

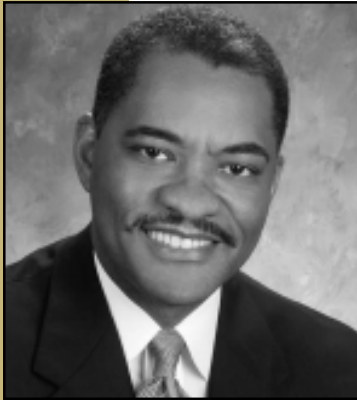
UNIVERSITY OF MISSOURI

Columbia • Kansas City • Rolla • St. Louis



economic IMPACT 2006

Letter from President Elson S. Floyd



Dear Friends:

The University of Missouri has played a vital role in our state since its founding in 1839. Today, the University of Missouri reaffirms its commitment not only to advancing the frontiers of knowledge, producing talented graduates and bringing knowledge directly to the people, but to partnering and collaborating with state, federal and local government, as well as with business and industry, to stimulate economic development.

This report shows some of the many ways that the University of Missouri is contributing to building a strong, vital state, one characterized by an abundance of good, well-paying jobs and by firms that are competitive globally. From technology transfer to cutting-edge research, from agriculture to the life sciences, the University of Missouri is at the forefront of cultivating new discoveries and bringing those ideas to the marketplace.

I invite you to explore this report to see how the University of Missouri is working on behalf of our citizens and our economy. I am confident that even those who already are familiar with the University of Missouri's contributions will come away impressed. We look forward to exploring new and exciting ways to improve the quality of life for all those throughout our great state and nation.

Sincerely,

A handwritten signature in dark ink, appearing to read "Elson S. Floyd".

Elson S. Floyd, Ph.D.
President

Economic Impact Highlights

UM means big business.....2

- With \$2.1 billion in total revenues and more than 23,000 employees, UM is the 21st largest publicly-held company in the state.
- Compared to top public companies headquartered in Missouri, no company has more of its employees within the state's borders than the University of Missouri.

UM faculty, staff and students work to build a better Missouri...4

- The University's 23,000 faculty and staff are in the business of research, teaching and extending new knowledge to improve the lives of all Missourians.
- UM granted nearly 13,000 degrees in 2005. UM provides the skilled graduates that are critical for the state's knowledge-based industries and their ability to stay and succeed in Missouri — competitive industries like agriculture, life sciences and engineering.

UM brings in new money from outside the state.....6

- UM uses its state appropriation to leverage nearly five times that amount with other revenue sources to provide the maximum benefit to all Missourians.
- UM research is an economic engine; the University conducts five dollars of research for every one dollar directly invested by the state.
- The University's federal research and development funding continues to grow, from \$159 million in Fiscal Year 1996 to more than \$285 million in Fiscal Year 2003, according to the National Science Foundation.
- UM's endowment and private support also continues to grow. The University endowment reached \$897 million as of June 30, 2005.

The mission of the University of Missouri, as a land-grant university and Missouri's only public research and doctoral-level institution, is to discover, disseminate, preserve, and apply knowledge. The university promotes learning by its students and lifelong learning by Missouri's citizens, fosters innovation to support economic development, and advances the health, cultural, and social interests of the people of Missouri, the nation, and the world.

UM means big business

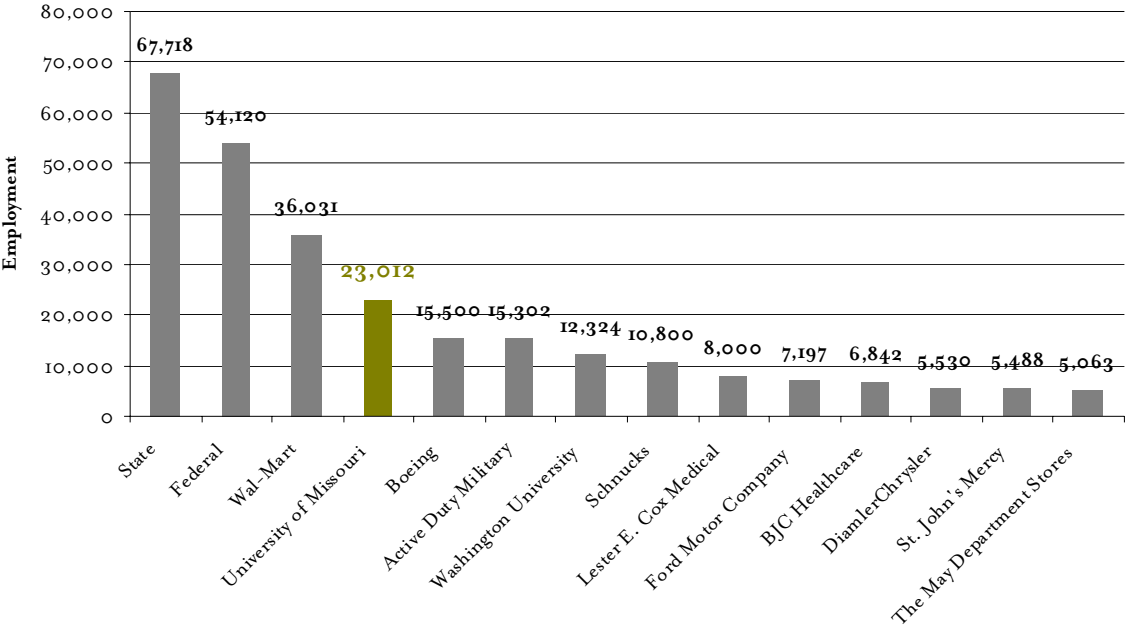
UM is one of the largest businesses in Missouri

The University of Missouri means — and makes — good business sense in Missouri. UM has earned Aa2/AA credit ratings from Moody's and Standard & Poor's, reflecting its ability to manage effectively its financial and physical resources. UM's non-profit status means all of its resources are poured back into Missouri. It also is among the top 25 of all publicly-held businesses in the State of Missouri in terms of annual revenues. This places the University among the ranks of companies with globally-recognized brands, such as Energizer Holdings, H & R Block, Monsanto Co., May Department Stores and Anheuser-Busch, among others.

With \$2.1 billion in total revenues and more than 23,000 employees, UM is the 21st largest publicly-held company in the state.

Among the Missouri-based businesses on the list, no company has more of its employees within the state's borders than the University of Missouri. The University and its employees have a direct impact on the State of Missouri's economy.

**MISSOURI EMPLOYMENT COMPARISON:
GOVERNMENT & TOP 10 PRIVATE EMPLOYERS, 2004**



**UNIVERSITY OF MISSOURI TOTAL REVENUES
COMPARED TO TOP PUBLIC COMPANIES
HEADQUARTERED IN THE STATE OF MISSOURI**

Rank	Company	Revenues (mil)	Total Global Employment
1	Emerson Electric Co.	15,615	107,800
2	Express Scripts Inc.	15,115	8,575
3	Anheuser-Busch Cos. Inc.	14,937	31,435
4	May Department Stores Co.	14,441	132,000
5	Monsanto Co.	5,457	12,600
6	Ameren Corporation	5,160	7,650
7	Leggett and Platt Inc.	5,086	33,000
8	Charter Communications Inc.	4,977	15,500
9	H & R Block Inc.	4,206	133,800
10	Graybar Electric Company Inc.	3,803	7,700
11	Peabody Energy Corp.	3,632	6,900
12	Interstate Bakeries Corp.	3,526	32,000
13	Mallinckrodt Inc.	3,000	12,000
14	Energizer Holdings Inc.	2,813	12,955
15	Nestle Purina PetCare Co.	2,763	14,630
15	Solutia Inc.	2,697	5,700
16	A.G. Edwards Inc.	2,608	15,400
17	Kellwood Co.	2,556	27,000
18	D & K Healthcare Resources Inc.	2,541	784
19	DST Systems Inc.	2,429	11,000
20	Furniture Brands International Inc.	2,375	17,800
21	University of Missouri System	2,193	23,012
22	Olin Corp.	1,997	5,700
23	Brown Shoe Company Inc.	1,942	11,600
24	Arch Coal Inc.	1,907	4,150
25	O'Reilly Automotive Inc.	1,721	14,149
26	Bakers Footwear Group Inc.	1,629	2,865
27	Ralcorp Holdings Inc.	1,558	6,000
28	Maverick Tube Corp.	1,456	2,566
29	Sigma-Aldrich Corp.	1,409	6,140
30	Spartech Corp.	1,122	3,750

UM faculty, staff & students work to build a better Missouri

The nature of University employees also distinguishes UM from many other businesses, because the University's talented and creative faculty and staff are in the business of research, teaching and extending new knowledge to improve the lives of all Missourians. They are in the business of adding value.

UM by its annual numbers:

- 23,000 faculty and staff
- 62,000 students
- 161,034 patients served by UM Health Care & over \$40 million in uncompensated care
- 403,062 served by Extension
- 92 disclosures filed
- 58 patent applications
- Over \$9 million in licensing income

In 2004, UM employed more than 7,000 faculty and 15,000 staff. These 23,000 faculty and staff also multiply their effects by direct interaction with more than 62,000 students — not to mention countless other associations through University of Missouri Extension that yield real impact for the state. With programs and activities in each of Missouri's 114 counties, Extension serves 403,062 people annually, making education and information available to help Missourians build economic viability, empowered individuals, strong families and communities, and healthy environments.

Faculty and staff also provide additional services with statewide reach and impact. UM Health Care serves patients from every county in the state and,

as the public safety net hospital, provides over \$40 million in uncompensated care annually. In 2004, UM Health Care provided services to 161,034 patients.

University researchers also are advancing the frontiers of knowledge. The University is committed to supporting cutting-edge research, to patenting discoveries made in its laboratories, and then speeding their transformation into useful products and processes. The Office of Technology and Special Projects takes an aggressive, entrepreneurial approach to licensing technologies from all four campuses, creating research and development partnerships, and assisting start-up firms that utilize University discoveries. Over the past five years, University inventions and patent applications have doubled; options and license agreements have quadrupled. Annual licensing income increased 60 percent in five years. In 2004, the number of patents issued to the University of Missouri increased by 177 percent over the previous year, continuing a very encouraging trend.

UM provides well-educated graduates necessary for the workforce

UM provides the skilled graduates that are critical for the state's knowledge-based industries and their ability to stay and succeed in Missouri — competitive indus-

tries like agriculture, health care, life sciences and engineering.

Of the University's more than 62,000 students, almost 53,000 are from Missouri. The University also has students from every county in the state, every state in the nation, and almost 100 different countries.

UM awarded 12,984 degrees in 2005. UM is the only public university in the state that trains doctors, dentists, veterinarians, lawyers, optometrists, engineers and other professionals who perform vital services that are essential to our communities.

The University's graduates stay in the state to live and work; more than 50 percent

of UM graduates remain in Missouri. In 2004, there were nearly 190,000 alumni in Missouri. Of these alumni, 2,955 graduated from the School of Medicine; 6,459 graduated from the School of Nursing; and 2,578 graduated from the School of Health Professions. UM alumni from the Schools of Dentistry, Pharmacy, Engineering and Law and the Colleges of Optometry and Veterinary Medicine also remain in Missouri in significant numbers. In fact, nearly 20 percent of all the state's teachers hold degrees from UM.

The value these graduates add to the state, both in terms of the increased salaries they command and their roles in transforming Missouri to a higher-value economy, amounts to billions annually. Researchers¹ estimate that an individual with a bachelor's degree is expected to earn, on average, \$19,485 more per year than a typical high school graduate. Even after subtracting education expenses and foregone earnings, this amounts to an expected increase of over \$700,000 in lifetime earnings for a usual career (from age 25 through 64).² More advanced degrees translate into even greater differences in earning potential.

Using these figures, the aggregate incremental earnings impact from the 12,984 degrees awarded by UM in 2005 alone exceeds \$330 million per year — or \$13 billion over the career of this group of graduates. Much of this increased income will be spent within the state helping the economy to grow stronger.

UM DEGREES AWARDED, FISCAL YEAR 2005

	MU	UMKC	UMR	UMSL	UM Total
Baccalaureate	4,259	1,393	731	1,902	8,285
Graduate Certificate	79	19	83	76	257
Master's	1,195	794	440	786	3,215
Educational Specialist	33	41	0	3	77
Doctoral	274	48	66	51	439
Professional	288	377	0	46	711
Total	6,128	2,672	1,320	2,864	12,984

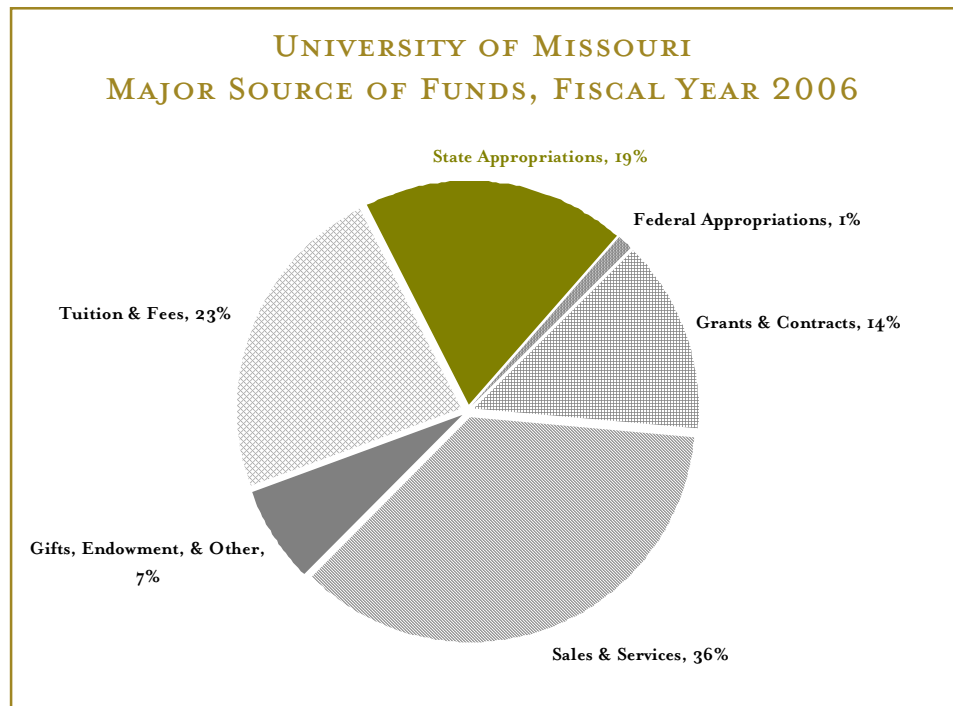
¹ *The Big Payoff: Educational Attainment and Synthetic Estimates of Work-Life Earnings* by Jennifer Cheesman Day and Eric C. Newburger for the U.S. Department of Commerce, Economics and Statistics Administration, U.S. Census Bureau, July 2002.

² All figures in the study are expressed in 1999 dollars. If restated in 2004 dollars, these figures would be almost 15 percent higher.

UM brings in new money from outside the state

UM leverages state funding

The University of Missouri is an effective steward of state resources. UM uses its state appropriation to leverage nearly five times that amount with other revenue sources to provide the maximum benefit to all Missourians.



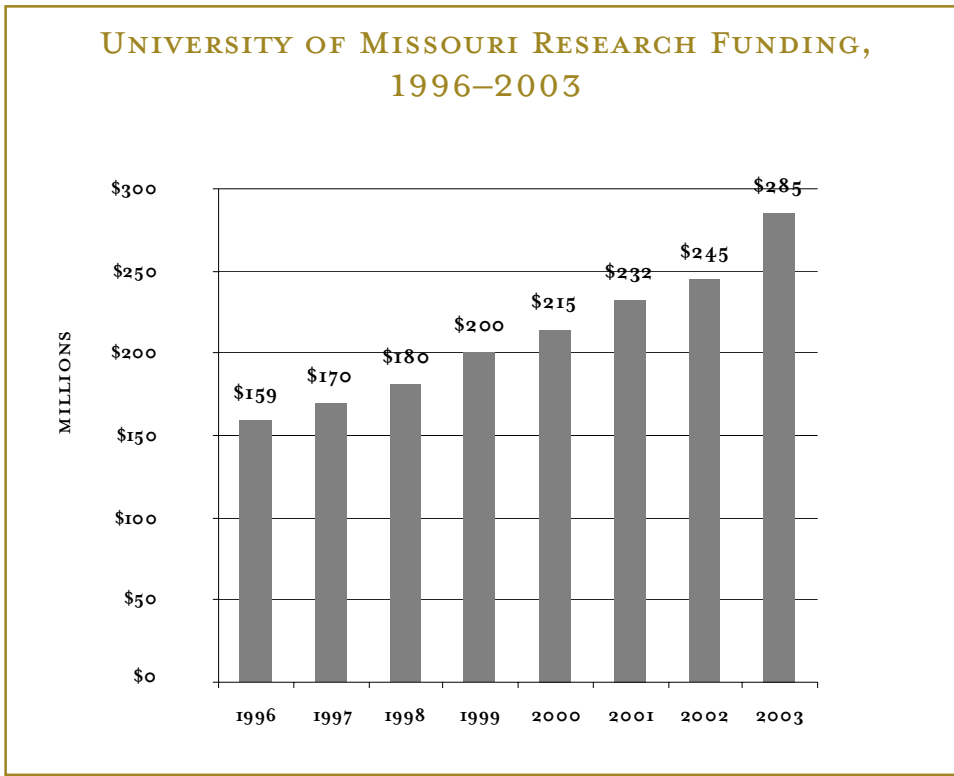
UM research is an economic engine

Growing Missouri's economy not only is going to take the kind of skilled workforce that the University of Missouri makes possible, it also will require a competitive and growing research base.

Missouri is currently spending more than \$3 per \$1,000 of gross state product on academic research. Research expenditures by the state not only make good short-term investment sense, it also grows the state's ability to create new, higher-value businesses.

UM also leverages state funding to attract federal research dollars to Missouri. The University conducts five dollars of research for every one dollar directly invested by the state.

The latest data from the National Science Foundation reveals that in Fiscal Year 2005 alone, UM earned 67 percent of total funding awarded by the NSF in Missouri. The University of Missouri-Columbia accounted for 44 percent of all Missouri NSF funding and ranked 14th nationally for awards in the life sciences.



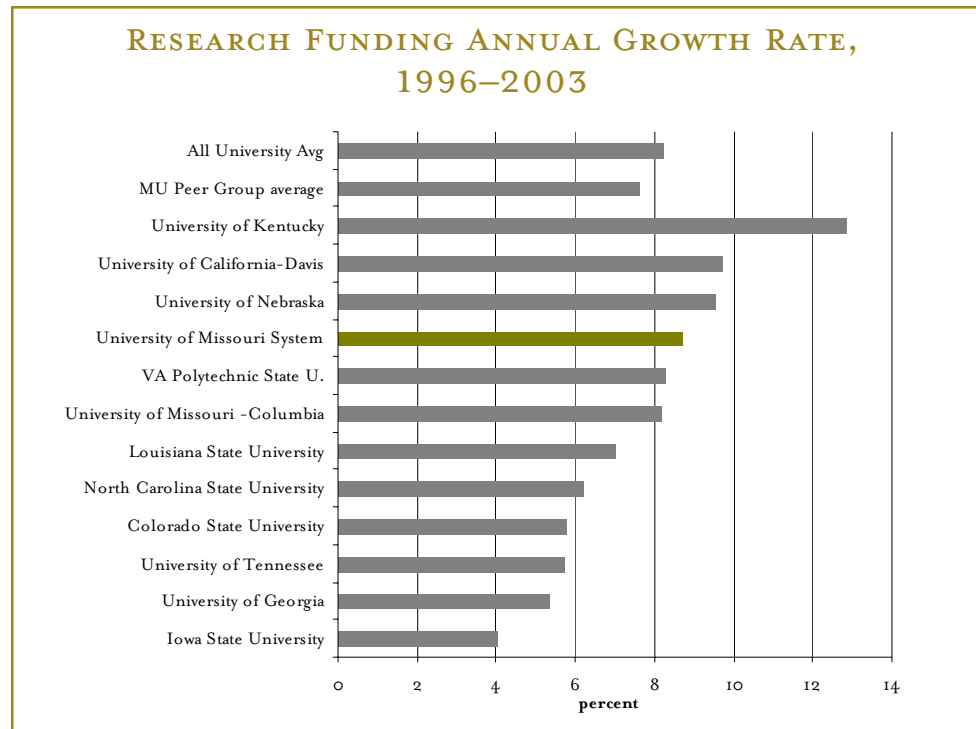
UM research funding continues to grow

The University’s federal research and development funding grew from \$159 million in Fiscal Year 1996 to more than \$285 million in Fiscal Year 2003, according to the National Science Foundation. Based on the most recent data from the NSF, the University of Missouri-Columbia is ranked No. 2 among public universities in the Association of American Universities in growth of federal research for the past ten years.

Among recent major awards are:

- \$10.4 million for a National Swine Center at MU, to serve as the world’s only clearinghouse for genetic material and swine for researchers studying a multitude of health issues;
- \$2.1 million for the Shock Trauma Research Center at the UMKC School of Medicine to apply new scientific discoveries to the treatment of injured military personnel;
- \$16 million for the University Transportation Center at UM-Rolla to research critical national transportation and security issues; and
- \$28 million for an education initiative, St. Louis In-Gear for Success, or SLINGS, at UM-St. Louis to increase high school graduation and college enrollment rates in eight St. Louis-area school districts.

RESEARCH FUNDING ANNUAL GROWTH RATE, 1996–2003



Source: National Science Foundation/Division of Science Resources Statistics, *Survey of Research and Development Expenditures at Universities and Colleges, FY 2003*.

UM enjoys a strong endowment and private support

Another hallmark of a strong business is the attraction of private investment. The University of Missouri endowment is growing, reaching \$897 million as of June 30, 2005. This dynamic growth is the result of much hard work by many dedicated individuals. During the past five years alone, additional gifts to the endowment have totaled \$125 million. The continued growth of these funds will greatly add to the institution's strength and demonstrate its value.

ACKNOWLEDGMENTS

This report was published in December 2005 by the University of Missouri Office of Research & Economic Development and University Communications. Cover photographs of University of Missouri-Columbia South Farm.

DATA SOURCES

Data provided by James Kaufman and Nicholas Kalaitzandonakes, Department of Agricultural Economics, University of Missouri-Columbia. Official peer group institutions have been selected as a comparison group based on several characteristics similar to the University of Missouri-Columbia: 1) They are all designated Carnegie Research I institutions; 2) Enrollment on these campuses are between 20,000 and 30,000 students; 3) At least one first professional degree is conferred from each main campus; 4) They are all land-grant universities. For more information, visit <http://web.missouri.edu/~ir/pages/peers/muofficial.htm>

Dear Friends:

The facts and statistics found in this report speak for themselves. Today's major research universities are going about their business largely unrecognized for their size, scope and impact on the economy. Across our nation, universities that have found the opportunity and courage to deliberately engage in economic development rarely retreat — and most are rewarded with success.

At the University of Missouri, we are embarking on just such a commitment, and although we have always been involved in strengthening the economy of the state, we expect to deliver a more robust impact through our highly-focused attention on economic development.

First, we are focusing on the culture of the University's faculty, staff and students. The energy, creativity and innovation that naturally come from such a community can be catalyzed by the modern concepts of entrepreneurship. The curriculum and experiences we plan over the course of a student's residency can have a large impact on our graduates' ability to seek, retain and even create jobs in the future.

Second, we are re-examining our internal processes for bigger impact. By working with the Missouri Department of Economic Development, we hope to collaborate further on the business assistance programs currently offered across the state. We also are improving our technology transfer processes for greater efficiency, increasing deal flow, business start-ups, and licensing activity.

Third, we are reorganizing our administration to better steward the vast and vital resources of the University of Missouri. Our intellectual and real property are but two valuable assets that are applicable to economic development. We are among the leading universities in the nation in the growth of our research effort, and this growing knowledge pool is the source of new ideas for economic development. Having the facilities to specifically incubate, accelerate and commercialize these ideas is the rationale behind the planning of our business incubators and research parks across the state. We can grow our own businesses as well as attract and recruit like-minded enterprises to our campus communities.

I invite your feedback and participation as we launch this most important effort for the University and the State of Missouri.

Regards,



John Gardner, Ph.D.

Vice President for Research & Economic Development



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