

Oakland University 360-Degree Environmental Scan

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Presented to
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the President's Executive Cabinet

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Introduction

The story line is simple: After a decade of job losses, counties across Michigan as well as those immediately surrounding Oakland University (OU) are competing toe-to-toe with other regions around the nation and world for new economy jobs. The competition begins with a skilled and educated workforce, positioning Oakland University—and all of its higher education counterparts—at the center of future economic development and prosperity. OU has many advantages, chief among them its geographical location: situated in the heart of southeast Michigan and able to conveniently serve Oakland and Macomb Counties, economic engines of the state.

Key to OU's success is its positioning as a regional resource. **OU must become the first choice of the top students, businesses, nonprofits, philanthropists, and governmental organizations and agencies within its own backyard.** Universities traditionally feed off the economic activity of their respective regions, but OU has an opportunity to fuel economic activity in its region. Michigan's economic success will be driven by jobs in healthcare, educational services, advanced manufacturing, biomedical and biotechnical research, energy, and professional and business services. Every growing industry needs talented, innovative, and creative workers who can solve a problem and effectively communicate the solution. OU should prepare its students to be these new economy workers by leveraging its physical and human capital to move its region and state forward.

In this report, we outline Michigan and OU's story—past, present, and future. We will start with the economic and occupational trends and projections that should guide OU's resourcing into the future. We will explain what the new economy is, and why higher education will play a larger and more critical role in the future of our state and nation. We will then discuss the financial realities facing OU and its peer institutions across the state. In conclusion, we will address OU's strategic planning process and provide one framework that might guide the university's transition from present to future.

In the end, we hope a few points become clear:

- OU is entering a period of limited resources. State aid is unlikely to increase, while personal wealth has been hit hard in recent years. Supporters of OU will want to know the value proposition, or the quantifiable benefit, of the university's services to the community and to its students. OU must find ways to maximize its resources by building strategic partnerships and concentrating investments on building premier programs.
- OU is also entering a period of intense competition within the higher education industry. There are about 3,000 four-year institutions throughout the nation,¹ and community colleges, including the established community colleges surrounding OU, are pursuing four-year degree programs. Meanwhile, elite four-year institutions have built up enormous endowments to attract top students and faculty regardless of economic status or discipline. OU must identify and intensely pursue its competitive advantages.
- OU is entering its mature years, but its identity remains undefined. Some perceive OU as an elite, almost private institution, while others view it as an accessible regional commuter school. OU's curricula are diffuse: it offers programs across nearly every major profession, from business to medicine to education, at both the undergraduate and graduate levels. **OU**

¹ The National Center for Education Statistics shows a total of 2,719 four-year degree-granting institutions in 2009, although this number includes branch campuses. See http://nces.ed.gov/programs/digest/d09/tables/dt09_266.asp (accessed 12/21/10).

must define itself and control its identity. As OU moves forward, it should recognize the opportunity for every academic program to become either “top market” or “mass market”. Anything in between invites competition from both sides, and will not help OU target its resources at programs that will compete most effectively with those at other institutions.

- As an organization and in its development of students, a focus on nimbleness will be the key to success in a new economy that will continue to evolve at a rapid pace.

Economic Trends and Projections to 2020

This section describes broad trends in the national, Great Lakes, Michigan, and local economies that could affect Oakland University in the future; the effects will be felt in such areas as the availability of resources and the institution's curricula.

- Since the first class graduated from Oakland University in 1963, much has changed, and some things have not. For example, although energy remains the world's most valuable and sought-after commodity, today's most profitable corporation, Wal-Mart (see Exhibit 1), has achieved its number-one spot by mastering the art of automation, using computers and other technologies in the place of humans. Seeking efficiencies should not be exclusively a budget-cutting exercise, but instead an ongoing focus on maximizing resources.
- The United States has moved past the industrial age, and is beginning to move beyond the information age to a new generation of jobs that put a premium on conceptual skills including creativity, design, problem solving, communication, and innovation.
- In the postindustrial era, consumers place a premium on the knowledge and creativity that goes into product development. Consider the iPod. Only 20 percent of the iPod's value is captured during the manufacturing of the video or audio equipment, while 80 percent of the value is added by the white collar workers who design, market, finance, and manage its global production and dissemination.²
- The iPod creates further value by being the hardware that accesses vast amounts of content through iTunes; together, the iPod and iTunes have capitalized on the rise of the platform. A tremendous value is placed on products that organize information. Instead of creating a competing product to the music industry, Apple created a new commerce vehicle to purchase and organize music collections—with a scale and speed that could not be matched by previous music marketing channels.
- Author Daniel Pink attributes the rise of the conceptual class to abundance, Asia, and automation.³
 - U.S. consumers live in a world saturated with goods. While Americans have a standard of living and an abundance of material possessions that our predecessors never dreamt possible, personal, family and life satisfaction has remained stagnant. Product differentiation and organization rule the day.
 - The interest in outsourcing by U.S. businesses big and small has been matched by Asia's intense knowledge-based education system. America's information age defined by engineers, programmers, lawyers, and accountants has created an economic revolution in Asia leading to the rise of their middle class. As the cost of communication continues to fall, work that can be done elsewhere will be done elsewhere.
 - Machines replaced the brawn of manufacturing and production workers last century, and this century the computer is replacing the left brain. Management guru Tom Peters says "for white-collar workers, software is a forklift for the mind." Michigan knows the economic impact of automation all too well, but the rest of the nation is also realizing the impact of automation. If the work can be simplified and automated, it will be.
 - The rapid growth of e-books illustrates the influence of technology across all sectors, including the oldest and most stable publishing business. Through the first half of 2010, sales of e-books were up 204 percent over the previous year.⁴

² *Help Wanted, Projections of Jobs and Education Requirements through 2018*, Executive Summary (Washington, D.C.: Center on Education and the Workforce, Georgetown University, June 2010).

³ Daniel Pink, *A Whole New Mind, Why Right-Brainers Will Rule the Future* (New York: Penguin Group, 2005).

EXHIBIT 1
Fortune Top U.S. Companies (Revenues)

1963	Billions	2010	Billions
General Motors	\$14.6	Wal-Mart	\$408.2
Exxon Mobil	\$9.5	Exxon Mobil	\$248.7
Ford Motor	\$8.1	Chevron	\$163.5
General Electric	\$4.8	General Electric	\$156.8
Mobil	\$3.9	Bank of America	\$150.5
U.S. Steel	\$3.5	ConocoPhillips	\$139.5
Texaco	\$3.3	AT&T	\$123.0
Gulf Oil	\$2.8	Ford Motor	\$118.3
AT&T	\$2.8	J.P. Morgan Chase	\$115.6
Esmark	\$2.5	Hewlett-Packard	\$114.6

Source: "Fortune 500, Annual Ranking of America's Largest Corporations," collected online by PSC, November 2010.

The World Is Flat

- Tom Friedman made famous the statement, "The world is flat."⁵ Despite political and social efforts to impede globalization, our nation and its various metropolitan centers and institutions now compete in a global environment.
- While the United States and much of the western world will continue to show steady growth of 2–5 percent annually as measured by GDP, China, India, and much of Africa and South America will experience rapid growth of 5 to 10 percent in 2010–11 and the years to come (see Exhibit 2). China is currently experiencing an unprecedented 10 percent annual growth according to many economists.⁶
- Between 2010 and 2050, the United States' share of global economic output will drop from just over 20 percent to just over 10 percent. Meanwhile, developing countries, which account for around six billion people, will see their share of global economic output grow from around 50 percent to over 80 percent, according to Jeffery Sachs of the Earth Institute at Columbia University.⁷
- Forbes' recent list of the world's top-10 fastest growing cities in the next decade includes three cities in China, two in India, and Raleigh-Durham as the only one in the U.S.⁸
- Wal-Mart (#1) and Exxon (#3) are among the world's largest corporations but the only two U.S. corporations to make the 2010 top ten. In 2005, five U.S. corporations ranked in the top ten, and just 20 years ago, U.S. corporations occupied nearly every slot.
- Multinational corporations are playing an increasingly outsized role in U.S. economic activity, accounting for only 23 percent of U.S. private sector GDP in 2007, but contributing 31 percent of growth in real GDP and 41 percent of gains in labor productivity since 1990.

⁴ Association of American Publishers, *June 2010 Sales Report*, available online at http://www.publishers.org/main/PressCenter/Archives/2010_August/June2010Statistics.htm (accessed 12/7/10).

⁵ Thomas Friedman, *The World is Flat: A Brief History of the Twenty-First Century* (New York: Farrar, Straus, and Giroux, 2005).

⁶ International Monetary Fund, *World Economic Outlook: Recovery, Risk, and Rebalancing* (Washington, D.C.: International Monetary Fund, October 2010).

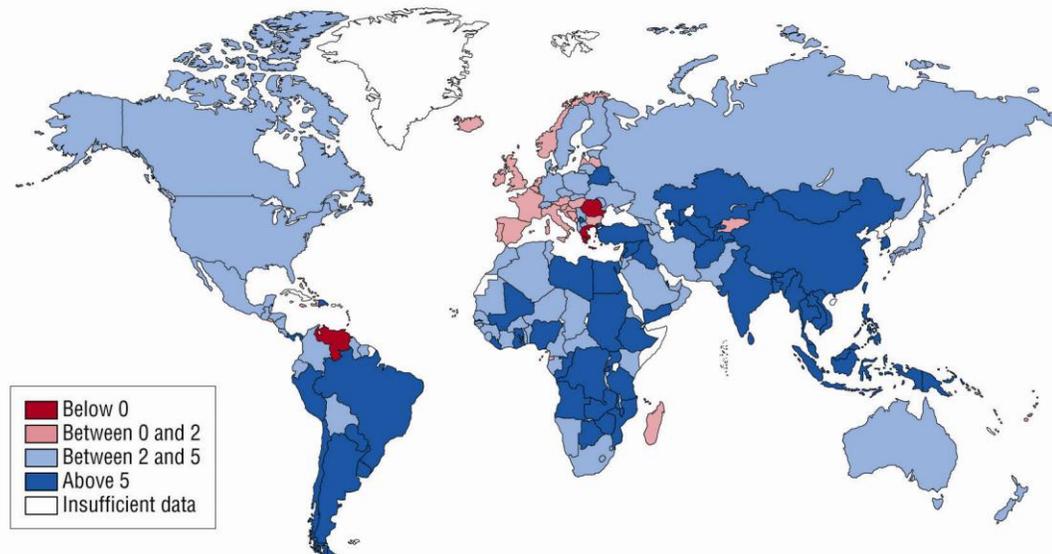
⁷ Jeffrey Sachs, 2010 Citigroup Foundation Lecture, Gerald Ford School of Public Policy, November 2010.

⁸ The Next Decade's Fastest Growing Cities, Joel Kotkin, published on Forbes.com, October 2010 (see <http://www.joelkotkin.com/content/00301-north-americas-fastest-growing-cities>, accessed 12/16/10).

The U.S. has long dominated the market for multinational corporate activity and investments, but fast-growing emerging markets are providing stiff competition for the United States in attracting activity.⁹

EXHIBIT 2

Average Projected Real GDP Growth (%) during 2010–11



SOURCE: International Monetary Fund, *World Economic Outlook, Recovery, Risk, and Rebalancing* (Washington, D.C.: IMF, October 1, 2010), 61. Reproduced with permission of IMF.

Rich Are Richer, Poor Are Poorer

- The income gap has continued to widen and reached a record high in 2009. The top 20 percent of American earners, those making more than \$100,000 per year, received 49.4 percent of all income generated in the United States compared with 3.4 percent earned by those below the poverty line. And the poorest are getting poorer, as 6.3 percent of Americans are below half the poverty line of \$10,977 for a family of four, the highest level since the government began tracking the data in 1975. The United States has the greatest income disparity among Western industrialized nations.¹⁰
- 1928 and 2007 are the only years on record when the richest 1 percent of Americans took home nearly a quarter of the entire income of the nation.
- Child poverty now stands at 21 percent compared to 9 percent of Americans 65 years or older, doubling the poverty gap between young and old since 2000.

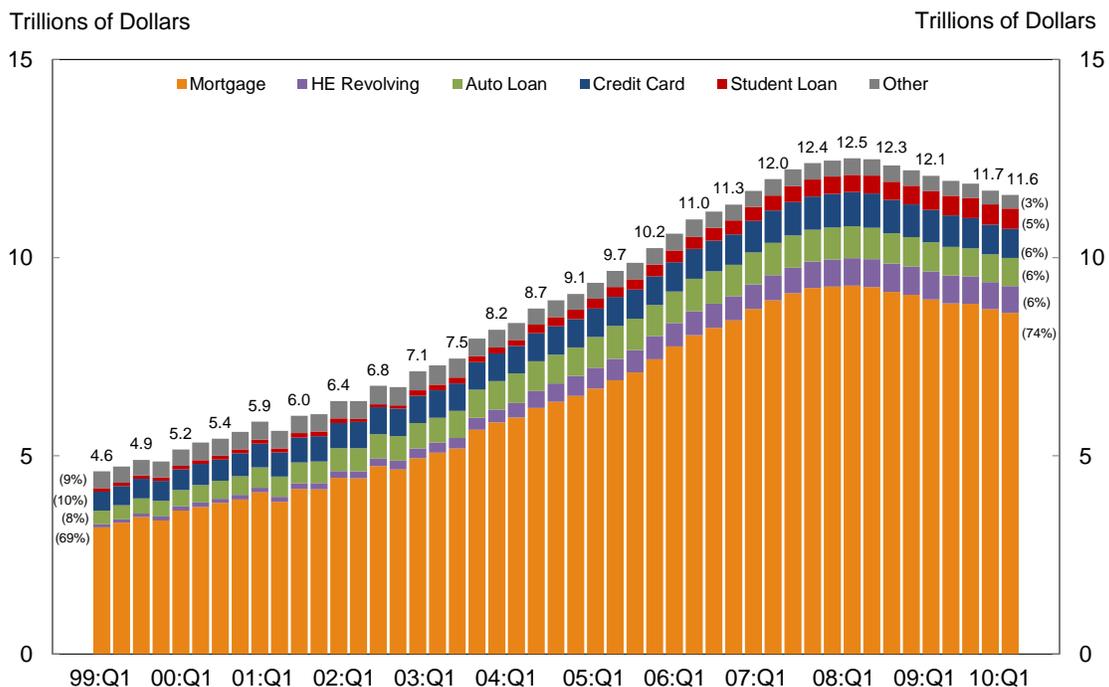
⁹ McKinsey Global Institute, *Growth and Competitiveness in the United States: The role of its multinational companies* (N.p.: McKinsey Global Institute, June 2010). Available online at http://www.mckinsey.com/mgi/publications/role_of_us_multinational_companies/pdfs/MGI_US_MNCs.pdf (accessed 12/16/10).

¹⁰ Carmen DeNaves-Walt, Bernadette D. Proctor, and Jessica C. Smith, *Income, Poverty, and Health Insurance Coverage in the United States: 2009* (Washington, D.C.: U.S. Census Bureau, September 2010). Available online at <http://www.census.gov/prod/2010pubs/p60-238.pdf> (accessed 12/7/10).

A Nation in Debt

- In fiscal year 2010 the nation's debt hit an all-time high of \$13.6 trillion and the highest as a percentage of GDP (62 percent) since shortly after WWII. The Congressional Budget Office estimates that at the current pace, national debt would reach 87 percent of GDP by 2020. Fiscal pressures at the state level also persist. High debt will force drastic spending or revenue adjustments at all levels of government in the near future.¹¹
- Over the past five years, the personal savings rate has grown from just over 1 percent of disposable personal income in 2005 to nearly 6 percent in 2010, according to the Bureau of Economic Analysis.¹²
- Driven by a heated housing market that drove mortgage-related debt to all-time highs, U.S. consumers carried \$12.5 trillion in household debt in late 2008, compared to \$4.9 trillion in late 1999 (see Exhibit 3). Since the start of the recession consumer debt has fallen 7 percent, totaling \$11.6 trillion in the 3rd quarter of 2010.¹³

EXHIBIT 3
Total Consumer Debt Balance and Its Composition



SOURCE: Federal Reserve Bank of New York, *Quarterly Report on Household Debt and Credit: Consumer Credit Panel*, August 2010.

- Mortgage-related debt accounts for 74 percent of debt today, up from 69 percent in 1999, while student loans now account for 5 percent of debt compared to less than 1 percent in 1999.

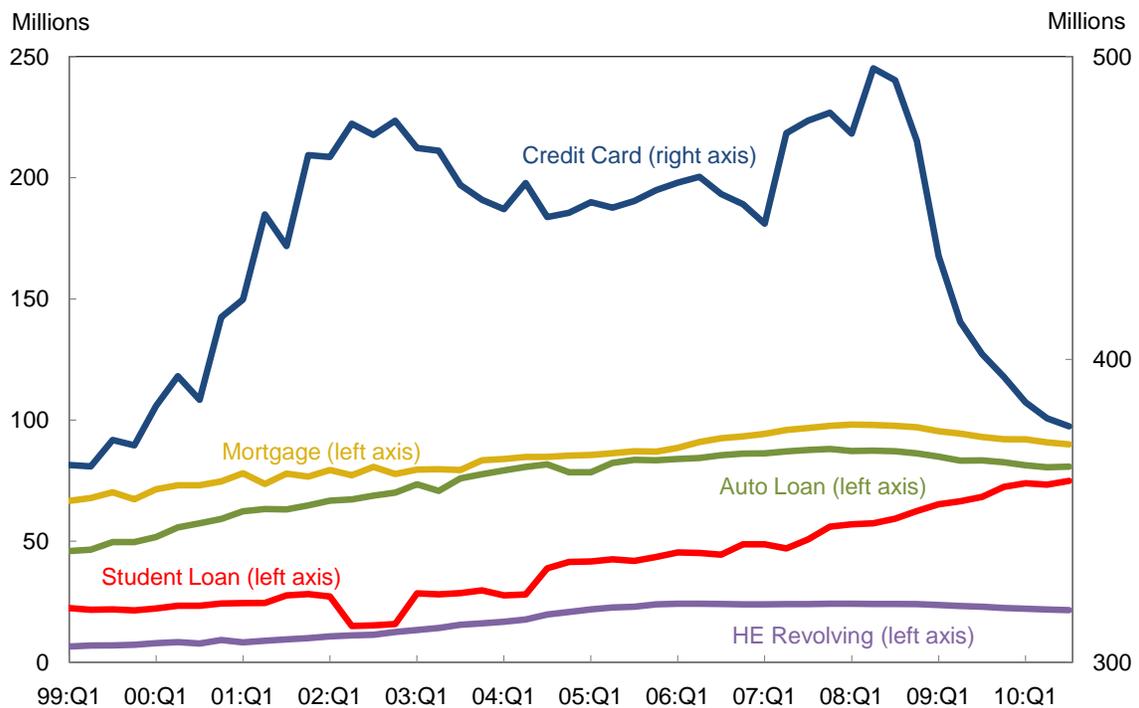
¹¹ Congressional Budget Office, *The Long-Term Budget Outlook* (Washington, D.C.: CBO, June 2010).

¹² Bureau of Economic Analysis, *Personal Saving Rate, National Economic Accounts*, published third quarter 2010, obtained by PSC October 2010 (see <http://www.bea.gov/briefrm/saving.htm>, accessed 12/16/10).

¹³ Federal Reserve Bank of New York, *Quarterly Report on Household Debt and Credit* (New York: Federal Reserve Bank of New York, August 2010), available online at http://www.ny.frb.org/research/national_economy/householdcredit/DistrictReport_Q22010.pdf (accessed 12/16/10).

- While the political debate has focused on the nation’s debt, trimming the deficit will not be easy. Nearly 67 cents of every dollar spent by the federal government pays for defense, social security, veterans’ affairs, Medicare, or other health-related activities.¹⁴
- On a per capita basis, Michigan residents are not nearly as debt ridden as other states, with just under \$40,000 of debt per capita in the third quarter of 2010, compared to California, Nevada, and New Jersey residents who each topped \$60,000 per capita.
- Home ownership nationwide has increased from 63 percent in 1965 to nearly 70 percent today as real estate became the investment of choice for much of the past 30 years and credit was easily available. However, due to the housing crisis, as well as a greater interest in personal and professional mobility, home ownership has started to and should continue to decline in the coming years.¹⁵
- Credit card debt rose sharply in two years (2000–2002), and fell dramatically in a single year (2009) nearly to its pre-2000 level (see Exhibit 4). The dramatic shift in consumer habits exemplifies the need for consumer-driven organizations to be nimble and able to adjust to changing social and economic trends.

EXHIBIT 4
Number of Consumer Credit Accounts by Loan Type



SOURCE: Federal Reserve Bank of New York, *Quarterly Report on Household Debt and Credit: Consumer Credit Panel*, August 2010.
NOTE: HE Revolving = Home Equity.

¹⁴ Shan Carter and Amanda Cox, Obama’s 2011 Budget Proposal: How It’s Spent, *New York Times*, February 1, 2010.
¹⁵ U.S. Department of Commerce, Bureau of Economic Analysis, *Census Home Ownership Rates for U.S. and Regions: 1965 to Present*, data through 3rd quarter 2010, available online at <http://www.census.gov/hhes/www/housing/hvs/historic/index.html> (accessed 10/1/10).

- The number of students willing to finance education with student loans nearly tripled over the past decade. While the cost of a higher education will continue to be a major concern for consumers, the long-term investment nature of education offers a stark contrast to the short-term credit card culture; therefore, the volume and values of student loans should not experience a similarly steep drop-off.

LOOKING BACK

- Between 2002 and 2010¹⁶ the United States added 8.6 million jobs, equal to a 5 percent increase in total employment (see Exhibit 5). Outsourcing and the automation of jobs led to major declines in manufacturing and information, while the housing bubble and subsequent credit crisis essentially paused activity in the construction sector during the recession of 2008–09.

EXHIBIT 5
U.S. Job Growth by Industry, 2002–2010

Category	Jobs lost/gained	% Change
Mining, quarrying, and oil and gas extraction	360,172	48%
Real estate and rental and leasing	2,259,901	40
Educational services	788,446	24
Health care and social assistance	3,481,366	22
Professional, scientific, and technical services	1,729,645	17
Arts, entertainment, and recreation	480,367	15
Other services (except public administration)	893,391	11
Finance and insurance	760,359	10
Accommodation and food services	1,013,382	9
Management of companies and enterprises	114,013	6
Administrative and support and waste management and remediation services	589,393	6
Government	1,174,377	5
Transportation and warehousing	140,467	2
Wholesale trade	716	0
Retail trade	-313,419	-2
Utilities	-15,100	-3
Construction	-510,667	-5
Agriculture, forestry, fishing and hunting	-315,43	-8
Information	-489,939	-13
Manufacturing	-3,506,807	-22
Total	8,634,651	5%

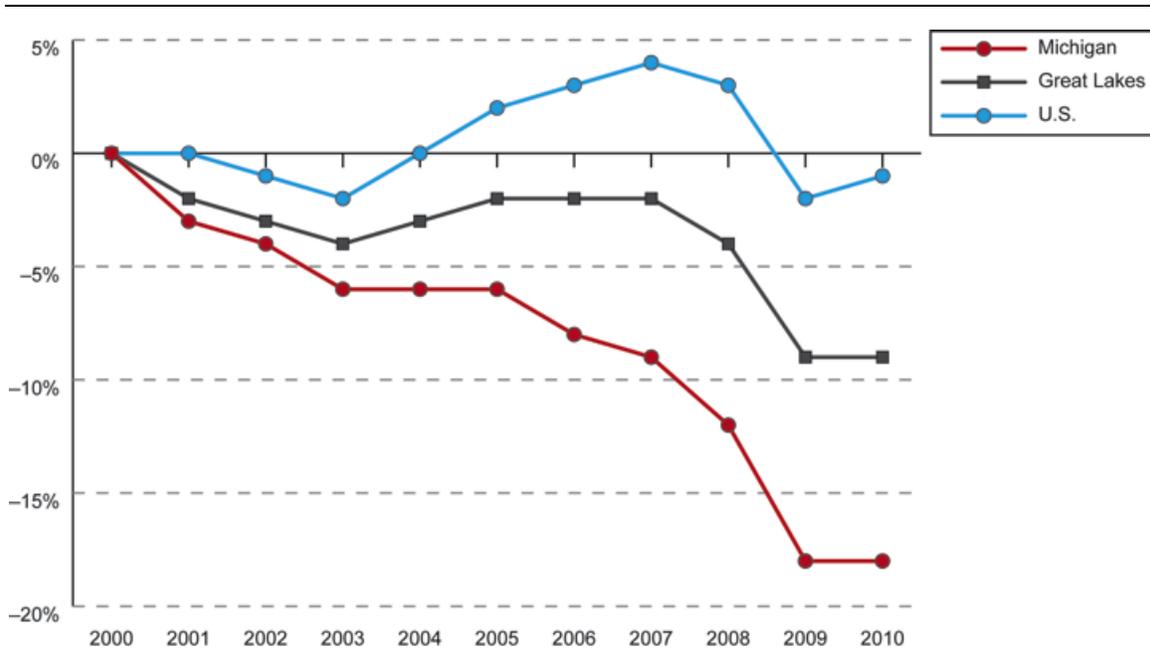
SOURCE: Data provided by Economic Modeling Specialists Incorporated (EMSI), collected and organized by Public Sector Consultants, October 2010.

NOTE: EMSI specializes in economic trend and projection modeling. See the Appendix for more information on EMSI and the sources it uses.

¹⁶ Instead of 2000, 2002 is used to eliminate economic irregularities from the dotcom bubble and the September 11, 2001, terrorist attack. Michigan began losing jobs in 2000 with the rest of the nation at the start of the 2000–2001 recession.

- Educational services and health care were the only two industries that were recession proof, growing in every year during the past decade and increasing their share of total employment and economic output.
- Driven by the recession, job losses in manufacturing accelerated, and gains in construction were washed away as manufacturing shed 1.9 million jobs and construction shed two million in the three-year period between 2008 and 2010.
- The growth of the residential and commercial real estate bubble drove the real estate industry to add 2.25 million jobs, of which nearly one-half million were quickly shed during the recession.
- Great Lakes employment peaked at the turn of the millennium at 24.8 million jobs, as it did in Michigan with 4.6 million jobs. Since then, the Great Lakes states have shed 9 percent of their jobs, while Michigan has lost more than 18 percent (see Exhibit 6).

EXHIBIT 6
Decline in Great Lakes Employment, 2000–2010



SOURCE: U.S. Bureau of Labor Statistics, Total Nonfarm, Seasonally Adjusted, Annual September Employment. Data collected and calculated by PSC, October 2010.

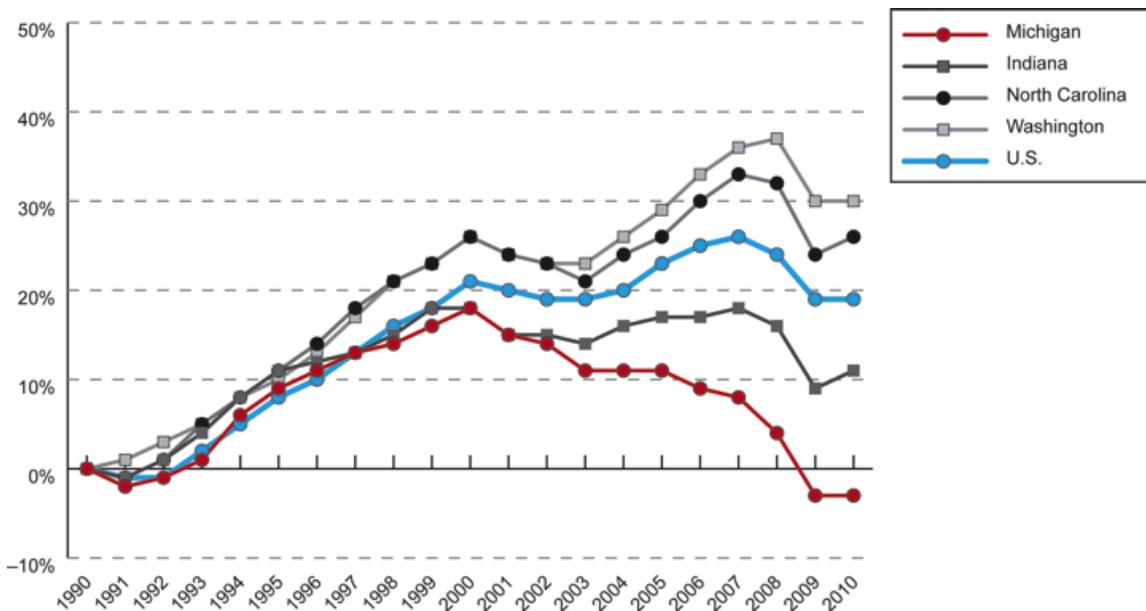
- As a whole, the Great Lakes states housed over 19 percent of the nation’s total employment 1990, and today account for just over 17 percent of the nation’s employment, a 10 percent reduction in market share. In 1990, Michigan held 3.6 percent of the nation’s total employment. Today, it is only home to 2.9 percent, a drop of nearly 20 percent in the state’s employment market share.
- Total employment in Michigan is less today than it was in 1990 (3.82 million in September 2010 versus 3.95 million in September 1990).¹⁷ Michigan is the only Great Lakes¹⁸ state that

¹⁷ Nonfarm, Seasonally Adjusted, Total Jobs by State in September, Bureau of Labor Statistics. Collected and organized by PSC, October 2010.

has experienced a net loss of employment over the past 20 years. Outsourcing and automation in the auto industry and other traditional “blue collar” industries are permanent realities nationally, and have disproportionately impacted Michigan’s employment base due to Michigan’s concentration of these industries.

- Indiana, North Carolina, and Washington have many of the same attributes as Michigan, including strong higher education institutions and a strong manufacturing history. Over the last 20 years, these three peer states have aggressively retooled their economies while Michigan remained tied to its industrial roots. As a consequence, Michigan’s employment kept pace during the 1990’s with the rest of the nation, but missed out on the growth during the 2000’s, and dipped much faster than its peer states during the recession (see Exhibit 7)

EXHIBIT 7
Change in Total Employment across Comparable States, 1990–2010



SOURCE: U.S. Bureau of Labor Statistics, Total Nonfarm, Seasonally adjusted, annual September employment. Data collected and calculated by PSC, October 2010.

- In sum, while the entire Great Lakes region struggled through the past decade, Michigan’s struggles have been sustained longer and as a whole have cut deeper than those in other states. Michigan’s economy has long been thought to outperform its peers—during fast growing periods Michigan is expected to grow faster and during national declines, Michigan declines faster. Unfortunately, over the past 20 years, Michigan only outperformed during the decline.
- Since 2002 Michigan’s major industries experienced a net loss of 414,244 jobs, with nearly 300,000 lost in the manufacturing industry alone (see Exhibit 8). Many analysts attribute the loss of employment, wealth, and income during this “lost decade” to the transitioning auto industry. The transition period climaxed with the bankruptcy filings of Chrysler and GM in 2010.

¹⁸ For the purposes of this report, Great Lakes states include Michigan, Ohio, Indiana, Illinois, Wisconsin, and Minnesota.

EXHIBIT 8
Michigan Job Growth by Industry, 2002–2010

Category	Jobs lost/gained	% Change
Educational services	25,708	32%
Mining, quarrying, and oil and gas extraction	4,033	32
Health care and social assistance	94,160	17
Real estate and rental and leasing	31,985	17
Administrative and support and waste management and remediation services	14,369	4
Arts, entertainment, and recreation	205	0
Other services (except public administration)	-1,177	0
Finance and insurance	-3,555	-2
Agriculture, forestry, fishing and hunting	-2,911	-3
Professional, scientific, and technical services	-11,400	-3
Utilities	-636	-3
Accommodation and food services	-13,810	-4
Transportation and warehousing	-9,916	-6
Government	-46,490	-7
Wholesale trade	-19,774	-10
Retail trade	-79,677	-13
Construction	-68,927	-23
Information	-19,391	-23
Management of companies and enterprises	-19,138	-27
Manufacturing	-287,902	-37
Total	-414,244	-8%

SOURCE: Data provided by EMSI; collected and organized by Public Sector Consultants, October 2010,

- Since 2002, no Michigan industry has been hit harder than manufacturing, which has shed 37 percent, or nearly 300,000 jobs. Construction (-23 percent) and retail trade (-13 percent) have lost a combined 149,000 jobs. The management (-27 percent) and information (-23 percent) industries have also lost large shares of jobs, although the total number of actual jobs lost is much lower.
- Government shed 46,000 jobs between 2002 and 2010, a 7 percent loss.
- The educational services (+32 percent), healthcare (+17 percent), and real estate industries were a few of the bright spots, but together, all the industries that showed growth in the state only added 170,000 jobs, not nearly enough to offset losses elsewhere.

Detroit MSA¹⁹

- The Detroit metropolitan statistical area (MSA) lost 303,247 jobs (12 percent) between 2002 and 2010 (see Exhibit 9). The health care and social assistance industry, which added just over 41,000 jobs, was the only major gainer of jobs, while manufacturing was the major loser.

¹⁹ The Detroit MSA includes Lapeer, Livingston, Macomb, Oakland, St. Clair, and Wayne Counties.

EXHIBIT 9
Detroit MSA Job Growth by Industry, 2002–2010

Category	Change	% Change
Mining, quarrying, and oil and gas extraction	748	28%
Educational services	8,362	26
Health care and social assistance	41,399	16
Real estate and rental and leasing	8,837	9
Other services (except public administration)	-1,025	-1
Utilities	-97	-1
Accommodation and food services	-6,252	-4
Arts, entertainment, and recreation	-2,325	-5
Administrative and support and waste management and remediation services	-12,450	-7
Agriculture, forestry, fishing and hunting	-670	-9
Professional, scientific, and technical services	-20,456	-9
Finance and insurance	-10,828	-10
Government	-27,942	-12
Retail trade	-37,885	-14
Transportation and warehousing	-14,101	-16
Wholesale trade	-19,248	-18
Management of companies and enterprises	-9,238	-20
Information	-12,241	-28
Construction	-38,154	-31
Manufacturing	-149,678	-44
Total	-303,247	-12%

SOURCE: Data provided by EMSI; collected and organized by Public Sector Consultants, October 2010.

- Detroit MSA workers earn \$53,809 on average, above the annual earnings per worker in Michigan (\$46,867) and nationally (\$50,104).
- Michigan and the Detroit MSA are intimately tied to manufacturing. Between 2002 and 2010, the Detroit MSA lost 150,000 manufacturing jobs, equal to 44 percent of the entire industry. More alarming, manufacturing workers were the third highest earners by industry, averaging \$83,794 per worker (see Exhibit 10). Manufacturing workers earn on average \$73,261 across the state and \$68,000 on average nationally.

EXHIBIT 10
Michigan's Manufacturing Dependence

	Manufacturing as a % of total employment		Total employment loss	Current average earnings per worker
	2002	2010		
Detroit MSA	13.8%	8.8%	150,000	\$83,794
Michigan	14.3%	9.7%	288,000	\$73,261
U.S.	9.6%	7.1%	3,507,000	\$68,000

SOURCE: Data provided by EMSI, collected and organized by Public Sector Consultants, October 2010.

LOOKING FORWARD

- Across all industries, the U.S. job market will grow around 10–12 percent over the next decade. The future of job growth breaks into two neat categories: service-providing industries will grow by nearly 13 percent, while goods-producing industries will decline by around 1 percent.
- Over the next decade, Michigan is expected to add 480,000 jobs across 20 major industries, growing from nearly 5 million jobs in 2010 to 5.5 million by 2020, a 10 percent increase (see Exhibit 11).

EXHIBIT 11 Michigan Industry Projection, 2010–2020

Category	Change	% Change
Professional, scientific, and technical services	94,713	28%
Administrative and support and waste management and remediation services	88,439	26
Educational services	27,553	26
Real estate and rental and leasing	52,690	24
Construction	42,273	19
Health care and social assistance	122,343	19
Arts, entertainment, and recreation	16,062	16
Finance and insurance	31,056	15
Mining, quarrying, and oil and gas extraction	1,914	12
Other services (except public administration)	24,054	10
Transportation and warehousing	15,984	10
Retail trade	14,518	3
Wholesale trade	5,841	3
Agriculture, forestry, fishing and hunting	1,220	2
Management of companies and enterprises	1,208	2
Information	282	0
Accommodation and food services	-2,603	-1
Government	-8,176	-1
Manufacturing	-46,221	-10
Utilities	-2,784	-14
Total	480,362	10%

SOURCE: Data provided by EMSI, collected and organized by Public Sector Consultants October 2010.

- Of the 20 major industry categories tracked by government economists, 16 are expected to add jobs in Michigan over the next decade. Health care and social assistance (122,000); professional, scientific, and technical services (95,000); and administrative and support and waste management and remediation services (88,439) will account for nearly two-thirds of the growth.
- Manufacturing will continue to shed jobs statewide, losing an additional 10 percent. The government, accommodation and food services, utilities, and information industries will remain stagnant.

Detroit MSA

- Over the next decade, the Detroit MSA is expected to add over 200,000 jobs at a rather slow pace of around 1 percent annually beginning in 2012 (see Exhibit 12).

EXHIBIT 12 Detroit MSA Industry Projection, 2010–2020

Description	Change	% Change
Administrative and support and waste management and remediation services	43,144	26%
Mining, quarrying, and oil and gas extraction	888	26
Professional, scientific, and technical services	51,767	26
Educational services	10,021	24
Real estate, rental and leasing	21,445	21
Health care and social assistance	58,823	20
Construction	14,214	17
Arts, entertainment, and recreation	6,168	13
Finance and insurance	11,737	12
Other services (except public administration)	12,803	12
Transportation and warehousing	7,949	11
Management of companies and enterprises	798	2
Retail trade	4,816	2
Wholesale trade	1,937	2
Information	-343	-1%
Accommodation and food services	-1,989	-1
Government	-7,017	-3
Agriculture, forestry, fishing and hunting	-478	-7
Manufacturing	-29,554	-16
Utilities	-1,262	-19
Total	205,870	10%

SOURCE: Data provided by EMSI; collected and organized by Public Sector Consultants, October 2010.

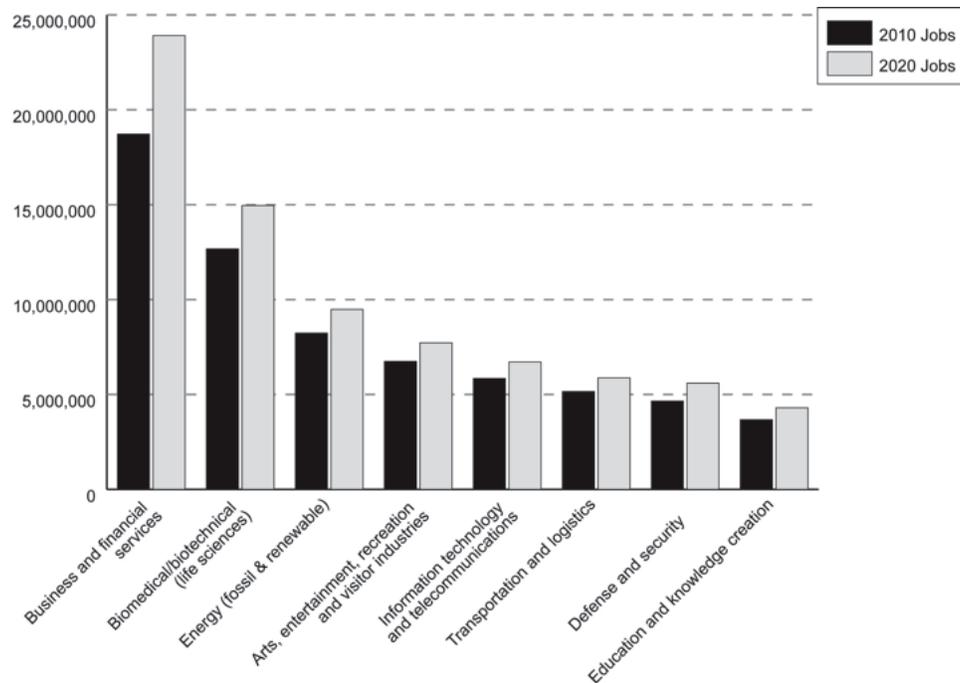
- Among the fastest growing industries, professional, scientific and technical services (26 percent); healthcare and social assistance (20 percent); administrative and support and waste management and remediation services (26 percent); real estate, rental and leasing (21 percent); finance and insurance (12 percent); construction (17 percent); and educational services (24 percent) are all expected to add more than 10,000 jobs.
- Manufacturing (-16 percent) and government (-3 percent) will continue to shed jobs over the next decade.
- The spread in earnings per worker paid out by specific industries will continue to widen over the next decade. The utilities and management industries are projected to provide the highest earnings per worker at \$129,000 and \$126,000, respectively, while accommodation and food service, real estate, and agriculture and forestry are each projected to pay less than \$30,000 per worker.

JOB GROWTH BROKEN DOWN BY INDUSTRY CLUSTERS²⁰

National

- Industry clusters that focus heavily on science, technology, engineering, and math (STEM) skills are projected to be the fastest growing over the next decade (see Exhibit 13).

EXHIBIT 13
U.S. Industry Cluster Growth, 2010-2020



	2010 Jobs	2020 Jobs	Change	% Change
Business and financial services	18,723,215	23,915,523	5,192,308	28%
Defense and security	4,653,838	5,597,760	943,922	20
Biomedical/biotechnical (life sciences)	12,673,386	14,959,483	2,286,097	18
Education and knowledge creation	3,670,703	4,294,383	623,680	17
Energy (fossil and renewable)	8,236,391	9,481,289	1,244,898	15
Information technology and telecommunications	5,844,449	6,715,951	871,502	15
Arts, entertainment, recreation and visitor industries	6,747,215	7,722,817	975,602	14
Transportation and logistics	5,156,638	5,875,144	718,506	14

SOURCE: Data provided by EMSI, Complete Employment-3rd Quarter 2010; collected and organized by Public Sector Consultants, October 2010.

²⁰ An industry cluster groups industries that are closely connected by the supply chain or have similar labor pools. Studying industry clusters often helps planners determine which new industries may be attracted to a specific region based on existing infrastructure and/or workforce.

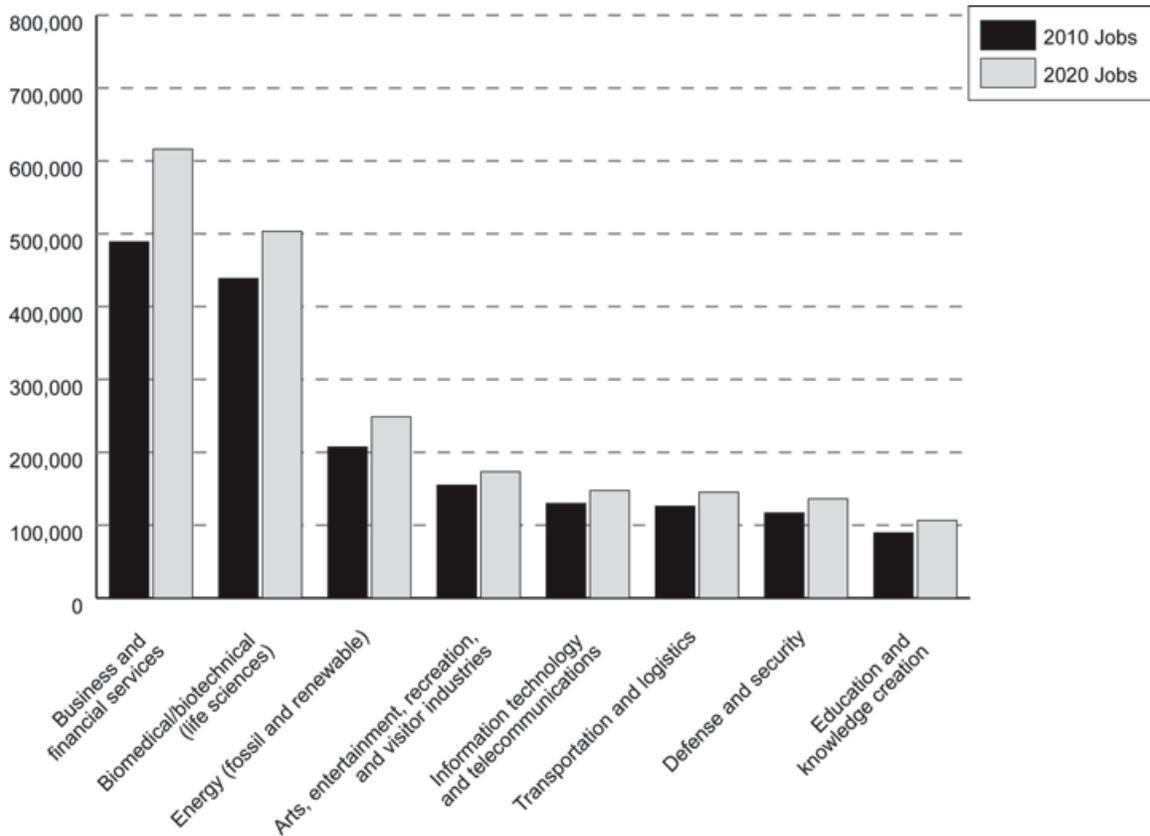
- The fastest growing occupations will be within traditional industries that are already identified by most major higher education institutions, but will emphasize jobs that involve human communication or research and problem solving.
- Business and financial services are expected to grow 28 percent over the next decade, adding over 5 million jobs. Defense and security and biomedical/biotechnical are both research-oriented industry clusters, projected to add a combined 3.2 million jobs.
- Drilling down into the industries and focusing on the fastest growing and highest paid (\$20/hour or more) occupations nationally over the next decade, financial specialists (27 percent), health diagnosing and testing practitioners (21 percent), business operations specialists (21 percent), computer specialists (21 percent), health technologists and technicians (19 percent) and teachers (13 percent) lead the growth.²¹

Michigan

- Michigan projected growth will follow a path similar to that of the nation, with growth momentum concentrated within industries that emphasize the STEM skills. Biomedical/biotechnical, energy, education and knowledge creation, and transportation and logistics are projected to grow slightly faster in Michigan than nationally, while growth in the other major clusters will be slightly slower than the nation's (see Exhibit 14).

²¹ Data provided by EMSI, Complete Employment-3rd Quarter 2010; collected and organized by Public Sector Consultants, October 2010.

EXHIBIT 14
Michigan Industry Cluster Growth, 2010–2020



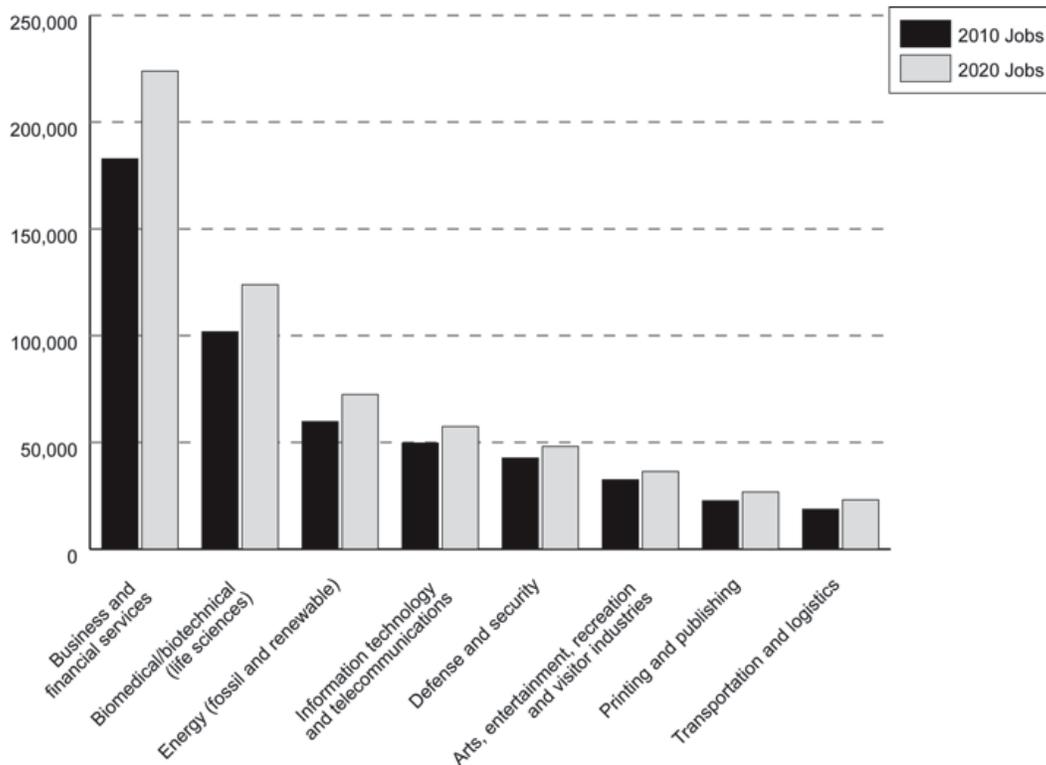
	2010 Jobs	2020 Jobs	Change	% Change
Business and financial services	488,968	616,113	127,145	26%
Energy (fossil and renewable)	207,237	248,791	41,554	20
Education and knowledge creation	89,458	106,607	17,149	19
Defense and security	116,758	136,193	19,435	17
Biomedical/biotechnical (life sciences)	438,527	503,326	64,799	15
Transportation and logistics	126,059	145,187	19,128	15
Information technology and telecommunications	129,774	147,604	17,830	14
Arts, entertainment, recreation, and visitor industries	154,998	173,149	18,151	12

SOURCE: Data provided by EMSI, Complete Employment-3rd Quarter 2010; collected and organized by Public Sector Consultants, October 2010.

Oakland University Area²²

- Locally, industries within the transportation logistics, biomedical/biotechnical, energy, and education and knowledge creation clusters are projected to outpace growth nationally and statewide (see Exhibit 15).

EXHIBIT 15
Oakland University Area Industry Cluster Growth, 2010–2020



	2010 Jobs	2020 Jobs	Change	% Change
Transportation and logistics	18,662	23,067	4,405	24%
Biomedical/biotechnical (life sciences)	101,800	123,879	22,079	22
Business and financial services	182,830	223,909	41,079	22
Energy (fossil and renewable)	59,742	72,451	12,709	21
Education and knowledge creation	17,893	21,545	3,652	20
Printing and publishing	22,664	26,768	4,104	18
Information technology and telecommunications	49,742	57,431	7,689	15
Defense and security	42,708	48,096	5,388	13
Arts, entertainment, recreation and visitor industries	32,498	36,342	3,844	12

SOURCE: Data provided by EMSI, Complete Employment-3rd Quarter 2010; collected and organized by Public Sector Consultants, October 2010

²² For the purposes of this report, we have considered the “Oakland University area” to contain Oakland County and Macomb County.

- Drilling down to occupational subgroups, the Oakland and Macomb County region has growth trends similar to the nation's. Regionally, expect to see growth in art and design (19 percent); counselors, social workers and other community and social service specialists (19 percent); and engineers (10 percent). Locally, the demand for teachers (11 percent growth) will be less than demand nationally (14 percent) but greater than statewide growth (9 percent).²³
- Oakland and Macomb Counties have historically been, and will remain, an economic center in Michigan. Using a location quotient measure²⁴ that quantifies the concentration of a particular industry cluster in the OU area compared to the state, we find that several high-growth and high-paying industries are concentrated in the OU area (see Exhibit 16).

EXHIBIT 16
Oakland University Area's Share of Michigan's Cluster Growth

Industry cluster	Total projected job growth in Michigan, 2010–2020	2020 Projected total jobs in Michigan	2020 Location quotient (Concentration of total jobs located in OU area relative to Michigan)	Current earnings per worker	
				Michigan	OU area
Transportation Equipment Manufacturing	–30,377	98,030	4.56	\$96,986	\$112,244
Advanced Materials	–5,773	197,467	1.74	73,624	82,540
Machinery Manufacturing	–6,560	49,821	1.71	69,870	77,966
Fabricated Metal Product Manufacturing	–9,811	51,937	1.63	57,562	60,555
Glass and Ceramics	–2,680	12,624	1.42	63,944	59,119
Business and Financial Services	127,145	616,113	1.41	60,463	71,623
Defense and Security	19,435	136,193	1.29	65,481	74,953
Information Technology and Telecommunications	17,830	147,604	1.29	72,999	84,675
Printing and Publishing	11,912	89,672	1.27	55,549	65,925
Biomedical/Biotechnical	64,799	503,326	1.25	48,525	51,188
Energy (Fossil and Renewable)	41,554	248,791	1.15	68,609	81,026

SOURCE: Data provided by EMSI; collected and organized by Public Sector Consultants, October 2010.

- Although the industry clusters with the most concentration in the OU area are all projected to lose jobs statewide over the next decade, major job footprints will remain across the transportation equipment manufacturing, advanced materials, machinery manufacturing, and

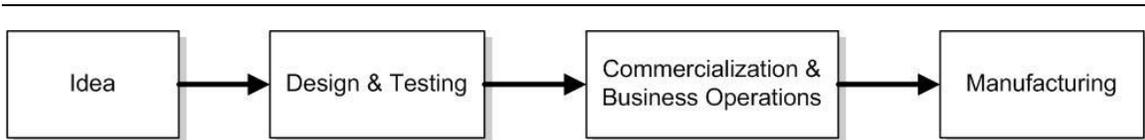
²³ Data provided by EMSI 3rd Quarter Employment; collected and organized by Public Sector Consultants, October 2010.

²⁴ Industry location quotient (LQ) is a way of illustrating how concentrated an industry is in a region compared to a larger geographic area, such as the state or nation. LQ is calculated by dividing the share of jobs an industry holds in one region by the share of jobs that industry holds in the larger area. LQ shows which industries make a regional economy unique.

fabricated metal product manufacturing clusters. More important to the region, these industries have compensated workers in the OU area at a much higher rate than elsewhere in the state. If these traditionally “blue collar” jobs remain concentrated in the OU area, it is likely due to the research and prototyping nature of the specific operations concentrated in the region.

- According to a 2010 report produced by Anderson Economic Group and commissioned by the University Research Corridor (URC), the advanced manufacturing industry has a major economic impact on Michigan’s economy. As of 2007, advanced manufacturing accounted for 16.2 percent of payrolls (\$24 billion) and 10.3 percent of total employment (381,351 workers) in Michigan, representing a larger share of the economy than found in the broader Midwest or nationally.²⁵
- When the manufacturing presence in the OU area is combined with other clusters, specifically defense and security, biomedical/biotechnical, energy, and information technology and telecommunications, new region-specific clusters can emerge. The Oakland University area is positioned to become a leader in Advanced Manufacturing and Research.²⁶
- For the OU area to sustain a prosperous manufacturing presence, it must participate in all phases of product development, with the majority of value produced during the early phases of idea generation, design, and prototyping (see Exhibit 17). Oakland University can be a strong participant in the early phases of product development for Oakland and Macomb Counties.

EXHIBIT 17 Product Development Lifecycle



SOURCE: Anderson Economic Group, *The University Research Corridor’s Support for Advanced Manufacturing in Michigan*, July 2010.

²⁵ Anderson Economic Group, *The University Research Corridor’s Support for Advanced Manufacturing in Michigan*, commissioned by the University Research Corridor (East Lansing, Mich.: Anderson Economic Group, July 2010).

²⁶ The cluster data findings shown in Exhibit 16 align with the 2010 Anderson Economic Group report that showed evidence of a healthy advanced manufacturing presence in Michigan.

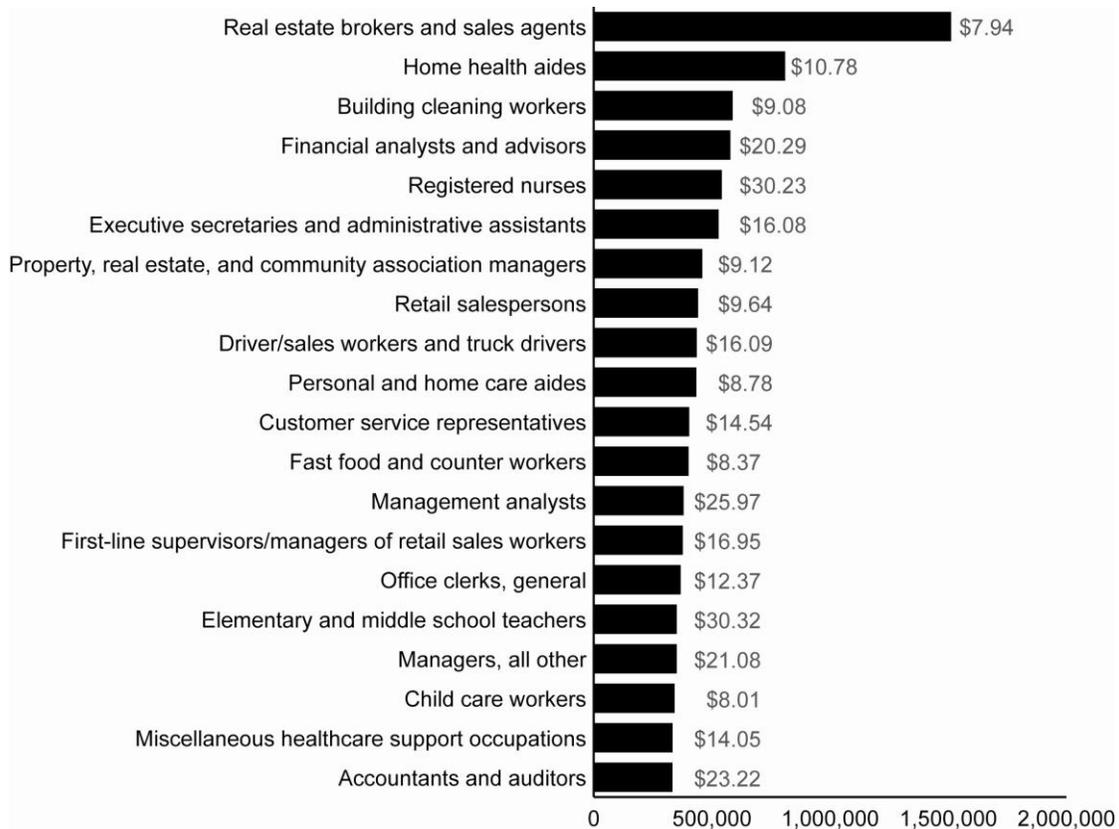
Occupation, Workforce, and Workplace Trends and Projections to 2020

This section presents the type of occupations in which the greatest growth is anticipated in coming years. It also provides insight into the changing skills necessary to compete in tomorrow's workforce and workplace. This information will be useful in OU's planning for program and curriculum changes.

- In occupations that have a high barrier to entrance, those that require high levels of training and often a need to work for an established institution, growth is driven by demand and less likely to be driven by bubbles. Healthcare will be driven by demand, and growth in the home health aide and nurse occupation fields will be responsive to the number of patients who need care. Alternatively, financial advisors and real estate agents, among other more speculative occupations, often have low barriers to entering the field. It is helpful to consider the individual wage level provided by each occupation to get an indication of the relative workload spread across workers and the extent to which the job is valued (see Exhibit 18).

EXHIBIT 18

U.S. Projected Occupation Growth, 2010–2020, and Average Hourly Wage



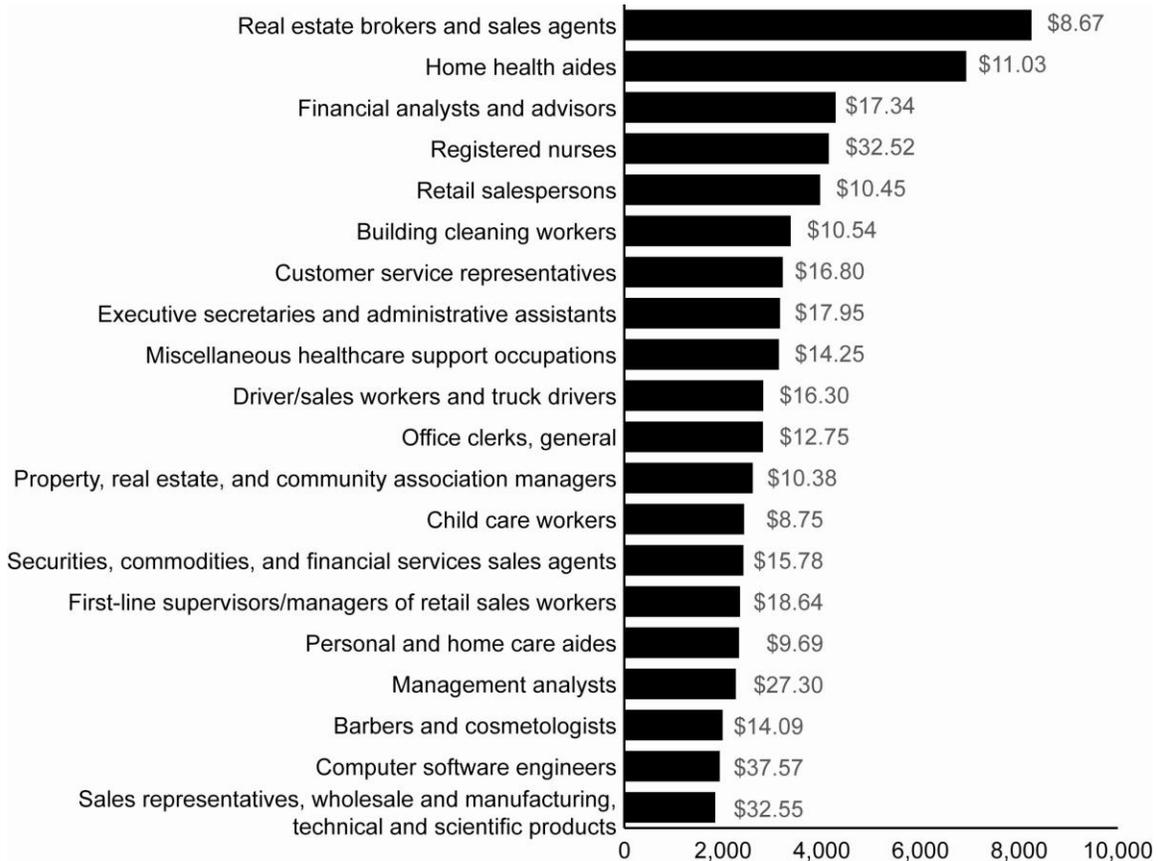
SOURCE: Data provided by EMSI, Complete Employment-3rd Quarter 2010; collected and organized by Public Sector Consultants, October 2010

NOTE: Real estate is one of several occupations with a high number of self-employed and part-time employees with compensation driven by commission.

- For the most part, occupations growing fast nationally are also projected to grow fast locally; however, wages in the OU region across the fastest growing occupations are consistently higher than those for same occupations nationally (see Exhibit 19).

EXHIBIT 19

OU Area Projected Occupation Growth, 2010–2020, and Average Hourly Wage



SOURCE: Data provided by EMSI, Complete Employment-3rd Quarter 2010; collected and organized by Public Sector Consultants, October 2010.

NOTE: Real estate is one of several occupations with a high number of self-employed and part-time employees with compensation driven by commission.

- In the healthcare and business fields, among other industries, generalists who can diagnose problems and seek solutions quickly will be valued more than specialists with specific skill-sets.
- Home healthcare aides, registered nurses, medical assistants, childcare workers, and social workers will be the fastest growing healthcare and human service professions regionally. Elementary teachers will be the fastest growing education-based occupation, although growth across all teaching professions will be relatively modest compared to other professions.
- When it comes to information age professions, job growth will be dominated by analysts, from software to financial to management. Workers must be able to explain “*the why*” as well as “*the what*” to compete for knowledge-based jobs in the United States.

- Within the computer science field, the fastest growing occupations will demand workers know how to customize work for clients, including program, design, and help services. Nationally and locally, the fastest growing computer science occupations require strong communication and problem-solving skills.
- As expected, metal and plastics (-6 percent) work will continue to disappear nationally over the next decade, and within the OU area it will shrink at an even faster rate of -19 percent.

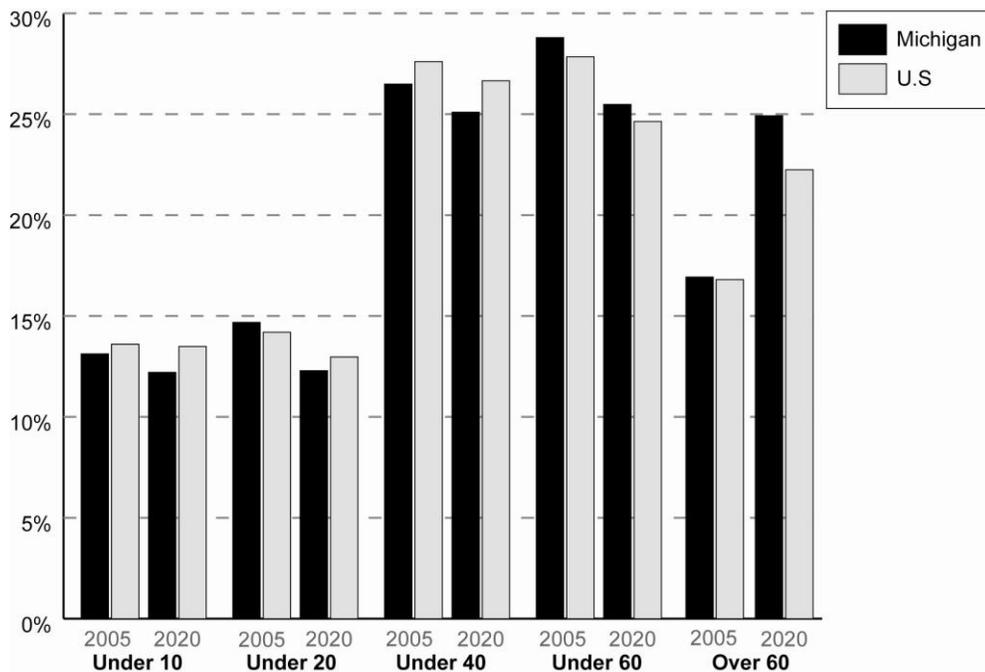
Demographic Trends and Projections to 2020

This section describes demographic trends that will affect the university's planning involving enrollment and diversity services.

AN AGING NATION AND STATE

- We are becoming an older nation; the baby boomers are retiring, and their children, now adults themselves, are waiting until later in life to begin families and are having fewer children. The household looks much different today than it did a decade ago. Average household size continues to decline, the percentage of adults who are married also continues to drop, now at 54.1 percent, and the median age for men (28.2) and women (26.1) continues its century climb.²⁷
- Between 2005 and 2020, the nation's population will expand by 9 percent, from 295.8 million to 323.4 million citizens. During the same 15-year period, Michigan is projected to have a net loss of 14,000 residents.
- Predictions of the baby boomers someday shifting the balance of age distribution are being realized in Michigan and nationwide. We are becoming an older nation, and an even older state (see Exhibit 20).

EXHIBIT 20
Michigan and U.S. Population Distribution by Age, 2005 vs. 2020



SOURCE: Data provided by EMSI, Complete Employment-3rd Quarter 2010; collected and organized by Public Sector Consultants, October 2010.

²⁷ U.S. Census Bureau, *America's Families and Living Arrangements: 2010*, November 10, 2010, available online at <http://www.census.gov/population/www/socdemo/hh-fam/cps2010.html>, accessed 12/20/10).

- Families have grown smaller and marriage and children are happening later in life as professional and personal pursuits have delayed “settling down.” For universities, this means the total number of young people coming through the K–12 school system will continue to shrink through the next decade both in real terms and as a percentage of the state’s total population. Nationally, by 2020, the under 10 population should once again experience a net increase over the generation before them.
- The over 60 population in Michigan will expand from nearly 17 percent in 2005 to almost 25 percent of the population by 2020, far outpacing the national aging trend. The aging of Michigan is a devastating trend that underlies many of the state’s financial and economic ills.
- The shrinking number of young people should shift OU’s benchmark philosophy from gross sales to market share. Every student who considers OU will have other options. To achieve student target goals or simply to maintain its current student population, OU must increase its market share by improving the quality of its programs.

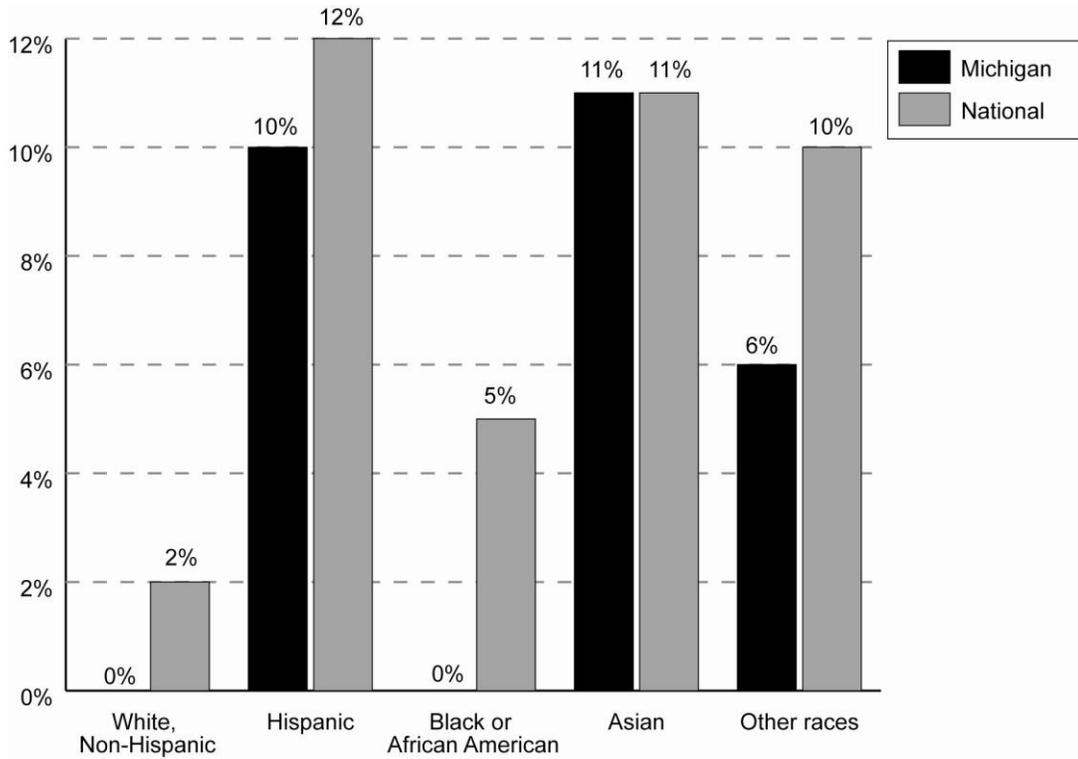
INCREASING DIVERSITY

- Capturing an 18-year window starting at 2002 and projecting out to 2020, whites accounted for 68 percent of the population, and by 2020 that share will have dropped to 63 percent nationally. The Hispanic population will expand from 13 percent to 17 percent. African- and Asian-Americans will also increase their respective shares of the nation’s population.²⁸
- We are becoming an increasingly diverse nation and state. Over the next 10 years, growth within specific racial/ethnic groups will be concentrated in Hispanic, Asian, and other minority groups. Blacks and whites, the traditional majority and minority groups, will experience very little relative growth over the next ten years (see Exhibit 21).

²⁸ EMSI Complete Employment-3rd Quarter 2010, collected and organized by Public Sector Consultants, October 2010.

EXHIBIT 21

Michigan and U.S. Percentage Growth by Racial Group, 2010–2020



SOURCE: Data provided by EMSI, Complete Employment-3rd Quarter 2010; collected and organized by Public Sector Consultants, October 2010.

- Diversity should continue to be a focus of the university’s student and faculty outreach, but initiatives must address the evolution of diversity into the areas of socio-economic status, diversity of faith and culture, and diversity of opinion. Considering the widening income gap and the state’s population decline in key age brackets, higher education institutions play a unique role in diversifying our state and communities, able to attract and train low-income and immigrant populations to be part of the educated middle class workforce. As geographical barriers are leveled, OU can target students from anywhere across the globe to ensure that it provides a diverse learning environment.

SUMMARIZING OU’S GEOGRAPHIC ADVANTAGE

- The Oakland University area, defined as Macomb and Oakland Counties, continues to be an economic driver for the state. With more than two million residents, the two counties compose over 20 percent of the state’s population, and are home to nearly 25 percent of the state’s jobs. Per capita income and median home values are higher in Oakland and Macomb Counties than in Michigan, while in aggregate, the educational attainment of area residents far surpasses that of the state (see Exhibit 22).

EXHIBIT 22
OU's Leading Indicators

	U.S.	Michigan	Oakland County	Macomb County
Population change 2005–2020	9% (27.7 million)	0% (–14,063)	1% (14,261)	4% (33,245)
Projected employment growth, 2010–2020	13% (22.4 million)	10% (480,362)	12% (96,437)	9% (33,395)
Per capita income ¹	\$27,466	\$25,651	\$37,722	\$27,404
Educational attainment ^{1,2}	27.4%	24.7%	42.1%	21.6%
Mean Travel Time to Work ¹	25.3 minutes	23.8 minutes	26.1 minutes	26.3 minutes
Median value of owner-occupied homes ¹	\$192,400	\$152,600	\$224,300	\$169,000
Population under 5 years old ¹	6.9%	6.3%	6.1%	6.1%

SOURCE: Data provided by EMSI, Complete Employment-3rd Quarter 2010; collected and organized by Public Sector Consultants, October 2010.

¹Denotes Census Bureau data from the American Community Survey, using a 3-year estimate from 2006 to 2008.

² Educational Attainment is the percentage of people 25 years or older who have completed a bachelor's degree based on a 3-year estimate, 2006–2008, available through the Census Bureau.

Rebuilding a Nation and Region

THE GREAT RECESSION

- The financial crisis of 2007, brought on by an over-heated housing market, led to a foreclosure crisis, failure of major corporate institutions, a decline in consumer wealth and retirement savings, and ultimately a decline in economic activity. In all, over eight million jobs were lost nationally during the recession.
- While the unemployment rate sits around 9.6 percent nationally as of late fall 2010, the unemployment rate for high-pay/high-skills workers is 6.75 percent, while the unemployment rate for low-pay/low-skills workers is 12.7 percent. For workers with a bachelor's or higher degree, the unemployment rate is 4.4 percent.
- Growth out of this two-year recession (December 2007–July 2009) will take the better part of a decade. If the economy adds 208,000 jobs per month—the best pace in the 2000s—it will take 11.5 years to reach pre-recession employment levels. Even at a growth rate of 321,000 jobs per month—the best pace in the 1990s—it would take nearly five years to return to pre-recession employment levels.²⁹
- Approximately 125,000 people enter the labor force each month, all of whom need to be absorbed. From November 2007 to August 2010, the 16–19 and the 20–24 age groups have been most affected by the recession as measured by the employment-to-population ratio (e2p),³⁰ while the 55+ age group has been comparatively unaffected despite job losses. Older workers are not as affected because older Americans are delaying retirement, likely due to the recession's impact on savings and wealth; this, in turn, leaves fewer opportunities for young professionals.
- Because of the baby boomers' delay in retirement, today's college graduates will have as hard a time finding a desirable job as any cohort before them going back to the Great Depression. This job hanging-on disrupts the normal flow of vacancies, compressing wages and responsibilities at the bottom. For those finding a job out of college, the ten-year loss of income due to lower wages is estimated at \$70,000 in today's dollars.³¹

BECOMING A LEADER IN EXPORTS

- For the Midwest to reestablish its place as an economic engine, capitalizing on its manufacturing roots and exporting both goods and services (specifically, knowledge services) is critical as well as feasible. The region's higher education institutions can be leaders in producing the goods and services, and in serving as a gateway to the world.
- The Great Lakes region remains a major player in the global economy, according to the Brookings Institution, specifically because the region's "concentrations of workers in research and development, design, marketing, and management also support, and are supported by, global product sales." The history of trade in the Great Lakes region "allows companies to spread the costs of developing a particular product over a much larger number of consumers." Both non-production and production staff at firms that export have higher

²⁹ Michael Greenstone and Adam Looney, *The Long Road Back to Full Employment: How the Great Recession Compares to Previous U.S. Recessions* (Washington, D.C.: The Brookings Institution, August 2010).

³⁰ Brookings uses an employment-to-population (e2p) ratio which captures both employed and unemployed workers as well as discouraged workers who leave the labor force.

³¹ Lisa Kahn, The Long-term Labor Market Consequences of Graduating College in a Bad Economy, *Labour Economics* 17, no. 2 (2010): 303–316.

wages, and overall, export industries tend to have a higher concentration of low-skilled workers.³²

- Transportation policy will be key in the coming years, specifically high-speed rail, greater access to ports and freight hubs, maintaining (or decreasing) commuting times, and better maintenance and preservation of existing highway and transit systems.³³
- In 2008, 9.7 percent of Great Lakes metro jobs were tied to exports, outpacing the national job distribution (8.3 percent) and outperforming the average of the top 100 metros across the country (8.1 percent). The metropolitan areas of Grand Rapids-Wyoming (13.8 percent) and Detroit-Warren-Livonia (12.5 percent) ranked 4th and 7th nationally in the concentration of export jobs. Exports as a share of gross metropolitan product (GMP) were also higher in Grand Rapids (15.1 percent, \$5.3 billion) and Detroit (14.7 percent, \$26.9 billion) than nationally (10.3 percent).³⁴
- However, as a whole the Great Lakes metros are less innovative³⁵ than their export-orientation would lead some to predict. On average, the nation's top 100 metros register 3.59 patents per thousand workers, while the Great Lakes metros average only 3.33 patents/thousand. Youngstown-Warren-Boardman (OH-PA) serves as a good example of the innovation challenges Great Lakes metros face. While Youngstown-Warren-Boardman is a regional leader in manufacturing concentration (14.5 percent) and export concentration (18 percent), it only produces 1.09 patents per 1,000 workers (see Exhibit 23). The manufacturing supply chain, long dominated by the auto industry across the Great Lakes, does not stimulate innovative activities along each link in the chain as one might expect to see in the high-tech or medical supply chains.

EXHIBIT 23

Great Lakes Patent Intensity Compared to Manufacturing and Export Intensity

Rank	Metro	Patents per 1,000 workers	Share of workforce in manufacturing	Export intensity
5	Rochester, NY	11.83	13.3%	12.1%
12	Minneapolis–St. Paul–Bloomington, MN–WI	6.89	10.8	10.7
16	Detroit–Warren–Livonia, MI	5.88	12.3	14.7
23	Akron, OH	4.57	12.9	12.5
26	Madison, WI	4.02	8.8	9.7
27	Cincinnati–Middletown, OH–KY–IN	3.88	11.2	12.9
33	Milwaukee–Waukesha–West Allis, WI	3.05	15.2	13.8
36	Chicago–Joliet–Naperville, IL–WI	2.85	10.3	10.9

³² Jennifer Bradley, Emlia Istrate, and Jonathan Rothwell, *Exports in the Great Lakes: How Great Lakes Metros Can Build on Exports and Boost Competitiveness* (Washington, D.C.: The Brookings Institution, Metropolitan Policy Program, July 2010).

³³ John Austin and Britany Affolter-Craine, *The Vital Center: A Federal Compact to Renew the Great Lakes Region* (Washington, D.C.: The Brookings Institution, October 2007).

³⁴ Bradley, Istrate, and Rothwell, 2010.

³⁵ Innovation is measured by patents per one thousand workers. Typically, economists expect to see high export regions have similarly high innovation ratings, as exports are generally driven by ideas generated locally.

Rank patents per 1,000 workers	Metro	Patents per 1,000 workers	Share of workforce in manufacturing	Export intensity
38	Cleveland–Elyria–Mentor, OH	2.82	12.9	13.1
41	Pittsburgh, PA	2.66	8.5	9.2
43	Indianapolis–Carmel, IN	2.52	10.2	15.2%
44	Syracuse, NY	2.45	9.6	10.0
45	Buffalo–Niagara Falls, NY	2.43	10.4	11.6
47	Des Moines–West Des Moines, IA	2.32	5.9	8.5
50	St. Louis, MO–IL	2.28	9.3	12.1
54	Grand Rapids–Wyoming, MI	2.01	17.4	15.1
56	Dayton, OH	1.88	11.8	13.8
57	Columbus, OH	1.84	7.8	10.3
60	Toledo, OH	1.74	13.6	15.8
75	Youngstown–Warren–Boardman, OH– PA	1.09	14.5	18.0
79	Louisville–Jefferson County, KY–IN	0.99	11.5	12.6
Great Lakes metros average		3.33	12.6%	12.5%
Top 100 metros average		3.59	8.9	10.9

SOURCE: Jennifer Bradley, Emlia Istrate, and Jonathan Rothwell, *Exports in the Great Lakes: How Great Lakes Metros can Build on Exports and Boost Competitiveness* (Washington, D.C.: The Brookings Institution, *Metropolitan Policy Program*, July 2010), 7.

- Growth in services as an exported regional product also lagged behind the national average. Great Lakes states increased only 34.2 percent from 2003 to 2008 compared to a 49.2 percent increase in the United States as a whole.

DEFINING THE NEW ECONOMY

- The New Economy, also known as the knowledge, service-based, or conceptual economy, requires participants to be “rock climbers,” while “ladder climbers” will be left behind.³⁶ Ladder climbers prepare themselves for career success by collecting credentials leading to the next rung. The ladder tends to be positioned from top to bottom within one industry, and therefore the skills are collected sequentially and compounded over time. Rock climbers, those needed in today’s economy, prepare themselves with a set of marketable skills that can be applied across industries and sectors, and are valued in diverse, high-performing organizations.
- The U.S. economy is moving from an industry-based workforce where workers are skilled in a particular trade and associated with a particular industry, to a skill-based economy where workers carry skill-sets across industries.

Describing this transition, author Daniel Pink writes:

We are moving from an economy and a society built on the logical, linear, computer-like capabilities of the Information Age to an economy and a society built on the inventive, empathetic,

³⁶ Michigan Future Inc., *Pathways to Good-Paying Careers: How young adults obtain good-paying jobs without four-year degrees*, (Ann Arbor, Mich.: Michigan Future Inc., December 1999).

big-picture capabilities of what's rising in its place, the Conceptual Age... The past belonged to computer programmers who could crank code, lawyers who could craft contracts, MBAs who could crunch numbers. The future belongs to creators and empathizers, pattern recognizers, and meaning makers... Artists, inventors, designers, storytellers, caregivers, consolers, big picture thinkers—will now reap society's richest rewards.³⁷

- The focus on specific skills tailored towards specific occupations means career seekers will be less tied to industries going forward. Traditional universities have organized business units or colleges based on industries, while the next generation worker will regularly move across different industries throughout her career.
- A close look at tomorrow's occupation growth shows that conceptual skills are increasingly valued. Skills that can be automated will be automated, therefore value-add characteristics that enhance the workplace or to the final product are the characteristics that will be sought and rewarded by employers. Lawrence Katz and Thomas Friedman consider workers who bring extra value skills to the workplace "artisans," workers who "bring something extra to their jobs."³⁸ These qualities include: being a "problem-solver, customizer, communicator, energizer, analyst, empathizer, and story-teller."

³⁷ Daniel Pink, *A Whole New Mind, Why Right-Brainers Will Rule the Future* (New York: Penguin Group, 2005).

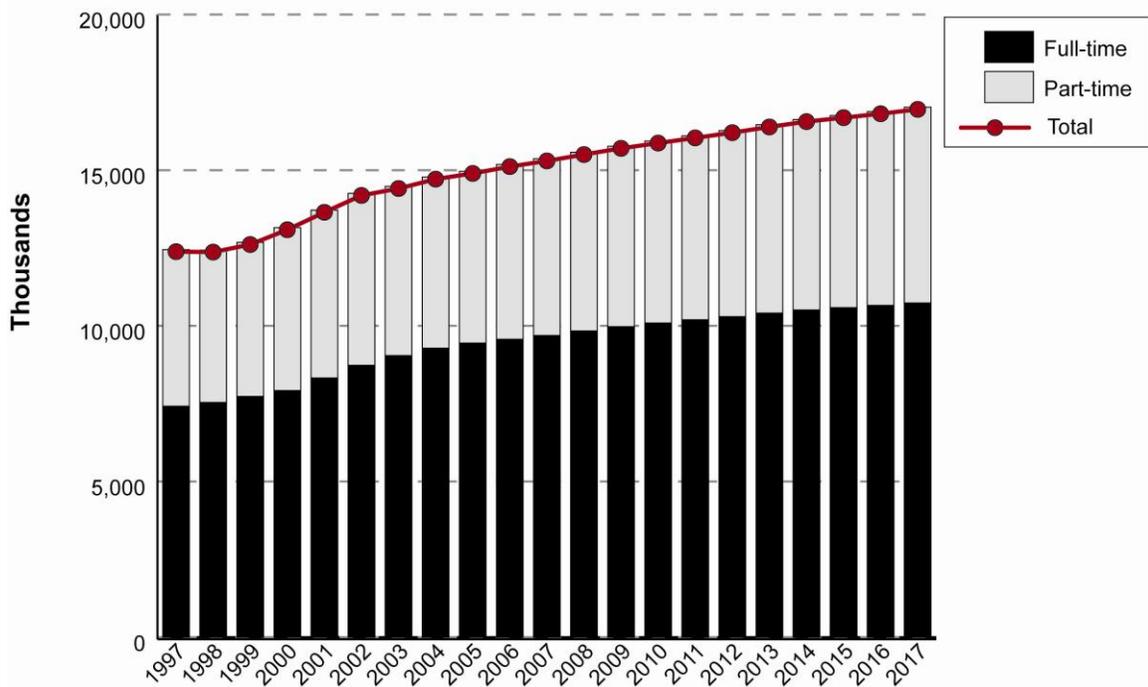
³⁸ Thomas Friedman, The Election that Wasn't, *New York Times*, October 23, 2010.

Higher Education Finance and Operational Trends

U.S. HIGHER EDUCATION

- Between 1997 and 2007, postsecondary enrollment jumped 23 percent, from 12.5 million to 15.2 million (see Exhibit 24). While the growth in enrollment will slow over the next decade, enrollments are projected to grow by 9–15 percent through 2017, according to the National Center for Education Statistics (NCES).³⁹

EXHIBIT 24
U.S. Enrollment Trends and Projections at
U.S. Postsecondary Institutions, 1997–2017



SOURCE: U.S. Department of Education, National Center for Education Statistics (NCES), Integrated Postsecondary Education Data System, “Fall Enrollment Survey” (IPEDS-EF: 92–99), and Spring 2001 through Spring 2007; and Enrollment in Degree-Granting Institutions Model, 1980–2006, November 2007.

NOTE: Detail may not sum to totals because of rounding. Some data have been revised from previously published figures. Data for 1999 were imputed using alternative procedures.

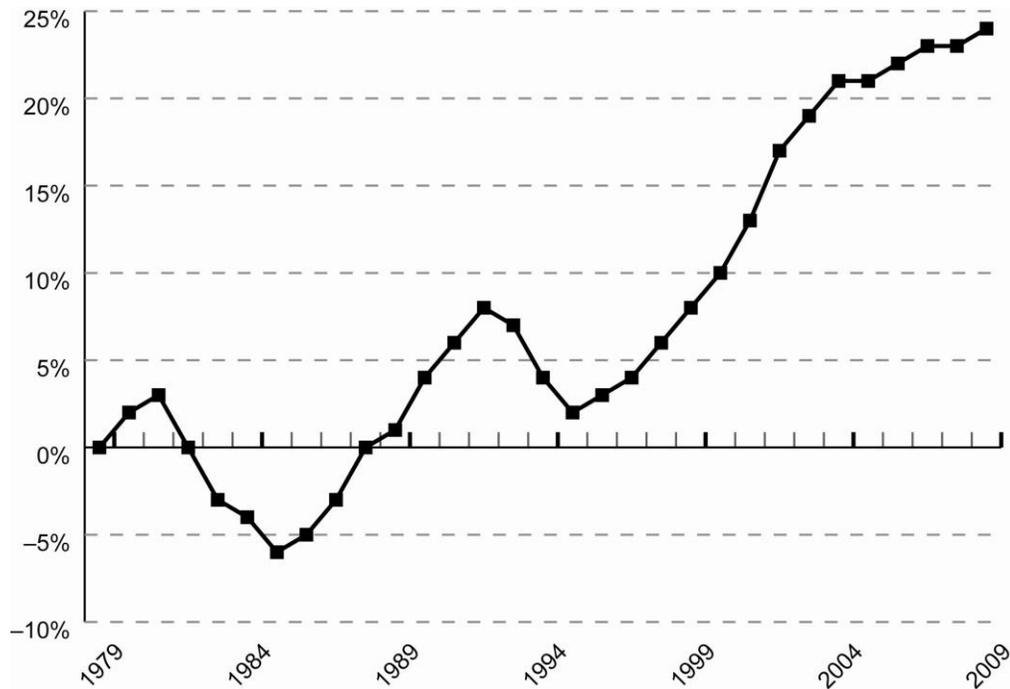
- The share of students at private versus public institutions has not changed much over time and is not projected to change going forward, with approximately 80 percent of students attending public institutions and 20 percent attending private institutions.
- Similarly, the share of full-time versus part-time students has remained relatively constant since 2007, with approximately two thirds of students enrolled full-time.

³⁹ National Center for Education Statistics projections based on the Integrated Postsecondary Education Data System “Fall Enrollment Survey,” November 2007.

MICHIGAN HIGHER EDUCATION STATS

- Total fiscal year equated students (30 undergrad credit hours=1 FYES) at Michigan public universities have increased from 206,671 in 1979 to 257,230 in 2009, a 24.5 percent total increase and an annual average increase of 0.7 percent (see Exhibit 25).

EXHIBIT 25
Enrollment Growth at Michigan Public Universities

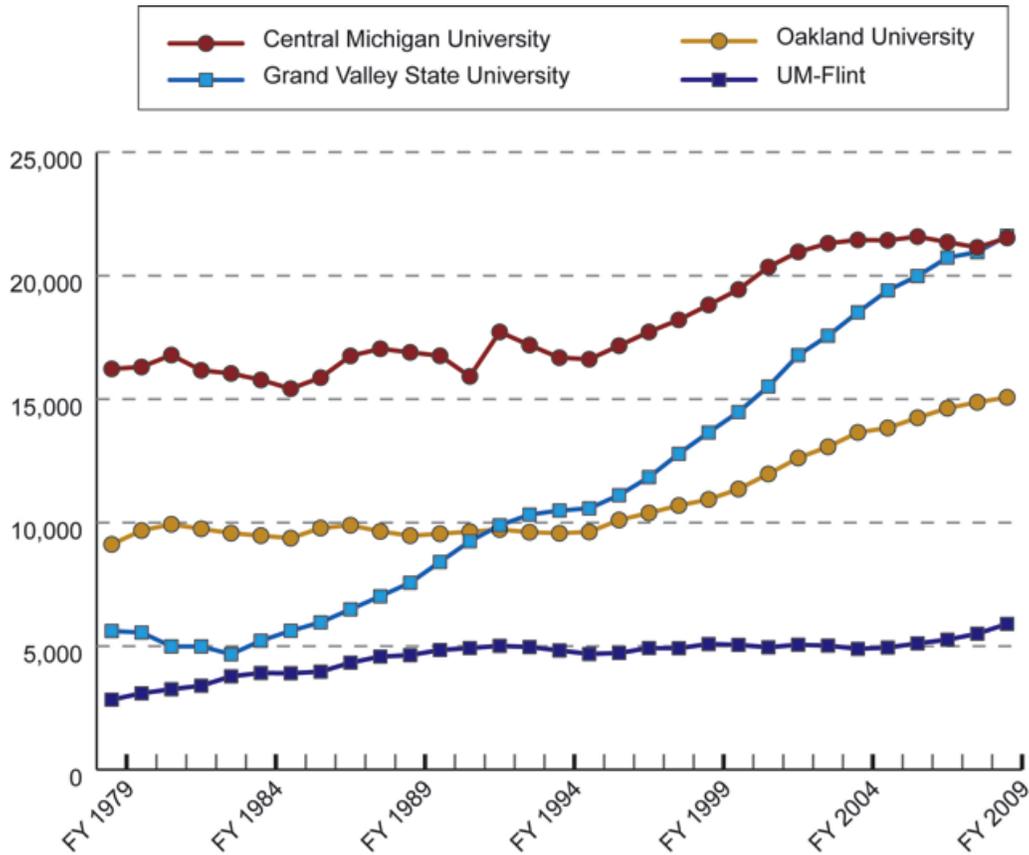


SOURCE: Data collected by Kyle Jen, Michigan House Fiscal Agency, October 2010, calculated by Public Sector Consultants.

- Over the last decade, OU increased its FYES by 32.7 percent, from 11,359 to 15,073. Across the state's universities, FYES grew 12.8 percent over the decade. Only Grand Valley State University (49.3 percent) and Ferris State University (36.8 percent) grew faster than OU. Saginaw Valley State University grew by 31.3 percent, while Northern Michigan University (18.0 percent) and UM Flint (16.8 percent) also expanded at a stronger than average rate. Looking back over the past 30 years, OU has experienced a very stable and healthy growth trajectory compared to three of its peer institutions (see Exhibit 26).

EXHIBIT 26

Growth in FYES at OU and Comparable Universities, 1979–2009



SOURCE: Data provided by Kyle Jen, House Fiscal Agency, October 2010. Calculations made by Public Sector Consultants.

NOTE: PSC chose CMU, UM-Flint, and GVSU as peers because of their relative size similarities to OU and regional proximity. All four universities have also taken a lead in driving their local economic activity.

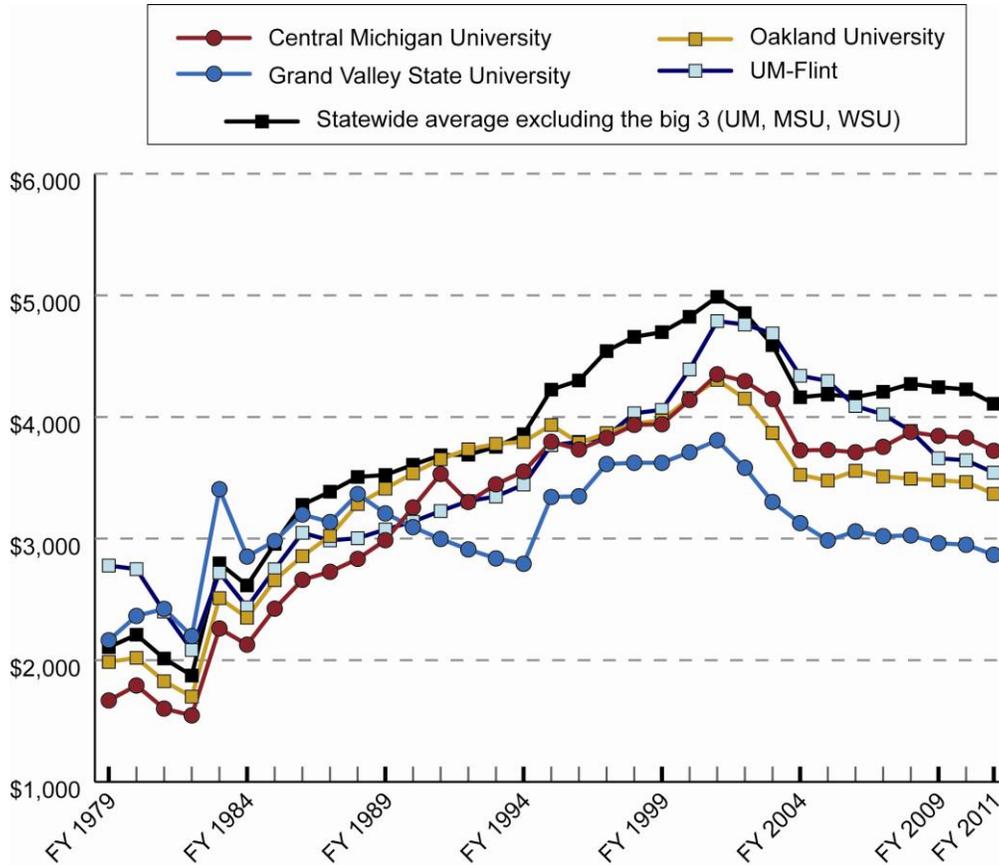
- In real dollars, state funding for higher education has dropped by 14 percent over the past decade, compared to a 6 percent drop in state spending on community colleges and an increase of 18 percent in K–12 appropriations from the state’s school aid fund.⁴⁰ During the same ten years, inflation in the metro-Detroit region increased by 21 percent while private industry compensation increased by 35 percent.⁴¹
- Including all 15 public institutions, the state will spend an estimated \$5,522 per FYES in FY 2011, down from \$6,841 per FYES in fiscal year 2001. When discounting for the three

⁴⁰ Data collected by Kyle Jen, Michigan House Fiscal Agency, October 2010, calculated by Public Sector Consultants; Employment Cost Index, U.S. Bureau of Labor Statistics, 2nd quarter values 2000-2010, collected and calculated by Public Sector Consultants, October 2010; Consumer Price Index, Detroit-Ann Arbor-Flint, MI, U.S. Bureau of Labor Statistics, first half values 2000-2010, collected and calculated by Public Sector Consultants, October 2010. Between fiscal years 1985 and 2001, total state appropriations for university operations increased 5.2 percent annually on average. Beginning in fiscal year 2002, when state funding only increased by 1.5 percent, state appropriations have declined by 1.1 percent annually through the current 2011 fiscal year.

⁴¹ Higher Education, Community College, and SAF appropriations collected by Kyle Jen, House Fiscal Agency, October 2010. Employment and Consumer Price Indices collected by PSC from U.S. Bureau of Labor Statistics, October 2010.

research institutions (UM, MSU and WSU), which receive a much larger annual appropriation than the other 12 public institutions, the state will spend just over \$4,000 per FYES in FY 2011. Like other institutions statewide, OU has seen a drop in state funding per FYES, estimated at \$3,368 per FYES in fiscal year 2011, down from \$4,305 in fiscal year 2001 (see Exhibit 27).

EXHIBIT 27
Annual Average State Appropriation per FYES, 1979–2011



SOURCE: Data provided by Kyle Jen, House Fiscal Agency, October 2010. Calculations made by Public Sector Consultants.

NOTE: **Statewide average excludes the largest three institutions, UM, MSU, and WSU, which receive higher state appropriations as research institutions.**

- The state no longer makes annual grants to universities for capital improvements. Instead, construction/renovation projects are funded on a one-time basis, and universities are responsible for maintenance costs out of their own operating funds.
- Since 1992, the state’s universities have spent \$2.30 billion on capital improvements, of which \$1.76 billion, or 76.5 percent, was subsidized by the state. The state has subsidized 75.9 percent of OU’s \$152.6 million in capital improvements since 1992.⁴²

⁴² House Fiscal Agency, *Capital Outlay Projects for State Universities 1992–Present* (Lansing, Mich.: House Fiscal Agency, updated September 2010).

- As public funding has slowed, universities have turned to endowments to subsidize operational and capital expenses.
- Over the past decade, endowments at Michigan’s universities and colleges have soared, including a 138 percent increase at the University of Michigan and a 403 percent increase at MSU (see Exhibit 28). The state’s public institutions have clearly had more success accelerating endowment funding than the state’s smaller colleges, according to the *Chronicle of Higher Education*. This is likely in response to the declining reliance on state aid.

EXHIBIT 28
Michigan’s Top College and University Endowments, 1999–2009

	1999 Market Value (in thousands)	2009 Market Value (in thousands)	10-year change
Michigan State University	\$265,238	\$1,046,975	295%
Saginaw Valley State University	\$13,971	\$37,003	165
University of Michigan	\$2,525,612	\$6,000,827	138
Calvin College	\$48,533	\$80,763	66
Central Michigan University	\$36,083	\$58,025	61
Michigan Tech University	\$39,537	\$63,617	61
Western Michigan University	\$92,590	\$141,355	53
Grand Valley State University	\$35,588	\$53,549	50
Kettering University	\$34,366	\$48,315	41
Wayne State University	\$146,275	\$204,529	40
Kalamazoo College	\$104,430	\$122,589	17
Hope College	\$105,201	\$122,480	16
Albion College	\$115,190	\$123,524	7
Alma College	\$115,190	\$79,711	-31
Andrews University	N/A	\$26,269	N/A
Eastern Michigan University	N/A	\$35,374	N/A
Northwood University	N/A	\$56,597	N/A
Oakland University	N/A	\$39,001	N/A

SOURCE: Facts and Figures database: College and University Endowments, The Chronicle of Higher Education. <http://chronicle.com/premium/stats/endowments/results.php?year=2010&sort=market&state=Michigan&limit=>, Compiled by the National Association of College and University Business Officers in partnership with Commonfund Institute. Collected and organized by Public Sector Consultants, October 2010.

NOTE: The 1999 value of several schools’ endowments were not available within the Chronicle’s database (N/A).

- Over the past five years, the median need-based aid at the nation’s top private liberal arts and research universities has increased by 33 percent, meaning the most expensive schools are lowering the cost of admissions for the top students regardless of ability to pay.⁴³
- In sum, competition among the state’s and nation’s higher education institutions is intensifying. OU should build upon its corporate and institutional partners, focusing its outreach around established programs that can stimulate philanthropic and corporate support and partnerships, including healthcare, business and the arts.

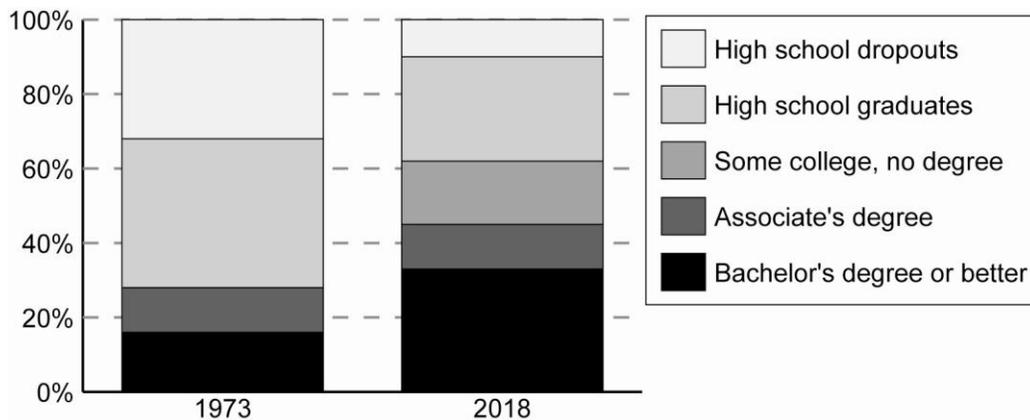
⁴³ Ronald Daniels (president of Johns-Hopkins University), Education Dollars Well Spent, *U.S. News and World Report Best Colleges*, September 2010, 14.

- The university should concentrate its investments on key programs that will define OU’s role in the community—and in the sectors and skills that the new economy demands.

HIGHER EDUCATION AND THE ECONOMY

- The United States has fallen from 1st to 12th place internationally in the percentage of young adults with postsecondary degrees. Many economists now agree that the U.S. will not have a jobs problem. It will instead have an education problem, with more jobs available than qualified candidates available to fill them.
- Postsecondary education will be the gateway to career options and rewarding compensation. Of the 60 million jobs available to workers nationally without any postsecondary education through 2018, 53 million will fall within three occupational clusters: food and personal services (16 million), sales and office support (15 million), and blue collar (22 million).⁴⁴
- Looking across a 45-year period, from 1973 and projected out to 2018, the nation will have experienced a dramatic shift in necessary job qualifications (see Exhibit 29). Projections by The Georgetown University Center on Education and the Workforce estimate that jobs available for workers with no more than a high school degree will have declined from 72 percent in 1973 to 38 percent in 2018. In contrast, those jobs that require at least an associate’s degree will increase from 28 percent in 1973 to 45 percent in 2018 across all occupations—almost completely reversing the percentages from 1973.⁴⁵

EXHIBIT 29
U.S. Jobs Available by Educational Attainment, 1973 and 2018



SOURCE: Anthony P. Carnevale, Nicole Smith, and Jeff Strohl, *Help Wanted, Projections of Jobs and Education Requirements Through 2018, Executive Summary* (Washington, D.C.: Center on Education and the Workforce, Georgetown University, June 2010). Data organized and graph produced by Public Sector Consultants.

NOTE: The category “Some college, no degree,” was not included in the 1973 data collected by the Center on Education and the Workforce.

- Higher education will be just as critical to the health of Michigan’s economy as it is in other states across the nation. Between 2008 and 2018, an estimated 1.3 million job vacancies will be created from new jobs and job openings due to retirement. While many of those positions

⁴⁴ Anthony P. Carnevale, Nicole Smith, and Jeff Strohl, *Help Wanted, Projections of Jobs and Education Requirements Through 2018, Executive Summary* (Washington, D.C.: Center on Education and the Workforce, Georgetown University, June 2010).

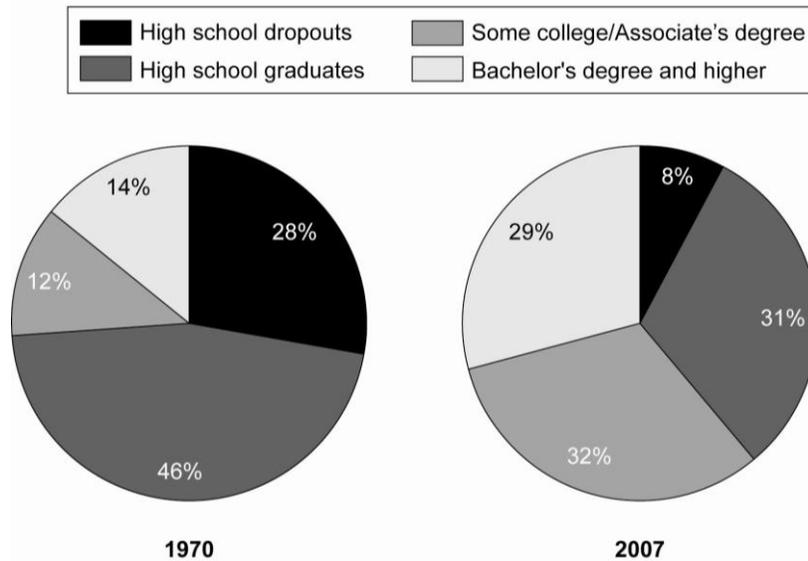
⁴⁵ Carnevale, Smith, and Strohl.

were once filled by a heavily uneducated workforce in Michigan, going forward those vacancies will be filled by a much more educated worker—an estimated 836,000 (62 percent) will require postsecondary credentials, while 388,000 (46 percent) will be available for high school graduates and only 103,000 (27 percent) for high school dropouts.

- Today, fewer of Michigan’s residents 25 years and older have a bachelor’s or higher degree, compared to both the national average and the most educated states. According to the Census Bureau, only 24.7 percent of Michigan residents have a bachelor’s or higher degree, compared to 27.5 percent of residents across the U.S. and 38 percent of residents in Massachusetts.⁴⁶
- Higher education will also be the gateway to the middle class. While high school graduates accounted for 46 percent of the middle class in 1970, by 2007 this proportion had dropped to 31 percent (see Exhibit 30). Higher education once was the path to the upper middle class, but soon it will be a societal norm and workplace expectation.

EXHIBIT 30

Middle Class Educational Attainment, 1970 and 2007



SOURCE: Center on Education and the Workforce, Georgetown University. Data Organized and graph produced by PSC, October 2010.

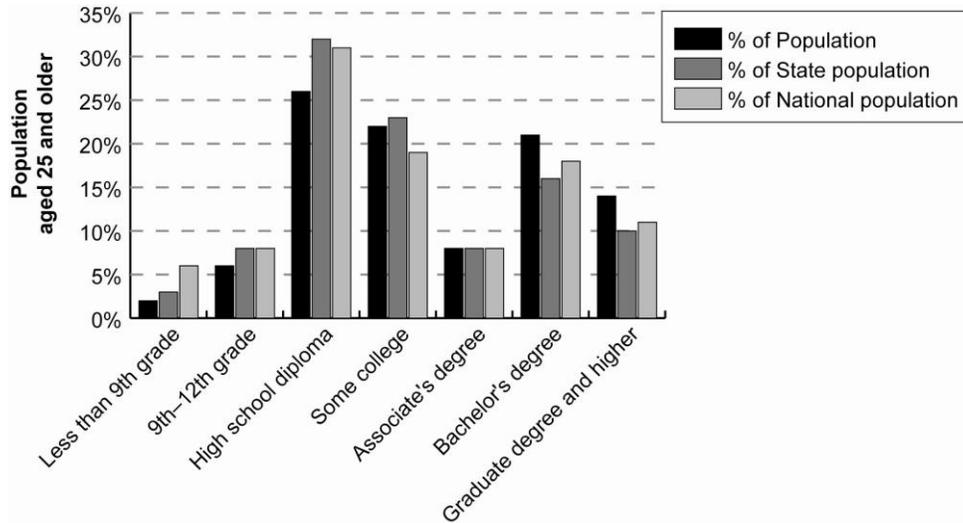
NOTE: Middle class represents the middle quintile of household income, as measured by the U.S. Census Bureau.

- As a percentage of total population, residents in the Oakland University area (Oakland and Macomb Counties) have a much higher educational attainment than the state or national attainment rates (see Exhibit 31). OU’s more educated regional population positions it to compete at a high level in the new economy.

⁴⁶ U.S. Census Bureau, *The 2010 Statistical Abstract, The National Data Book*, available online at <http://www.census.gov/compendia/statab/>, collected by Public Sector Consultants, November 2010.

EXHIBIT 31

Educational Attainment of OU Area Residents Compared to State and National Rates, by Population Aged 25 and Older

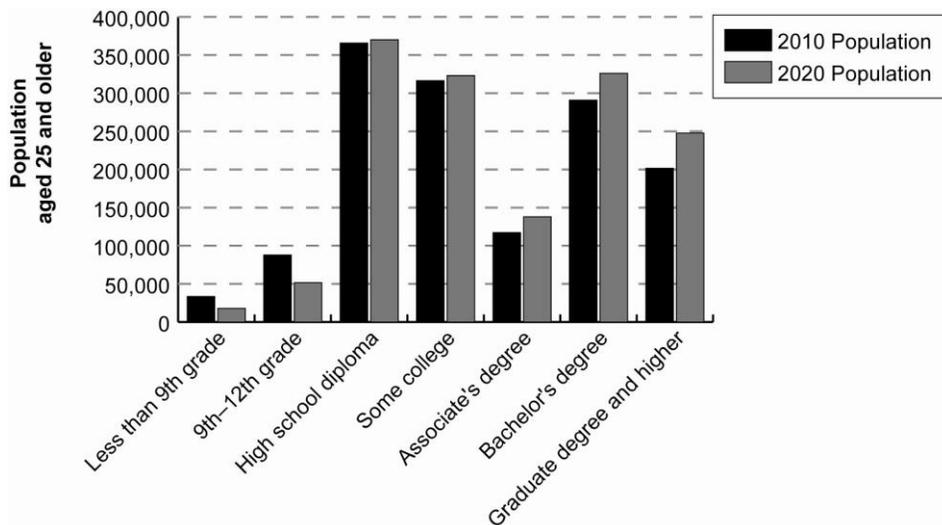


SOURCE: EMSI, Education Attainment 2010 Report. Data collected and organized by Public Sector Consultants, 2010.

- Looking forward, the OU region is projected to continue being a highly educated region, as the greatest percentage gains over the next decade will be within the cohorts of residents who have attained a bachelor's or master's degree (see Exhibit 32).

EXHIBIT 32

Projected Educational Attainment, 2010 and 2020



SOURCE: EMSI, Education Attainment 2010 Report. Data collected and organized by Public Sector Consultants, 2010.

- The U.S. advantage in higher education is the diversity of institutions, with over 6,000 institutions serving students of different ages and needs. Grover Whitehurst of the Brookings Institution recently said, “We should make diversity our strength by establishing national policies that encourage institutions to adjust quickly to changing needs in the marketplace for learning.”⁴⁷
- A key to the United States remaining competitive in attracting multinational activity is its ability to attract and develop skilled workers and immigrants. Universities play a key role in attracting and developing foreign workers for the U.S. economy. A recent study from the Institute of International Education provides the following key facts and trends:⁴⁸
 - Nearly 700,000 international students attended U.S. higher education institutions in 2009–10, equal to 3.6 percent of the total enrollment at U.S. institutions. The percentage of total enrollment peaked in 2001–02 at 3.7 percent, and due to an array of reasons stemming from the 9/11 terrorist attacks and increased competition from non-U.S. institutions, the pace of international student enrollment slowed during this decade.
 - The state of Michigan currently ranks 8th in hosting international students, with just over 24,000 in 2009–10. Both U-M (6th) and MSU (8th) rank high in terms of total number of international students on campus.
 - Approximately 62 percent of international students fund their U.S. education from family and personal sources while 24 percent are funded through the host institution.
 - The top five fields of study of international students are business and management (21.1 percent of total), engineering (18.4 percent), physical and life sciences (8.9 percent), math and computer science (8.8 percent), and social sciences (8.7 percent).
 - China and India are the top two nations sending students to study in the United States (see Exhibit 33).

EXHIBIT 33

Origin of International Students Who Attend a U.S. College, 2009–10

	2009–10 Total	% of Total	% Change 2008/09–2009/10
China	127,628	18.5%	29.9%
Saudi Arabia	15,810	2.3	24.9
India	104,897	15.2	1.6
S. Korea	72,153	10.4	–3.9
Taiwan	26,685	3.9	–4.9
Canada	28,145	4.1	–5.2
Japan	24,842	3.6	–15.1
World Total	690,923	100.0%	2.9%

SOURCE: Institute of International Education, *Open Doors Report 2010*, *Open Doors 2010 Fast Facts*, *Top Places of Origin*, November 2010.

- Since 2000, however, Saudi Arabia has experienced the fastest rise, emerging as a top ten international importer of students.

⁴⁷ Grover Whitehurst, *Higher Education and the Economy* (Upfront Blog, The Brookings Institution, August 9, 2010). Available online at http://www.brookings.edu/opinions/2010/0809_obama_college_whitehurst.aspx (accessed 12/8/10).

⁴⁸ *Open Doors Report 2010*: Open Doors 2010 Fast Facts (New York: Institute of International Education, November 2010).

- The number of U.S. students studying abroad over the past decade doubled, from approximately 130,000 in 1998–99 to 260,000 in 2008–09. The experience of studying abroad, regardless of duration (full year or intense multi-week experience) is intensifying the “flattening of the world.”

TECHNOLOGY AND HIGHER EDUCATION

Looking Back

In the past decade, information and communications technologies have affected—sometimes greatly, and sometimes at the margins—the way students and workers interact with teachers and employers.

- The Internet—more precisely, the World Wide Web—has come of age, growing from a library-like **reference** network to a place where people go to get things **done** (take a class, book an airline ticket, purchase a washing machine, comment on a foreign news article).
- Mobile **computing** devices—which were considered “lightweight” ten years ago if they weighed less than eight pounds—are now weighed in ounces (witness the Apple iPad at 22 ounces, or the new Samsung Galaxy tablet at 13.6 ounces). Laptop computers themselves have broken into three subgroups—laptops, netbooks, and tablet-style portable computers.
- Mobile **communications** devices have changed even more dramatically. A typical cell phone weighed 10.5 ounces in 1990, 7.7 ounces in 2000, and as little as 3 ounces in 2010.⁴⁹ The high selling iPhone 4—which, arguably, is both a computer and a cell phone—weighs 4.8 ounces.
- The expansion of the high-speed Internet—as compared to the 1990s when dial-up connections were far more common—has allowed both individuals and organizations to store, retrieve, and view massive amounts of information with little regard to distance between sender and receiver of information.
- With lighter weight devices—many of which can be tucked into a student backpack or pants pocket—able to access information, the Internet is no longer something you go out of your way to access at a computer lab or desktop computer in your home or office. Instead, the concept of the Internet as a computer-based network has been replaced by a vague concept of being always “online” or “in touch” through a combination of cellular, wireless, and wired network connections. To contemporary students, waiting to access the Internet until you walk into a defined room in a certain building is a foreign, quaint, and outdated concept.

Taken together, these shifts have had major effects on education, work, and home life.

- Ubiquitous devices mean that students not only enter college with a large amount of computer-based experience, but that they also enter college with at least two computing devices (laptop/desktop and cell phone). More devices, however, also mean more screens competing for a student’s attention during—and outside of—class.
- Lighter devices mean that the line between work and home—or classroom and study time—is being blurred. Students can take courses at all hours of the day or night, just as workers can communicate with colleagues at all hours.

⁴⁹ U.S. Geological Survey, Recycled Cell Phones—A Treasure Trove of Valuable Materials, available online at <http://pubs.usgs.gov/fs/2006/3097/fs2006-3097.pdf> (accessed 12/8/10) and Apple iPhone website, <http://www.apple.com/iphone/specs.html> (accessed 12/8/10).

- More connected devices mean that social networks are simultaneously larger and smaller. Larger, because users can choose to be exposed to other users anywhere in the world; smaller because a higher degree of interconnection means that students can spend more time on Facebook interacting with high school friends scattered throughout the nation than meeting college-age peers at the same institution one building away.
- The destruction of barriers of distance—when was the last time someone under the age of 30 paid for an international telephone call instead of using Skype?—has also heightened the need for awareness of cultures, time zones, and communications styles. At the same time, the absolute ease to **talk** for free across time zones—a synchronous communication—can quickly reduce the challenges of miscommunications inherent in written asynchronous communications.

Looking Ahead

In the coming decade, information and communications technologies will continue to grow more powerful, lighter, and more ubiquitous. These changes will make *management* of information and communications devices a critically important—and distinguishing—feature of institutions of higher education.

- Institutions will need to decide whether to replace current computer labs with common areas such as lounges with modular and flexible furniture where students can quickly set up individual and small group work spaces. Computer labs will likely be restricted to disciplines where there is a high need for specialized devices for specific classes (e.g., design workstations in a college of architecture or engineering) or research (e.g., a telephone survey laboratory).
- Similarly, institutions will need to decide what infrastructure and services are **provided** by the university for students and faculty, **purchased** by the university for students and faculty, and left for students and faculty to **procure on their own**. For example, when does a university run its own student e-mail system, when does it subcontract its student e-mail and group workspace to Google Apps for Education, and when does a university cease to run a student e-mail system at all—instead allowing each student to register a personal e-mail account, or cell phone messaging account, when they register for a class? Students expect high-speed *infrastructure* for connecting their own devices more than they expect a university to provide interconnected *devices* themselves. Faculty and staff, on the other hand, expect the institution to provide them with *both* infrastructure and devices for their jobs/roles.
- The role and function for information and communications devices in the classroom will also evolve. Some classrooms will use centralized devices as an integrated component of the traditional lecture, while other classrooms will be “tech-free educational zones” as professors deliver content—or experiential learning—while students select for themselves how to participate in class and take notes. Distance learning environments will have a similar metamorphosis, as some classes involve a cluster of local students and a distant instructor (e.g., 15 students gathering to learn a regional dialect of a foreign language taught by an instructor half a world away), while for classes only a handful of students are local, while the teacher and the majority of students are participating remotely.
- The conquest of distance will also alter the content of educational offerings as well as the educational environment. Especially when time zone differences are minor, professorial lectures at a single institution can be augmented by real-time interviews or lectures with leaders at other universities. Job-based training will also change, as career and placement services offices begin to train students to obtain jobs with online *and* paper resumes, as well as interviews conducted in person, via telephone, and via videoconference.

- Cost savings will abound for flexible institutions—but demands on infrastructure will likely bring IT spending right back to current levels. Two technologies are useful as examples of this contrast.
 - Cloud computing—or the ability of a simple, lightweight, local device to use the Internet to leverage massive computer resources and pay only for the resources consumed—will move the *storage* of data out of institutional data centers and into massive interconnected warehouses (potentially organized by academic discipline). But the huge cost savings of cloud computing come at the cost of significant investments in ever higher-speed connections between the user and the cloud.
 - Electronic tools used to create content—whether written, aural, or visual—are becoming virtually cost free. To wit, think of the last document that a student or professor authored. Other than the ability to type, place text in different sizes or typefaces, insert graphics or photos, and insert footnotes or endnotes—what other features of a massive word processing program like Microsoft Office are used on a regular basis? Universities that license Microsoft Office-like suites for faculty and staff at hundreds of dollars per copy will be competing on a cost basis with universities that license low-cost—or free, open-source—software packages that are fully functional for the majority of faculty and staff. But just like cloud computing, savings in software license fees are often quickly eaten by both training and support—along with improved infrastructure—considerations.
- The primary challenge for institutions of higher education—which are steeped in the traditions of information technology devices from the computer’s inception as a room-sized mainframe device—is to continue to manage the transition from a small number of massive, university-owned and controlled devices in the 1940s and 1950s to a modern student population—and workforce—that will expect real-time data, real-time recall, and ubiquitous access from anywhere on or off campus on any device that the *student or employee* chooses to use.

Conclusion:

Oakland University's Environment

As OU prepares for its future, the university faces several opportunities and threats. The information in this report should make clear that OU is entering a period of limited resources, and more intense competition for those resources and for students. The way OU positions itself—through its investment decisions and its messaging to the public—will determine the extent to which the university maximizes its potential as a treasured community asset.

STRENGTHS AND OPPORTUNITIES

- Oakland and Macomb Counties remain economic, financial, intellectual, and cultural hubs of Michigan—the two-county region is home to roughly 1 in 5 Michigan residents and 1 in 4 Michigan jobs. OU's location means it is positioned to be the educational institution of choice. If OU can more effectively engage with its community partners, its preeminent position should be bolstered for years to come.
- Certain sectors of the economy are growing—even in Michigan—and OU is located at the Michigan hub of these sectors (educational services, health care, and business and financial services). Furthermore, since income in these fields is higher than the national average, OU students are well positioned to reach higher-income careers than their peers in other fields or at other institutions.
- OU remains undefined in the public mind, and therefore has the opportunity to define itself. Many of its older peers are tied to institutional commitments and external perceptions. OU is one marketing campaign away from defining itself as a leader in the new economy.
- As the value of a strong liberal arts background increases and the creative class rises, OU's complement of liberal arts education for all students and its recognized fine arts program give it an advantage in preparing students for the new economy.
- OU's partnership with Beaumont Hospital can serve as a template for building strong, strategic partnerships that enable OU to dominate the research to practice marketplace. OU excels at student development, and its access to key international and regional players is an advantage. If OU can consistently combine its culture of student development with access to top tier professional programs and institutions, it can excel in the research-to-practice marketplace.
- The School of Medicine will capture the emerging influence that the healthcare sector will play in the region and nationally in the coming years. Across the campus, the Meadow Brook Theater and OU's fine arts programs can capture the emerging influence of the “right brain” economy. While at first glance, a medical school and fine arts seem polar opposites, they give OU a strong presence of both ends of the economic and community spectrum, and help create both sense of purpose and sense of place at the university.
- Moving athletics into Division 1 can certainly be a financial burden on the institution, but if managed appropriately and combined with strong efforts in branding OU's approach to teaching and research in the new economy, successful athletic programs can bring national acclaim to campus that augment the academic and extracurricular offerings of OU.
- While the state's general fund budget—which supports public higher education—will remain severely constrained in the short term, the conversion of the job market to focus on employees with college-level skills will continue. As long as higher education continues to be the gateway to a **career** with higher paying employment, students and families will be willing

to pay increased tuition rates for access to these jobs, meaning OU has a defined revenue stream it controls that can be tapped for future programmatic investments. Leveraging existing endowments—and focusing on building future endowments to partially offset declining state revenues—will be important activities for OU as well.

WEAKNESSES AND THREATS

- There are nearly 3,000 four-year colleges and universities nationally, and they are all competing for a shrinking number of college-eligible students. Top students are not tied close to home, and instead are looking for the “best fit.”⁵⁰ Fit can be defined in many ways, but schools that have a distinguishable characteristic have an edge. Currently, Oakland University is not distinguishable from either its geographic peers or its institutional category peers—so the longer it takes to define OU in the minds of current and prospective students and faculty, the harder it will be for the university to move ahead of its peers.
- The major land grant institutions are making strides to create a more intimate ambiance, especially for incoming freshmen, through specialty colleges and residential programs. Meanwhile, community colleges are taking steps to create a larger feel by offering four-year degrees and flexible programs. Oakland is caught in the middle—and if it does not choose a path will be seen by students as neither intimate nor large.
- The physical campus is a strong asset, but it remains a commuter-friendly campus that even provokes residential students to rely on their vehicles. OU’s campus is under-utilized as a competitive edge to create a strong sense of place in Oakland and Macomb counties.
- The unstable political landscape in Lansing—and the continuing General Fund budget crisis—will continue to complicate the planning process for the university’s finances. It is likely that state support will not grow fast enough—or potentially, not grow at all—to offset the university’s increasing costs and investments; therefore more reliance on private support is necessary. With a relatively young alumni base, OU does not yet have a strong private support base in place to activate but must redouble its efforts to develop this base as it enters prime charitable giving age brackets.
- As the most expensive and elite universities increase need-based aid, Oakland’s competitive price-tag advantage becomes less effective in attracting top students. The infusion of private money into endowments has allowed top-tier institutions to compete for students nationwide regardless of socioeconomic status. This makes the growth of OU’s endowment a critical component and measure of future success.

BUILDING A DISTINCTIVE OAKLAND UNIVERSITY

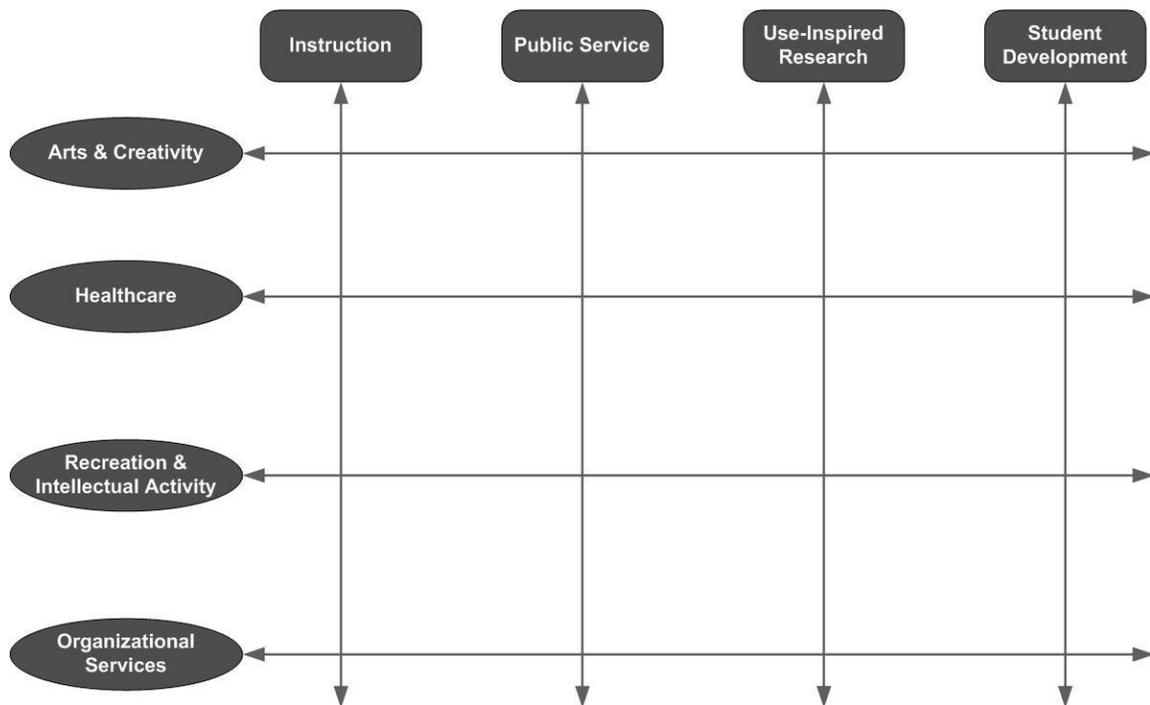
Going forward, OU would be best positioned by focusing on its core competencies—competencies that can be applied across every business unit, college, and school that the university supports. OU has long included in its mission four institutional pillars: instruction, use-inspired research, public service, and student development. Needless to say, all universities would claim to be based upon these pillars, but rare is the university that finds a way to integrate these values across all of its programs.

During OU’s strategic planning and ongoing evaluation of its various offerings, it should attempt to integrate, or at least recognize, its core values in every business unit. Planning should also consider four interaction points that OU has with its community: arts and creativity (e.g., Meadow Brook), healthcare (e.g., OU-Beaumont), recreational and intellectual activity (e.g., academic lecture series and youth sports camps), and organizational services (e.g., consulting to

⁵⁰ *Finding the Right College for You, Fall 2010* (N. p.: Kaplan/Newsweek, September 2010).

local school districts). How does OU, through its students, faculty, and staff, showcase its competencies to the public during these points of contact? Developing and promoting these intersections with the public will serve OU's strategic vision of being a distinctive community asset. One way to think about crossing the university's competencies with its most visual assets is illustrated in the diagram below (see Exhibit 34).

EXHIBIT 34
Applying the Competencies across the University



SOURCE: Public Sector Consultants, 2010.

Further, using instruction, public service, and use-inspired research as the three paths to creating a well-rounded and rich student experience (student development) would separate OU from its competitors. At one end of the spectrum of higher education institutions competing for students, the state's major research institutions advance a research agenda, and while they engage students at different levels, instruction is not a key competency. In contrast, the regional teaching schools across the state excel at providing small class sizes and personal instruction, but fall short on connecting students to global experiences, research activities, and a variety of professional opportunities. Both types of institution engage in public service, but with much different pools of participants and audiences in mind.

By focusing its activities in key economic sectors, OU is well positioned to

- give smart students the personal attention they might not get at a top-tier research university,
- provide all students with strong academic opportunities in key disciplines,
- expose students and the OU community to the arts and public engagement, and
- link businesses, students, and faculty alike with global experiences, research, and professional opportunities.

Appendix:

Economic Modeling Specialists Incorporated (EMSI)

Economic Modeling Specialists Inc. (EMSI) provides employment data and economic analysis via web tools and custom reports. EMSI also produces comprehensive impact analyses for colleges and universities in the US and internationally.

To arrive at its economic, demographic, and education trends and projections, EMSI uses the following sources:

- U.S. Department of Commerce
 - Bureau of Economic Analysis
 - State Personal Income and Employment
 - Local Area Personal Income and Employment
 - Industry Economic Accounts, Benchmark and Annual Input-Output (I-O) Accounts
- U.S. Census Bureau
 - American Community Survey
 - County Business Patterns
 - ZIP Code Business Patterns
 - Nonemployer Statistics
 - Local Employment Dynamics (LED)
 - TIGER/Line File (with additions by DM Solutions Group)
 - Population Estimates
 - U.S. National and State Population Projections
 - Census 2000 Summary Files 1 and 3 (SF 1, SF 3)
- U.S. Department of Labor
 - Bureau of Labor Statistics
 - Quarterly Census of Employment and Wages (QCEW)
 - Current Employment Statistics (CES)
 - Current Population Survey (CPS)
 - Local Area Unemployment Statistics (LAUS)
 - National Compensation Survey
 - National Industry-Occupation Employment Matrix (10-year, current/projected)
 - Occupational Employment Statistics (OES)
 - Occupational Education and Training Projections
 - Employment and Training Administration (ETA)
 - Characteristics of the Insured Unemployed
 - National O*NET Consortium, O*NET Production Database
- U.S. Department of Education, National Center for Education Statistics
 - Integrated Postsecondary Education Data System (IPEDS)
 - Office of Educational Research and Improvement for the CIP, 2000 Standard Occupational Classification Crosswalk to 2000 Classification of Instructional Programs
- U.S. Department of Health and Human Services, National Center for Health Statistics
 - Health, United States

- U.S. Postal Service
 - Address Information Systems (AIS) Products, Delivery Statistics
 - AIS Products, 5-Digit ZIP Product
 - AIS Products, City State Product
- Internal Revenue Service
 - Statistics of Income Division, County-to-County Migration Data
- U.S. Railroad Retirement Board
 - Annual Railroad Retirement Act and Railroad Unemployment Insurance Act Statistical Tables
- Private sources
 - Indeed.com job-posting search engine
 - Nielsen Claritas Business-Facts® (in conjunction with infoUSA™)

NOTE: In addition to federal sources, EMSI uses state and (where available) sub-state industry projections produced by all 50 individual states.
