

Chapter 6

Access to Post-secondary Education in the United States: Past, Present, and Future Perspectives

by

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This chapter discusses the past, present and future of enrolments in US post-secondary education by examining the institutional, economic, and public policy factors over the last 25 years that had a major impact on college enrolment in the United States. It uses the state of US higher education today and the current economic and political environment as the starting point for understanding the challenges and opportunities facing the future growth of higher education, especially among minorities and people from low income background.

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6.1. Introduction

During the next decade, post-secondary education in the United States is likely to continue its growth and rapid diversification. Although significant challenges loom, the necessity of education in a technologically based and increasingly global economy will continue to increase in importance. As the United States continues to become more racially diverse, Americans of color will comprise an increasing share of post-secondary enrolments. The future growth of American higher education will depend on both old and new obstacles, such as the uncertainty of state funding and rising tuition, access dilemma of the poor, and accountability and outcomes assessment movements. In many ways, the United States will continue on a course set in the 1980s, as immigration increased, the economy shifted from manufacturing and production to knowledge and service. Technological advances and globalisation will only accelerate the pace of economic change.

During the past twenty-five years, post-secondary education in the United States experienced massive growth and change as the national population and economy were changing. Since 1980, higher education enrolments expanded and became more racially diverse despite significant declines in the size of the traditional college-age population. Sometimes the size and complexity of a system can limit its ability to change, but the variety of American higher education allowed for various institutions to adapt in differing ways to the changing society and economy. Growth occurred at most types of post-secondary institutions as the demand for access to higher education reached unprecedented levels.

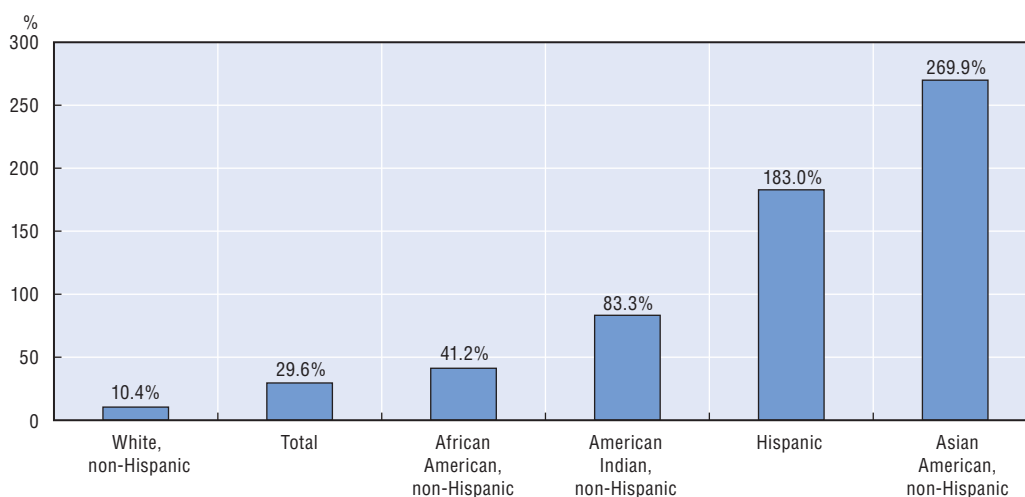
6.2. The expansion of access to higher education: from past to present

The change in enrolment in post-secondary education in the United States over the last 25 years is a complex trend occurring within the context of changes in the racial and cultural make-up of the nation. Post-secondary education in the United States changed as the nation became more diverse. Enrolments in post-secondary education steadily increased while the college-age population was slightly declining, thanks to a rising participation rate and the intake of older students. This pattern was reflected in all racial/ethnic groups of the US population and, with some differences, in all post-secondary institutions making. However, enrolment patterns differ significantly by income groups.

The impact of a changing US population on post-secondary education

Since 1980, the US population grew steadily by 26%, topping 293 million in 2004 (US Census Bureau). It reached 300 million in 2006. This population increase was driven by tremendous growth among Americans of color, primarily Hispanics, Black Americans, and Asian Americans.

From 1980 to 2004, the white population increased by less than 10%, compared to an increase of 100% among Americans of color (see Figure 6.1).¹ Because of the sheer number of whites in the United States, a 10% increase equaled 18.9 million more whites in 2004 than in 1980. The numerical growth among Hispanics during the last twenty-five years

Figure 6.1. **Percentage change in US population by race/ethnicity, 1980-2004**

Source: US Census Bureau, Population Division: National Estimates; Quarterly Population Estimates, 1980 to 1990; National Center for Health Statistics, Bridged-Race Vintage 2005 Population Estimates.

easily dwarfed the growth among whites.² The Hispanic population in the United States increased by 183%, growing by nearly 27 million persons to surpass 41 million in 2004. The largest percentage growth during this period was among the Asian American population which increased by 269%, from 3.5 million to 13.2 million. The Black American population only increased by 41.2%, but because of the large size of this population in 1980, growth of this group was greater than that of Asian Americans, 10.8 million additional Black Americans compared to 9.6 million Asian Americans.

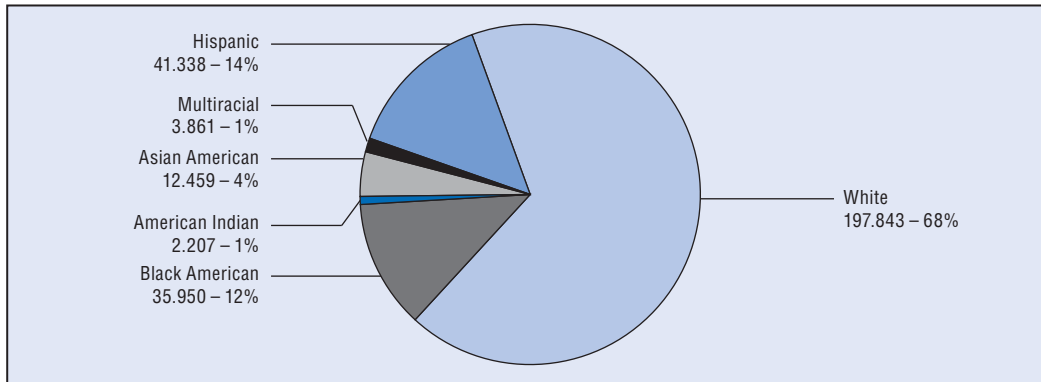
The differing rates of growth of the various racial/ethnic groups in the United States are a result of changes in fertility rates and immigration. During the first half of the 20th century the white population had a high fertility rate, but during the second half of the century, whites became a much older population, characterised by a low fertility rate. The extremely large rate of growth in the Hispanic and Asian American population is the result of high fertility rates and high immigration during the last twenty-five years. The Black American population grew because of high fertility rates, but was only minimally affected by immigration (Hobbs and Stoops, 2002).

While whites continued to be the majority racial/ethnic group in the United States, the growth of minorities significantly changed the overall composition of the nation. In 1980, 77% of Americans were white. Twenty-five years later the white share of the US population decreased by 10 percentage points to 68% (see Figure 6.2). These changes had an obvious effect on the school-age population in the United States. The school-age population became more diverse than the overall population because the median age of whites became older as the post-war “baby boom” generation aged, nearly 40 years old, while the median age of persons of color remained in the mid-20s.

As the overall population in the United States was growing, the opposite was occurring among 18 to 25-year-olds. From 1980 to 2004, the number of 18- to 25-year-olds declined by nearly 2.5%, a loss of almost 850 000 (see Table 6.1). The decline was due to a decrease in the number of whites in this age range, a loss of 5.7 million persons. A significant increase in Hispanics and Asian Americans in this age group helped reduce the overall decline, thereby causing greater diversity among this age group. The number of 18- to 25-year-old

Figure 6.2. **US population by racial/ethnic group, 2004**

Numbers in millions



Source: US Census Bureau (2004), Population Division, Table 3: "Annual Estimates of the Population by Sex, Race and Hispanic or Latino Origin for the United States: 1 April 2000 to 1 July" (NC-EST2004-03).

Table 6.1. **US population of 18- to 25-year-olds by race/ethnicity, selected years: 1980 to 2004**

	1980	1990	2000	2004	% change from 1980 to 2004	Numeric change from 1980 to 2004
Total	34 138 425	31 050 463	30 887 993	33 297 127	-2.5	-841 298
White, non-Hispanic	26 487 557	21 949 964	19 330 153	20 745 941	-21.7	-5 741 616
Black, non-Hispanic	4 358 774	4 167 977	4 336 786	4 784 559	9.8	425 785
American Indian, Eskimo and Aleut, non-Hispanic	222 760	249 043	296 378	339 172	52.3	116 412
Asian American, non-Hispanic	529 331	990 198	1 485 476	1 560 172	194.7	1 030 841
Hispanic origin, any race	2 540 003	3 693 281	5 439 200	5 867 283	131.0	3 327 280

Note: The data follow a consistent race definition.

Source: US Census Bureau, Population Division: National Estimates; Quarterly Population Estimates, 1980 to 1990; National Center for Health Statistics, United States Census 2000 Population with Bridged Race Categories; National Center for Health Statistics, Bridged-Race Vintage 2005 Population Estimates.

Hispanics more than doubled, increasing by 3.3 million persons. The number of Asian Americans in this age range increased by 1 million persons.³

One could have expected the decline in the college-age population from 1980 to 2006 to cause a decline in enrolment in post-secondary education in the United States. However, the opposite occurred; enrolments jumped by 51% over this period, increasing from about 12 million students to more than 18 million students (Table 6.2). During this period when the size of the college-age population was declining in the United States, access was expanding to include more students than ever before. In 1980, less than a third of high school graduates aged 18- to 24-year-old were enrolled in post-secondary education. By 2006, the share of high school graduates aged 18 to 24 participating in post-secondary education was 45% (US Census Bureau, 2008). While the college-going rate differs for each racial/ethnic group, each group showed significant increases. The growth in enrolment was also spurred by an increase in the number of older Americans attending college. From 1980 to 2005, the number of persons over the age of 24 enrolled in post-secondary, degree-granting institutions increased by 34% (US Department of Education, 2008a).

Table 6.2. **Total fall enrolment in US post-secondary institutions by race/ethnicity: selected years, 1980 to 2006 and projections to 2015**

	1980	1984	1990	1995	2000	2006	2015 ¹
ALL STUDENTS	12 087 000	12 235 000	13 818 600	14 261 781	15 312 300	18 205 474	19 874 000
White	9 833 000	9 815 000	10 722 500	10 311 243	10 462 100	10 896 819	12 113 000
Black American	1 107 000	1 076 000	1 247 000	1 473 672	1 730 300	2 207 271	2 755 000
Hispanic	472 000	535 000	782 400	1 093 839	1 461 800	1 897 258	2 569 000
Asian American/Pacific Islander	286 000	390 000	572 400	797 359	978 200	1 081 627	1 415 000
American Indian	84 000	84 000	102 800	131 304	151 200	174 936	229 000
Foreign students	305 000	335 000	391 500	454 364	528 700	600 715	793 000

1. Projections by NCES (analysis by authors).

Source: US Department of Education, National Center for Education Statistics, Integrated Post-secondary Education Data System (IPEDS), Fall Enrolment Survey, 1980 to 2006.

From 1980 to 2006, the largest growth in college enrolments occurred among students of color. The number of minorities enrolled in post-secondary institutions grew by nearly 3.5 million persons, an increase of 175%. The number of whites enrolled rose by only 1 million people, 11%. The large growth among minority students from 1980 to 2006 was due largely to increases in two populations: Hispanics and Black Americans. Hispanics and Black Americans were responsible for the largest numerical increases, 1.4 and 1.1 million respectively (see Table 6.2). This growth in minority enrolment dramatically changed the composition of American higher education. In 1980, only 16% of college students in the United States were persons of color. By 2004, their share significantly increased to 26%.

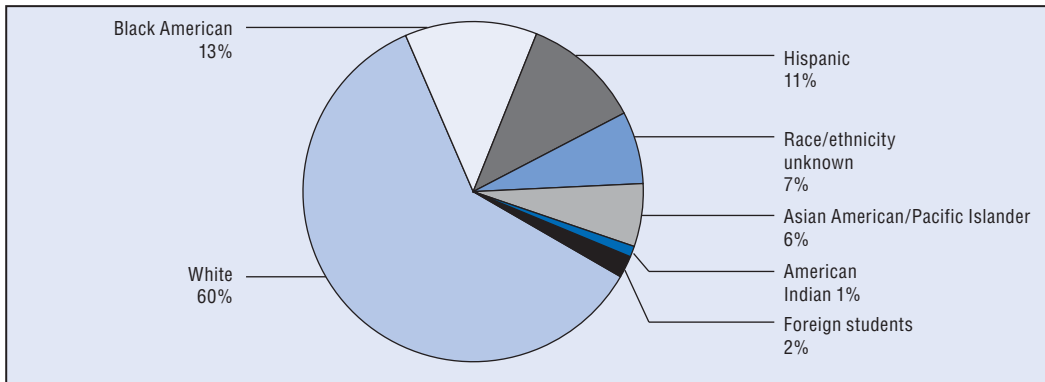
The diversity of (and within) US higher education

Through all the population changes the United States has developed into one of the largest and most diverse systems of post-secondary education in the world. Today there are 4 300 accredited, degree-granting post-secondary institutions in the United States. These institutions consist of a mixture of schools of varying size, unique missions, and scope. Using broad categories, there are four major types of institutions in the United States: private not-for-profit four-year schools (36% of institutions), public two-year schools (24% of institutions), private for-profit schools (23% of institutions), and public four-year schools (15% of institutions).⁴ Public four-year institutions are the smallest sector however this sector consists of many large institutions. As a result public four-year schools enrolled 39% of college students in the United States in 2005.

In the fall of 2006, more than 18 million persons were enrolled in post-secondary institutions in the United States.⁵ The majority of these persons were enrolled in undergraduate programmes and courses (15.6 million in 2006, full- and part-time). The majority of undergraduates in the United States are white (60%) while minority and foreign students make up 31% and 2% of enrolment respectively (in 2006, see Figure 6.3, US Department of Education, 2008b).⁶ The increase in minority enrolment depicted above has occurred at all types of institutions. Both four-year institutions and two-year institutions grew by a similar number of minority students from 1980 to 2005, 2 million and 1.5 million respectively. Most of this growth occurred at public institutions (US Department of Education, 2008a).

Undergraduate students in the United States are not homogenous 18- to 24-year-olds attending in similar patterns. Women make up more than half of undergraduates (57%).

Figure 6.3. **Undergraduate enrolment in the United States by race/ethnicity and nationality, fall 2006**



Source: US Department of Education, National Center for Education Statistics, Integrated Post-secondary Education Data System (IPEDS), Fall Enrolment Survey, 2006 (analysis by authors).

The majority of undergraduates are under the age of 25, but a large percentage – 31% – are aged 25 and older (US Department of Education, 2008a). Because so many undergraduates are older students, it is no surprise that 32% of all undergraduates are married and/or have children. The majority (54%) of undergraduate students attend on less than a full-time, full-year basis (American Council on Education, 2005).

Of the 2 600 four-year public and private institutions, only 151 focus on research and award a large number of doctorates in a variety of fields. These are commonly referred to as doctoral or research institutions.⁷ Because of their long history and role in research and graduate education, many of these institutions are among the most recognised internationally, such as Harvard University, University of Michigan, and University of California at Berkeley. A finite amount of research funding from the federal government and business and industry limits the number of research institutions that can exist in the United States. The majority of four-year institutions have very little research focus and serve the primary goal of educating students.

Because post-secondary education institutions in the United States vary in selectivity, mission, and cost, it is not surprising that enrolment patterns vary by demographic characteristics. Among the more than 15.6 million undergraduate students in 2006, more than half (51%) were enrolled at four-year institutions. However, the majority of Hispanic (52%) students attend public two-year post-secondary institutions (see Table 6.3). In addition to being the least likely to attend two-year institutions, white students are nearly twice as likely to attend doctoral/research institutions as African American and Hispanic students.

Enrolment patterns also differ significantly by income. Although there are many ways to categorise income, this chapter categorises persons into three income groups which adjust based on family size, especially number of dependent children: low-income (persons with family incomes twice the national poverty level or less), middle-income (persons with family income more than twice the national poverty level and less than five times the poverty level), and upper-income (persons with family incomes higher than five times the poverty level).⁸ Low-income persons are the only income group with less than half of its students at four-year schools. Half of low-income students attend two-year

Table 6.3. **Total fall undergraduate enrolment in US post-secondary institutions by race/ethnicity and sector, 2006**

Full and part-time

	Total	Public, 4-year	Private not-for-profit, 4-year	Public, 2-year	Private for-profit ¹	Other ²
All students	15 630 823	5 622 555	2 409 256	6 276 185	1 203 120	119 707
White	9 405 394	3 651 979	1 580 149	3 620 888	485 848	66 530
	100%	39%	17%	38%	5%	1%
Black American	1 965 454	625 412	265 073	813 124	244 220	17 625
	100%	32%	13%	41%	12%	1%
Hispanic	1 762 753	522 718	147 271	910 144	167 382	15 238
	100%	30%	8%	52%	9%	1%
Race/ethnicity unknown	1 076 176	265 924	205 207	367 155	229 927	7 963
	100%	25%	19%	34%	21%	1%
Asian American/Pacific Islander	934 987	368 845	119 916	399 147	40 957	6 122
	100%	39%	13%	43%	4%	1%
American Indian	159 777	57 306	15 361	73 666	9 745	3 699
	100%	36%	10%	46%	6%	2%
Foreign students	326 033	130 371	76 279	91 812	25 041	2 530
	100%	40%	23%	28%	8%	1%

1. Includes 4-year, 2-year and less-than-2-year programmes.

2. Includes private not-for-profit 2-year and less-than-2-year as well as public less-than-2-year programmes.

Source: US Department of Education, National Center for Education Statistics, Integrated Post-secondary Education Data System (IPEDS), Fall Enrolment Survey, 2006 (analysis by authors).

schools, compared to only 42% of their middle-income peers, and 35% of high-income students. Similar to all undergraduates, 58% of low-income undergraduates are female. There is no difference in the percentage of low-income students and all undergraduates aged 25 or older, 39% respectively. However low-income persons in higher education are twice as likely to be single parents as all undergraduates, 22% compared to 11% (American Council on Education, 2005). Cost and accessibility are probably the main reasons why more low-income persons are likely to enroll at two-year institutions.

The larger share of low-income students enrolled at two-year institutions is consistent across all racial/ethnic groups. The percentage of high-income whites, Black Americans, American Indians, and Asian Americans enrolled at two-year institutions ranged from 33% to 37%, compared to 47% to 58% of low-income students from each of these racial/ethnic groups (see Table 6.4). Although a large percentage of high-income Hispanics are enrolled at two-year post-secondary institutions, 47%, the percentage remains significantly lower than that percentage of middle- and low-income Hispanics.

The college participation rates for all racial/ethnic groups have increased since 1980, but there remains a 5.6 percentage point gap between the college participation rate of whites and African Americans. The college participation rate among Hispanics is 8.5 percentage points less than African Americans. Research has shown that what appears to be a black-white gap in college participation is really a difference by income (Adelman, 2004 and 2006). Adelman using socioeconomic status (SES), found that nearly all (93.8%) of high school graduates in the highest SES group entered college within eight years after graduating from high school (see Table 6.5). The college participation rate declines for each group down the SES ladder, bottoming out in a college participation rate of 53.6% among students from the lowest SES quintile.⁹

Table 6.4. **Undergraduate enrolment by institution level, income and race/ethnicity, 2003**

Income level		Institution level		
		4-year (%)	2-year (%)	Less than 2-year (%)
Total	Low	46.2	50.4	3.4
	Middle	56.2	42.2	1.6
	High	64.4	34.5	1.1
White	Low	50.7	47.1	2.3
	Middle	58.5	40.2	1.4
	High	66.2	32.9	0.9
Black American	Low	41.5	53.9	4.7
	Middle	54.4	43.5	2.1
	High	61.7	36.0	2.4
Hispanic	Low	36.1	57.4	6.5
	Middle	43.2	54.0	2.8
	High	49.7	47.5	2.9
Asian American	Low	51.0	46.8	2.3
	Middle	54.1	44.2	1.7
	High	61.6	37.5	0.9
American Indian	Low	39.7	58.2	2.2
	Middle	53.8	45.1	1.1
	High	62.5	36.7	0.9

Source: US Department of Education (2005), National Center for Education Statistics, 2003-04 National Postsecondary Student Aid Study (analysis by authors).

Table 6.5. **Percentage of high school 12th graders who entered post-secondary education by end of cohort study, 1982 and 1992**

Socioeconomic status (SES) quintile	Class of 1982	Class of 1992	Increase in access
	1982-1993	1992-2000	Class of 1982 to class of 1992
81st-100th percentile (high)	87.7	93.8	6.1
61st-80th	72.6	86.7	14.1
41st-60th	64.4	77.0	12.6
21st-40th	54.0	65.3	11.3
1st-20th percentile (low)	43.0	53.6	10.6

Source: Adelman (2004), Table 2.4, p. 24.

6.3. The expansion of access to higher education beyond demography

The expansion of access to post-secondary education in the United States can be traced back to a variety of factors, but most notably, changes in the national economy and student financial aid. For minorities the increase in access has also been related to governmental and legal efforts to end racial discrimination in college admissions. Changes in the size and composition of the US population were not the only national changes affecting post-secondary enrolments during the last twenty-five years. Changes in post-secondary student enrolments in the United States occurred during a time of tremendous economic and institutional change that likely impacted minority and white students in differing ways. Despite several periods of decline, enrolment in US post-secondary, degree-granting institutions increased by 31% between 1980 and 2005 (US Department of Education, 2008a). This growth in enrolment is not likely the result of any one event but rather the result of a confluence of changes during this period. The ability and desire of students to pursue post-secondary education is typically related to a variety of

institutional, economic, and national policies such as cost of attendance (tuition, fees, housing, and board), financial aid availability, local or national economic conditions, and rate of return on a college education. All of these factors, while not necessarily a direct correlation, set the context for changing post-secondary enrolments. Indeed, as Johnes (1993) put it, “the links between the labour market and the demand for education are complex. Signals are transferred from one market to the other imperfectly, and are subject to lags”.

The US economy changes

There is evidence that the increase in post-secondary enrolment is partly due to significant gains in the economic returns to a college education that are the result of a changing US economy. The early 1980s was a period of multiple economic recessions and rising unemployment. Between 1981 and 1982, the United States lost 2.4 million jobs. The sectors most affected by the recession were those that did not require considerable formal education beyond high school: manufacturing, agriculture, transportation and construction.¹⁰ However, even within a recession that pushed the unemployment rate in the United States to a post World War II high of 10.1%, there were several sectors experiencing significant growth (“slow unemployment”, 1982). From 1983 to 1991, seven occupational fields in the United States saw job growth of more than 1 million jobs; three of these fields were higher paying managerial fields that typically require a college education. The other four fields were lower paying administrative support and service occupations that do not require a college education (US Census Bureau, 2004a). The pattern of job growth in the 1980s began the growth of high paying jobs in managerial and specialised skill fields and “low-skill, low-wage” jobs.

The 1990s brought about a drastic upswing in the US economy. The emergence of new technology and a renewed entrepreneurial spirit created a robust economy that added 20 million jobs since the recessions of the 1980s. Despite the record job growth of the 1990s, Americans continued to need some form of post-secondary education to be competitive in the US labour market. Even many low-skill, low-wage jobs required some level of specialised skills due to the increasing use of computers in the workforce (Levy and Murnane, 2004). According to the US Census Bureau, 24% of Americans used a computer at work in 1984. By 2001, nearly 60% of American workers used computers (US Census Bureau, 2004a). From 1983 to 2002, twelve occupations added more than 1 million jobs. With the exception of construction trades, six of these occupations were “high-skill, high-wage” jobs, such as managerial occupations and mathematical and computer scientists, and the other half were low-skill, low-wage jobs, like administrative support and sales.

Although there are numerous public and private returns on the investment in post-secondary education, typically people make a decision to pursue a post-secondary education because of private returns, especially economic ones. As the United States moved from an industrial to a knowledge-based economy with a large service sector, the difference in earnings between working Americans with a college degree and those without a college education began to increase. In 1980, the median salary of male and female college graduates was 19% and 34% higher, respectively, than the median salary of high school graduates. By 2002, male and female college graduates earned, on average, 65% and 70% more than male and female high school graduates (US Census Bureau, 2004b). Over the course of a 40-year-career, a college graduate will earn nearly USD1 million more than the typical high school graduate (Baum and Payea, 2004).

Affirmative action and access to elite institutions

The changes stated above increased desire for, and expanded access to, post-secondary education on a broad level over the past twenty-five years. However, the effort to increase minority access at selective public and private four-year institutions during this same period took critical steps with a legal ruling in 1978. In 1978 the US Supreme Court issued a ruling in *Regents of the University of California v. Bakke* that established a national policy for the practice of affirmative action (the use of race in the admissions process) at public and private institutions. Alan Bakke filed suit claiming the admission policy of the Medical School at the University of California, Davis (UC-Davis) discriminated against him because he was white. UC-Davis had an affirmative action policy for admissions that reserved sixteen of the hundred seats in the entering class for disadvantaged members of certain minority groups. The Supreme Court issued two historical rulings in this case: first, the Court ruled that the admission policy of UC-Davis medical school was not permissible under the law, and secondly, the Court ruled that the use of race was permissible under certain circumstances. The Court said that racial classifications must serve compelling governmental interests and the proposed policy must be closely related to the compelling interest (Anderson, 2001). The ruling in *Bakke* set a legal precedence and to some a mandate to expand access for non-white students to selective and elite public and private post-secondary institutions. Only a very small number of four-year institutions in the United States can be classified as elite but the importance of this small group of institutions is mostly due to their national and often international stature as pathways to local, national, and international leadership positions in business, politics, and legal and medical professions. Elite institutions are generally thought of as public flagship research universities and highly selective private research and liberal arts institutions.¹¹

In 1976, prior to the ruling in *Bakke*, few Black Americans were attending selective institutions. Black Americans represented only 9% of college students, just over 1 million students. Forty per cent of these Black students were enrolled at public two-year institutions, which are not selective. Among the 600 000 Black students at four-year institutions, nearly 200 000 were enrolled at historically Black colleges and universities (Wilson, 1982). Historically Black colleges and universities were established to provide higher education to Black Americans when many post-secondary institutions were not integrated. In 1964, the United States Congress passed the Civil Rights Act. Title VI of this law was intended to provide equal educational opportunity to African Americans by forcing public post-secondary institutions to end racial segregation and discrimination. Many public post-secondary institutions maintained a legacy of discrimination against Black Americans. Previous laws and legal rulings allowed such unfair treatment if the state offered separate institutions for the discriminated group. The Civil Rights Act was the first major effort by the federal government to override state laws that discriminated against Black Americans.

After 1964, some progress was made and many public post-secondary institutions ended stated admissions policies that discriminated against Black Americans. However, many replaced explicit discriminatory policies, *de jure segregation*, with *de facto* discriminatory policies. *De facto* discriminatory policies appeared race-neutral, but in reality limited access of Black Americans. An example of *de jure* segregation is a written policy of not admitting Black students. A *de facto* segregation policy would replace the written policy of not admitting Black students with admissions criteria that were guaranteed to result in something similar, *e.g.*, requiring a minimum standardised test

score on a test that is not meant to be used to determine student ability to succeed in college. In 1973, the United States District Court for the District of Columbia ruled in *Adams v. Richardson* that the Department of Health, Education, and Welfare order public post-secondary institutions in the ten southern states that continued to discriminate against Black Americans develop plans with affirmative action to remedy the vestiges of past discrimination (*Adams v. Richardson*, 1973).¹²

Following the *Bakke* ruling, affirmative action in college admissions remained unchallenged until 1995. In July 1995, after a year of debates, protest, and national media attention, the Board of Regents of the University of California System led by Governor Pete Wilson, voted to end affirmative action in the admissions process at its institutions. The attention Wilson brought to the issue of affirmative action helped generate financial support for a ballot initiative in California to end all affirmative action by government entities. In November 1996, 55% of California voters voted for Proposition 209, which banned the use of race as a factor in college admissions and state hiring (Pusser, 1999).

Also in 1996, the US Court of Appeals for the Fifth Circuit ruled in *Hopwood v. Texas* that the University of Texas could no longer use race in its admissions process. This ruling did not directly impact many other institutions because the Fifth Circuit only has jurisdiction in three states: Mississippi, Texas, and Louisiana. The greatest impact of the *Hopwood* decision was to encourage conservative groups, like the Center for Individual Rights, to file similar suits in other states. Soon after the *Hopwood* decision, the Center for Individual Rights filed suit against the University of Michigan and the University of Washington Law School. The case against the University of Michigan eventually reached the US Supreme Court in 2003.

In 2003, the Supreme Court issued its second ruling related to affirmative action in college admissions. The Court ruled on two cases involving the University of Michigan, *Grutter v. Bollinger*, which involved the law school, and *Gratz v. Bollinger*, which involved the undergraduate admissions policy. In *Gratz v. Bollinger* the Court ruled against the University of Michigan's undergraduate admissions policy because the Court thought the policy placed too much emphasis on race in the selection process. In *Grutter v. Bollinger*, the Court ruled in favor of the use of race in the admissions process at the university's law school. The two rulings made clear that within strict limitations the use of race in college admissions was permissible because racial diversity serves a compelling government interest (Schmidt, 2003). However, these recent developments reflect a backlash against affirmative action in many states, and it is not clear whether this will remain a major policy instrument for minority access in selective institutions in the coming decades. While affirmative action has recently been under attack for its potential undue discrimination against white students, it should be noted that it has also been criticised for its narrow focus on minority access to elite and selective institutions. Some argued that while helping minority students from advantaged socio-economic groups, it did not do enough to widen participation of the bulk of low income minority students.

While the impact of *Hopwood* was limited to three states, the impact on minority admissions at selective four-year institutions in these states was immediate. For example, at Texas Agricultural and Mechanical University, the admission rate for African American and Hispanic students dropped from 90% to 70% (Card and Krueger, 2004) and the enrolments for these groups of students declined dramatically by fall 1997 (Hurtado and Wathington, 2001). Similar trends followed the *Gratz v. Bollinger* decision. A year after the

decision was rendered, the University of Michigan reported its smallest class of African American freshmen in 15 years (Dobbs, 2004). In addition to the University of Michigan, several other universities have reported significant declines in African American enrolment including the University of California system, the Pennsylvania State University, the University of Minnesota, the University of North Carolina at Chapel Hill, the University of Pennsylvania, the University of Georgia, the Ohio State University, and the University of Illinois (Dobbs, 2004).

The challenge of equal opportunity for low income students

Whereas minority access to post-secondary education has fairly progressed over the past decades in the United States, as noted above the picture is more mixed when one takes into account students' socio-economic background. Lower income persons attend post-secondary education institutions at a significantly lower rate than higher income persons for a myriad of reasons, many of which are interrelated to the reality of life for lower income persons in the United States. Many low-income families find themselves in this situation because of limited earnings potential due to low levels of education. The lack of experience in post-secondary education among most low income adults leaves a college information void for their children. Research shows parental education, involvement, and encouragement to be strong predictors of college attendance (Cabrera and La Nasa, 2000; King, 1996; McDonough, 1997; and Stage and Rushin, 1993; St. John, 2002). Parents who did not attend college do not have the experience or information to assist their child in preparing for post-secondary education. The lack of this experience may also lead to less encouragement because of a lack of understanding about all the benefits of a college education. In addition to parental encouragement and support, students also are impacted by support from peers and counselors (King, 1996). Family and friends, especially older persons can provide valuable information and encouragement to students. Because communities are concentrations of persons of similar financial standing, lower income students are likely to live around other low-income persons, therefore these students have peers that lack post-secondary experience and information. As stated previously, financial aid is a major factor. Lower rates of attendance among lower income persons is also partially due to college cost, concerns about forgone earnings, and the perception of limited financial resources available to pay for college (Kane, 1999).

Finally, lower income persons have less access to quality primary and secondary education that can lead to post-secondary enrolment. The poor quality of primary and secondary education that many low-income students receive in the United States does not adequately prepare them for post-secondary education (Adelman, 2006). Although public primary and secondary education in the United States is the domain of each state, with states providing 47% of school revenues in 2005, the federal government does influence primary and secondary education policy through funding requirements. Funding can vary greatly across schools, often (though not always) to the disadvantage of schools located in districts with higher percentages of lower income persons. Although the problems of schools hosting high percentages of low-income students are not always related to funding, school districts with lower amounts of funding suffer from various problems related to their limited economic resources: teachers with less experience, larger class sizes, and less library books and computers (US GAO, 2002).

The quality of public primary and secondary schools may be the result of funding differences, but the determination of quality is based on outcomes, not funding. Because

school districts that serve lower income families are usually operating with less than adequate funding, the schools suffer from teacher shortages, classroom overcrowding, deteriorating classroom facilities, and limited course offerings. Many of the schools in school districts serving large numbers of lower income families fail to meet minimum state proficiency levels in core subjects like reading and math (Center on Education Policy, 2006). At the secondary level, many of these schools do not have the resources to offer higher level courses that can better prepare students for post-secondary education. The difference in access to important higher level courses is apparent by income; 72% of students in the highest income quintile attended high schools that offered calculus, compared to only 44% of students in the lowest income quintile (Adelman, 2006). The effects of these educational inequalities on enrolment in post-secondary education are important. That being said, preparation to college is only part of the explanation. Data from the US National Education Longitudinal Survey show that students from low income backgrounds have less chances to go to college than their richer peers *regardless* of their high school test scores: 72% of high income students with high school test scores in the *bottom* quartile of the test score distribution go to college, compared with 68% of low income students with test score in the *top* quartile (Carnevale, 2006).

Today in the United States more Americans have access to higher education than ever before. However, the reality of access to post-secondary education is that it is not partitioned equally. Significant gaps in access between whites and persons of color persist, however much of this disparity is related to income and social class. The fact that lower income students lack the preparation, resources, aspiration, and support to pursue post-secondary education at rates similar to more affluent students is an acknowledgment of a nation still struggling to fulfill the promise of equal opportunity.

6.4. The future of enrolment in American higher education

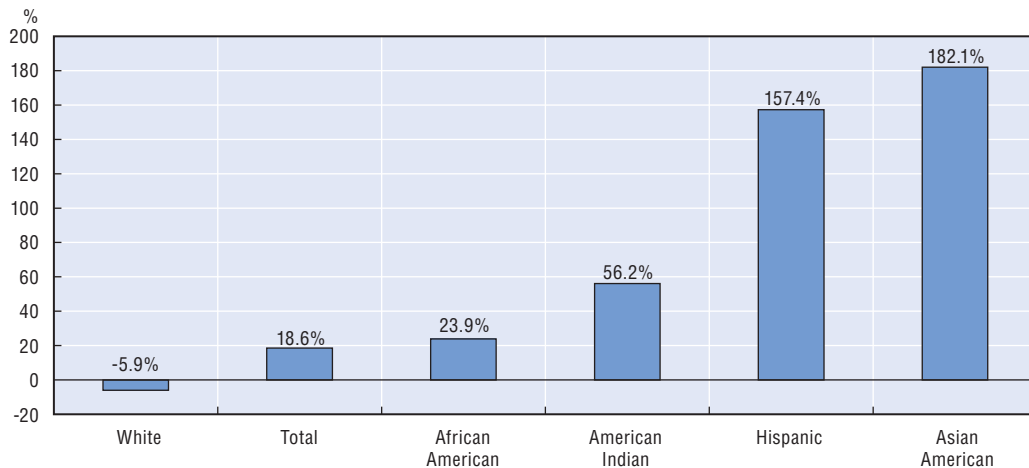
In the last 25 years post-secondary education in the United States has evolved into a diverse assortment of institutions educating an increasingly diverse nation as well as persons from around the globe. Today there are several factors that present the opportunity for post-secondary education enrolment in the United States to continue to grow: population growth among the young and the changing US economy under globalisation. The college-age population is projected to grow with a shift towards an increased share of minority students and the US economy will continue to provide students with strong incentives to have a post-secondary education.

Growth in the pipeline

As stated previously, post-secondary enrolment in the United States increased over the past twenty-five years despite a decline in the college-age population. The future potential for the growth of American higher education is extremely strong because the younger than 15 population has been growing since 1980. The number of American children increased by 19% from 1980 to 2004. In just the last fifteen years this age group increased by over 7 million persons.

Because of lower fertility rates among whites, all of the growth in persons younger than 15 occurred among persons of color. The number of whites in this group declined by nearly 6% from 1980 to 2004 (see Figure 6.4). The increase in the number of persons of color was led by Asian American and Hispanics, 182% and 157%, respectively. The number of Hispanic children increased by 7.4 million persons. The growth in the number of minorities

Figure 6.4. **Percentage change in US under 15 population by race/ethnicity, 1980-2004**



Source: US Census Bureau (2004), Population Division, Tables 1 and 4: "Annual Estimates of the Population by Sex and Five-Year Age Groups for the United States: April 1, 2000 to July 1" (NC-EST2004-01); 1980 Decennial Census.

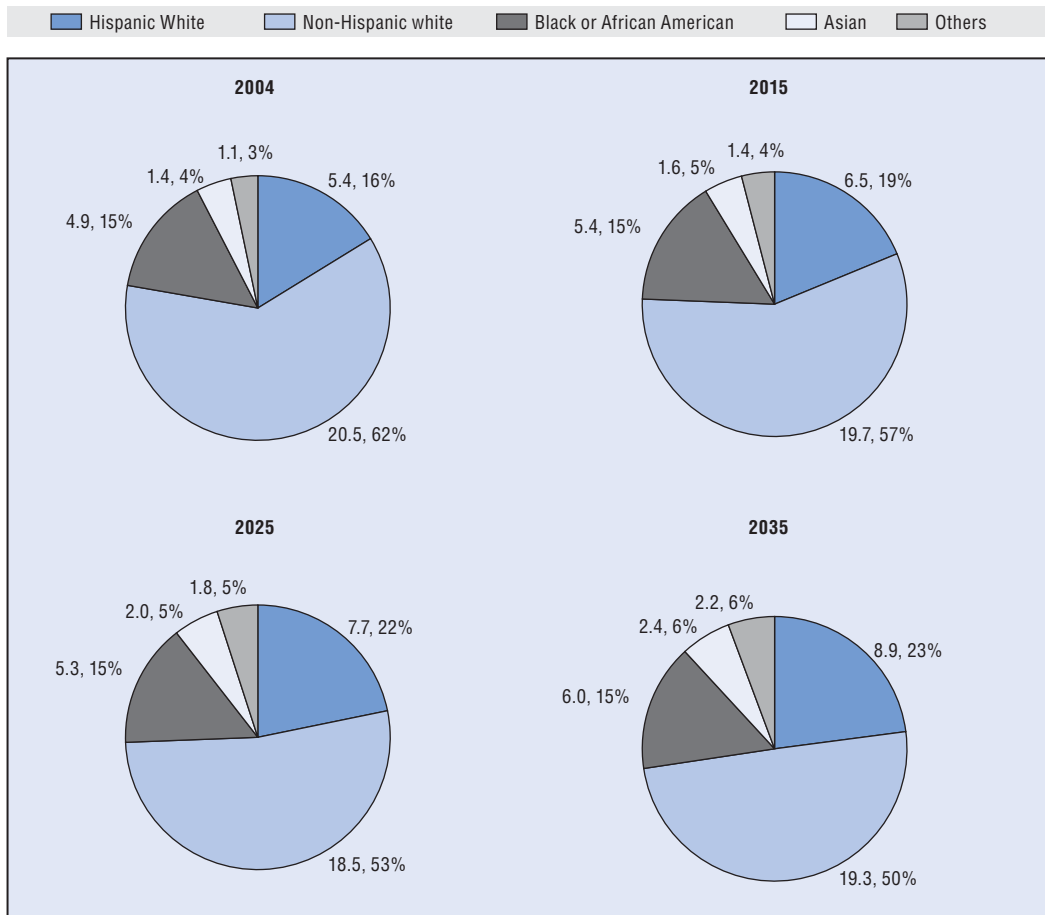
in this age group is rapidly shifting the racial composition of the youth of America. In 1980, one out of four American children was a person of color. Twenty-five years later nearly one out of two young Americans are persons of color. From 2004 to 2025, the number of (non-Hispanic) whites in the 18-25-year-old population is projected to decrease by 9% (that is, 1.9 million persons) while the total 18-25-year-old cohort is projected to increase by 7% (5.7 million persons). While the Hispanic population (of any race) will grow by 48% in this age group, the non-Hispanic population will actually decrease by 2%. Projections between 2004 and 2035 show a more marked increase of the college-age Hispanic population by 73% against a 6% increase for the non-Hispanic population. By 2025, whites will make up 53% of the 18-25-year-old population, and become a minority (49.7%) by 2035 (see Figure 6.5).

Population projections from the US Census Bureau show the impact of these changes in the future make-up of the US population. The (non-Hispanic) white population is projected to decrease from 68% in 2004 (see Figure 6.2) to 59% by 2025, and 56% by 2035 (see Figure 6.6). While the total US population is projected to grow by 19.3% between 2004 and 2025, the (non-Hispanic) white population is forecast to increase by 5% against 27% for Blacks or African Americans, 62% for Hispanic whites, 67% for Asians and 68% for all other groups. Again, the growth of the Hispanic population (of any race) is the most significant change: it is projected to grow by 63% against 12% for the non-Hispanic population.

More importantly, post-secondary enrolment projections from the US Department of Education support the assertion that enrolments will continue to climb based on growth of young persons in the United States. According to the enrolment projections, over the next ten years post-secondary enrolment will increase by 16%, topping 20 million students in 2015 (Hussar, 2005). While all groups will continue to grow, recent projections forecast that white students will account for 61% of total enrolment in 2015 (against 66% in 2004), and that all other groups will increase their share, with Black Americans, Hispanics and Asian representing 14%, 13% and 7% of enrolments, respectively (against 13%, 10% and 6% in 2004) (see Table 6.2 and Figure 6.7). More detailed projections show that the absolute

Figure 6.5. **Population estimates and projections for 18-25-year-olds for the United States**

Number in millions and percentages



Note: The projections and 2004 estimates follow the 1997 guidelines for the coding of race issued by the US Office of Management and Budget (OMB), hence the differences in categories and numbers with the historical data presented in the first section of the chapter (Figures 6.1 and 6.2 and Table 6.1).

Source: US Census Bureau, Population Division, US Population Estimates; Interim Population Projections consistent with Census 2000.

number of white undergraduates will fall in ten states by 2015, and that minorities will become the majority on a growing number of campuses: minorities will become the majority in four states (Hawaii, District of Columbia, California and New Mexico) and will range between 40 and 50% in 8 other states (Texas, New York, Maryland, Florida, New Jersey, Louisiana, Mississippi and Georgia). The largest increase will come from Hispanic undergraduates, who were forecasted to outnumber African American undergraduates in the near future (Carnevale and Fry, 2000).

Globalisation and the US economy

Throughout much of the 20th century, the United States has perceived itself and was often considered abroad as the land of opportunity. As the largest industrial country in the world, the United States provided more employment opportunities for its citizens than any other country. However advances in software and computer technology alongside other factors have created a global knowledge based economy which has resulted in non-Western

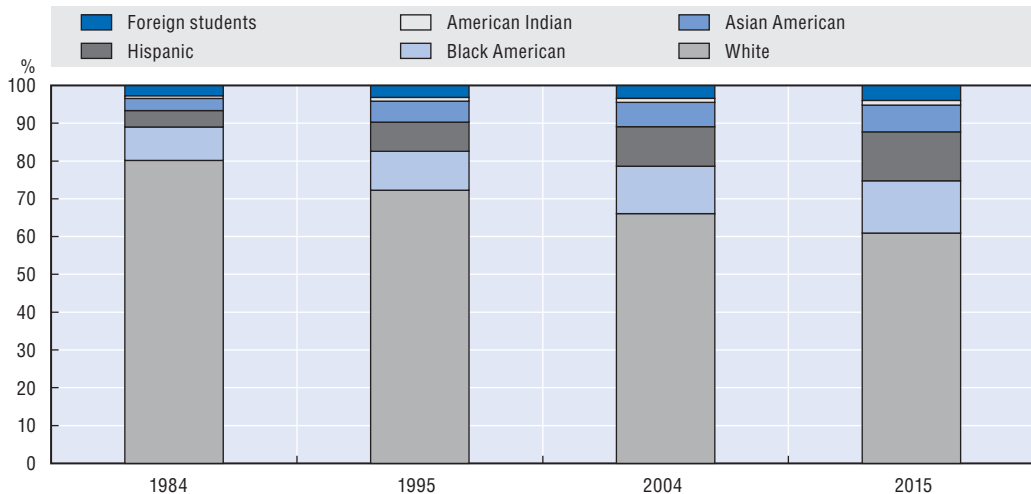
Figure 6.6. Population estimates and projections for the United States

Numbers in millions and percentages



Source: US Census Bureau, Population Division, US Population Estimates; Interim Population Projections consistent with Census 2000.

Figure 6.7. Actual and projected distribution of US total enrolments in post-secondary education by race/ethnic groups (1984-2015)



Source: US Department of Education, NCES.

countries being able to compete for jobs in industries that have no geographic boundaries, like computer software development (Friedman, 2005). Technology has expanded the potential for many industries in the United States to utilise highly skilled labour in other parts of the world. Indian accounting firms are increasingly doing American income tax returns and increasingly more US hospitals are having their CAT scans read by Indian or Australian radiologists (Friedman, 2005). Professions such as these, which tend to be populated by the American middle class, are increasingly being outsourced to other countries that can do these jobs cheaper and more efficiently.

As a result, the US economy is fast becoming a dichotomous labour market with, as noted above, a division of labour increasingly consisting of so-called “low skilled, low wage” and “high skilled, high wage” jobs. The result of this dichotomy is that the path to professional and financial security, that is high skill, high wage jobs, requires a post-secondary education (Friedman, 2005). If the United States is to remain competitive in the global economy, it is widely believed that the level of education among all Americans must increase significantly. Just as an earlier shift in the economy played a part in the increase in Americans pursuing a college degree, globalisation will likely have the same impact on young people in the United States.

The continuing dichotomous nature of the US job market is apparent when analysing the occupations with the largest projected job growth in the next decade. Twelve of the thirty occupations listed have a median earnings (in 2004) above USD 28 000. Most of these twelve occupations require some form of post-secondary education:¹³ registered nurse, post-secondary teacher, general and operations manager, elementary school teacher, accountants and auditors, truck drivers, computer software engineers, maintenance and repair workers, executive secretaries, sales representatives, carpenters, and computer systems analysts. The remaining occupations are mostly low-skill, low-wage jobs (Hecker, 2005).

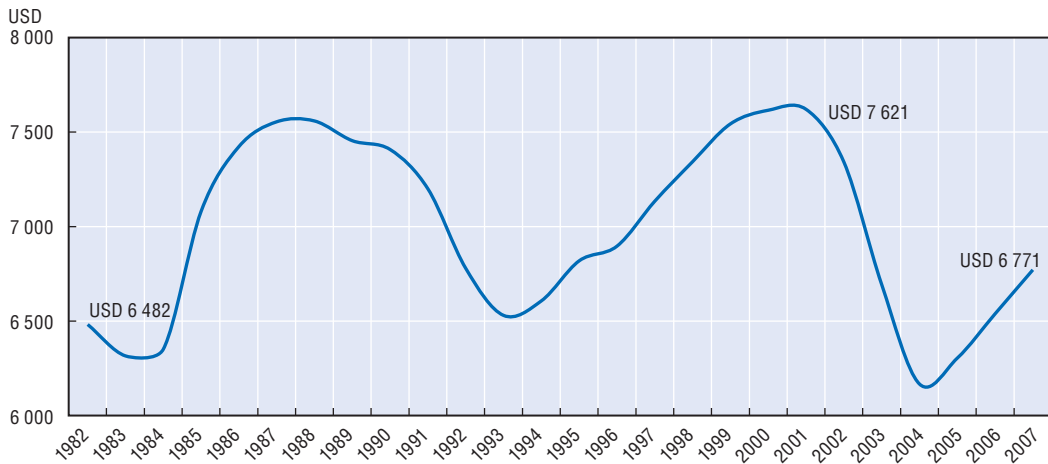
6.5. Challenges for the future

The challenges facing American higher education are complex and both unpredictable and uncontrollable. Much success can be gleaned from the rising college participation rates of all racial/ethnic groups, however numerous challenges exist: unpredictability of state funding, access and equity issues, and the spread of accountability and assessment of student learning.

Uncertainty of state support for public higher education and the rising cost of going to college

American post-secondary institutions are facing a funding crisis from one of their largest sources of funding. Public post-secondary institutions receive the majority of their funding from the federal and state governments. The federal government contributes 40% of total revenue at public four-year institutions and state governments contribute about 36%. The percentage of revenue from states has declined significantly since 1980 when states contributed 45.6% of total revenue (US Department of Education, 2005). Another way to understand the decline in state support for higher education is to look at state post-secondary educational appropriations per full-time equivalent students (FTE).¹⁴ In 2007, state governments appropriated slightly more money to post-secondary education per FTE than in 1982, despite the rising cost of educational equipment and facilities such as computers and laboratories (see Figure 6.8). State support for public higher education is not

Figure 6.8. **Constant-dollar¹ educational appropriations² per FTE (US), fiscal years 1982-2007**



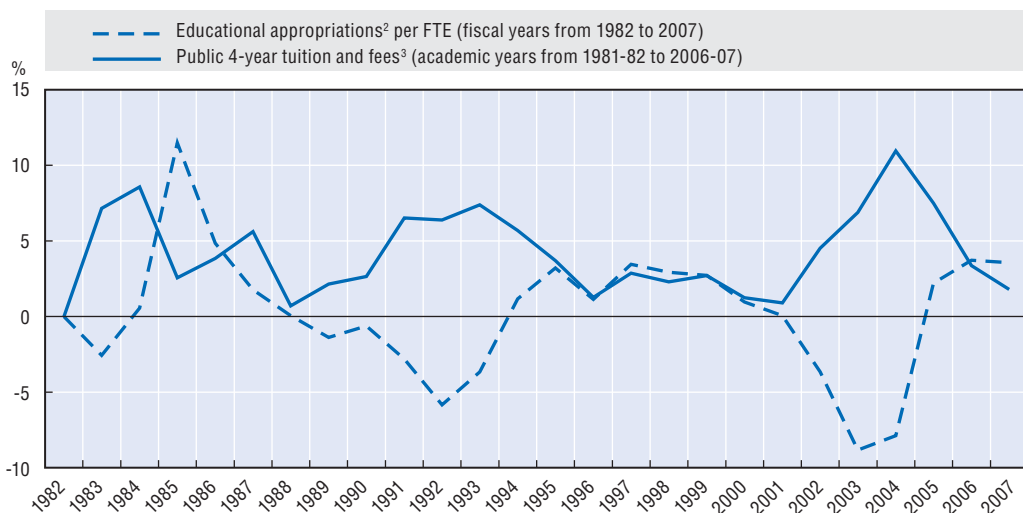
1. Constant 2007 dollars adjusted by SHEEO Higher Education Cost Adjustment (HECA).
2. Educational appropriations (state and local funds available for public higher education operating expenses, excluding spending for research, agriculture, and medical education and support to independent institutions and students).

Source: State Higher Education Executive Officers (2008).

capricious and arbitrary but usually the result of state economic conditions that limit fiscal resources (State Higher Education Executive Officers, 2005): it follows business cycles.

The decrease in state funding per full-time-equivalent (FTE) is correlated with an increase in tuition over the last twenty-five years. As Figure 6.9 shows, in most years there is an inverse relationship between annual percentage changes in tuition and fees and state

Figure 6.9. **Annual percentage change (constant-dollars¹) in educational appropriations per FTE and tuition and fee charges at public 4-year institutions (US), 1982-2007**



1. Constant 2007 dollars adjusted by SHEEO Higher Education Cost Adjustment (HECA).
2. Educational appropriations (see Figure 6.8).
3. Tuition and fees are enrolment-weighted.

Source: State Higher Education Executive Officers (2008), College Board (2007).

educational appropriations per FTE students. When the state appropriation per FTE decreased, tuition and fees increased. The cost of attending a post-secondary institution has increased significantly since 1980. From 1982 to 2007 (in constant 2007 dollars) the average tuition and fees at a public two-year institution as well as the cost of attendance at public or private four-year institutions more than doubled, increasing by 137%, 195% and 152%, respectively.¹⁵ Despite these increases, the tuition and fees for one year at a public post-secondary institution remained relatively low, about USD 6 000 at public four-year schools and USD 3 200 at public two-year schools (College Board, 2007).

As tuitions increased to account for declines in state funding, student financial aid became increasingly important. In the first half of the 1980s, student loan programmes saw considerable growth, while federal grant programmes, such as the Pell Grant, declined in real value (McPhearson and Schapiro, 1998).¹⁶ From 1987 to 2007, average federal loans per FTE increased by more than USD 2 500 (in constant 2006 dollars), from USD 1 826 to USD 4 337. During this same period, average grant aid per FTE also saw considerable growth, from USD 3 967 to USD 9 499. Despite funding increases, the largest federal grant programme, the Pell grant, actually lost buying power (College Board, 2005 and 2007). Student financial aid from non-federal sources also increased during the 1980s. According to McPhearson and Schapiro (1991), “from 1975 to 1989, state programmes grew by 53%, while institution-based aid...grew by 78% in real terms from 1981 to 1989 (p. 29)”.

Research on the effect of rising tuition and changes in student financial aid suggest that the impact was hardest on lower income students, but did not adversely affect the enrolment patterns of the majority of Americans above the lowest income category. Investments in student financial aid for lower income students softened the negative impact of rising cost of attendance; however, the gap in the college going rate between low-income students and high-income students widened in states with higher public tuitions (McPhearson and Schapiro, 1998; Kane, 1999). Any such college going rate gap between low-income and high-income students is going to have a greater impact on persons of color, because Black Americans, Hispanics, and American Indians are more likely to be low-income than whites. Although recent improvement in economic conditions in many states has led to increases in funding, it is impossible to predict the impact of future economic conditions on state funding for higher education.

The access dilemma of the poor

Despite rising enrolment numbers, US higher education is becoming less affordable for some US students, especially low-income students. As stated previously, more than 86% of high school graduates from the two highest socioeconomic status quintiles enrolled in post-secondary education, compared to only 54% of students in the lowest quintile (see Table 6.5).

Low-income students rely on the Pell Grant programme as a major tool in accessing college. Between 1973 and 1990, 42 million low-income students utilised the Pell Grant programme to access college. Since 1990, 52 million low-income students have benefited from Pell Grants. While the number of students utilising the Pell Grant has increased significantly, the value of the Pell Grant has dropped sharply over the past 20 years. The cost of attending college increased 80% at public institutions and 66% at private institutions between 1995 and 2004, and the maximum Pell Grant award increased only 43%. From 1980 to 2003, the percentage of the cost of attendance that the maximum Pell Grant award covered at public two-year post-secondary institutions declined from 99% to 68%.¹⁷ At

four-year public institutions the buying power of the maximum Pell Grant dropped by 39 percentage points to cover only 38% of the cost of attendance. Over the same period of time the value of the maximum Pell Grant award at four-year private institutions declined from 36% of cost of attendance to a mere 16%.¹⁸ Since the mid-seventies, the real cost of higher education (understood as total price minus all aid) has risen only slightly for students from advantaged socio-economic backgrounds but has doubled for low income students. For students (or families) in the bottom quartile of the US family income distribution, college costs have increased from 42 to 63% of total family income, while they have remained stable for the top 40% of the family income distribution (Carnevale, 2006).

Access to post-secondary education among low-income persons is also affected by lack of information about the availability of financial aid. Nearly 60% of low-income students and their parents reported not having enough information about how to pay for college (Sallie Mae Fund, 2003).

A lack of access to post-secondary education among low-income persons will have an impact that reverberates beyond poor communities in the United States. Overall, the continued growth in post-secondary enrolment will likely not be negatively affected by limited access among low-income persons. The majority of students in US post-secondary education are from middle- and high-income families. Low-income students represent a small segment of the post-secondary population.

However, the benefits this groups receives from advanced education are substantial because a college education has the ability to change their socioeconomic status. Research shows that Americans with less than a college degree are more likely to be incarcerated, unemployed, require welfare assistance and report being in less than good health (Baum and Payea, 2004). While these traits diminish the quality of life for these Americans, they also require a significant amount of support from local, state, and federal governments. With health care and prison cost rising and the number of Americans living in poverty increasing annually, the plight of Americans with low educational attainment extends beyond just an individual issue. All working Americans will bear the burden of the unemployed.

The new minority challenges

Because of the racial shifts occurring among the college-age population, the future growth of US higher education will greatly depend on the ability to maintain and increase access among Black Americans and Hispanics from all income levels. Given that Black American and Hispanic students are more likely to come from a low-income background, the challenge is really correlated to the increased access of the poor discussed above.

While participation in and access to post-secondary education has increased among all racial and ethnic groups of students, there has been less progress made in terms of graduation. Bailey (2005) shows that the gaps between Black Americans, Hispanics and Whites grew in actual percentage point if one considers who earned 10 credits in post-secondary education: Black Americans and Hispanics still achieve rates equivalent or inferior to what whites had achieved 20 years ago. In 2000, about 32% of the white 25-34-year-old population has a Bachelor degree, against 16% of the corresponding African American and 11% of the Hispanic population – and the share of tertiary educated Hispanic males actually fell between 1990 and 2000. With Black Americans and Hispanics representing over 30% of the US population in 2020, it will be important to raise their post-

enrolment success to meet the demands of the US economy, which is predicted to require more workers with skills learned in college (Bailey, 2005).

Other challenges associated to this demographic shift will be cultural and possibly linguistic ones. With Hispanic students becoming a majority in a few states of the United States, the higher education sector will have to adapt to new cultural demands, possibly including a changing language of instruction. While historically Black colleges and universities were a response to segregation, Hispanic-Serving Institutions (HSI) have become a *de facto* reality in places where the population was mainly Spanish-speaking. To date, their language of instruction has primarily been English, but more states and institutions will have to adapt their curricula and teaching to the traditions and distinctive experience of Hispanic Americans in the coming decades.

This may also mean that minority issues will become more diversified than they have been in the past, where affirmative action has dominated the US policy agenda in this respect. Minority education will no longer be synonymous with affirmative action, but instead shaped by a much wider range of concerns (for example new questions like completion) and a much more varied group of “minorities” – which, again, in the next generation, will be the new majority in some states.

The spread of accountability and assessment of student learning

Although accountability in US higher education is nothing new, over the past 20 years there has been a significant change in the concept and practice of accountability. While earlier notions of accountability focused on regulating the flow of campus resources and the decisions of campus officials, the new accountability movement is outcome driven with policy makers seeking to influence institutional behavior for the purpose of improving institutional performance and student learning (McLendon, Hearn and Deaton, 2006). While much of the push for accountability has come from policy makers, concern has also been expressed by business leaders concerned about the preparedness of the US workforce and parents looking to get the most for their tuition dollars.

Accountability in higher education is gaining in popularity, particularly at the state level (McLendon, Hearn and Deaton, 2006). Between 1979 and 1990, only four states adopted either a performance funding or performance budgeting policy.¹⁹ Between 1990 and 2002, 38 states adopted one of these policies (McLendon, Hearn and Deaton, 2006). In addition to state level policies, the federal government is exploring ways to make post-secondary institutions more accountable for student outcomes (Kerkstra, 2006; US Department of Education, 2006).

Accountability policies that fail to recognise the uniqueness of each post-secondary institution could lead schools to limit access. One concern for state and federal officials is the low graduation rate of students in US post-secondary institutions, 58% for full-time students beginning at a four-year institution seeking at least a bachelor’s or equivalent degree (cohort years 2000 and 2003, US Department of Education, 2008b). As stated previously, only a small number of post-secondary institutions in the US are selective, the majority of four-year institutions are not selective and offer the opportunity for students from a variety of backgrounds to attend a four-year post-secondary institution. The low graduation rate among US students can partially be attributed to this policy that encourages all types of students to attempt to earn a college degree regardless of their academic preparation. State and federal accountability efforts that seek to measure

institutions by graduation rates and evaluate a standard set of knowledge ignore the uniqueness of post-secondary institutions and may actually stymie the growth of many post-secondary institutions by forcing less selective institutions to become more selective. This shift in admission policy would shut the door of four-year institutions on many lower-income Americans.

6.6. Conclusion

The future of post-secondary education in the United States will continue to be affected by internal and external pressures in the next decade. Population growth among young Americans will likely lead to expanding enrolments at all types of post-secondary institutions. In the coming decade post-secondary education will reflect the increasing racial/ethnic diversity of the nation. As selective elite institutions adjust their recruitment of minority students, the number of students of color at elite institutions should begin to increase. National and local efforts to raise the quality of primary and secondary education provided to low-income students if successful should increase the percentage of low-income students attending post-secondary education.

However, if government support for post-secondary education institutions and its students does not increase, access for low-income students will decline significantly. Access for low-income students will become even more of a pressing issue in the next decade because most of the population growth among potential college students will be among minority students who are more likely than whites to be from low-income families.

The challenge of globalisation may serve as a positive force on post-secondary educational opportunity for Americans from all racial and economic backgrounds. Today governmental and business leaders in the United States realise the importance of post-secondary education, especially in science, technology, engineering, and math fields, in order for the nation to maintain its place in the global economy. The US government recently passed legislation aimed at increasing the number of students majoring in science and technology fields (Frist, 2006). According to a survey of 100 top science and technology companies in the United States, most of the leaders of these companies fear that a shortage of Americans trained in science and technology will jeopardise the nation's standing in the global economy (Bayer Corporation, 2006). This heightened awareness has already resulted to special funding (both governmental and corporate) targeted at increasing the production of scientists, engineers, computer programmers, and mathematicians.

The past twenty-four years in American higher education proved that enrolments can grow even when the college age population declines. The expansion of college access beyond the most affluent students benefited post-secondary education by preventing enrolment declines. More importantly, the expansion of college access in the United States benefited the nation and allowed for more people from diverse backgrounds to obtain a higher education and succeed in the changing US economy at the end of the 20th century. Future developments in US higher education will once again depend heavily on the expansion of access, the changing nature of the economy and the global marketplace.

Notes

1. In this chapter “white” refers only to white, non-Hispanic persons.
2. It should be noted that the term *Hispanic* refers to all people of Spanish heritage from Mexico, Central and South America and the Caribbean, no matter their race. For the purposes of this chapter, however, the Hispanic population is included in discussions of minority populations.
3. There was a major change in the guidelines for the coding of race in the United States in 1997, which took effect in Census 2000. The new guidelines allow the coding of two or more racial categories, whereas the earlier practice required respondents to choose a single race. Provided by the US Census Bureau, the data in this paragraph and in Table 6.1 do however reflect the old definition through 2004. Because race and Hispanic origin are reported subjectively in decennial censuses, occasional trends, even if consistent in definition, need to be interpreted with caution. For example, the 52% increase in the American Indian population from 1980 to 2004 (Table 6.1) is not plausible as population growth and is most likely influenced by an increasing tendency of people to report this category in census enumerations.
4. In this chapter the term “four-year” refers to institutions that grant at least a bachelor’s degree, but may also grant master’s, professional, and doctoral degrees. The term “two-year” refers to associate’s degree granting institutions.
5. The US Department of Education collects enrolment data for the fall semester/quarter of each year. An enrolment estimate for the entire 12-month academic year includes persons who were not enrolled for the fall semester/quarter count, but enrolled some time during the academic year. This estimate is called an unduplicated 12-month headcount. For academic year 2003-04 the unduplicated 12-month headcount was 23.5 million students.
6. The remaining share of enrolment consists of persons of unclassified race/ethnicity.
7. The 2000 Carnegie Classification definition of Doctoral/Research Universities-Extensive: these institutions typically offer a wide range of baccalaureate programmes, and they are committed to graduate education through the doctorate. They award 50 or more doctoral degrees per year across at least 15 disciplines.
8. The national poverty level is a sliding income scale based on family size. For example, in 2002, the poverty level for a family of four (including two children under the age of 18) was USD 18 244. So, for this size family low-income equals USD 36 388, middle-income equals USD 36 389 to USD 91 220, and upper-income equals more than USD 91 220. For a single-headed household with only one child under the age of 18, the income ranges would adjust downward.
9. These college participation rates are significantly higher than the overall rate of 45% mentioned above because the 93-53 percentage rates are based on enrolment within 8 years after high school (for students who completed high school). The 45 percentage rate is a one-time snapshot of persons aged 18- to 24-years old.
10. It is important to distinguish between formal education, such as a course at a college or university and work-related training. Many manufacturing jobs require considerable training for example, but do not require formal education.
11. The term “elite institution” does not refer to specific definition of institution type or notion of quality, but refers to the perception of certain institutions based on selectivity and rank in various publications that rank institutions.
12. States listed in the Adams ruling: Louisiana, Mississippi, Oklahoma, North Carolina, Florida, Arkansas, Pennsylvania, Georgia, Maryland, and Virginia.
13. This refers to the provision of formal instructional programmes with a curriculum designed primarily for students who have completed the requirements for a high school diploma or equivalent. This includes programmes of an academic, vocational, and continuing professional education purpose, and excludes avocational and adult basic education programmes (US Department of Education).
14. When discussing funding for post-secondary education it is important to connect funding to student enrolment. In pure dollars state funding for post-secondary education has increased significantly over time. However, because of rising enrolment, the funding increases are actually declines.
15. Tuition data are based on tuition and mandatory fee charges. Data are enrolment weighted and in 2007 dollars.

16. The Pell Grant programme is a federally funded need-based grant. It is the largest single grant programme in the United States.
17. Cost of attendance includes tuition and necessary fees at all institutions and room and board at four-year institutions.
18. "Students at lower-priced institutions could only receive grants equivalent to no more than a fixed percentage of college prices...After 1985, when the cap was raised from 50% to 60%, only students at public two-year institutions (and other similarly low-priced institutions) were affected. The 1992 reauthorisation of the Higher Education Act revoked this limitation (King, 2003, p. 5)."
19. *Performance funding* is an approach where an institution receives a designated share of state funding if it reaches a specified performance target. Under *performance budgeting*, state policy makers use campus achievement on performance indicators as one of several factors that determine state funding.

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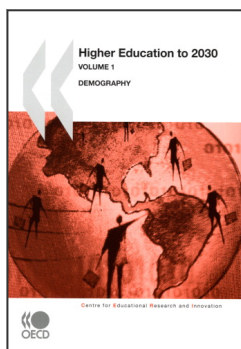
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