

Employment Choices in Oakland County for the 21st Century

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Appendix D: Internet sources related to Employment Choices Oakland County D1-2
http://www.co.oakland.mi.us/c_serv/ced/products/appendixd.html

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1.0 INTRODUCTION (TAB)

1.0 INTRODUCTION

As mentioned previously, Oakland County Planning and Economic Development Services was an integral part of the research and review involved in the Oakland University study, "*Jobs for the 21st Century*." However, the authors of this study believed there were some gaps that could be filled by using existing data to draw some conclusions about the current and future trends of labor market demands in Oakland County. It is not the intention of these authors to duplicate the efforts of the OU research team. The information that follows is intended for quick referencing purposes and to provide a snapshot analysis of employment patterns in this County. More importantly, the authors of this study hope this report serves as a tool for career counselors who help guide high school and college students in their career choices. Another dimension of this study offers readers a basis to compare Oakland County with the Detroit Metropolitan Statistical Area, the State of Michigan and the U.S.

The bulk of this study is presented in bullet, table and graphic forms for ease in referencing. After a brief discussion of the economic flavor of Oakland County, the study takes employment forecast reports and organizes the information by *Occupational Division*, *Industrial Division* and *Occupations*. This section also partners employment forecast data with the educational and income data. These two additional variables can further inform employers and employees of the relationship that skills have on income levels for various occupations. The final section of this study depicts Oakland County's labor market of the future relative to labor market demands for three larger entities: the Detroit MSA, the State and the nation.

2.0 ECONOMIC CHARACTERISTICS OF OAKLAND COUNTY (TAB)

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Oakland County's recent history has been one of significant economic prosperity. Entering the 21st century, residents of Oakland County will benefit from the vast employment opportunities available within the County. Oakland County is home to the Midwest technological cluster, Automation Alley, which encourages retention and location of high-tech businesses. This technology driven effort can benefit the County because high-tech companies can keep existing jobs and add new jobs to Oakland County. In addition, Oakland County is home to the world headquarters of six Fortune 500 companies. The presence of DaimlerChrysler, Kmart, Lear Corporation, Kelly Services, Meritor and Delphi Automotive Systems provides citizens of Oakland County with many job opportunities and helps attract other national and international business opportunities. Due to the suitable economic environment, over 35% of all Fortune 500 companies do business in the County.

With increasing global investment focused on businesses within Oakland County, even more employment opportunities will become available. Over 394 foreign owned firms from 21 countries conduct operations in the county. Lastly, to ensure that citizens of Oakland County can enhance their skills to match current employment trends, there are 13 institutions of higher learning that provide much of the workforce with these necessary skills. When the many positive aspects of Oakland County are coupled with the projected employment gains, it is obvious that this County's citizens will prosper and continue to lead a quality life into the 21st century.

2.1 Unemployment in Oakland County

Oakland County currently has the 8th lowest employment rate in Michigan. With the expansion of businesses already established and the projected employment gains, Oakland County will remain at the top of this list.

Unemployment by County As of August, 1999

	<u>RATE</u>
1. Washtenaw County	1.5%
2. Livingston County	1.6%
3. Clinton County	1.6%
4. Mackinac	1.6%
5. Leelanau	1.7%
6. Midland	1.8%
7. Eaton County	1.8%
8. Oakland County	2.0%
9. Allegan	2.1%
10. Cheboygan	2.1%
16. Macomb County	2.4%
19. Wayne County	4.3%
MICHIGAN	2.8%

2.2 Employers of Oakland County Residents

Oakland County residents benefit from the presence of many large corporations within the county and in nearby counties which provide many job opportunities.

Oakland County's Top 20 Largest Employers, 1998

<u>Employees</u>	<u>Estimated Local Employees</u>
1. General Motors	26,000
2. DaimlerChrysler AG	20,890
3. Electronic Data Systems	9,900
4. William Beaumont Hospital	7,930
5. Kmart Corp.	6,000
6. Ameritech-Michigan	5,000
7. U.S. Government	4,230
8. Providence Hospital and Medical Centers	4,020
9. Mercy Health Services	3,920
10. Oakland County Government	3,560
11. Blue Cross Blue Shield of Michigan	3,550
12. Ford Motor Company	3,530
13. Progressive Tool & Industries	3,480
14. Compuware	2,480
15. Bank One	2,410
16. Henry Ford Health System	2,140
17. Botsford Hospital	2,090
18. Lear Corporation	2,040
19. Arbor Drugs Inc.	1,910
20. Comerica Inc.	1,900

- 179 of the Fortune 500 companies did business in Oakland County in 1997
- 394 foreign owned firms representing 21 countries do business in Oakland County
- There are over 41,000 businesses present in Oakland County
- 18.8% of all people employed in Michigan work in Oakland County
- Oakland County is the third wealthiest county, based on per capita income, for counties with over 1 million people

3.0 LABOR MARKET IN OAKLAND COUNTY (TAB)

3.0 LABOR MARKET IN OAKLAND COUNTY

There were 694,190 jobs total in Oakland County in 1994. By 2005, this number is expected to reach 853,790, an increase of 23%. On average, there will be 29,812 job openings every year in Oakland County, providing ample opportunities for those just starting their careers or for those looking for a change in career paths.

Where will these 159,600 additional jobs be found? The labor market of Oakland County for the period between 1994 and 2005 can be examined using several categorization tools. First, the broadest grouping of occupations is the *Occupational Division* Classification. This classification includes:

- Executive, administrative and managerial occupations
- Technicians and related support occupations
- Administrative support occupations
- Professional specialty occupations
- Marketing and sales occupations
- Service occupations
- Agriculture, forestry, fishing and related occupations
- Precision production, craft and repair occupations
- Operators, fabricators and laborers

Another way to group occupations is by *Industrial Division* which includes:

- Manufacturing
- Construction
- Transportation, Communication and Utilities
- Wholesale Trade
- Finance, Insurance and Real Estate
- Services
- Retail Trade
- Agriculture and Mining

Finally, the third unit of analysis employed in this study is *Occupation* -- the most discrete variable. Obviously, individual occupations represent the most diverse measure and include among many others:

- Systems analysts
- Registered nurses
- Janitors and cleaners
- General office clerks
- General managers and top executives
- Home health aides
- Retail salespersons

3.1 Summary of Oakland County's Labor Market

Data gleaned from the Oakland County Occupational Employment Forecast for 1994-2005 was analyzed using all three of the classification groups listed above. A summary of Oakland County by these measures is followed by a more detailed examination of the future of employment trends in Oakland County.

By Occupational Division

- Professional occupations increase their share of the total by 2.5%
- Administrative support occupations share of the total decline by 11%
- Marketing and Sales occupations share of the total decline by half a percent
- Technical occupations share of the total increases slightly
- Precision Production occupations drop by .8% in their share of the total jobs

By Industrial Division

- Growth of systems analysts occurs in the services and the finance, insurance and real estate industry division.
- Half of the growth of general managers and top executives occurs in the services industry followed by a large increase in the wholesale industry.
- Secretarial and computer engineering occupations also occur primarily in the services industry.

By Occupations

Occupations Gaining Workers, 1994 – 2005

	Number of Jobs <u>Gained from 1994-2005</u>
1. Systems Analysts	8,050
2. General Managers & Top Executives	4,290
3. Secretaries	4,130
4. Retail Salesperson	3,880
5. Computer Engineers	3,870
6. Janitors & Cleaners	3,230
7. Receptionists & Information Clerks	2,870
8. Secondary School Teachers	2,820
9. General Office Clerks	2,580
10. Registered Nurses	2,530

Occupations Losing Workers, 1994-2005

	Number of jobs <u>Lost from 1994-2005</u>
1. Machine toolcutting operators	-530
2. Billing, posting and calculator machine operators	-370
3. Central office operators (telephone)	-210
4. Sheet metal workers	-210
5. Drilling & boring machine toolsetters	-210
6. Custom tailors and sewers	-140

3.2 Oakland County's Labor Market by Occupational Division

Occupational growth in Oakland County can be measured using Annual Average Openings (see table below) or total change in employment from 1994 – 2005.

Average Annual Openings

Studying the Annual Average Openings contributes to an understanding of which jobs are gaining positions and which jobs are losing positions.

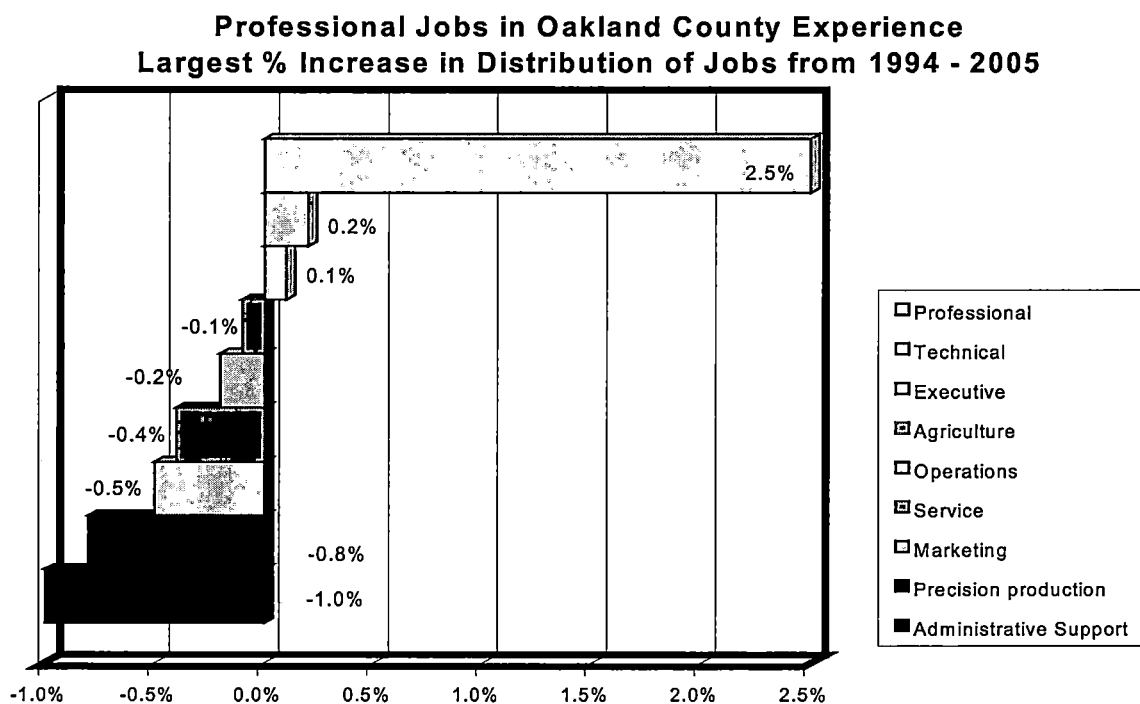
Oakland County Employment Forecasts By Occupation Division Annual Average Openings, 1994-2005

		Annual Average Openings		
		<u>Total</u>	<u>Grwth</u>	<u>Replcmt</u>
<i>All Occupations in Oakland County</i>		29,812	14,521	15,291
1.	Professional Specialty Occupations	5,823	3,979	1,844
2.	Administrative Support Occupations	4,634	2,058	2,576
3.	Service Occupations	4,482	1,849	2,633
4.	Marketing and Sales Occupations	3,797	1,366	2,431
5.	Operators, Fabricators and Laborers	3,774	1,760	2,014
6.	Executive, Administrative and Managerial	3,309	1,734	1,575
7.	Precision Production, Craft and Repair	2,329	862	1,467
8.	Technicians, and Related Support Occup.	1,479	833	646
9.	Agriculture, Forestry, Fishing	185	80	105

- Yearly, Oakland County grows 14,521 new jobs
- Professional jobs experience the highest annual growth, while Agriculture jobs experience the smallest annual job growth
- Administrative, Service, Marketing and Sales, Operators and Laborers, Precision Production, and Agriculture divisions fill more replacement positions than new positions
- Professional and Specialty; Executive, Administrative and Managerial; and Technicians fill more new than replacement positions

Change in Distribution of Jobs from 1994-2005

Another way to view occupational growth in a labor market is change over a period of time rather than average yearly job openings. The bar chart below shows the change in the distribution of jobs in Oakland County from 1994 to 2005 using *Occupational Division* as the classification.



- As evident in this chart, Professional jobs earn the biggest increase in their share of all jobs during this period – 2.5%
- Technical and Executive division jobs also increase their share
- All other occupational divisions lose some of their share of the jobs to Professional, Technical and Executive jobs between 1994 - 2005

Job Growth by *Occupational Division* Change from 1994 – 2005

While it useful to view occupational changes by *Occupational Division*, it is more helpful to examine change in employment patterns by specific occupations within each of these nine categories. The next nine (9) pages illustrate job growth by occupation by *Occupational Division*.

Professional & Specialty Occupations

	<u>1994-2005 Job Gain</u>	<u>% of Total Job Gain</u>
1. <u>Professional & Specialty Occupations</u>	43,813	27.5%
1.1 Computer & operations research analysts	12,212	7.7%
Computer system analysts, eng. & scientist	11,913	7.5%
1.2 Teachers, librarians, counselors	8,150	5.0%
Secondary school teachers	2,812	1.8%
1.3 Engineers	5,602	3.5%
Mechanical engineers	2,483	1.6%
1.4 Health assessment & treating	4,327	2.7%
Registered nurses	2,526	1.6%
1.5 Writers, artists & entertainers	3,811	2.4%
Designers (except interiors)	1,427	.9%

- Between 1994 and 2005, total employment increases by 159,320 jobs.
- Professional & Specialty occupations gain 43,813 workers and account for 27.5% of total employment growth. Between 1994 and 2005, annual openings are forecast at 5,823 in this occupational division.
- Computer & operations research analysts sector is the largest growth component of Professional & Specialty occupations. It comprises about 28% of professional & specialty occupations and 7.7% of all employment growth.
- Growth by Industry Sector
 - Professional & Specialty occupations comprise 34.3% of total employment growth in the Services industry sector.
 - Professional & Specialty occupations comprise 80.6% of the increase in employment in the Manufacturing industry sector.
 - Most gains in computer & operations research analysts employment occurs in the Finance, Insurance, Real Estate and Services industry sectors.

**Job Growth by Occupational Division
Change from 1994 – 2005**

Administrative Support Occupations

	<u>1994-2005 Job Gain</u>	<u>% of Total Job Gain</u>
2. <u>Administrative Support Occupations</u>	22,615	14.2%
2.1 Other clerical & administrative support	7,917	5.0%
General office clerks	2,579	1.6%
Clerical supervisors & managers	2,496	1.6%
2.2 Secretaries, stenographers & typists	3,641	2.3%
Secretaries	4,123	2.6%
2.3 Material recording, scheduling, dispatching	3,657	2.3%
Traffic, shipping & receiving clerks	1,430	0.9%
2.4 Information clerks	3,322	2.1%
Receptionists & information clerks	2,870	1.8%

- Administrative Support occupations gain 22,615 workers and account for 14.2% of total forecast employment growth. There were 4,634 annual openings forecast between 1994 and 2005.
- Secretarial occupations comprise the largest increase in Administrative Support growing by 4,123 with 703 annual openings.
- Clerical support ranks 3rd in occupation gains while secretaries rank 5th.
- Growth by Industry Sector
 - Administrative Support will experience a 1.6% decrease in employees in the Manufacturing industry sector. Most of the job losses will be in computer operators and communication equipment operators

**Job Growth by Occupational Division
Change from 1994 – 2005**

Service Occupations

	<u>1994-2005 Job Gain</u>	<u>% of Total Job Gain</u>
3. <u>Service Occupations</u>	20,320	12.7%
3.1 Personal service	4,636	2.9%
Home health aides	2,497	1.6%
3.1 Protective service	4,152	2.6%
Guards	2,232	.4%
3.2 Food preparation & service	3,549	2.2%
Chefs, cooks & other kitchen workers	1,752	1.1%
3.3 Health service	3,530	2.2%
Medical assistants	1,102	0.7%
3.4 Cleaning & building service	3,427	2.2%
Janitors & cleaners, maids	3,221	2.0%

- Service occupations gain 20,320 workers or 12.7% of all jobs. Between 1994 and 2005, average annual job openings are forecast at 4,482.
- Building janitors & cleaners and maids are forecast for a 3,230 (22.7%) employment gain, the largest for a single occupation within the service category.
- Personal service occupations will have the largest increase in employment followed closely by Protective services occupations.
- Food, health and cleaning are forecast to increase by about 3,500 jobs each.
- Growth by Industry Sector
 - Cleaning and building service occupations decline 15.7% in the Manufacturing sector.
 - Service workers in the Retail industry sector are primarily food preparation
 - Food prep: 29% of all workers in the Retail industry sector and, 89% of service occupation employment
 - Gains in food prep workers total 25% of gains in Retail Trade employment sector

Job Growth by *Occupational Division*
Change from 1994 – 2005

Operators, Fabricators & Laborers Occupations

	<u>1994-2005 Job Gain</u>	<u>% of Total Job Gain</u>
4. <u>Operators, Fabricators & Laborers Occup.</u>	19,363	12.2%
4.1 Helpers, laborers & material movers	10,572	6.6%
All others	7,259	4.6%
4.2 Transportation & material moving	4,617	2.9%
Motor vehicle operators	2,863	1.8%
Truck drivers	2,286	1.4%
4.3 Hand workers, assemblers & fabricators	2,260	1.4%
4.4 Machine setters, set-up operators	1,914	1.2%
Metal & plastic processing	838	0.5%

- Operators, Fabricators & Laborers gained 19,363 or 21.5% and represent 12.2% of total job gain. From 1994 to 2005, average annual job openings are forecast at 3,774.
- Helpers, laborers and material movers will grow by 10,572 (38.5%). This growth will expand this portion of the operators, fabricators and laborers category by 4.2%.
- Transportation and material moving occupations will grow by 23.7%.
- Losses occur in the following occupations:
 - Machine tool cutters and form setters lose 1,363 jobs (14.3%)
 - Other machine setters and operators lose 318 jobs (7.1%)
 - Freight and stock material movers and handlers decline in the manufacturing sector
- Growth by Industry Sector
 - Gains of 13,742 jobs or 62% occur in the Services industry sector.
 - Gains in the Construction industry sector total 842 jobs or 20.5%.
 - Transportation, Communication and Utilities industry sector gain 43% in motor vehicle drivers.

**Job Growth by Occupational Division
Change from 1994 – 2005**

Executive, Administrative & Managerial Occupations

	<u>1994-2005 Job Gain</u>	<u>% of Total Job Gain</u>
5. <u>Executive, Administrative & Managerial Occup.</u>	19,057	12.0%
5.1 Managerial & administrative	12,829	8.1%
General Managers & top executives	4,287	2.7%
5.2 Management support	6,228	4.0%
Accountants and auditors	1,242	0.8%

- Executive, Administrative and Managerial jobs gained 19,057 or 24.8% and comprise 12% of total employment forecast gains. Between 1994 and 2005, average annual job openings are forecast at 3,309.
- Managerial and administrative occupations grow at the same rate as all occupations, about 23.4%.
- General managers, top executives, financial managers, marketing, advertising, public relations and engineering managers are leading growth occupations. Engineers and marketing managers will gain in their share of this group.
- Employment interviewers grow at 72% and gain 490 jobs.
- Construction and building inspectors grow 58%.
- Management analysts grow 45%.
- Tax examiners, collectors decline.
- Buyers for wholesale and retail lose jobs.
- Loan officers and counselors lose jobs.
- Growth in Industry Sector
 - Executive, Administrative & Managerial jobs in the Manufacturing sector grew more than twice as fast as overall job growth. Most of this growth is engineering managers.
 - Growth of Executive, Administrative & Managerial jobs in the Retail industry is in food service and lodging managers.
 - Change in the numbers of these jobs in the Service industry sector can be found in the growth rates of the following occupations. General managers and top executives increased by 35%. Financial managers increased by 42%. Managers of engineers increased by 66% and Marketing managers increased by 64%.

**Job Growth by *Occupational Division*
Change from 1994 – 2005**

Marketing & Sales Occupations

	<u>1994-2005 Job Gain</u>	<u>% of Total Job Gain</u>
6. <u>Marketing & Sales Occupations</u>	15,020	9.4%
6.1 Retail salesperson	3,877	2.4%
6.2 All other	4,895	3.1%
6.3 Cashiers	2,078	1.3%

- Marketing & Sales gains 15,020 or 17.6%, which represents 9.4% of total employment gains. From 1994 to 2005, average annual job openings are forecast at 3,797.
- Cashiers and real estate appraiser jobs decline.
- Travel agents gain 615 jobs (62.1%).
- Growth by Industry Sector
 - Retail salespersons equal 26% of all marketing and sales occupational growth in the Retail industry sector.
 - Service industry sector gains 20.6% in marketing & sales occupations, the majority of which are supervisors of sales workers.

**Job Growth by Occupational Division
Change from 1994 – 2005**

Precision Production, Craft & Repair Occupations

	<u>1994-2005 Job Gain</u>	<u>% of Total Job Gain</u>
7. <u>Precision Production, Craft & Repair Occup.</u>	9,510	6.0%
7.1 Mechanics, installers and repairers	5,050	3.2%
Maintenance repairers, general utility	1,660	1.0%
7.2 Construction trades	2,610	1.6%
Carpenters	590	0.4%
7.3 Production occupations, precision	860	0.5%
Assemblers, precision	500	0.3%

- Precision Production, Craft and Repair occupations gain 9,510 workers, a 13.6% increase and account for 6.0% of total employment growth. From 1994 to 2005, annual average job openings are forecast at 2,329.
- Mechanics, installers and repairers will gain 5,050 jobs. This gain is spread evenly across electrical and electronic equipment mechanics and installers, maintenance repairers, automotive and bus and truck mechanics and other mechanics installers and repairers.
- Construction trades have the most employment growth in carpenters, electricians and plumbers.
- Precision Production occupations grow only 4.0% due to losses in sheet metal workers and custom tailors and sewers, and little or no growth in machinists and tool and die makers.
- Growth by the Industry Sector
 - In the Manufacturing industry sector, precision occupations lose 2.8% or 718 workers. Inspectors, metal workers and millwrights also decline.
 - A 25.4% rate of growth in the Services industry sector occurs in the mechanics, installers and repairers occupations.

**Job Growth by Occupational Division
Change from 1994 – 2005**

Technicians and Related Support Occupations

	<u>1994-2005 Job Gain</u>	<u>% of Total Job Gain</u>
<u>8. Technicians and Related Support Occup.</u>	9,180	5.8%
8.1 Health technicians and technologists	4,140	2.6%
Licensed practical nurses	680	0.4%
8.2 Technicians (except health and engineering)	2,820	1.8%
Computer programmers	1,710	1.1%
8.3 Engineering and science technicians & technologists	2,210	1.4%
Electrical and electronic technicians & technologists	1,050	0.7%

- Technicians gain 9,180 workers, a 28.7% increase from 1994 levels and account for 5.8% of all job growth. Between 1994 and 2005, annual average job openings are forecast at 1,479.
- Growth by Industry Sector
 - Drafters lose jobs in the Manufacturing industry sector.
 - Over 90% of the growth of technicians occurs in the Services industry sector. Major growth occurs in health related occupations.

**Job Growth by Occupational Division
Change from 1994 – 2005**

Agriculture, Forestry, Fishing and related Occupations

	<u>1994-2005 Job Gain</u>	<u>% of Total Job Gain</u>
9. <u>Agriculture, Forestry, Fishing and related occup.</u>	730	.5%
9.1 Gardening, nursery, greenhouse & lawn services	690	.4%
Gardeners and groundskeepers (except farm)	230	.1%

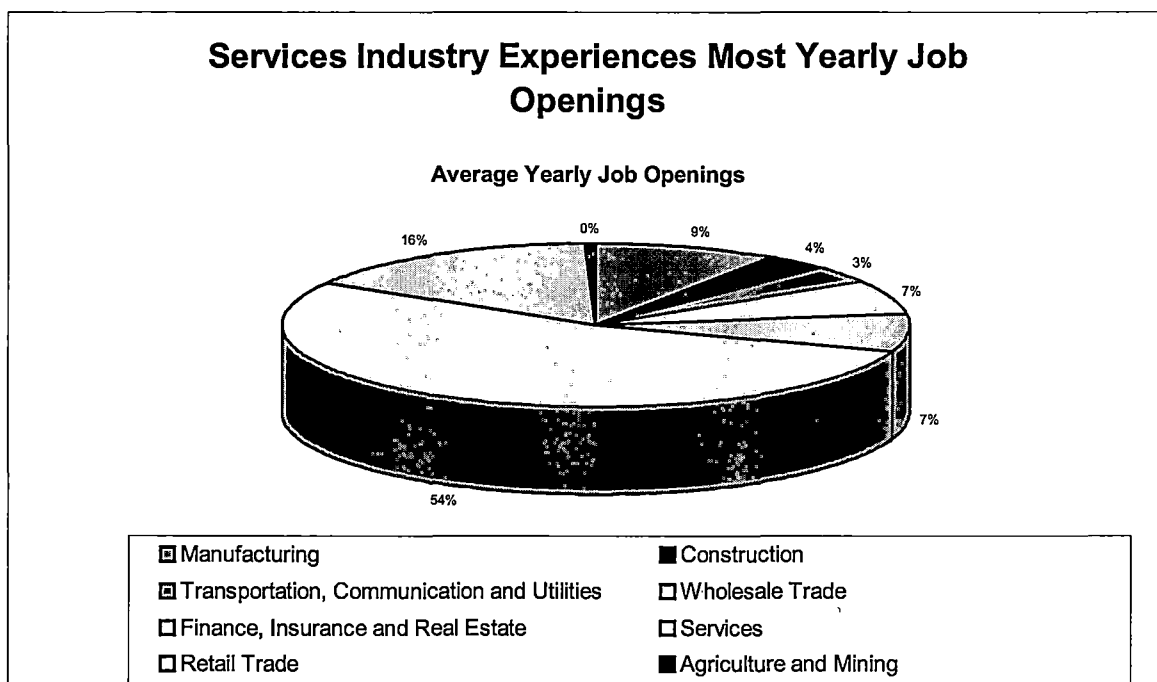
- Agriculture occupations grow a modest 11.8% well below the average of 23%. Between 1994 and 2005, annual average openings are forecast at 85.
- Farm operators and managers decline by 140 or 25% and farm workers lose 23%.
- Gardening, nursery and greenhouse and lawn service occupations comprise over 70% of this category.

3.3 Growth by Industry Division

Another way of grouping occupations is by *Industry Division*.

The pie chart below shows the distribution of annual openings in Oakland County from 1994 to 2005 using *Industry Division* as the classification.

Distribution of Annual Average Openings



- More than half or 54% of all yearly openings were in jobs in the Services industry
- The Retail Trade industry experiences 16% of the share of annual job openings
- Finance, Insurance and Real Estate industry and the Wholesale Trade industry each had 7% of the share of annual job openings

**Occupations by *Industry Division* by *Occupational Division*
For Oakland County, 1994 - 2005**

The table below breaks down the annual job openings by *Industry Division* by *Occupational Division*.

	<u>Yearly Job Openings</u>
Manufacturing Division	2,713
Executive, Administrative and Managerial Occupations	355
Professional Specialty Occupations	474
Technicians and Related Support Occupations	103
Marketing and Sales Occupations	119
Administrative Support Occupations	243
Service Occupations	34
Agriculture, Forestry, Fishing and Related Occupations	0
Precision Production, Craft and Repair Occupations	555
Operators, Fabricators and Laborers	1,068
Construction Industry	1,031
Executive, Administrative and Managerial Occupations	154
Professional Specialty Occupations	20
Technicians and Related Support Occupations	2
Marketing and Sales Occupations	30
Administrative Support Occupations	76
Service Occupations	3
Agriculture, Forestry, Fishing and Related Occupations	1
Precision Production, Craft and Repair Occupations	576
Operators, Fabricators and Laborers	169
Transportation, Communication and Utilities Division	924
Executive, Administrative and Managerial Occupations	72
Professional Specialty Occupations	53
Technicians and Related Support Occupations	64
Marketing and Sales Occupations	125
Administrative Support Occupations	304
Service Occupations	20
Agriculture, Forestry, Fishing and Related Occupations	0
Precision Production, Craft and Repair Occupations	80
Operators, Fabricators and Laborers	235

Wholesale Trade Division	1,983
Executive, Administrative and Managerial Occupations	274
Professional Specialty Occupations	168
Technicians and Related Support Occupations	28
Marketing and Sales Occupations	517
Administrative Support Occupations	403
Service Occupations	14
Agriculture, Forestry, Fishing and Related Occupations	8
Precision Production, Craft and Repair Occupations	239
Operators, Fabricators and Laborers	332

Finance, Insurance and Real Estate Division	2,117
Executive, Administrative and Managerial Occupations	544
Professional Specialty Occupations	241
Technicians and Related Support Occupations	30
Marketing and Sales Occupations	317
Administrative Support Occupations	771
Service Occupations	89
Agriculture, Forestry, Fishing and Related Occupations	15
Precision Production, Craft and Repair Occupations	103
Operators, Fabricators and Laborers	7

Services Division	15,583
Executive, Administrative and Managerial Occupations	1,598
Professional Specialty Occupations	4,720
Technicians and Related Support Occupations	1,235
Marketing and Sales Occupations	686
Administrative Support Occupations	2,409
Service Occupations	2,488
Agriculture, Forestry, Fishing and Related Occupations	48
Precision Production, Craft and Repair Occupations	674
Operators, Fabricators and Laborers	1,743

Retail Trade Division	4,586
Executive, Administrative and Managerial Occupations	238
Professional Specialty Occupations	50
Technicians and Related Support Occupations	13
Marketing and Sales Occupations	2,004
Administrative Support Occupations	412
Service Occupations	1,522
Agriculture, Forestry, Fishing and Related Occupations	4
Precision Production, Craft and Repair Occupations	148
Operators, Fabricators and Laborers	195

Agriculture and Mining Division	145
Executive, Administrative and Managerial Occupations	7
Professional Specialty Occupations	7
Technicians and Related Support Occupations	6
Marketing and Sales Occupations	4
Administrative Support Occupations	15
Service Occupations	1
Agriculture, Forestry, Fishing and Related Occupations	97
Precision Production, Craft and Repair Occupations	5
Operators, Fabricators and Laborers	3

As illustrated in this table, Service industry jobs experienced the largest number of yearly openings (15,583), followed by Retail Trade industry jobs (4,586), followed by Manufacturing industry jobs (2,713)

- More than half or 54% of all yearly openings were in jobs in the Services industry
- The Retail Trade industry experiences 16% of the share of annual job openings
- Finance, Insurance and Real Estate industry and the Wholesale Trade industry each had 7% of the share of annual job openings

Top Growth Occupations by Industry Division

Another way to illustrate job growth in Oakland County is to categorize occupations experiencing high growth by *Industry Division*. Below is a sample of some of these occupations.

<u>Industry Division</u>	<u>Top Growth Occupations</u>
Agriculture & Mining	Gardeners, grounds keepers, and lawn maintenance workers
Construction	Construction trades and electrical equipment mechanics
Manufacturing	Mechanical engineers
Transportation, Communication, Utilities	Travel agents
Wholesale	Supervisors
Retail	Salesperson, cashiers
Finance, Insurance, Real Estate	Insurance sales, real estate agents
Services	Computer systems analysts, Engineers and teachers
Government	Police and detectives

3.4 Job Growth by Occupation

Occupational Division and *Industrial Division* provide useful generalized information about Oakland County's labor market. However, information on specific *Occupations* and how they will grow or decline over the 11-year period from 1994 to 2005 represents the most useful data for counselors guiding students and employees and job seekers making career choices.

The best measure of growth of occupations is the number of new (not replacement) jobs available on a yearly basis. This combined with overall job gain between 1994 – 2005 help describe the future of Oakland County.

Occupations with Top Yearly Job Growth

<u>Occupations</u>	<u># of NEW jobs available each year</u>	<u>Number of Jobs Gained from 1994-2005</u>
1. Systems Analysts	731	8,050
2. General Managers & Top Executives	390	4,290
3. Secretaries	375	4,130
4. Salesperson, Retail	352	3,880
5. Janitors and Cleaners	292	3,230
6. Receptionists and Information Clerks	261	2,870
7. Teachers, Secondary	256	2,820
8. Computer Engineers	247	3,870
9. General Office Clerks	234	2,580
10. Registered Nurses	230	2,530

Occupation Groups with Highest Annual Openings

Occupation groups include two or more occupations.

	<u>Annual Average Openings</u>
1. Helpers, Laborers and Material Movers	1,659
2. Managers	1,455
3. Systems Analysts, Computer Scientists and Engineers	1,181
4. Food and Beverage Service Occupations	1,168
5. Engineers	830
6. Management Support	745
7. Machine Operators	741

Brief Description of the Five Fastest Growing Jobs in Oakland County:

Systems Analysts:

Systems analysts plan and develop new computer systems or think of new ways to apply existing systems resources to additional operations. They use their knowledge and skills to solve computer problems and enable computer technology to meet the individual needs of the organization. Most system analysts work in offices or laboratories that are comfortable. A typical workweek is 40 hours, however, evening and late night work may be required in order to meet deadlines and finish certain tasks. A bachelor's degree is usually the prerequisite and some more complex jobs require a graduate degree. Systems analysts must be familiar with programming languages, have strong problem-solving skills and must be able to communicate effectively with others. Median annual earnings in 1996 were about \$46,300.

General Managers and Top Executives:

General managers and top executives formulate policies and direct operations of businesses and corporations, nonprofit institutions, and government agencies. A corporation's general goals and policies are established by the chief executive officer in collaboration with other top executives. Middle managers direct their individual departments' activities within the framework of the organization's overall plan with the help of first-line managers and their staffs. Median annual earnings in 1996 were about \$90,000.

Secretaries:

Secretaries are responsible for a variety of administrative and clerical duties necessary to run and maintain organizations efficiently. They schedule appointments, provide information to callers, organize and maintain paper and electronic files, manage projects, and produce correspondence for themselves and others. Median earnings in 1996 were about \$19,700.

Retail Salesperson:

Retail sales workers assist customers in finding what they are looking for and attempt to interest customers in merchandise. The latter may be accomplished through description of a product's features, demonstration of its use, or by showing various models and colors. Retail sales workers make out sales checks, receive cash, check and charge payments, bag or package purchases, and give change and receipts. They may also handle returns or exchanges or merchandise, perform gift-wrapping, help stock shelves or racks; arrange for mailing or delivery of purchases, mark price tags, take inventory, and prepare displays. Median earnings in 1996 were about \$12,480.

Janitors and Cleaners:

Janitors and cleaners keep office buildings, hospitals, stores, apartment houses, hotels and other types of buildings clean and in good condition. Some only do cleaning while others have a wide range of duties. They may fix leaky faucets, empty trashcans, do painting and carpentry, replenish bathroom supplies, mow lawns and see that heating and air conditioning equipment works properly. Janitors may wet or dry mop floors, clean bathrooms, vacuum carpets, dust furniture, make minor repairs and exterminate insects and rodents. In hospitals, where they are mostly known as maids or housekeepers, they may wash bed frames, brush mattresses, make beds, and disinfect and sterilize equipment and supplies. In hotels, aside from cleaning and maintaining the premises, they may deliver ironing boards, cribs and rollaway beds to guests' rooms.

3.5 Education and Income

Occupational growth in the near term future is an important consideration for job and employee seekers alike. However, the skills and education required of an occupation can help inform the choices of potential employees and obviously help guide the hiring process for employers. Income too varies depending on the occupation and is an important criterion for any job seeker.

Jobs Requiring the Most Education

- | | |
|--|--|
| 1. Physicians | bachelors degree with pre-med. requirements, M.D., residency |
| 2. College and University Faculty | bachelors degree, Ph.D. or Masters in field of study |
| 3. Lawyers | bachelors degree in any field, J.D. |
| 4. General Managers and Top Executives | bachelors degree in business or related field, M.B.A. |
| 5. Accountants and Auditors | bachelors degree in accounting, M.B.A. |
| 6. Engineers | bachelors degree in engineering |
| 7. Systems Analysts, Computer Engineers and Scientists | bachelors degree in computer engineering/science |
| 8. Managers | bachelors degree in general business |
| 9. Computer Programmers | bachelors degree in computer science |
| 10. Secondary School Teachers | bachelors degree, education specialty |

M.D. – Medical Doctor Ph.D. – Doctorate M.B.A. – Masters of Business Administration J.D. – Juris Doctorate

- Cross-referencing this list with the high growth occupations in Oakland County, it is clear that **not all occupations** with increasing new positions require extensive college education. This dispels the myth that all future jobs will require a college degree.

Categorizing the Top 50 Highest Paying Jobs

	<u>Yearly Median Income*</u>
1. Physicians	\$160,000
2. General Managers and Top Executives	\$ 90,000
3. Lawyers	\$ 60,000
4. College and University Faculty	\$ 51,000
5. Accountants and Auditors	\$ 48,725
6. Managers	\$ 47,500
7. Systems Analysts, Computer Scientists, and Engineers	\$ 46,300
8. Computer Programmers	\$ 40,100
9. Secondary School Teachers	\$ 38,600
10. Engineers	\$ 38,500

* National salary figures from 1996

- If maximization of income is the goal of the job seeker, it is evident by this list that higher education affects income levels. Each of these occupations requires a four-year college degree, at a minimum.
- However, comparison of this list with the list of high growth occupations of the future demonstrates that there will be less demand (low growth) for certain high paying jobs and more demand (high growth) for certain moderate paying jobs. This contradicts the assumption that the job market of the future will consist of only people with college degrees.

Income and Education Levels of Occupations in Oakland County

This table links the three variables of job openings, education and income. As concluded previously, it is clear that high growth occupations in Oakland County cover a wide gamut of educational requirements. Some jobs, like Helpers and Laborers, require minimal education. While other positions, such as Managers, are available only to those with four-year college degrees. And finally some openings, for example Systems Analysts, will be accessible to those with more than a four-year college degree. In all, there will be healthy demand for some minimal-education jobs, higher income levels are associated with college-degree occupations.

Top Growth Occupations

	<u>Yearly Job Openings</u>	<u>Minimal Education</u>	<u>Median Salary*</u>
1. Helpers and Laborers	1659	HS	\$ 17,160
2. Managers	1455	BD	\$ 47,500
3. Systems Analysts, Computer Scientists and Engineers	1181	BD+	\$ 46,300
4. Food and Beverage Service Occupations	1168	HS-	\$ 14,040
5. Retail Salesperson	1068	HS-	\$ 12,480
6. Cashiers	851	HS-	\$ 12,844
7. Engineers	830	BD	\$ 38,500
8. General Managers and Top Executives	777	BD+	\$ 90,000
9. Management Support	745	BD	\$ 30,000
10. Machine Operators	741	HS-	\$ 29,085
11. Secretaries	703	HS+	\$ 19,700
12. General Office Clerks	613	HS+	\$ 19,300
13. Assemblers and Fabricators	607	HS	\$ 17,680
14. Janitors and Cleaners	550	HS-	\$ 15,600
15. Health Technicians	491	HS+	\$ 27,828
16. Chefs, Cooks and Other Kitchen Workers	459	HS+	\$ 17,520
17. Secondary School Teachers	452	BD	\$ 38,600
18. Clerical Supervisors and Managers	409	HS+	\$ 28,900
19. Receptionists and Information Clerks	397	HS	\$ 17,940
20. Truck Drivers	387	HS	\$ 27,850
21. Home Health Aides	382	HS-	\$ 13,806
22. Registered Nurses	875	BD	\$ 36,244
23. Marketing and Sales Worker Supervisors	361	BD	\$ 24,400
24. Machinery and Related Mechanics	340	HS	\$ 28,360
25. Stock Clerks	338	HS	\$ 22,308
26. Guards	328	HS	\$ 17,300
27. Computer Programmers	286	BD	\$ 40,100
28. Material Moving Equipment Operators	255	HS	\$ 23,712

29. Blue Collar Worker Supervisors	240	HS+	\$ 33,280
30. Accountants and Auditors	230	BD+	\$ 48,725
31. Elementary School Teachers	216	BD	\$ 37,300
32. Traffic, Shipping and Receiving Clerks	212	HS	\$ 19,084
33. Teacher Aides and Educational Assistants	205	HS+	\$ 18,262
34. Industrial Designers	180	HS+	\$ 27,000
35. Bookkeeping Clerks	180	HS	\$ 20,700
36. Police and Detectives	178	HS+	\$ 34,700
37. Drafters	177	HS+	\$ 31,250
38. Electrical and Electronic Equipment Mechanics	175	HS+	\$ 32,188
39. College and University Faculty	168	BA+	\$ 51,000
40. Artists and Commercial Artists	163	BD	\$ 27,100
41. Lawyers	160	BD+	\$ 60,000
42. Bank Tellers	160	HS	\$ 16,300
43. Adjustment Clerks	152	BD	\$ 22,880
44. Automotive Mechanics	152	HS+	\$ 24,856
45. Hairdressers, Hairstylists and Cosmetologists	151	HS+	\$ 15,080
46. Physicians	141	BD++	\$160,000
47. Nursing Aides, Orderlies, and Attendants	141	HS-	\$ 15,184
48. Electrical and Electronic Technicians	137	HS+	\$ 38,435
49. Medical Assistants	130	HS+	\$ 22,261
50. Special Education Teachers	129	BD	\$ 37,900

Key:

* = National salary figures from 1996

HS- = High school degree or less than required

HS = High school degree required

HS+ = High school degree or more required, usually a 2 year Associate's Degree

BD = Bachelor's degree from a 4-year college or university required

BD+ = More than a Bachelor's degree is required. Includes a J.D. (law), M.D. (medical)
Ph.D. (doctorate) and a Master's.

BD++ = Pertains to physicians only, who after medical school, must complete an internship/
Residency with a medical establishment lasting 3-8 years

4.0 Regional and National Comparison (TAB)

Comparing Yearly Job Openings by *Occupational Division*

Changing employment trends can also be assessed by examining yearly job openings.

	<u>Oakland County</u>	<u>Metro Detroit</u>	<u>State of Michigan</u>	<u>United States</u>
Executive, Administrative and Managerial	3,309	7,484	16,100	4,844,000
Professional Specialty	5,823	11,801	25,590	8,376,000
Technicians and Related Support	1,479	3,154	6,600	1,798,000
Marketing and Sales	3,797	9,616	20,550	6,706,000
Administrative Support	4,634	7,936	17,400	6,991,000
Service	4,482	12,631	28,300	9,813,000
Agriculture, Forestry, Fishing	185	514	2,150	988,000
Precision Production, Craft & Repair	2,329	6,387	14,870	4,489,000
Operators, Fabricators and Laborers	3,774	10,194	22,330	5,626,000
TOTAL, OCCUPATIONS	29,812	69,716	154,700	49,631,000

Metropolitan Detroit includes the following counties: Oakland, Lapeer, St. Clair, Macomb, Livingston, Wayne and Monroe

- As illustrated in the bar charts on the previous page, Oakland County's labor market mirrors the Detroit MSA, State and national labor markets in experiencing a larger share of Professional and Specialty jobs during the 11-year period.
- Oakland County is unique relative to the other three labor markets in that jobs in the Occupational Divisions of Agriculture and Operations lose part of their share of total employment to Professional and Specialty, Technical, and Executive Occupational Divisions. By contrast, Metropolitan Detroit, Michigan and the U.S. each show Agriculture and Operations jobs increasing their share of total employment, if only minimally.
- Workers in Administrative Support jobs experience a smaller loss in share of total employment in Oakland County (-1.0%) compared to their loss in other labor markets: Detroit MSA (-1.7%), Michigan (-1.3%) and the U.S. (-1.5%).

Comparing Job Growth by *Occupational Division* from 1994-2005

Oakland County

	<u>1994-2005</u> <u>Job Gain</u>	<u>% of Total</u> <u>Job Gain</u>
1. Professional & Specialty Occupations	43,820	27%
2. Administrative Support Occupations	22,610	14%
3. Service Occupations	20,320	13%
4. Operators, Fabricators & Laborers Occupations	19,360	12%
5. Executive, Administrative & Managerial Occupations	19,050	12%
6. Marketing & Sales Occupations	15,020	9%
7. Precision Production, Craft & Repair Occupations	9,510	6%
8. Technicians and Related Support Occupations	9,180	6%
9. Agriculture, Forestry, Fishing and related Occupations	730	.5%
 Total, All Occupations	 159,600	 100%

Detroit MSA

	<u>1994-2005</u> <u>Job Gain</u>	<u>% of Total</u> <u>Job Gain</u>
1. Professional & Specialty Occupations	69,070	26%
2. Administrative Support Occupations	8,480	3%
3. Service Occupations	51,000	19%
4. Operators, Fabricators & Laborers Occupations	35,020	13%
5. Executive, Administrative & Managerial Occupations	32,530	12%
6. Marketing & Sales Occupations	32,980	12%
7. Precision Production, Craft & Repair Occupations	19,160	7%
8. Technicians and Related Support Occupations	15,430	6%
9. Agriculture, Forestry, Fishing and related Occupations	1,270	.5%
 Total, All Occupations	 264,940	 100%

State of Michigan

	1994-2005	% of Total
	<u>Job Gain</u>	<u>Job Gain</u>
1. Professional & Specialty Occupations	144,550	25%
2. Administrative Support Occupations	30,750	5%
3. Service Occupations	110,950	19%
4. Operators, Fabricators & Laborers Occupations	69,220	12%
5. Executive, Administrative & Managerial Occupations	71,200	12%
6. Marketing & Sales Occupations	72,350	12%
7. Precision Production, Craft & Repair Occupations	46,710	8%
8. Technicians and Related Support Occupations	33,600	6%
9. Agriculture, Forestry, Fishing and related Occupations	2,600	.5%
Total, All Occupations	581,930	100%

National Perspective

	1994-2005	% of Total
	<u>Job Gain</u>	<u>Job Gain</u>
1. Professional & Specialty Occupations	5,100,000	29%
2. Administrative Support Occupations	990,000	6%
3. Service Occupations	4,600,000	26%
4. Operators, Fabricators & Laborers Occupations	760,000	4%
5. Executive, Administrative & Managerial Occupations	2,200,000	12%
6. Marketing & Sales Occupations	2,500,000	14%
7. Precision Production, Craft & Repair Occupations	830,000	5%
8. Technicians and Related Support Occupations	880,000	5%
9. Agriculture, Forestry, Fishing & Related Occupations	-112,000	0%
Total, All Occupations	17,694,000	100%

- These tables show many similarities among the four (4) labor markets.
- There are some distinctions among these four labor markets. One distinction is Service occupations represent 26% of total national job gain. This is a significant share compared to the share of total job gain of Service occupations in other markets: 13% in Oakland County, 19% in the Detroit MSA, and 19% in the State of Michigan.

Comparing Yearly Openings of Occupations from 1994-2005

As a county with a worldwide reputation for being a leader in the business world which provides residents with many employment opportunities, the following information will display how Oakland County measures up to the Detroit Metropolitan area, to the state of Michigan and to the United States.

Oakland County – Top Jobs

	<u>New Openings Betw. 1994-2005</u>	<u>% Change From 1994-2005</u>
1. Systems Analysts	8,050	130%
2. General Managers and top executives	4,290	23%
3. Retail Salesperson	3,880	16%
4. Secretaries (except medical and legal)	3,290	22%
5. Janitors and Cleaners (except maids and housekeeping)	3,230	23%
6. Receptionists and Information Clerks	2,870	41%
7. Teachers, Secondary	2,820	39%
8. General Office Clerks	2,580	16%
9. Registered Nurses	2,530	26%
10. Clerical Supervisors and Managers	2,500	35%
11. Home Health Aides	2,500	106%

Detroit MSA – Top Jobs

	<u>New Openings Betw. 1994-2005</u>	<u>% Change From 1994-2005</u>
1. Helpers and Laborers	12,160	34%
2. Waiters and Waitresses	11,880	37%
3. Systems Analysts	11,830	88%
4. Retail Salesperson	9,510	15%
5. Cashiers	9,090	54%
6. Mechanical Engineers	8,490	45%
7. Hand Packers and Packagers	5,580	29%
8. Home Health Aides	4,520	66%
9. Computer Engineers	4,110	90%
10. Receptionists and Information Clerks	3,970	24%

State of Michigan – Top Jobs

	<u>New Openings Betw. 1994-2005</u>	<u>% Change From 1994-2005</u>
1. Waiters and Waitresses	22,250	29%
2. Cashiers	22,000	19%
3. Helpers and Laborers	21,380	27%
4. Systems Analysts	20,570	98%
5. Home Health Aides	17,470	98%
6. General Managers & Top Executives	17,140	16%
7. Registered Nurses	14,520	21%
8. Retail Salespersons	13,290	10%
9. Marketing and Sales, Supervisors	12,790	19%
10. Maintenance Repairers, Gen. Utility	11,660	24%

United States – Top Jobs

	<u>New Openings Betw. 1994-2005</u>	<u>% Change From 1994-2005</u>
1. Retail Salesperson	1,821,000	14%
2. Cashiers	1,772,000	19%
3. Waiters and Waitresses	1,390,000	26%
4. General Managers and Top Executives	1,104,000	15%
5. General Office Clerks	908,000	4%
6. Secretaries, Except legal and medical	871,000	9%
7. Truckdrivers	823,000	10%
8. Marketing and sales worker supervisors	788,000	17%
9. Teachers, Secondary school	782,000	29%
10. Registered Nurses	740,000	25%

- Waiter and waitress jobs are among the top three jobs in terms of total new openings for each labor market, except Oakland County's.
- Systems analysts are growing between 88%-130% in Oakland County, Detroit MSA and Michigan during the 11-year period.
- Retail salespersons will be in high demand in all four labor markets.
- There will be continued need for Home Health Aides regionally, but not necessarily in the U.S.
- Truckdrivers have experienced more growth at the national than locally or regionally.
- Cashiers, though in demand elsewhere, do not surface as a high growth occupation, in terms of total new positions between 1994-2005, in Oakland County.

5.0 CONCLUSION

Some important conclusions can be drawn from the studies comprising this report. Overall, Oakland County employment will grow more than 20% during the years 1994 and 2005. This is significant especially considering it is more than 1½ times the national job growth rate.

Oakland County's healthy growth rate can be summarized a variety of ways, using Occupational Division, Occupational Industry and occupation. First, in terms of Occupational Division, **Professional and Specialty** occupations increase the most during this period. Jobs in this category increased their share of all jobs by 2.5%. Second, in looking at jobs by Industrial Division, it is striking that over half (54%) of all yearly openings fell in the **Services Industry** category. Finally, the job with most significant growth was **System Analyst**, an occupation that generates over 8,000 new jobs, almost double the next largest growth occupation of General Managers and Top Executives, from 1994-2005.

Another dimension of this study was the link between education and income. As expected, people with more education or training generally make more money. However, not all growth occupations require the higher education levels that reward people with higher salaries. In fact, almost three-quarters of all Oakland County jobs DO NOT require four-year degrees.

How does Oakland County measure up to the region, the state and the country? First, the division of **Professional and Specialty Jobs** is the fastest growing not only in Oakland County's labor market but also in the Detroit metropolitan market, Michigan and the U.S. Also, Oakland County service jobs grow by a rate comparable with Metro Detroit and the state labor markets (19%) while service jobs for the nation as a whole experienced a larger job gain (26%) between 1994 and 2005.

In all, this study helps fill the gap in information about demand by occupation in Oakland County and the skills required for these jobs. Intended for a mixed audience, this study has something useful for everyone. For example, this study can inform employees of their job options and the opportunities that come with additional training and education. It can also help employers and counselors guide the decisions of workers and students. Finally, policy-makers can better understand what future employment will look like in Oakland County and how it compares with other labor markets.

One thing is clear: there are always employment options. The availability of various jobs and their growth rates over time, what they pay, and their educational requirements can be critical in decisions about what career to pursue, what job to accept or what kind of employee to hire. It is the intention of the authors and compilers of both this report and the Oakland University study that this information will help guide these very decisions.

Albeit useful this is not an exhaustive product. Research on this topic continues to increase our understanding of the factors that influence the labor markets of different areas, and specifically what shapes Oakland County's now and in the future. For example, **Appendix B** is a list of website addresses that represent some of the sources and reports of the ongoing study of employment trends.

This report has increased our understanding of Oakland County's labor market demands. However, the next step needs to address the skills of the workforce and how these skills match with the occupations in demand. In fact a skills-profile of the workforce in our labor market area will help identify the gaps between employees' skills and the skills needed to fill jobs. Finally, a look at the skills-to-job-demand mismatch will aid policy-makers in developing and implementing programs to address these needs.

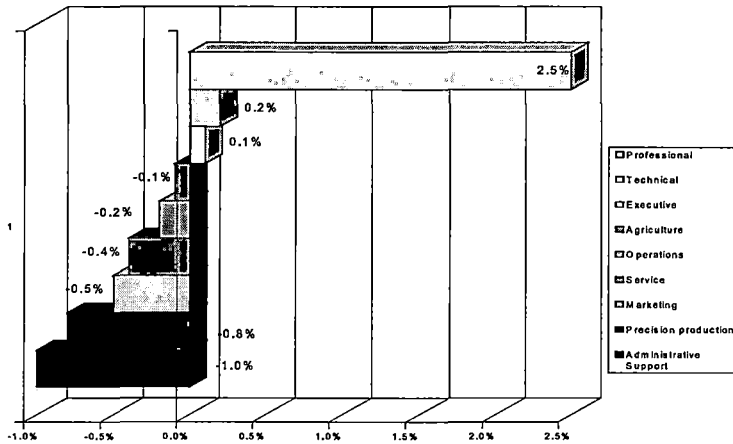
4.0 Labor Market Demands of Oakland County using Regional, State and National Comparison

How does Oakland County compare with other labor markets? The following section compares employment patterns and projections for the County with larger labor markets including the Detroit Metropolitan Statistical Area (MSA), the State of Michigan and the United States.

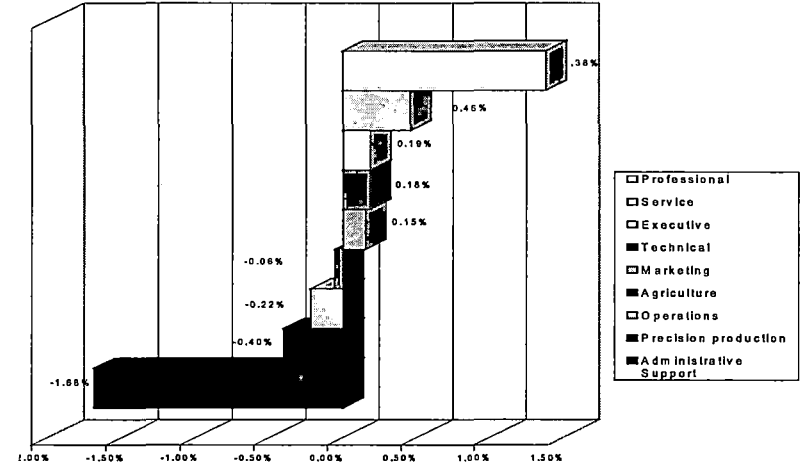
Change in the Distribution of Jobs by *Occupational Division* From 1994-2005

Continuing the same system of analysis, the following bar charts depict the shift in the distribution of jobs between 1994 and 2005 by *Occupational Division* for Oakland County, the Detroit MSA, the State of Michigan and the U.S. as a nation.

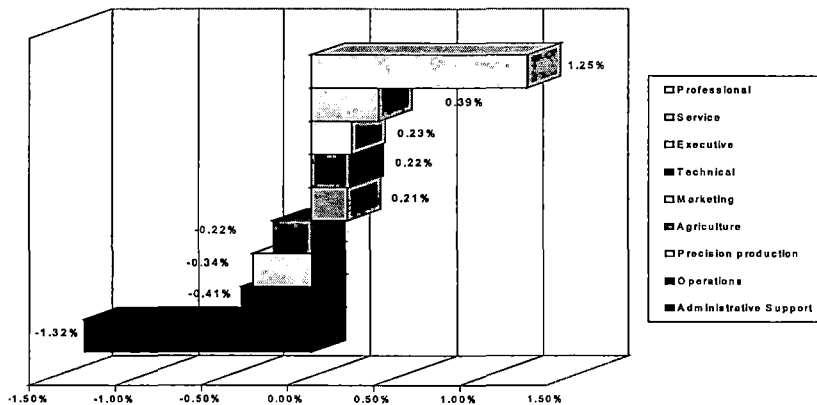
In Oakland County, Professional Jobs Increased their Share of All Jobs by 2.5% between 1994 - 2005



In Detroit MSA, Professional Jobs Increased their Share of All Jobs by about 1.4% between 1994 - 2005



In Michigan, Professional Jobs Increased their Share of All Jobs by 1.25% between 1994-2005



Nationally, Professional Jobs Increased their Share of All Jobs by almost 2% between 1994 - 2005

