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# Michigan Job Vacancy Survey 2006 Results



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## Acknowledgements

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# 2006 Michigan Job Vacancy Survey

## Executive Summary

### Michigan Economy

The Michigan economy has found it difficult to bounce back from the economic downturn of 2001 due in large part to the off-shoring of manufacturing jobs and the competitive challenges facing the domestic automotive industry, both which play vital roles in Michigan's economic health. Since 2000, the peak year of employment in Michigan, the state has experienced six consecutive years of job loss, a trend that is expected to continue through 2007. One approach to address some of the issues facing Michigan is to better understand and align workforce supply with labor market demand. Demand side market information provides insight for the job seeker, educator and employer, allowing each to better prepare and take action in dealing with today's changing labor environment.

### Job Vacancies in Michigan's Labor Market

The Bureau of Labor Market Information & Strategic Initiatives (BLMISI) conducted a survey in the spring/summer of 2006 on Michigan's labor market. The objective was to collect information on Michigan's job vacancies to better understand the demand side of the market and profile various characteristics of the open positions. The survey encompassed more than 8,600 employers statewide, segmented across 6 regions and 11 super sectors.

### Questions addressed by this report

- Which jobs are in demand?
- What education and work experience levels are required?
- What benefits are attached to part-time/full-time job vacancies?
- Which jobs require the highest shares of workers with postsecondary training or education?
- What specific education level is required for job vacancies?
- Which jobs have long-term shortages of qualified help?

### Key Findings

- Health related occupations in Michigan are most in demand and contribute more than 9,000 vacancies with a job vacancy rate of 2.6% or roughly three vacant positions for every 100 positions filled. For example, healthcare practitioners and technical occupations contribute more than 4,000 vacancies and offer a median hourly wage of \$22.00 an hour.
- Approximately 70% of job vacancies for small firms, 66% of vacancies at medium-size firms and 93% of large firm vacancies require some type of work experience.
- Employers rarely offer benefits to part-time positions. Less than one-quarter of all part-time vacancies are offered any benefits. Part-time jobs that offer benefits are: public health assistants, speech therapy assistants, weight reduction specialists, school bus drivers, and lifeguards.
- Postsecondary training or education is required in nearly 30% of the open positions with six major occupational fields such as engineering, managerial and administrative, education, computer and healthcare requesting two-thirds or more of the vacancies specifying various levels of postsecondary education.
- The top five occupations with a major share of their vacancies requiring vocational training or an associate's degree include: Healthcare Practitioners and Technical; Arts, Design, Entertainment, Sports, and Media; Personal Care and Service; Healthcare Support; and Installation, Maintenance, and Repair.
- Employers reported vacancies that were difficult to fill in a multitude of occupational categories, specifically: Healthcare Practitioners and Technical; Healthcare Support; Personal Care and Service; and Protective Service.

## ***Introduction – About the Survey***

### **Survey Objective:**

The goal of the Job Vacancy Survey (JVS) is two-fold:

- Assess current labor demand and job characteristics.
- Initiate a data series that over time will identify labor market trends.

**Data Source:** The survey collected information from approximately 8,600 firms in six regions of Michigan. The sample was stratified by region, industry, and firm employment size. Job vacancies represent a period of time during which the survey was conducted. In this case, the time period was from April - October, 2006.

### **Regions:**

- Southeast Michigan
- Southwest Michigan
- Mid-Michigan
- West Michigan
- Northern Lower Michigan
- Upper Peninsula

*Note: See **State Map of Michigan** in Appendix A. See Appendix C for regional and state comparisons.*

### **Industry:**

Each employer was classified according to the North American Industry Classification System (NAICS).

*Note: See Appendix D for **Methodology**.*

### **Firm Employment Size:**

- Small Firms – 1 to 49 employees
- Medium Firms – 50 to 999 employees
- Large Firms – 1,000 or more employees

### **Information collected on each occupation:**

- Number of current job openings
- Wage offered
- Educational requirements
- Work experience requirements
- Benefits offered
- Permanent/temporary status
- Full-time/part-time status
- Licensing/certification requirements
- Length of time job is open

**Definitions:** For the purpose of this study, a job vacancy is a position that is currently open-for-hire at the time of the survey. This study excludes job vacancies reserved for contract consultants, employees of contractors, and others not considered employees of surveyed firms.

### **Audience:**

- Policymakers can identify occupations with a workforce shortage
- Michigan Works! Agencies (MWAs) can identify occupations with large numbers of job vacancies
- Training institutions can identify trends for occupations in demand (future reports)
- Job seekers can identify wage and benefits offered as well as education and work experience required for vacant jobs today

**More about the data:** You can obtain additional information on the Fall 2006 Michigan Job Vacancy Survey (JVS) Report from the Michigan Department of Labor & Economic Growth (DLEG) by contacting Stephen Woods at (313) 456-3399 or woodss1@michigan.gov. The JVS Reports can be downloaded by going to the Bureau of Labor Market & Strategic Initiatives' website at <http://www.michigan.gov/lmi>.

## Which jobs are in demand?

The table below lists jobs by occupation sorted by the number of job vacancies listed by employers.

- **Full-Time Job Vacancies** are unfilled positions identified by the employer as full-time jobs.
- **Part-Time Job Vacancies** are unfilled positions identified by the employer as part-time jobs.
- **Number of Job Vacancies** represents unfilled positions that employers are trying to fill.
- **Occupational Job Vacancy Rates** are unfilled positions for every 100 filled positions in the major occupational group.
- **Median Hourly Wage Offered** is the median wage offered by employers to a qualified job seeker.

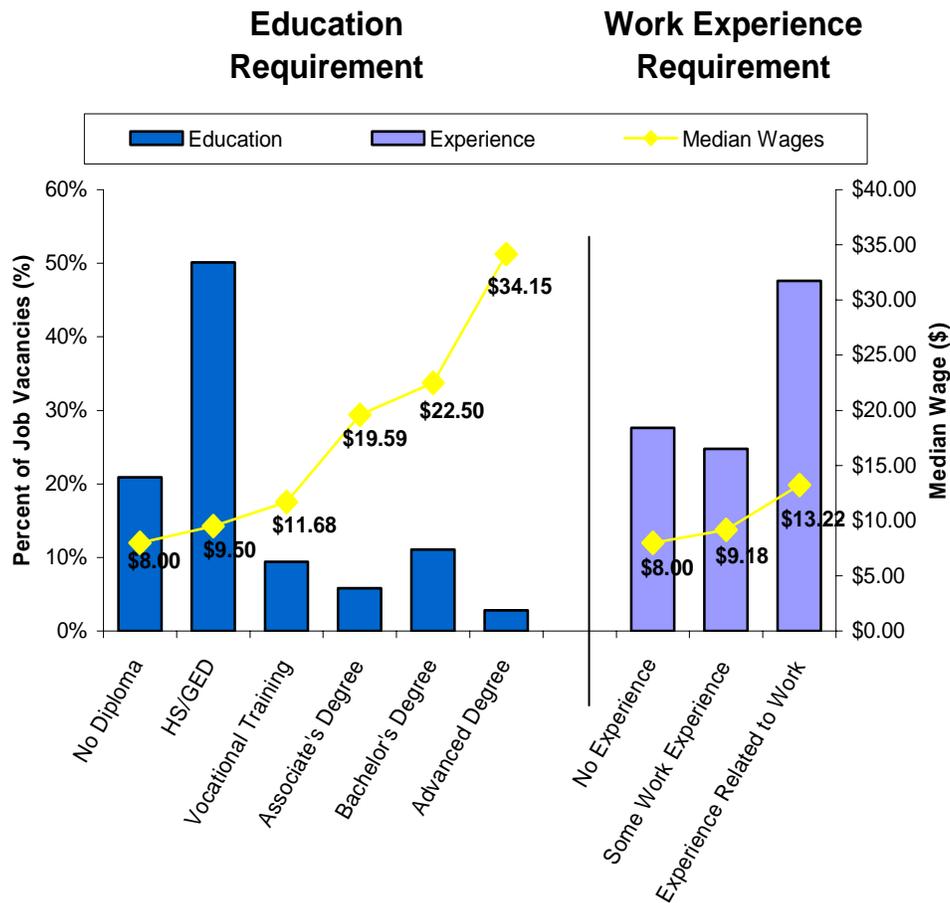
### Job Vacancies, Job Vacancy Rates and Wage Offered by Major Occupational Group

Major Occupational Group	Full-Time Job Vacancies	Part-Time Job Vacancies	Number of Job Vacancies	Occupational Job Vacancy Rate	Median Hourly Wage Offered
<b>All Occupations, Total</b>	<b>56,267</b>	<b>27,713</b>	<b>83,980</b>	<b>1.9%</b>	<b>\$10.00</b>
Sales and Related	4,988	9,223	14,211	3.1%	\$7.50
Office and Administrative Support	9,129	3,950	13,080	1.9%	\$9.38
Production	7,449	639	8,088	1.7%	\$10.25
Food Preparation and Serving Related	2,754	3,505	6,258	1.7%	\$5.50
Transportation and Material Moving	3,938	1,844	5,782	1.9%	\$9.50
Healthcare Practitioners and Technical	4,169	1,550	5,719	2.5%	\$22.00
Construction and Extraction	3,758	759	4,517	2.6%	\$14.00
Personal Care and Service	2,746	1,440	4,186	4.3%	\$7.21
Education, Training, and Library	2,050	1,267	3,317	1.3%	\$15.46
Healthcare Support	1,737	1,572	3,309	2.7%	\$9.63
Business and Financial Operations	2,689	309	2,998	1.6%	\$21.64
Installation, Maintenance, and Repair	2,256	96	2,353	1.3%	\$13.50
Managerial and Administrative	2,123	102	2,226	1.2%	\$28.85
Architecture and Engineering	1,778	46	1,823	1.4%	\$32.22
Protective Service	1,040	360	1,400	1.6%	\$11.00
Building and Grounds Cleaning and Maintenance	641	548	1,189	0.9%	\$8.00
Arts, Design, Entertainment, Sports, and Media	946	148	1,094	2.0%	\$21.63
Computer and Mathematical	930	81	1,011	1.2%	\$19.71
Community and Social Services	714	224	938	1.9%	\$13.22
Life, Physical, and Social Science	340	48	388	1.3%	\$18.27
Farming, Fishing, and Forestry	33	30	63	1.1%	\$10.00
Legal	31	0	31	0.1%	\$50.48

- Personal Care and Service occupations have the highest job vacancy rate of 4.3%, or more than four vacant positions for every 100 jobs filled due primarily to high turnover (33.9%). These positions offer a median hourly wage of \$7.21 an hour.
- Aggregating all Healthcare related occupations equates to 9,028 or 10.8% of total job vacancies with a job vacancy rate of 2.6% or nearly three vacant positions for every 100 positions filled. The median hourly wage offered for all health related occupations is \$17.00 an hour. (See *Appendix B for healthcare related occupations*.)
- Totaling all Service related occupations result in 16,342 or 19.5% of all job vacancies and a job vacancy rate of 2.0% or two vacant positions for every 100 jobs filled. The median hourly wage offered is \$7.54 an hour. Food Preparation and Serving Related occupations contribute more than 6,000 or 36.7% of the vacancies in the service related group, which tend to have a lower average hourly wage rate (tips not included), causing the median hourly wage for all Service Related occupations to be somewhat lower. (See *Appendix B for service related occupations*)

## What education and work experience levels are required?

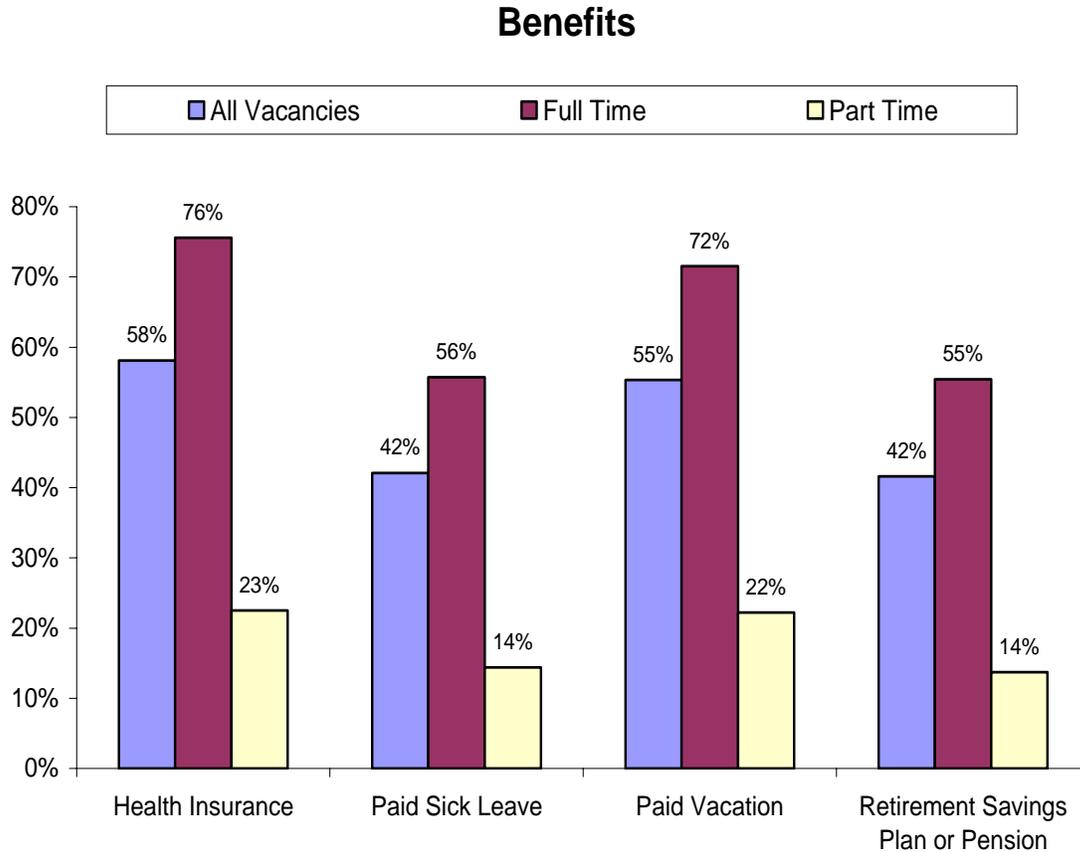
The following bar graph shows the distribution of job vacancies by education and work experience levels.



- The median hourly wage offered to vacant positions which require training or a degree beyond high school ranges from \$11.68 to \$34.15 per hour.
- Job vacancies which require no degree or a high school diploma/GED are 71% of total job vacancies and pay less than \$10.00 an hour.
- On average, jobs that require a higher level of education offer higher wages. The same is true for work experience. Jobs which require "experience related to work" represent 48% of all vacant positions and offer a median hourly wage of \$13.22 an hour. The median hourly wage offered to a qualified job seeker with "some work experience" is \$9.18 an hour. "Some work experience" is defined as experience "related" to the field but not to a particular job. For example, engineer in comparison to auto engineer.
- The median hourly wage offered for vacant positions that require an even greater impact on wage level is education which increases exponentially with higher educational attainment.
- Moreover, 24% of job vacancies offered by small firms (1 to 49 employees), 19% of vacancies at medium-size firms (50 – 999 employees) and 29% of large firm vacancies (1,000 or more employees) require vocational training.
- A significant percentage of the vacancies at large firms (93%) require some type of work experience as compared to 70% of open positions at small firms and 66% at medium-size firms.

## What benefits are attached to part-time and full-time job vacancies?

The following bar graph displays the distribution of job vacancies across various benefits offered to qualified workers for full-time and part-time jobs. Benefits for all jobs regardless of full-time or part-time description are included for comparison purposes.



- Health insurance is the most offered benefit of the four benefits considered in this study. It is offered to 58% of all vacant positions; 76% of all full-time vacant positions and 23% of all part-time vacant positions.
- Employers rarely offer benefits to part-time positions. Less than one-quarter of all part-time vacancies are offered any benefits. Examples of part-time jobs that offer benefits are: public health assistants, speech therapy assistants, weight reduction specialists, school bus drivers, and lifeguards.

For all vacancies (part-time and full-time),

- More than 40% of job vacancies at small firms (1 to 49 employees) participating in this study offer Health Insurance and Paid Vacation benefits.
- More than 52% of job vacancies at medium-size firms (50 to 999 employees) offer health insurance, paid vacation, and a retirement savings plan or pension benefits.
- More than 90% of job vacancies at large firms (1,000 or more employees) offer health insurance, paid sick leave, and paid vacation in their benefits package. About 42% of job vacancies for large firms offer a retirement savings plan or pension.

## Which jobs require the highest shares of workers with postsecondary training or education?

The following table lists all major occupational groups with 1,000 or more vacant positions and a greater than average share of job vacancies which require vocational training or higher.

**Job Vacancies and Wage Offered, Selected Occupations**

Major Occupational Group	Percent of Job Vacancies Requiring Vocational Training or Higher	Number of Job Vacancies Requiring Education Beyond High School	Median Wage for Vocational Training or Higher	Median Wage Offered for High School Diploma/GED
<b>All Occupations, Total</b>	<b>29%</b>	<b>24,354</b>	<b>\$16.83</b>	<b>\$9.00</b>
Architecture and Engineering	94%	1,714	\$33.17	\$10.44
Managerial and Administrative	90%	2,003	\$28.85	\$19.23
Education, Training, and Library	84%	2,786	\$15.61	\$5.50
Computer and Mathematical	83%	839	\$20.43	\$8.00
Healthcare Practitioners and Technical	82%	4,690	\$22.10	\$8.81
Arts, Design, Entertainment, Sports, and Media	70%	766	\$21.63	\$10.00
Installation, Maintenance, and Repair	64%	1,506	\$15.39	\$9.00
Personal Care and Service	52%	2,177	\$11.50	\$8.00
Healthcare Support	45%	1,489	\$10.00	\$8.47
Business and Financial Operations	41%	1,229	\$22.84	\$9.62

- About 29% of all job vacancies statewide require vocational training or higher and offer a median hourly wage of \$16.83 an hour.
- Less than 50% of the vacancies in Healthcare Support, and Business and Financial Operations, occupations require vocational training or higher. Examples of Healthcare Support occupations include home health aides; medical assistants; and nursing aides, orderlies, and attendants. Personal financial advisors, loan officers and logisticians are examples of Business & Financial Operations occupations.
- Six of the major occupational groups have 70% or more job vacancies requiring vocational training or higher. This group of occupations contributes 12,798 or 15% of all job vacancies statewide.
- The median hourly wage is \$18.00 an hour for all aggregated healthcare related vacancies which require vocational training or higher. The median hourly wage for healthcare related vacancies that require a high school diploma or no education is \$8.75 an hour.
- Approximately 50% of the Personal Care and Service (\$11.50 an hour) occupations require vocational training or higher but offer a wage less than the statewide median hourly wage (\$16.83 an hour) for vacancies requiring vocational training or above. About 49% of vacancies in this occupational group require a state license. Examples would include personal and home health aides; hairstylists; and barbers.

## What specific education level is required for job vacancies?

The previous table identified occupations with an above average share of vacancies requiring vocational training or above. The following table provides more detail on the educational requirements for these vacancies.

### Distribution of Education Required for Occupations with over 1,000 Vacant Positions

Major Occupational Group	High School/GED Required	Vocational Training Required	Associate's Degree Required	Bachelor's Degree Required	Advanced Degree Required
Healthcare Practitioners and Technical	18%	11%	31%	28%	13%
Personal Care and Service	36%	50%	0%	2%	0%
Healthcare Support	40%	40%	5%	0%	0%
Education, Training, and Library	16%	9%	10%	57%	8%
Business and Financial Operations	28%	1%	7%	31%	2%
Installation, Maintenance, and Repair	32%	57%	6%	1%	1%
Managerial and Administrative	8%	3%	9%	63%	15%
Architecture and Engineering	6%	4%	5%	67%	19%
Arts, Design, Entertainment, Sports, and Media	29%	0%	53%	16%	1%
Computer and Mathematical	16%	17%	17%	47%	2%

- Healthcare Practitioners and Technical; Education, Training and Library; and Arts, Design, Entertainment, Sports and Media occupations have a balanced distribution of educational requirements across their open positions.
- A substantial percentage of the Healthcare Support; Installation, Maintenance, and Repair; and Personal Care and Service job vacancies require only a high school/GED education.
- Occupations with a major share of their vacancies requiring vocational training or associate's degrees include: Healthcare Practitioners and Technical; Arts, Design, Entertainment, Sports, and Media; Personal Care and Service; Healthcare Support; and Installation, Maintenance, and Repair.
- Occupational vacancies which predominantly request a bachelor's or advanced degree include: Education, Training, and Library; Managerial and Administrative; Architecture and Engineering; and Computer and Mathematical.
- Business and Financial Operations occupations have approximately 60% of their job vacancies requiring a high school diploma/GED or a bachelor's degree. Occupations requiring a high school diploma/GED include loan officers, cost estimators and appraisers & assessors of real estate. Examples of occupations in this major occupational group requiring a bachelor's degree include budget analysts, financial analysts, and accountants.
- As firm size increases, the percent of jobs that require training beyond high school also increases – small firms (45%), medium firms (48%), and large firms (51%).

## Which jobs have long-term shortages of qualified help?

The following table uses three measures to identify occupations with long term shortages: Job Vacancy Rate, Hiring Demand Index and Hiring Difficulty. Only occupations with hiring difficulty greater than 44% (statewide average) are included in the table below.

- **Job Vacancy Rate** represents the number of job vacancies for every 100 filled jobs (total employment) in an occupation group, industry, or region. An occupation with a job vacancy rate greater than the job vacancy rate for all occupations (average statewide rate: 1.9%) may indicate relative difficulty in hiring for that occupation.

- **Hiring Demand Index** measures labor demand due to factors which do not include turnover. (Turnover is the cycling in and out of jobs by workers.) Occupations with a hiring demand index of "below average" are considered slow-growing occupations. Occupations included in this table are growing at a steady pace (average) or better (above average).

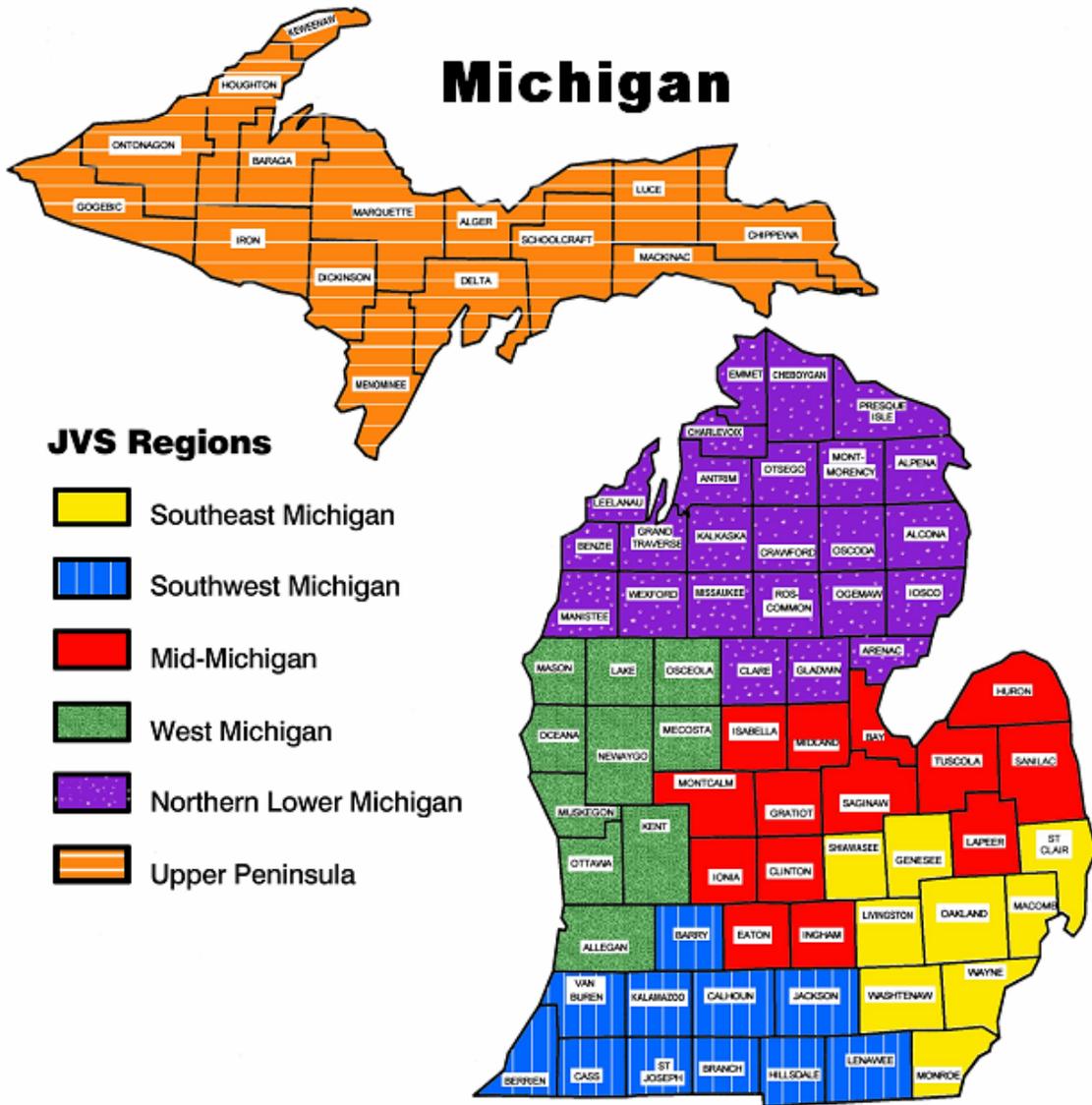
- **Hiring Difficulty** reflects the share of vacancies which employers take 60 days or more to fill or who are constantly seeking to fill a position.

### Job Vacancy Rate and Hiring Difficulty, Selected Occupations

Major Occupational Group	Number of Job Vacancies	Estimated Employment	Occupational Job Vacancy Rate	Hiring Demand Index	Hiring Difficulty (%)
<b>All Occupations, Total</b>	<b>83,980</b>	<b>4,334,829</b>	<b>1.9%</b>	<b>Average</b>	<b>44%</b>
Sales and Related	14,211	455,495	3.1%	Above Average	45%
Office and Administrative Support	13,080	687,735	1.9%	Average	49%
Healthcare Practitioners and Technical	5,719	228,602	2.5%	Above Average	57%
Construction and Extraction	4,517	174,735	2.6%	Average	47%
Personal Care and Service	4,186	97,232	4.3%	Above Average	57%
Healthcare Support	3,309	123,778	2.7%	Average	56%
Business and Financial Operations	2,998	190,212	1.6%	Above Average	49%
Protective Service	1,400	86,378	1.6%	Average	78%

- Generally, employers are constantly hiring for less-skilled, lower paid positions. Higher-skilled, higher paid positions tend to take employers longer than 60 days to fill. Both conditions would result in high hiring difficulty percentages.
- Employers reporting on job vacancies state that 56% of all job openings statewide are filled within 60 days or less.
- Healthcare Practitioners and Technical (2.5%) and Personal Care and Service (4.3%) occupations have a job vacancy rate greater than the rate for all occupations (1.9%). Employers find these occupations difficult to fill as noted by the "above average" hiring demand index which represents fast-growing occupations. Healthcare Practitioners and Technical occupations represent higher-skilled, higher paid jobs (employers take longer than 60 days to hire). Personal Care and Service occupations represent less-skilled, lower paid jobs (employers are constantly hiring).
- Protective Service occupations have an occupational job vacancy rate (1.6%) below the statewide average rate (1.9%), an "Average" Hiring Demand Index and a large percent of difficult to fill job vacancies (78%). Roughly 48% of these positions are of the less-skilled, lower paid variety, which are constantly being filled by employers.

# Appendix A: State Map of Michigan



## Appendix B: Major Occupational Groups

Major Occupational Group	Sample Occupations
Management and Administrative	Medical and Health Services Administration; Director of Sales; Construction Manager; Information Systems Manager; Superintendent of Schools
Business and Financial Operations	Accountant; Auditor; Financial Adviser; Human Resource Specialist; Mortgage Loan Officer
Computer and Mathematical	Computer Analyst; Programmer; Software Developer; Systems Analyst; Web Developer
Architecture and Engineering	Architectural Designer; Civil Engineer; Computer Designer; Electrical Engineer; Automotive Engineer
Life, Physical, and Social Science	Behavioral Scientist; Chemists; Geneticist; Physiologist; Psychologist
Community and Social Services	Case Manager; Counselor; Probation and Parole Officer; Social Worker; Youth Director
Legal	Lawyers; Legal Assistant; Paralegal; Title Clerk; Title Examiner
Education, Training, and Library	Adjunct Faculty; Librarians; Nursing Instructor; Paraprofessional; Teacher Assistants
Arts, Design, Entertainment, Sports, and Media	Art Director; Athletic Coach; Designer; Journalist; News Reporter
Healthcare Practitioners and Technical <sup>H</sup>	Dentist; Lab Technician; Licensed Practical Nurse; Pharmacist; Registered Nurses
Healthcare Support <sup>H,S</sup>	Certified Nursing Assistant; Home Health Aides; Medical Assistants; Nursing Aides, Orderlies, and Attendants; Veterinary Technician
Protective Service <sup>S</sup>	Correction Officer; Firefighter; Police Officer; Security Officer; Warden
Food Preparation and Serving Related <sup>S</sup>	Bartender; Chef; Fast Food Worker; Host/Hostess; Servers (Waiters and Waitresses)
Building and Grounds Cleaning and Maintenance <sup>S</sup>	Building Superintendent; Cleaning Person; Housekeeper; Janitor Custodian; Landscaper
Personal Care and Service <sup>S</sup>	Camp Counselor; Flight Attendants; Hairstylist; Personal Trainer; Valet
Sales and Related	Advertising Sales Agents; Cashiers; Retail Salespersons; Sales Clerk; Telemarketer
Office and Administrative Support	Administrative Assistant; Bookkeeper; Customer Service Representatives; Receptionist; Secretary
Farming, Fishing, and Forestry	Farm Worker (Crop, Nursery, and Greenhouse); Laborer; Picker; Seaman; Tree Cutter
Construction and Extraction	Building Inspector; Driller; Drywall Finisher; Molder; Pipe Layer
Installation, Maintenance, and Repair	Auto Technician; HVAC Installer; Locksmith; Tire Worker; Utility
Production	Assembler; Dry Cleaner; Grinders; Sewing; Welder
Transportation	School Bus Drivers; Commercial Pilots; Taxi Drivers and Chauffeurs; Industrial Truck and Tractor Ship Loaders; Parking Lot Attendants

Note: H represents Healthcare Related occupations.  
S represents Service Related occupations.

## Appendix C: Regional and State Comparisons

The following table provides a comparison between the regions and state.

### Job Vacancies, Job Vacancy Rate and Median Hourly Wage Offered by Region

Region	Number of Job Vacancies	Estimated Employment	Occupational Job Vacancy Rate	Median Hourly Wage Offered
<b>All Occupations, Total</b>	<b>83,980</b>	<b>4,334,829</b>	<b>1.9%</b>	<b>\$10.00</b>
Southeast Michigan	39,548	2,409,722	1.6%	\$10.58
Southwest Michigan	6,356	438,050	1.5%	\$10.25
Mid-Michigan	9,067	505,750	1.8%	\$8.00
West Michigan	10,039	602,320	1.7%	\$11.51
Northern Lower Michigan	7,446	210,297	3.5%	\$8.00
Upper Peninsula	2,069	124,381	1.7%	\$11.00

Note: When randomly selecting establishments for the sample, any establishment without a county/town combination attached to a region receives an area code of "9999Balance," which represents the Balance of State" region. An analyst in the Quarterly Census of Employment and Wages (QCEW) section will give this establishment a county code of 995, 996, 998 or 999 if 50% of employment for this establishment is not located in one county.

The "Balance of State" region has 9,455 job vacancies and an estimated employment of 44,309.

## **Appendix D: Methodology**

### **Sample Design**

Information on job vacancies for 2006 came from surveying 8,615 companies across Michigan. The Neyman Allocation procedure was used to randomly select firms from our Michigan Quarterly Census Employment and Wages (QCEW) program. A population of 209,804 firms were identified by applying an Occupational Employment Statistics (OES) North American Industry Classification System (NAICS) defined scope. The selected firms were based on a sampling procedure that stratified by seven regions, 20 industry sectors and six employment-size classes. The sampling process excludes private households, personnel service industries and firms with no employees. Eleven industry Supersectors (a group of two-digit industries), defined by 2002 NAICS, are represented in the survey sample. NAICS can be found at <http://www.bls.gov/bls/naics.htm>.

### **Survey Instrument**

Employers surveyed were asked to provide information on all current job vacancies at their location. Information collected included number of openings, wage, education and work experience requirements, benefits, length of time job is vacant, and whether the position is part-time/full-time, permanent or temporary/seasonal.

Survey questionnaires were mailed in April 2006 to Michigan employers. Contact information, firm size information, and industry classification for each firm was drawn from the Enhanced Quarterly Unemployment Insurance (EQUI) file produced by the Quarterly Census of Employment and Wages (QCEW) program, Department of Labor & Economic Growth (DLEG). Additional contact information was obtained via telephone calls, email, internet telephone directories, and firm websites if applicable.

After collecting and reviewing data for job vacancies, the data is scaled to produce estimates which represent Michigan's labor market in seven regions and statewide. The scaling procedure accounts for job vacancy distribution, industry employment by region and industry size by region.

### **Employer Job Title Codification**

Employer-defined job titles are collected with the aforementioned information on job vacancies. Some employer job titles are not easily linked to a Standard Occupational Classification (SOC) group. To clarify, the Job Vacancy Survey (JVS) staff called the employer to obtain a position description of the vacant position. Along with the job title, additional information on the position such as wage, education and work experience are used to link the employer job title with an occupation title from the 2000 SOC title structure.

The 2000 SOC structure is broken out into four levels: (a) 820 detailed groups, (b) 449 broad groups, (c) 96 minor groups and (d) 23 major groups. This study contains major occupational groups and a group of related occupations at the two-digit occupational or major group level. Examples of occupations in the major occupational group are listed in *Appendix B*. The 2000 SOC structure can be found at <http://stats.bls.gov/soc>.

### **Occupational Employment Estimates**

The Estimates Delivery System (EDS) produces the occupational employment estimates for each occupation in this study. EDS was created by Tom Price at the Labor Market Information Division within the North Carolina Employment Security Commission. It uses micro data files from our Occupational Employment Statistics (OES) program to estimate employment and wages by detailed occupation titles. This data is used in the calculation of the occupational job vacancy rate for each detailed occupation.

### **Turnover Rates**

Turnover rates were used to calculate the Hiring Demand Index by major occupational group. They are derived from the Current Population Survey (CPS) Job Tenure Supplement. CPS data can be obtained by using DataFerrett or going to <http://www.census.gov>.

## Appendix E: The Sample

Firm Size	Sample Size	Number of Responses	Response Rate
1 to 9 employees	1,642	1,189	72.4%
10 to 49 employees	2,390	1,664	69.6%
50 to 249 employees	2,887	1,945	67.4%
250 to 999 employees	1,383	914	66.1%
1,000 to 4,999 employees	294	205	69.7%
5,000 or more employees	19	16	84.2%
Firm Category			
Small Firms (1 to 49 employees)	4,032	2,853	70.8%
Medium Firms (50 to 999 employees)	4,270	2,859	67.0%
Large Firms (1,000 or more employees)	313	221	70.6%

Industry SuperSector	Sample Size	Number of Responses	Response Rate
Natural Resources, Mining and Construction	582	422	72.5%
Manufacturing	1,164	820	70.4%
Trade, Transportation, and Utilities	1,770	1,183	66.8%
Information	159	101	63.5%
Financial Activities	503	311	61.8%
Professional and Business Services	1,285	811	63.1%
Education and Health Services	1,451	1,051	72.4%
Leisure & Hospitality	885	541	61.1%
Other Services	342	216	63.2%
Public Administration	132	88	66.7%
Federal, State and Local Government	343	273	79.6%

Region	Sample Size	Number of Responses	Response Rate
<b>Michigan</b>	<b>8,615</b>	<b>5,817</b>	<b>67.5%</b>
Southeast	4,308	2,891	67.1%
Southwest	887	602	67.9%
Mid-Michigan	1,010	693	68.6%
West Michigan	1,165	782	67.1%
Northern Lower	523	367	70.2%
Upper Peninsula	356	256	71.9%
Balance of State	367	226	61.6%

## Appendix F: Survey Summary Statistics

<b>Job Vacancy Data Summary</b>	
<b>All Industries</b>	
<b>Number of Job Vacancies</b>	<b>83,980</b>
<b>Occupational Job Vacancy Rate</b>	<b>1.9%</b>
Full-Time Positions	67.0%
Part-Time Positions	33.0%
Vacancies Open < 30 Days	43.4%
Vacancies Open Between 30-59 Days	13.1%
Vacancies Open > 60 Days	19.5%
Constantly Recruiting/Always Hiring	24.0%
Permanent Positions	84.9%
Temporary/Seasonal Positions	15.1%
No Educational Requirement	20.9%
Vacancies Requiring a Diploma/GED	50.1%
Vacancies Requiring Vocational Training	9.4%
Vacancies Requiring an Associate's Degree	5.8%
Vacancies Requiring a Bachelor's Degree	11.1%
Vacancies Requiring an Advanced Degree	2.8%
License or Certificate Required	21.3%
No Experience Requirement	27.6%
Some Work Experience Requirement	24.8%
Experience Related to Position Requirement	47.6%
Median Hourly Wage for All Vacancies	\$10.00
Vacancies with Health Insurance	58.1%
Vacancies with Paid Sick Leave	42.1%
Vacancies with Paid Vacation	55.3%
Vacancies with Retirement Svgs Plan/Pension	41.6%
Vacancies with No Benefits Offered	35.2%

*Department of Labor & Economic Growth  
Bureau of Labor Market Information & Strategic Initiatives*

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