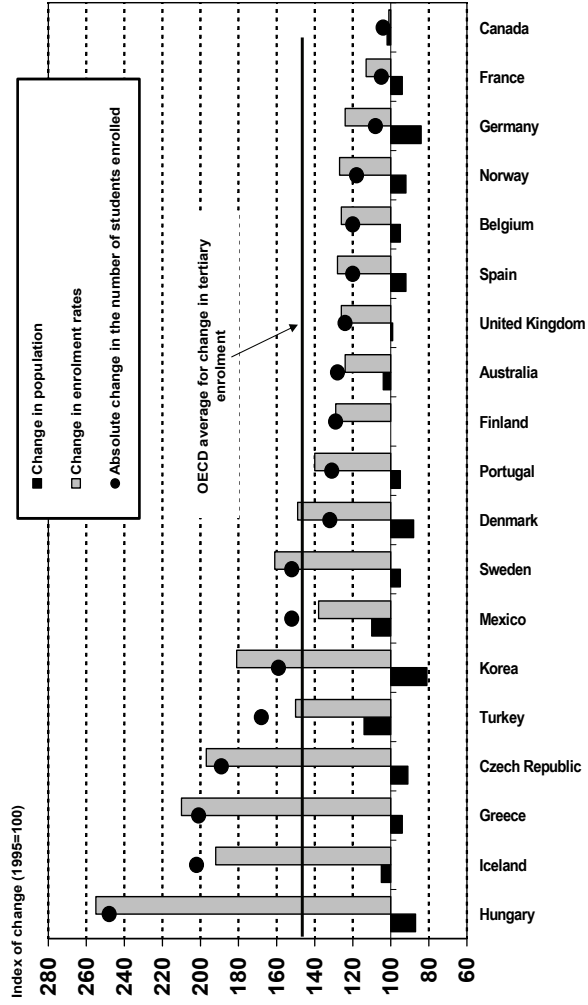
Another glimpse into the race for access is shown in Figure 8.2, which contrasts the overall change in population among select OECD countries and the change in enrollment rates between 1994 and 2004. Many countries within Europe and parts of Asia face declines in the overall population—and many are seeking, or will seek, a greater infusion of immigrants to make up for labor needs. This is the case in Hungary, Greece, the Czech Republic, Korea, Sweden, Denmark, Portugal, Spain, Belgium, Norway, Germany, and France. But in each of these countries there has been a substantial increase in the enrollment in tertiary institutions. The U.S. is not shown in this chart, but if it were it would show a relatively significant increase in general population and virtually no change in enrollment rates. Comparing countries like Iceland or Sweden, or even Germany, to the relatively huge population and economy of the U.S. can be misleading. But the important point for this discussion is the trajectory of a large swath of countries with developing, or rapidly developing, economies. Collectively, they paint a picture that gives a sense of the global race for access.

The Global Race for Degree Attainment

While there are impressive increases in access among most OECD member states (and in other parts of the world including China and India), an important question relates to the quality of the educational experience and efficacy of institutions. This is difficult to answer in light of the major differences in the socioeconomic composition of various nations, and the quality and mission of their various higher education institutions. One aspect is to simply look at degree completion rates. The quality and efficiency of higher education systems in Europe are not uniform, with many students in France, Spain, and Italy, for example, never completing a degree.

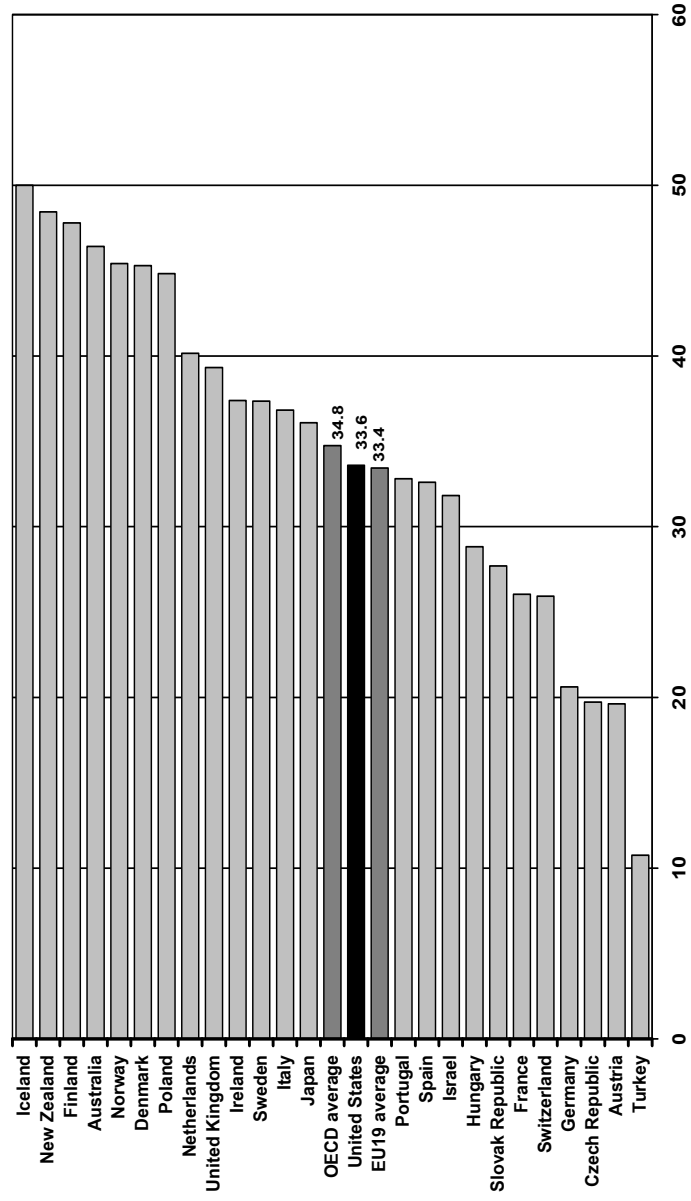
But reforms are being undertaken in places such as Italy and Germany, Portugal and Spain, to radically change degree structures, in part to address high attrition rates. As a consequence, many OECD countries are approaching or exceeding degree productivity rates found in the United States. Figure 8.3 offers a glimpse at data on actual graduation rates of those who enter tertiary institutions.

Figure 8.2. Changes in Population and Tertiary Enrollment Rates Among Select OECD Nations: 1995-04



Source: Education at a Glance (OECD 2006).

Figure 8.3. Tertiary Graduation Rates among OECD Nations, 2004



Source: Education at a Glance (OECD 2006).

The OECD estimates the role of education in increasing labor productivity, measured as GDP per person employed. One important cause of rising economic productivity, economists argue, is educational attainment of the working population—a correlation embraced by national governments. In 2004, the United States ranked sixth in the role of educational attainment in productivity growth, behind Portugal, the United Kingdom, 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,” note economists Pedro Caneiro and James J. Heckman.¹⁵

There are other indicators that America’s leadership position is faltering. Relative to most other nations that are economic competitors, significantly smaller proportions of college-age students are entering scientific fields. In 2005, it is estimated that China had nearly three times and India over two times the number of college graduates in engineering, computer science, and information technologies as the United States.¹⁶ The Chinese national government is engaged in a large-scale effort to expand higher education through building both native institutions and cleverly created limited partnerships with foreign providers—partnerships in which 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 MITs—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. A 2006 study by the National Academies (a consortium that includes the National Academy of Sciences and the National Academy of Engineering in the United States) notes that in 2005 chemical companies closed down 70 facilities in the United States and planned to close 40 more; at the same time, 120 chemical plants were being built around the world with price tags of \$1 billion or more, with some 50 in China and only one being built in the United States.¹⁷ More lax environmental regulations play a part, but so does the availability of skilled labor and technical knowledge.

There is increasing evidence that the quality of these academic programs in other parts of the world, and the clusters of research expertise that entice international companies, are growing and becoming increasingly competitive with U.S.

¹⁵ Quoted in Jack Cassidy, “Winners and Losers: The Truth About Free Trade,” *The New Yorker*, August 2, 2004.

¹⁶ Committee on Prospering in the Global Economy of the 21st Century, National Academies, *Rising above the Gathering Storm: Energizing and Employing America for a Brighter Economic Future* (Washington, D.C.: National Academics Press, 2006); original estimates in this publication were revised; see “The Disappearing Chinese Engineers,” *Inside Higher Education*, June 13, 2006.

¹⁷ National Academies, “Broad Federal Effort Urgently Needed to Create New, High-Quality Jobs for All Americans in the 21st Century,” press release, October 12, 2005.

institutions and research centers. This has led critics of shrinking state and federal funding for higher education in the United States to argue that the nation is at the edge of losing its long dominance in basic science.¹⁸ For example, of the articles in the world's top physics journal published in 1983, some 61 percent were authored by scholars in American universities; in 2003, that proportion dropped to 29 percent.¹⁹ As a percentage of GNP, federal funding for basic research in the U.S. in the physical sciences and engineering has been declining for the past 30 years, to less than 0.05 percent in 2003. Asia's developing economies are placing increasing percentages of their GNPs into science and technology. The payoff? Their share of global high-tech exports rose from seven percent in 1980 to 25 percent in 2001. According to National Science Foundation figures, the U.S. percentage fell from 31 percent to 18 percent.²⁰ The U.S. is still competitive; it is just that others have become more competitive.

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 mean a richer global market for scientific and technological expertise, much of which will be drawn to the United States. Some even predict a "glut of technical[ly] sophisticated human capital," or at least a large enough surplus of talent that will fill high-skilled labor needs in U.S. economic sectors.²¹ 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, and few would, in essence, turn their backs on producing native talent. Investing in native talent and attracting and seeking skilled labor in the global market are not mutually exclusive objectives.

Further, recent studies point to the net job creation benefit of a well-educated society. Across the OECD, increases in the educational attainment level of a national population have been matched by the creation of high-paying jobs. Further, "OECD countries with the fastest growth in tertiary attainment had close to or negative growth in unemployment among the highly educated." This means that worries about a potential oversupply of tertiary degree holders—meaning a possible overinvestment by government and by families—are generally not relevant.²² Greater supply generally does result in a lower wage premium (benefit) for those with, for example, bachelor's degrees over those who gain only high school diplomas, but the premium remains and compounds over the length of a person's life.

As the global production of scientists and engineers grows, the rise of new high-technology industries and research clusters outside the traditional hegemony

¹⁸ See National Academies, *Rising above the Gathering Storm*.

¹⁹ Cassidy, "Winners and Losers."

²⁰ National Science Foundation, *Science and Engineering Indicators 2006* (Washington, D.C.: National Science Foundation, 2006).

²¹ See Robert B. Freeman, "Is a Great Labor Shortage Coming? Replacement Demand in the Global Economy," National Bureau of Economic Research, working paper 12541.

²² OECD, *Education at a Glance 2008*.

is altering the flow of talent. Some worry that the U.S.'s and Europe's attractiveness for global talent will decline in relative terms. As a recent OECD report notes, how can the United States retain "a strong knowledge economy without a stronger education system?"²³ As emphasized throughout this book, higher education is not just a tool for meeting immediate labor needs and for promoting economic innovation, although that is an important role; it also is a vital route for socio-economic mobility, for creating a more inclusive society, and for promoting democracy itself.

Explaining the U.S. Stagnation

Beyond the rise of concerted competitors who are expanding access and graduation rates, what factors contribute to this erosion in America's once-dominant position in higher education? There is no one domestic cause but, rather, an array of interrelated causes. However, they can be boiled down to four main factors. One is the stagnation and, in many states, significant *declines in high school graduation rates*, which in turn erode the demand for higher education. A second cause is *declining political interest and government investment in public higher education* (where, again, some 80 percent of all American students are enrolled). This 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 of 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 focuses on two of these causes—secondary graduation rates and increased fees.

Secondary School Attrition Rates

A major variable in explaining the relatively weak performance of the U.S. higher education system relates to major problems in the educational pipeline. Rising skill demands in OECD countries have made qualifications at the upper secondary level the minimum credential for successful labor market entry. "Secondary school dropouts experience much longer periods where they are neither employed nor in post-school education or training," observes one OECD publication.²⁴

²³ Barry McGaw and Andreas Schleicher, "OECD Briefing Notes for the United States," *Education at a Glance 2005*.

²⁴ *Education at a Glance 2008*; See also their study on U.S. and Australia secondary school dropouts, Russell W. Rumberger and Stephen Lamb, "The Early Employment and Further Education Experiences of High School Dropouts: A Comparative Study of the United States and Australia," OECD Paper, May 1998: <<http://www.oecd.org/dataoecd/40/37/1925643.pdf>>.

Whereas less than two decades ago the United States had the highest secondary graduation rates, it is now among the lowest within the OECD, ranking 19th. See Figure 8.4. Based on U.S. Department of Education reports, the OECD reports a 75 percent completion rate in 2004. A 2005 study by Paul E. Barton, however, estimates that the percentage is possibly as low as 66.1 percent, down from an estimated peak of 77 percent in 1969. Burton and others insist that previous and current estimates by the Department of Education, and in turn by state governments, of high school completion rates are too high.²⁵ Federal data for 1970 through 2001 show only a marginal decrease in the number of 18- to 24-year-olds who have completed high school.²⁶

But because of disparities in data collection among the thousands of school districts and the 50 states, there are good indicators that federal data artificially inflate the nation's claimed high school graduation rates—a reality just recently officially recognized by the U.S. Department of Education. Perhaps most importantly, and as noted earlier, there are huge peaks and valleys in the secondary graduation rate between regions, and between racial and socio-economic groups. One recent study, for example, shows that in many of California's poor urban areas the high school graduation rates are a tragic 39 percent.²⁷

In more optimistic times, it was thought that the United States might reach a high school completion rate of 90 percent, which was a goal set by President George H. W. Bush and the nation's governors in 1990. However, according to Barton's analysis, between 1990 and 2000, the completion rate declined in 43 states, and in 10 states, it declined precipitously—by more than eight percent. Only seven states experienced increases.²⁸ There are few indications that this trend has bottomed out. Among the causes cited by a growing body of literature are not only significant socio-economic shifts in the American population, but also in 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, relate 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 percent of American high school graduates are not prepared for college work. A 2004 survey of all 50 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

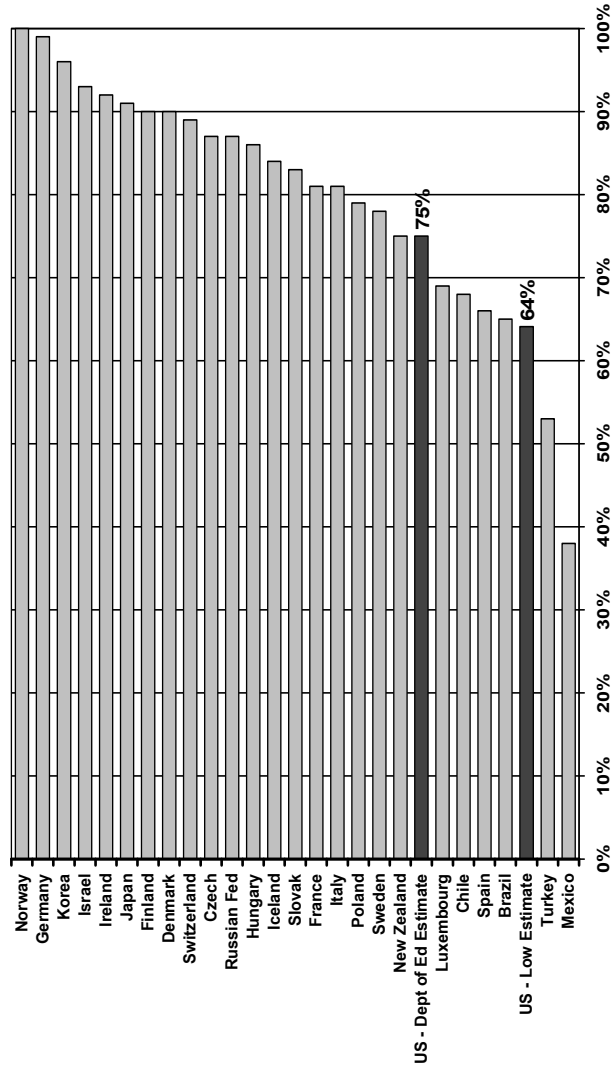
²⁵ Paul E. Barton, *One-Third of a Nation: Rising Dropout Rates and Declining Opportunities* (Princeton, N.J.: Educational Testing Service, 2005).

²⁶ U.S. Department of Education, National Center for Education Statistics, *Dropout Rates in the United States: 2001*; see also NCES, *Digest of Educational Statistics: 2003*, Table 102.

²⁷ See Cal Dropout Research Project: <<http://www.lmri.ucsb.edu/dropouts/about.htm#1>>. Also "Which California Schools Have the Most Dropouts?" <http://www.lmri.ucsb.edu/dropouts/pubs_statbriefs.htm>.

²⁸ Barton, *One-Third of a Nation*, 4.

Figure 8.4. Secondary Graduation Rates among OECD Nations: U.S. Official and Low Estimate



Source: Education at a Glance (OECD 2006).

rigorous set of course requirements remains the standard for almost every state.”²⁹ Before a meeting of the nation’s governors in early 2005, Microsoft Chairman Bill Gates claimed that the American high school system is “obsolete” compared with education abroad. America’s system, he stated, was undermining the workforce of the future and “ruining the lives of millions of Americans every year.”³⁰

The high attrition rates of male students are yet another wrinkle in the story. Males are more likely than females to drop out of high school. They tend to get lower grades and take fewer college-preparatory courses. Females are now the majority in chemistry and advanced math courses. In 1960, males represented 64.1 percent of all college and university students; they now represent less than 43 percent. A similar trend can be seen among the other OECD countries.³¹ There is some evidence that this phenomenon reflects pent-up demand and the opening of the job market to females. But increased enrollment by the female cohort is more exaggerated in the United States and correlates 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 socio-economic 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.”³² In 1999, some 34 million people, or 12.4 percent of the population, lived below the federally determined poverty line, and that figure is creeping upward.

Shifts in demography and income have influenced the socio-economic 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, Chicanos/Latinos, pose a

²⁹ Achieve, Inc., *The Expectations Gap: A 50-State Review of High School Graduation Requirements* (Washington, D.C.: Achieve, Inc., December 2004), 4.

³⁰ Microsoft Chairman Bill Gates before the National Governors’ Educational Summit, March 1, 2005.

³¹ Robert A. Jones, “Where the Boys Aren’t: for Young Males, the Drift Away from Academic Achievement Is a Trend,” *CrossTalk*, vol. 13, no. 3 (Spring 2005): 6–8.

³² Claudia Goldin and Lawrence Katz, “The Returns to Skill in the United States across the Twentieth Century,” National Bureau of Economic Research, April 11, 1999.

major problem. And for reasons even more complex, African-American high school and college participation rates correlate even more directly with economic status. Nationally, only 14.7 percent of Chicanos/Latinos have earned either an associate's or higher degree; for African Americans, the number is 20.0 percent, and for Asian Americans and Euro-Americans, the numbers are 50.5 percent and 33.6 percent, respectively.³³

Fees and Access

Public institutions have attempted to make up for a portion of a substantial decline in government investment relative to costs by raising fees. In 1980, fees and tuition made up approximately 15 percent of public university operating costs; they grew to about 28 percent 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 governments and colleges and universities have perhaps 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 percent in just seven years. Graduate students carry an average debt of \$45,000. Almost every college-qualified, high-income high school graduate enrolls within two years, but more than 20 percent of qualified low-income students do not go at all.³⁴ Not surprisingly, the net cost of attending a college or university is taking a larger share of family income at a disproportionate rate. One estimate indicates that the net cost of attending a college or a university (fees minus financial aid) absorbs 38 percent of the total income of families and individuals in the lowest income quintile, and that figure is 45 percent in the second-lowest quintile. The lower figure for lower-income groups reflects in some form more readily available financial aid, yet both are arguably large percentages with deleterious influences on access. Families in the middle, fourth, and highest income quintiles devote 30 percent, 20 percent, and 14 percent of their family income to college costs.³⁵

Criticism of increased tuition has stressed the impact on middle-income families of a reduced entitlement, prompting various congressional hearings. But arguably, the biggest influence is on the growing number of low-income Americans.

³³ Ruppert, *Closing the College Participation Gap*, 16.

³⁴ Donald E. Heller, "Trends in Public Colleges and Universities," in *The States and Public Higher Education Policy*, ed. Donald E. Heller (Baltimore, Md.: Johns Hopkins University Press, 2001): 11–38.

³⁵ *Ibid.*

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 publics and independents.³⁶ “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 United States, “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.”³⁷

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 one percent decrease in participation among 18- to 24-year-olds.³⁸ 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 percent.³⁹ 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 also heavily influenced by price increases. In the United States, part-time students are now the majority and the fastest growing higher education population.

Rapid and unpredictable increases in fees at public universities, as opposed to gradual and planned increases, may be the biggest culprit negatively influencing access. Private colleges and universities can establish a funding plan and keep to it; publics are subject to political and economic vacillations. After severe state budget cuts to most public universities in the early 1990s, an improved economy caused lawmakers in a number of states to force fee reductions largely for political gain and not as part of a long-term plan for financing higher education. Virginia, California, and Massachusetts all followed this path. Previously, rapidly rising fees helped to suppress demand; after the fee reductions, demand then grew. But the effects appeared temporary—more an indicator of price sensitivity and confusion about the availability of financial aid. Marginal fee increases in subsequent years resulted in relatively stable demand for higher education. In short, students and their families could better plan for educational services and their cost.

There is a great need for expanded research on the relationship between tuition levels, affordability, and access in public colleges and universities. There are very few good studies focused on micro-economic questions related to pricing and

³⁶ See Alexander W. Astin and Leticia Oseguera, “The Declining ‘Equity’ of American Higher Education,” *The Review of Higher Education*, vol. 27, no. 3 (Spring 2004): 321–41.

³⁷ Rupert Wilkinson, *Aiding Students, Buying Students: Financial Aid in America* (Nashville, Tenn.: Vanderbilt University Press, 2005).

³⁸ L. L. Leslie and P. T. Brinkman, “Student Price Response in Higher Education,” *Journal of Higher Education*, 58, 181–204.

³⁹ Tom J. Kane, “Rising Public College Tuition and College Entry: How Well Do Public Subsidies Promote Access to College?” Working Paper Series No. 5164 (Cambridge, Mass.: National Bureau of Economic Research, 1995).

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 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.

The Future and the Vital Role of the Publics

In 1960, 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.”⁴⁰

Economists and sociologists are increasingly interested in the question of how one accounts for societies characterized by high levels of social aspiration, actual socio-economic mobility, and economic growth and technological innovation. How can we account for economic growth, social progress, and the differences among nations? One widespread interpretation, building on the work of economist Gary Becker and earlier work on human capital, is that political cultures that build and expand institutions over time, such as higher education but 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. That is, particular political cultures both create social and economic institutions and are fundamentally shaped by them over time. It is a long-term and cumulative investment.⁴¹

⁴⁰ John W. Gardner, *Excellence: Can We Be Equal and Excellent Too?* (New York: Harper & Row, 1961).

⁴¹ Among the growing body of literature on this topic, see G. Glaeser, R. La Porta, F. Lopez-de-Silanes, and A. Schleiger, “Do Institutions Cause Growth,” National Bureau of Economic Research Working Paper No. W10568, 2004; D. Acemoglu, S. Johnson,

Globalization, supranational entities, and international frameworks, such as the European Union and the 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 owe much of their present position to previous investment rates in education. The nation-state is not dead yet; indeed, its resilience or transformation into regional alliances may surprise globalists.⁴²

With the exception of political battles in America over admissions to a few selective public universities and concerns over cost containment, American higher education remains a second-tier political issue. The crisis of the publics—the underinvestment in public colleges and universities, which are the primary providers of postsecondary education—is not a mainstream political concern. For this and a variety of other reasons, the United States has become relatively complacent in maintaining its higher education advantage.

A full discussion of policy options for bolstering America's already mature mass higher education system lies beyond the scope of this book. Instead, I present only a few thoughts on a difficult problem. Although this and earlier chapters have outlined many maladies of the U.S. system, there are many strengths. Arguably, America's brand of higher education is not in need of the kind of top-down regulatory reforms recently and currently pursued in European and other nations. What is needed is the interest and attention of national and state governmental leaders and some consensus in the higher education community on how to improve the nation's school system, how to create a national agenda focused on increasing higher education participation and degree-attainment rates, and a sustainable financial model for public universities and colleges.

America's population continues to grow, reaching over 300 million in 2006. Revised projections by the U.S. Census Bureau issued in the summer of 2008 estimates that the nation will have 490 million people by 2050—up from a previous projection of 420 million. The U.S. is among a small group of developed economies with significant growth in population with a record of some 4.3 million births in 2007.⁴³

How might that translate into growing enrollment in higher education in the U.S.? The answer depends on whether the U.S. expands access to keep pace with competitors, or simply treads water or makes only marginal gains. A study by the Education Commission of the States estimates that some 2.2 million additional students will enter accredited public and private colleges and universities between 2000 and 2015 if national participation rates hold steady. Yet current rates of participation within the traditional age cohort (18- to 24-year-olds) and

and J. A. Robinson, "The Colonial Origins of Comparative Development: An Empirical Investigation," *American Economic Review*, 91 (2001): 1369–1401.

⁴² John Aubrey Douglass, "How All Globalization is Local: Countervailing Forces and their Influence on Higher Education Markets," *Higher Education Policy*, vol. 18, no. 4 (December 2005): 445–73.

⁴³ "The Population Gap," *Science Magazine*, vol. 321 (August 29, 2008): 1139.

older students (25 and older) are arguably too low. If the participation rates nationally were to reflect the best-performing states, the result would be 10.3 million additional students in accredited postsecondary institutions by 2015 (see Figure 8.5). That large projected difference demonstrates how poorly many heavily populated states are doing in their participation rates.⁴⁴

Most past projections have significantly underestimated demand, in part because the population has grown faster than projected, job-skill requirements have escalated, and perhaps most importantly, individual aspirations have grown. Whether there are 10 million additional students seeking entrance into higher education or a higher figure, the most likely scenario is that public universities and colleges will take the bulk of them if they have the funding, political desire, and capability to meet that demand. The number and type of providers, including for-profits, will undoubtedly increase, further diversifying the nation's higher education system. But in no small part, educational attainment in the United States will depend on the vibrancy of its public higher education sector. In my view, it is also critical that, as the higher education sector grows over time, selective public universities retain in some major form their historical role in society as broadly accessible agents of social change; as a corollary, they must avoid near convergence with their private counterparts, which is the possible outcome of privatization. Hence, they must uphold their historic social contract.

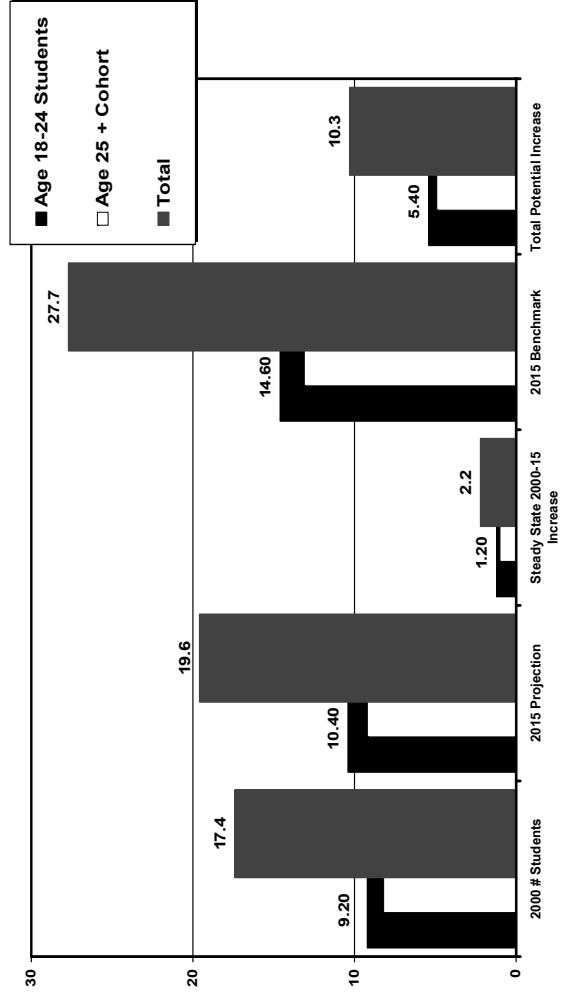
Most contemporary pundits agree that there are significant problems with access to and financing of public colleges and universities. In the United States, as noted, these are second- or third-tier national policy issues. In many E.U. countries, they are first-tier issues, with concerted efforts to, in the words of the Bologna Declaration, "increase international competitiveness of a European system of higher education." They have formed supranational forums for debating and forming policies to assess and reposition the E.U. Arguably, the U.S. federal government has a greater historical and contemporary role in supporting higher education than in supporting K-12. Although such a suggestion cuts against the current political ethos of free markets and less government and raises the danger of another stifling round of accountability bureaucracy, one might reconsider how a national strategy could strengthen American higher education.⁴⁵

On their own, states in general lack a broader understanding or concern regarding the issue of national competitiveness and the larger problems of growing social and economic stratification. Individual states may seek increased participation rates and recognize the need for additional resources for public higher education, but most are financially incapable (because of competing needs, political gridlock, and legal restrictions on generating revenue) of launching a rate of investment similar to the post-World War II and 1960s eras. Indeed, the resources and political commitment in that period that significantly expanded access re-

⁴⁴ Ruppert, *Closing the College Participation Gap*.

⁴⁵ John Aubrey Douglass, "Higher Education as a National Resource," *Change Magazine*, vol. 37, no. 5 (Sept./Oct. 2005): 30–38.

Figure 8.5. Projection of U.S. Postsecondary Participation, Steady State and Benchmark: 2000–2015



Steady State = U.S. average participation rate for Age 18-24 Students (34.0 percent) and Age 25+ (4.5 percent)
 Benchmark = Top State U.S. participation rates for 18-24 Students (47.7 percent) and Age 25+ (6.5 percent)
 Source: Closing the College Participation Gap, Education Commission of the States, 2003.

quired a collaboration of state and federal government—neither could do it on their own. Certainly, those political eras and policy approaches could not and should not be directly replicated. However, the specter of privatization and market models will probably not generate the investment rates and political commitment needed to adequately bolster American education and to retain its leadership position.

Or perhaps the world economy and priorities of competitor nations have permanently eroded America's once-distinct higher education advantage. Even if this is the case, a new sense of resolve by political and higher education leaders in the United States is paramount, both as a key route for economic development *and* socio-economic vitality. What would it mean for the United States to continue its downward trajectory relative to other developed economies in secondary graduation rates, in access to higher education and degree production, and the resulting ramifications for socio-economic mobility? How will the growth of new science clusters and the shift in the production of science and engineering degrees to new areas of the world shape future economic activity? The answers to these questions will profoundly influence the future development of the nation's economy and, eventually, political influence. America should look across the oceans and to other continents for ideas, inspiration, and a pragmatic sense of the globalizing and increasingly competitive world.