The Michigan Metrics

Office of the President
The University of Michigan
July 1995

Contents

Statement of Purpose

The **Michigan Metrics Project** is part of a larger strategic planning project, called *Vision 2000: "The Leaders and the Best..."* In brief, this vision statement's guiding principle is that leadership and quality are the most important characteristics in determining the impact of the University of Michigan on society, the state, the nation, and the world. Accordingly, the primary objective of this project is to position the University of Michigan to become the leading university of the 21st century.

> *Vision 2000: "The Leaders and Best..."*
>
> To position the University of Michigan to become the leading university of the 21st century.

In this vision statement, the goal of "leadership" is characterized as leading the way, setting the pace, and becoming the standard against which others compare themselves. Such a leadership vision requires a complex strategy, since all of the key characteristics of the University are involved:

- quality
- quantity (size)
- breadth (comprehensiveness)
- excellence
- innovation

The achievement of the *Vision 2000* will require finding the ideal combination of all of these factors.

The evolution of this vision of the University of Michigan's future, its role and mission, began in the mid-1980's in anticipation of the fundamental and profound changes that would transform our society and its institutions. Such changes include the increasing ethnic and cultural diversity of our people; the growing interdependence of nations; and the degree to which knowledge itself has become the key driving force in determining economic prosperity, national security, and social well-being.

The broad themes and guidelines that characterized the early stages of the strategic planning process have been refined into more specific goals (e.g. to become the leading research university in the nation).

These goals are the focus of the **Michigan Metrics Project**, which has two primary objectives. The first objective is to measure our progress toward *Vision 2000* and the particular goals developed as part of *Vision 2000* .

The second, related purpose of the Metrics Project is to provide, in one place, a set of the *most important* indicators that highlight areas where significant headway has been made and areas that may need special attention. The Metrics project covers a ten-year period and serves as a comprehensive source of information about the University's recent past and its current status. This resource will be a valuable tool in helping guide decisions about the direction of the University's future.

Since the University's strategic planning is a long-term process, the Metrics project will be updated on a regular basis. As part of our effort to revise and improve this resource, we want to encourage your comments and suggestions on its form and content. Please take the opportunity to review these benchmarks and, in particular, look at areas where you might have a special interest. If you have any thoughts about the Metrics project, please share them with Lucy Drotning in the Office of Academic Planning and Analysis.

Themes of the 1990s

A number of different themes and challenges emerged from the strategic planning process. Each theme or challenge was recognized as playing an important role in the University of Michigan's future. They serve as the rationale for major initiatives, such as the Michigan Mandate. These themes include:

Themes of Change

- The increasing pluralism and diversity of our people
- Globalization of America and the shrinking global village
- The Age of Knowledge

Challenges

- A Finite World (Global Change)
- The Post-Cold-War World
- Rebuilding America

Frontiers

- Progress (vs. optimization)
- Creation (of knowledge, objects, intelligence, life...)
- Exploration (of knowledge, planet, universe...)

Particular Challenges to Higher Education

- The Challenge of Change
- The Commitment to Excellence
- The Importance of Fundamental Values
- Building a Community of Scholars
- Restoring Public Understanding, Trust, and Support
- Acquiring and Managing the Resources Necessary for Excellence

Strategic Themes at the University of Michigan

- Inventing the University of the 21st Century
- Redefining the Nature of the Public University
- Financing the University
- The Michigan Mandate
- A World University
- The Electronic University
- Global Change
- Strategic Marketing Plan
- "Keeping our eye on the ball"...

Major Goals and Objectives

The broad themes and challenges of the 1990s have recently been refined into specific goals that are more amenable to measurement. Measuring progress towards these goals is the purpose of the Michigan Metrics project.

Leadership Goals

1. To enhance the quality of all academic programs
2. To sustain UM blend of broad access and high quality
3. To build more spires of excellence...attract, nurture, and achieve the extraordinary
4. To achieve more firsts" for the University
5. To become the leading research university in nation
6. To achieve the objectives of the Michigan Mandate
7. To make UM the leader among American universities in promoting and achieving success of women students, faculty, and staff
8. To develop a new paradigm for undergraduate education
9. To enhance the quality of the student living/learning environment

Resource Goals

10. To build strong leadership teams for University
11. To acquire resources necessary to compensate for loss of state support
12. To restructure the University to better utilize existing resources
13. To strengthen external relationships (state, feds, public)
14. To enhance quality of institutional advancement events/facilities
15. To increase private support to exceed state appropriation by year 2000
16. To increase endowment to $2 billion by year 2000
17. To dramatically improve quality of UM facilities

Trail-Blazing Goals

18. To restructure UM to better respond to intellectual change
19. To explore new models for University of the 21st century
20. To position UM as a "world university"
21. To position UM as model of the "electronic university" of 21st century
22. To make UM a leader in knowledge transfer to society
23. To work with community leaders to position Ann Arbor for the future
24. To assist state in making transition to "post-industrial" economy
25. To have the leading intercollegiate athletics program in the nation in terms of integrity, impact on student-athletes, success
26. To build more of a sense of pride in...respect for...excitement about...and loyalty to the University of Michigan!

Summary of Goals

Vision 2000: The Leaders and Best...

To position the University of Michigan to become the leading university of the 21st century

Goal	Strategic Plan/Actions	Progress Since 1987-88	Status
1. Improving the quality of all academic programs	Comparison with highest standards Continuous improvement Investments in Engineering, Medicine, Sciences	National Surveys Most programs and schools in top 10; many in top 5	Some progress...
2. To sustain tradition of high student quality and broad access ("an uncommon education for the common man")	Restructure tuition/fin. aid Private gifts for financial aid UM role in direct loan program	In-state access sustained Out-state access jeopardized	Holding on despite decline in state support
3. To build spires of excellence ...attract, nurture, and achieve the extraordinary	Focus resources Attract and sustain faculty and students of true genius Encourage programs to strive to be the very best...#1	Many programs ranked top in nation Faculty awards continue to accelerate Retention challenges	Some progress ...more cultural change needed
4. To achieve more "firsts" for the University	Create risk-taking culture Focus resources Leadership strategy	Human gene therapy Most powerful laser NSFnet, MREN, IFS The Michigan Mandate University Hospitals Intercollegiate Athletics...	Significant progress ...(very close to the top)
5. To become the leading research university in America	Research incentives and support Washington office JJD leadership (NSB)	UM moved from 7th to 1st in nation in sponsored research activity	Goal achieved!
6. To build a multicultural university community	The Michigan Mandate	Student Representation ...Tot. Minority 12% -> 24% ...African American 4.1% -> 8.3% Grad Rates ...64% African American, 74% Hispanic American Faculty Representation ...Total Minority 9% -> 13.5% ...Black 2.6% -> 4.7%	Great progress ...but still far to go
7. To make UM the leader among American universities in promoting and achieving success of women students, faculty, and staff	Strategic plan (1993) Women faculty initiatives Improve campus environment	Target of opportunity program Sexual harassment policies Dependent leave policies	Michigan Agenda for Women

Goal	Strategic Plan / Actions	Progress Since 1987-88	Status
8. To develop a new paradigm for undergraduate education in a major research university	UG Initiative Fund LS&A, Eng UG Initiatives Gateway Campus	New Freshman Courses Chemistry, Math sequences UG Research Participation	Still at early stage
9. To restore the UM to a position of leadership in the quality of the living and learning environment provided for its students	Bring UM in line with best practices at other universities Attract outstanding people to student affairs activities Develop a greater sense of mutual trust and respect with students	Recruiting of Maureen Hartford Re-establishing Dean of Students Campus safety efforts Michigan Mandate actions Substance abuse policies Sexual harassment / assult policies Student Rights and Responsibilities Code	Now back in line with other colleges ...positioned for leadership
10. Build strong teams to lead the University	Strengthen Executive Officers Recruit outstanding Deans Stress teamwork and strategic approach	Exceptionally strong EO team Strong deans	Strong progress
11. Acquire resources necessary to sustain UM quality in face of loss of state support	Strategic business plan Restructure tuition / finan. aid Increase private support New investment strategies Resource management strategies	State support has declined more than 20% as a percentage of the General Fund Budget since FY84 General Fund State Appropriations are now less than 12% of total UM budget UM has managed to absorb these cuts while preserving quality (at least for the short-term)	Strong progress ...but most difficult phase lies ahead
12. To restructure the University to better utilize resources to achieve and sustain quality	Better resource allocation Total Quality Management efforts Reorganization of key units Global restructuring strategy Metrics Project	M-Quality in place PACE, ACUB	Good progress ...but still lots of opportunity
13. To build strong relationships with UM's key external constituences: ...State Relations ...Community Relations ...Alumni Relations	State Relations Strategy Federal Relations Strategy	Relationships with Governor, Legislature very positive White House, Congress relationships quite strong	Strong progress on political front ...longer term public relations effort
14. To set new standards of quality for facilities and events aimed at institutional advancement	Upgrade all key facilities Reorganize event teams Set high standards, encourage staff to exceed them	Renovation of Pres H, Inglis H Stadium pressbox areas Major events (e.g., Commencement) Campaign events strategy	Strong progress ...but sustained effort essential

Goal	Strategic Plan / Actions	Progress Since 1987-88	Status
15. To build private support of UM to a level comparable to state appropriation	Goals by year 2000 ...annual gifts $200M/y ...endowment $2B Restructure Development Campaign for Michigan President's Advisory Council	Annual gifts and pledges: ...$89M -> $152M Endowment ...$301 M -> $912M to date Launch Campaign ...$747M to date	Strong progress ...essentially on track
16. To increase endowment to $2B by the year 2000	Restructure Investment Strategies Investment Advisory Committee	Endowment growth ...$301M -> $1B to date	Great progress!
17. To dramatically improve quality of UM facilities	Medical Campus Plan Central Campus (LS&A) Plan North Campus Plan South Campus (Athletic) Plan	Great progress on UMMC North Campus almost complete (FXB, ITIC, Eng Center) South Campus almost complete (Stadium, Canham, Schembechler) LS&A Plan moving rapidly ahead (East Eng, UGLI, Physics, CC Little, Angell, Haven, Frieze, LS&A, Social Work, Gateway Campus)	Great progress ...key focus during 1990s will be LS&A
18. To restructure University to better respond to intellectual change	Interdisciplinary activities More risk-taking Structures appropriate for change	Interdisciplinary Plan Entreprenurial culture	First stage of implementation
19. To explore new models for the University of the 21st century	Futures Group Strategic Focus Groups	Early articulation of concepts "New U" plan National efforts	Some progress ...but still early
20. To reposition UM as a "world university"	Launch debate New International Structure Establish new linkages	International linkages greatly expanded Davidson Institute Midwest Universities Consortium for International Affairs Institute for Foreign Area and International Studies	Some progress ...but still searching for right model
21. To position UM as a model of the "electronic university" of the 21st century	Info Tech Plan National networking leadership Key linkages Decentralize management	ITD environment NSFnet -> NREN IBM (IFS), Apple, Apollo CAEN, CITI	Strong early progress ...needs some redirection
22. To make UM a leader in knowledge transfer	Restructure intellectual properties (IP) activities and policies Decentralized management (e.g., Medicine, Engineering) Advisory Board	Realigned IP Office Developed new IP policies Medicine, Engineering Activity increasing	Some progress ...but still not where we need to be

Goal	Strategic Plan/Actions	Progress Since 1987-88	Status
23. To work with community leaders to position Ann Arbor for the future	Develop plan AA leadership group University Enterprise Zone	Very early in strategy	Some progress
24. To assist state in making transition to "post-industrial" economy	Launch IPPS Group Leadership on K-12 education	Very early in strategy	Limited progress
25. To have leading intercollegiate athletics program in nation…in terms of integrity, impact on student-athletes, success, leadership	Build strong links between Athletics and the Administration Seek outstanding coaches Big Ten/NCAA negotiations Improve Womens' Athletics Tiering	Success (5 Big Ten FB champ, 2 NCAA Final Fours, Heisman, Swimming, Hockey, CC,…) #1 in Men's Sports (#17 in Women's)	Great progress …but many challenges ahead
26. To build more of a sense of pride in…respect for… excitement about… and loyalty to the UM	C-word efforts community, cooperation, collaboration, concern, caring Internal Communications Plan	Early efforts to articulate community themes Efforts to work with SACUA, MSA, Deans…	Inadequate progress to date
Strategic Planning Efforts	Initial Strategy Groups Refinement of goals Metrics Project Strategic Assessment	UM generally regarded as national leader in planning efforts	Clear leadership role in higher education

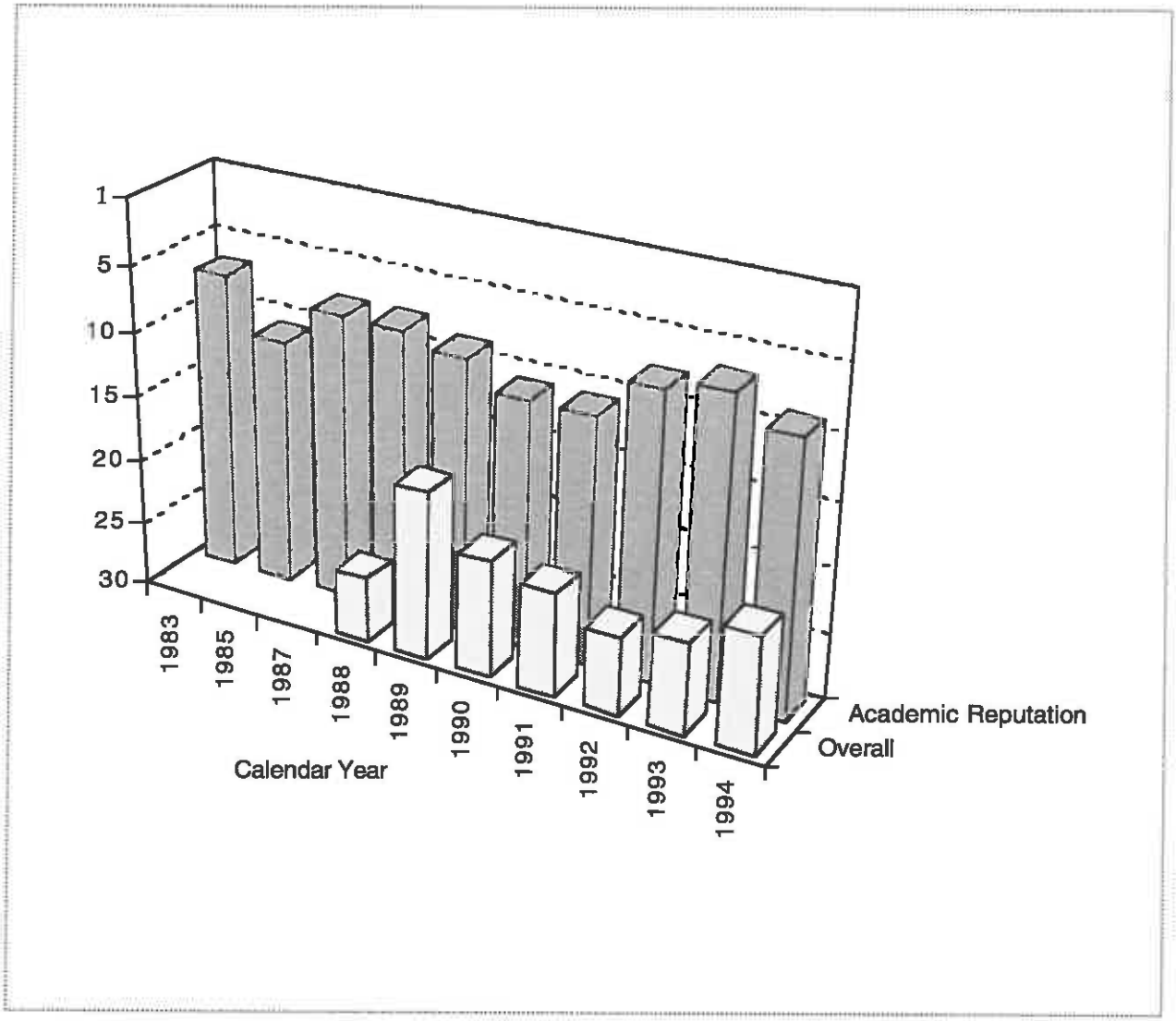
Goal To improve the quality of all academic programs

Table 1-1 Academic Program Rankings by U.S. News and World Report (1992, 1993, 1994)

Program	*Ranking* Academic Reputation	Overall
UNDERGRADUATE PROGRAM	9	21
PROFESSIONAL		
Business (only public in top 10)	7	5
Business Law	5	
Executive Education	1	
Management	5	
Marketing	5	
Law (only 2 publics in top 10)	4	7
International Law	5	
Engineering	6	6
Aerospace	5	
Electrical	5	
Environmental	2	
Industrial	3	
Mechanical	5	
Nuclear	2	
Medicine (only 1 public in top 10)	10	14
Drugs/Alcohol Medicine	4	
Health Care		
Dentistry	3	
Pharmacy	6	
Nursing	4	
Health Services Administration	1	
GRADUATE PROGRAMS		
Sciences		
Geology	6	
Mathematics	8	
Social Sciences/Humanities		
Anthropology	1	
Economics	11	
English	14	
History	6	
Political Science	1	
Psychology	2	
Sociology	3	

Figure 1-1

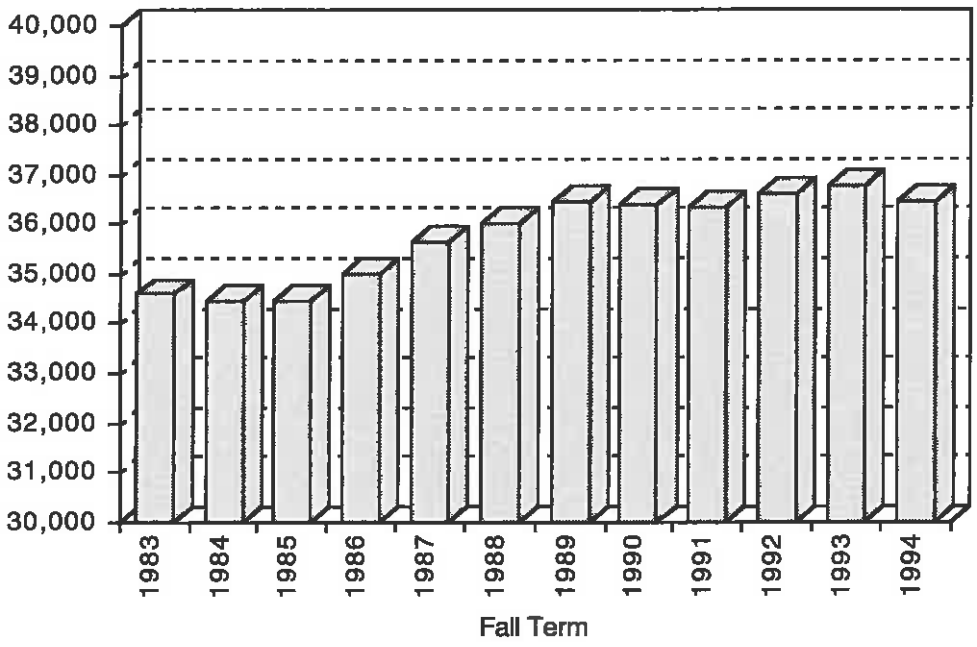
Rankings of Undergraduate Program by U.S. News and World Report



Goal

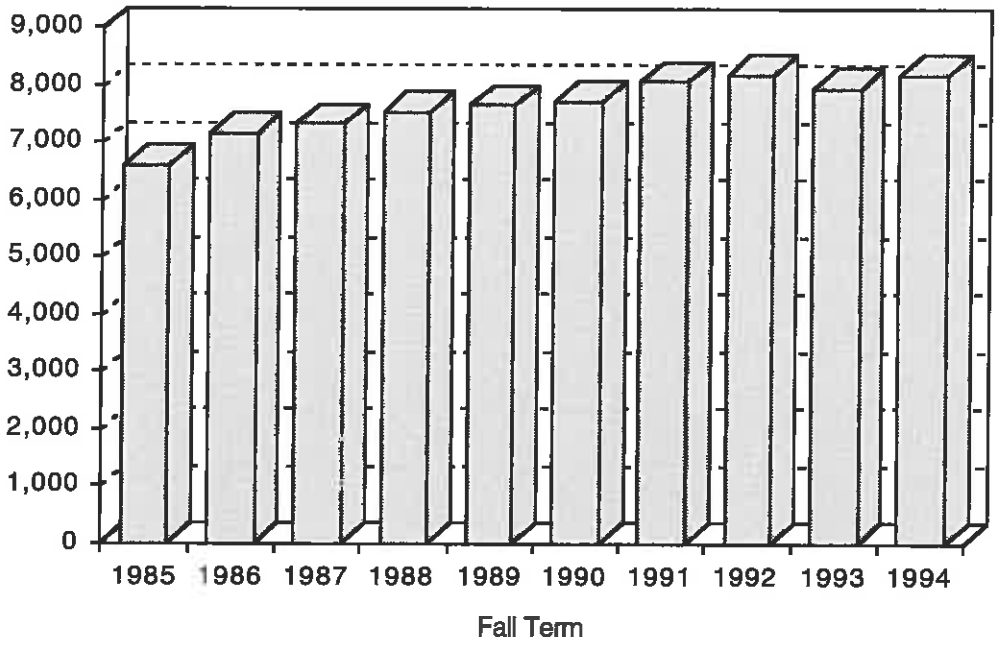
To sustain tradition of high student quality and broad access (the Michigan tradition of providing "an uncommon education for the common man")

Figure 2-1 Total Headcount Enrollment



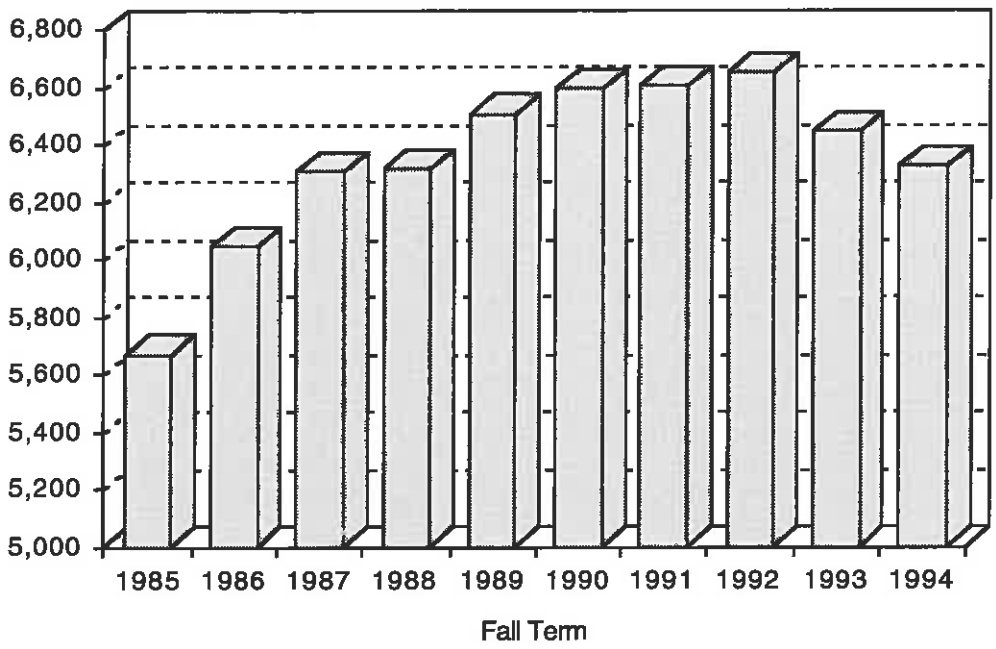
Change Since Fall 1987: +2.4%

Figure 2-2 Total Headcount Enrollment, Dearborn



Change Since Fall 1987: +2.4%

Figure 2-3 Total Headcount Enrollment, Flint



Change Since Fall 1987: +2.4%

Figure 2-4 Undergraduate and Graduate Headcount Enrollment

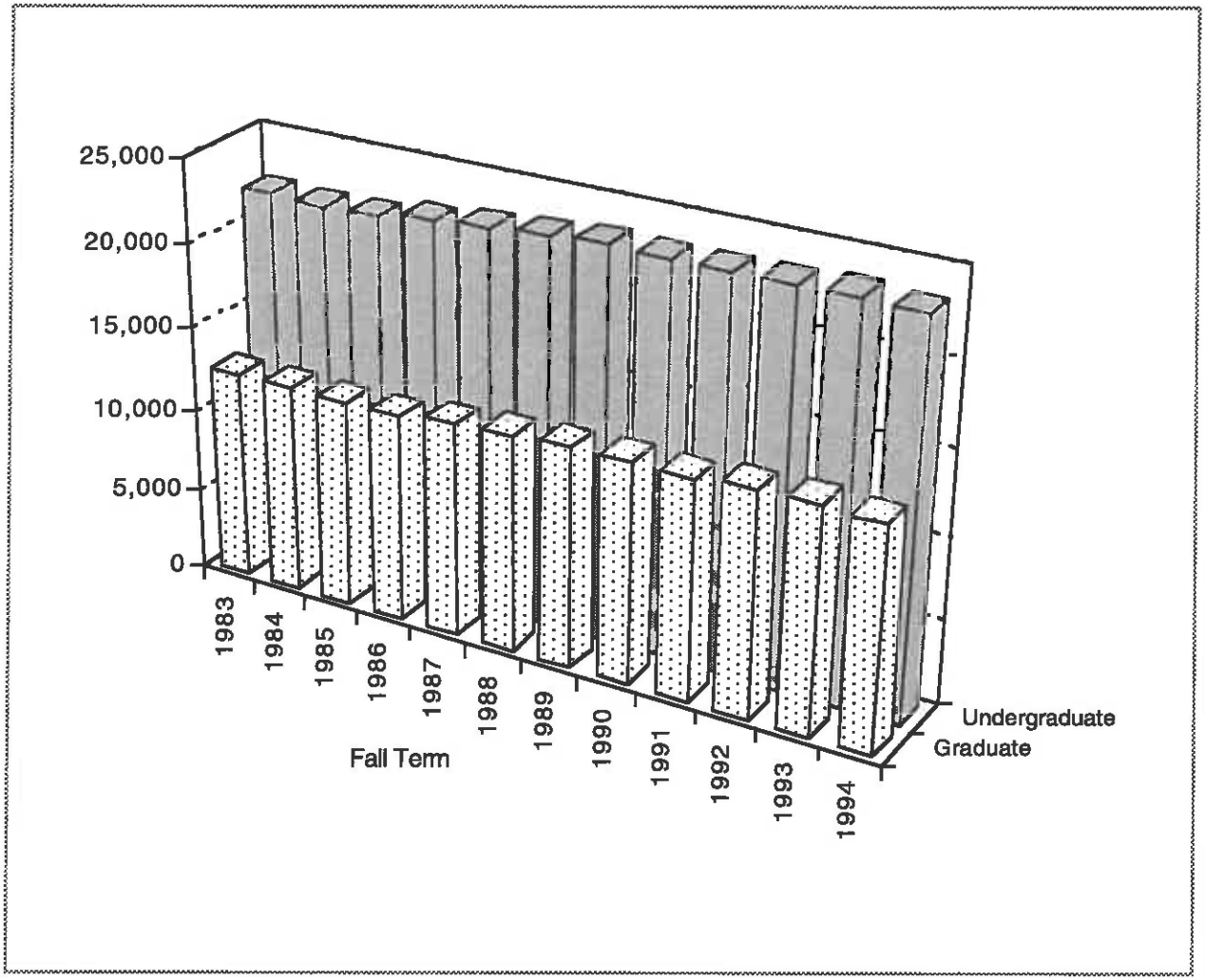
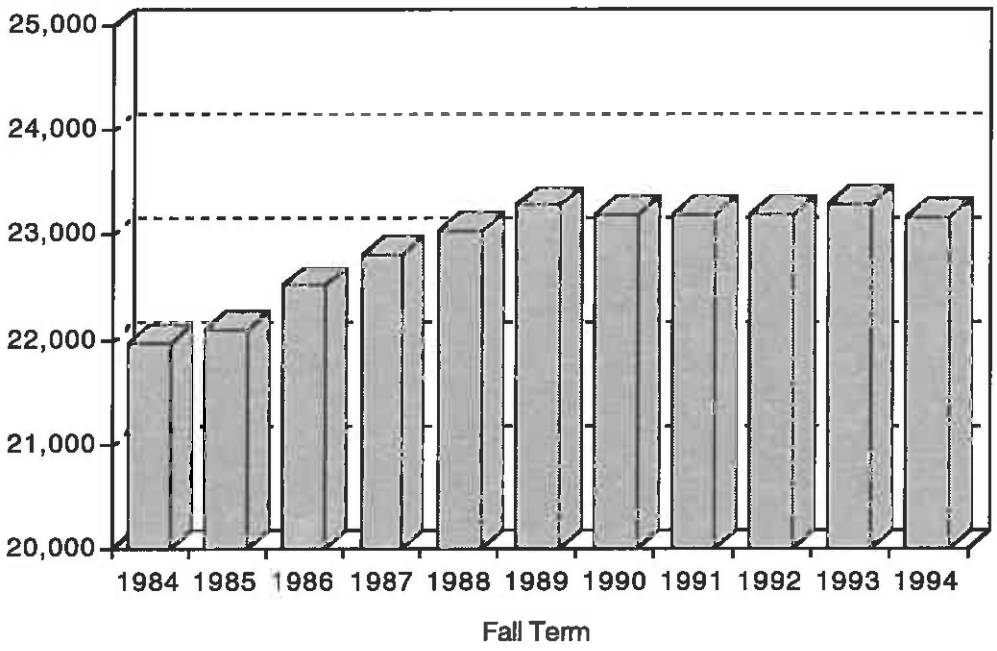
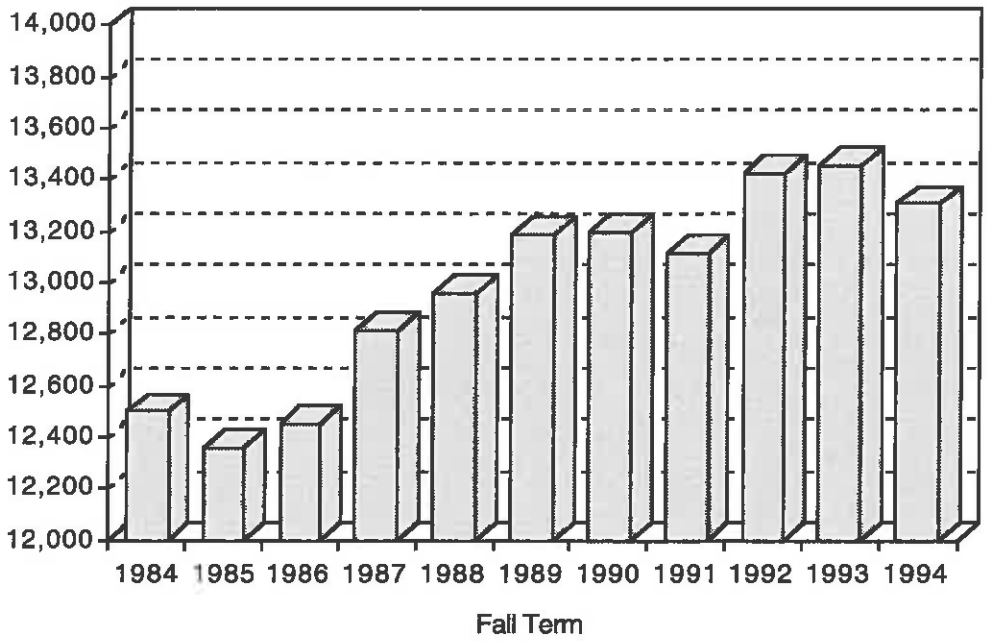


Figure 2-5 Undergraduate Headcount Enrollment



Change Since Fall 1987: +1.6%

Figure 2-6 Graduate Headcount Enrollment



Change Since Fall 1987: +3.8%

Figure 2-7 Resident and Non-resident Undergraduate Headcount Enrollment

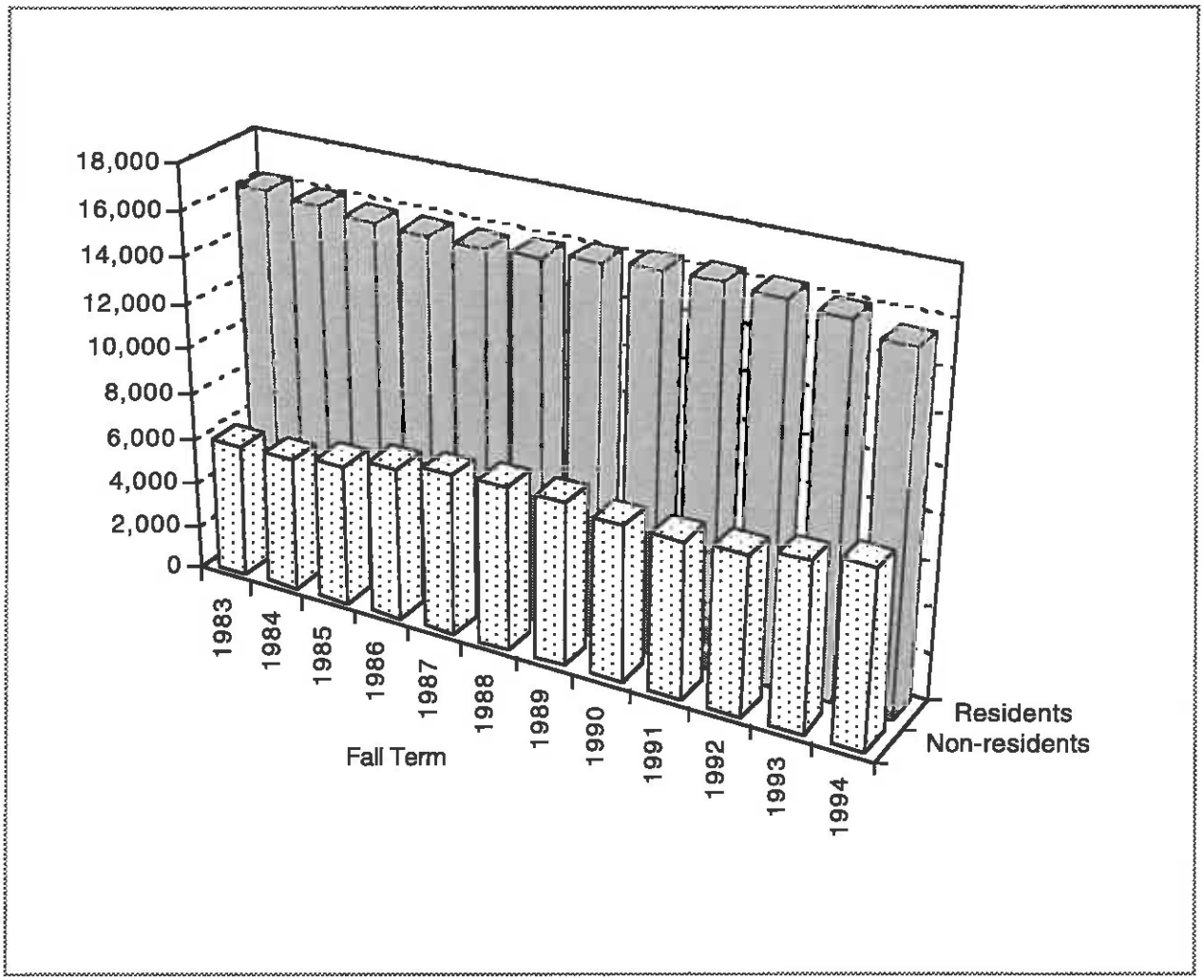
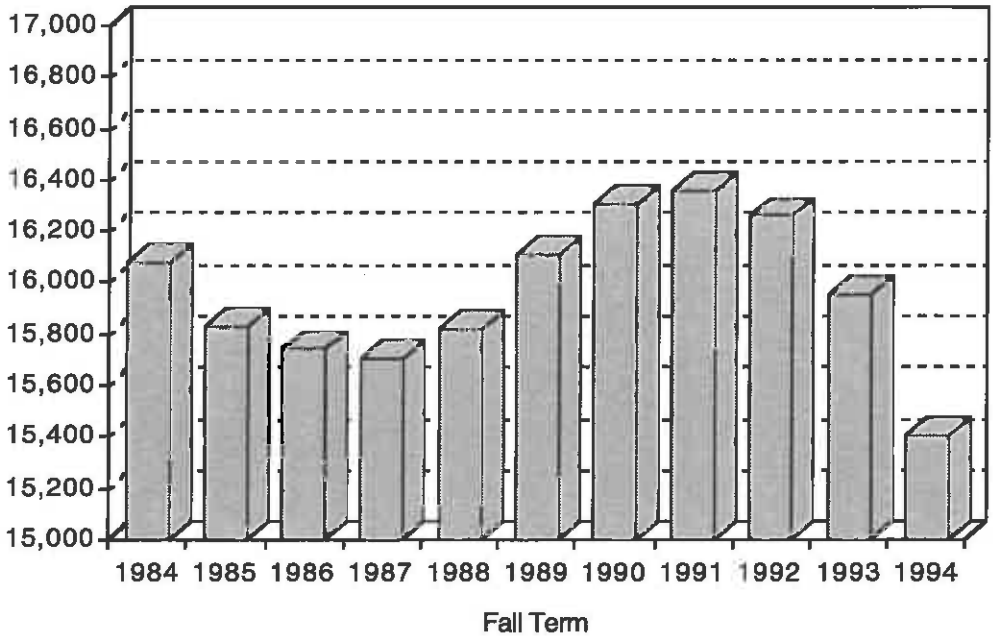


Figure 2-8

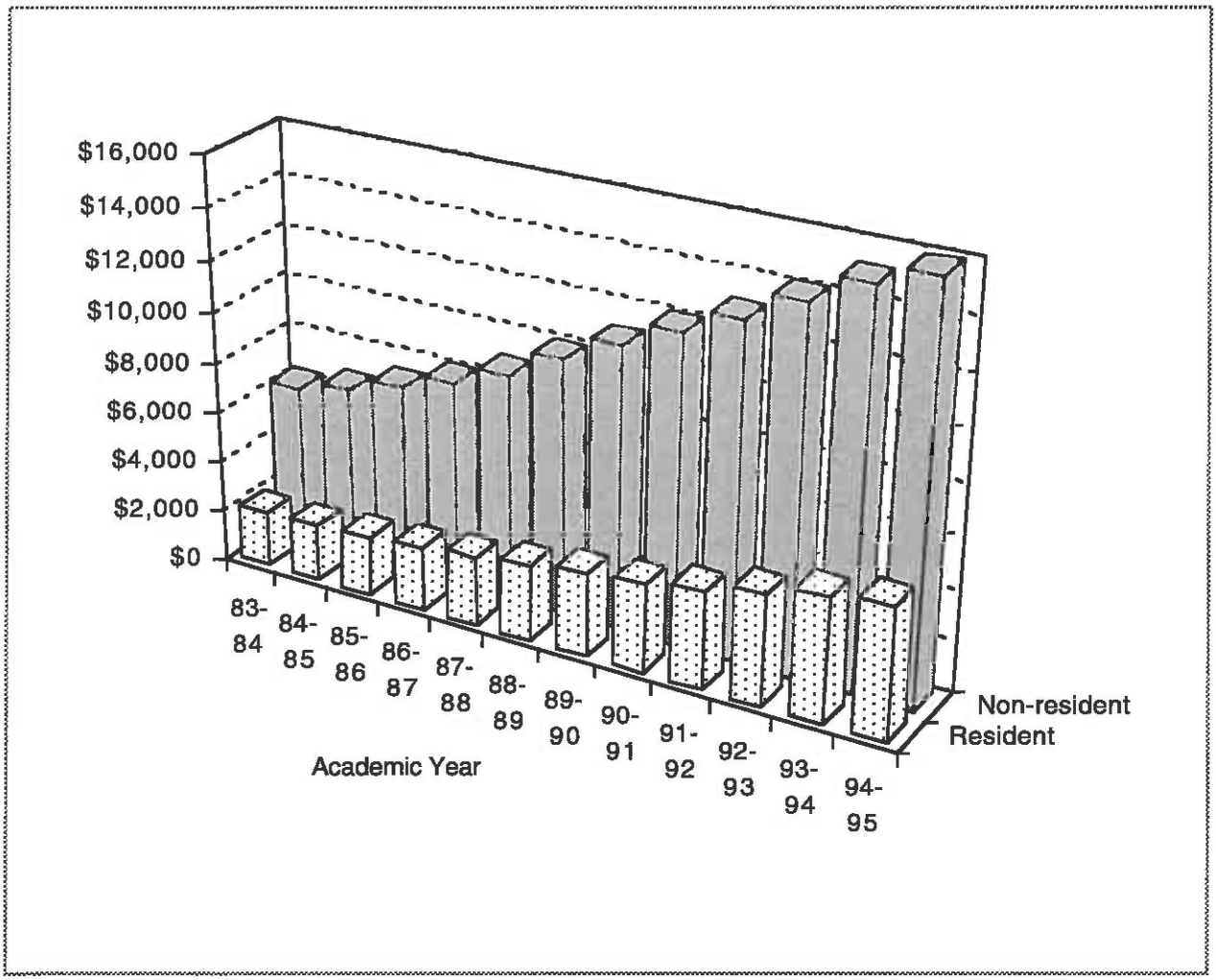
Resident Undergraduate Headcount Enrollment



Change Since Fall 1987: -1.9%

Figure 2-9

A Comparison of Resident and Non-resident Academic Year Undergraduate Tuition Rates

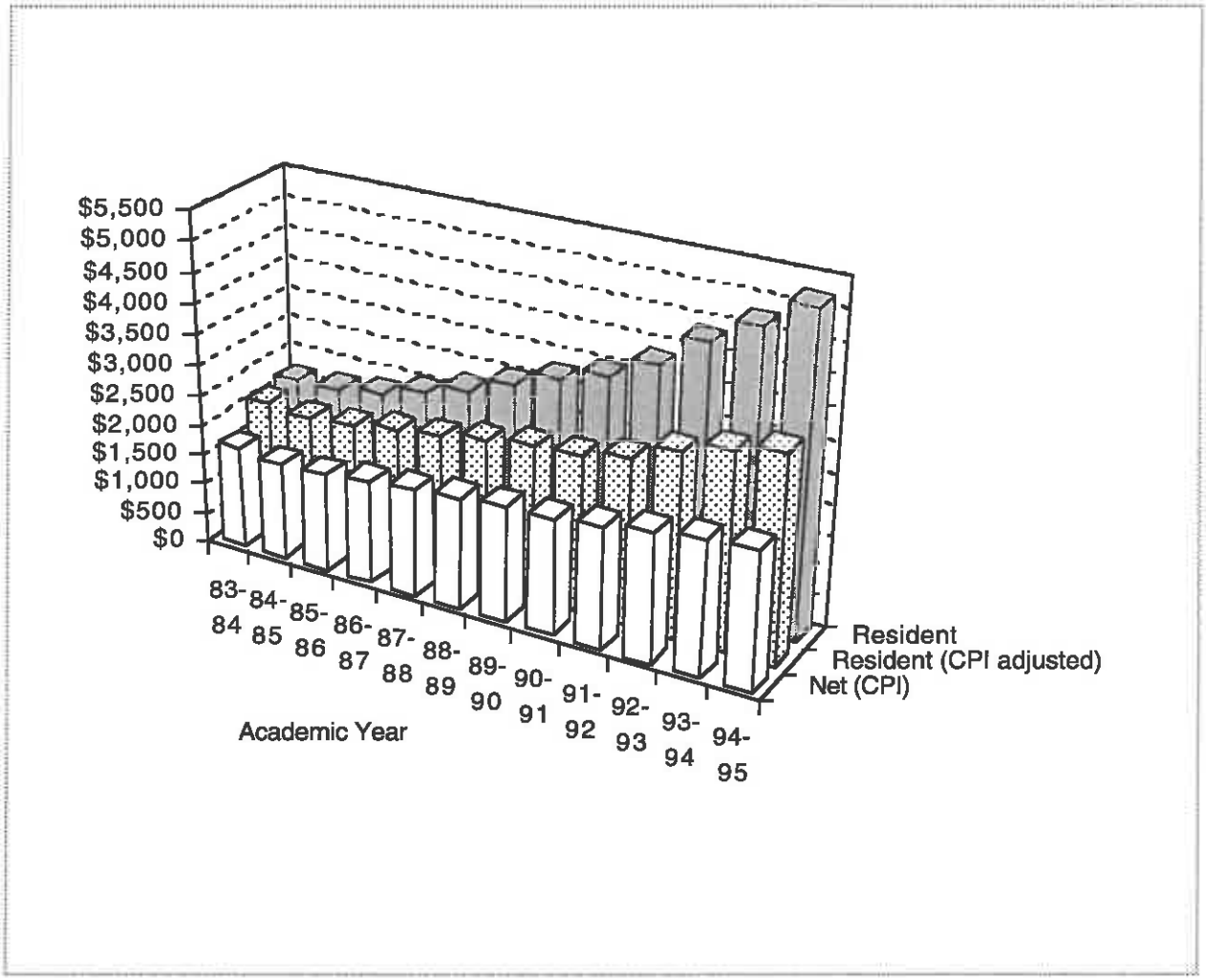


Change in Tuition and Fees Since 87-88:

Resident UG Tuition	+90%
Non-resident UG Tuition	+79%

Figure 2-10

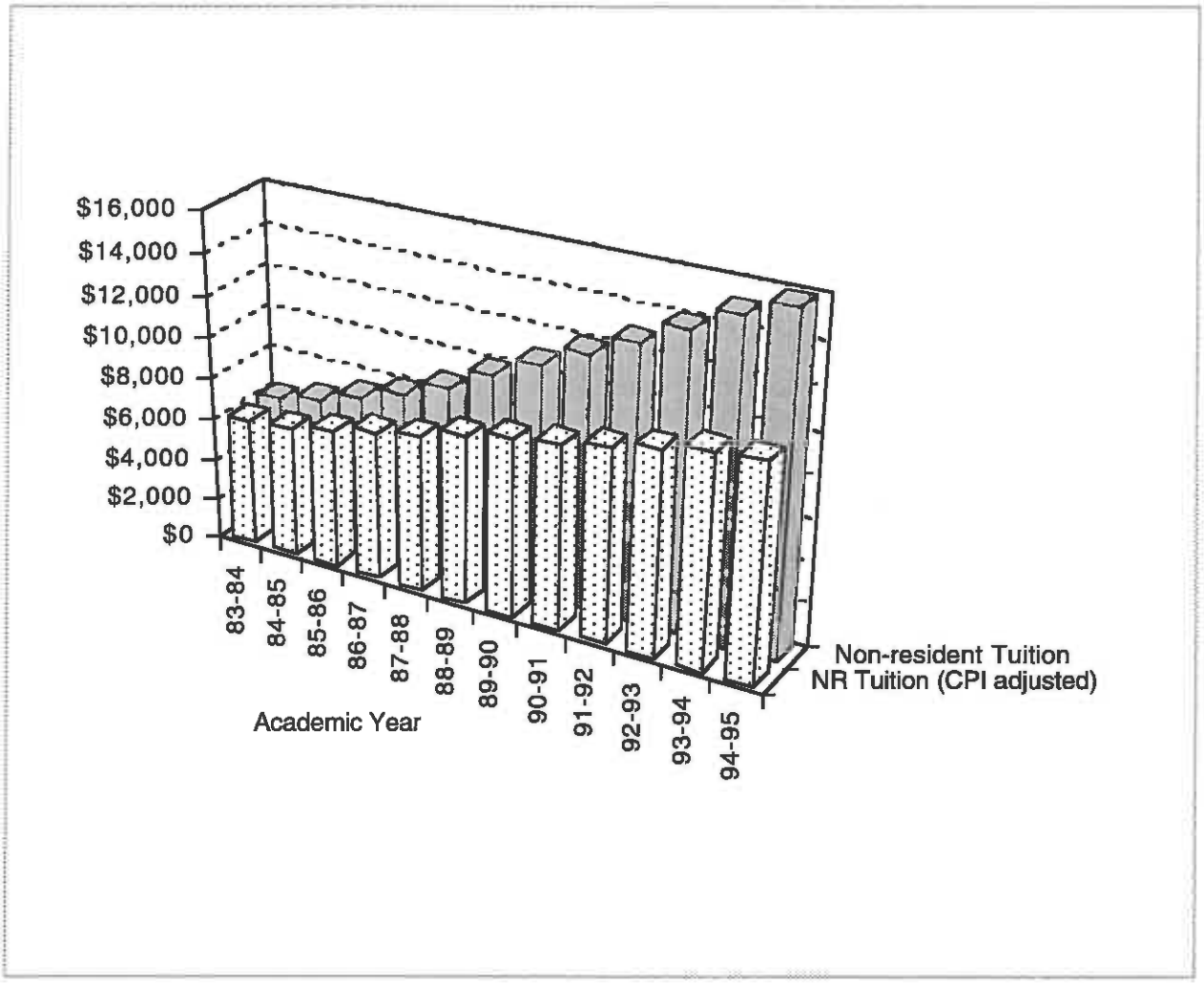
Resident Undergraduate Tuition (actual, discounted by CPI, and further discounted by UM financial aid per UG student)



Change Since 87-88 in Resident Undergraduate:

Tuition	+90%
Tuition (CPI adjusted)	+46%
Net Tuition (CPI adjusted)	+28%

Figure 2-11 Non-resident Undergraduate Tuition (actual and discounted by CPI)



Change Since 87-88 in Non-resident Undergraduate:

Tuition	+79%
Tuition (CPI adjusted)	+37%

Figure 2-12

UM Tuition Cost for a Michigan 1st Year Undergraduate in Relation to Tuition at Other Top Universities 1994-95

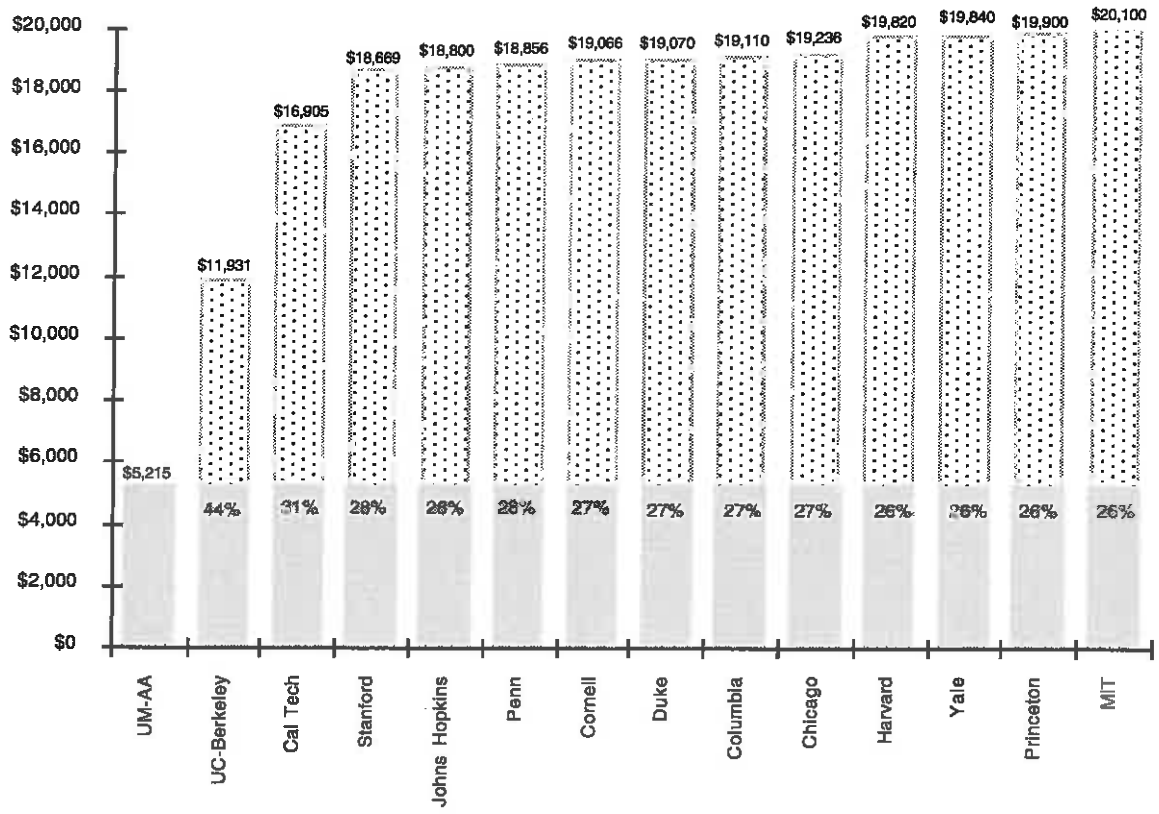


Figure 2-13

Student Financial Aid

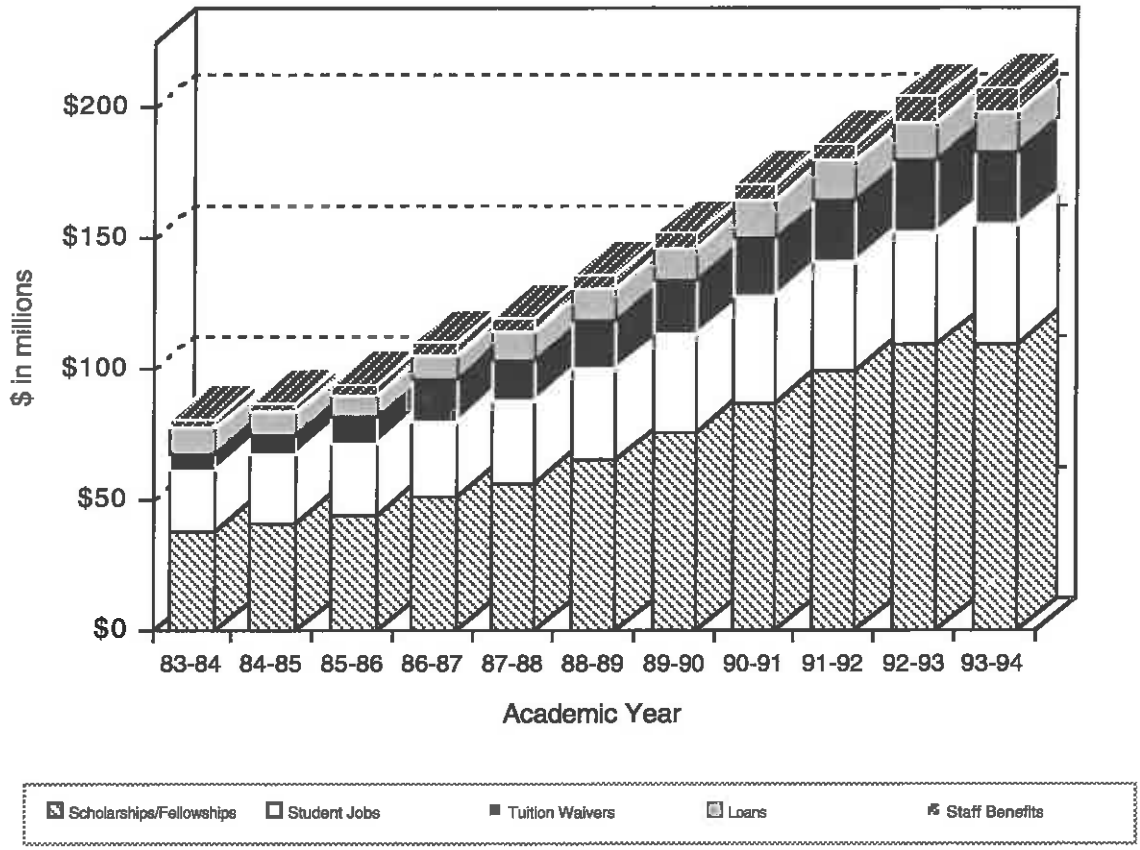
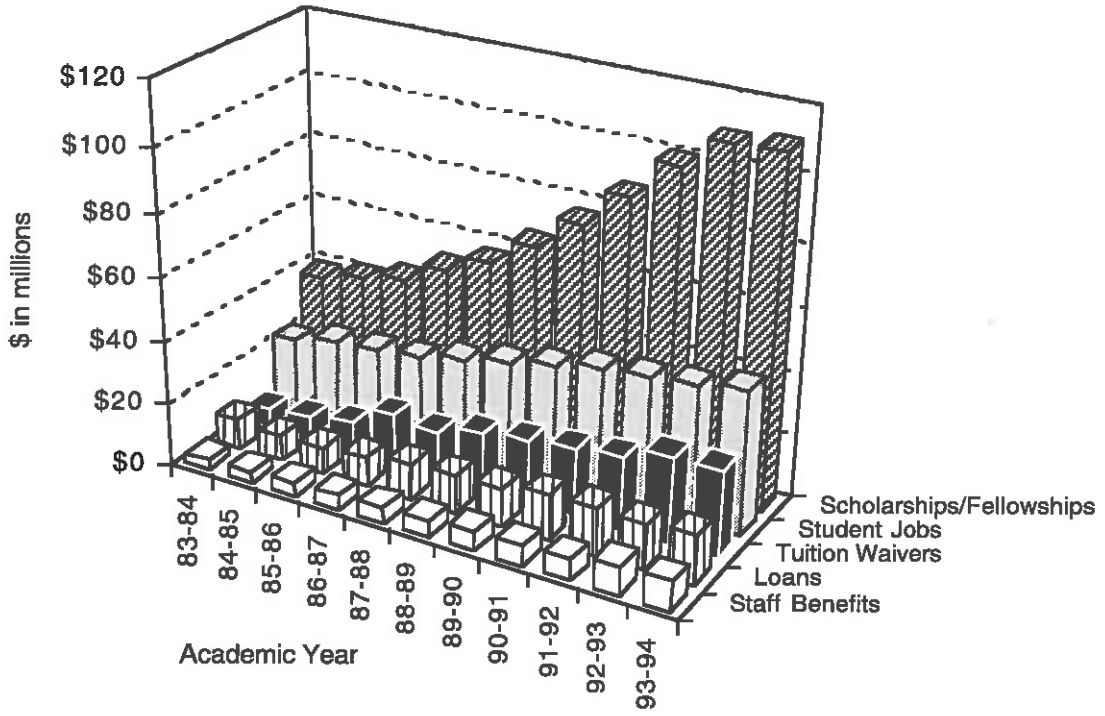


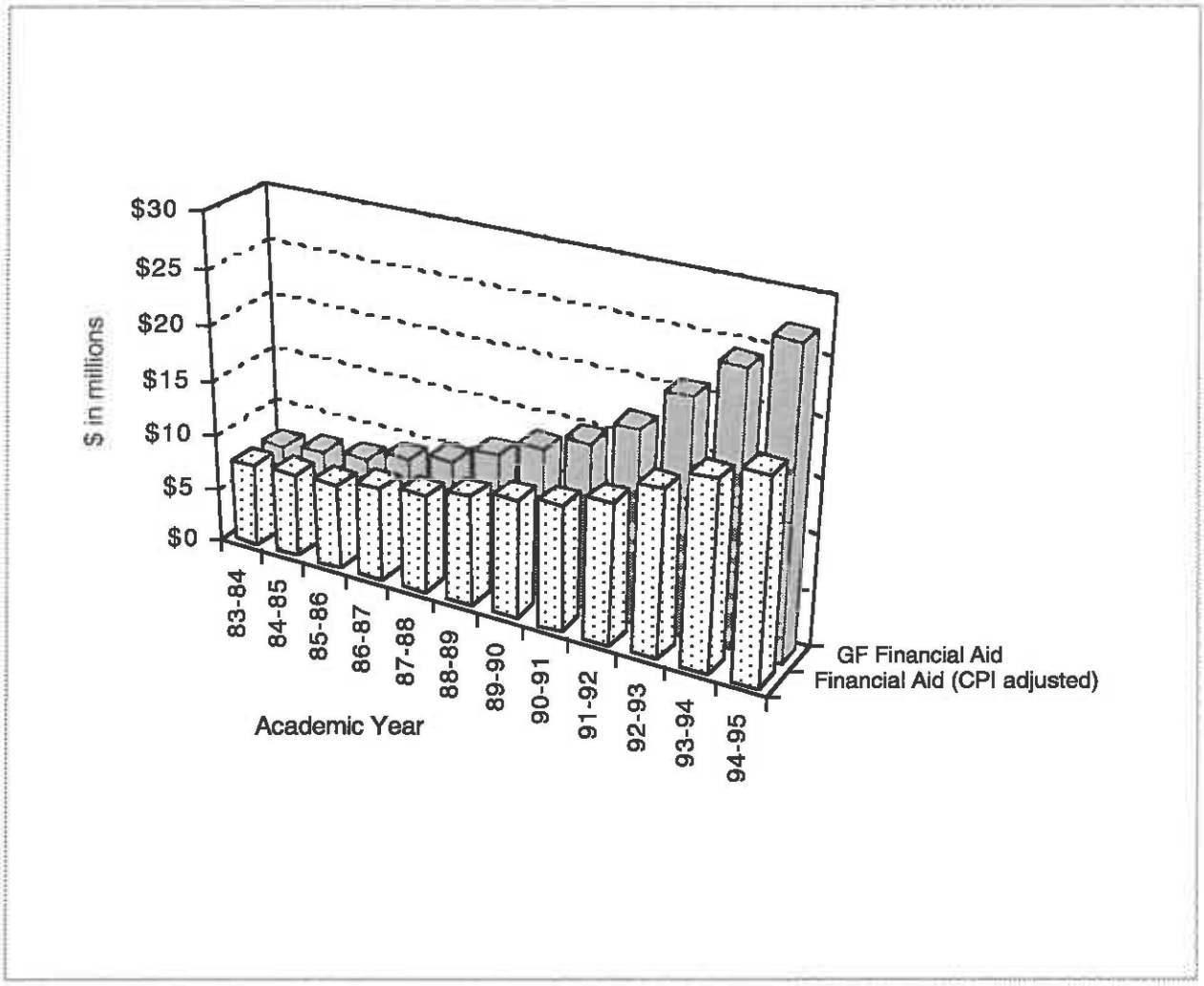
Figure 2-14 Components of Student Financial Aid



Change Since 87-88:

Scholarships	+93%
Student jobs	+43%
Tuition waivers	+87%
Loans	+36%
Staff Benefits	+94%
TOTAL	+74%

Figure 2-15 General Fund Undergraduate Financial Aid Support



Change Since 1987:

Undergrad GF Financial Aid	+165%
Undergrad GF Financial Aid (CPI adjusted)	+103%

Figure 2-16

Selectivity: The Percentage of Applicants Who Are Admitted by Residency Status

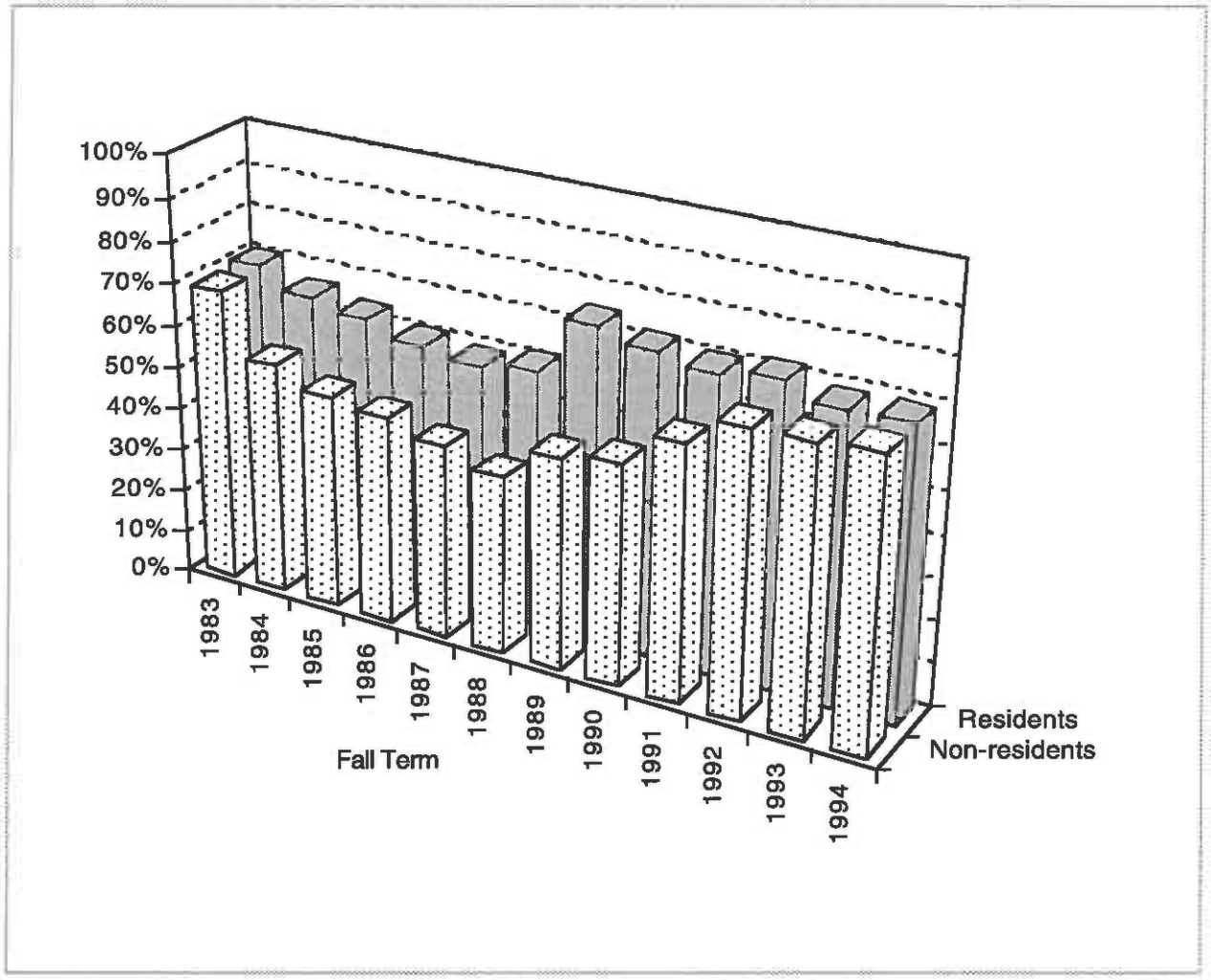


Figure 2-17

Yield: The Percentage of Admitted Freshmen Who Enroll by Residency Status

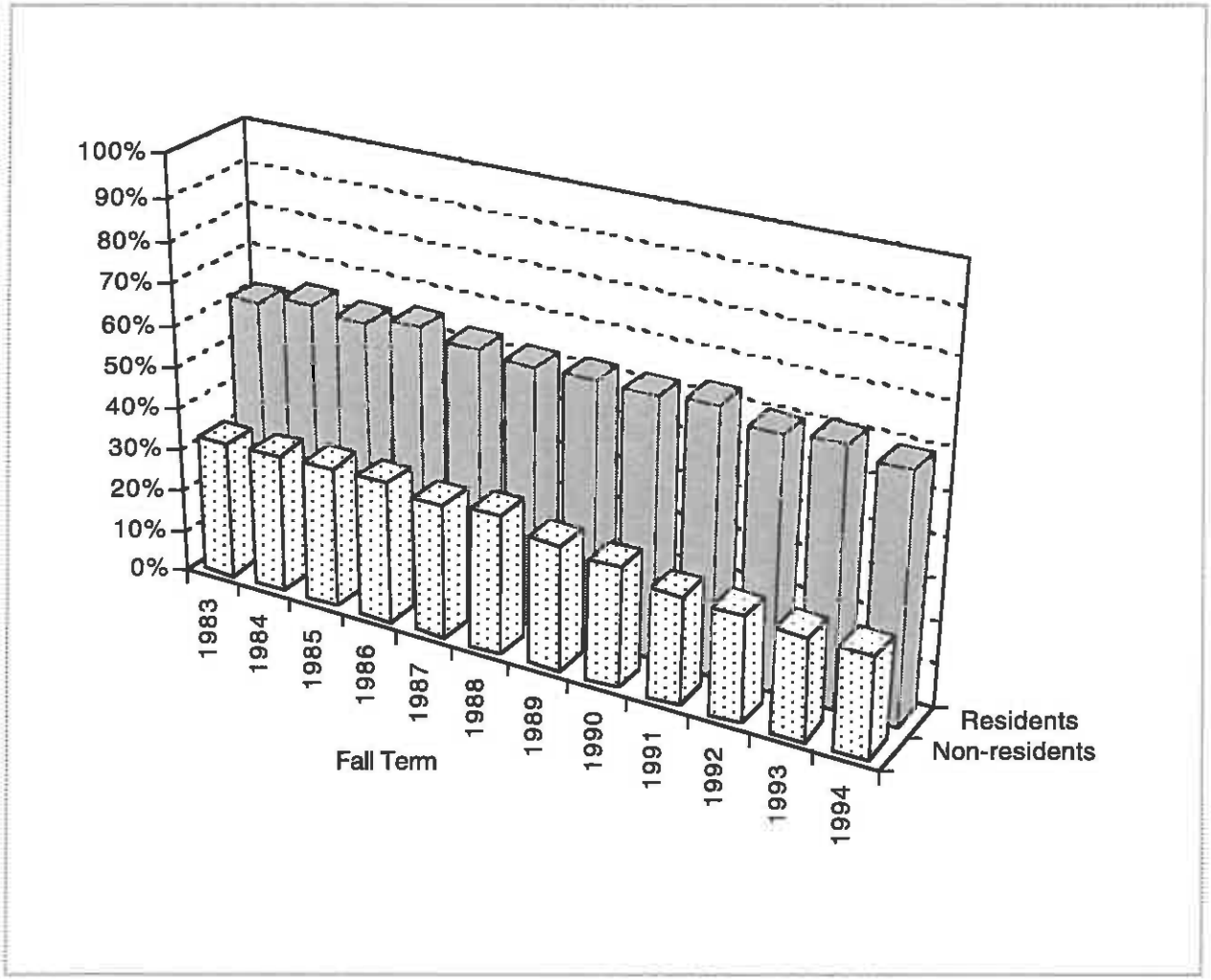


Figure 2-18

The Percentage of Admitted Freshmen Who Enroll by Family Income, Fall 1992

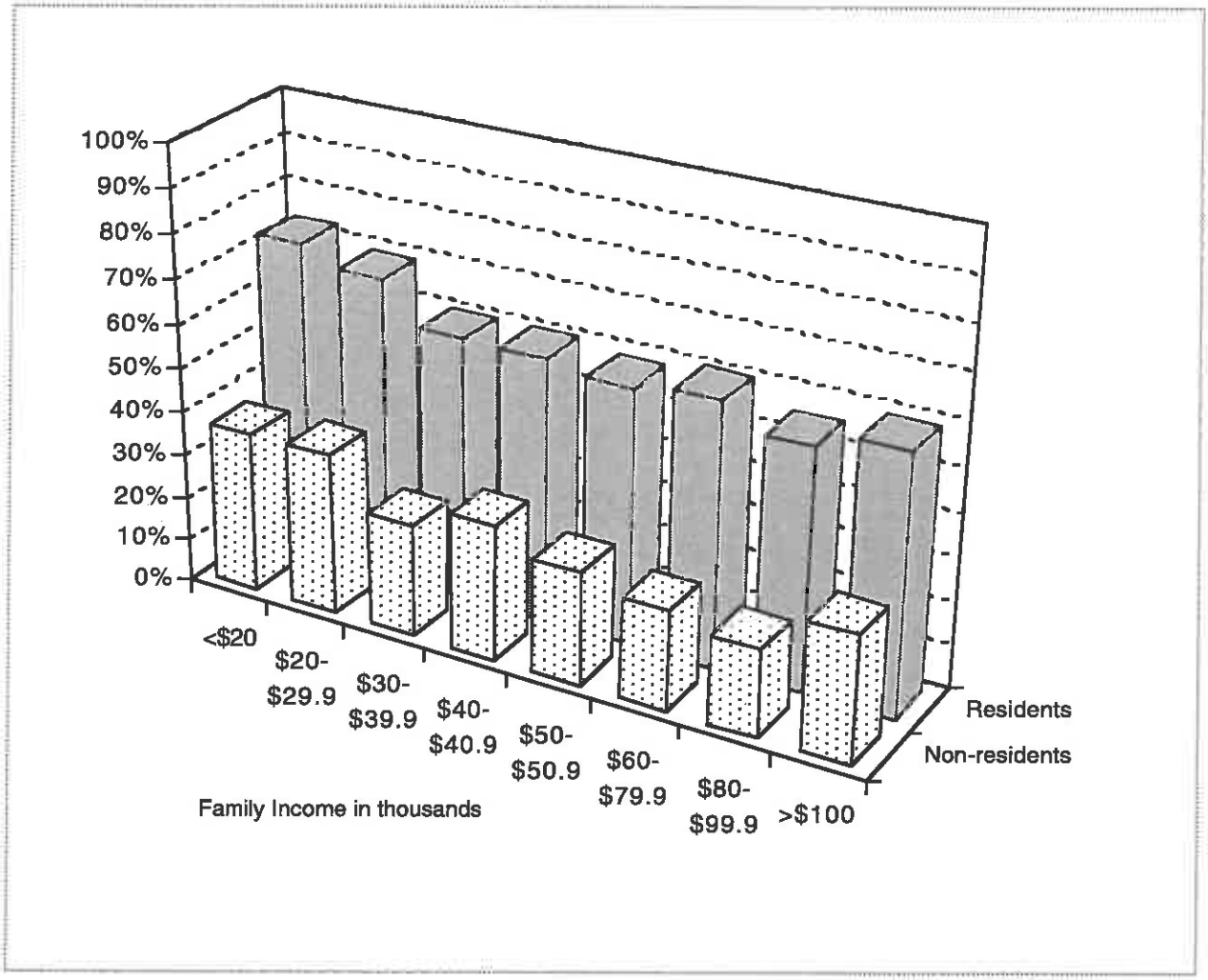


Figure 2-19 The Percentage of Admitted Freshmen Who Enroll by Family Income for Michigan Residents, Fall 1992

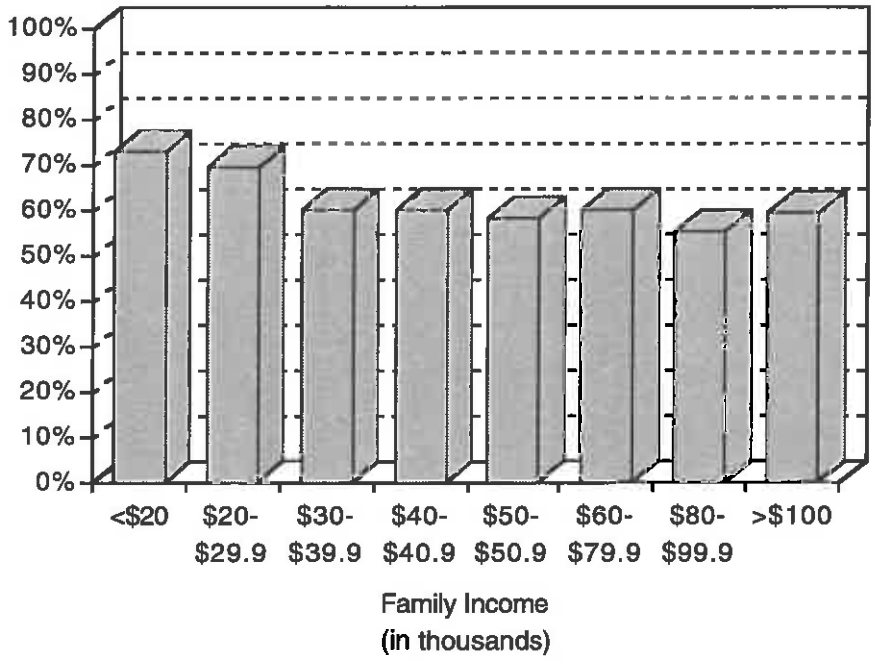


Figure 2-20

The Percentage of Admitted Freshmen Who Enroll by Family Income for Non-residents, Fall 1992

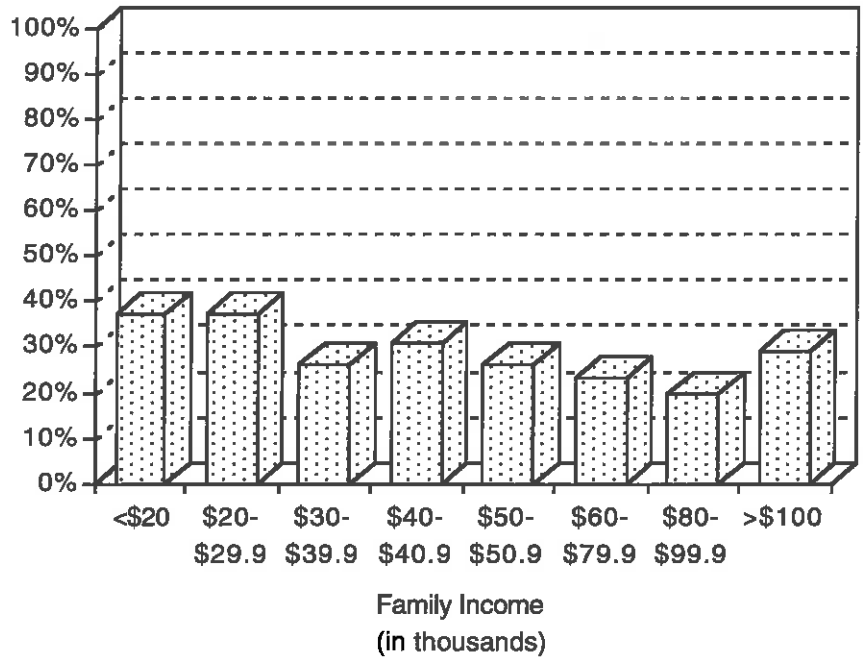


Figure 2-21 Median SAT Scores of Freshman Cohort

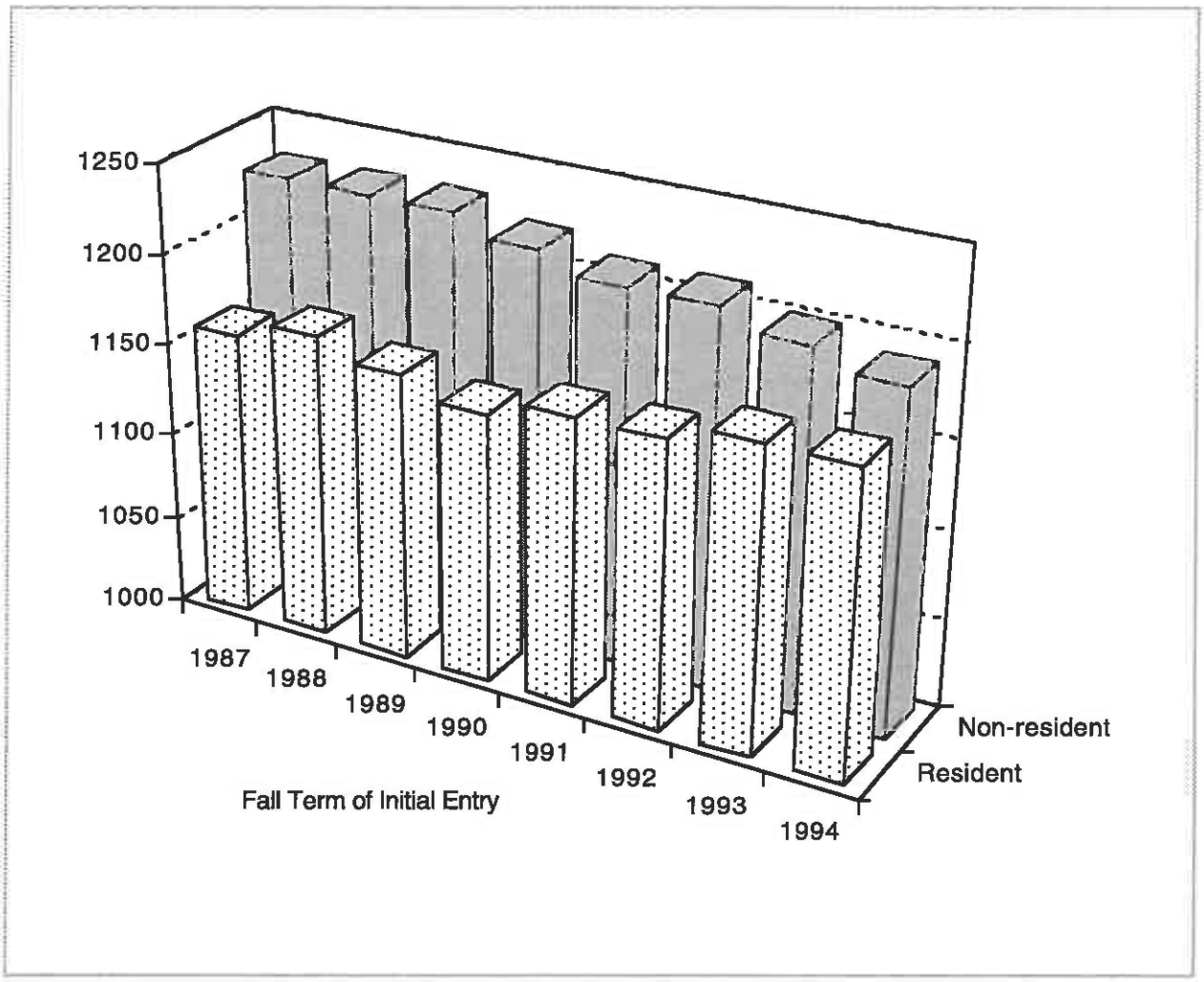


Figure 2-22

Retention of Freshman Cohorts Two Years after Initial Entry by Residency Status

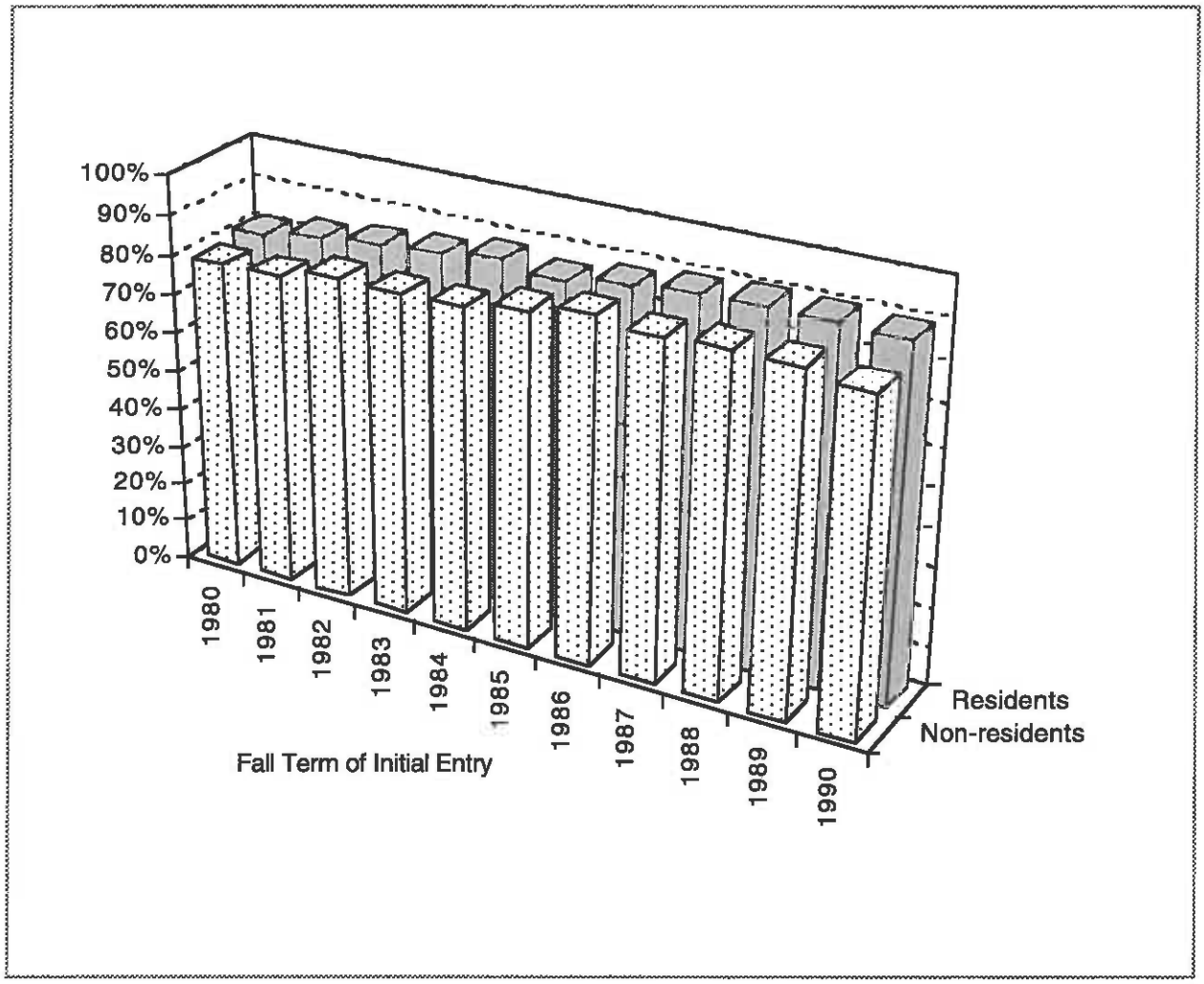


Figure 2-23 Graduation of Freshman Cohorts Four Years after Initial Entry by Residency Status

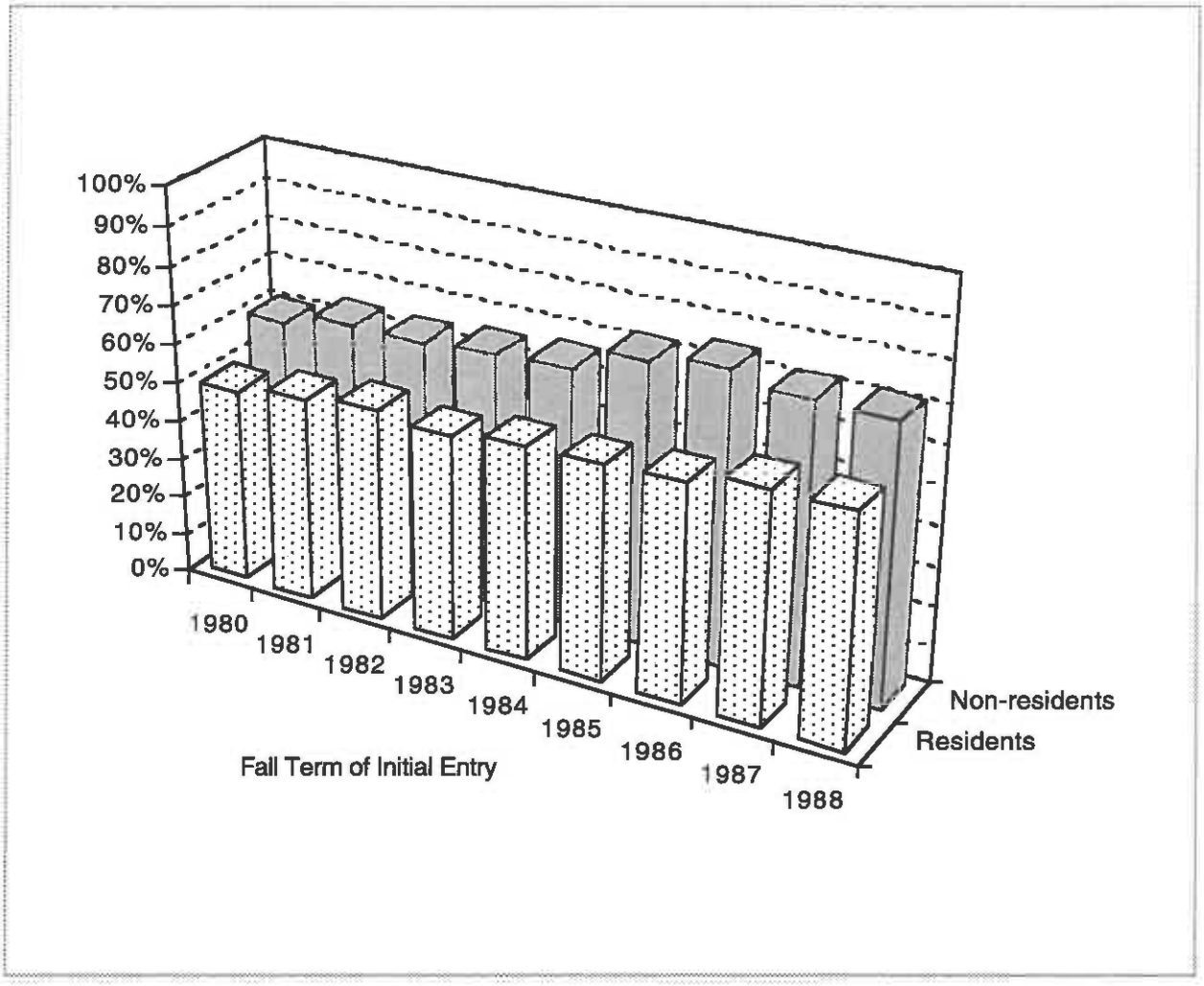
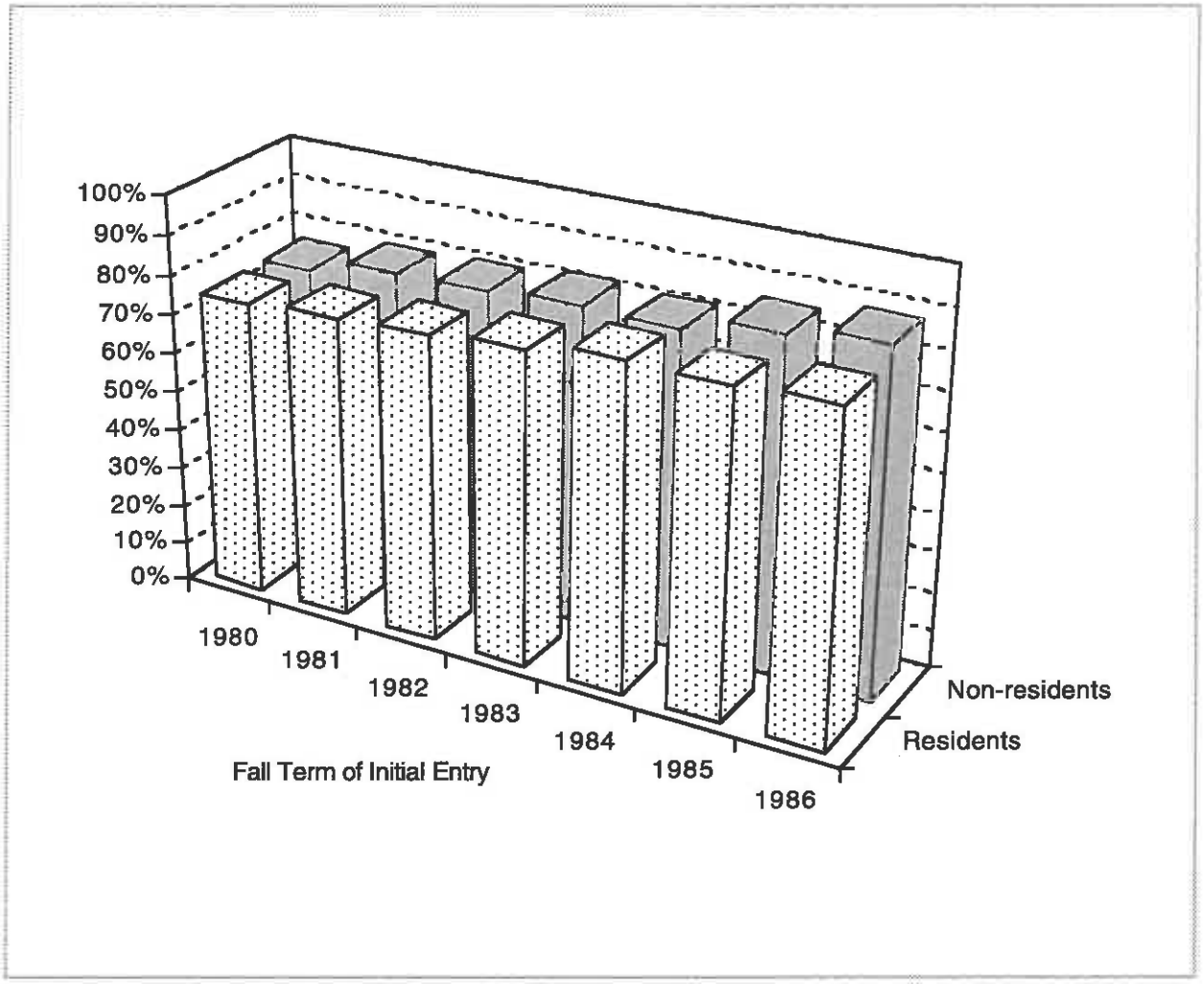


Figure 2-24

Graduation of Freshman Cohorts Six Years after Initial Entry by Residency Status

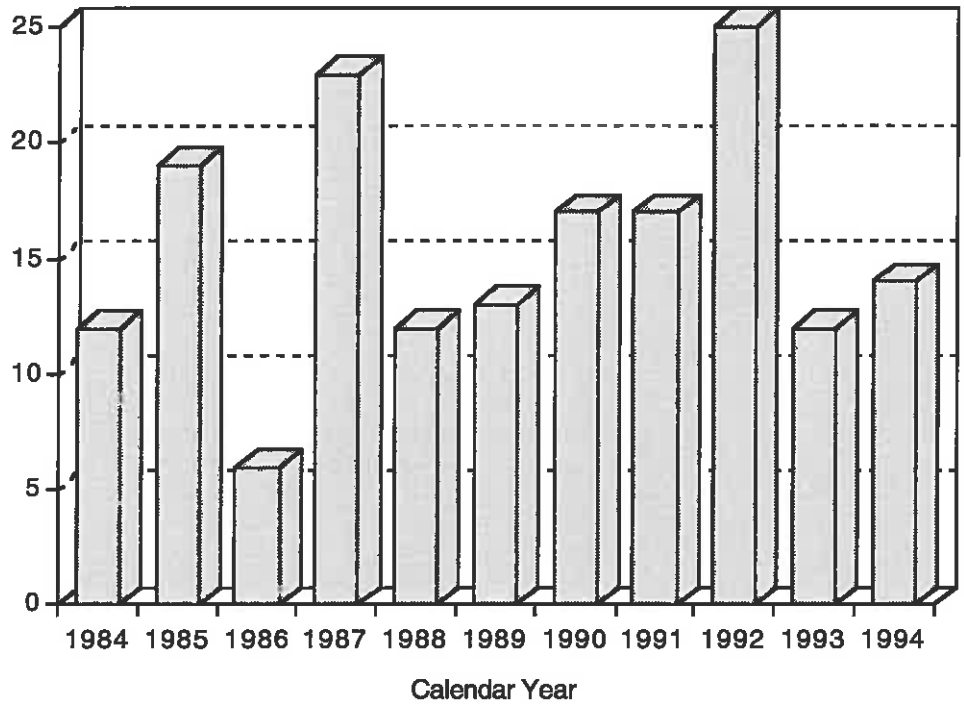


Goal

To build spires of excellence...to attract, nurture, and achieve the extraordinary

Figure 3-1

Number of Major National Honors Received by Faculty



Note: Honors include election to national academies, MacArthur Fellowships, Pulitzer Prizes, National Medals of Science or Technology, Guggenheim Fellowships, and Presidential Young Investigators/Presidential Faculty Fellows.

Figure 3-2

Number of Faculty Elected to the American Academy of Arts and Sciences

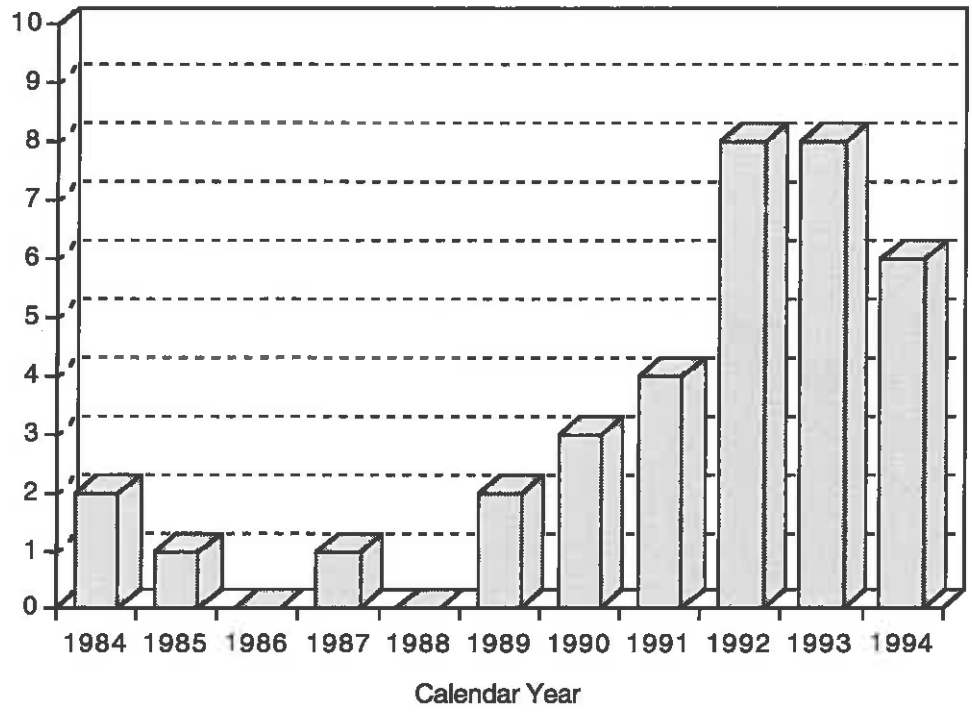


Figure 3-3

Number of Faculty Selected as Presidential Young Investigators/Presidential Faculty Fellows

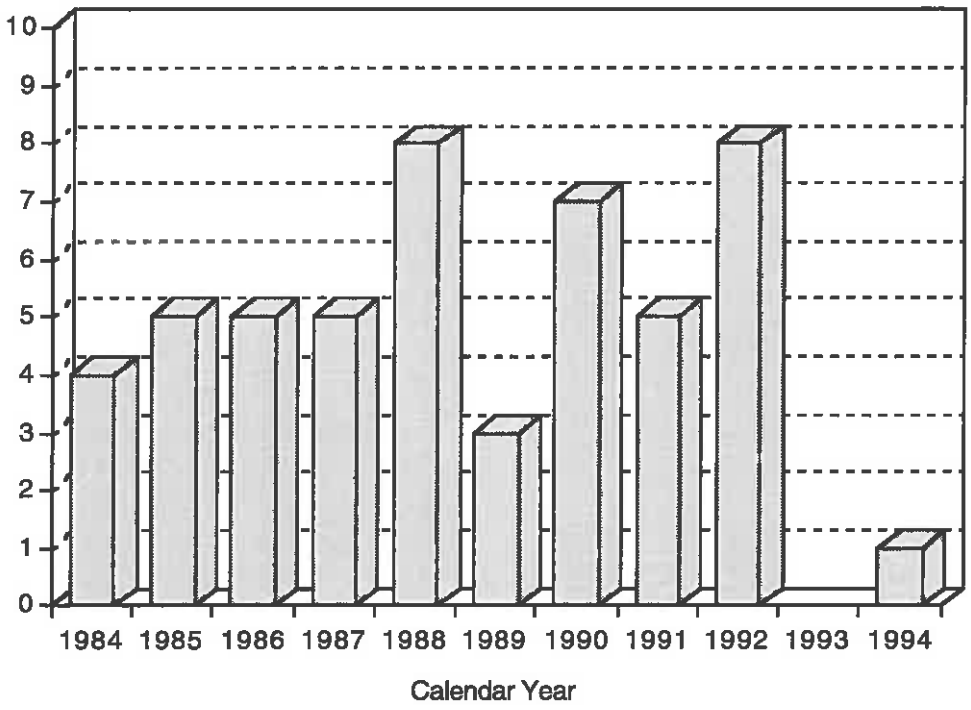


Figure 3-4 Number of Guggenheim Fellowships Won by Faculty

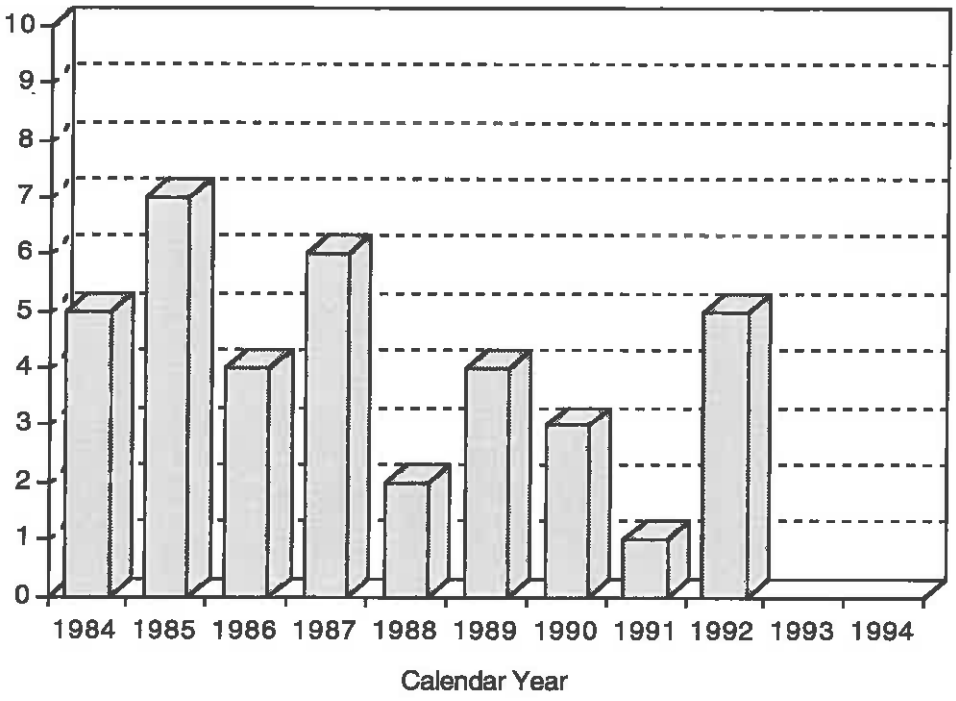


Figure 3-5 Number of Major Awards Won by Undergraduates

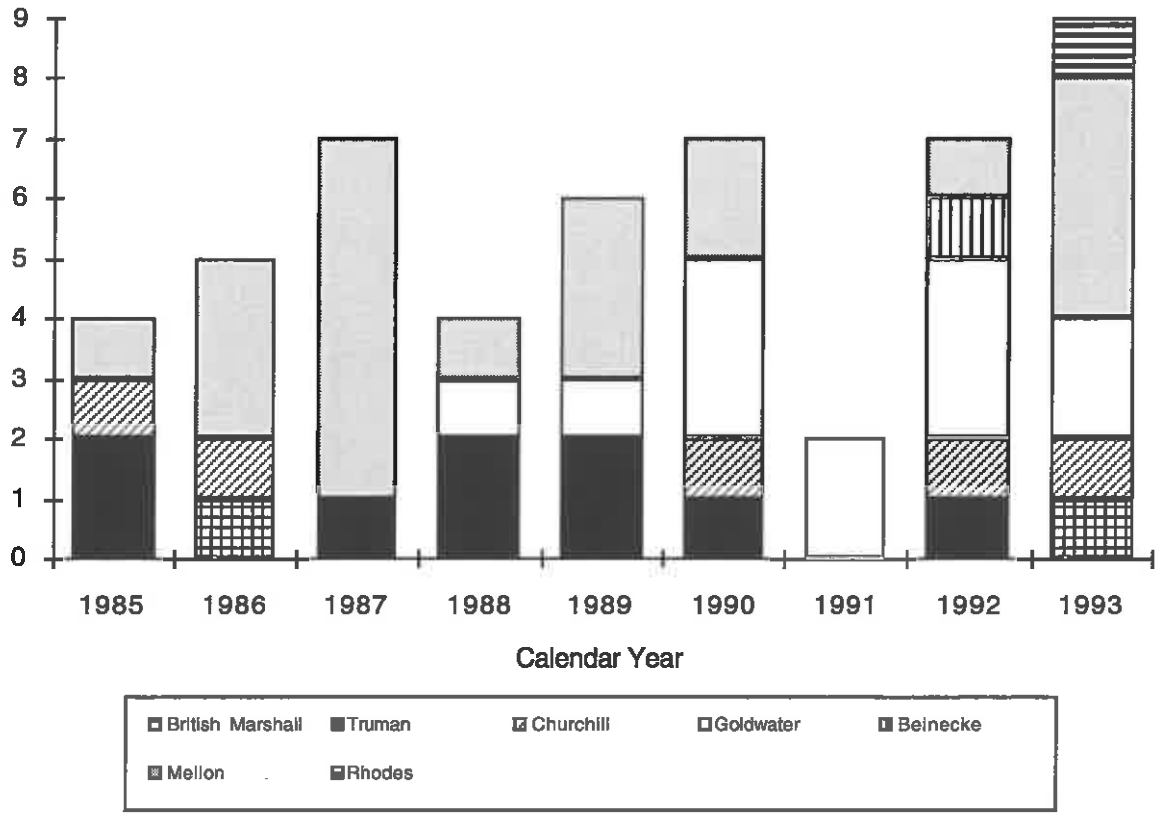


Figure 3-6 Number of Major Awards Won by Graduate Students

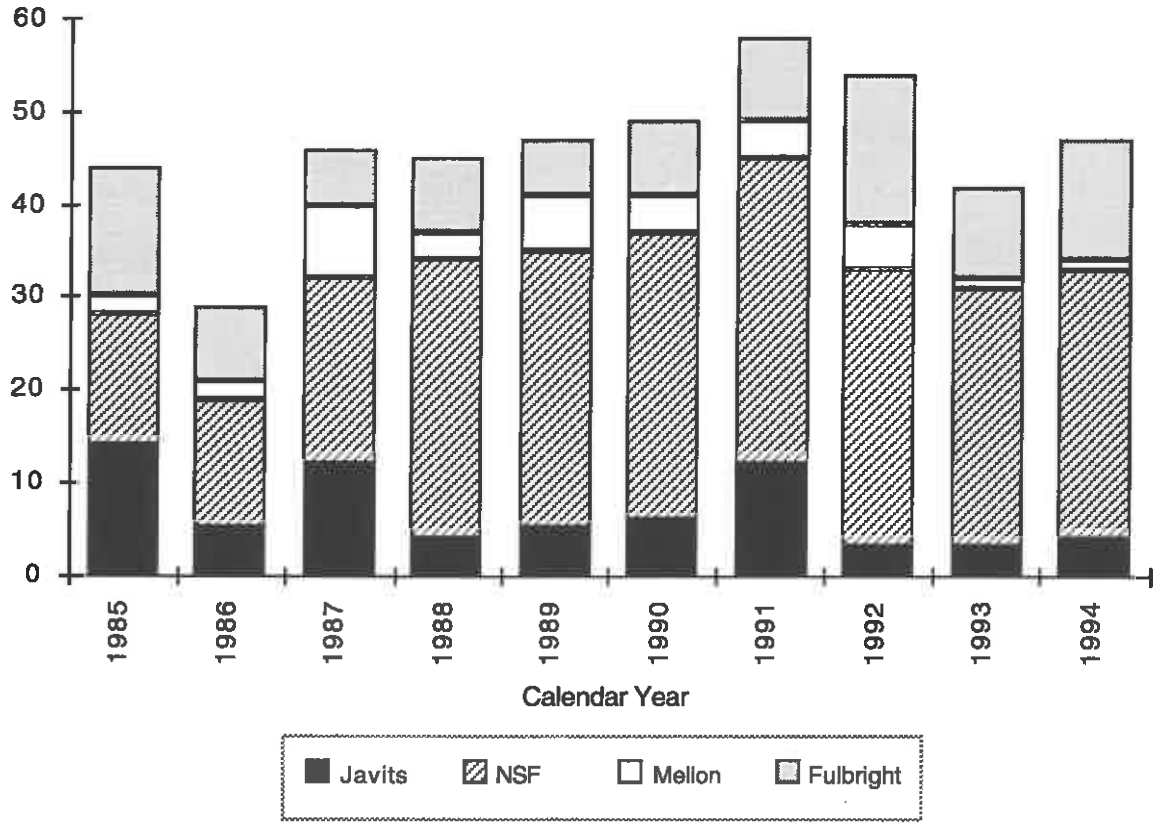


Figure 3-7

Average Compensation of Assistant Professors at UM-AA and Peer Public Universities

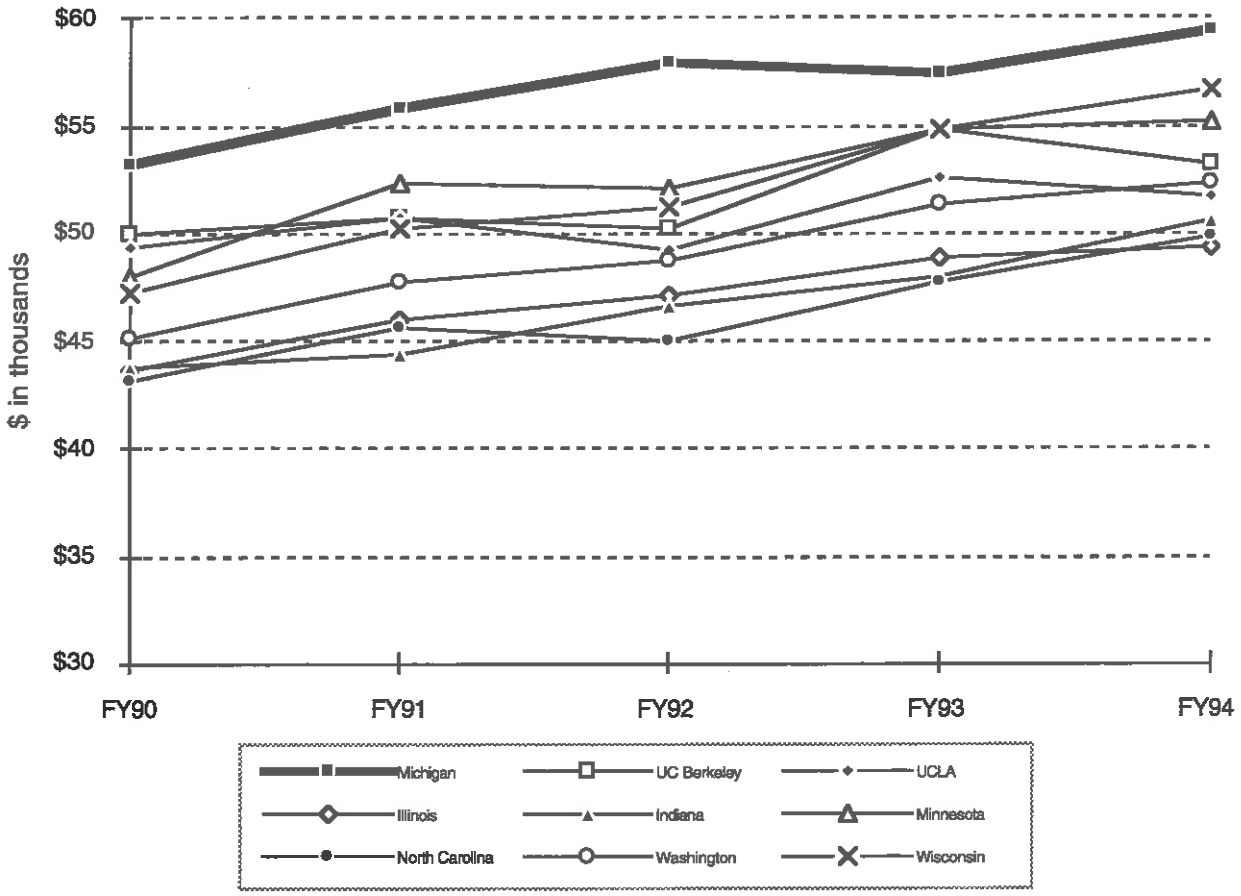


Figure 3-8

Average Compensation of Assistant Professors at UM-AA and Peer Private Universities

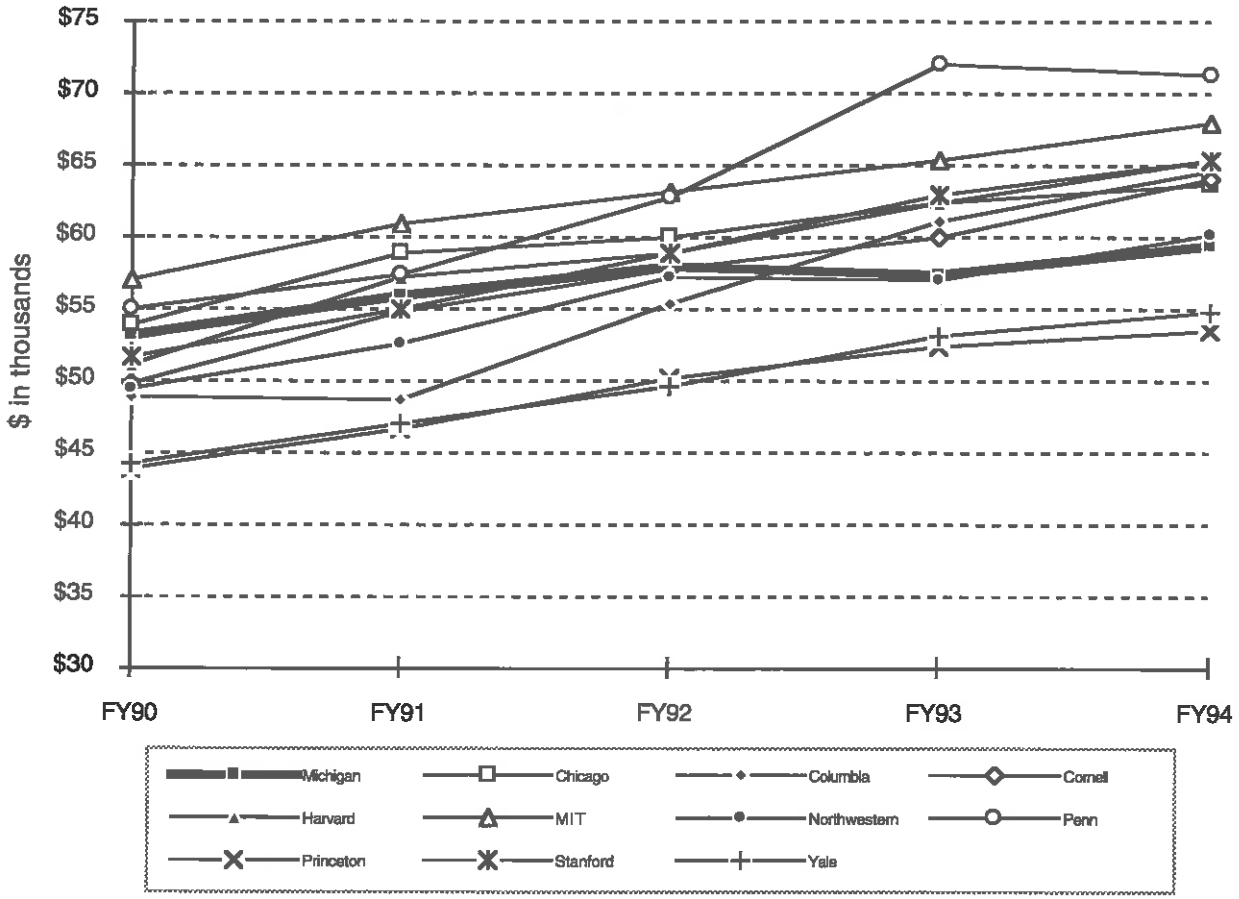


Figure 3-9

Average Compensation of Associate Professors at UM-AA and Peer Public Universities

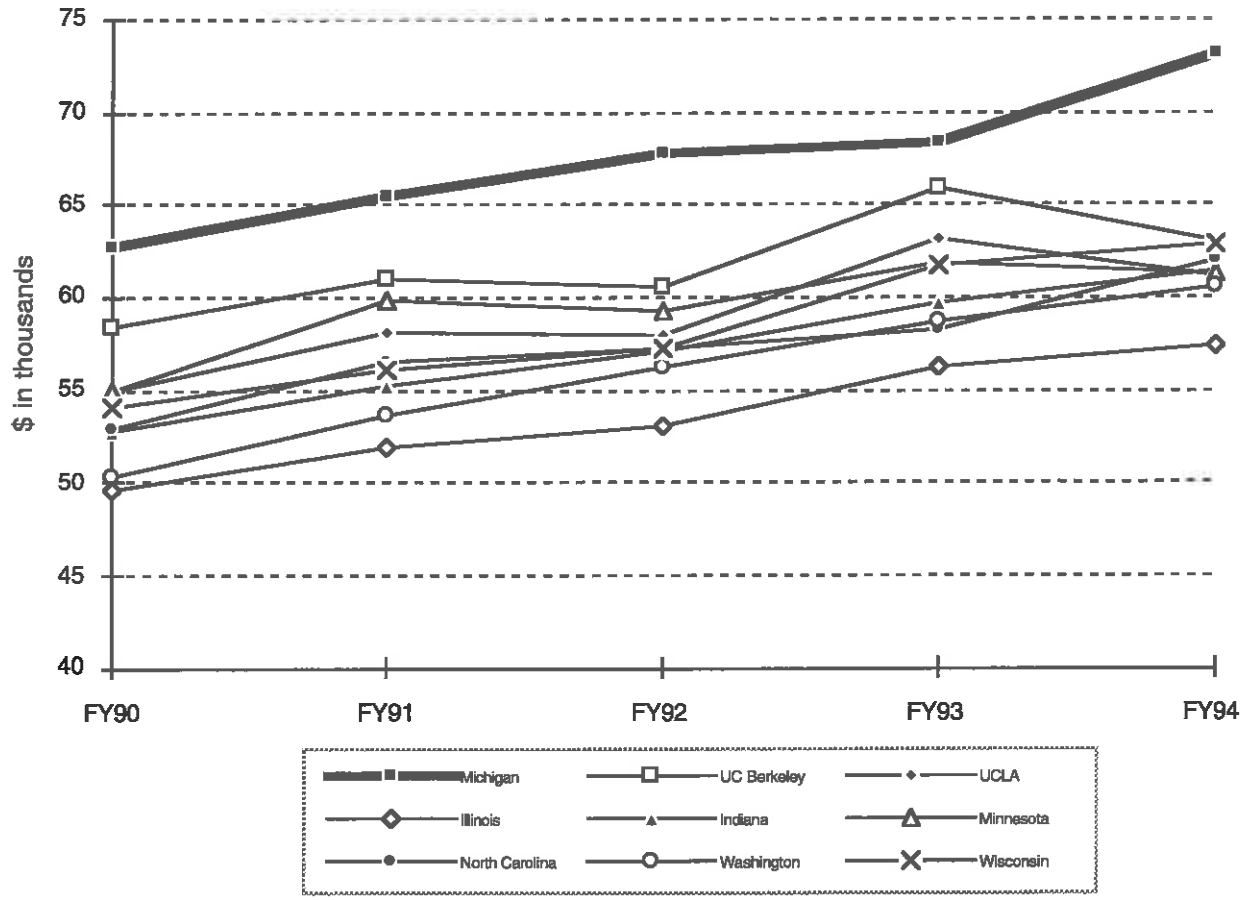


Figure 3-10

Average Compensation of Associate Professors at UM-AA and Peer Private Universities

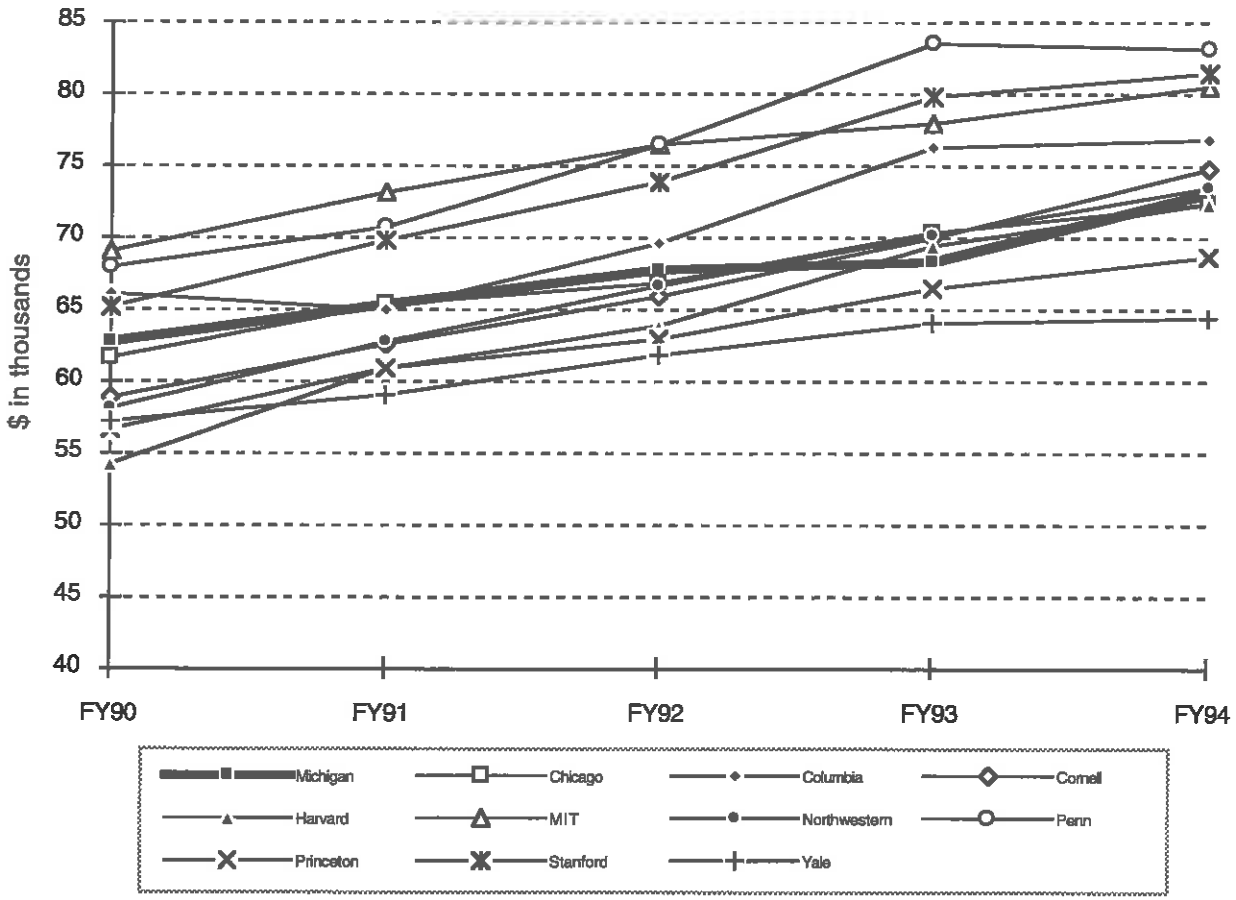


Figure 3-11

Average Compensation of Professors at UM-AA and Peer Public Universities

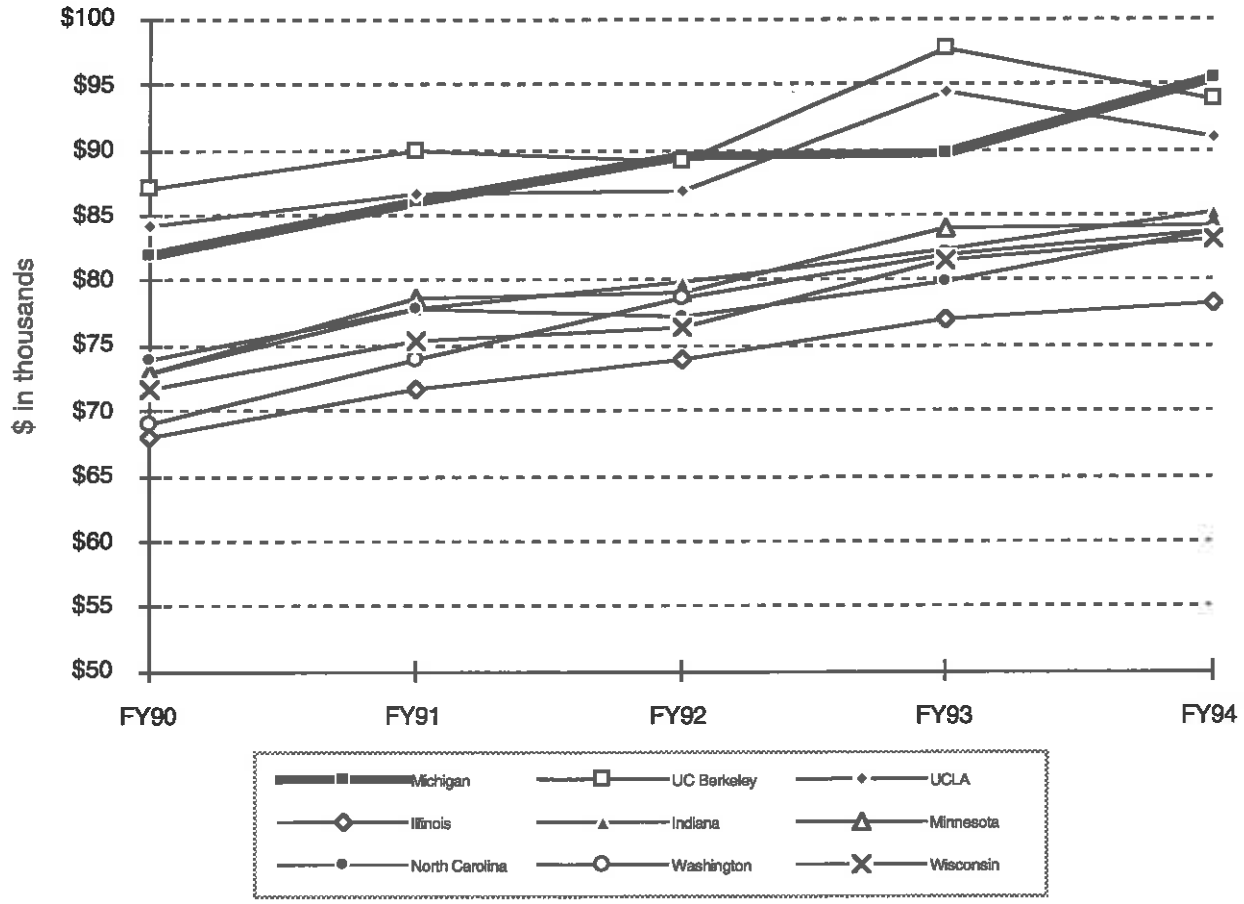
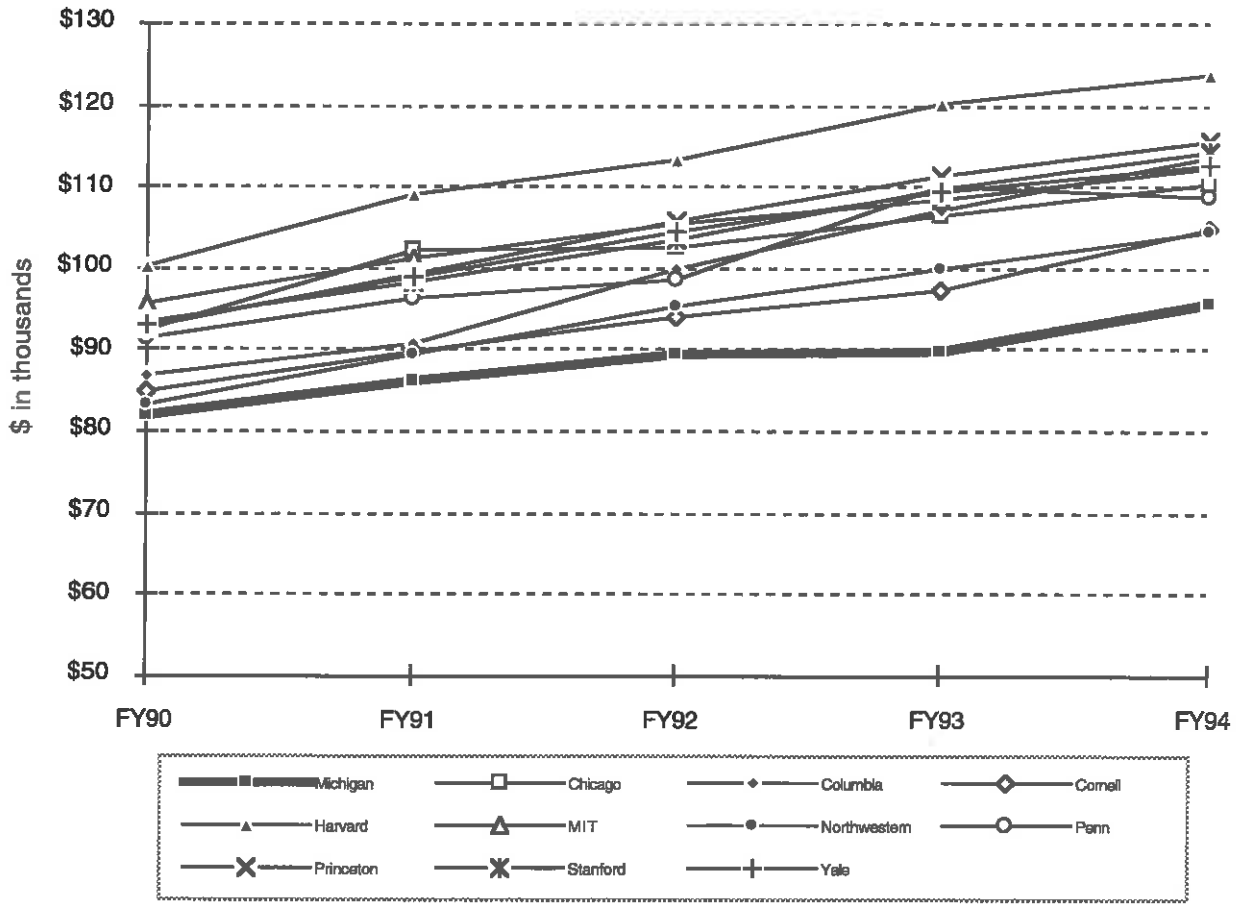


Figure 3-12

Average Compensation of Professors at UM-AA and Peer Private Universities



Graduate Programs Ranked in the Top Five Nationally

1982-83	Anthropology
	Classical Studies
	History
	Political Science
	Psychology
	Sociology
1985-86	Information and Library Studies
1986-87	Law
1987-88	Aerospace Engineering
	Anthropology
	Classical Studies
	Comparative Literature
	Dentistry
	Forestry
	History
	Industrial Engineering
	Law
	Information and Library Studies
	Nuclear Engineering
	Nursing
	Political Science
	Pharmacy
	Psychology
	Public Health

	Slavic Languages
	Social Work
	Sociology
1989-90	Aerospace Engineering
	Electrical Engineering
	Industrial Engineering
	Law
	Nuclear Engineering
1990-91	Aerospace Engineering
	Electrical Engineering
	Industrial Engineering
	Law
	Nuclear Engineering
1991-92	Aerospace Engineering
	Business
	Electrical Engineering
	Industrial Engineering
	Law
	Nuclear Engineering
	Political Science
	Sociology
1992-93	Aerospace Engineering
	Anthropology
	Classical Studies
	Comparative Literature
	Dentistry

	Forestry
	History
	Industrial Engineering
	Law
	Information and Library Studies
	Mechanical Engineering
	Nuclear Engineering
	Nursing
	Pharmacy
	Political Science
	Psychology
	Public Health
	Social Work
	Sociology
1993-94	Chemical Engineering
	Electrical Engineering
	Environmental Engineering
	Industrial Engineering
	Nuclear Engineering
	Law
	Nursing
	Public Health
	Social Work

Faculty Awards: MacArthur Fellows

1985	Gregory Schoepen
1987	Richard Wrangham
	Robert Axelrod
1988	Ruth Behar
1989	Sherry Ortner
	Rebecca Scott
	Thomas Holt
1991	Alice Fulton
1992	Ann Ellis Hanson
	John Holland
1993	Henry Wright
	Stephen Lee

Faculty Awards: National Academy of Sciences

1983	Minor Coon
1985	Kenneth Pike
	Warren Wagner
1987	Robert Axelrod
1989	Fred Gehring
	Harold Shapiro
1991	Mathew Alpern
1992	Melvin Hochster
1993	Francis Collins
1994	Henry Wright

Faculty Awards: National Academy of Engineering

1982	Emmett Leith
1984	Robert Hanson
1985	Walter Weber
1987	Chen-To Tai
	James Duderstadt
1989	Lynn Conway
1991	Gerald Faeth
1992	William Brown
1993	Peter Banks
	Albert Schultz
1994	Donald B. Griffin
	Elmer G. Gilbert
	George I. Haddad

Faculty Awards: National Institute of Medicine

1984	Rhetaugh Dumas
1985	Stefan Fajans
	William Kelley
1986	June Osborn
1987	Minor Coon
	Marshal Becker
1989	David Kuhl

1990	Peter Ward
1991	Francis Collins
	Bernard Agranoff
1993	Jack Dixon
1994	Huda Akil
	Stanley J. Watson, Jr.
	Tadataka Yamada

Faculty Awards: National Medal of Science or National Medal of Technology

1974	James Neal (Science)
1979	Emmett Leith (Science)
1980	Elizabeth Crosby (Science)
1983	Donald Katz (Technology)
1984	H. Richard Crane (Science)
1991	James Duderstadt (Technology)

Faculty Awards: Nobel Prize

1960	Donald Glaser
1980	Lawrence Klein
1985	Jerome Karle
1987	Joseph Brodsky

Faculty Awards: Pulitzer Prize

1966	Leslie Bassett
1988	William Bolcom

Faculty Awards: American Academy of Arts and Sciences

1933	Hans Kurath
1945	J. Lawrence Oncley
1952	Halvor N. Christensen
1969	Philip Converse
	Ross L. Finney
1970	William K. Frankena
1971	H. Richard Crane
	James V. Neel
1974	Richard D. Alexander
	Horace W. Davenport
	Ronald Freedman
	Theodore M. Newcomb
1975	Francis A. Allen
	John W. Atkinson
	Richard B. Brandt
	Charles Tilly
1976	R. Arnheim
1977	Dorwin P. Cartwright
	Clyde H. Coombs

	Samuel J. Eldersveld
	Stanley M. Garn
	Warren Miller
	John R. Platt
	Edward G. Seidensticker
1978	Robben W. Fleming
1979	D.R. Shackleton Bailey
	Sylvia L. Thrupp
1980	Albert Feuerwerker
	George Katona
	Chester G. Starr
	Robert B. Zajonc
1981	Elizabeth L. Eisenstein
1982	William Hamilton
	Charles E. Trinkaus, Jr.
1984	Minor J. Coon
	James N. Morgan
1985	Robert M. Axelrod
1987	Terrance Sandalow
1989	Frederick Gehring
	Daniel Katz
1990	Allan F. Gibbard
	Harold K. Jacobson
	Warren H. Wagner
1991	Robert L. Kahn
	John Kingdon

	Roy Rappaport
	Harold W. Stevenson
1992	Lee Bollinger
	John H. D'Arms
	Phoebe Ellsworth
	W. Reynolds Farley
	Melvin Hochster
	Richard Nisbett
	Sherry Ortner
	James Boyd White
	Leslie Kish
1993	James J. Duderstadt
	Bruce Frier
	Donald Kinder
	Ludwig Koenen
	Richard Lempert
	Howard Schuman
	Alfred Simpson
	Barbara Smuts
1994	June Osborn
	Hazel Markus
	Edward E. Smith
	Mayer Zald
	Arlene Saxonhouse
	Leonard Barkan

Goal To achieve more "firsts" for the University

UM Firsts

1983	Computer Aided Engineering Network (CAEN-most sophisticated computer network in any university)
1986	Transplant Policy Center (J. Turcotte)
	UM's School of Information and Library Science ranked first
1987	Information technology campus-wide networking
1988	Entrepreneurial Environment
	Continued decentralization of control of discretionary resources (Rackham, Vice President for Research, Vice President for Student Services, Schools and Colleges)
	Research Incentives Program (Returning 5% of Indirect Cost Recovery directly to Principal Investigators)
	Modification of Intellectual Properties Policies (Allowing ownership by inventor)
	Return of Indirect Cost Recovery on Graduate Student Research Assistant tuition to units
	Indexing of Indirect Cost Recovery Department Research Administration
1989	Cystic fibrosis gene defect found (F. Collins)
	Mammastatin discovered (M. Wicha)
	Development of positron microscope (A. Rich)
	UM becomes first university to win both a Rose Bowl and a NCAA Basketball Championship
1990	Discovery of hind limbs on 40 million year-old whales (P. Gingerich)
	Neurofibromatosis gene defect found (F. Collins)
	UM Sunrunner wins Sunrayce USA-1990
	UM Medical Center ranks as largest in nation
	NSF establishes National Science and Technology in Ultrafast Optics at Michigan
1991	UM library becomes one of first major research libraries in the nation to have its entire public card catalog on-line (6 million volumes listed)
	The EPA selects UM for two national centers, one to lead the country's first environmental education consortium, and the other to manage the new National Pollution Prevention Center
	UM Business School joins with European counterparts in Brussels to inaugurate the Global Business Partnership

Fran Blouin, director of the Bentley Library, initiates the first scholarly exchange program between an American university and the new Russian State University for the Humanities

UM receives a $30 million gift to found the William Davidson Institute, to assist nations in making transitions from command- to free-market economies

UM Engineering students win national championship in Student Robotics Competition

UM becomes first university to exceed $1 million in United Way drive

JJD elected as chair of the National Science Board

1992 World's first clinical trials in using modified human genetic material to treat human disease (hypercholesterolemina and malignant melanoma)

Creation of the most powerful laser pulse to date (G. Mourou)

Francis Collins selected to head Human Genome Project

First in externally funded research and development expenditures

Department of Political Science ranked first

Law School ranked first

1993 Rated first overall in men's athletics by USA Today

Department of Anthropology ranked number one

Department of Health Services Administration ranked first

First public university to undertake a $1 billion campaign

First in externally funded research and development expenditures

Researchers at the UM create a new target-specific cancer treatment using radioactive antibodies to attack lymphoma cancer cells

Researchers in the Department of Human Genetics are the first to use gene therapy to cure Duchenne muscular dystrophy (DMD) in mice. DMD is the most common form of the disease

UM researchers successfully performed the first gene therapy using direct transfer of modified human genetic material

UM physicists are among the scientists who announced evidence for the possible discovery of the top quark, the last of six types of quarks to be discovered. Quarks are the subatomic particles that comprise the nuclei of atoms

Philip Gingerich, UM paleontologist, along with researchers from Pakistan, discovered fossils of a 46-million-year-old whale that walked on four legs on land but swam with the undulating tail mostion of a modern whale. The discovery provides important information about the structural and behavioral changes that occurred 40 to 50 million years ago as whales made the transition from land-dwelling to ocean-dwelling mammals

Dr. Ruth Decker, a UM surgeon, developed a breakthrough in the treatment and cure of thyroid cancer. The simple blood test identifies the gene responsible for medullary thyroid cancer and allows doctors to remove the thyroid before the cancer appears

UM, through its new Center for High-Definitions Display Technologies is one of the nation's leading research institutions in computer screen technologies.

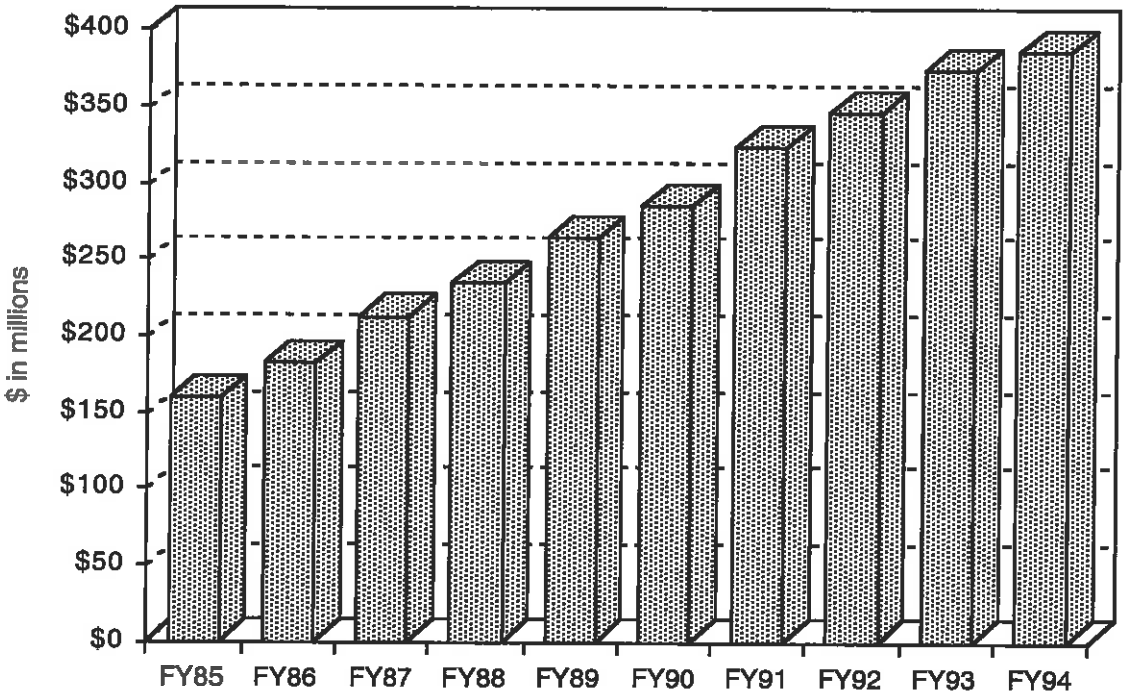
The UM is the leading source of academic research on the environmental justice movement.

Goal To become the leading research university in America

Table 5-1 National Rankings of Research Universities By Volume of Research Activity FY92

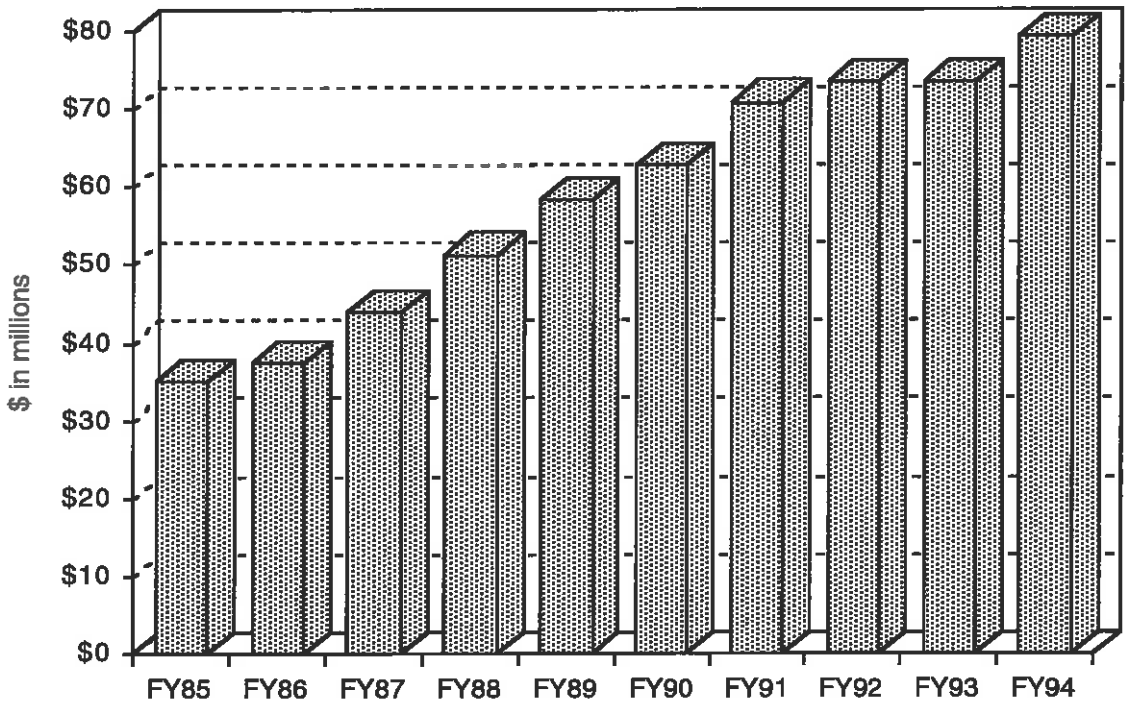
Rank	*Institution*	*Expenditures*
1	University of Michigan	$393,059,000
2	Stanford University	$367,980,000
3	University of Wisconsin-Madison	$352,706,000
4	Massachusetts Institute of Technology	$324,453,000
5	University of Minnesota	$317,026,000
6	University of Washington	$313,514,000
7	Texas A & M	$305,390,000
8	Cornell University	$299,342,000
9	University of California-San Francisco	$295,784,000
10	University of California-Berkeley	$284,545,000
11	University of California-San Diego	$282,114,000
12	Pennsylvania State University	$278,305,000
13	Johns Hopkins University	$272,542,000
14	University of California-Los Angeles	$270,954,000
15	Harvard University	$253,126,000
16	University of Illinois-Urbana	$251,970,000
17	University of Texas at Austin	$228,545,000
18	University of Pennsylvania	$222,424,000
19	University of Arizona	$221,999,000
20	University of Maryland-College Park	$219,041,000

Figure 5-1 Growth in Research Expenditures



Change Since FY88: +65%

Figure 5-2 Growth in Indirect Cost Recovery



Change Since FY88: +55%

Figure 5-3 Changes in Indirect Cost Effective Rate

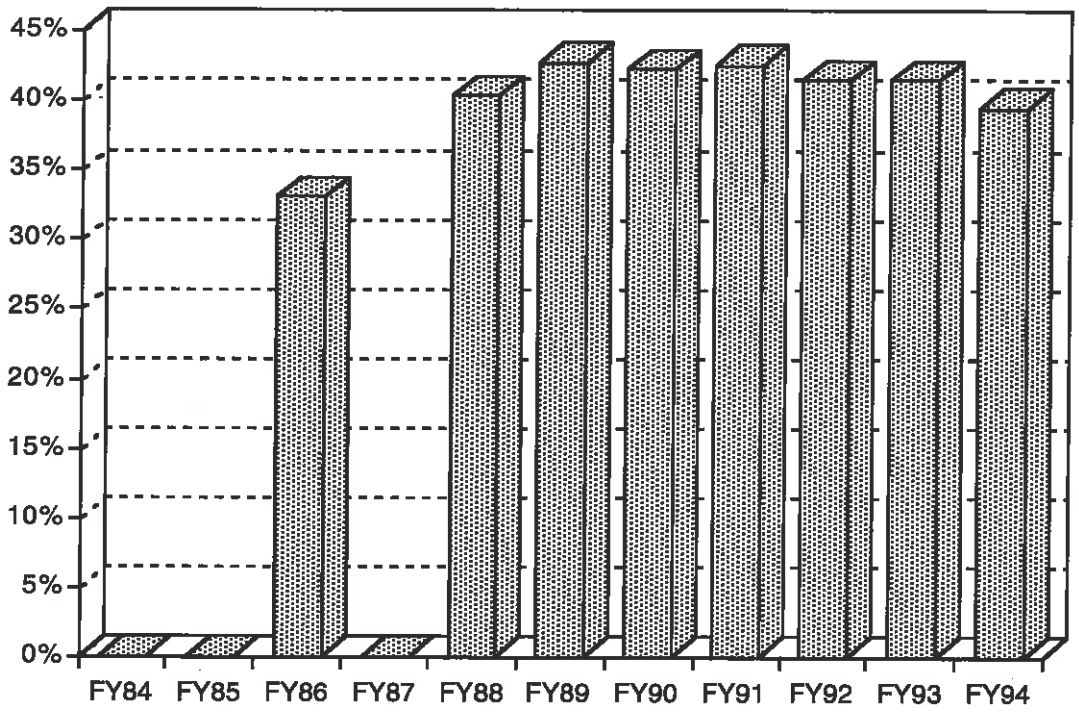


Figure 5-4 National Ranking in Research Activity

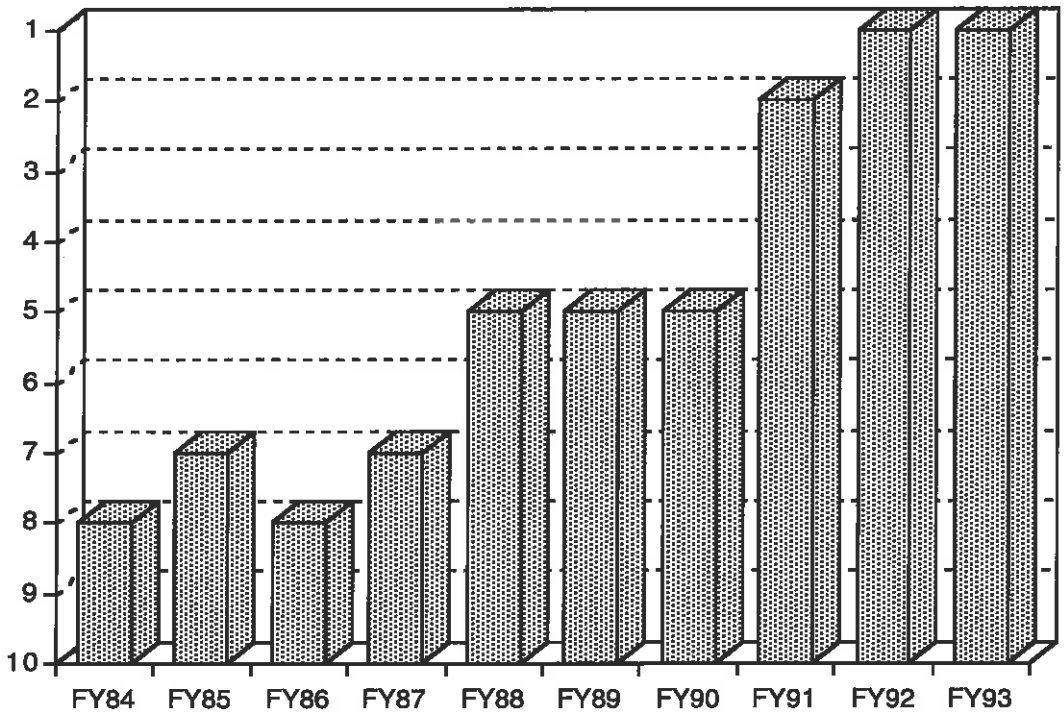


Figure 5-5

Trends in Research Expenditures: Medical School, Engineering, LS&A, and ISR

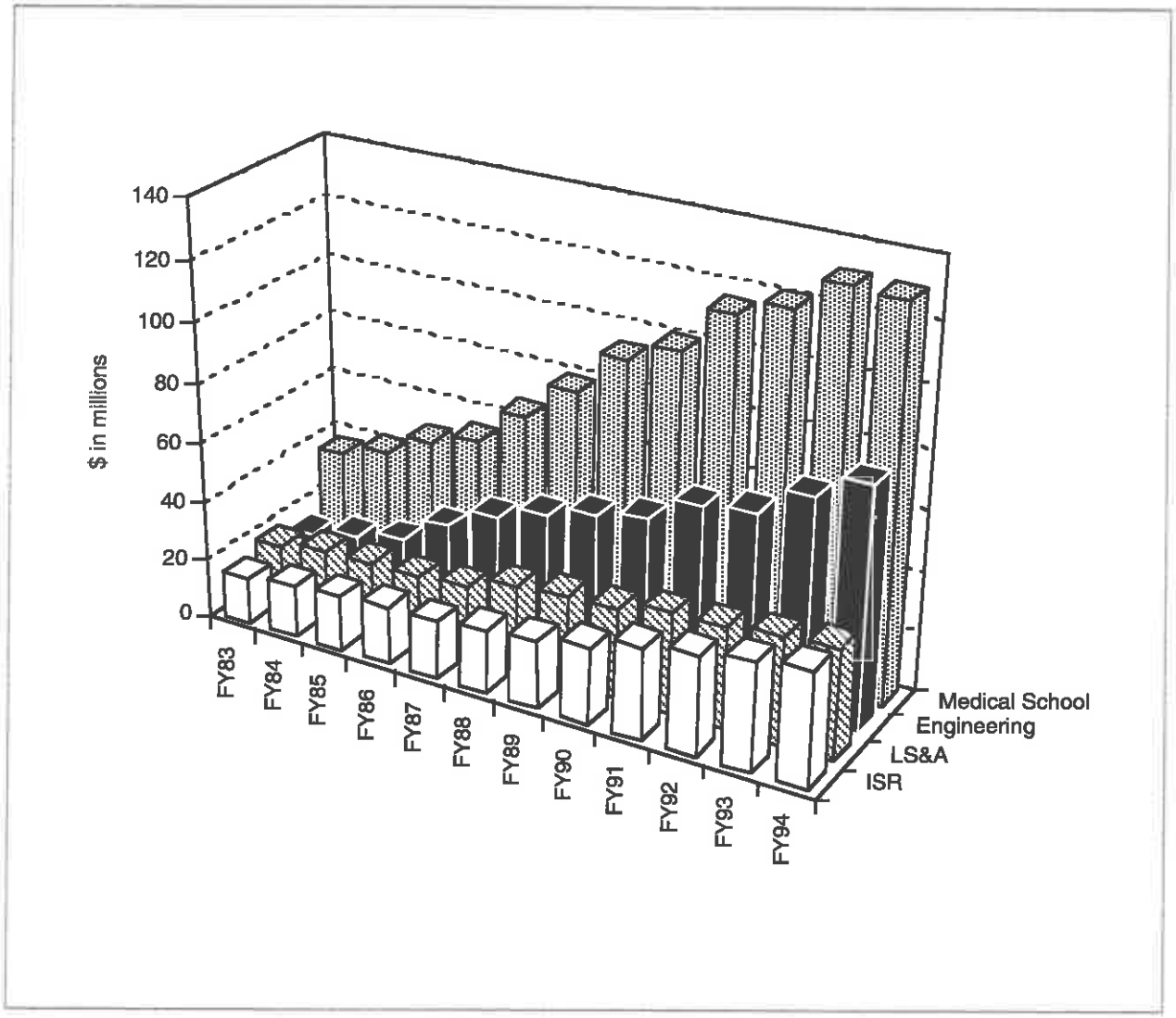


Figure 5-6

Trends in Research Expenditures: Public Health, Social Work, and Business Administration

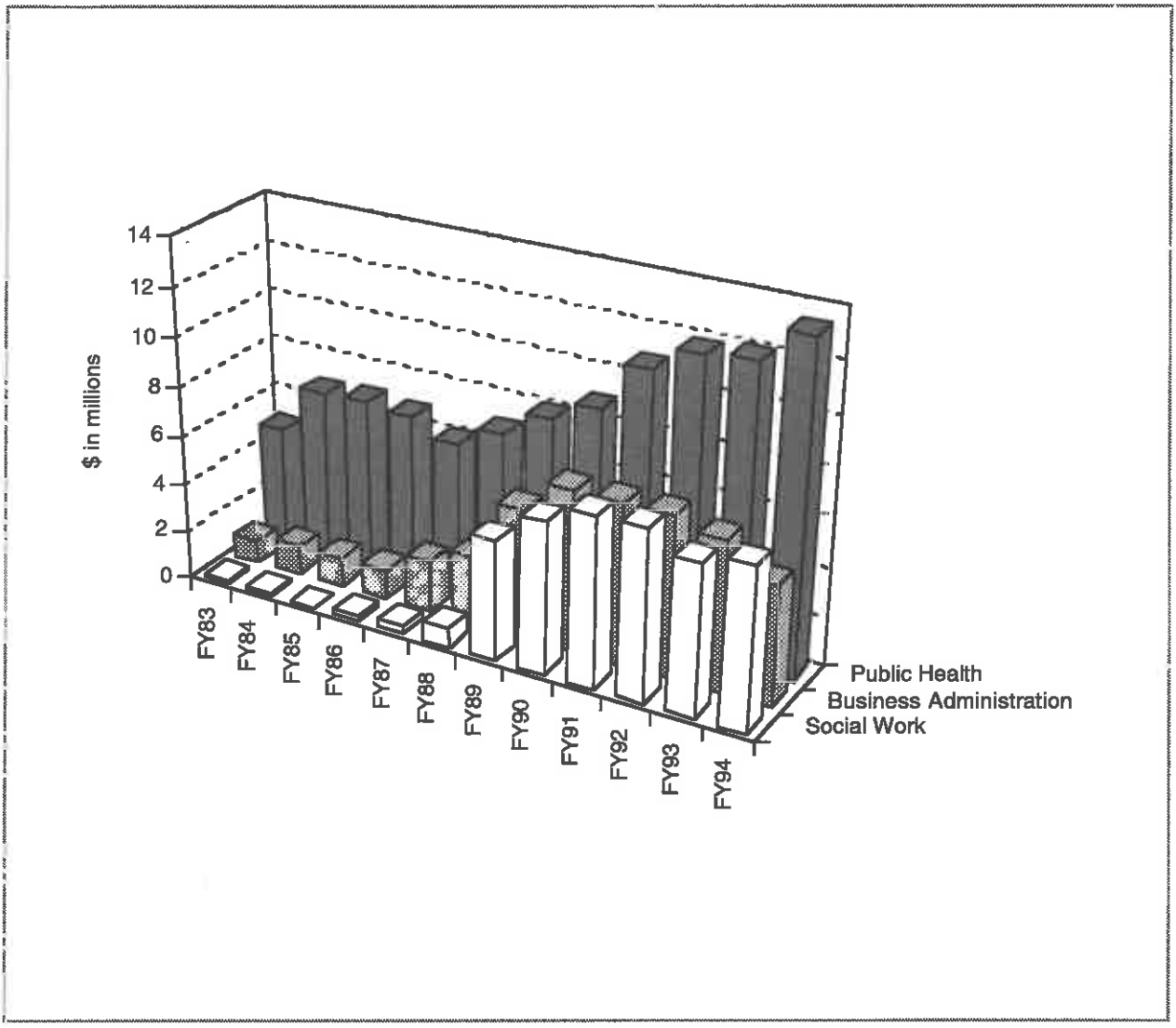


Figure 5-7

Trends in Research Expenditures: Dentistry, Natural Resources & Environment, and Education

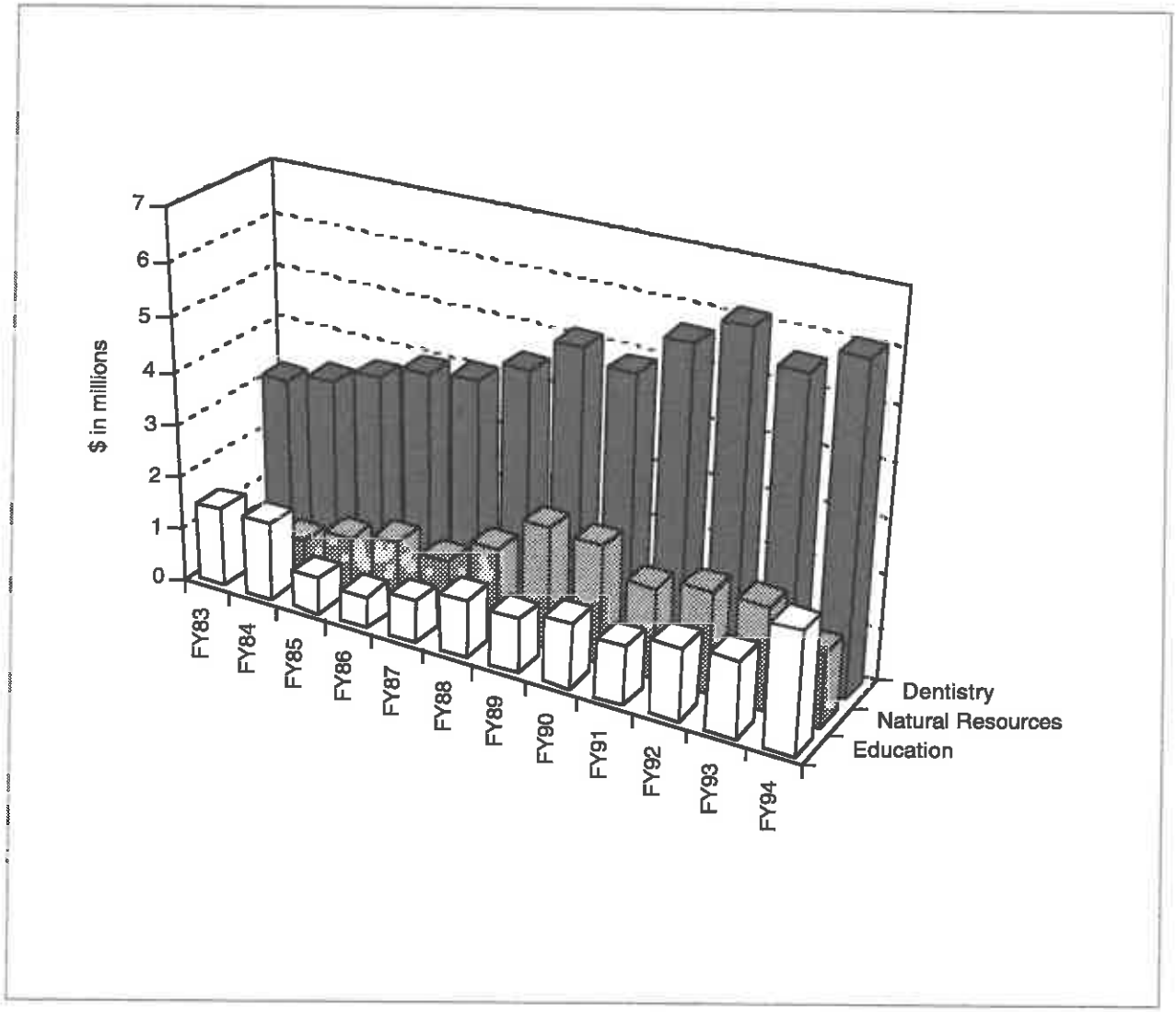


Figure 5-8

Trends in Research Expenditures: Pharmacy, Nursing, Law, and Kinesiology

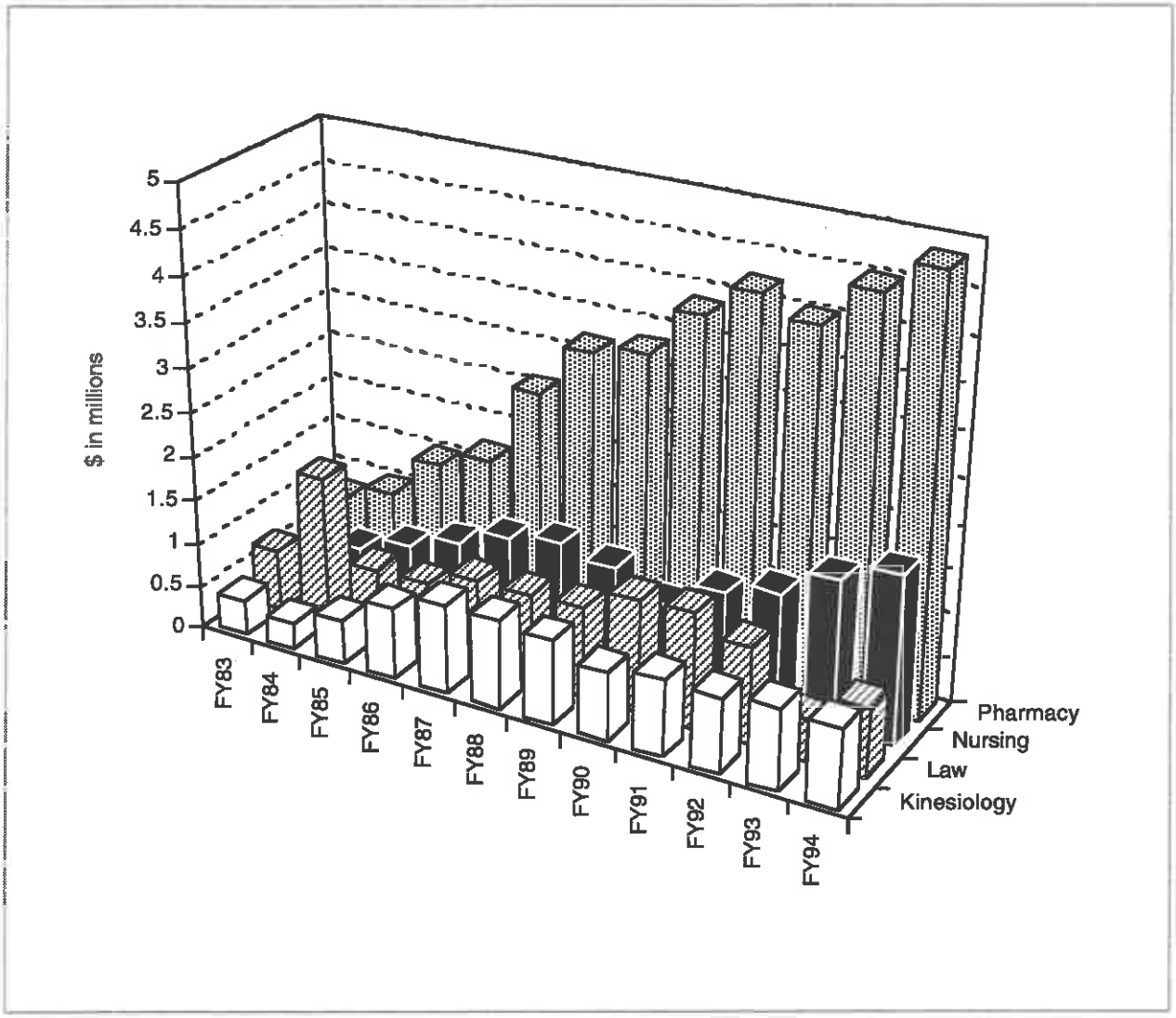
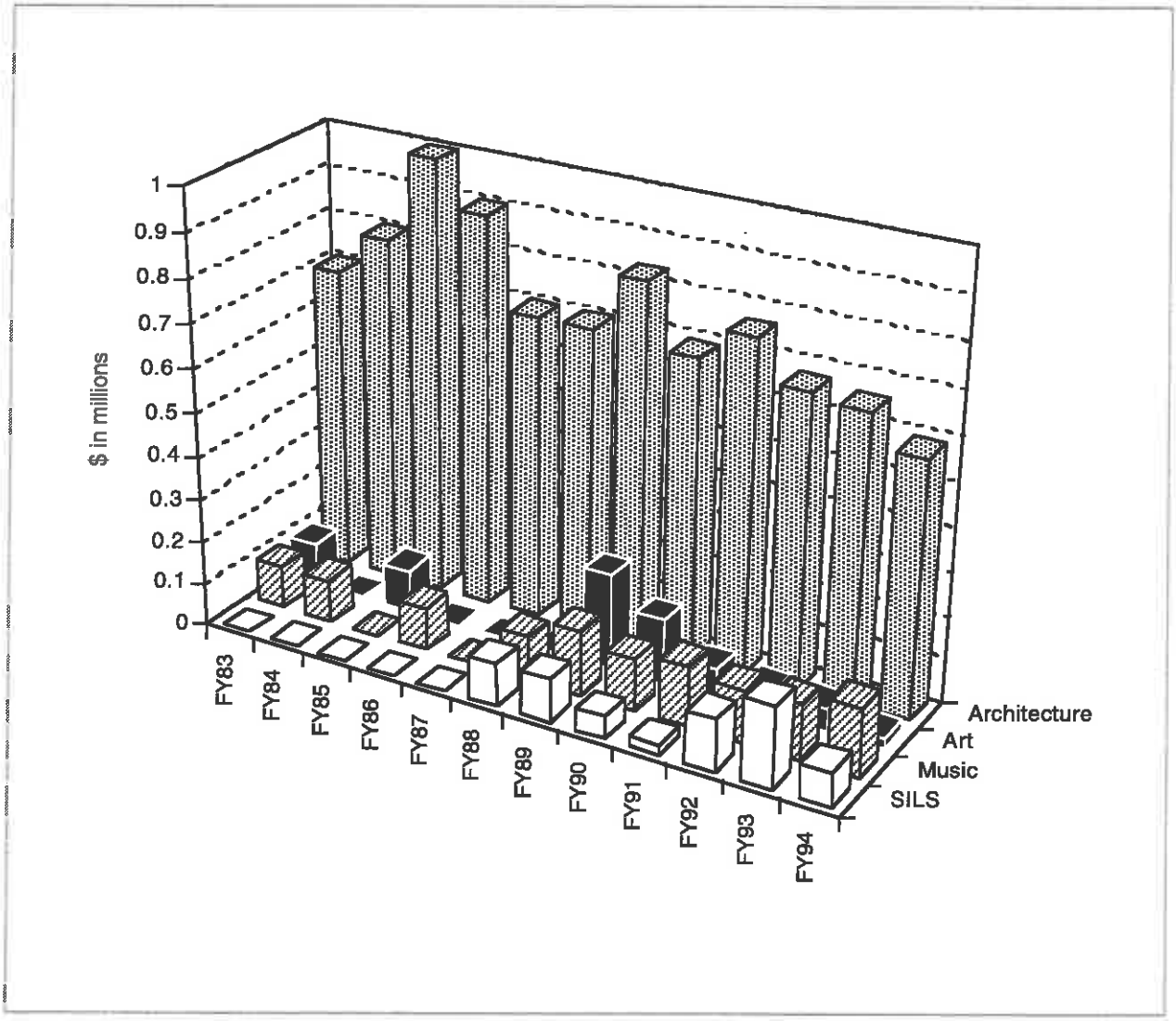


Figure 5-9

Trends in Research Expenditures: Architecture & Urban Planning, Information & Library Studies, Music, and Art



Selected Research Accomplishments

1983-84 UM's Laurentian sails for Africa to serve as a floating laboratory for a U.S. Agency for International Development's $4.6 million project

An $8.2 million grant from NASA will fund the construction of High Resolution Doppler Imager, a satellite designed to monitor changes in weather and climate

Research done by UM neuroscientists indicates that a single exposure to amphetamines may cause permanent changes in some nerve cells of the brain

Research conducted by UM gerontologists suggest that a gradual personality change in aging persons may signal the onset of Alzheimer's disease

Howard Hughes Medical Research Institute, established at UM, to conduct research on clinical applications of molecular genetics

UM selected by the Semiconductor Research Corporation as a National Center of Excellence for Advanced Manufacturing Sciences

1984-85 UM researchers conduct experiments on NASA's space shuttle to test the efficacy of image producing radar to create two-dimensional pictures of earth's terrain

UM researcher develops a mechanical heart that helps keep a 6-month old heart transplant patient alive

UM researchers and space shuttle astronauts collaborate to determine how the body attempts to adapt to weightlessness

UM scientists are part of international group of researchers that define the goals and strategies of the Earth Observatory System, one of NASA's top priorities

1985-86 UM Medical Center is designated a model spinal injury center by the National Institute for Handicapped Research, becoming only one of nine in the nation

Jonas Salk visits UM to celebrate the 30th anniversary of his announcement that a vaccine for polio had been discovered after a year of field trials at the UM

UM's School of Education receives a $5 million grant from the National Institute of Education to establish a Center for Improving Postsecondary Learning and Teaching

UM collaborates with several industrial firms to develop an "integrated" information technology environment on UM campus — the first such environment anywhere

UM physicians launch a program to test high risk newborns for hearing impairments

UM Medical Center establishes its Neurofibromatosis Center

1986-87 UM researchers conclude that clay barriers are not enough to prevent pollutants from entering ground water

National Science Foundation awards $3 million grant to UM to help develop a nationwide electronic information exchange network for scientists and engineers called "EXPRES"

National Science Foundation awards a team of UM scientists a grant to study the use of light instead of electricity for ultra high speed computing and signal processing

A new satellite data center and facilities in the Space Research Building are among the nation's largest

Three members of the Howard Hughes Medical Institute at the UM are part of a team that identifies the one gene that may be responsible for both Alzheimer's disease and Downs syndrome

UM astronomers discover a new galaxy that is one of the largest but least visible on record

UM astronomers report massive black holes lie at the center of two nearby galaxies and may be found at the centers of other galaxies

1987-88 UM is one of four institutions to share $7.4 million National Science Foundation grant for basic materials research

UM Medical Center opens its center for the study of kidney disease through a National Institutes of Health grant of $4 million

UM and Michigan State University share a hazardous waste study project funded by Dow Chemical Company

UM (via MERIT) wins contract for managing NSFnet, the computer network linking together the nation's universities and national laboratories

A Center for Excellence in Geriatrics is established at UM's Medical Center
UM's Medical Center establishes a Substance Abuse Center of Excellence

UM physicists build and test the first positron transmission microscope

The National Institutes of Health gives UM $11.2 million for the Michigan Diabetes Research and Training Center

The Lucille P. Markey Charitable Trust awards UM $7.25 million to study message exchange between nerve cells in the brain

The National Institute of Health awards $6 million to UM for a Multipurpose Arthritis Center, one of only 13 centers nationwide

UM's College of Engineering selected as one of nine NASA Space Engineering Research Centers

UM shares a $6.7 million grant with the Urban Institute of Washington to develop and maintain a national kidney registry

UM researchers, in a joint study with IBM, begin to develop software to enhance the university's computer networking system

1988-89 UM's Biological Station receives a 3-year grant from the Kellogg Foundation to establish SEE-North, a program designed to improve science literacy in Michigan's northern Lower Peninsula and eastern Upper Peninsula

UM establishes the Alcohol Research Center through a $7.5 million grant from National Institute of Alcohol Abuse and Alcoholism

UM's Bentley Historical Library receives prestigious Distinguished Service Award of the Society of American Archives. Later in 1989, the library is awarded funding to modernize the Vatican's archives system

UM scientists among handful of American researchers sponsored by NASA as co-investigators for Soviet mission to Mars

UM researchers collaborate with Russian scientist to conduct the first experiment on the world's highest energy proton accelerator

UM researchers isolate pure protein, called mammastatin, that inhibits breast cancer growth

1989-90 Scientists at the Howard Hughes Medical Institute at UM and at the Hospital for Sick Children in Toronto identified the gene responsible for cystic fibrosis

UM hosts EDUCOM '89, the 25th national conference on computer technology in higher education. 3500 delegates are on site for conference at the movement's birthplace, making it the largest conference ever held at UM and city of Ann Arbor

$6.17 million grant from National Institute on Aging funds Michigan Alzheimer's Disease Research Center at UM Medical Center

UM researchers involved in discovery of drug that delays onset of disabling symptoms of Parkinson's Disease

Physicians at UM Cancer Center are first in country to use three-dimensional radiation therapy planning, a technique that allows doctors to direct radiation to a tumor more precisely

UM researchers collaborate with scientists from the French National Atomic Energy Committee to create the world's most powerful beam of laser light to date

UM researcher discovers whales once had feet

1990-91 Researchers at UM's Howard Hughes Medical Institute identify the gene believed to be responsible for neurofibromatosis

National Institute of Health grants UM Medical Center $5 million to establish the nation's only program project for gene therapy. Later in 1990, UM researchers develop gene therapy that may correct an inherited genetic defect responsible for a high cholesterol disorder in humans

Howard Hughes Medical Institute researchers at UM and the University of Iowa have used gene replacement techniques in a lab culture to correct the defect in human cystic fibrosis cells

UM researchers Elizabeth G. Nabel, Gregory E. Plantz and Gary J. Nabel successfully direct modified genes

UM awarded $14.3 million to establish a National Science Foundation Science and Technology Center to study high speed optics and laser technology

Andrew. W. Mellon Foundation gives $3 million to establish yearly fellowships for doctoral candidates; gift is one of the largest single grants ever given to an institution to support doctoral education in humanities and social sciences

1991-92 UM scientist Richard M. Laine develops a procedure that transforms beach sand into silicon based chemicals, polymers, glasses, and ceramics

UM experiments are carried on four NASA space shuttle missions, one of them involving a High Resolution Doppler Imager designed by UM engineers

EPA selects UM over 28 other institutions to manage the National Pollution Prevention Center

UM's School of Business Administration inaugurates the Global Business Partnership, designed to conduct research into human resource practices around the world

UM initiates the first scholarly exchange program between an American University and the new Russian State University for the Humanities

UM's School of Social Work uses a $674,000 grant from the Ford Foundation to conduct the first comprehensive study of the economic and social effects of the 1991 state welfare cutbacks

UM performs world's first gene therapy trial using direct transfer of modified human genetic material into the body to treat disease

EPA awards UM $4.8 million to establish a national center at the UM that will serve as a clearinghouse for information on K-12 environmental education

UM scientist Hunein F. Maassab developed a new strain of influenza virus that can be used for vaccines, and it can be updated each year to match new influenza strains

UM astronomers and scientists, let by Douglas Richstone, working with researchers at the University of Hawaii's Institute for Astronomy, may have discovered a black hole 100 times more massive than any previously documented

UM Medical Center establishes a Center for Molecular Medicine to enhance gene discovery and therapy through an $8.9 million grant from the National Institutes of Health (NIH); it is the only such center in the nation focusing on human disease genes. UM research teams are the only researchers outside of the NIH to conduct therapy experiments in humans

UM paleontologist Daniel C. Fisher discovers over 20 footprints of an adult male mastodon

1992-93 UM researchers at the Center for Great Lakes and Aquatic Sciences discover the remains of the Newell A. Eddy, a 19th century three-masted schooner, on the bottom of Lake Huron

The Warner-Lambert/Parke-Davis Company's $5.5 million gift to the Medical School, College of Pharmacy and Department of Chemistry is one of the largest single contributions in UM's history

ISR receives an $18 million grant from the National Institute on Drug Abuse (NIDA) to continue and to expand its annual national survey of America's secondary students. The grant is one of the largest in UM's history, as well as one of the largest for the NIDA

Researchers at the UM and at Duke University develop a way to prevent the human immunodeficiency virus (HIV) from infecting human T leukemia cells

UM researchers are part of the six team international research group that has identified the gene responsible for Huntington's disease

Researchers at UM's Comprehensive Cancer Center are part of a group that has identified a particular gene that reverses the cancer-like growth characteristics of human melanoma cells

1993-94 Researchers at the University of Michigan created a new target-specific cancer treatment using radioactive anitbodies to attack lymphoma cancer cells

Researchers in the Department of Human Genetics were the first to use gene therapy to cure Duchenne muscular dystrophy (DMD) in mice. DMD accounts for half af all muscular dystrophy cases and causes muscle weakness, joint stiffening, and spinal curvature.

Researchers at the University of Michigan Biological Station found that rising carbon dioxide in the atmosphere produced fundamental changes in growth rates of plants and microorganisms living in soil and levels of carbon and nitrogen in soil.

NASA has chosen a team of UM atmospheric scientists to develop plans for an unmanned mission to Mars in 1998.

UM researchers sucessfully performed the first gene therapy using direct transfer of modified human genetic material.

UM researchers unveiled the M-ROVER, a remote-operated vehicle used for under water exploration and recovery.

Using technology they developed, UM scientists helped NASA's space shuttle count trees in a 2,500 square-mile section of the Upper Peninsula. The experiment will help scientists learn more about the impact trees and other plant life may have on global warming and climate change.

UM physicists were among the group of physicists who announced evidence for the possible discovery of the top quark, the last of six types of quarks to be discovered. Quarks are the subatomic particles that comprise the nuclei of atoms.

UM paleontologist Philip Gingerich, along with researchs from the Geological Survey of Pakistan, discovered fossils of a 46-million-year-old whale that waled on four legs on land but swam with the undulating tail motion of a modern whale. The whale provides important information about structural and behavioral changes that occurred 40 to 50 million years ago as whales made the transition from land-dwelling to ocean-dwelling mammals.

Goal [redacted] To build a multicultural university community

Table 6-1 Representation of Persons of Color in the Nation, the State, and UMAA, Fall 1994

	Persons of Color	Black	Hispanic/Latino	Native American	Asian
National*	24.80%	12.10%	9.00%	0.80%	2.90%
State*	17.80%	13.90%	2.20%	0.60%	1.10%
UMAA					
Students #	24.16%	8.27%	4.67%	0.79%	10.43%
Undergraduate	24.92%	8.34%	4.68%	0.83%	11.07%
Graduate	20.42%	7.10%	4.73%	0.60%	7.99%
Professional	24.45%	9.09%	4.58%	0.78%	10.00%
Faculty (Tenured & Tenure Track)	13.50%	4.70%	1.90%	0.30%	6.60%
Academic Administration	15.80%	14.20%	1.70%	0.00%	0.00%
Professional Non-faculty	15.00%	6.10%	1.20%	0.30%	7.40%

*1990 Census Data

#Percentages for students refer to African Americans, Hispanic/Latino Americans, Native Americans, and Asian Americans.

Numbers for Academic Administration and Professional Non-faculty are from 1993.

Table 6-2 Representation of Persons of Color in the Nation, the State, and UM - Dearborn, Fall 1993

	Persons of Color	Black	Hispanic/Latino	Native American	Asian
National*	24.80%	12.10%	9.00%	0.80%	2.90%
State*	17.80%	13.90%	2.20%	0.60%	1.10%
UMAA					
Students					
Undergraduate	13.70%	6.60%	2.10%	0.60%	4.50%
Graduate	11.20%	3.60%	1.80%	0.20%	5.50%
Faculty (Tenured & Tenure Track)	23.90%	4.00%	1.00%	0.50%	18.20%
Academic Administration	26.70%	6.70%	0.00%	6.70%	13.30%
Professional Non-faculty	16.00%	11.80%	1.80%	0.00%	2.40%

*1990 Census Data
#Percentages for students refer to African Americans, Hispanic/Latino Americans, Native Americans, and Asian Americans.

Table 6-3

Representation of Persons of Color in the Nation, the State, and UM - Flint, Fall 1994

	Persons of Color	Black	Hispanic/Latino	Native American	Asian
National*	24.80%	12.10%	9.00%	0.80%	2.90%
State*	17.80%	13.90%	2.20%	0.60%	1.10%
UMAA					
Students					
Undergraduate	14.30%	10.00%	2.00%	0.90%	1.30%
Graduate	9.80%	5.80%	1.50%	0.80%	1.80%
Faculty (Tenured & Tenure Track)	16.50%	7.30%	3.00%	0.00%	6.10%
Academic Administration	22.20%	11.10%	0.00%	0.00%	11.10%
Professional Non-faculty	15.70%	11.60%	3.30%	0.00%	0.80%

*1990 Census Data

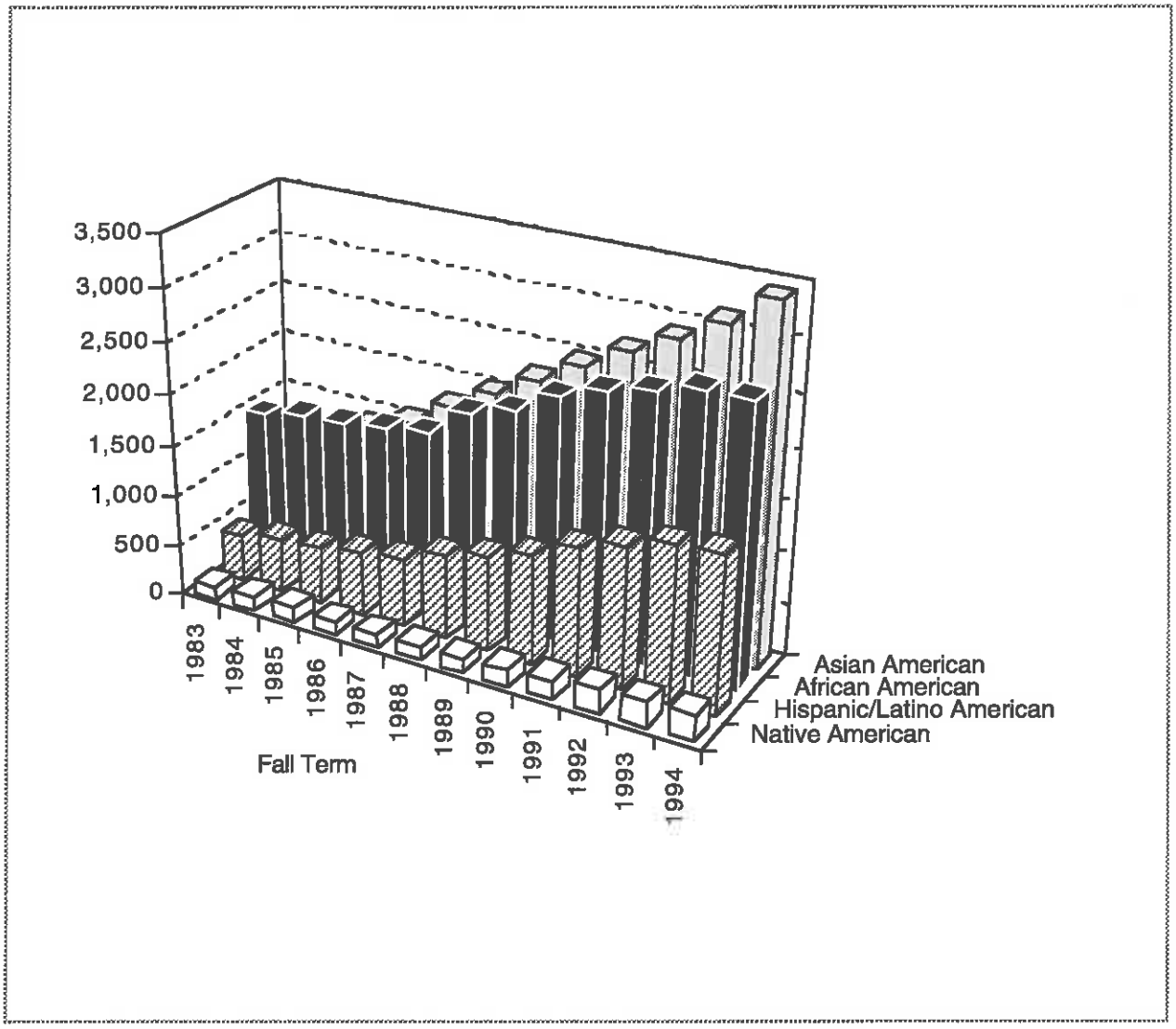
#Percentages for students refer to African Americans, Hispanic/Latino Americans, Native Americans, and Asian Americans.

Table 6-4

Enrollment of Students of Color, Fall 1994

	Students of Color	African American	Hispanic/Latino American	Native American	Asian American
Undergraduate	5,590	1,871	1,050	186	2,483
Graduate	1,024	356	237	30	401
Professional	1,313	488	246	42	537
Total	7,927	2,715	1,533	258	3,421

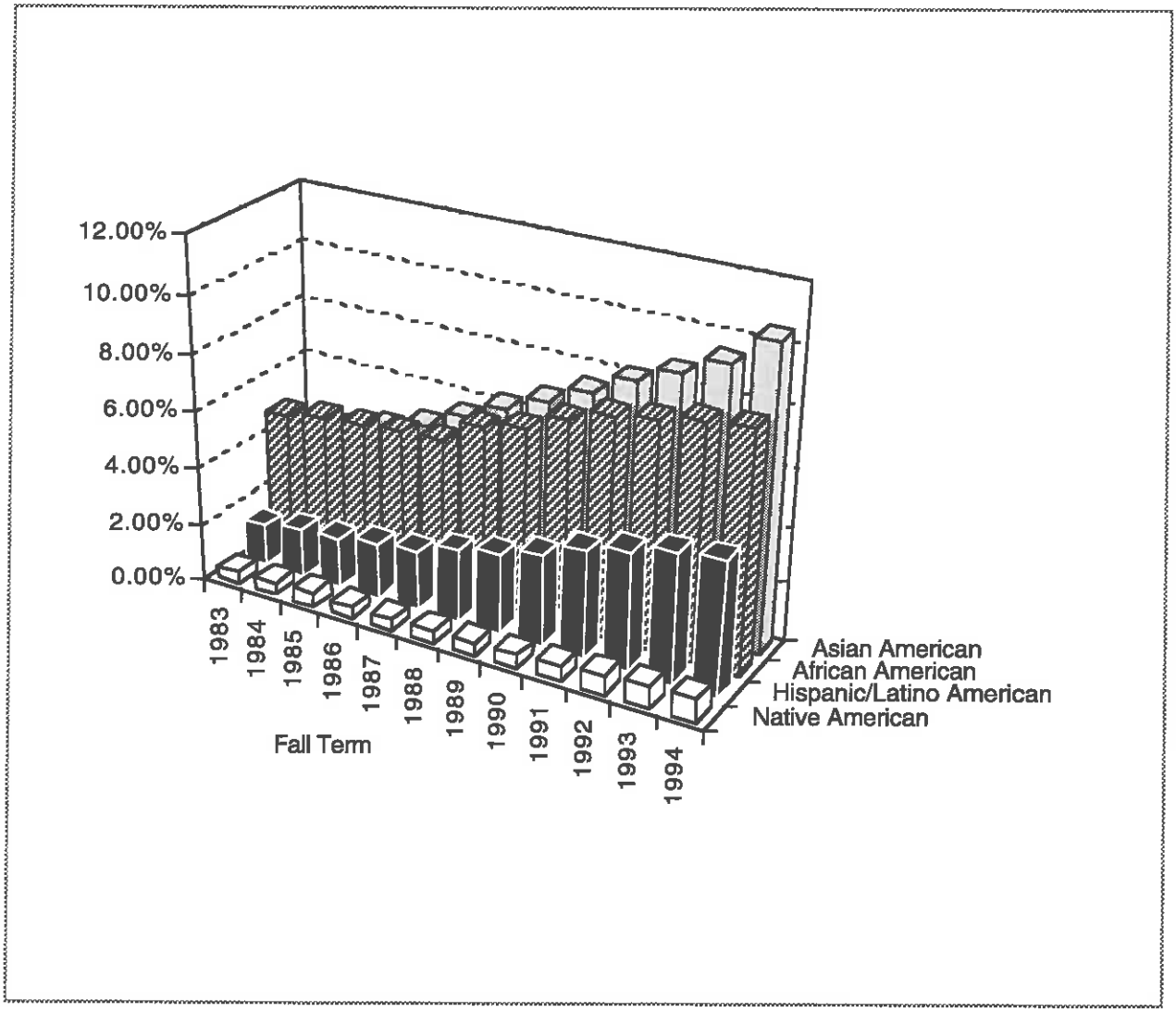
Figure 6-1 Minority Student Enrollments



Change Since Fall 1987:

Asian Americans	+90%
African Americans	+57%
Hispanic/Latino American	+126%
Native Americans	+100%
TOTAL	+83%

Figure 6-2 Minority Student Enrollment Percentages

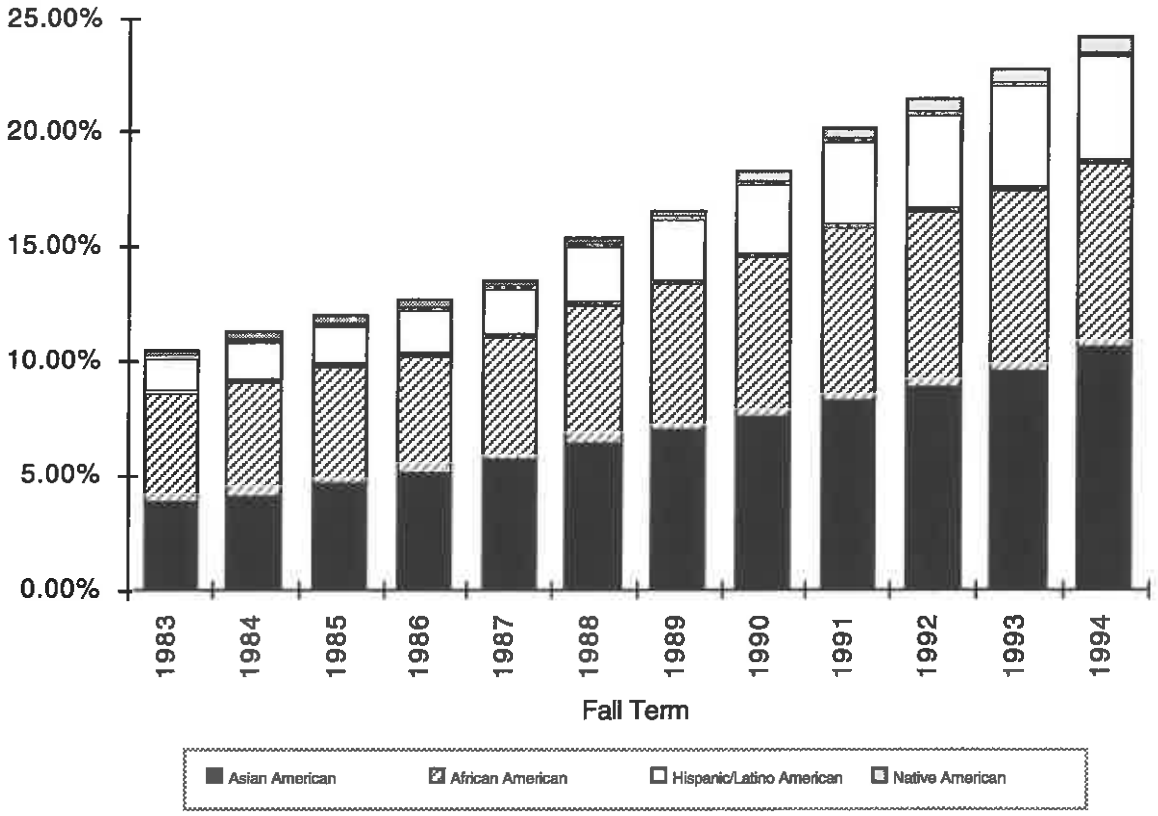


Change Since Fall 1987:

Asian Americans	+86%
African Americans	+53%
Hispanic/Latino American	+122%
Native Americans	+96%
TOTAL	+79%

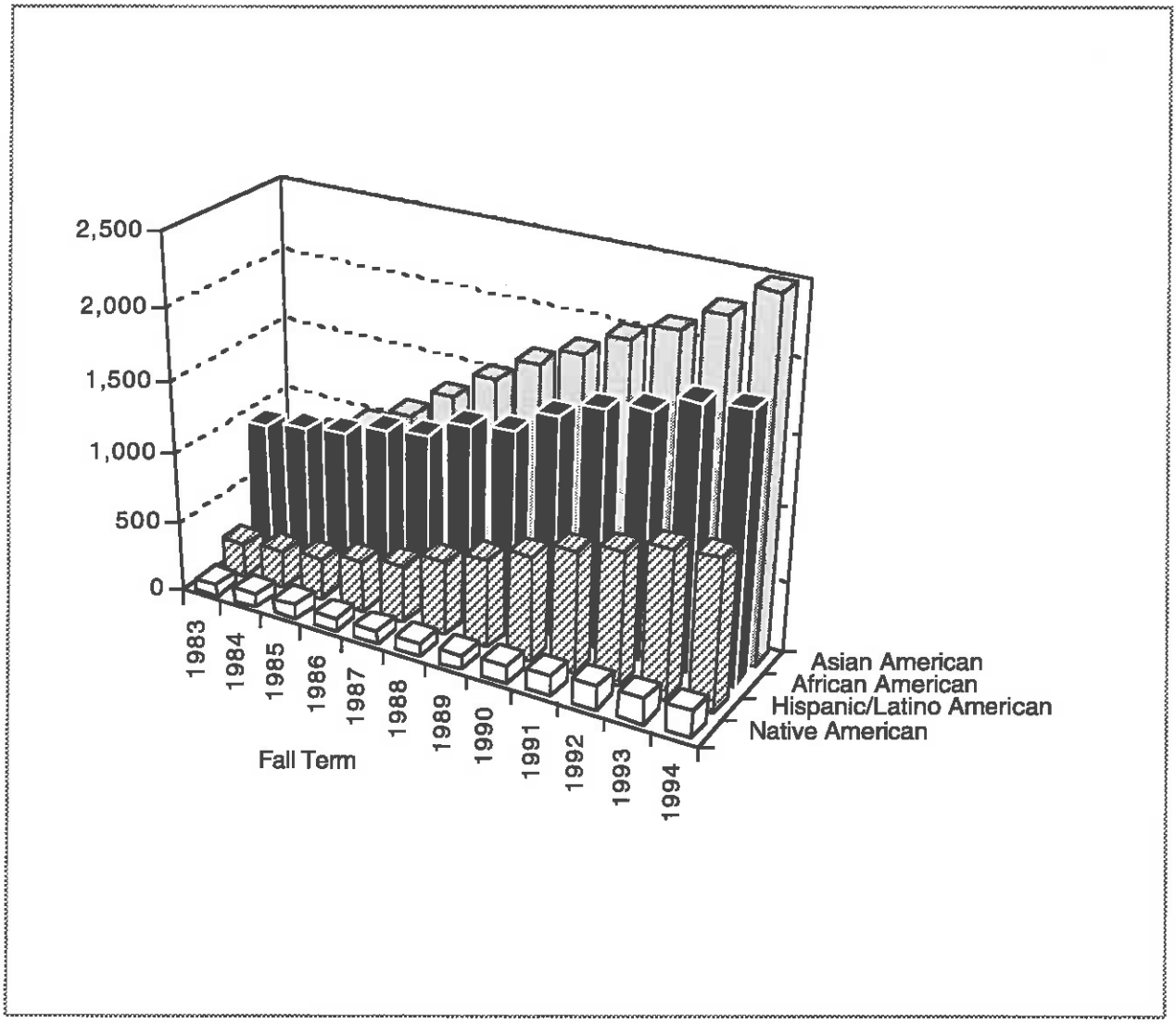
Figure 6-3

Minority Student Enrollment Percentage



Change in the Percent of Minority Students Since Fall 1987: +79%

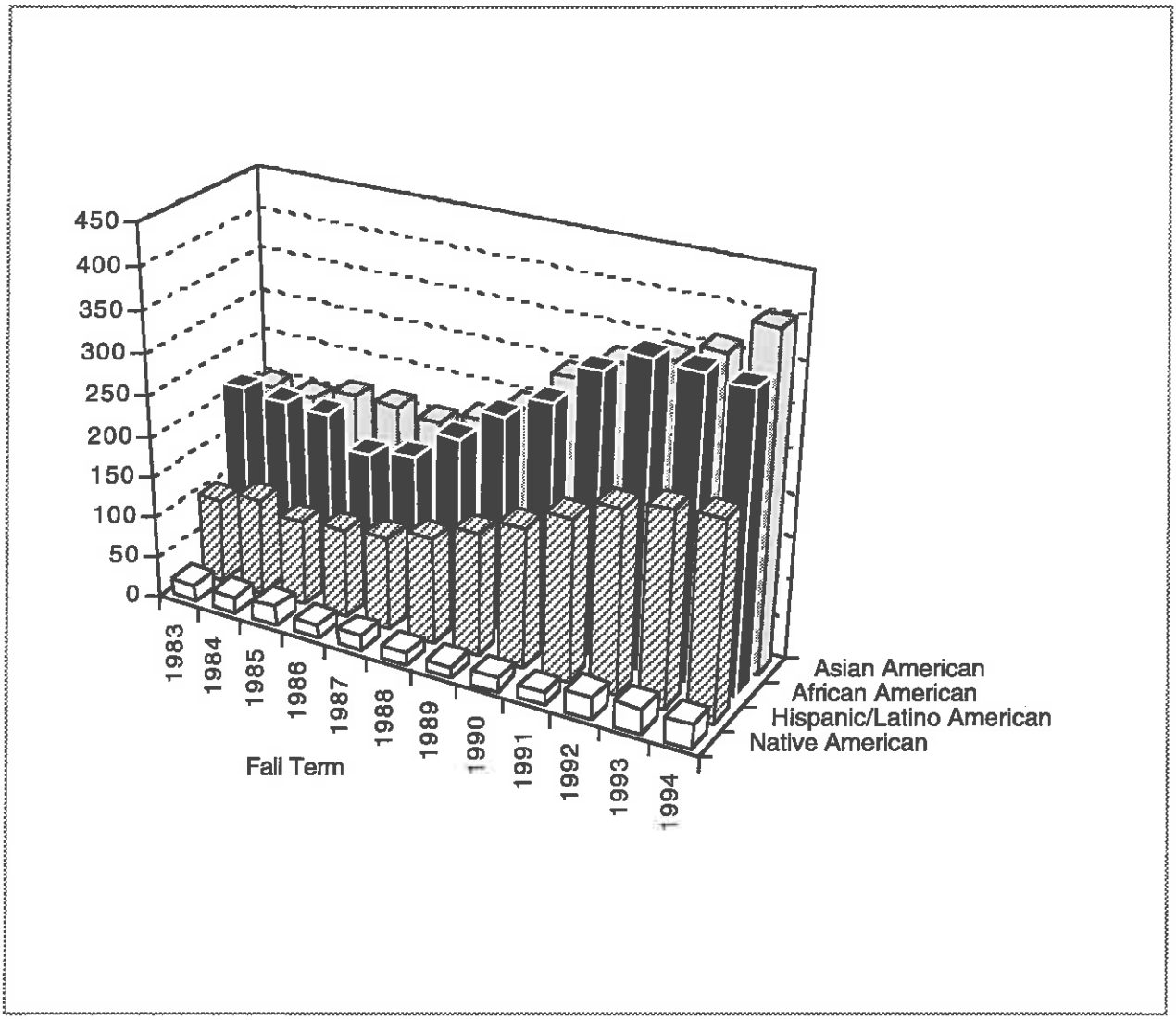
Figure 6-4 Minority Undergraduate Student Enrollments



Change Since Fall 1987:

Asian Americans	+85%
African Americans	+56%
Hispanic/Latino American	+157%
Native Americans	+109%
TOTAL	+84%

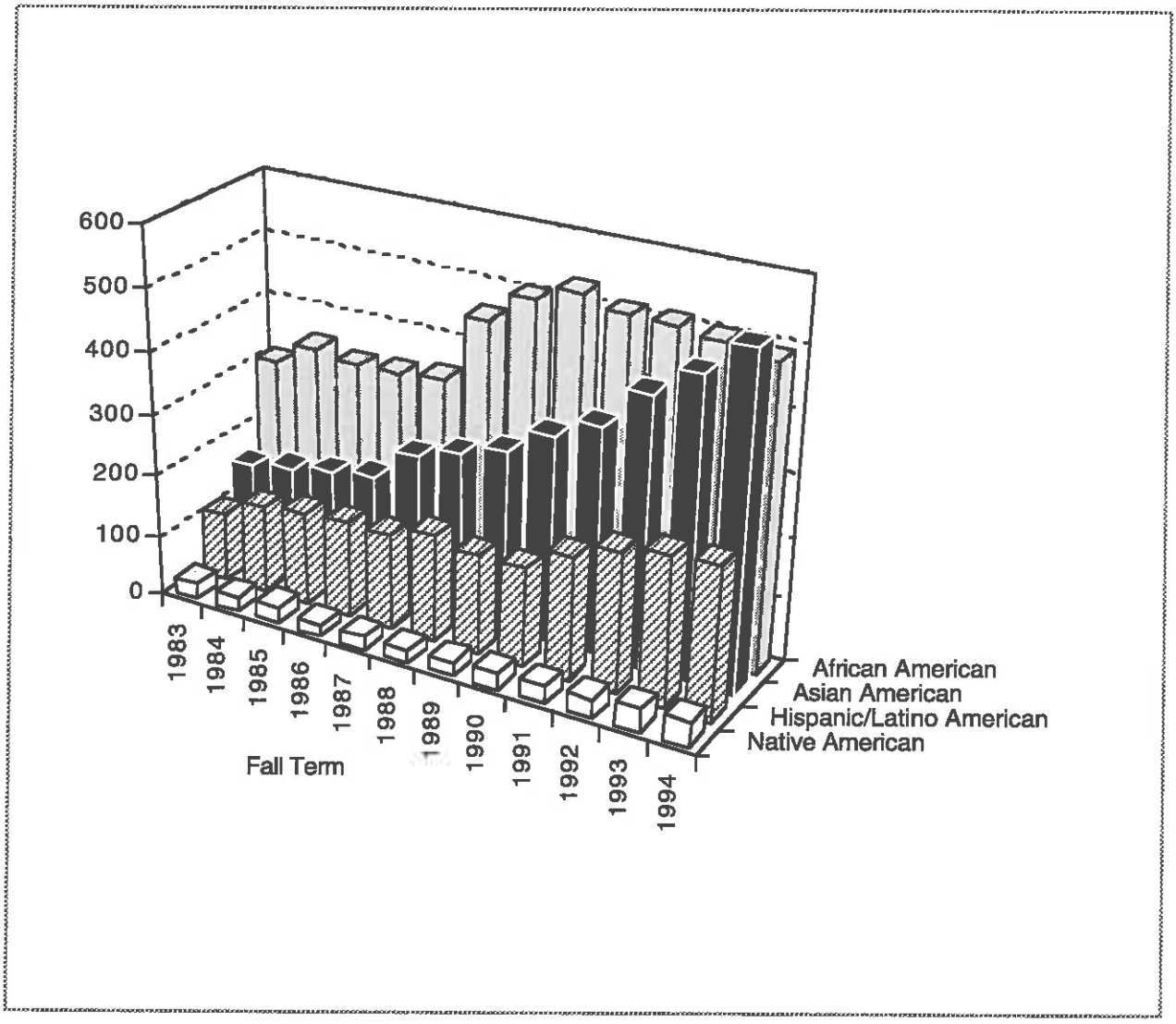
Figure 6-5 Minority Graduate Student Enrollments



Change Since Fall 1987:

Asian Americans	+93%
African Americans	+89%
Hispanic/Latino American	+110%
Native Americans	+58%
TOTAL	+94%

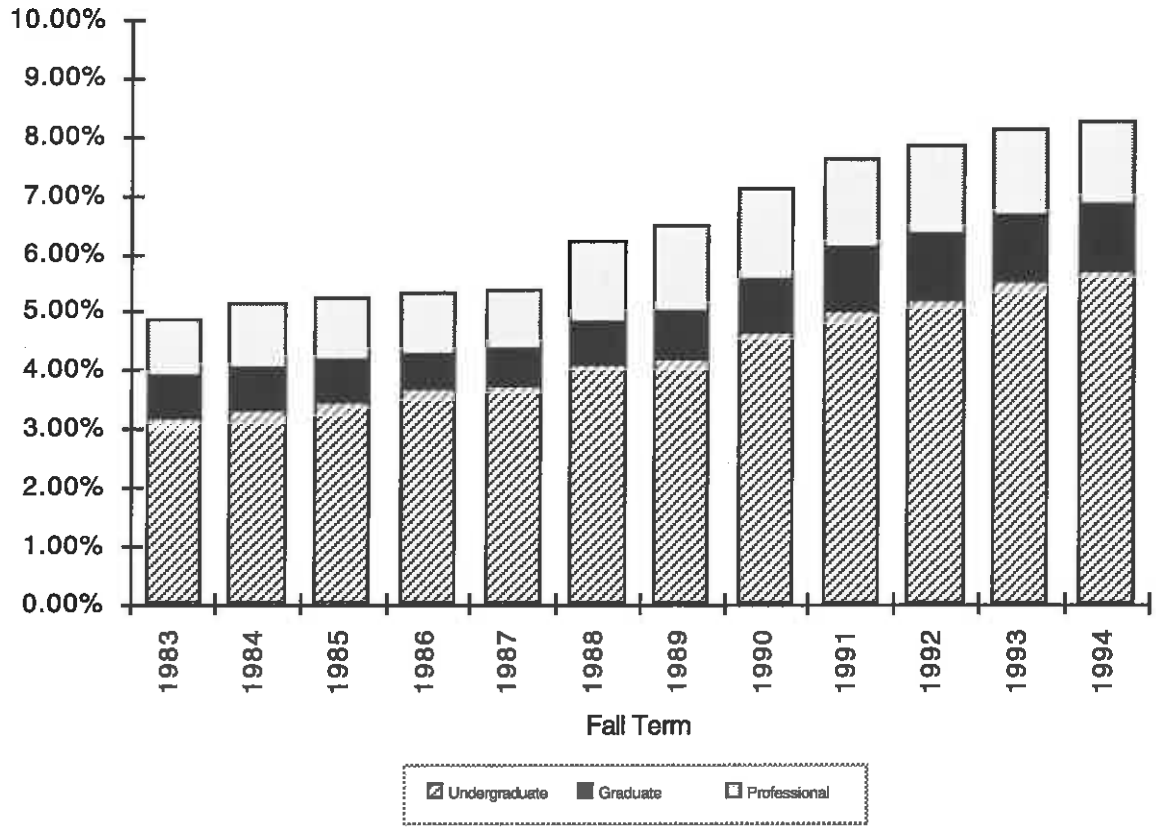
Figure 6-6 Minority Professional Student Enrollments



Change Since Fall 1987:

Asian Americans	+114%
African Americans	+41%
Hispanic/Latino American	+59%
Native Americans	+100%
TOTAL	+70%

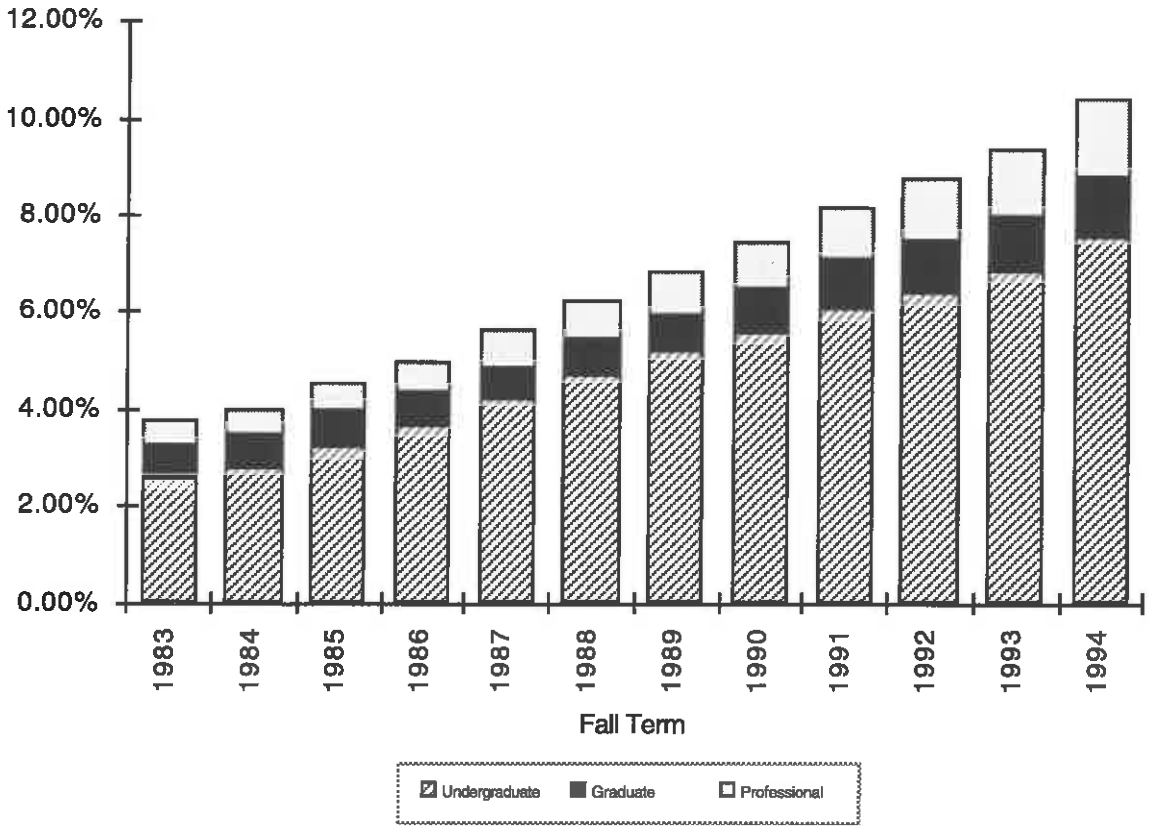
Figure 6-7 Enrollment Percentage of African American Students



Change Since Fall 1987:

Undergraduate	+53%
Graduate	+85%
Professional	+38%
TOTAL	+53%

Figure 6-8 Enrollment Percentage of Asian American Students

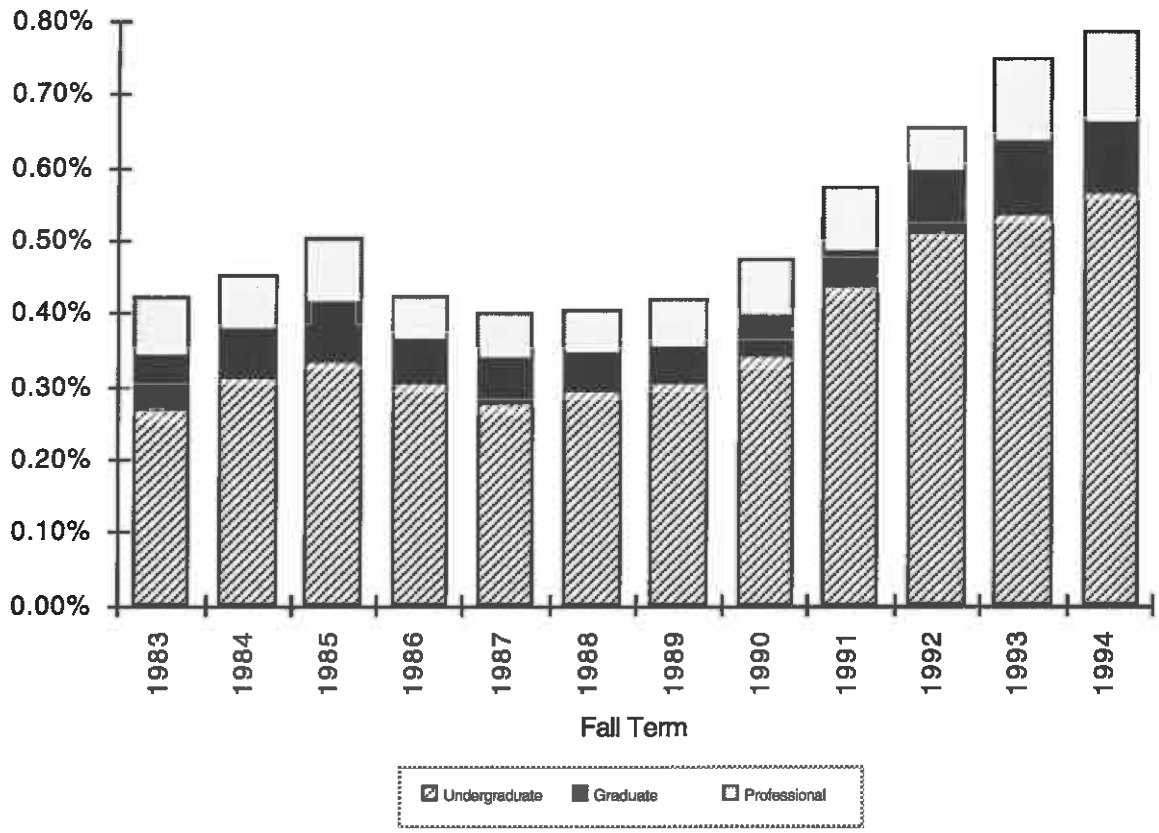


Change Since Fall 1987:

Undergraduate	+81%
Graduate	+89%
Professional	+109%
TOTAL	+86%

Figure 6-9

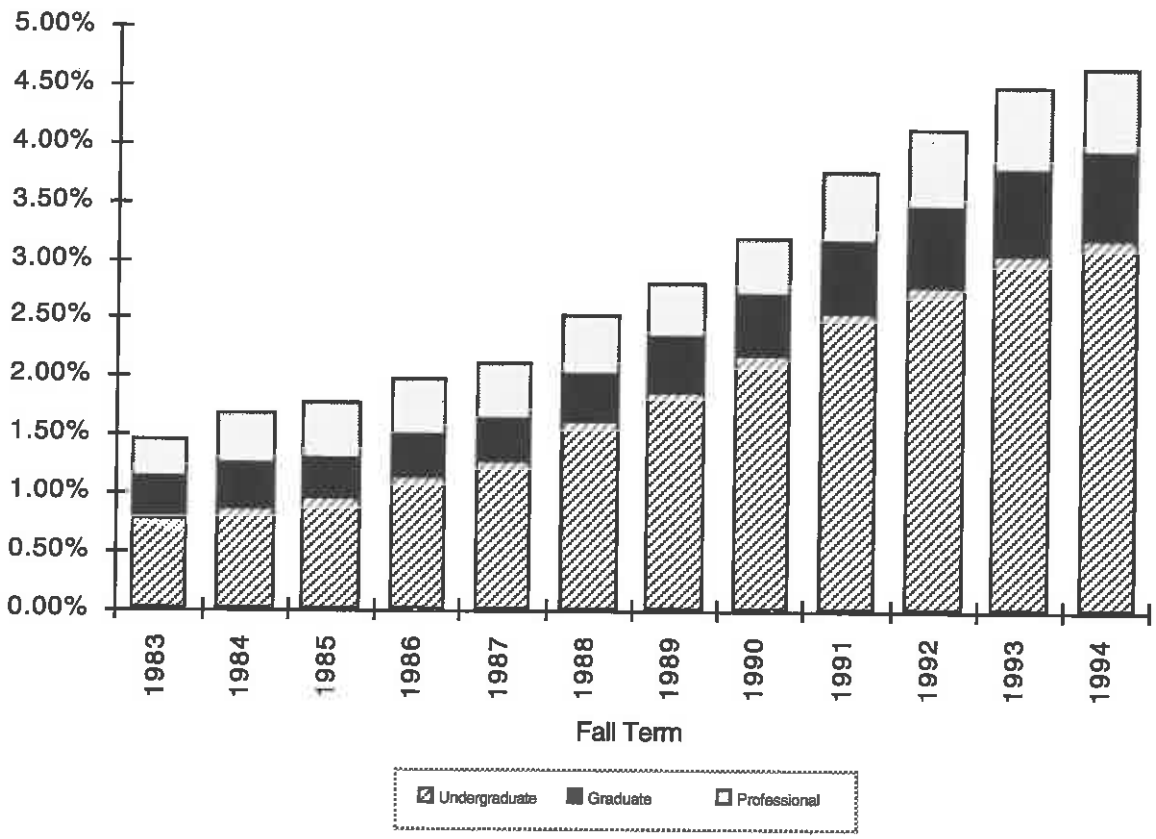
Enrollment Percentage of Native American Students



Change Since Fall 1987:

Undergraduate	+104%
Graduate	+54%
Professional	+96%
TOTAL	+96%

Figure 6-10 Enrollment Percentage of Hispanic/Latino American Students

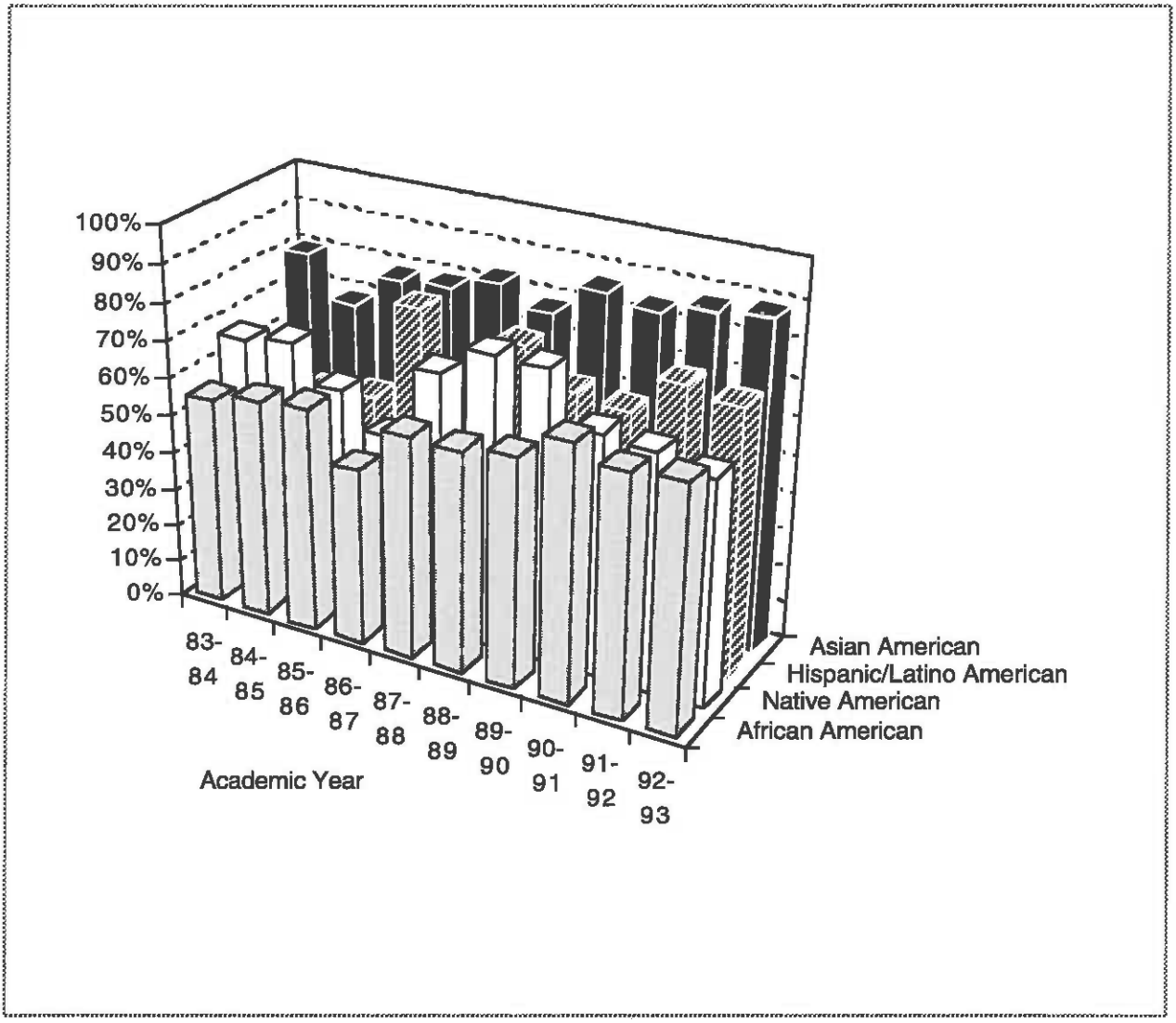


Change Since Fall 1987:

Undergraduate	+151%
Graduate	+105%
Professional	+55%
TOTAL	+122%

Figure 6-11

Graduation Rates of Freshman Minority Cohorts Six Years After Initial Entry

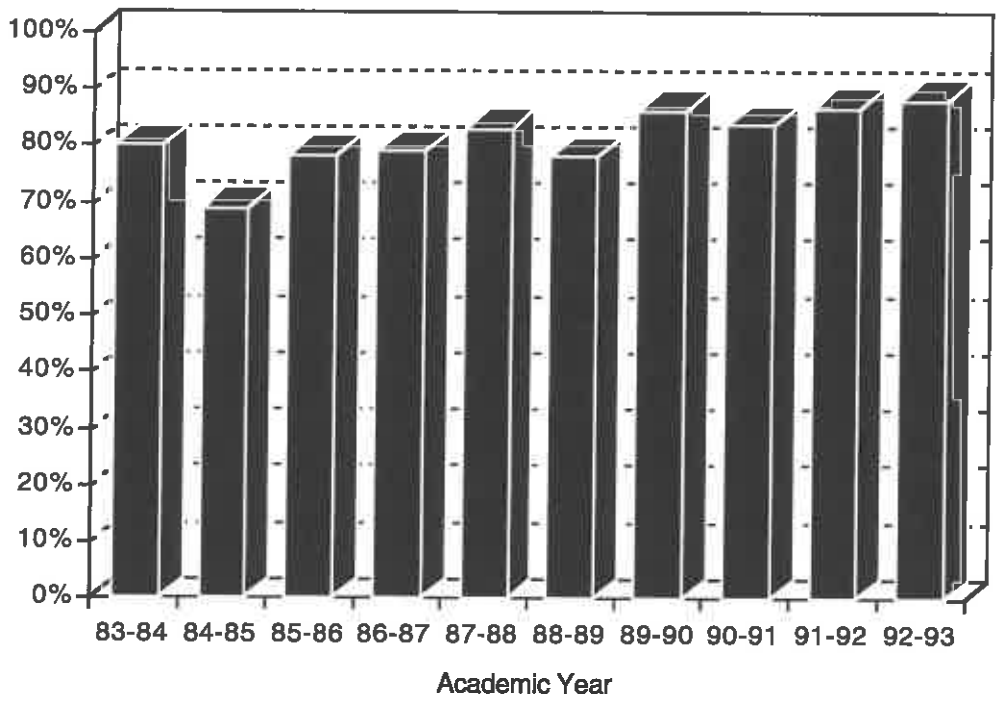


Change Since 87-88:

Asian Americans	+6%
African Americans	+10%
Hispanic/Latino American	+18%
Native Americans	-14%
TOTAL	+12%

Figure 6-12

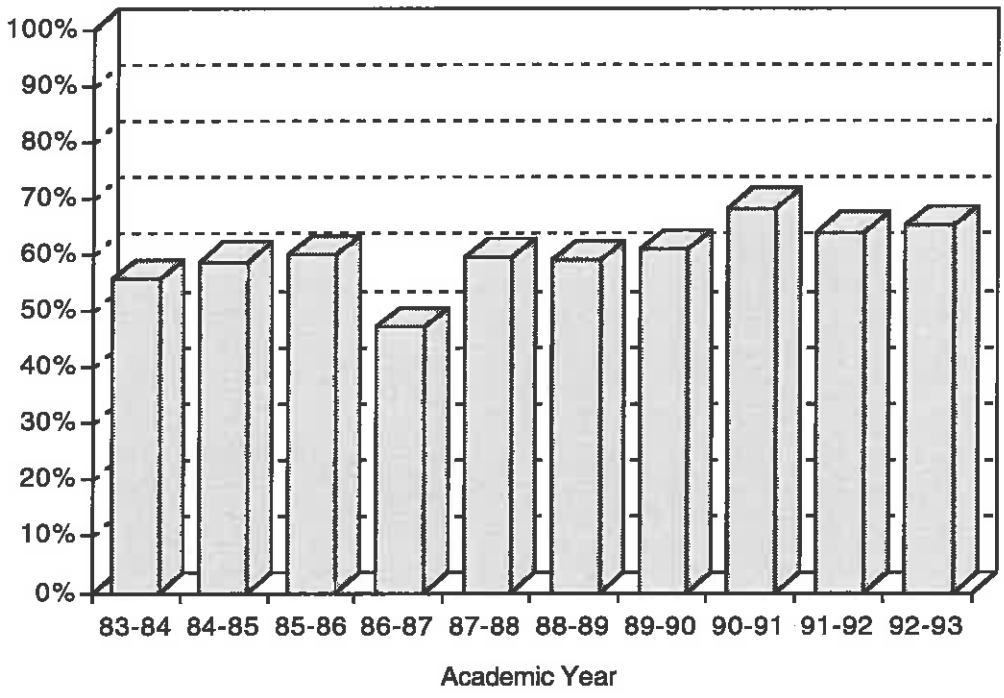
Graduation Rates of Freshman Asian American Cohorts Six Years After Initial Entry



Change Since 87-88: +6%

Figure 6-13

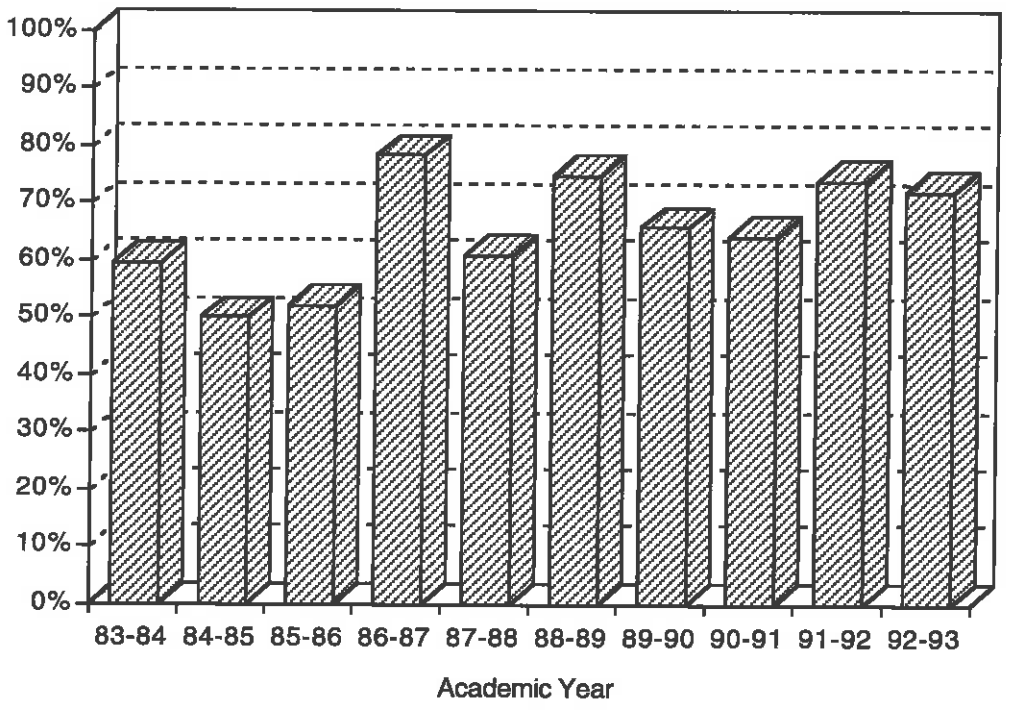
Graduation Rates of Freshman African American Cohorts After Six Years Initial Entry



Change Since 87-88: +10%

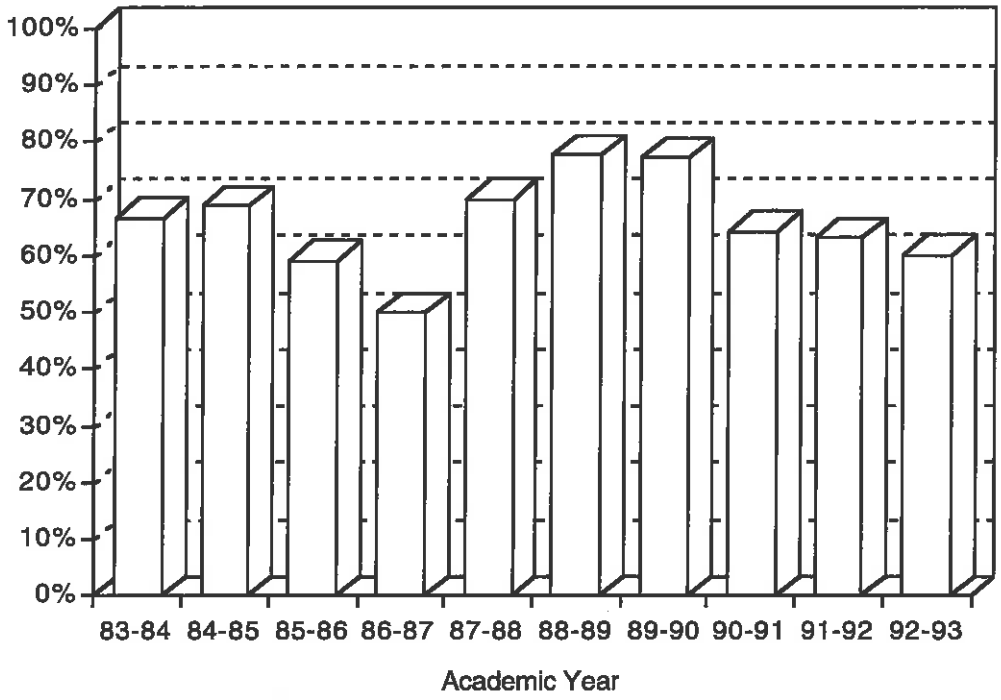
Figure 6-14

Graduation Rates of Freshman Hispanic/Latino American Cohorts Six Years After Initial Entry



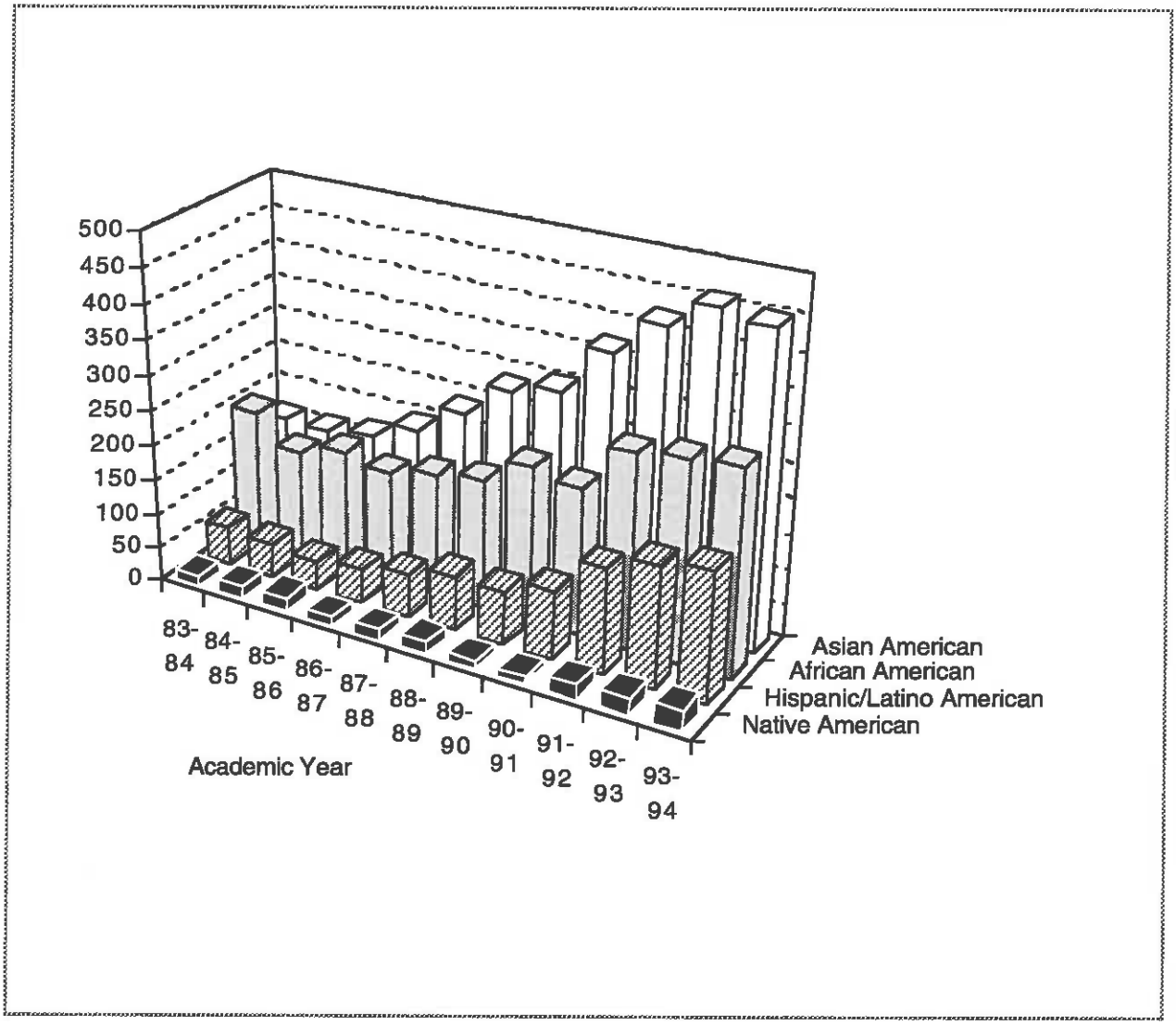
Change Since 87-88: +18%

Figure 6-15 Graduation Rates of Freshman Native American Cohorts Six Years After Initial Entry



Change Since 87-88: -14%

Figure 6-16 Minority Undergraduate Degrees Conferred

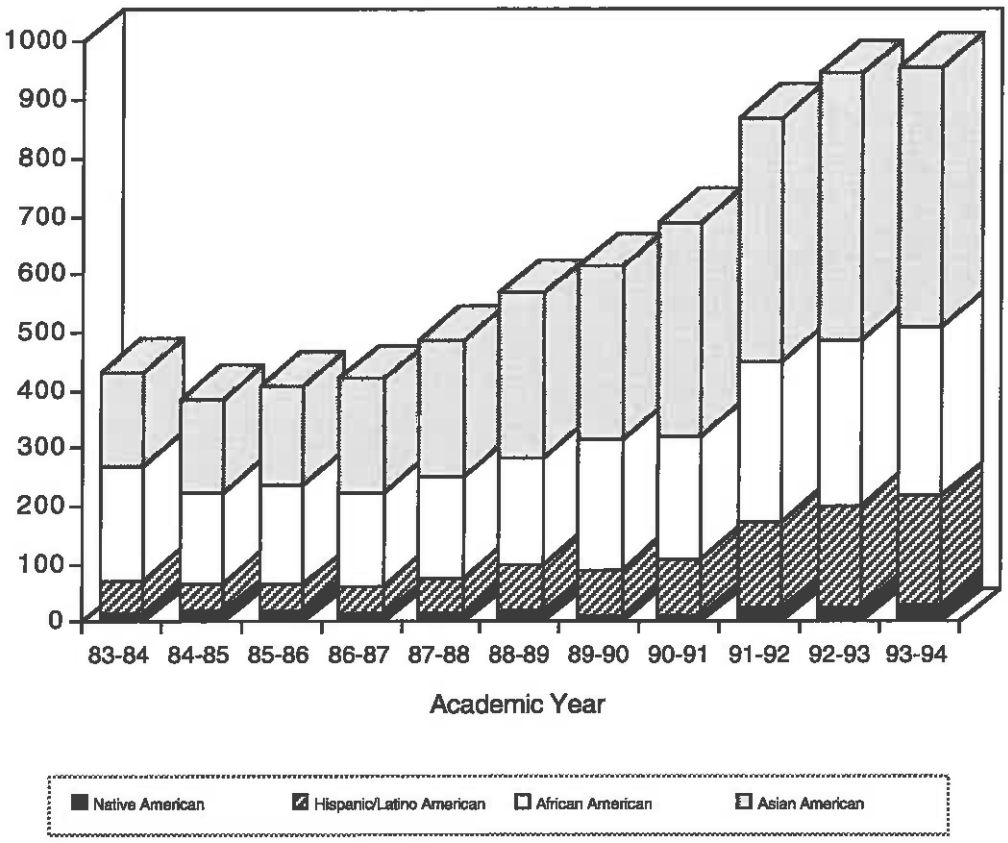


Change Since 87-88:

Asian Americans	+90%
African Americans	+67%
Hispanic/Latino American	+207%
Native Americans	+94%

Figure 6-17

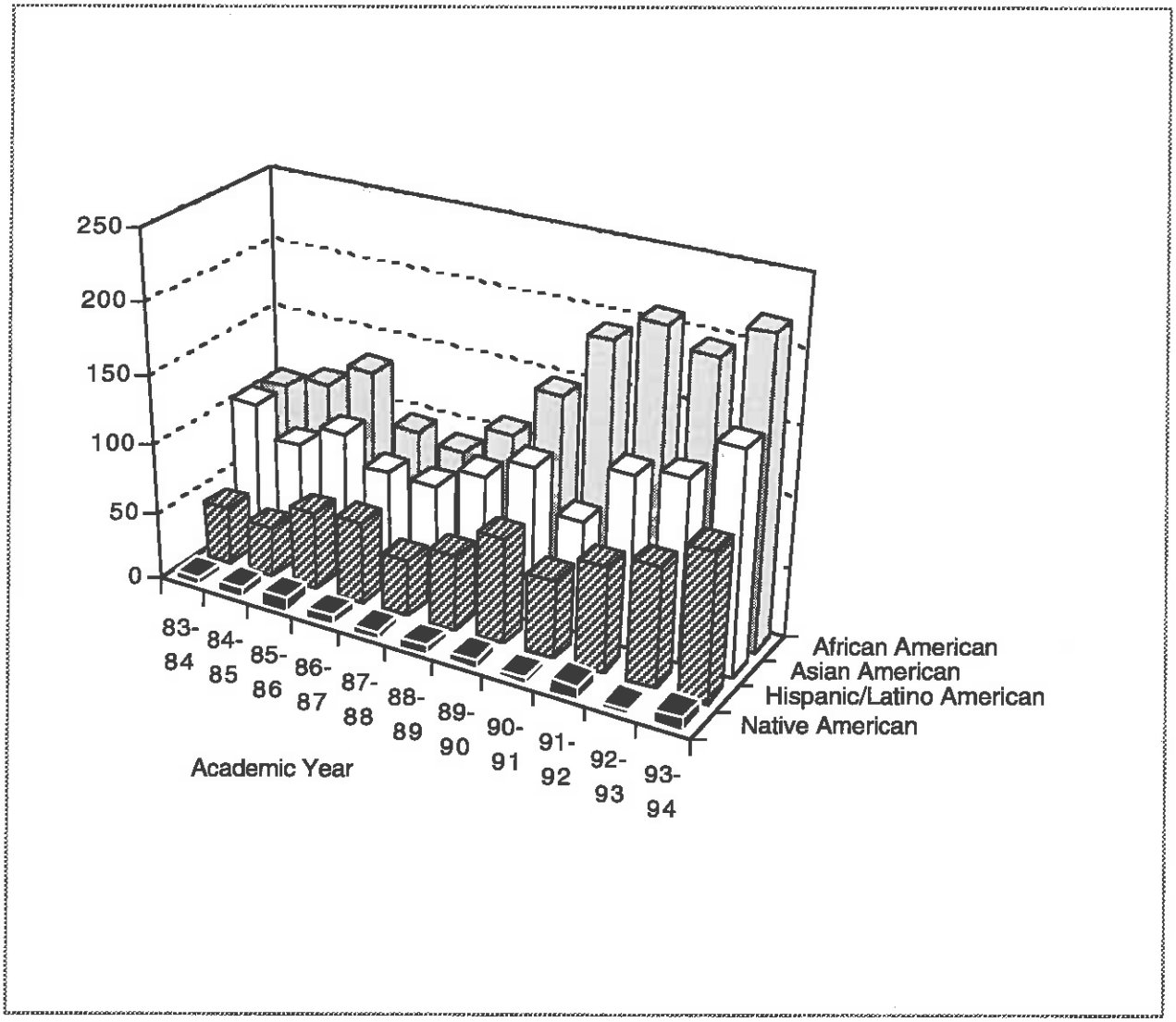
Minority Undergraduate Degrees Conferred



Change Since 87-88:

Total Minorities	+96%

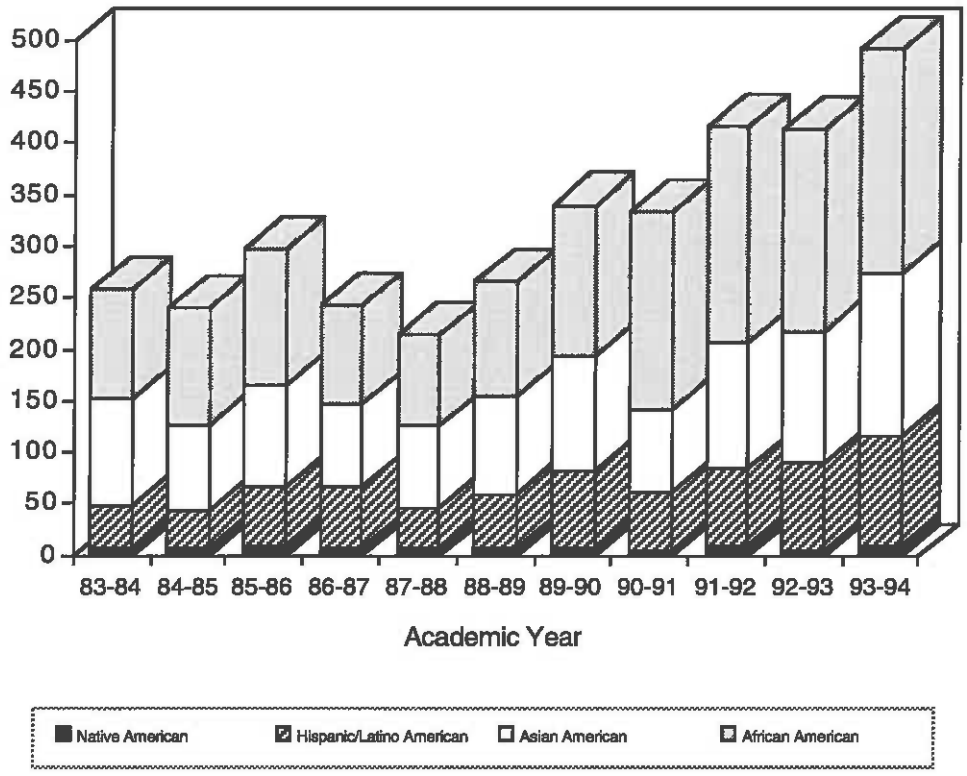
Figure 6-18 Minority Masters and Intermediate Degrees Conferred



Change Since 87-88:

Asian Americans	+100%
African Americans	+146%
Hispanic/Latino American	+156%
Native Americans	+67%

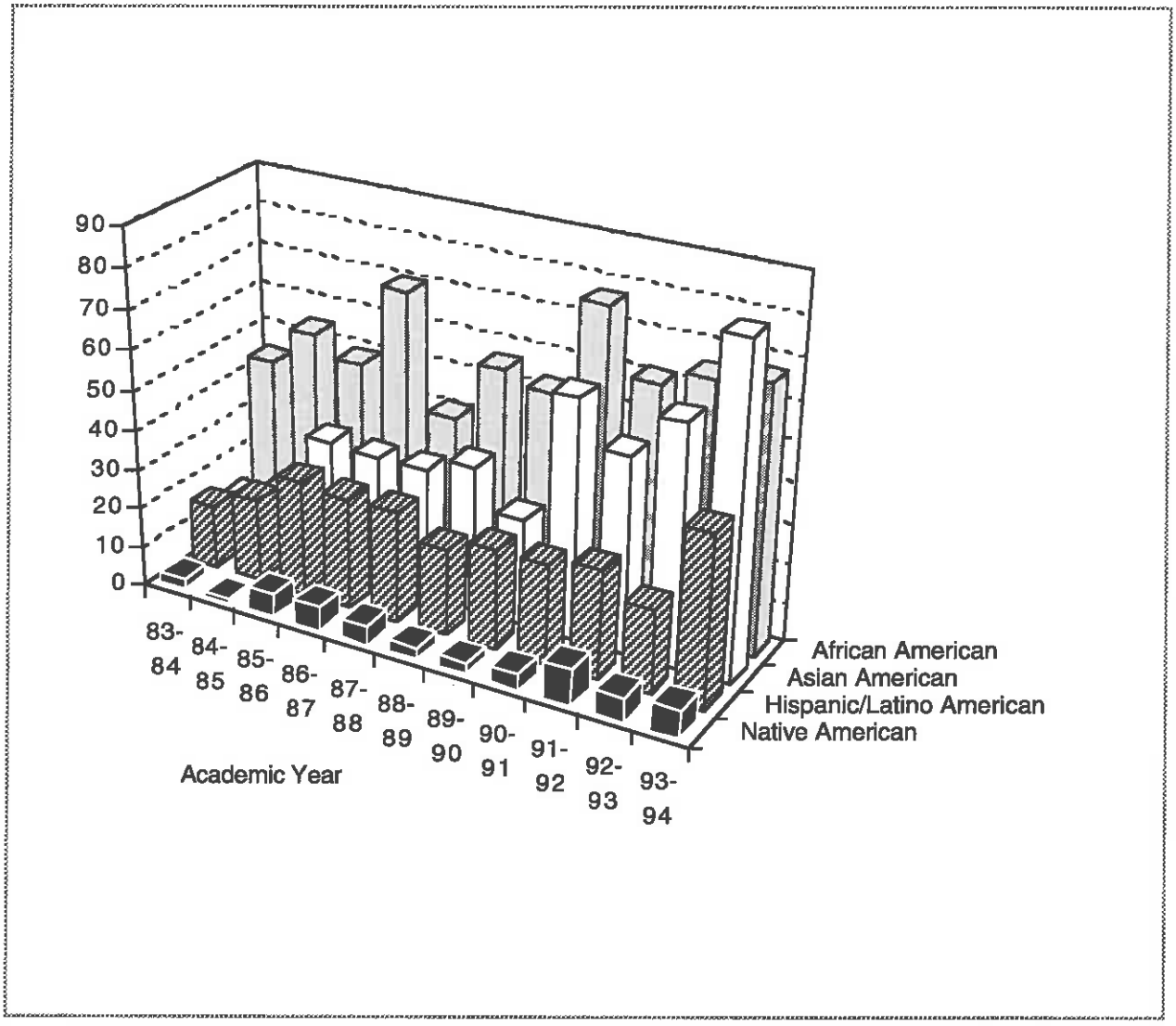
Figure 6-19 Minority Masters and Intermediate Degrees Conferred



Change Since 87-88:

Total Minorities	+129%

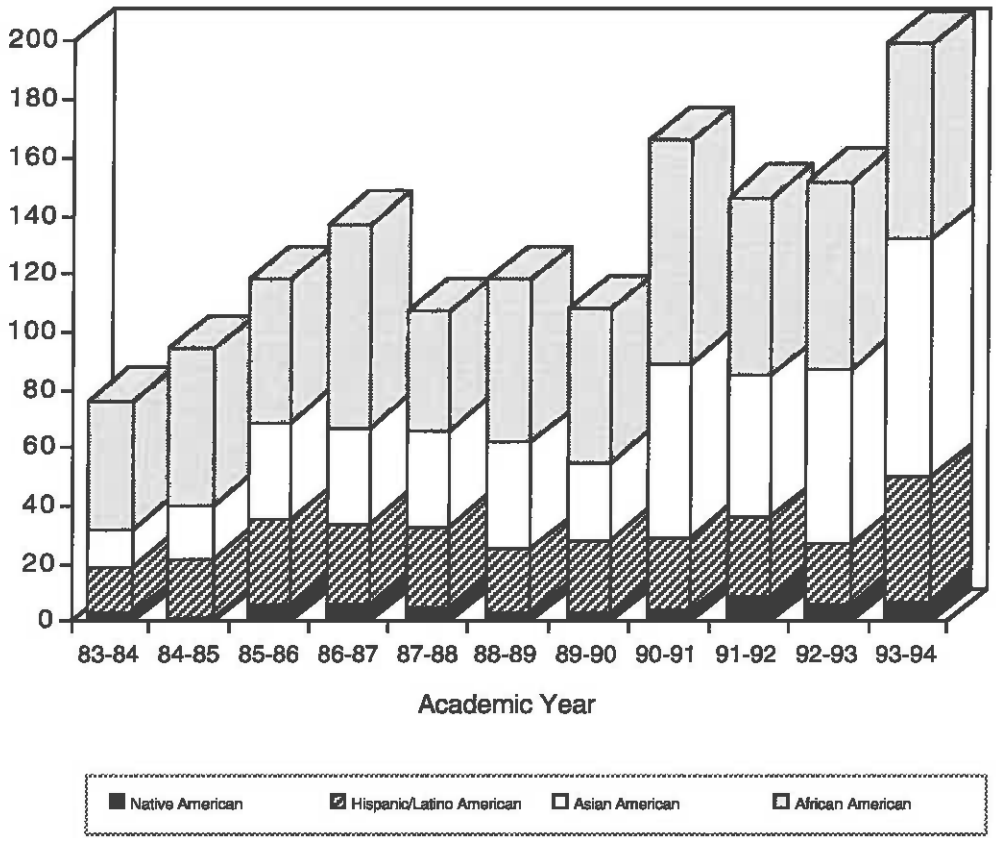
Figure 6-20 Minority Professional Degrees Conferred



Change Since 87-88:

Asian Americans	+148%
African Americans	+63%
Hispanic/Latino American	+54%
Native Americans	+40%

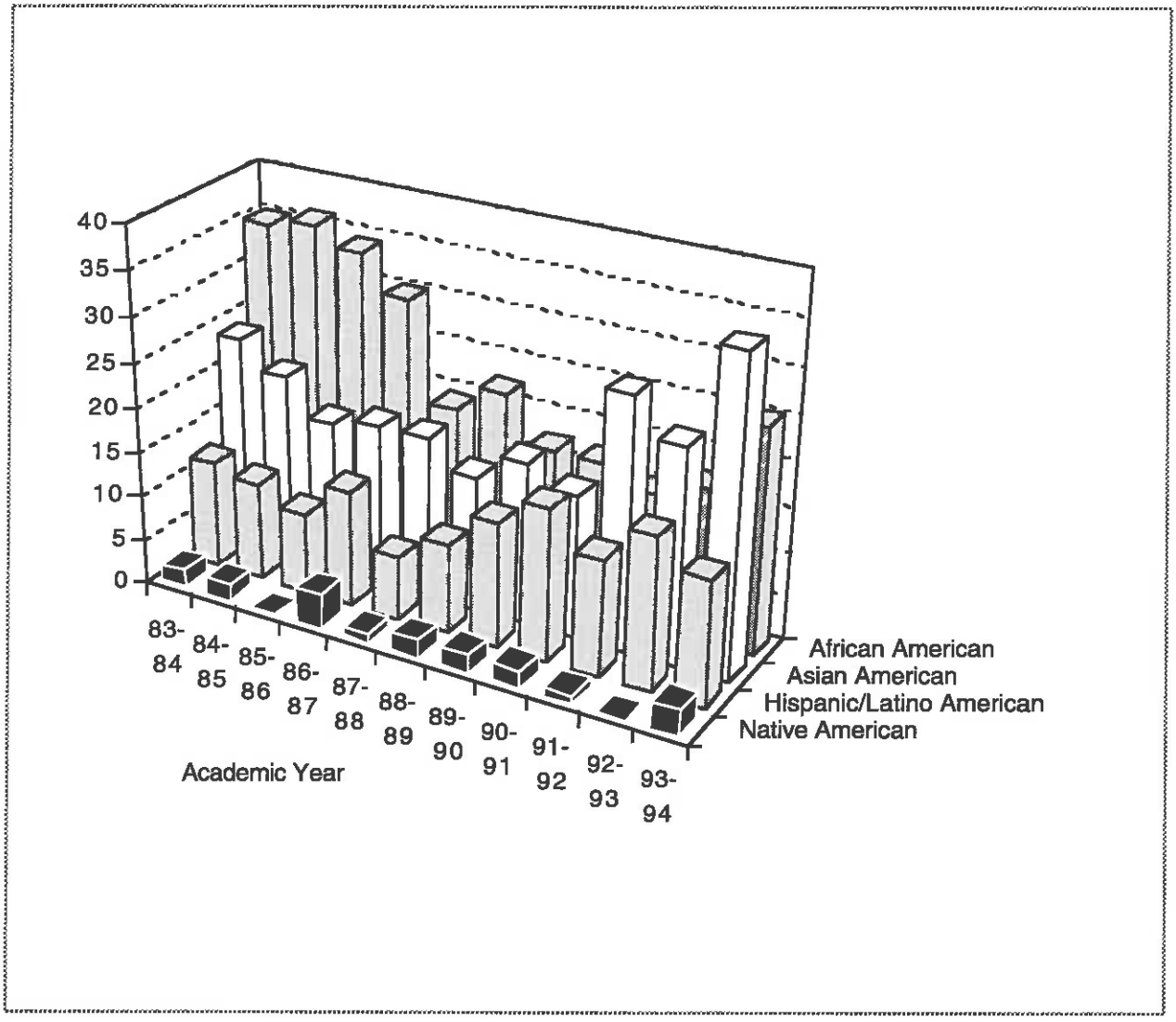
Figure 6-21 Minority Professional Degrees Conferred



Change Since 87-88:

Total Minorities	+86%

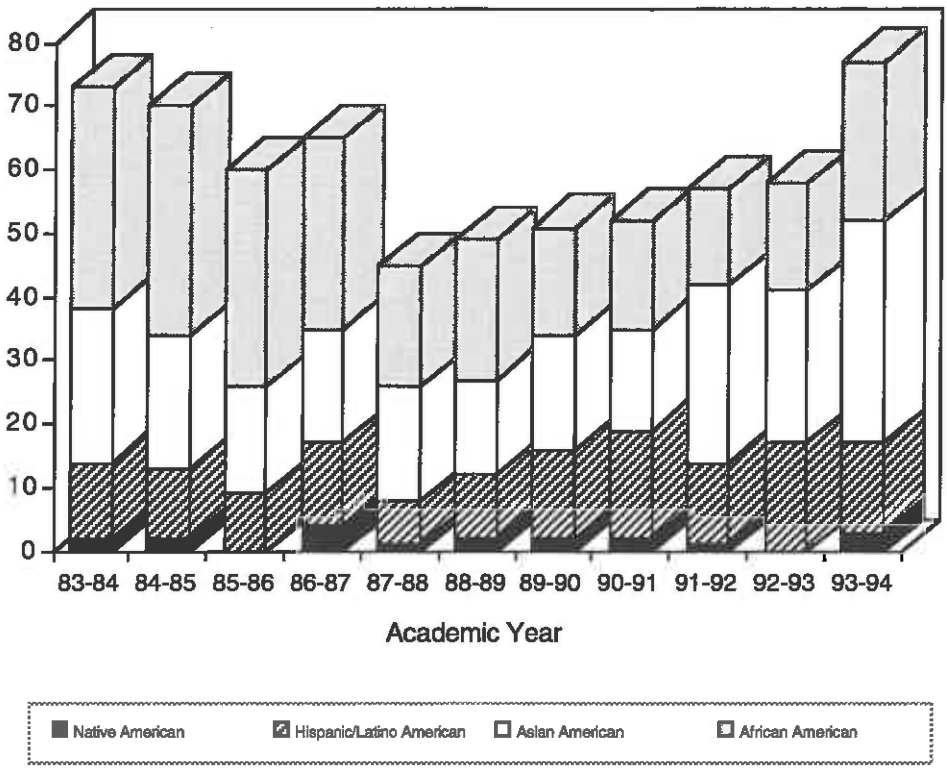
Figure 6-22 Minority Ph.D. Degrees Conferred



Change Since 87-88:

Asian Americans	+94%
African Americans	-32%
Hispanic/Latino American	+100%
Native Americans	+300%

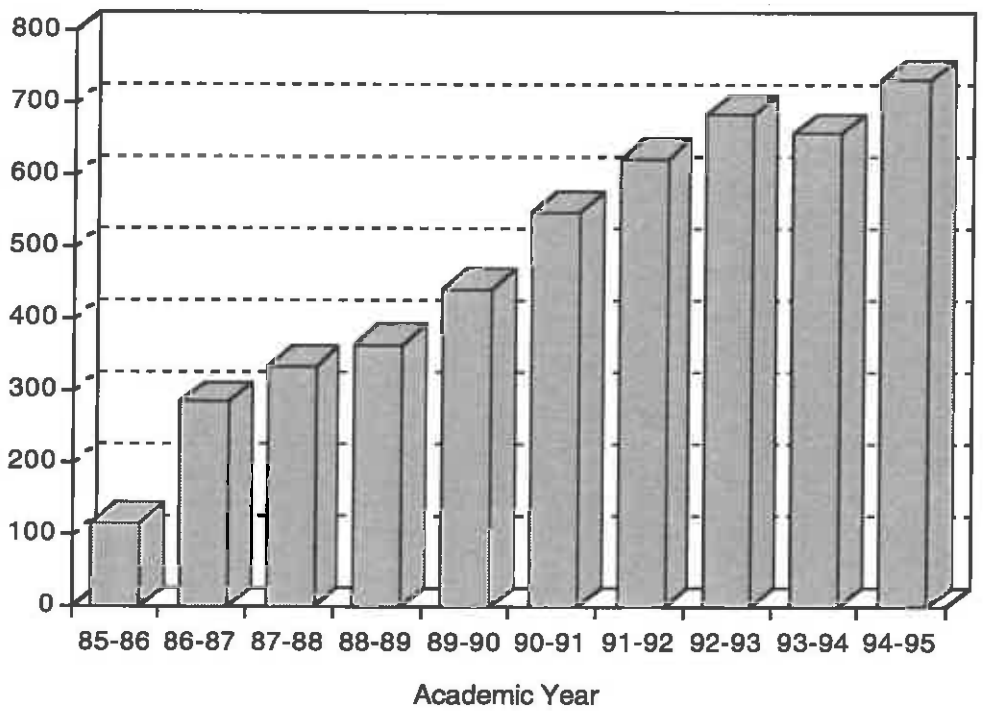
Figure 6-23 Minority Ph.D. Degrees Conferred



Change Since 87-88:

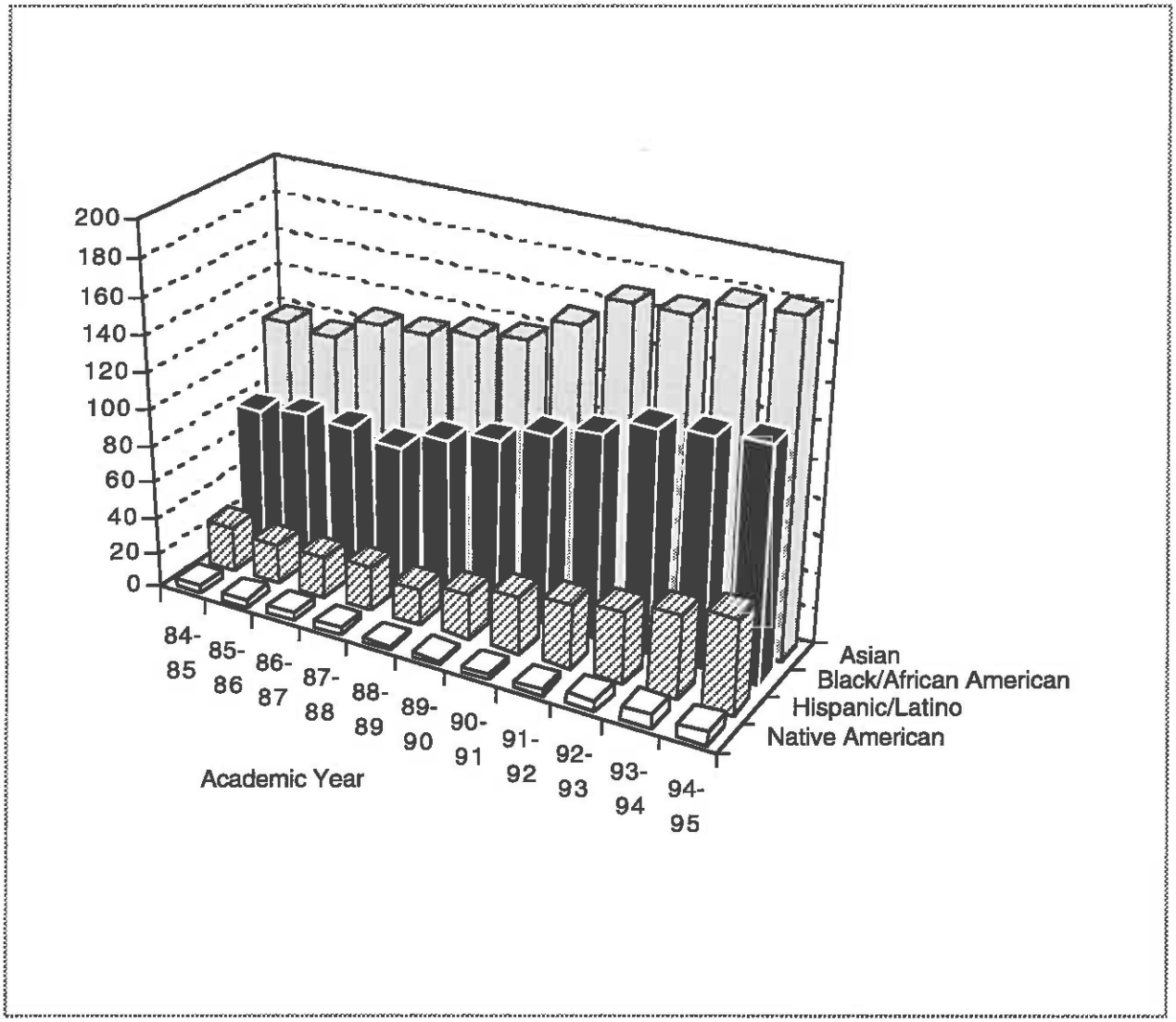
Total Minorities	+71%

Figure 6-24 Rackham Minority Graduate Fellows



Change Since 87-88: +118%

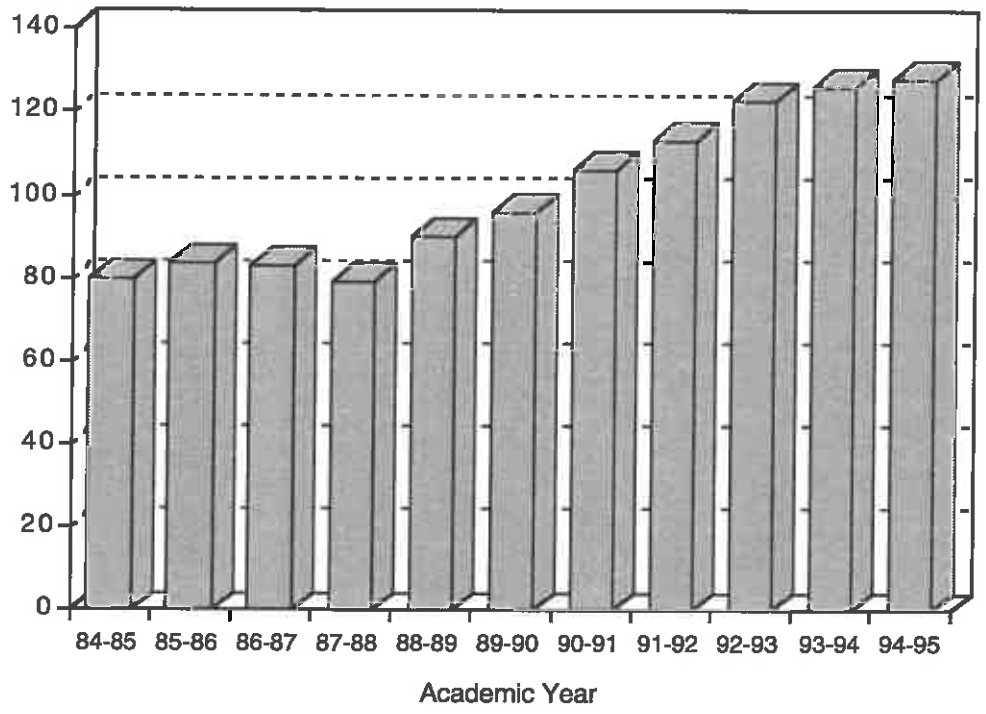
Figure 6-25 Number of Minority Faculty



Change Since 87-88:

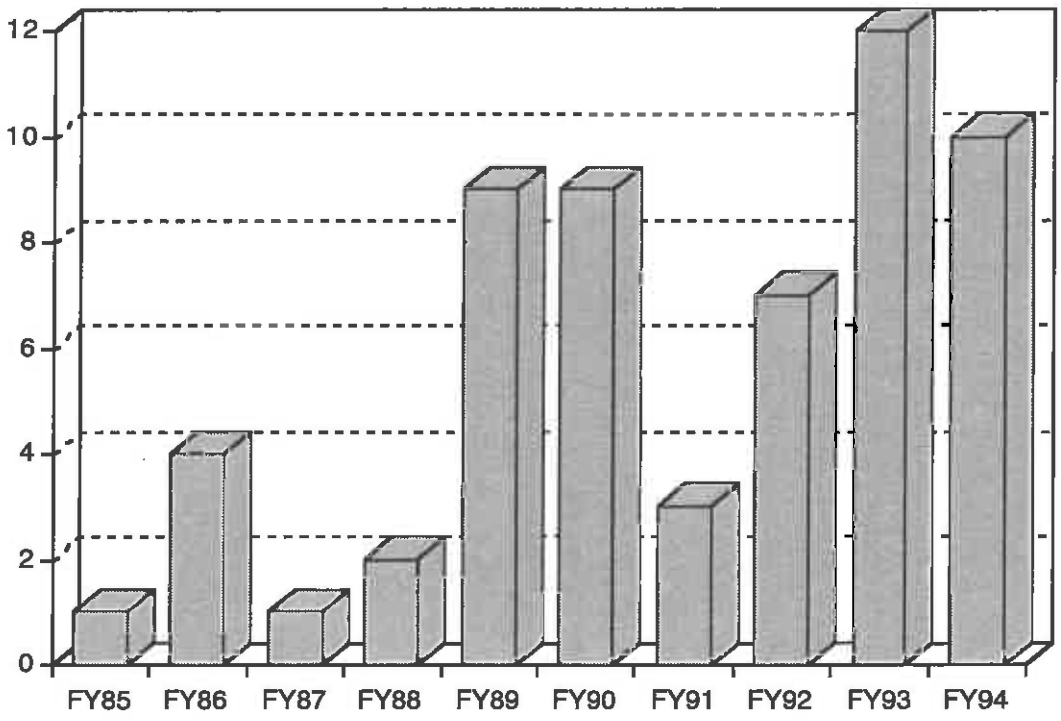
Asian	+39%
Black	+62%
Hispanic/Latino	+117%
Native American	+75%
TOTAL	+55%

Figure 6-26 Number of Blacks/African Americans on Faculty



Change Since 87-88: +62%

Figure 6-27 Senior Hires of Minorities (EOs, deans, directors)



Change Since FY88: +400%

Goal

By the end of the decade, the UM will become the leader among American universities in promoting and achieving the success of women as students, faculty, and staff.

Figure 7-1 Total Enrollment by Gender

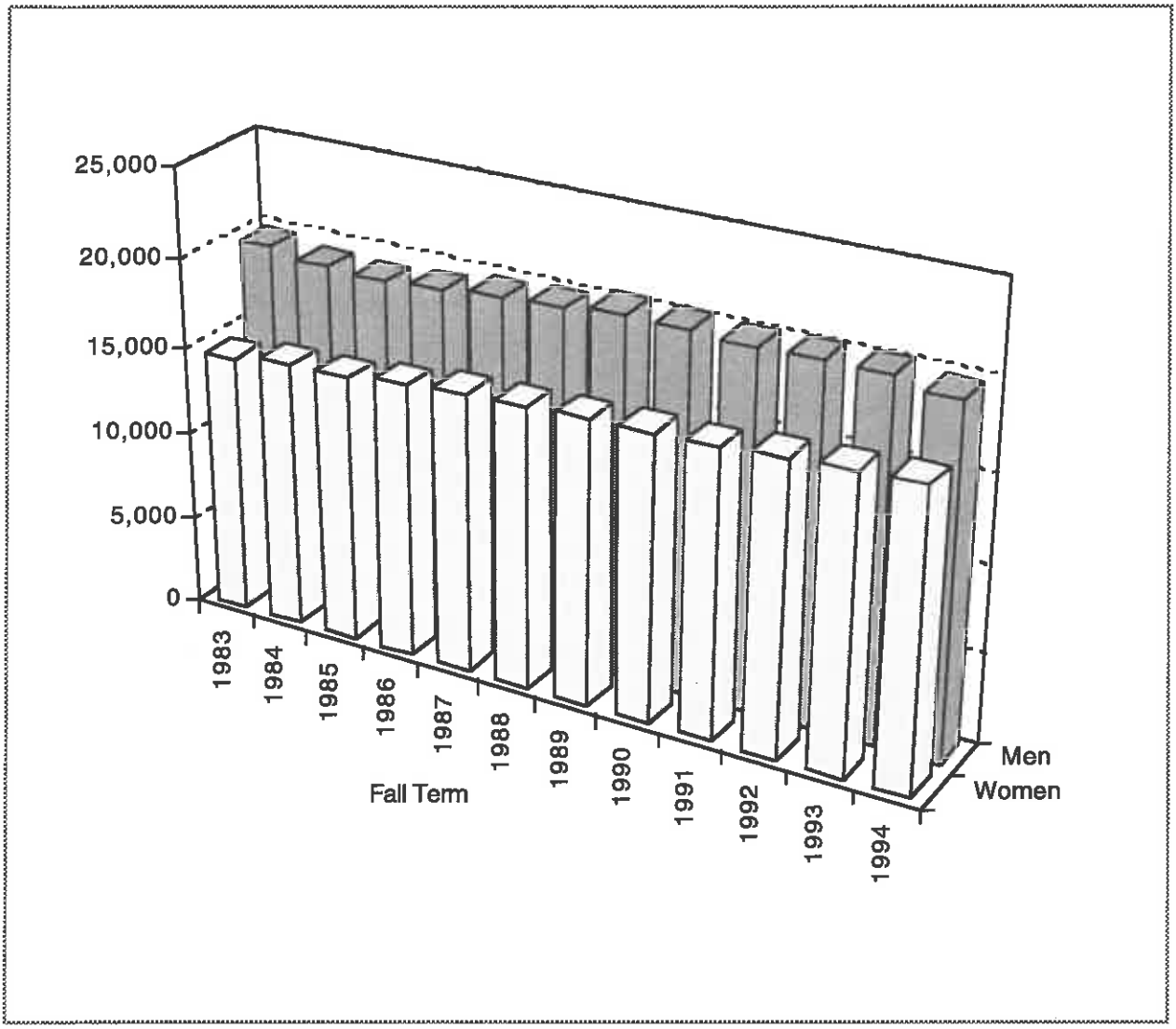


Figure 7-2

Enrollment by Gender as a Percentage of Total Enrollment

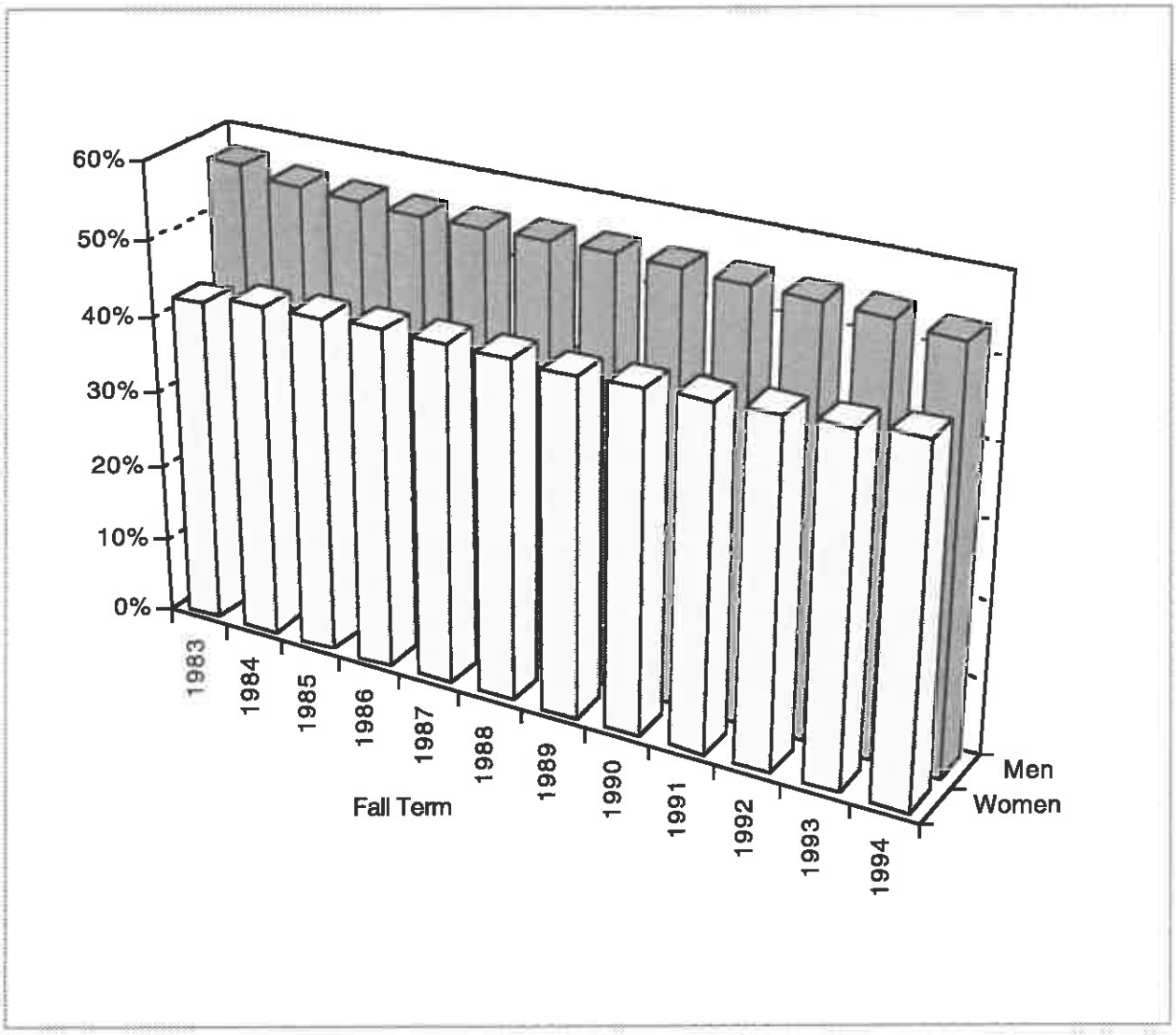


Figure 7-3

The Percentage of Women Students

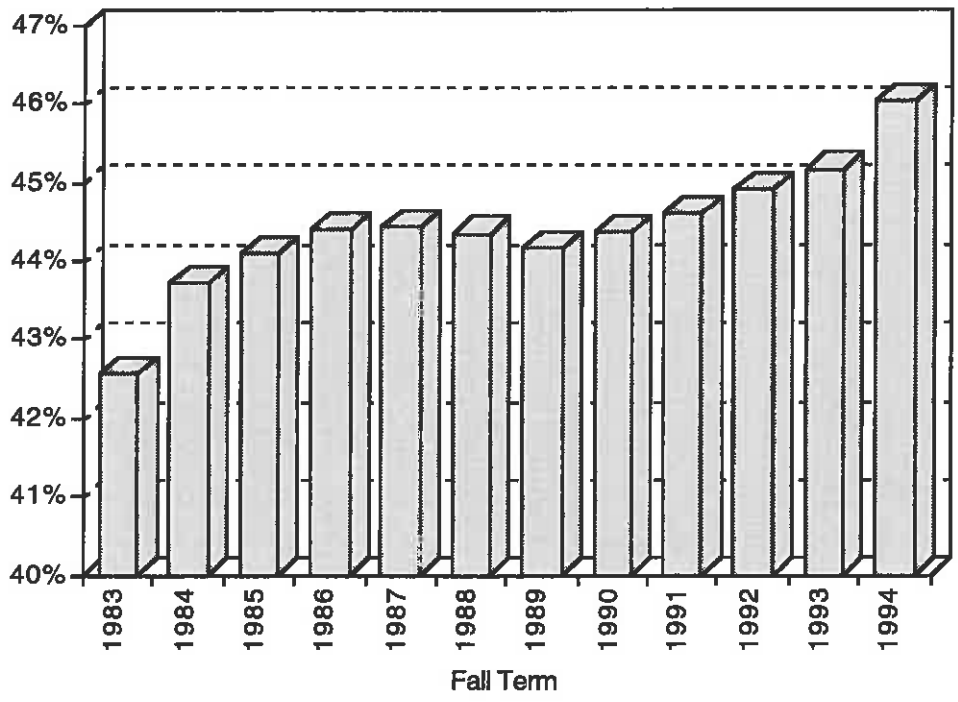
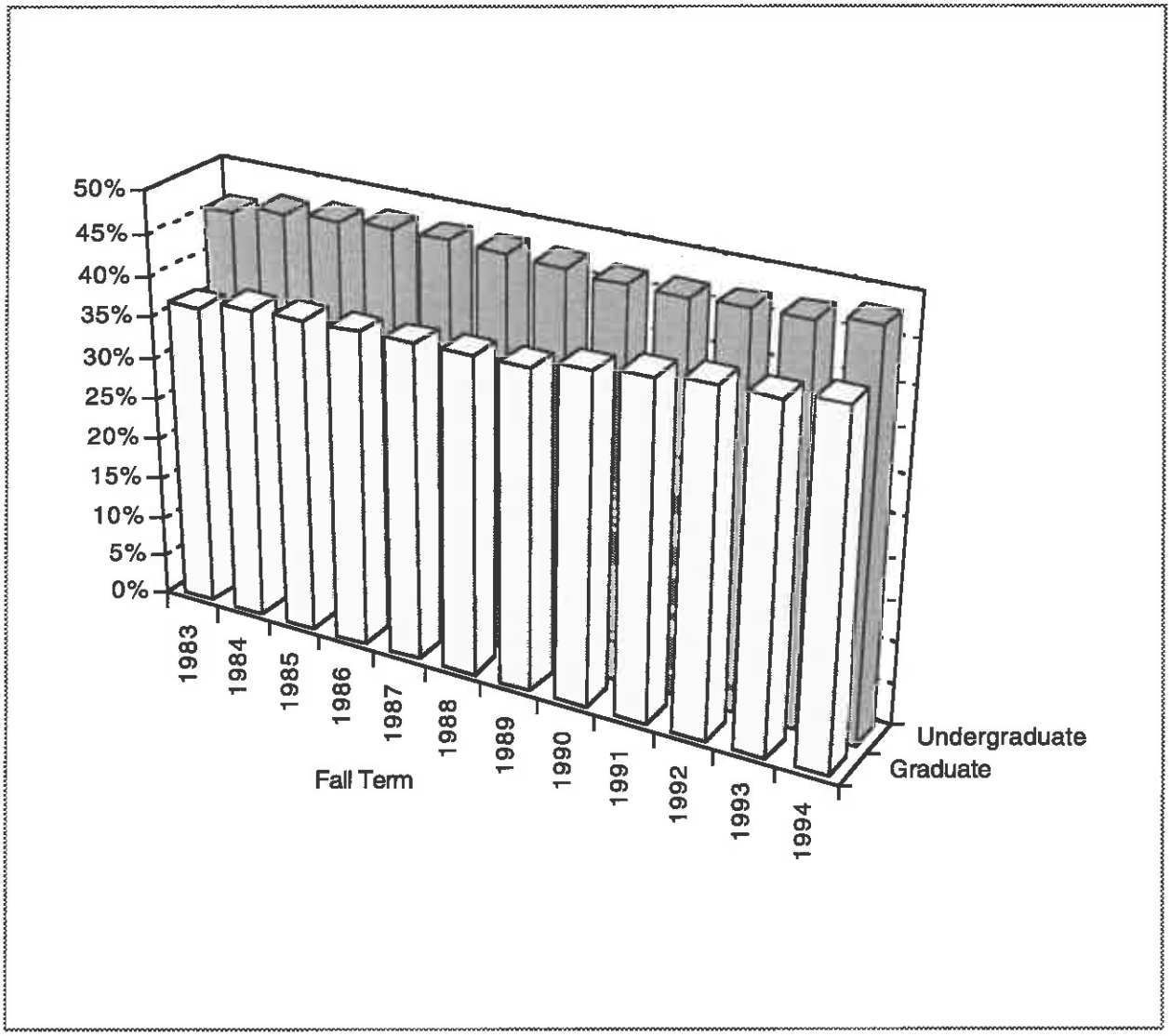


Figure 7-4

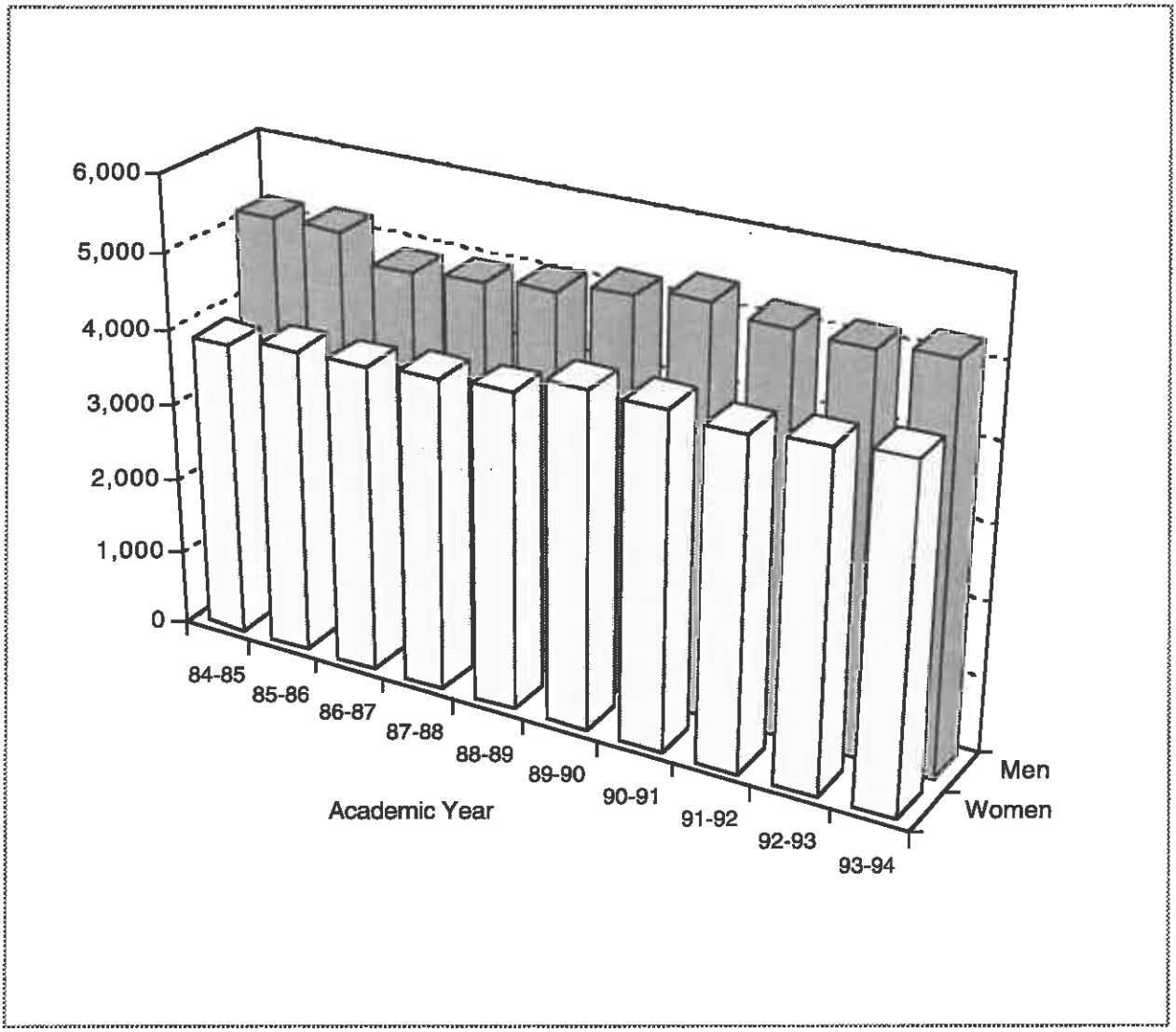
Percentage of Women Enrolled by Student Level



Change Since Fall Term 1987:

Graduates	+10.3%
Undergraduates	+0.7%

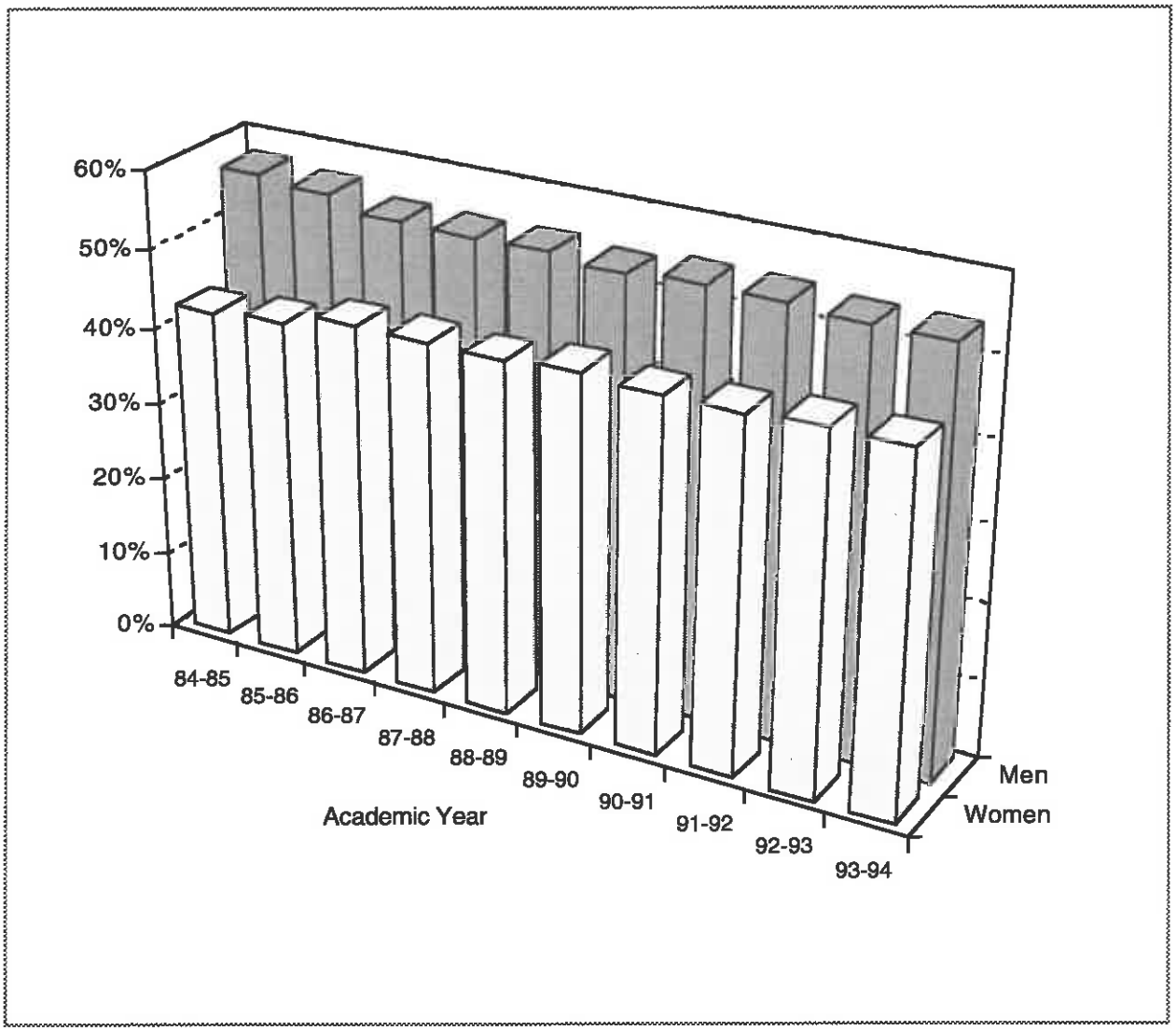
Figure 7-5 Degrees Conferred by Gender



Change Since 87-88:

Women	+9%
Men	+6%

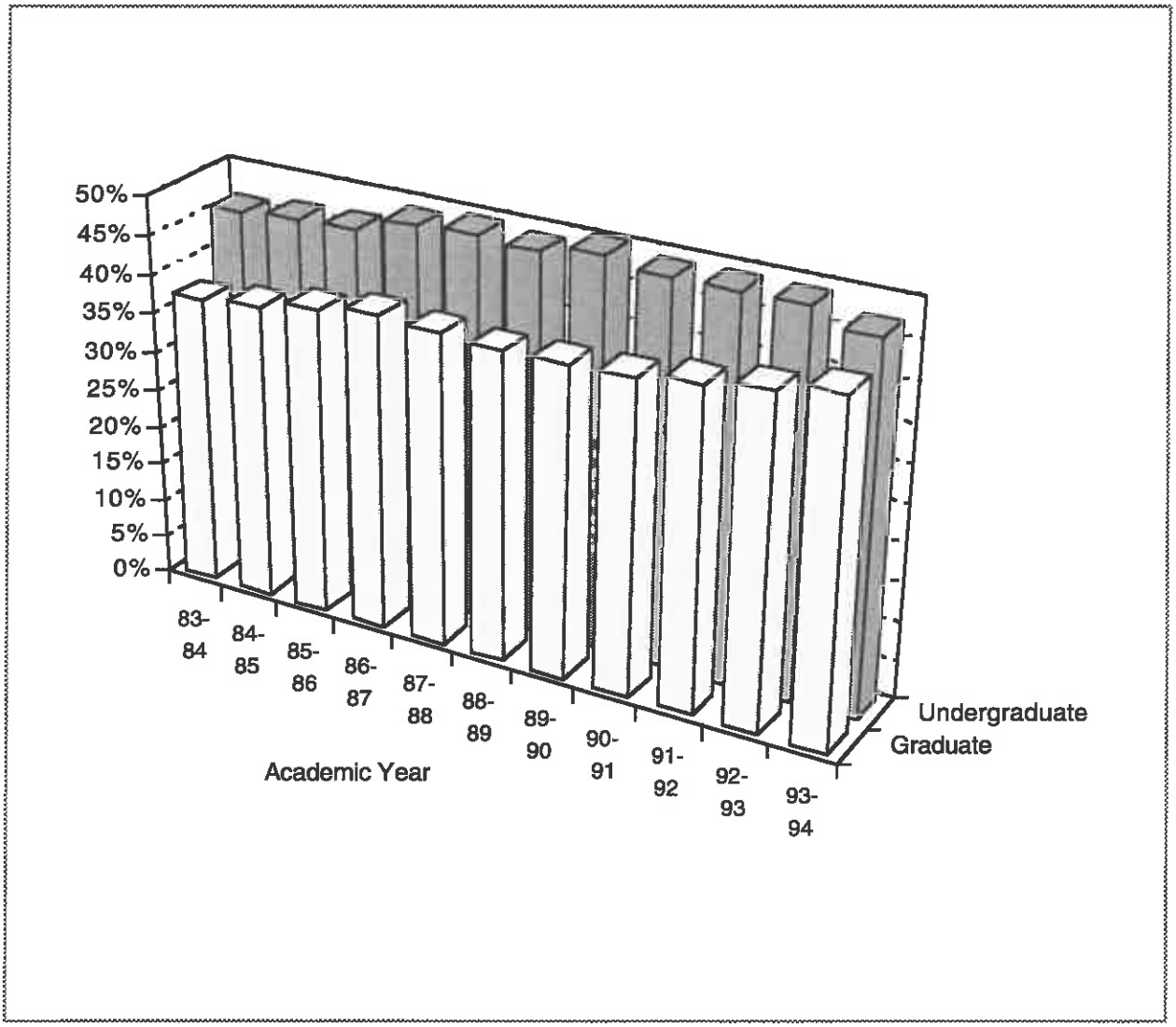
Figure 7-6 Percentage of Degrees Conferred by Gender



Change Since 87-88:

Women	+1.5%
Men	-1.2%

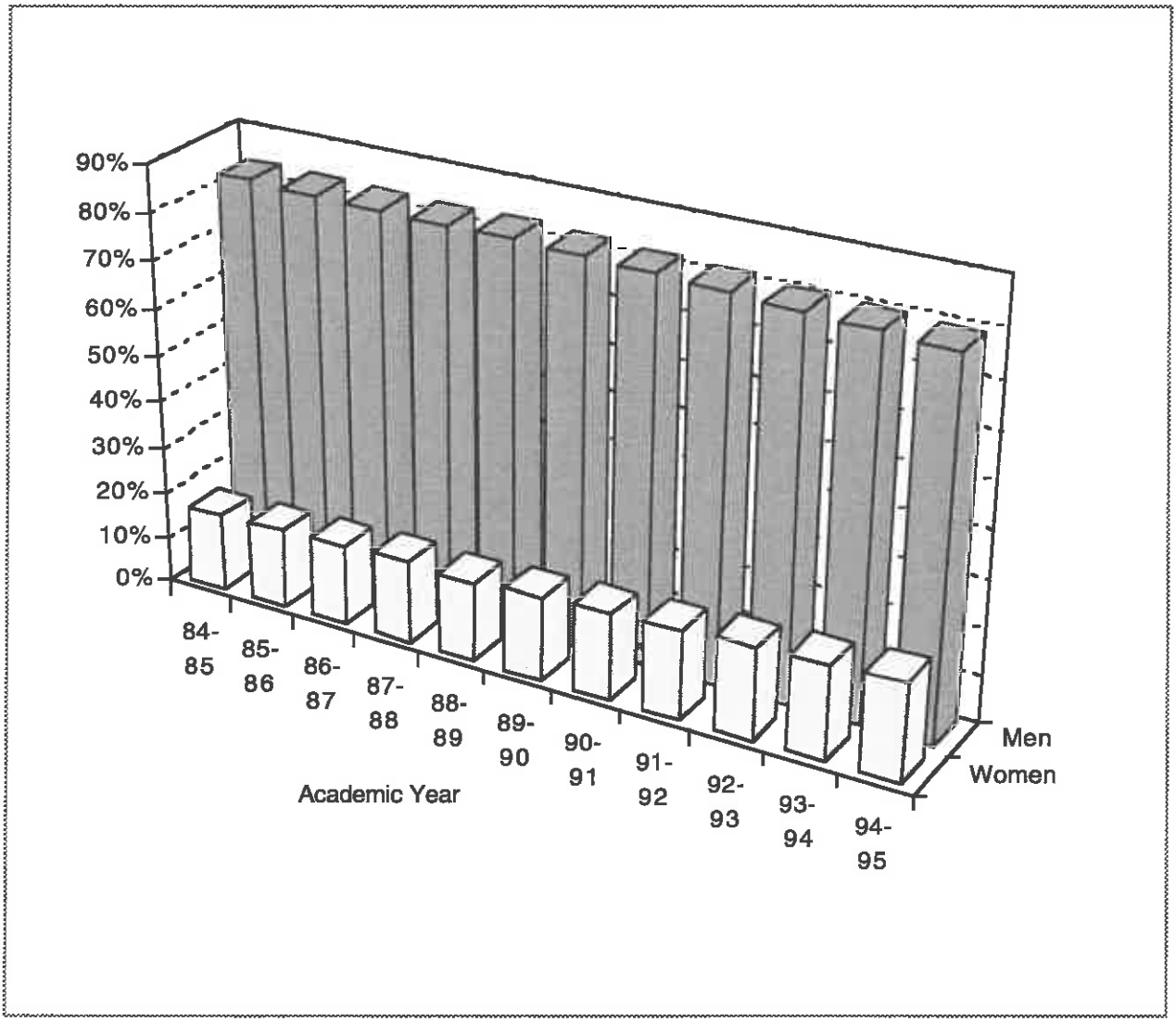
Figure 7-7 Percentage of Degrees Conferred to Women by Degree Level



Change Since 87-88:

Graduates	+8.8%
Undergraduates	-4.9%

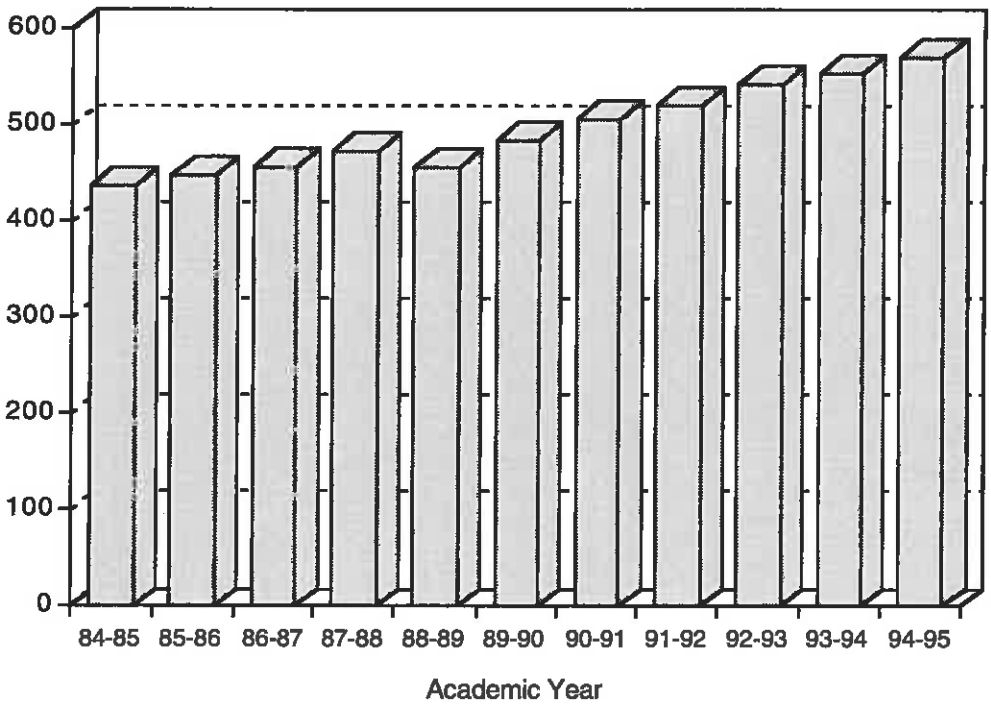
Figure 7-8 Percentage of Faculty by Gender



Change Since 87-88:

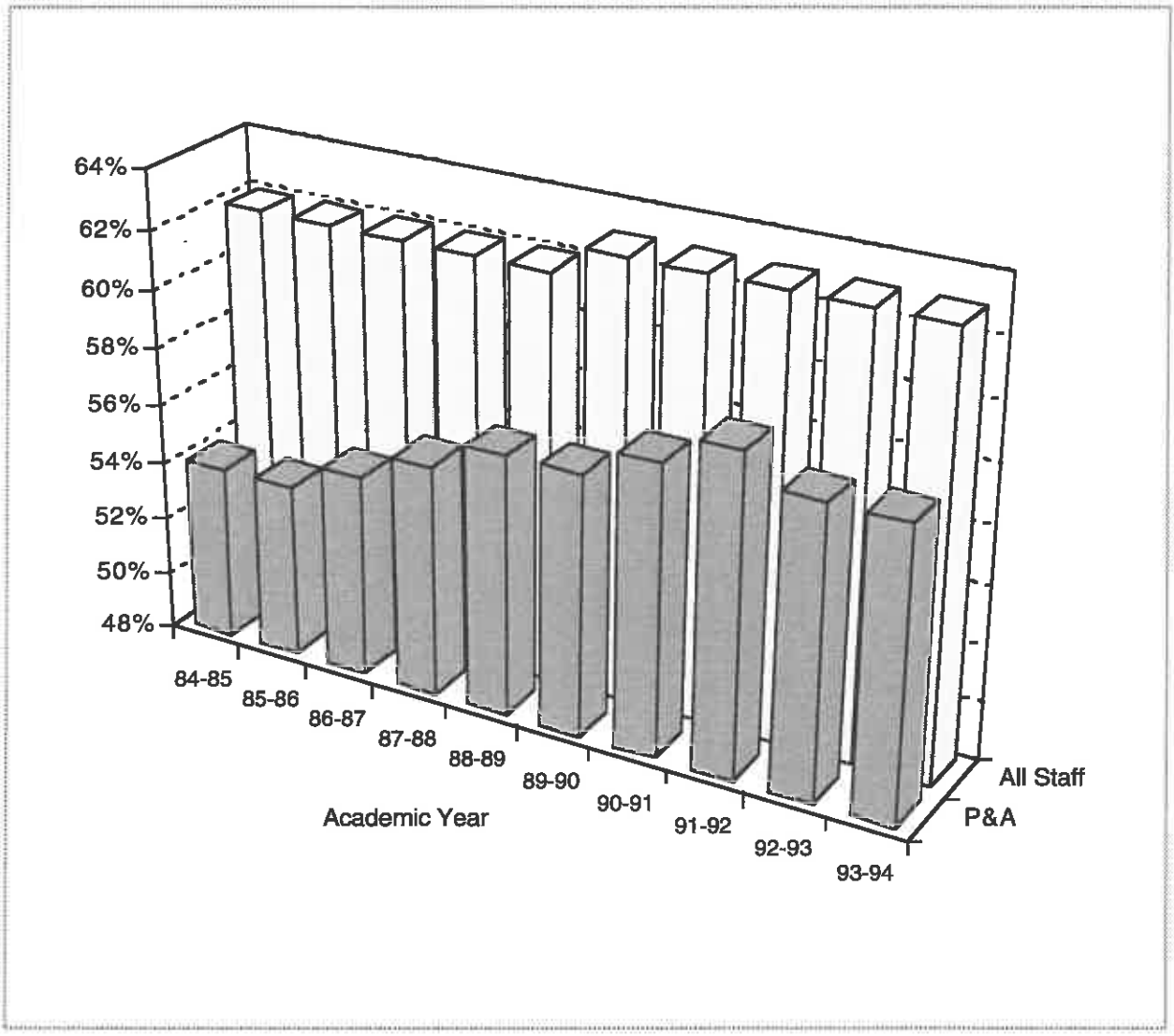
Women	+18.6%
Men	-4.0%

Figure 7-9 Number of Women Faculty



Change Since 87-88: +14.6%

Figure 7-10 Percentage of Women Staff in Academic Units (excluding hospitals)



Change Since 87-88:

All Staff	+1.6%
P & A Staff	5.4%

Goal To develop a new paradigm for undergraduate education in a major research university

Milestones

1957	Honors Program
1963	Pilot Program
1967	Residential College Program
1969	Minority Engineering Program
1983	Comprehensive Studies Program
1985	Summer Research Opportunity Program (SROP)
1986	Training of International Graduate Student Teaching Assistants
	LS&A Blue Ribbon Panel on Undergraduate Education
1987	New standards for Teaching Assistant language proficiency
	Thurnau Professorships for undergraduate teaching
	Institute for Humanities involvement in undergraduate education (Hewlett Foundation grant)
	Provost's White Paper on Undergraduate Education (JJD) Presentation to Senate Assembly
	Undergraduate Initiatives Fund
	Central Campus Classroom Renovation Projects (ongoing)
1988	Angell-Haven Computer Courtyard Project
	UGLI Renovation (Phase I)
	Focusing of Undergraduate Initiatives Fund
	Intergroup Relations and Conflict Program
	Teaching Assistant Training Program
	Residence Hall Study
	LS&A Advisors assigned to Residence Halls
	Engineering Commission on Undergraduate Education
	The Collegiate Fellows Program
	Undergraduate Research Opportunity Program

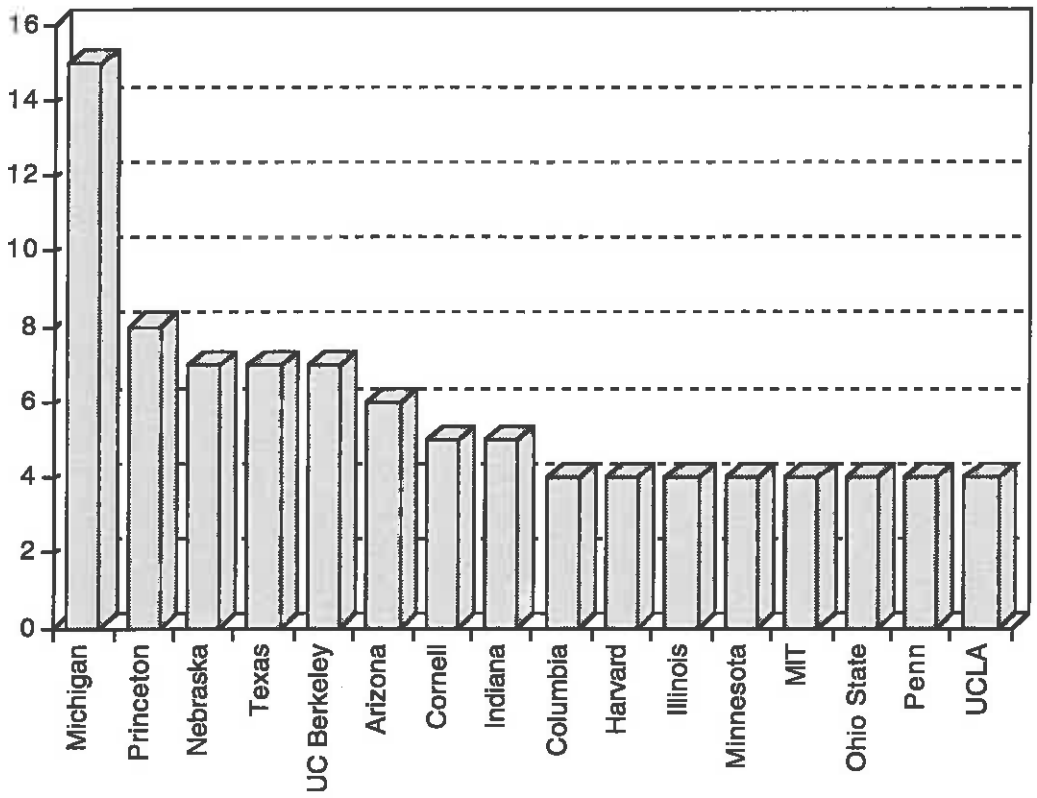
1989	LS&A Task Forces
	Collegiate Seminars
	Curricular Reform of Introductory Chemistry Courses
	Global Rivers Environmental Education Network
	Language Resource Center Media Projects
	Engineering Efforts
1990	Report of Planning Committee on Undergraduate Education (PCUE)
	Appointment of Assistant Dean for Undergraduate Curriculum in LS&A
	Appointment of Associate Dean for Undergraduate Affairs in Engineering
	"Sunrunner": 1st in US, 3rd in World Solar Car Challenge
1991	21st Century Program
	Advisory Office for Women in Engineering
	College of Engineering Faculty Fellows Program
	LS&A Race or Ethnicity Requirement (UC 299)
	English: Senior faculty required to teach an Undergraduate course
	LS&A Teaching Awards
	Mentoring Program for Undergraduates
	Report of the Central Committee on Undergraduate Education (CCUE)
	College of Engineering Teaching Awards
1992	Introduction of new "non-calculus" sequence in mathematics
	Gateway Campus Plan
	College of Engineering surveys on the undergraduate educational experience
	Revision of introductory calculus courses
	New B.A. Degree Program in Physics

1993	New B.A. Degree offered in Biology
	College of Engineering curricular revisions
	Task Force on the First-Year Experience
	WISE (Women in Science and Engineering) Residence Hall
1994	Revitalization of Center for Research on Learning and Teaching
	Classical Studies concentration in Classical Civilization
	Expansion of Freshman Seminars into "Gateway" Seminars
	New B.S. Degree offered in Biochemistry
	Quantitative Reasoning Requirement passed

Goal To build strong teams to lead the University

Figure 9-1

A Comparison of the Number of Presidents Produced During the Past 25 Years



Milestones

The Teams: Leadership Groups

Executive Officer Team

Management Committee

The Teams: Strategic Groups

Strategic Assessment Team

Futures Group (10-30 year planning horizon)

Committee on Institutional Advancement

Campaign Steering Group

Council on a Multicultural University (COMU)

Advisory Committee on University Budgets (ACUB)

Dean's Development Committee

Change Group II (1991)

Strategic Planning Team (1989)

State Strategy Team (1989)

Change Group (1989)

Detroit Strategy Group (1989)

State Outreach Group (1989)

Communications Advisory Team (1989)

The Teams: Other Standing Groups

Academic Policy Group

Medical Center EO Group

Federal Relations Strategy Group

State Relations Strategy Group

EO/SACUA/Deans/Regents/Student retreats

Committee on Budget Administration (1988)

Additional involvement of Deans in University Planning (1988)

Academic Policy Group

Strategic Planning Team

Development Policy Group

Science Development Council

AAAC/EO Retreats

Science Development Council (1988)

The Teams: Special Task Forces

Task Force on Town-Gown Interface (Bob Beckley, Chair)

Task Force on First-Year Experience

University Events (ongoing, John D'Arms, Chair)

University History and Traditions (ongoing, Bob Warner, Chair)

Campus Safety Committee (ongoing, Jim Snyder, Chair)

Substance Abuse Task Force (ongoing, George Zuidema, Chair)

Study Committee on Status of Lesbians and Gay Men (1991)

Minority Retention (1990)

Task Force on Costs of Higher Education (1989)

Task Force on Campus Safety (1989)

Task Force on University Events (1989)

Task Force on Faculty Recruitment, Retention, and Retirement (1989)

Task Force on Quality of Student Life (1989)

Task Force on Student and Faculty Housing (1989)

EO/SACUA/Student Leadership Retreats (1989)

"Campus Urbanization" Study (1989)

The Teams: External Groups

President's Advisory Council (1989)

Capital Campaign Steering Committee (1991)

Investment Advisory Council (1990)

Michigan CEO-Presidents Roundtable (1990)

Technology Transfer Advisory Committee (1993)

Other Leadership Indicators

UM Administrators Going on to University Presidencies

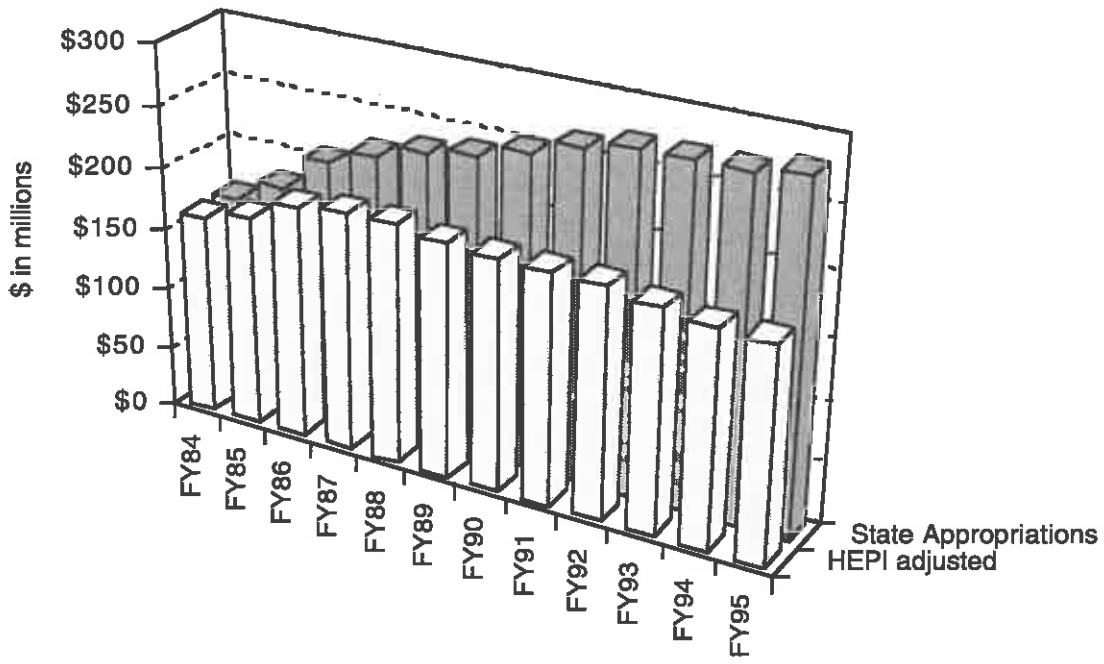
1965	Roger Heyns (UC-Berkeley)
1969	Frederick Thieme (Colorado)
1971	Stephen Spurr (Texas)
1975	James Zumberge (Nebraska, USC)
1977	Frank Rhodes (Cornell)
1978	Arthur Hanson (Purdue, Texas A&M)
1980	David Ragone (Case-Western Reserve)
1980	Harold Shapiro (Michigan)
1985	John Crecine (Georgia Tech)
1987	Harold Shapiro (Princeton)
1988	George Lewis (Vermont)
1988	J. Duderstadt (Michigan)
1989	Niara Sudarkasa (Lincoln)
1990	Linda Wilson (Radcliffe)
1991	Charles Vest (MIT)

Goal

To acquire the resources necessary to sustain UM's excellence in face of decline in state support

Figure 10-1

State Appropriations (both in actual and HEPI adjusted to FY84$, showing decline since FY88 relative to inflation)



Change Since FY88:

State Appropriations	+18%
State Appropriations (HEPI)	-9.2%

Figure 10-2 State Appropriations (both actual and HEPI adjusted to FY69$)

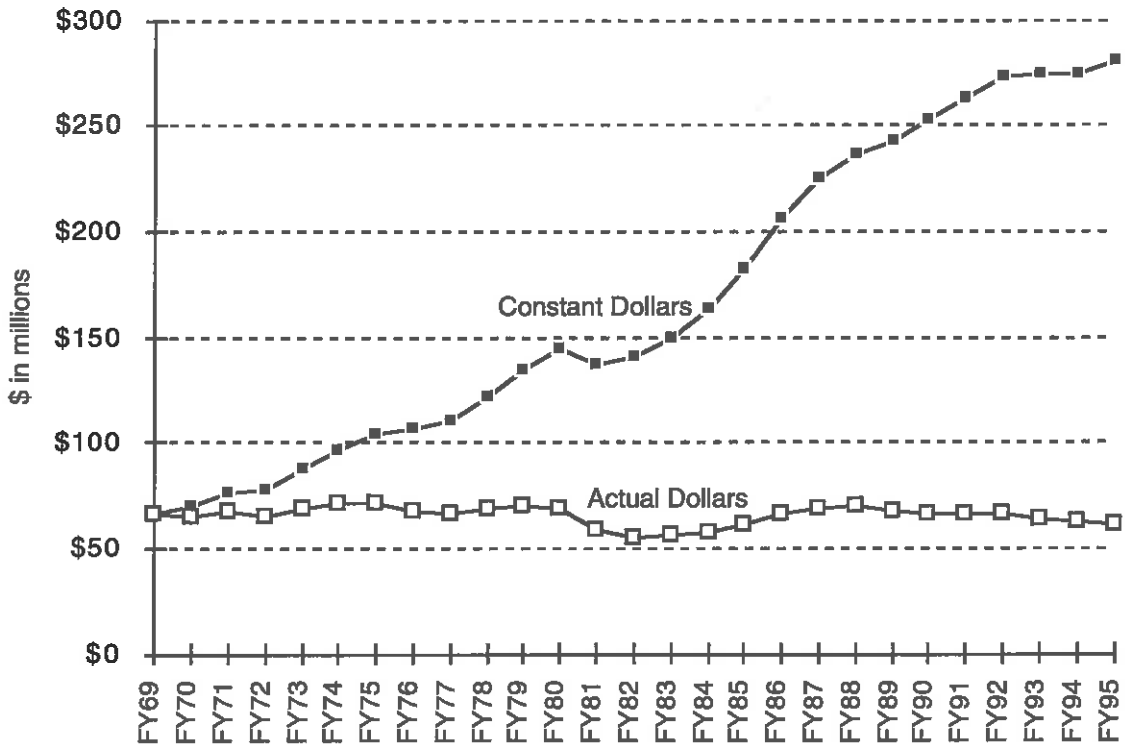


Figure 10-3

State Appropriations per Fiscal Year Equated Student (in actual dollars and HEPI adjusted to FY69$)

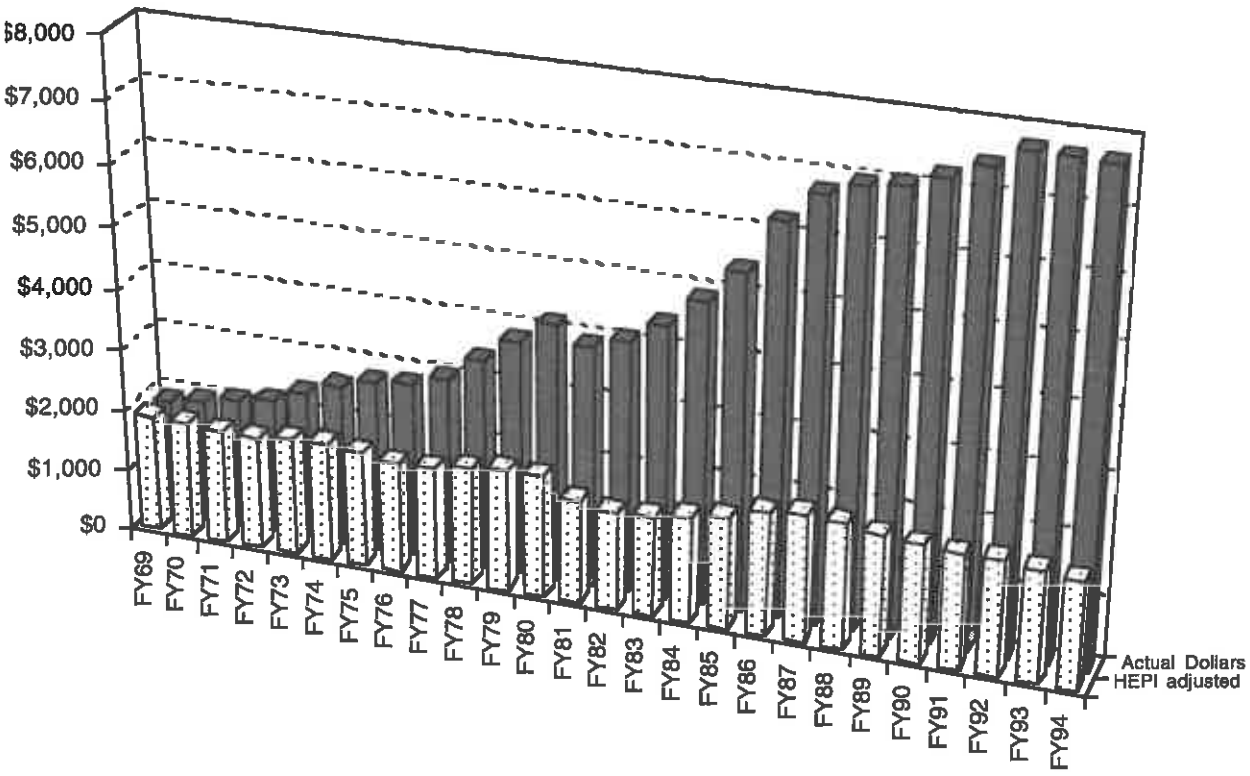


Figure 10-4 State Appropriations per Fiscal Year Equated Student (in Actual Dollars and HEPI adjusted to FY84$)

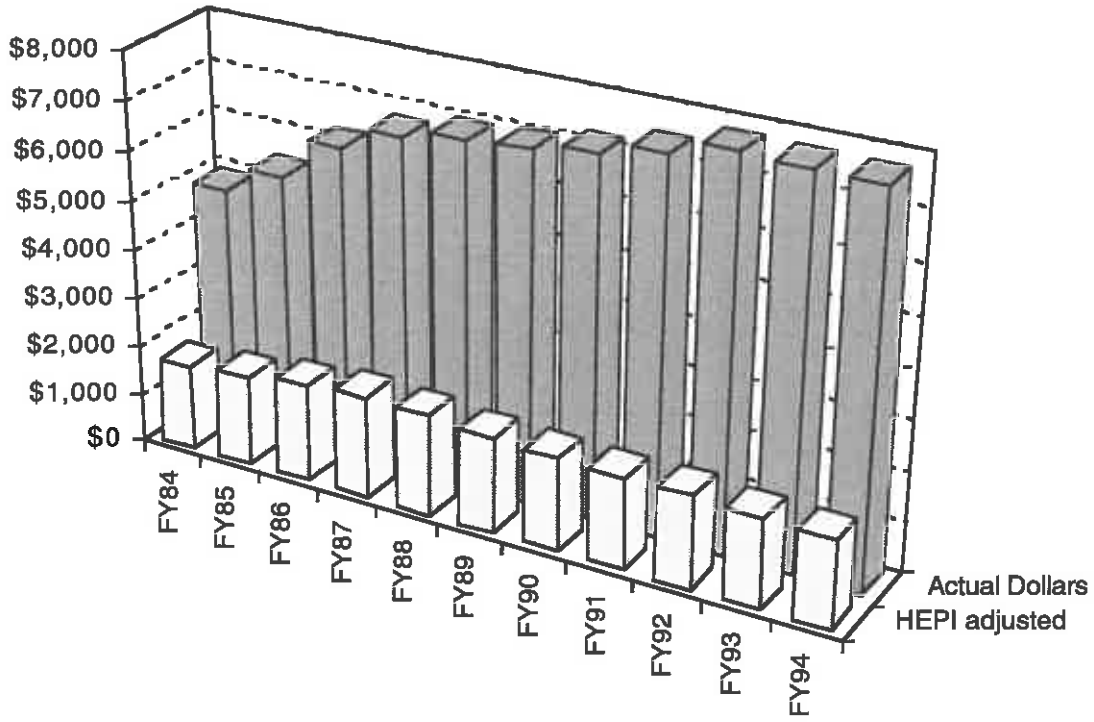


Figure 10-5

A Comparison of FY92 State Appropriations per Fiscal Year Equated Student

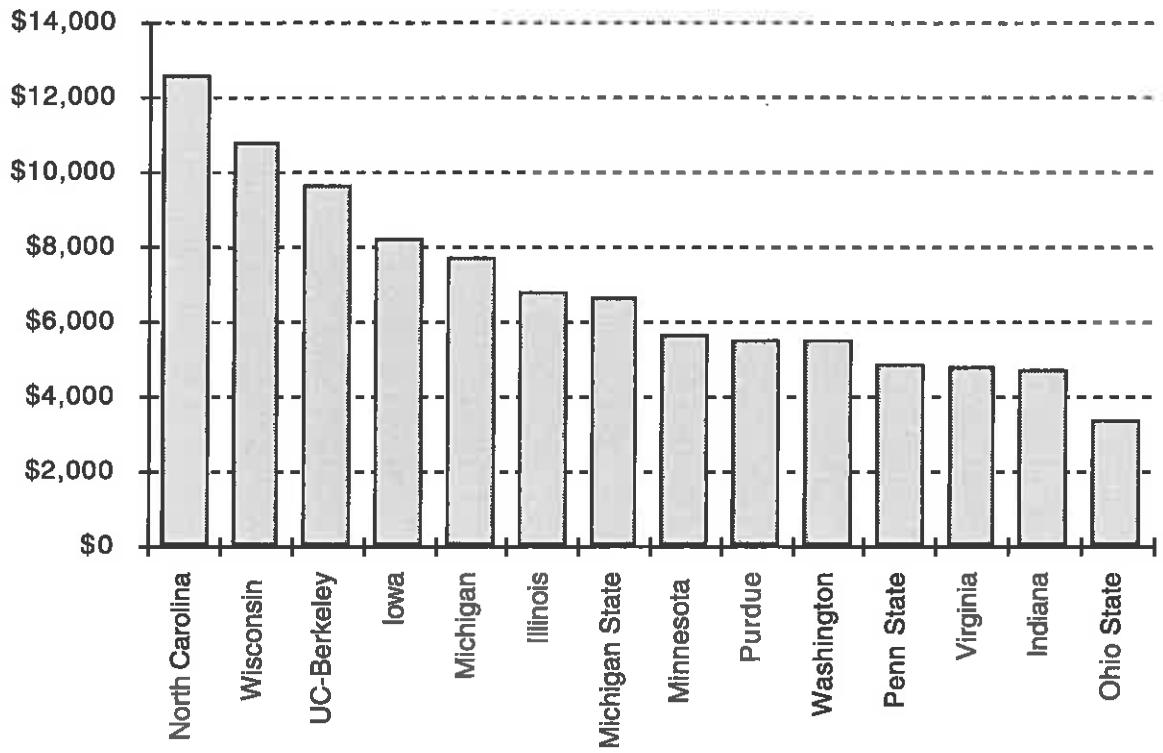
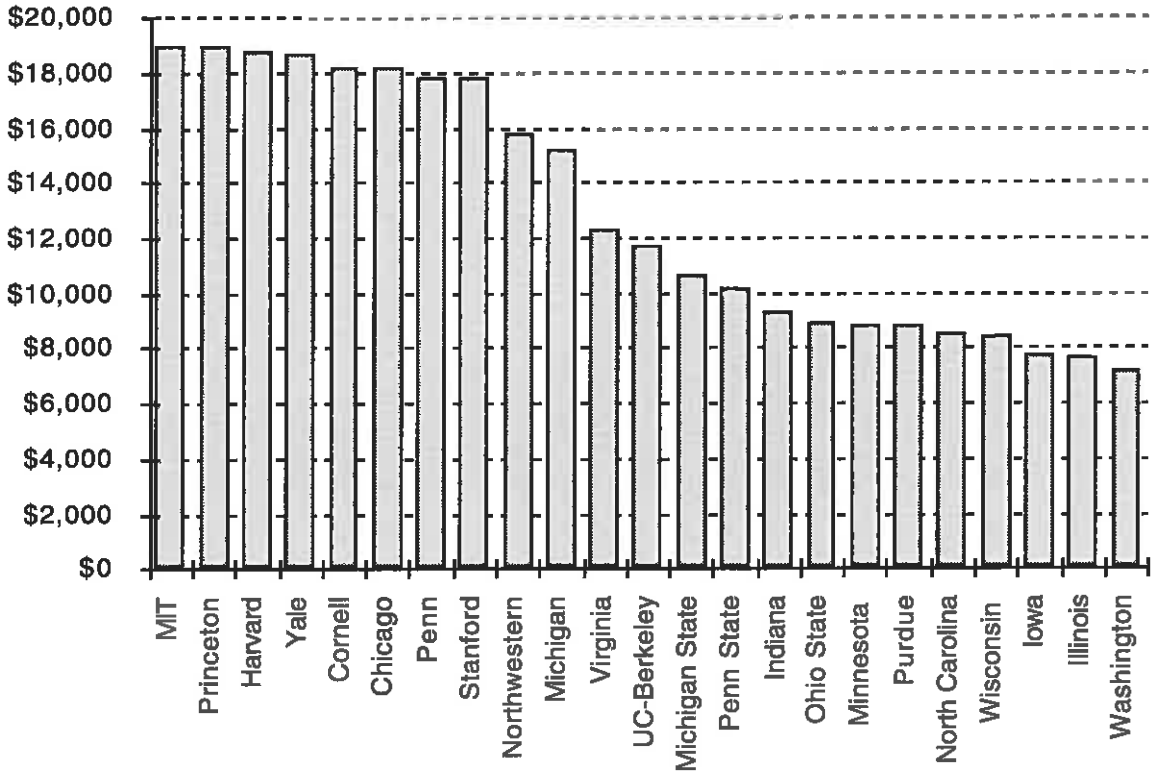


Figure 10-6

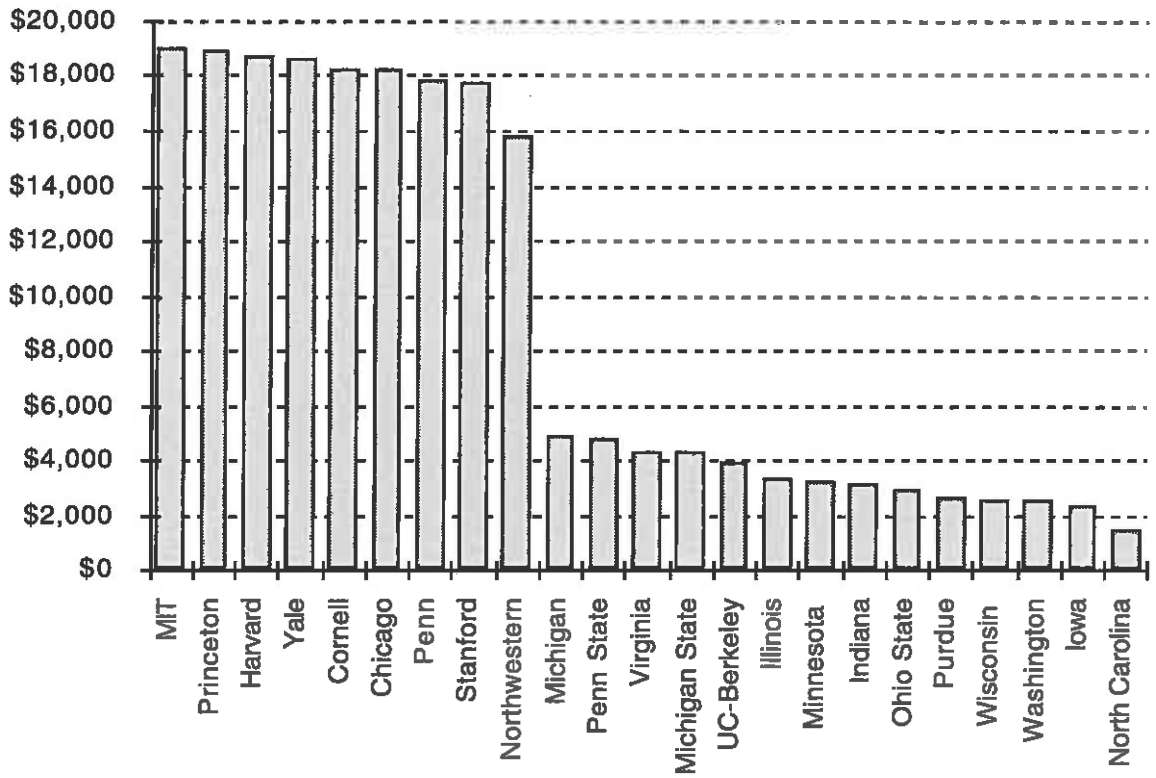
A Comparison of 1993-94 Undergraduate Tuition Rates at Peer Public and Private Universities



Note: Numbers for public universities are non-resident undergraduate tuition rates.

Figure 10-7

A Comparison of 1993-94 Undergraduate Tuition Rates at Peer Public and Private Universities



Note: Numbers for public universities are resident undergraduate tuition rates.

Figure 10-8

A Comparison of Effective Support per Student (as measured by the sum of FY92 State Appropriations per FYES and Resident Undergraduate Tuition Rates)

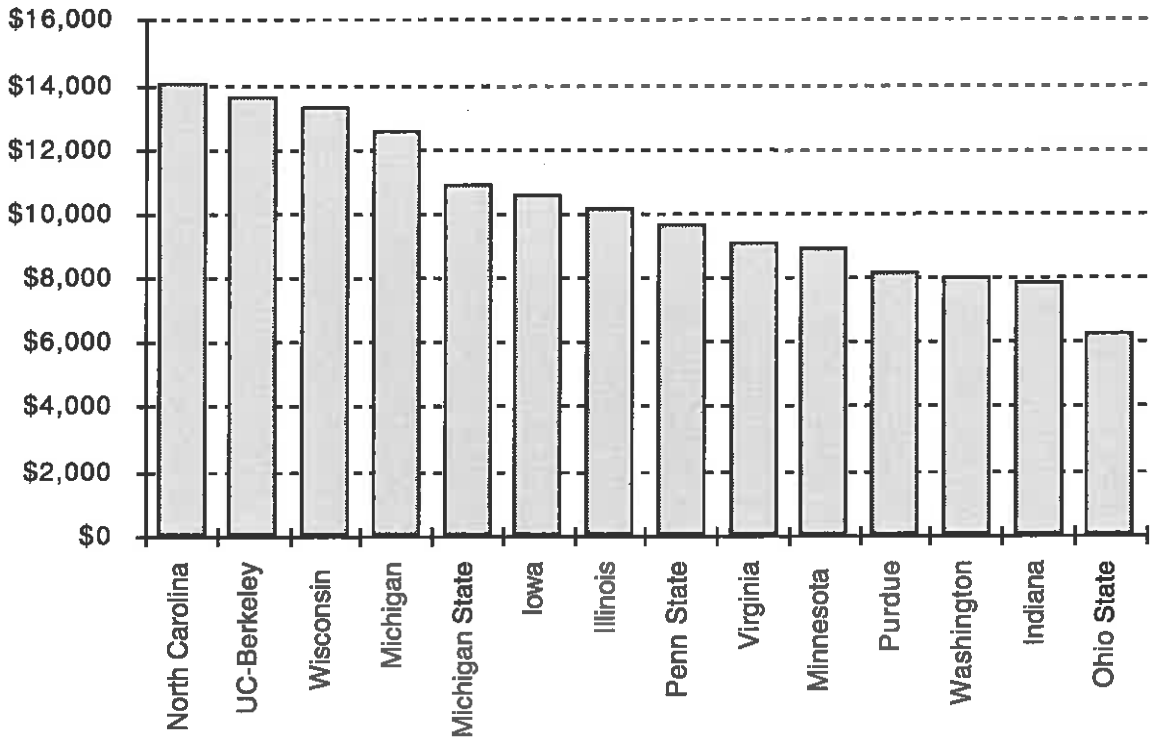
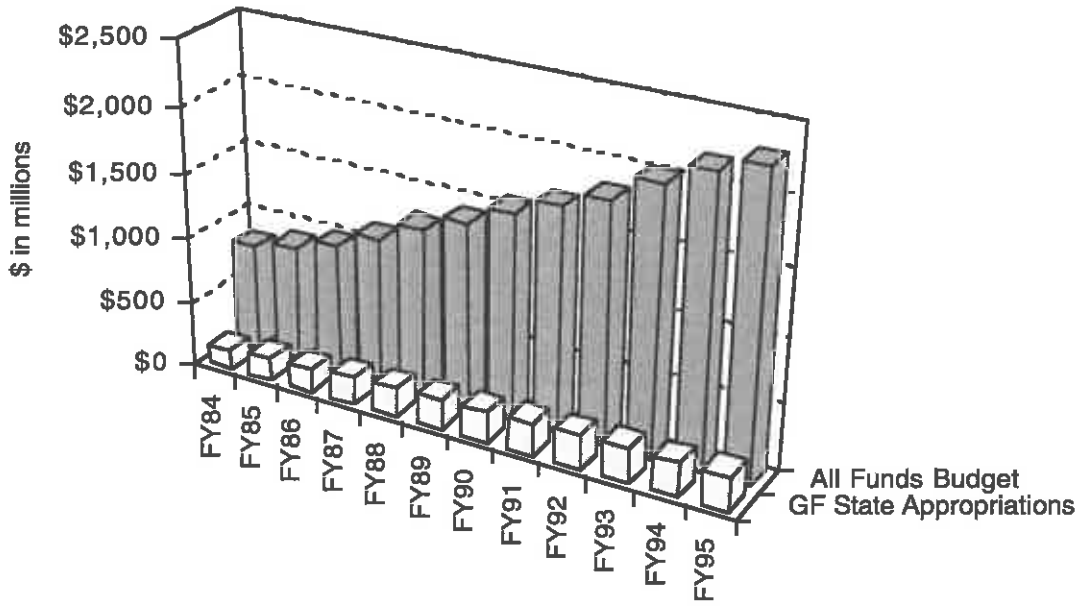


Figure 10-9

Comparison of General Fund State Appropriations and All Funds Budget

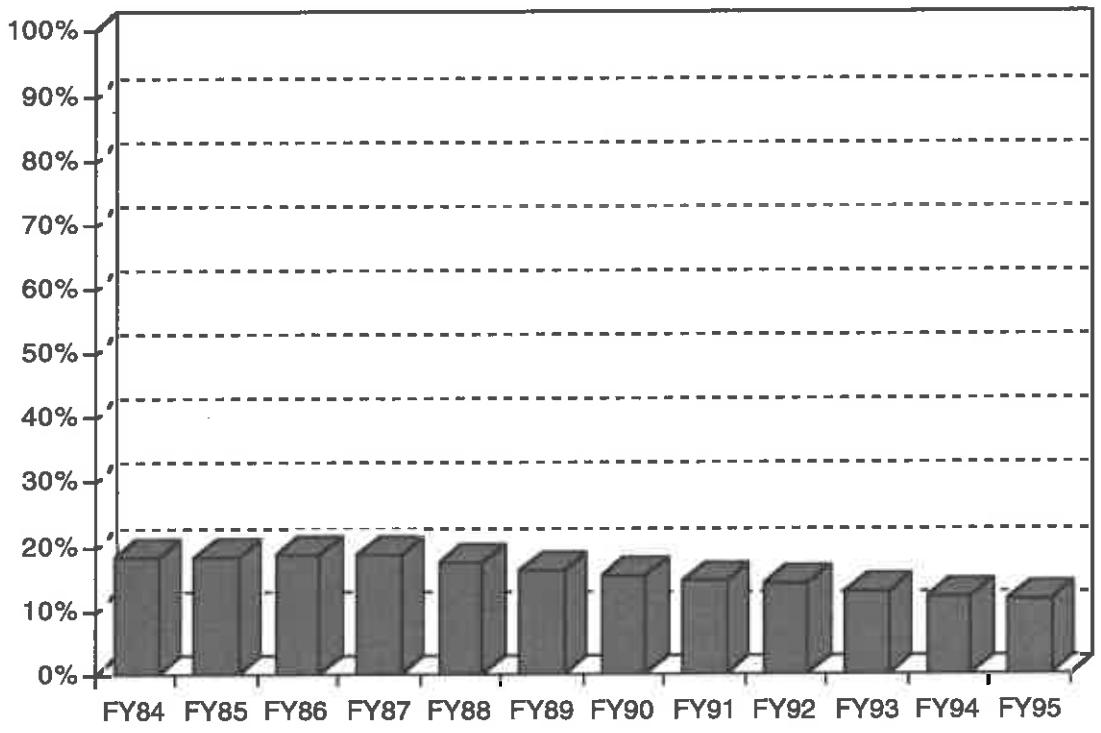


Change Since FY88:

GF State Appropriations	+20%
All Funds Budget	+70%

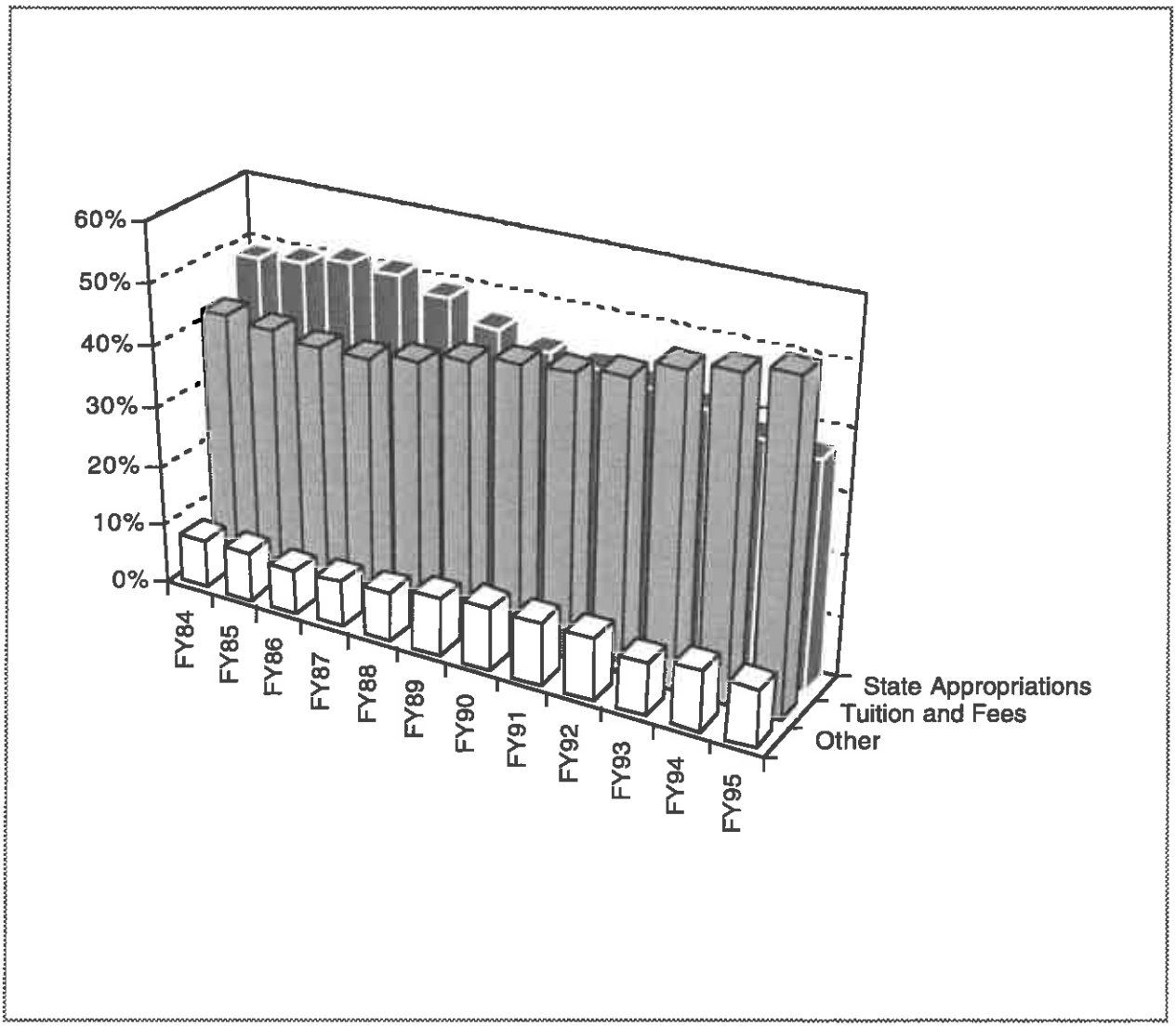
Figure 10-10

General Fund State Appropriations as a Percentage of All Funds Budget



Change Since FY87: 17.2 to 11.6%
(a decline of 33%!)

Figure 10-11 The Changing Mix of General Fund Revenue



Change in % of Total Since FY88:

State Appropriations	-25%
Tuition and Fees	+26%
Other	+15%

Figure 10-12 The Changing Mix of General Fund Revenue

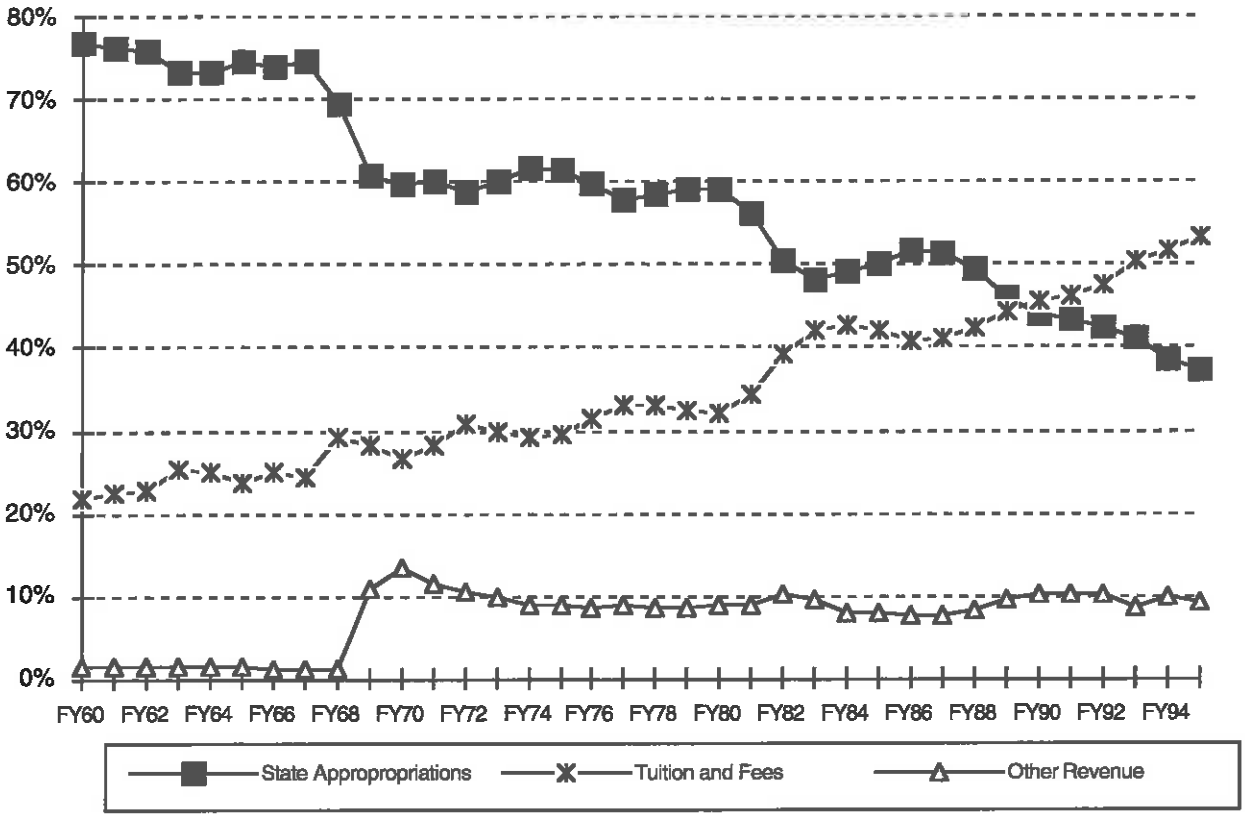


Figure 10-13

Annual Percent Change in Total General Fund Revenue Compared with Annual Percentage Changes in CPI and HEPI Inflation Indexes

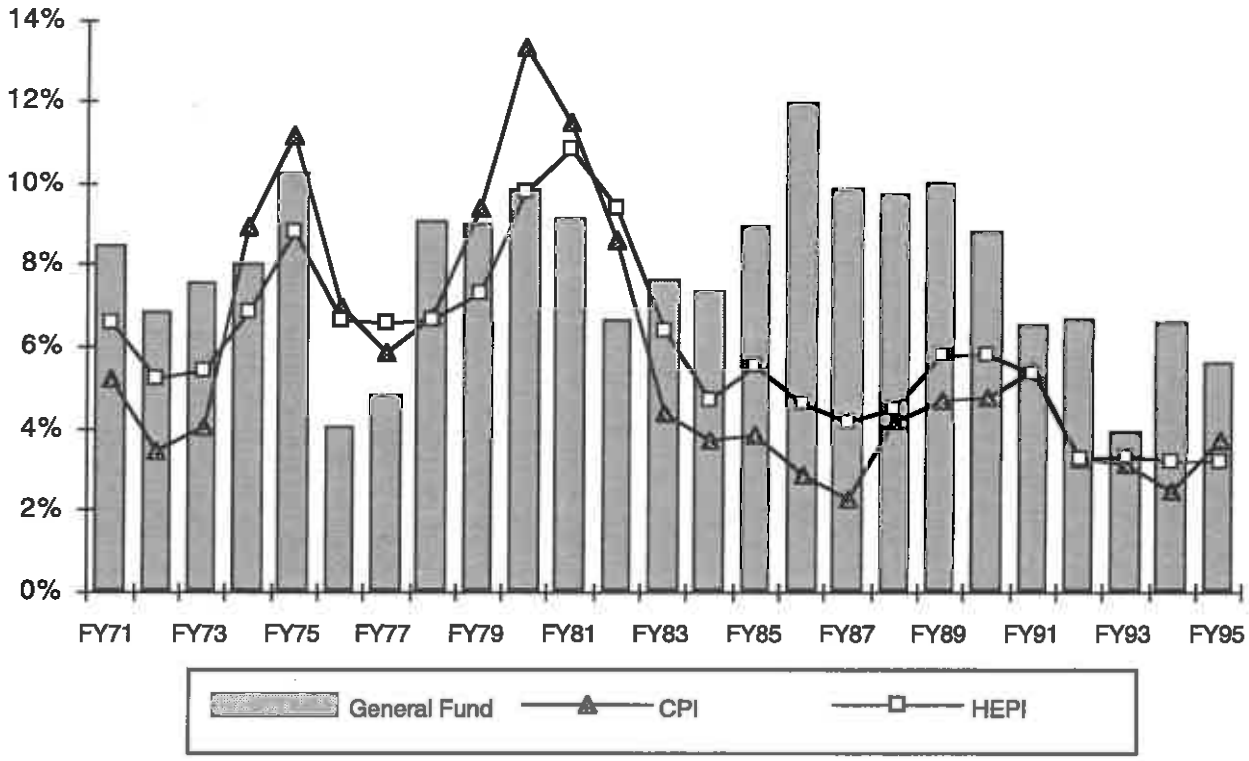
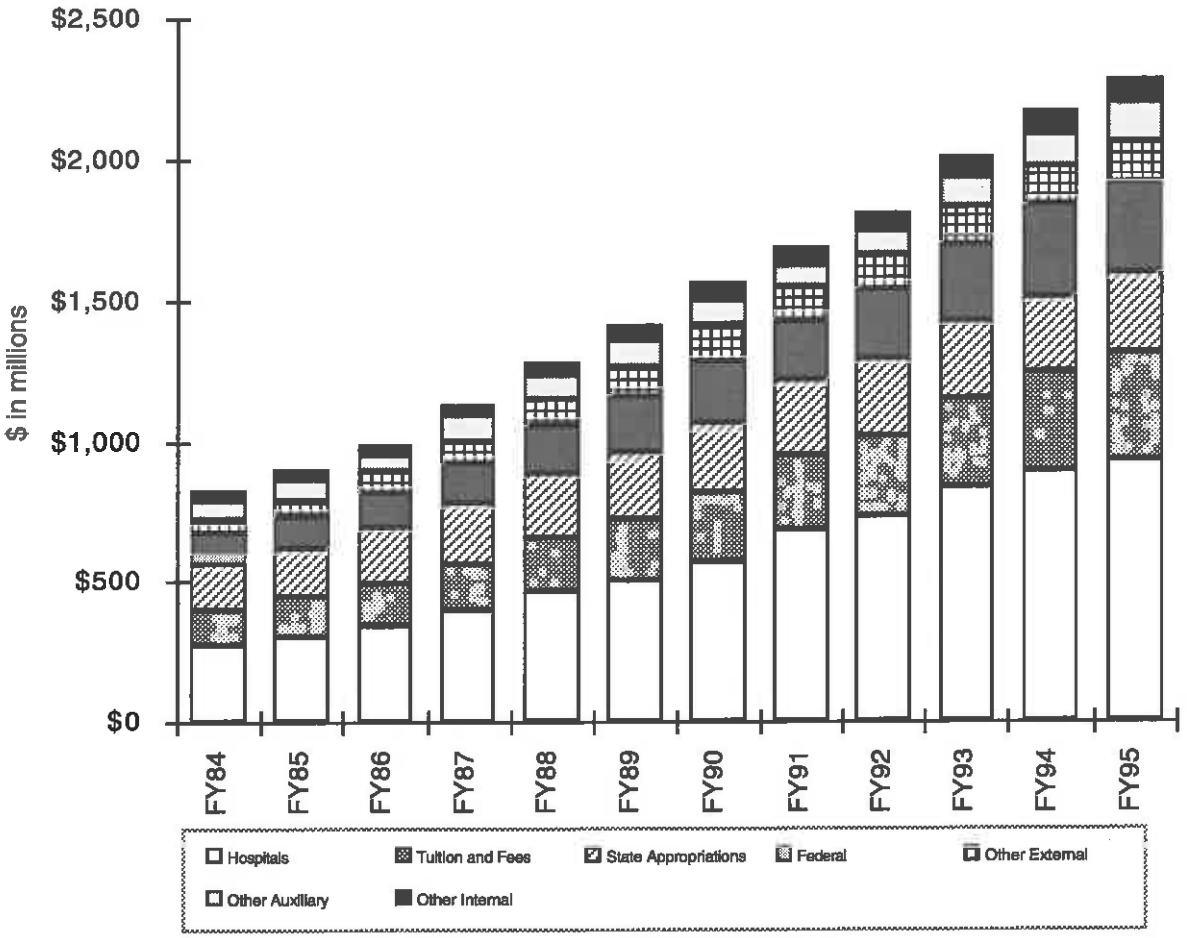


Figure 10-14

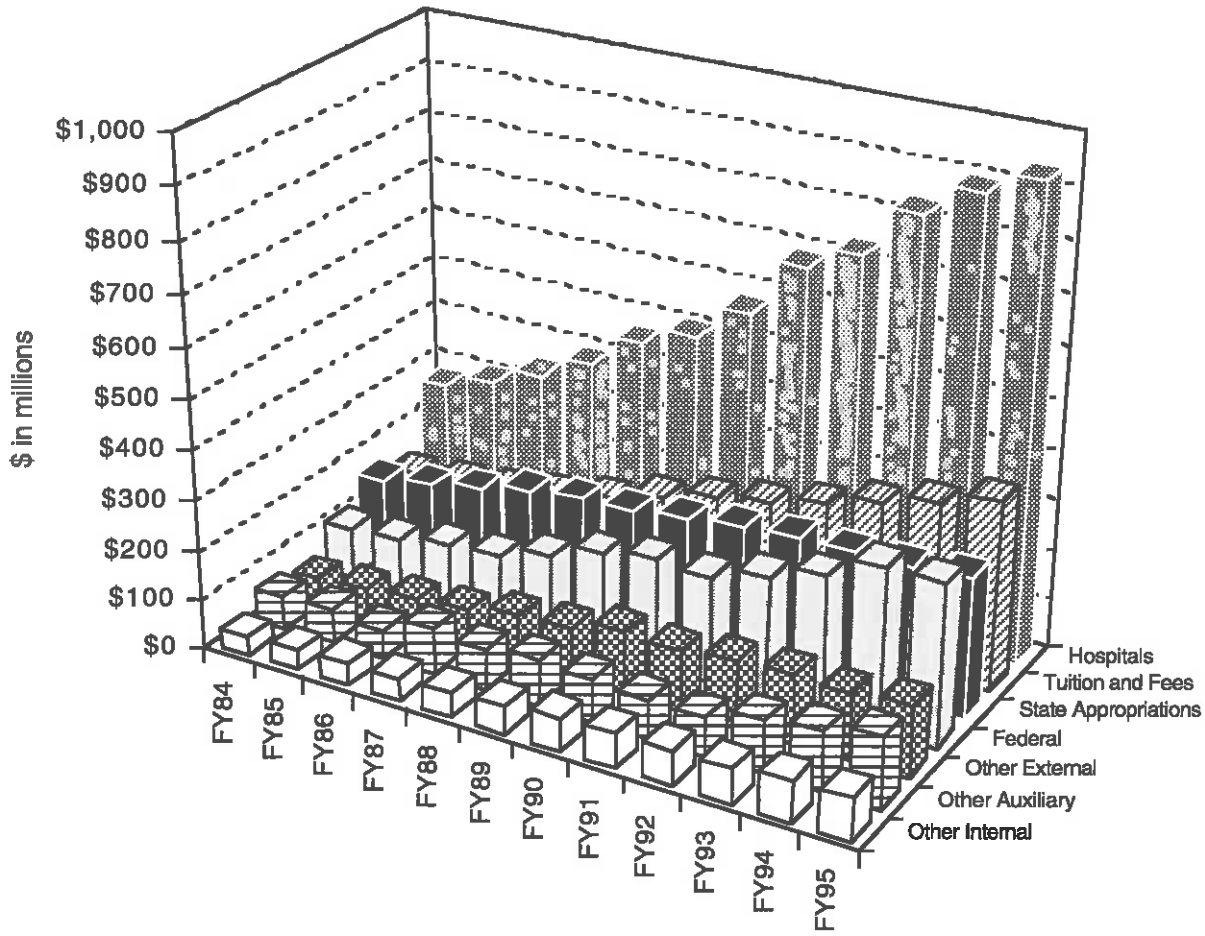
The Changing Mix of All Funds Revenue in Dollars



Change Since FY88:

All Funds Budget	+78%

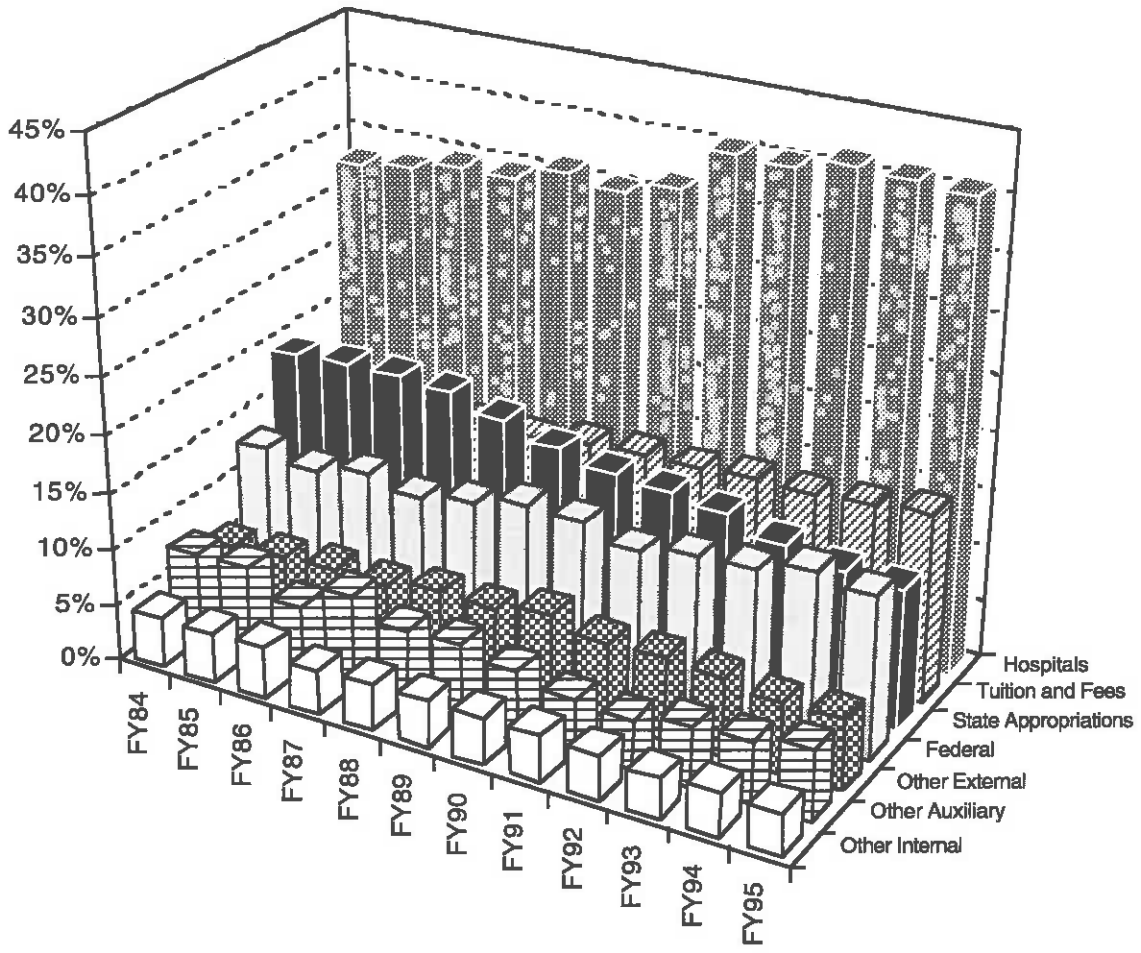
Figure 10-15 Components of All Funds Revenue



Change Since FY88:

Hospitals	+102%
Tuitions and Fees	+101%
Federal Support	+94%
State Support	+19%
Other External	+50%
Other Auxiliary	+76%
Other Internal	+64%

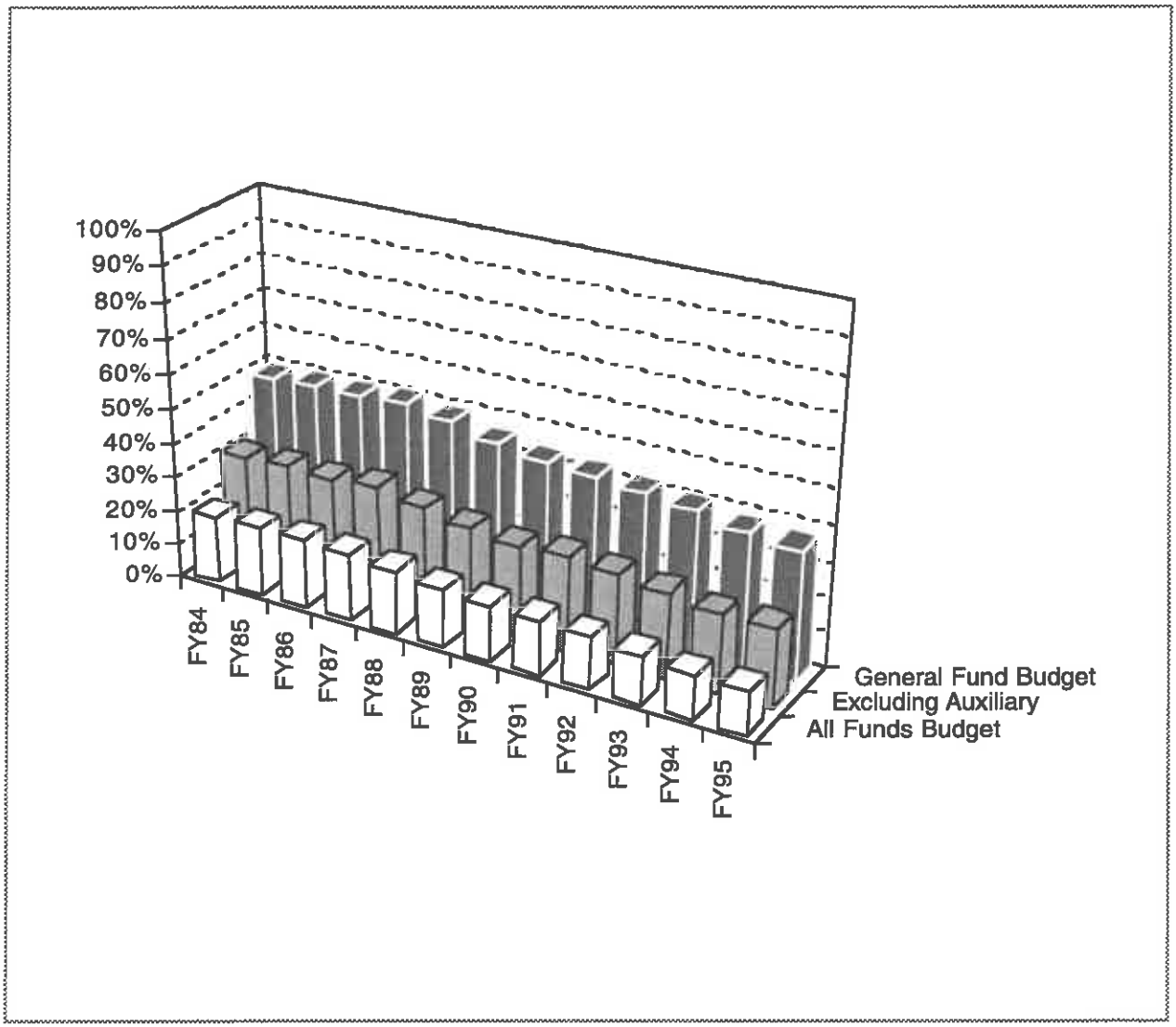
Figure 10-16 The Changing Percentage Mix of All Funds Revenue



Change in % of Total Since FY88:

Hospitals	+13%
Tuition and Fees	+12%
Federal Support	+9%
State Support	-33%
Other External	-16%
Other Auxiliary	-2%
Other Internal	-8%

Figure 10-17 State Appropriations as a Percentage of Operating Budgets

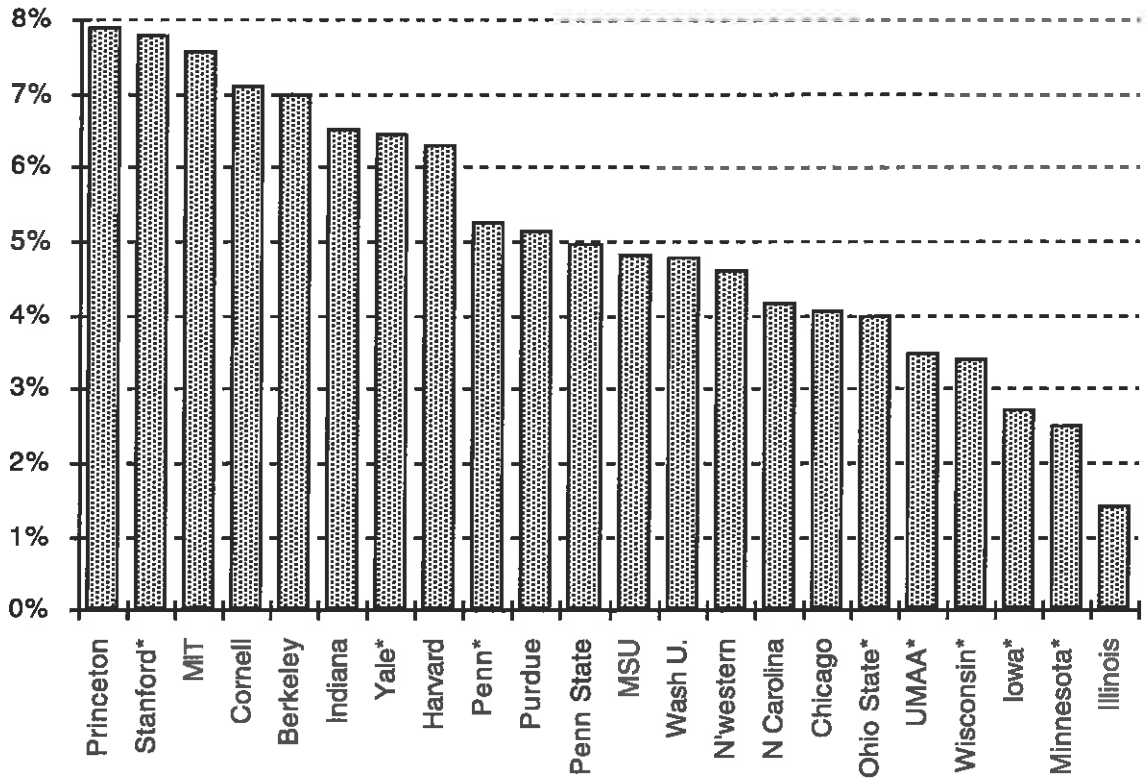


Goal

To restructure the University to better utilize resources to achieve and sustain quality and mission

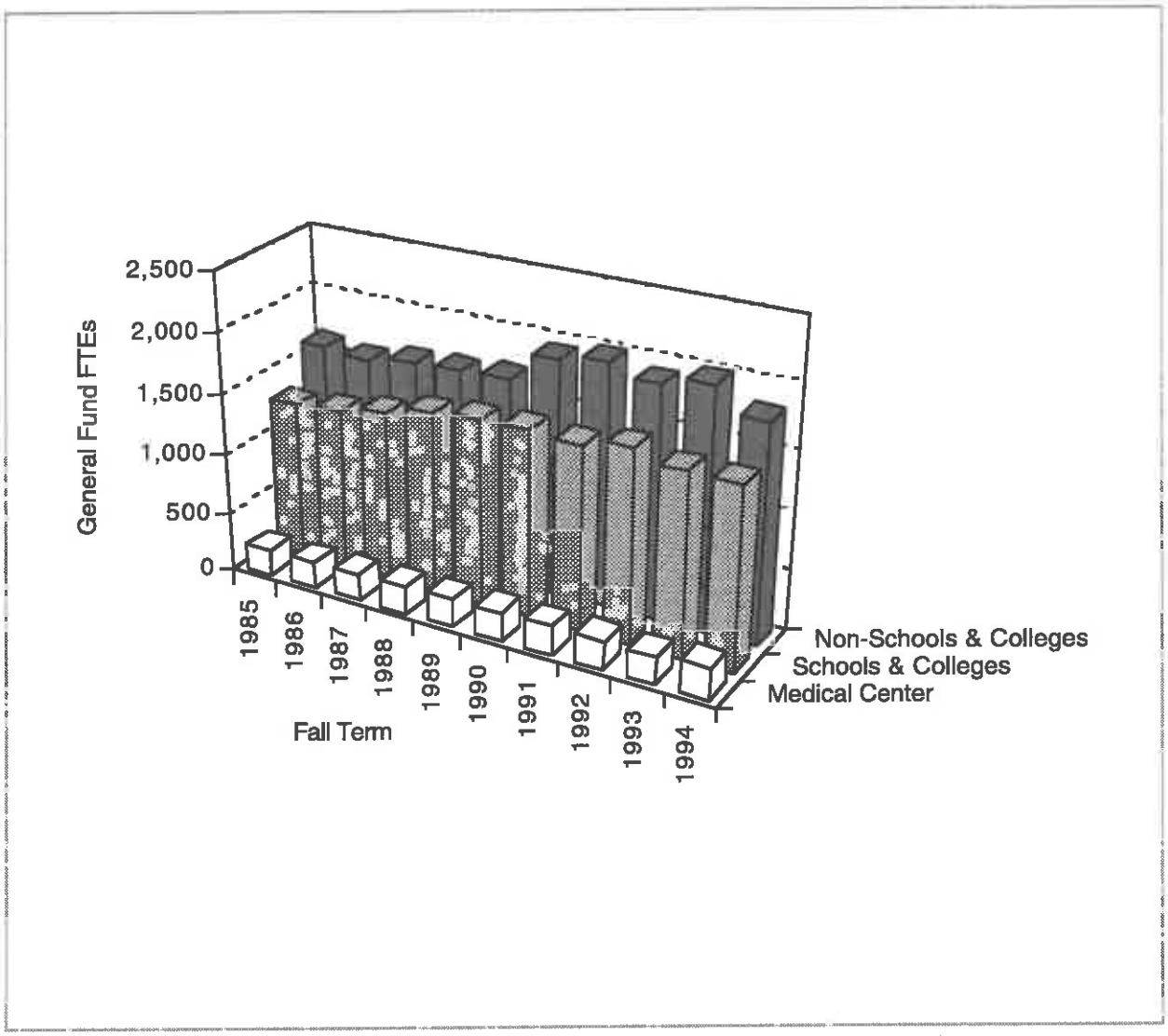
Figure 11-1

Comparison of Institutional Support as a Percentage of Current Funds Expenditures and Transfers (FY92) at Various Peer Universities



Notes: 1) Current Funds Expenditures include auxiliary and hospital expenditures. 2) An asterisk indicates institutions with hospitals whose revenue and expenditures are included in the university's IPEDS Reports. 3) Minnesota data are FY93.

Figure 11-2 Full-time Equivalent Administrative Staff Supported on the General Fund

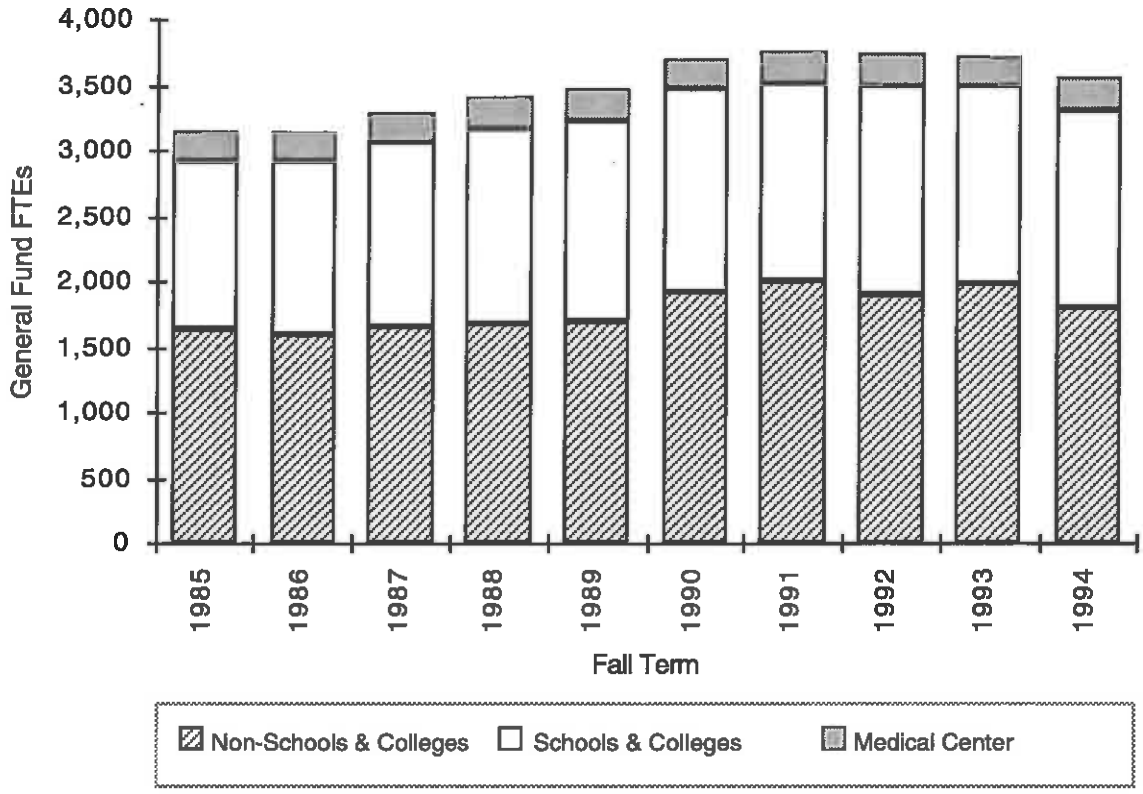


Change Since Fall Term 1987:

Schools & Colleges	+7%
Non-Schools & Colleges	+9%
Medical Center	+16%

Figure 11-3

Full-time Equivalent Administrative Staff Supported on the General Fund

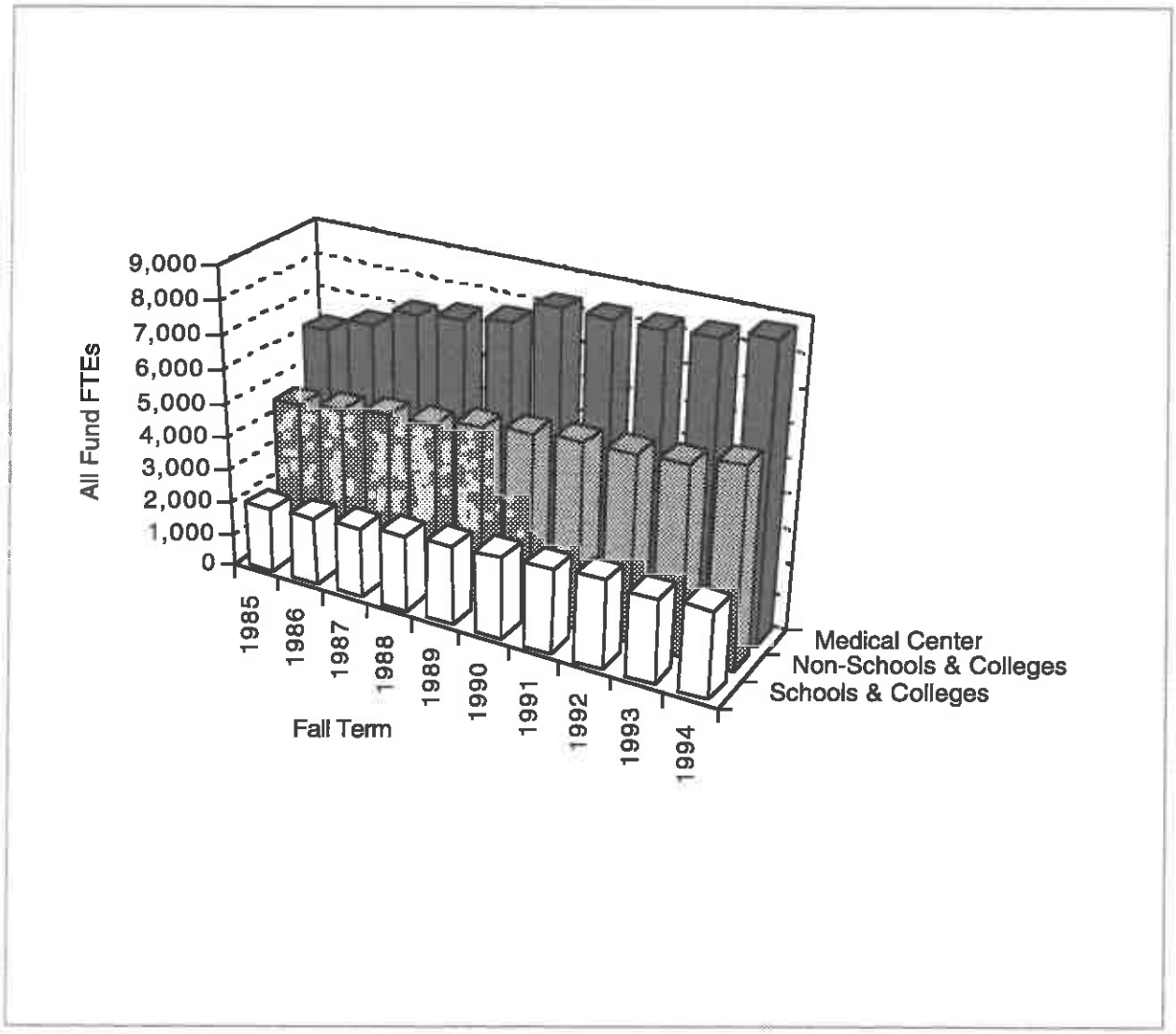


Change Since Fall Term 1987:

Total General Fund FTEs	+8%

Figure 11-4

Full-time Equivalent Administrative Staff Supported on All Funds

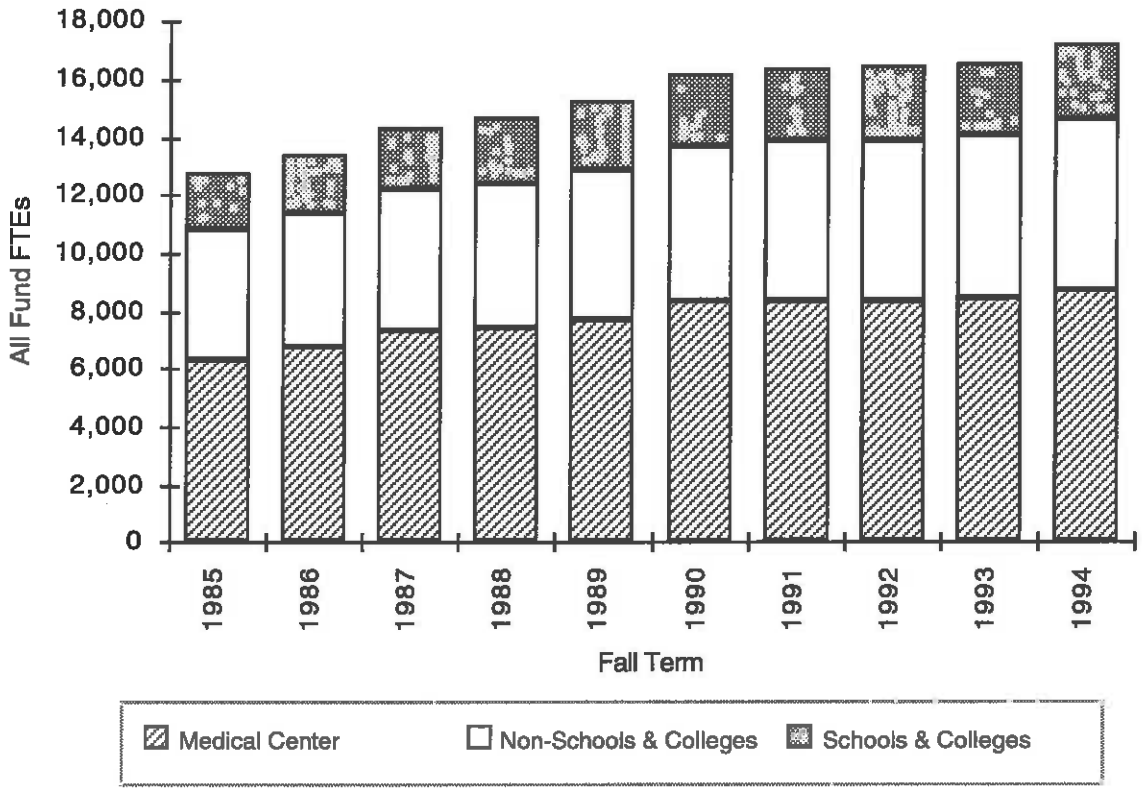


Change Since Fall Term 1987:

Schools & Colleges	+23%
Non-Schools & Colleges	+20%
Medical Center	+19%

Figure 11-5

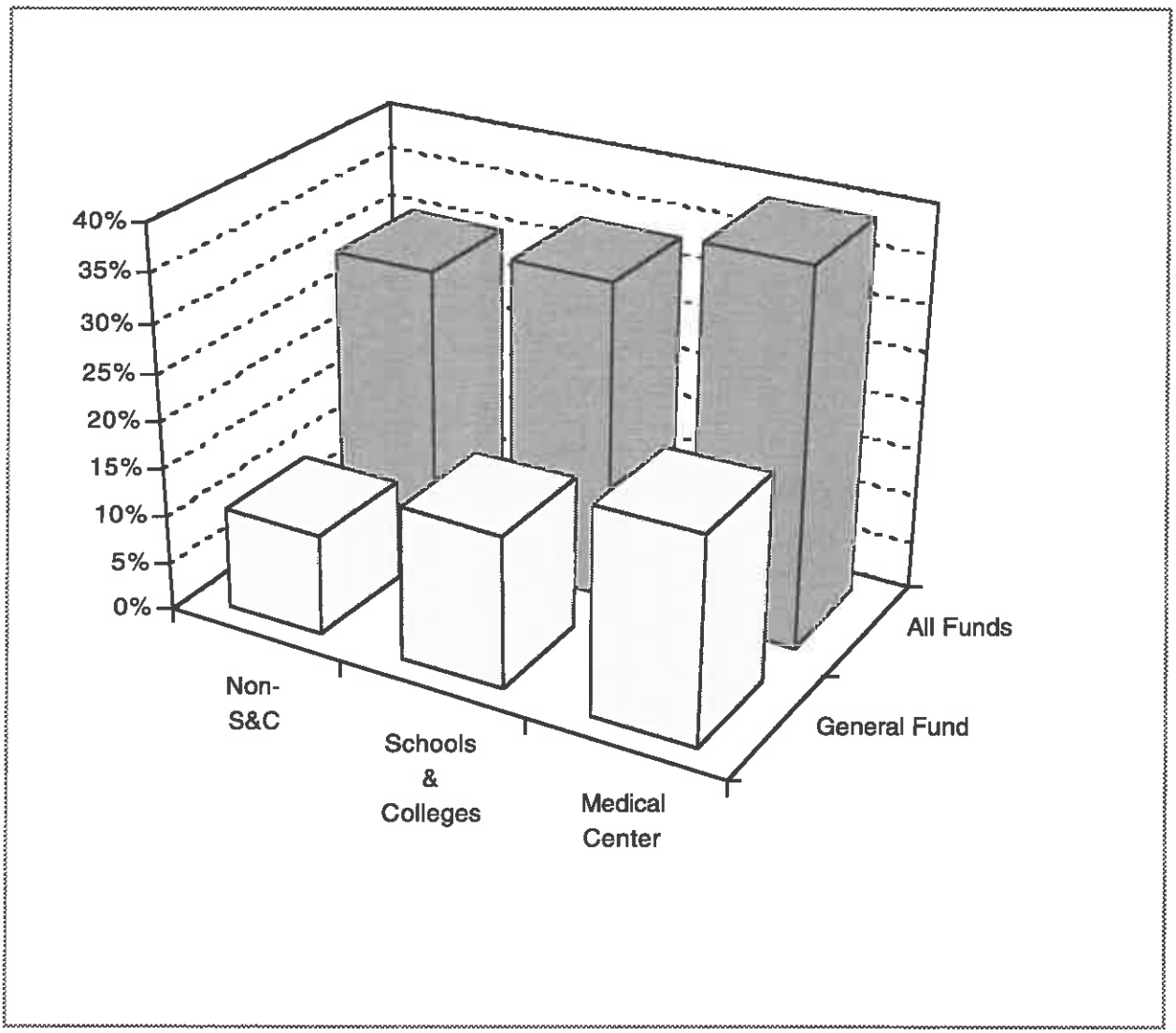
Full-time Equivalent Administrative Staff Supported on All Funds



Change Since Fall Term 1987:

Total All Fund FTEs	+20%

Figure 11-6 Growth in Administrative Staff by Area (Fall 1985-Fall 1994)



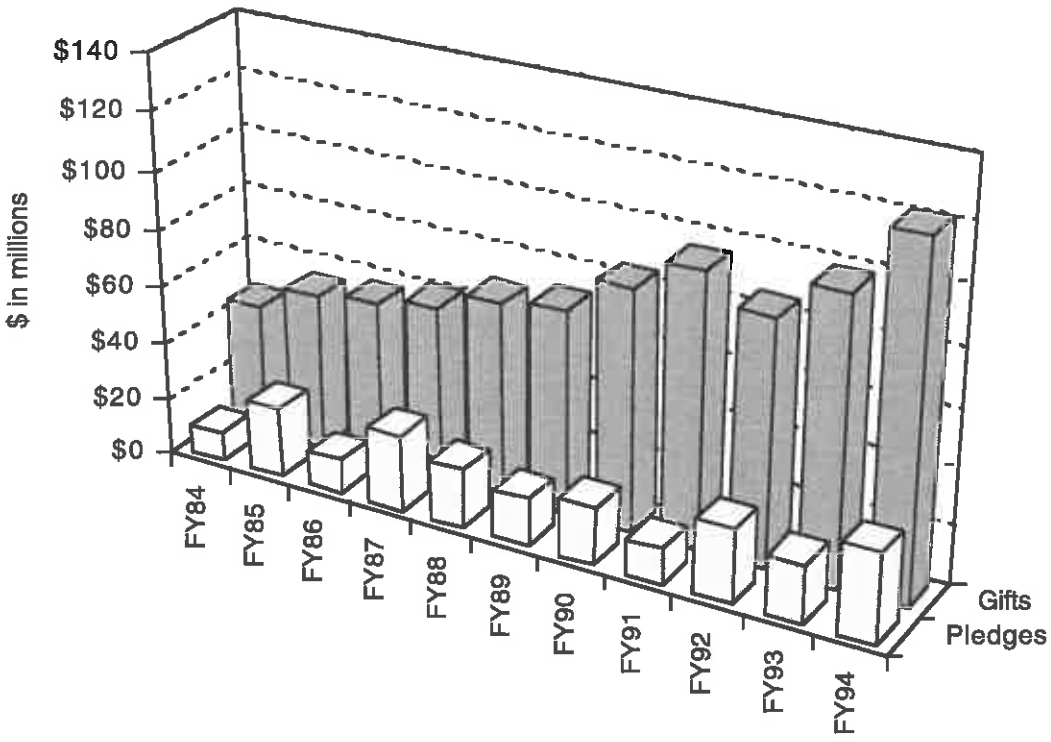
Goal

To build private support of UM (private giving and endowment income) to a level comparable to state appropriation by 2000

Table 12-1 Largest Single Gifts to UM

Year	*Source*	*Amount* (in actual dollars)	(in 1990 dollars)
1931	Cook	$21 million	$200 million
1934	Rackham	$10 million	$90 million
1969	Mott Foundation	$7 million	$27 million
1976	Mott Foundation	$6 million	$15 million
1983	Benton Estate	$7.3 million	$10 million
1984	General Motors	$7.5 million	$10 million
1986	Kellogg Foundation	$10 million	$12 million
1988	Markey Trust	$8.2 million	$8 million
1989	Francois-Xavier Bagnoud Association	$6 million	$6 million
1992	Guardian Industries (William Davidson)	$30 million	$28 million
1994	Lurie Family	$12 million	$10 million
1994	Ford Motor Co.	$5.5 million	$5 million
1995	Markey Trust	$4 million	$3 million

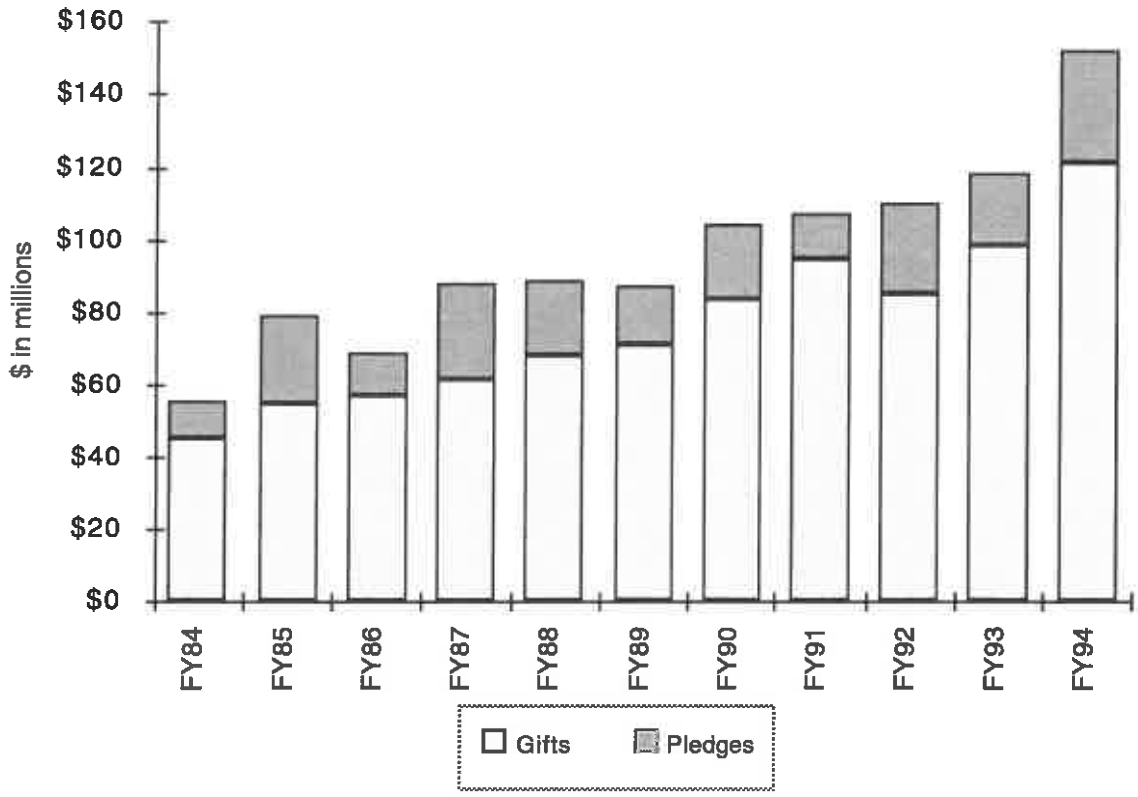
Figure 12-1 Private Giving (Gifts and Pledges)



Change Since FY88:

Gifts	+78%
Pledges	+48%

Figure 12-2 Total Private Giving (Gifts and Pledges)



Change Since FY88:

Total	+71%

Figure 12-3 Cumulative Growth in Number of Endowed Professorial Chairs

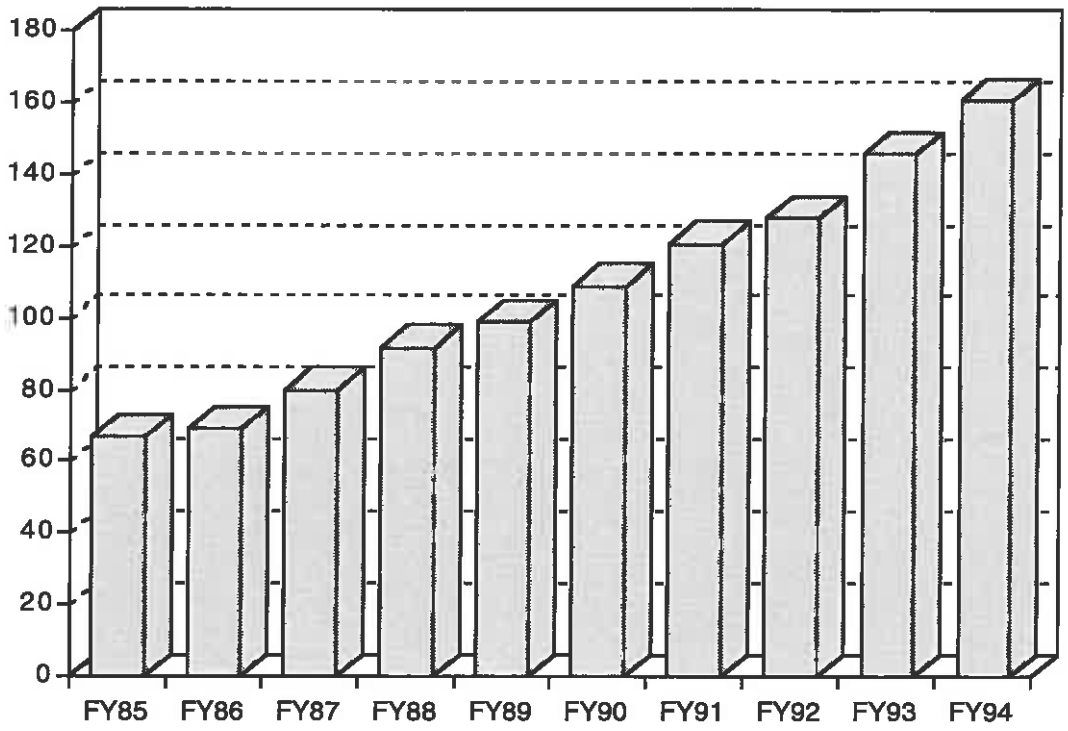
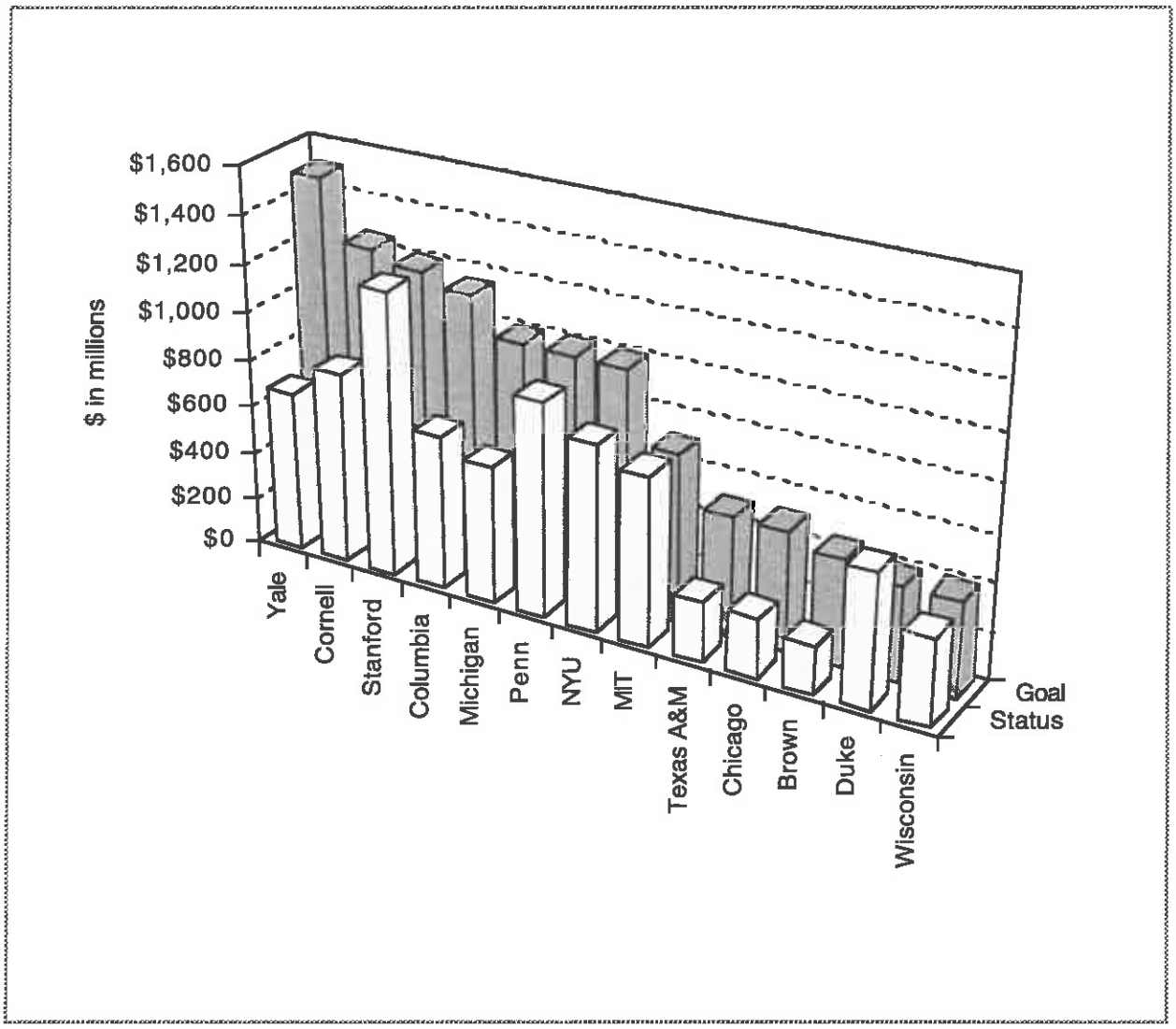


Figure 12-4

Campaign Goals and Progress for Selected Major Universities as of 1993-94



Goal

To increase endowment to $2 billion by year 2000

Figure 13-1 Growth in University Endowment

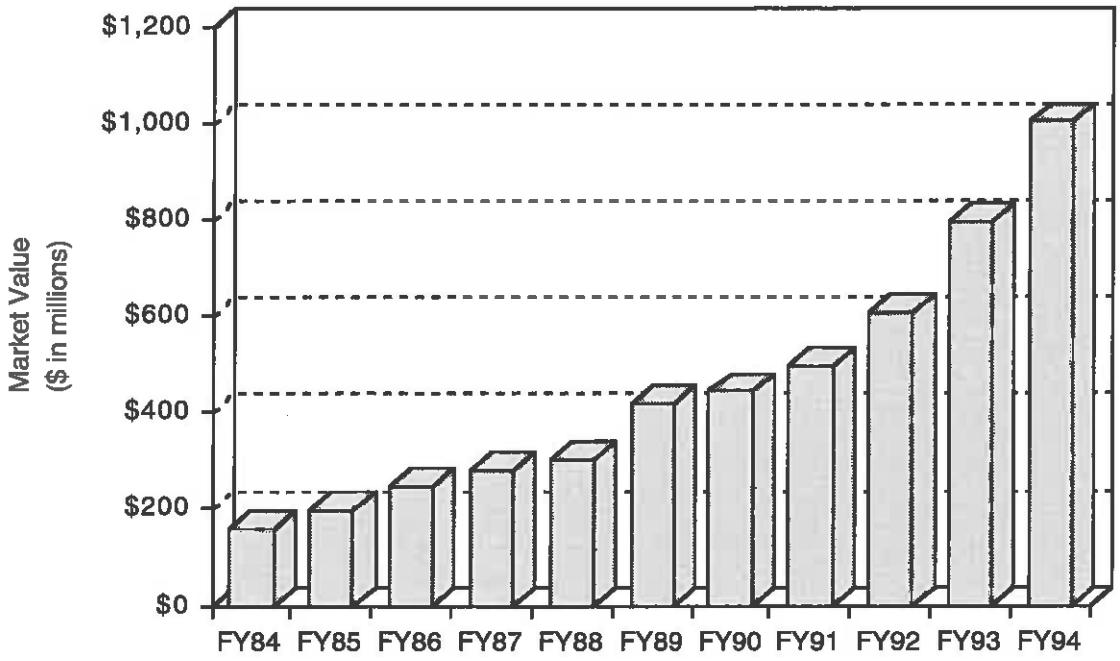


Figure 13-2

Growth in Dollars Under Investment Management

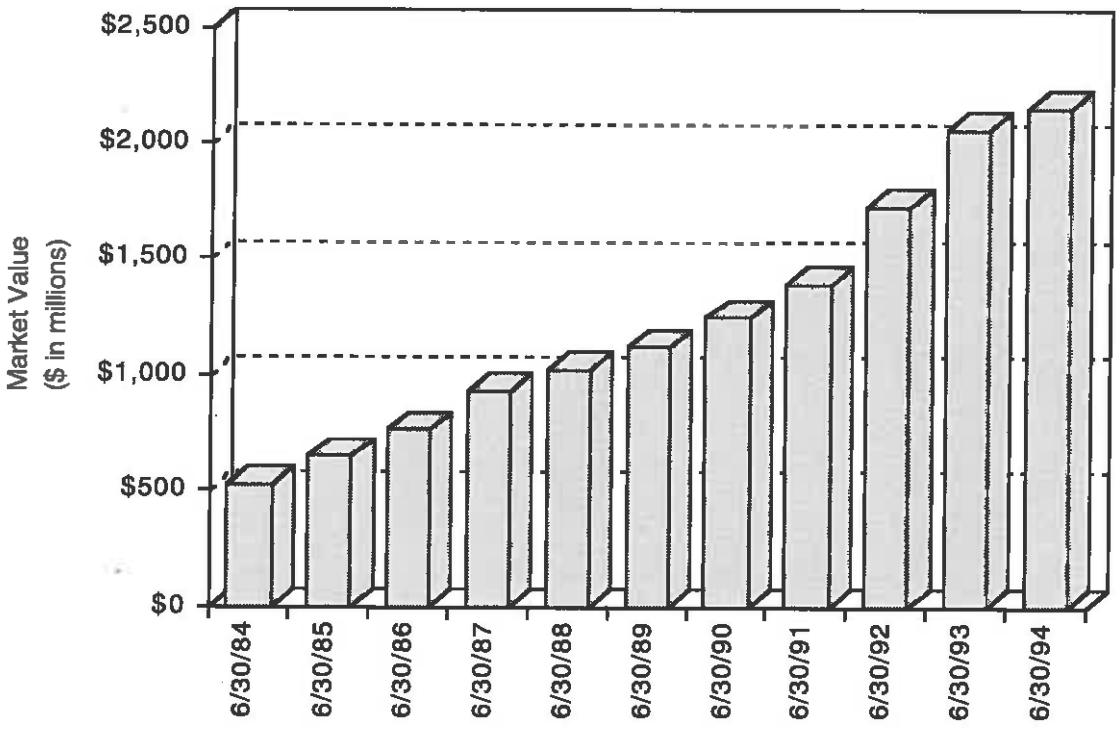


Figure 13-3 Real Value Added to Endowment

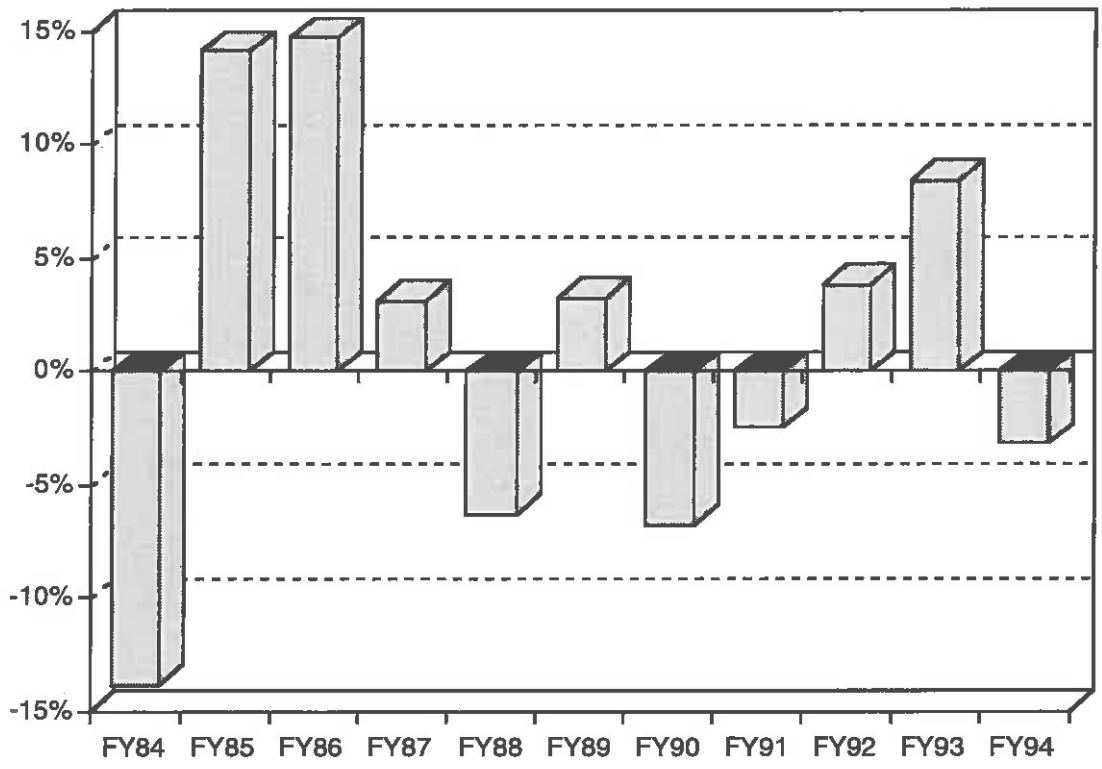


Figure 13-4 Performance of Endowment Investments

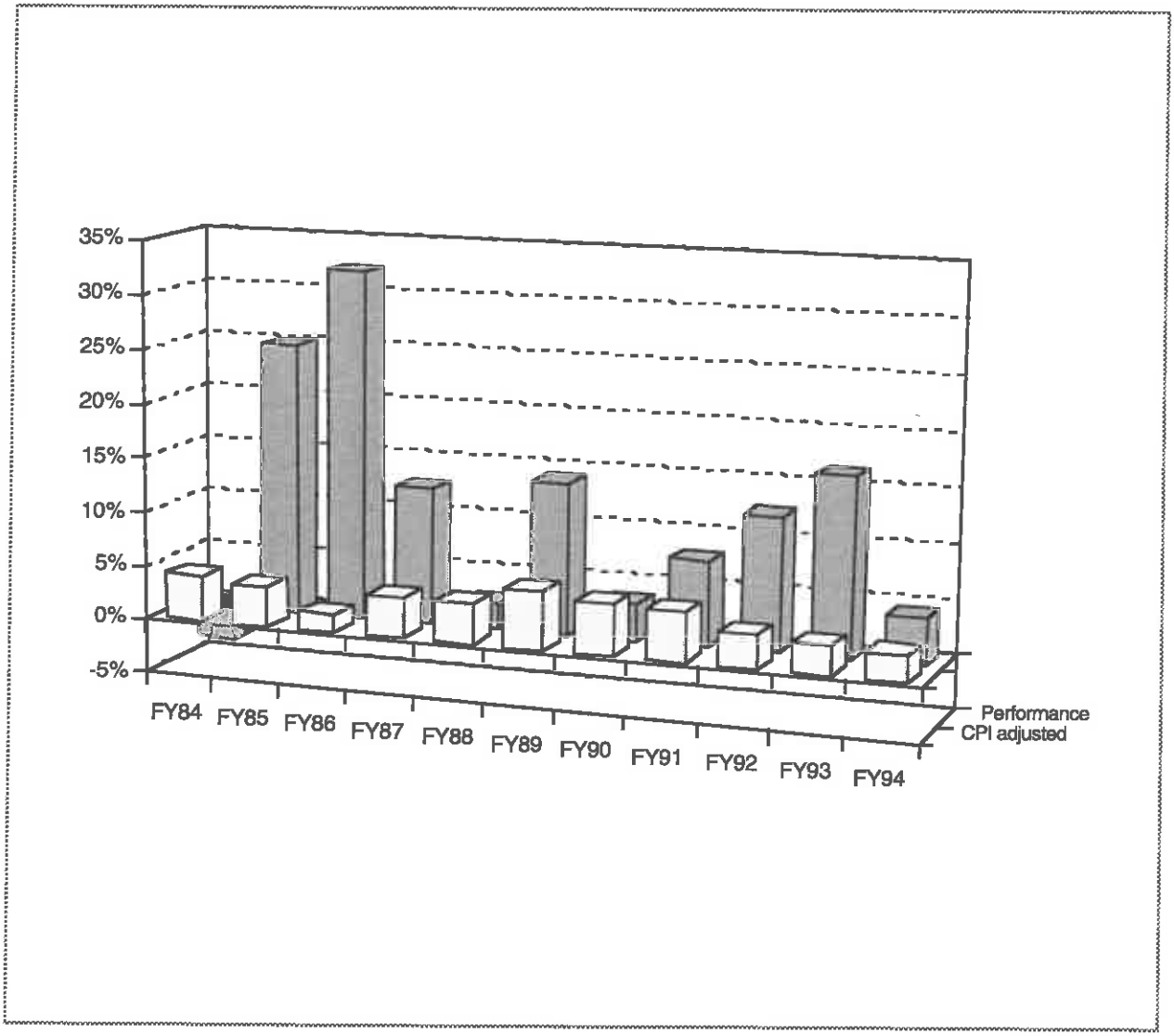


Figure 13-5 Distribution of Endowment Investments

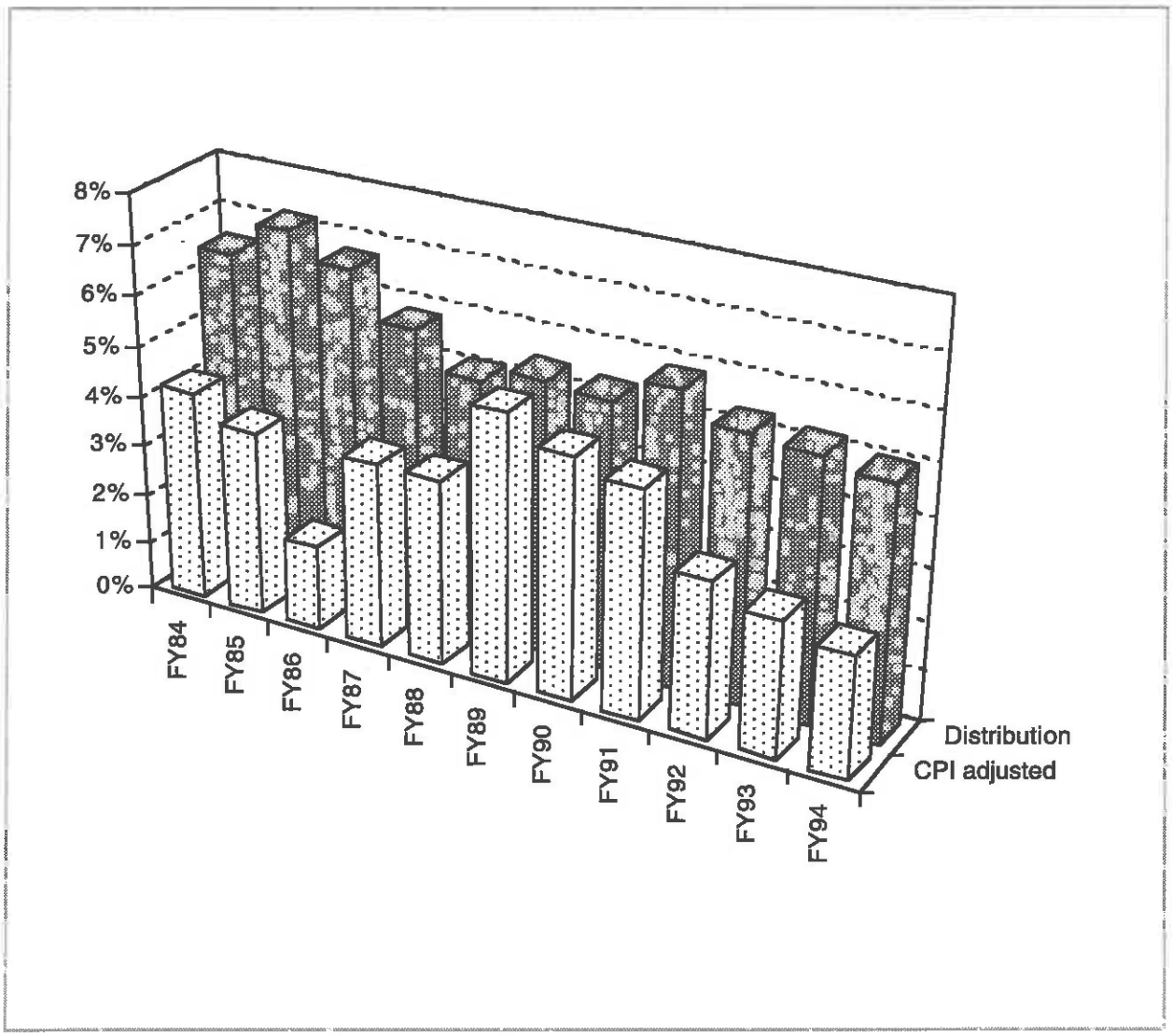
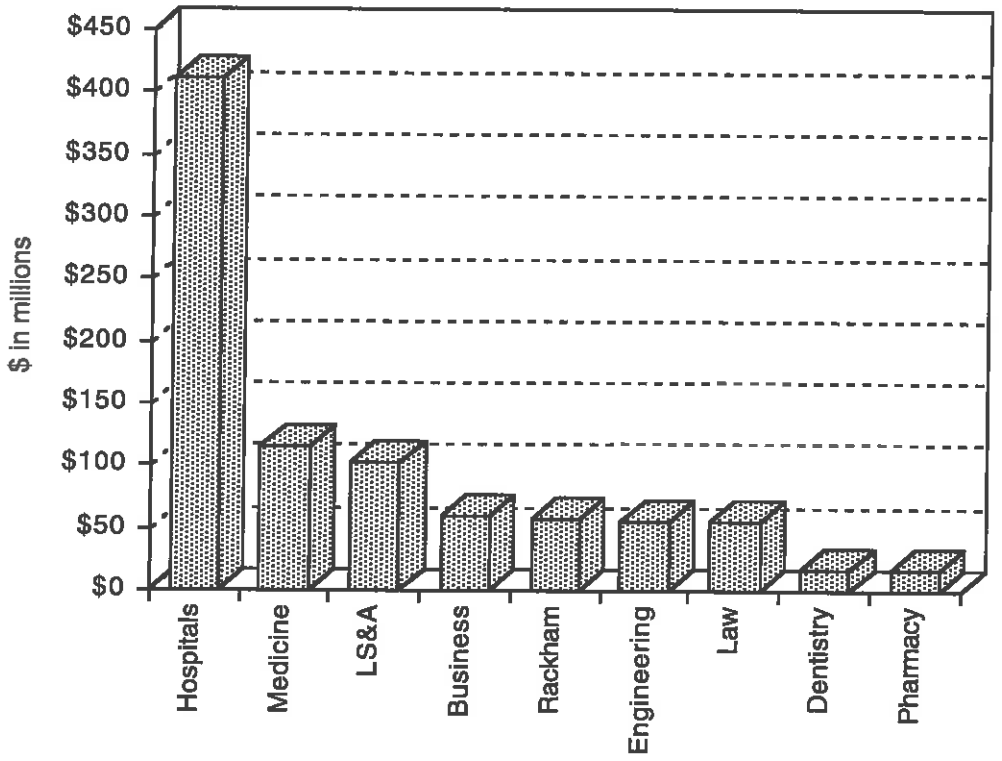


Figure 13-6 A Comparison of the Market Value of the Endowments for Various UM Units (March, 1993)



Goal

To complete the renovation or rebuilding of the physical infrastructure of the University

Figure 14-1 State Appropriations to UMAA for Academic Facilities

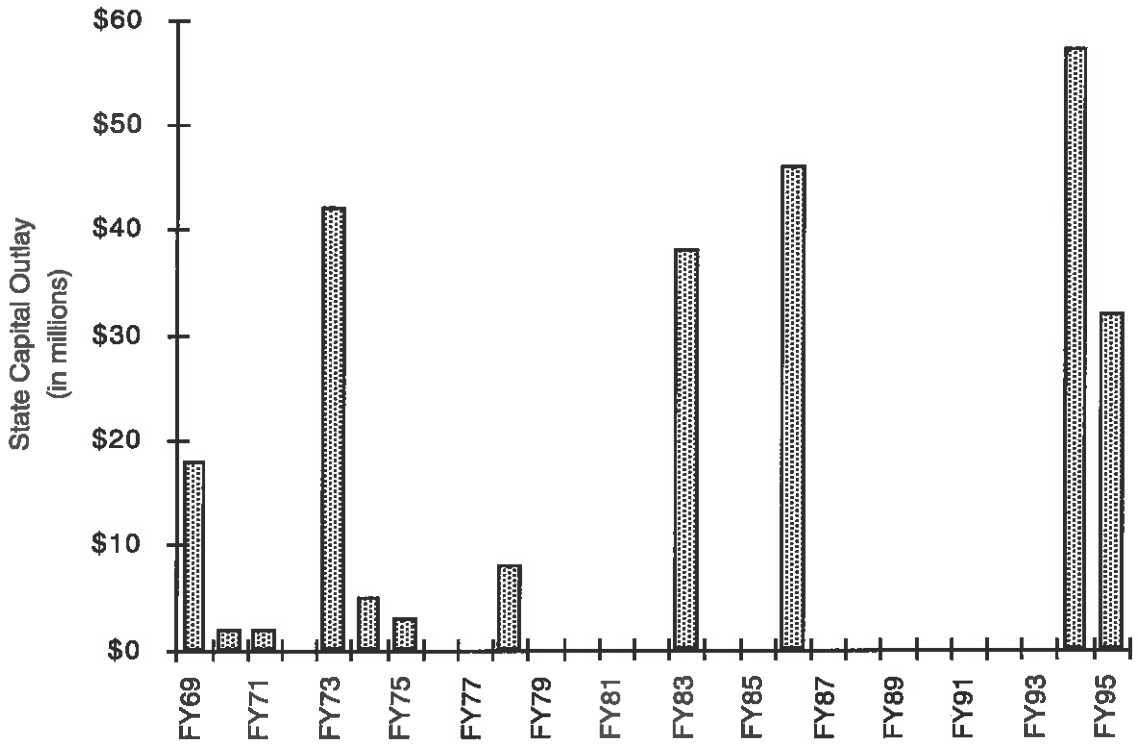
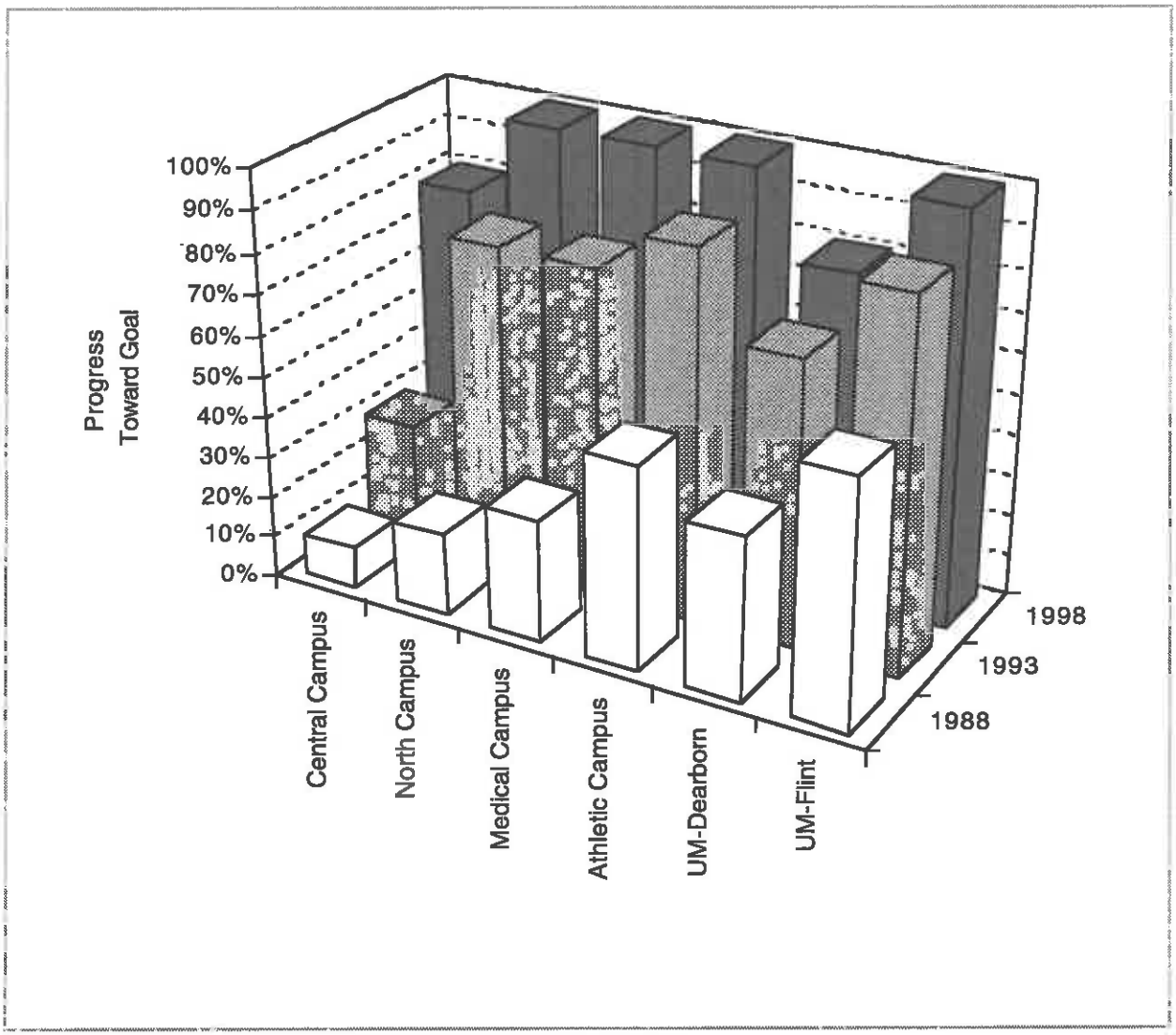


Figure 14-2

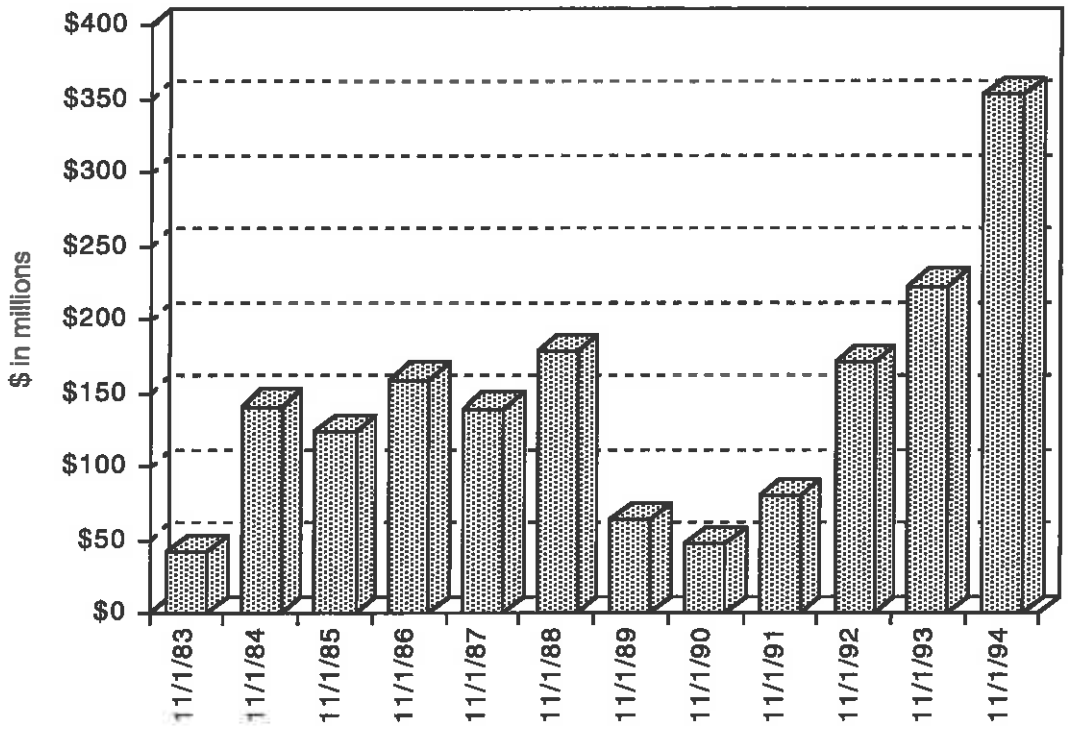
Progress on Meeting Major Capital Facilities Needs



Note: 1998 estimates are based on projects currently underway.

Figure 14-3

Total Dollar Value of Projects in Progress



Milestones

1983	Alumni Center
	Industrial and Operations Engineering Building
	Advanced Technology Lab
1984	Business Administration Computer Center and Executive Education Building
1985	Medical Science Research Building I
	Industrial Technology Institute
	Vocal Arts Center and Organ Studio
	Kellogg Eye Center
	Lorch Hall
	North Ingalls Building (Nursing)
	G. G. Brown Laboratory
1986	Electrical Engineering and Computer Science Building
	University Hospital
	Taubman Center
	Business Administration Executive Dorm
1987	Space Research Building addition
	Medical Inn
1988	Canham Natatorium
	Manufacturing Systems Engineering Lab (UM-Dearborn)
	Riverfront Campus Parking Deck (UM-Flint)
	Murchie Science Building (UM-Flint)
	Institute for Social Research (ISR) addition
	Physics renovation projects
	Information and Technology Division (ITD) move to Argus Building

Nursing School relocation to North Ingalls Building (NIB)

North Campus Commons expansion

Angell-Haven Courtyard Project

Chemical Sciences progress

Dow Building-G.G. Brown Laboratory Connector

Central Campus classroom renovation project

- UGLI
- Angell Auditoriums
- Angell-Haven Courtyard project
- All Central Campus classrooms

Cooley Lab renovation

1989 Medical Sciences Research Building II

Dow Laboratory for Chemical Sciences

Angell Auditorium project

Old Main demolition

UGLI Renovation

E. H. Kraus renovation

Nursing renovation in North Ingalls Building (NIB)

West Engineering renovation

Ingalls Mall Phase II

1990 Schembechler Hall

School of Information and Library Studies renovation

Ingalls Mall Phase III

Shepard Wing—Revelli Hall

Pharmacy Addition

1991 North Campus Family Housing Center

General Campus Renovation Project (UM-Dearborn)

University Pavilion (UM-Flint)

Randall Laboratory

1908 and 1948 Chemistry Buildings

UM Stadium Project

Child and Maternal Health Care Center

UMH Hospital Child Care Center

North Campus Community Center

1992 Administrative Services (acquiring Wolverine Towers)

Pharmacy Wing

Medical Science Research Building III (schematic drawings)

UM Stadium Renovations (second phase completed)

1993 Francois-Xavier Bagnoud Building (FXB Aerospace Laboratory)

Athletics Administration Building

Projects Underway:

- East Engineering Renovation (construction started-8/93)
- Randall Laboratory Addition (construction started-7/93)
- ULGI Renovation (construction started-6/93)
- ITIC (state funding approved, construction started-11/93)
- Engineering Center (state funding approved, construction started)
- C. C. Little renovation (state funding approved)
- Angell Hall renovation (state funding approved)
- Administrative Services (moves into Wolverine Towers)
- Medical Sciences Research Building III (under construction)
- Cancer and Geriatrics Center (construction started, 8/93)

UMH Parking Structure (preparing for bid)

Mott II (under construction)

Taubman Expansion (working drawings)

UM Stadium renovations (third phase underway)

UM Golf Course Clubhouse (under construction)

UM-Flint Library (under construction)

UM-Flint takeover of State Office Building (state funding approved)

UM-Dearborn Classroom Project (state funding approved)

Social Work Building (working drawings)

Angell-Haven Connector (schematic drawings)

Hill Auditorium (schematic drawings)

Projects in Planning

Angell/Haven Hall Connector
Art Museum
Hill Auditorium Renovation and Addition
Intercollegiate Athletics Tennis Center
Medical Center North Entrance Parking Structure
North Campus Bell Tower
School of Social Work Building
Visitor's Center
Dearborn General Campus Renovation - Phase II
Dearborn Campus Support Services Building

Projects Completed During 1993-94

Chemical Sciences Building - Phase II
Completed November, 1993
Financed by gifts and University funds

François-Xavier Bagnoud Building
Completed September, 1993
Financed by gifts and University funds

Intercollegiate Athletics - Administration Building Renovation
Completed December, 1993
Financed by Athletic funds

Kellogg Eye Center and Turner Clinic Mechanical Room and Renovation
Completed March, 1994
Financed by gifts and Hospital Funds

Medical Science Research Building III
Completed June, 1994
Financed by University funds

Projects in Progress During 1993-94

Central Campus Renovations - Angell Hall
Work started in March, 1994 with an estimated completion date of July, 1996
Financing is from a State appropriation and University funds

Central Campus Renovations - C. C. Little
Work started in April, 1994 with an estimated completion date of August, 1996
Financing is from a State appropriation and University funds

Central Power Plant and North Campus Electrical Expansions
Work started in October, 1993 with an estimated completion date of June, 1995
Financing is from Utility system revenues and a bond issue

East Engineering Building Remodeling
Work started September, 1993 with an estimated completion date of March, 1996
Financing is from University funds and a bond issue

Integrated Technology Engineering Center
Work started in April 1994 with an estimated completion date of December, 1995
Financing is from a State appropriation and University funds

Integrated Technology Instruction Center
Work started in December 1993 with an estimated completion date of June, 1996
Financing is from a State appropriation and University funds

Mary Markley and South Quad Renovation
Work started in May, 1993 with an estimated completion date of May, 1995
Financing is from Housing revenues and a bond issue

Michigan League Improvements - Phased
Work started in March, 1990 with an estimated completion date of March, 1995
Financing is from University funds

Randall Laboratory - Addition
Work started in June, 1993 with an estimated completion date of August, 1995
Financing is from University funds and a bond issue

Randall Laboratory Renovation - Phased
Work started in March, 1990 with an estimated completion date of December, 1994
Financing is from University funds

Undergraduate Library Addition, Renovation and Connector Bridge
Work started in May, 1993 with an estimated completion date of January, 1995
Financing is from University funds and a bond issue

University Hospitals Cancer and Geriatric Centers
Work started September, 1993 with an estimated completion date of August, 1996
Financing is from Hospital funds, Medical School grants, and a bond issue

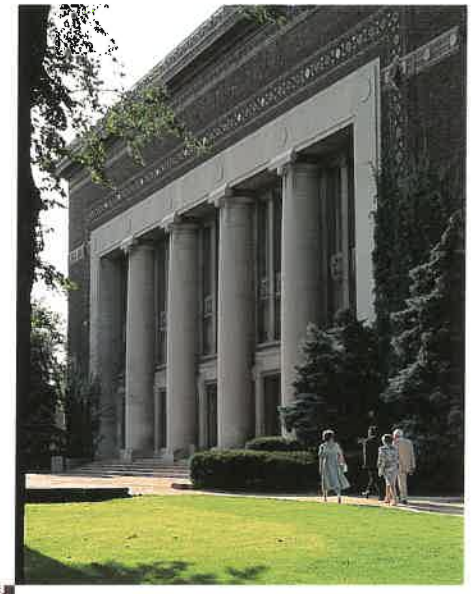
University Hospitals - Mott Renewal Project
Work started in August, 1992 with an estimated completion date of February, 1995
Financing is from Hospital funds

Flint Central Energy Plant and Utility Distribution
Work started in April, 1993 with an estimated completion date of July, 1995
Financing is from University funds and a bond issue

Flint Library and Learning Resource Center - The Francis Willson Thompson Library
Work started in December, 1992 with an estimated completion date of September, 1994
Financing is from gifts and a bond issue

Building on Tradition

At special groundbreaking ceremonies last fall, under the theme of "Building on Tradition," the University recognized the many campus-wide projects designed to enhance and renew University facilities. The following section highlights these projects, which include: renovated classrooms, additional office space, modernized laboratories, advanced medical facilities, and combined reference collections.



Hill Auditorium Renovation and Addition ▶

Plans: New seats, lighting, and air conditioning are included in plans for the auditorium renovation. An addition will be constructed at the rear of the building.

Price tag: $20 million, to be financed by gifts as part of the Campaign for Michigan.

Projected completion: To be determined.

◀ School of Business Administration's Kresge Business Administration Library, Computer and Executive Education Building, and Executive Residence

Features: One of the nation's largest business libraries, Kresge features open stack collections on three levels, areas for study carrels, individual work areas for research, and group study rooms. The Computer Executive Education Building houses the School's computing and research facilities, including 170 advanced microcomputers, and large- and medium-sized case discussion rooms, seminar rooms, and offices. The Executive Residence has eight classrooms, offices, and offers complete hotel services.

Price tag: $15 million, financed by gifts and the School of Business Administration.

Completed: 1985.

School of Nursing Building (Formerly 400 North Ingalls Building) ▶

Features: Part of what was once the old St. Joseph Mercy Hospital, the building was renovated and converted into administrative offices and classrooms for the School of Nursing.

Price tag: $3.5 million, financed by the Medical School and the University.

Completed: 1990.

E. H. Kraus Natural Science Building

Features: Renovations include modern heating, ventilating, and lighting systems for the entire building. Older laboratories on the third and fourth floors were renovated for heavy-duty biological research.

Price tag: $12.5 million, financed by the state and the University.

Completed: 1988.

School of Social Work

Plans: A 5-level buildin is proposed at the southwest corner of East University and South University, to be joined to the School of Education by a connector bridge.

Price tag: $22 million, to be financed by gifts.

Projected completion: To be determined.

Randall Laboratory Renovation and Addition

Plans: A 4-story addition and an oversized basement to be added to the west side of the building will provide state-of-the-art physics research laboratories.

Price tag: $22.4 million, financed by the issuance of tax-exempt bonds secured by a pledge of student fees and the University.

Projected completion: Mid-1995.

Angell Hall Courtyard Computer Terminal and Laboratory Facility

Features: The 300-computer terminal facility was constructed by enclosing the courtyard of the Angell-Mason complex.

Price tag: $2.7 million, financed by the University; Literature, Science, and the Arts; and the Information Technology Division.

Completed: 1989.

Undergraduate Library Renovation and Addition

Plans: Renovations and approximately 26,000-square-foot addition to the UGLi, which will also get a new facade of brick and limestone. Connector bridges will link the library to Harlan Hatcher Graduate Library and West Engineering.

Price tag: $11 million, financed by gifts, issuance of tax-exempt bonds secured by a pledge of student fees, and the University.

Projected completion: 1995.

Alumni Center

Features: Built on the mall that runs between the Harlan Hatcher Graduate Library and Horace H. Rackham Building, the Alumni Center meshes in color and style with its neighbor, the Michigan League. The center houses a library, meeting rooms, and offices. A 2-story atrium welcomes visitors to the 32,000-square-foot center.

Price tag: $3.5 million, financed by gifts.

Completed: 1983.

East Engineering Renovation

Plans: Renovations to the building, which will become home to the departments of mathematics and psychology.

Price tag: $28.6 million, financed by the issuance of tax-exempt bonds secured by student fees and the University.

Projected completion: March 1996.

Willard Henry Dow Laboratory, Chemistry Building Renovation

Features: The three-phase project included a new building of 270,000 gross square feet and renovation of the 1908 and 1948 buildings. One of the most striking features of the Willard Henry Dow Laboratory is its large atrium. The new facility plus renovations to the old made it possible to accommodate several related programs—biophysics, macromolecular and protein structures—in one Central Campus location.

Price tag: $45 million for Willard Henry Dow Laboratory and $19.9 million for renovations, financed by the state, gifts, and the University.

Completed: 1989.

Tappan Hall Addition

Features: This 10,000-square-foot addition houses the U-M's Fine Arts Library in a fire-safe and climate-controlled environment.

Price tag: $2.3 million, financed by gifts, the University, and Literature, Science, and the Arts.

Completed: 1983.

C. C. Little Building and Angell Hall Renovations ▶

Plans: Heating and cooling systems, elevators, restrooms, and other basic components are included in these two renovations, as well as upgraded teaching and research space.

Price tag: $32.5 million, financed by the state and the University.

Projected completion: Mid-1996.

◀ Kellogg Eye Center

Features: The Kellogg Eye Center consolidates in one location the inpatient, outpatient, research, educational, and administrative activities of the Department of Ophthalmology, providing a comprehensive referral center offering highly specialized care to more than 34,000 patients annually.

Price tag: $8.5 million, financed by gifts and the University.

Completed: 1985.

Medical Science Research Building III ▶

Features: The 207,000-square-foot building provides modern research space for the Medical School. MSRB III houses both basic research and clinical departments, encouraging interdisciplinary, complementary work.

Price tag: $50.1 million, financed by the University.

Completed: 1994.

◀ Hospitals Complex: University Hospital, A. Alfred Taubman Health Care Center, and the Maternal and Child Health Center (MCHC)

Features: University Hospital with 558 beds, is the largest of the Medical Center's seven hospitals. Its 11 floors are spread across more than 1 million square feet. Taubman Center houses state-of-the-art specialty clinics and outpatient services. This 4-story building connects to the new University Hospital and the 2,000-car patient/visitor parking structure. The MCHC, an addition to Taubman Center and Mott Hospital, allowed for the relocation of a number of units. The pediatric intensive care unit was expanded, and a new neonatal intensive care unit was built.

Price tag: approximately $400 million, financed by the state, gifts, and the University.

Completed: University Hospital and the Taubman Center 1986; the MCHC 1992.

Mott Children's Hospital Renovation and Addition

Plans: A 6-floor addition is being built to the west of the building. Patient rooms are being renovated in the first major project of this nature since Mott was built 23 years ago. The addition and renovations are needed to meet the demand for more acute pediatric care.

Price tag: $49 million, financed by the Hospital.

Projected completion: February 1995.

Cancer and Geriatrics Centers

Plans: The two centers, housed in a 10-story building west of University Hospital, will provide research and clinical space. Also planned adjacent to the centers is a 1,000-car parking structure, possibly topped by a 5-story office building.

Price tag: $88.6 million for the Cancer and Geriatrics Centers, financed by the Hospital, Medical School, and a bond issue.

Projected completion: August 1996.

North Campus Commons Addition

Features: The 44,700-square-foot addition includes retail space, a mall, office space, and two guest suites. Renovation of the existing Commons Building expanded the lounge and informal snack bar space, provided an elevator for handicapped access to all levels and a computing center branch site.

Price tag: $4.36 million, financed by the issuance of tax-exempt bonds secured by a pledge of student fees.

Completed: 1988.

Engineering Center Building

Plans: The 65,000-square-foot academic and student services center to be built south of the Walter E. Lay Automotive Laboratory will provide space for undergraduate student records, counseling and financial aid offices, engineering placement, College of Engineering administrative offices, and engineering student organizations plus academic space for the Department of Industrial and Operations Engineering.

Price tag: $15 million, financed by the state and the University.

Projected completion: December 1995.

Integrated Technology and Instruction Center ▶

Plans: A high-technology facility on North Campus, the center will have instructional areas, including a library and study space, design laboratories, and areas for musical performances. The center will stress links between engineering, architecture, music, and art. The 3-story building will be connected to the Chrysler Center and the North Campus Commons addition.

Price tag: $42 million, financed by the state and the University.

Projected completion: June 1996.

◀ Electrical Engineering and Computer Science Building

Features: The 232,000-square foot, 4-story building is connected to the G. G. Brown Building to the north and the Walter E. Lay Automotive Laboratory to the south. It houses the Department of Electrical Engineering and Computer Science, parts of mechanical engineering and applied mechanics, administrative offices, other engineering programs and student services.

Price tag: $30 million, financed by the state.

Building completed: 1986.

Herbert H. Dow Laboratory ▶

Features: This 3-story red brick, steel, and glass structure houses the departments of Chemical Engineering and Materials Science and Engineering.

Price tag: $10.8 million, financed by gifts.

Completed: 1983.

◀ François-Xavier Bagnoud Building

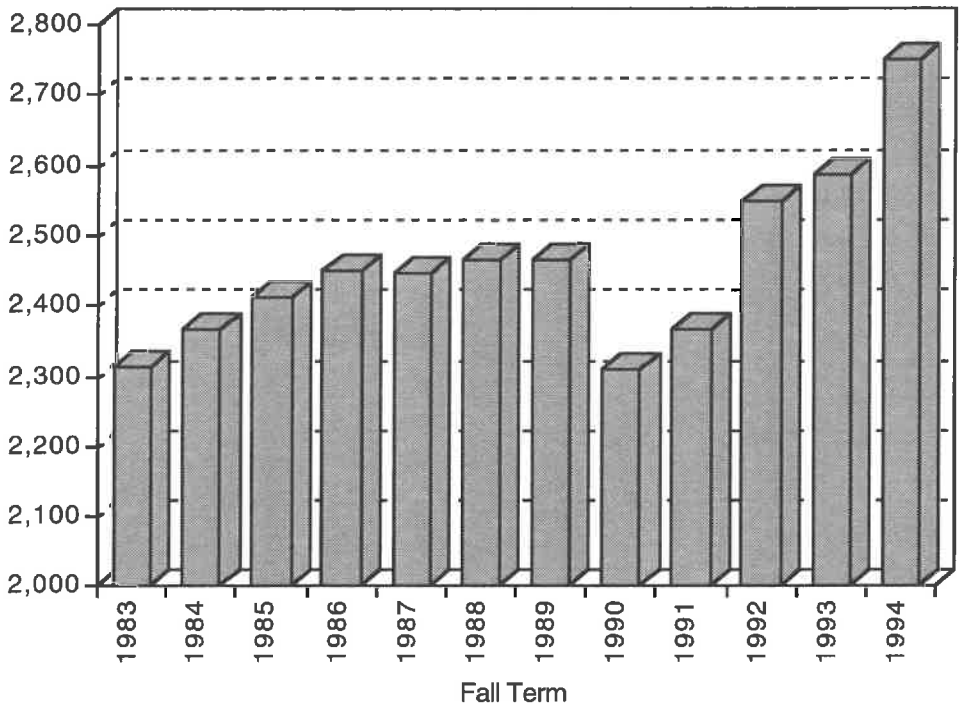
Features: The 93,400-square-foot aerospace engineering facility includes a large atrium, 30 teaching and research labs, 156-seat lecture hall, 3 classrooms, 30 faculty/staff offices, 30 graduate student offices, and a student lounge. The building is named for François-Xavier Bagnoud, a U-M aerospace graduate who was killed in a helicopter crash.

Price tag: $14.7 million, financed by gifts and the University.

Building completed: 1993.

Goal To reposition the UM as a "world university"

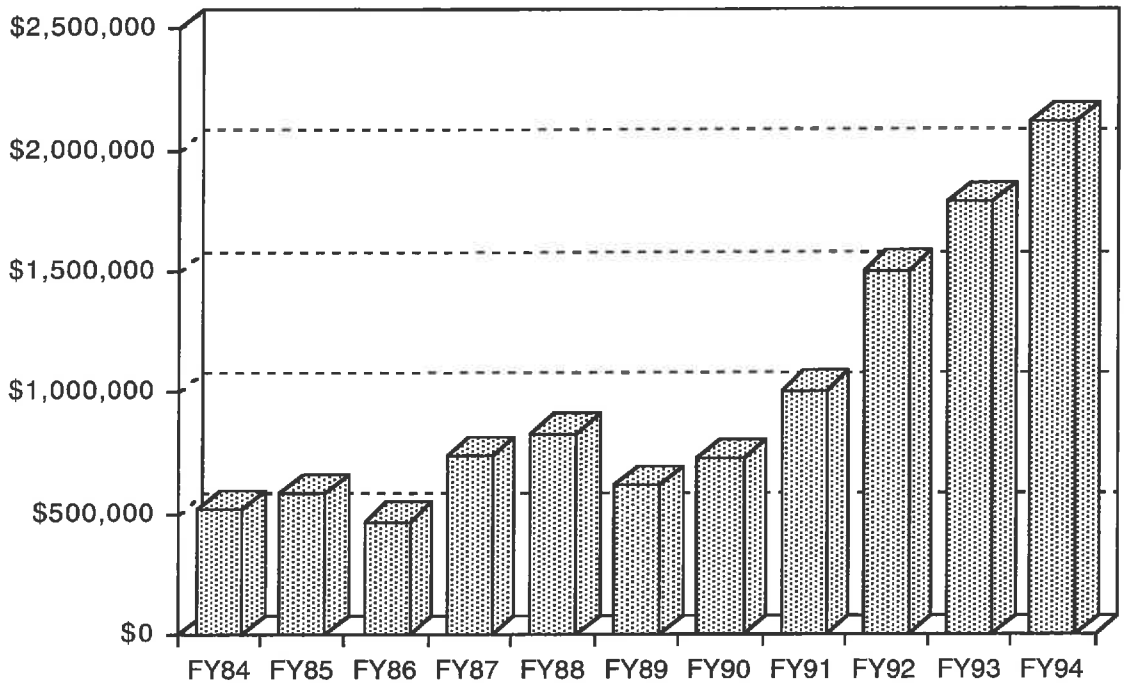
Figure 15-1 Number of International Students



Goal

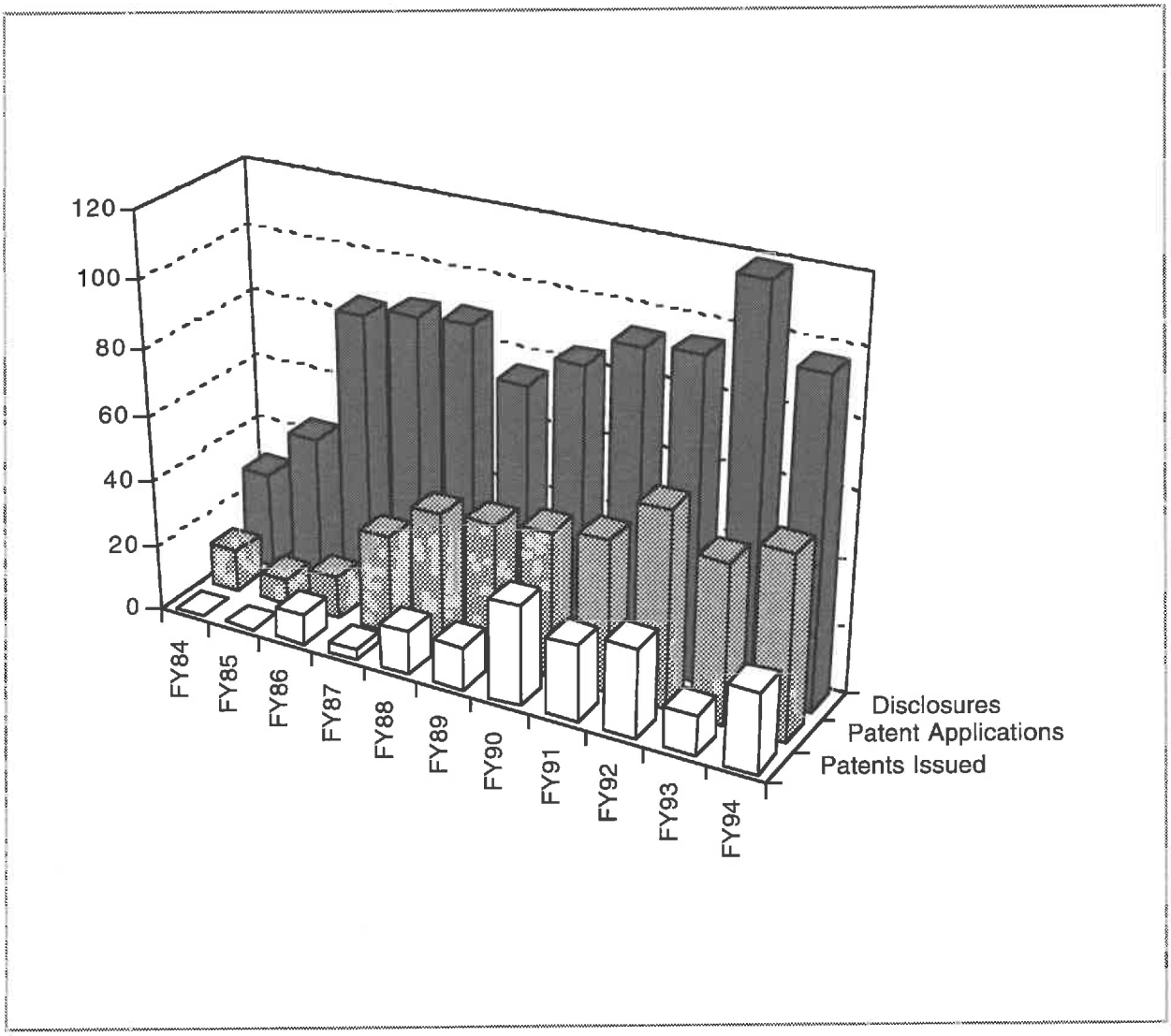
To make UM a leader in knowledge transfer and economic impact

Figure 16-1 Royalty Revenue



Change Since FY88: +154%

Figure 16-2 Intellectual Property Activity



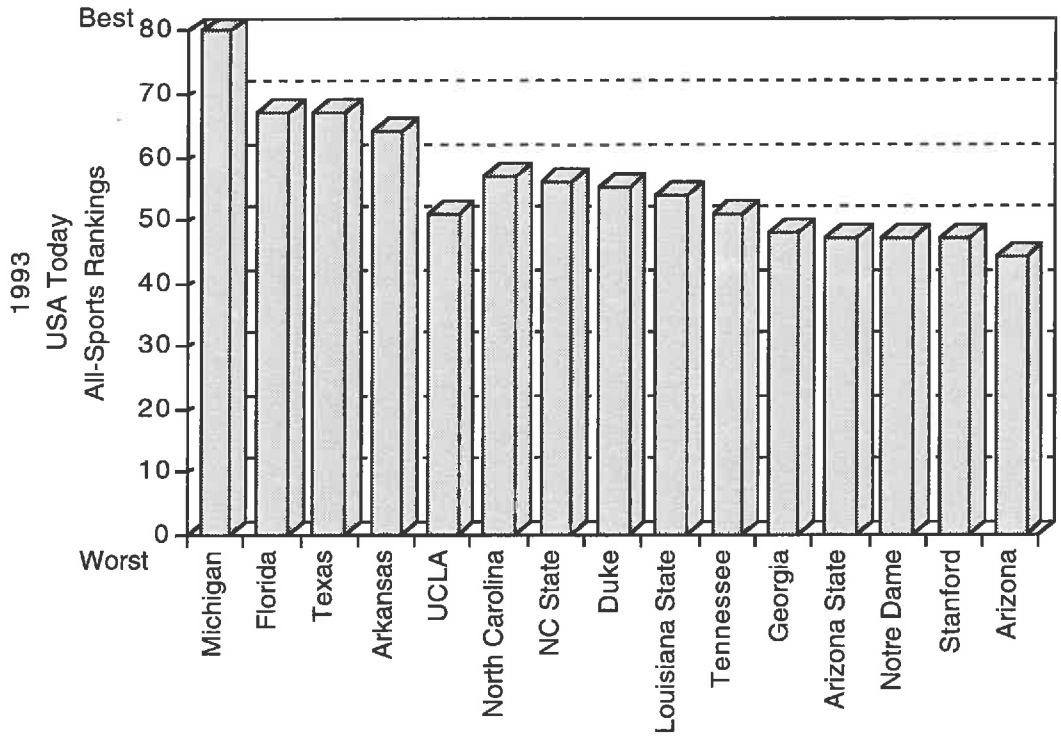
Changes Since FY88:

Disclosures	+8%
Patent Applications	34%
Patents Issues	-84%

Goal

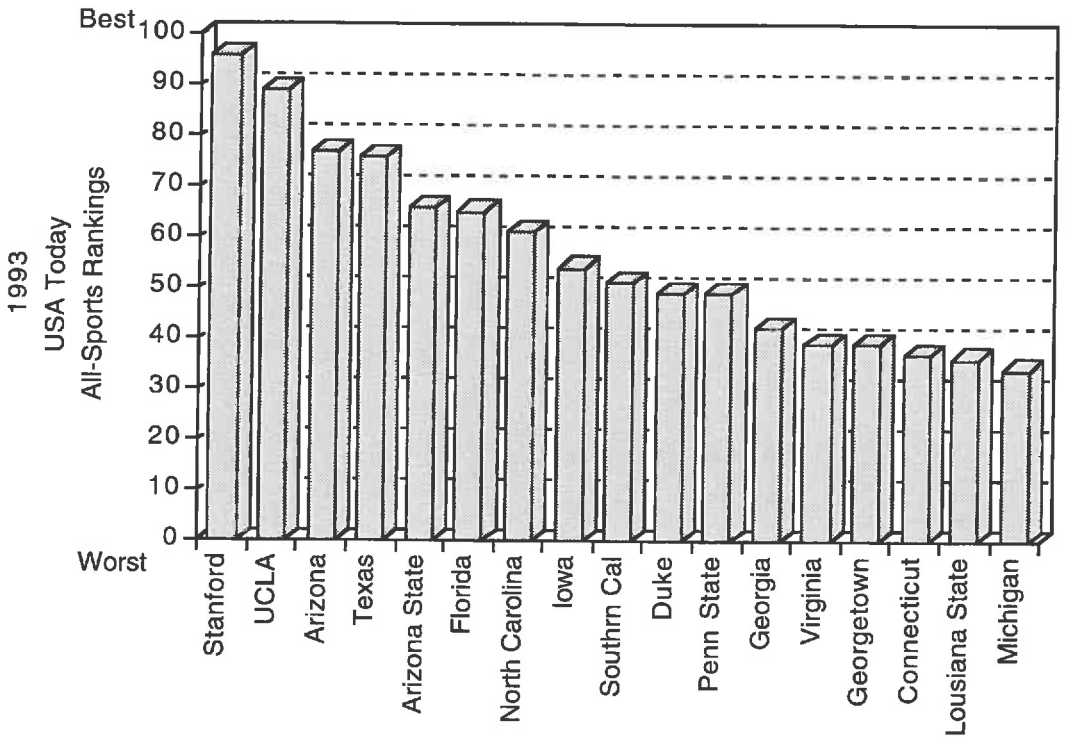
To develop the nation's leading programs in men's and women's intercollegiate athletics

Figure 17-1 Rankings of Men's Sports Programs



Note: The article ranks universities in each of ten NCAA Division I sports. Teams are ranked from 1-20, with 20 points going to the national champion.

Figure 17-2 Rankings of Women's Sports Programs



Note: The article ranks universities in each of ten NCAA Division I sports. Teams are ranked from 1-20, with 20 points going to the national champion.

Table 17-1 Conference and National Rankings of Men's Athletics

Men's Baseball		
	Big Ten	National
83-84	1	8
84-85	3	10
85-86	1	28
86-87	1	23
87-88	1	19
88-89	1	12
89-90	5	
90-91	5	
91-92	8	
92-93	7	
93-94	3	

Men's Basketball		
	Big Ten	National
83-84	4	
84-85	1	2
85-86	1	2
86-87	5	
87-88	2	10
88-89	3	1
89-90	3	13
90-91	8	
91-92	3	2
92-93	2	2
93-94	2	11

Men's Cross Country		
	Big Ten	National
83-84	2	17
84-85	2	8
85-86	6	
86-87	5	
87-88	6	
88-89	3	16
89-90	8	
90-91	2	13
91-92	2	6
92-93	2	5
93-94	1	
94-95	2	7

Men's Football		
	Big Ten	National
83-84	2	8
84-85	6	
85-86	2	2
86-87	1	8
87-88	4	19
88-89	1	4
89-90	1	7
90-91	1	7
91-92	1	6
92-93	1	5
93-94	4	19

Men's Golf		
	Big Ten	National
83-84	8	
84-85	3	
85-86	9	
86-87	6	
87-88	3	
88-89	8	
89-90	7	
90-91	7	
91-92	7	
92-93	7	
93-94	9	

Men's Gymnastics		
	Big Ten	National
83-84	5	
84-85	7	
85-86	6	
86-87	6	
87-88	7	
88-89	6	
89-90	7	
90-91	7	
91-92	6	
92-93	5	
93-94	5	

Men's Hockey		
	CCHA	National
83-84	9	
84-85	9	
85-86	8	
86-87	7	
87-88	5	
88-89	4	
89-90	4	
90-91	2	
91-92	1	
92-93	2	2
93-94	1	

Men's Swimming and Diving		
	Big Ten	National
83-84	3	11
84-85	2	15
85-86	1	25
86-87	1	6
87-88	1	5
88-89	1	3
89-90	1	4
90-91	1	6
91-92	1	10
92-93	1	2
93-94	1	3
94-95	1	

Men's Tennis		
	Big Ten	National
83-84	5	
84-85	1	
85-86	2	
86-87	1	16
87-88	1	3
88-89	2	
89-90	6	
90-91	8	
91-92	8	
92-93	8	
93-94	2	

Men's Indoor Track and Field		
	Big Ten	National
83-84	2	38
84-85	4	50
85-86	3	13
86-87	4	36
87-88	6	44
88-89	4	10
89-90	8	
90-91	4	11
91-92	9	
92-93	8	
93-94	1	

Men's Outdoor Track and Field		
	Big Ten	National
83-84	3	34
84-85	4	52
85-86	5	36
86-87	4	25
87-88	5	30
88-89	6	
89-90	6	
90-91	4	
91-92	8	
92-93	7	
93-94	4	

Men's Wrestling		
	Big Ten	National
83-84	5	18
84-85	3	5
85-86	3	10
86-87	7	19
87-88	2	6
88-89	3	5
89-90	6	31
90-91	2	12
91-92	6	25
92-93	5	11
93-94	6	5

Table 17-2 Conference and National Rankings of Women's Athletics

Women's Basketball		
	Big Ten	National
83-84	9	
84-85	10	
85-86	7	
86-87	10	
87-88	6	
88-89	8	
89-90	4	
90-91	9	
91-92	9	
92-93	11	
93-94	11	

Women's Cross Country		
	Big Ten	National
83-84	9	
84-85	3	
85-86	3	
86-87	4	
87-88	5	7
88-89	3	15
89-90	3	17
90-91	3	14
91-92	3	8
92-93	1	10
93-94	1	6
94-95	1	2

Women's Field Hockey		
	Big Ten	National
83-84	4	
84-85	5	
85-86	6	
86-87	5	
87-88	5	
88-89	4	
89-90	4	
90-91	5	
91-92	4	
92-93	4	
93-94	4	

Women's Golf		
	Big Ten	National
83-84	9	
84-85	9	
85-86	8	
86-87	9	
87-88	9	
88-89	9	
89-90	7	
90-91	8	
91-92	9	
92-93	11	
93-94	10	

Women's Gymnastics		
	Big Ten	National
83-84	4	
84-85	4	
85-86	6	
86-87	5	
87-88	7	
88-89	7	
89-90	6	
90-91	3	
91-92	1	
92-93	1	9
93-94	1	4

Women's Softball		
	Big Ten	National
83-84	4	
84-85	2	
85-86	5	
86-87	2	
87-88	2	
88-89	2	
89-90	4	
90-91	3	
91-92	1	
92-93	1	17
93-94	3	

Women's Swimming and Diving

	Big Ten	National
83-84	4	9
84-85	5	
85-86	1	31
86-87	1	10
87-88	1	8
88-89	1	6
89-90	1	7
90-91	1	15
91-92	1	7
92-93	1	5
94-94	1	8
93-95	2	

Women's Tennis

	Big Ten	National
83-84	3	
84-85	8	
85-86	10	
86-87	10	
87-88	5	
88-89	10	
89-90	5	
90-91	4	
91-92	5	
92-93	6	
93-94	2	

Women's Indoor Track and Field

	Big Ten	National
83-84	6	
84-85	6	
85-86	6	
86-87	8	
87-88	6	
88-89	7	
89-90	5	
90-91	7	
91-92	6	
92-93	3	
93-94	1	7

Women's Outdoor Track and Field

	Big Ten	National
83-84	6	
84-85	8	
85-86	4	
86-87	7	
87-88	8	
88-89	4	
89-90	5	
90-91	9	
91-92	8	
92-93	1	
93-94	1	23

Women's Volleyball

	Big Ten	National
83-84	4	
84-85	5	
85-86	8	
86-87	10	
87-88	9	
88-89	10	
89-90	10	
90-91	10	
91-92	6	
92-93	5	
93-94	7 (tie)	
94-95	9 (tie)	

Figure 17-3

Number of Freshman Men's Football Participants Enrolling and Number Graduating Six Years After Initial Entry

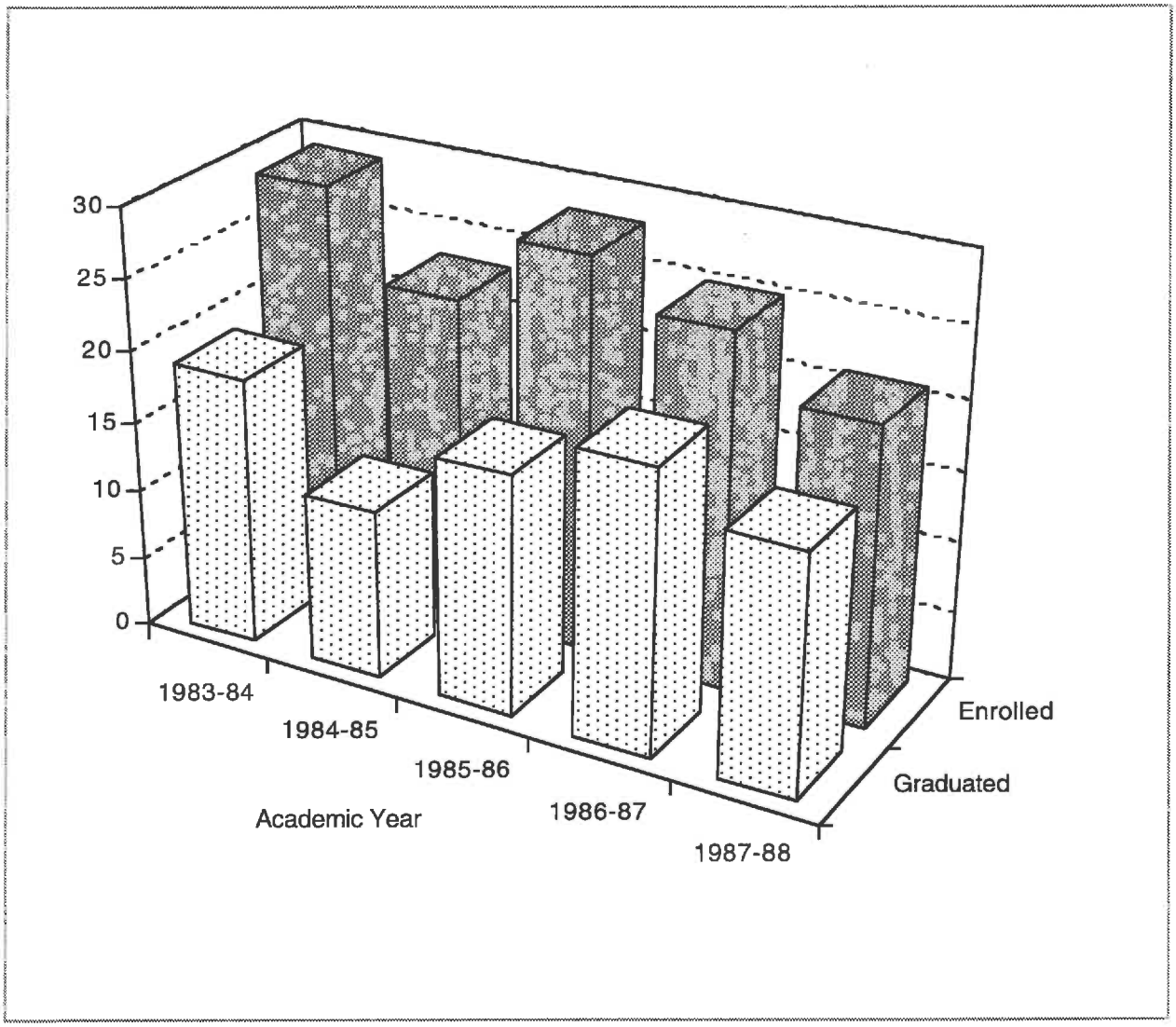


Figure 17-4

Number of Freshman Men's Basketball Participants Enrolling and Number Graduating Six Years After Initial Entry

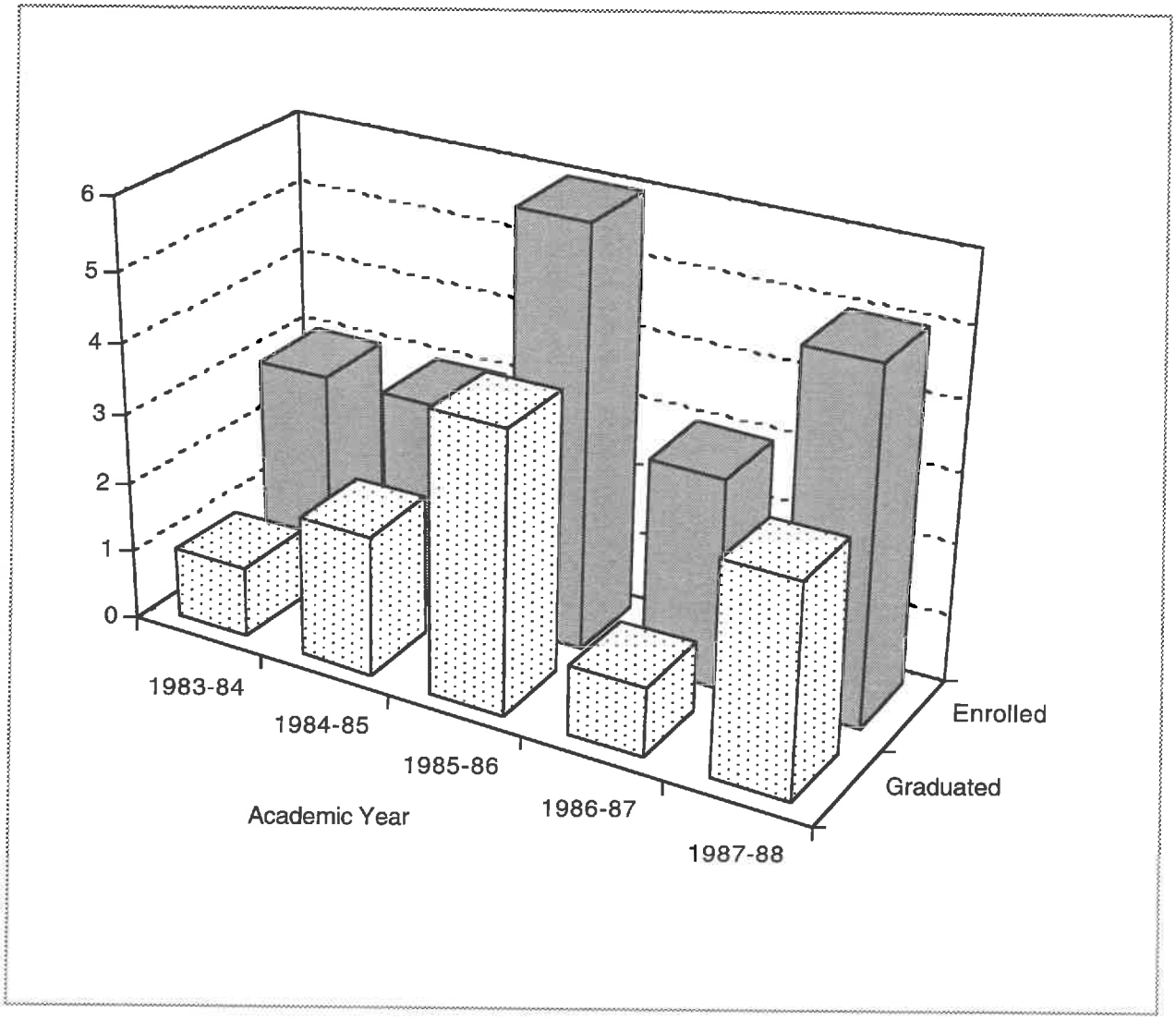


Figure 17-5

Number of Freshman Men's Baseball Participants Enrolling and Number Graduating Six Years After Initial Entry