6 Wisconsin's Business Climate

Critical Issues

- What are Wisconsin's strengths?
- What are its weaknesses?
- Where do its opportunities lie?
- What are its threats?

6.1 National Competitiveness

One assessment of national competitiveness was undertaken by The Government Performance Project. It measured the quality of management performance in all 50 states for their handling of Money, People, Infrastructure, and Information, and then awarded each state a grade. Wisconsin received a B-. The state was credited for strong fiscal attributes, i.e. generally solid debt management, strong internal controls, and major efforts at using risk management to limit liabilities. However, balancing spending with revenues failed.

The Project reports that "Through the 1990s, Wisconsin cut income taxes by about $1.2 billion a year, committed to fund two-thirds of K-12 education at the state levels and oversaw an increase in prison population from 7,000 to about 21,000. Meanwhile, year after year, it relied on surpluses in order to pay for unaffordable long-term increases in its spending. When the economy called a halt to that kind of Ponzi scheme, the state discovered that it was running about $3.2 billion short."[88]

In the Government Performance Project report, the President of the Wisconsin Taxpayers Alliances, is quoted as saying, "'. . . they did a number of things to put the budget in balance on paper but not to fully address the problem.'" The report offers these examples: "The state transferred hundreds of millions of dollars to the general funds, notably transportation. It restructured its debt to get one-time savings on debt service. And it bonded out money for infrastructure that had historically been paid for with operating revenues."[89]

The chronic budget problems have forced the state to cut back on infrastructure maintenance and information technology. However, in health care coverage, where an overwhelming percentage of employees are union members, the state required them to pay at least a token amount in premiums and gave them a choice among HMOs that made services available. The HMOs kept prices low and saved the state millions of dollars. This same report states that, "Technology is a significant impediment statewide." And, "There's no automated way to compare enterprise-wide HR data or financial data or any other enterprise-wide data," says . . . the state's chief

[88] Government Performance Project. See www.results.gpponline.org/StateOverview.aspx?id=141
[89] Government Performance Project. See www.results.gpponline.org/StateOverview.aspx?id=141

information officer, though the state is taking steps to redress the problem "based in part on a consolidation of servers and networks."[90]

Another attempt to rate business climate, mostly on quality-of-life issues, was completed by the nonprofit Center for Enterprise Development. It used a grading system with 31 outcome measures and 38 policy measures organized into an index framework: Financial Security, Business Development, Homeownership, Health Care, Education, and Tax Policy.[91]

> Wisconsin earned an overall grade of B on the 2005 Assets and Opportunity Scorecard. In some respects, the state's citizens are better off than the rest of the nation, where nearly one in five American households has zero net worth or is in debt. Wisconsin's 6th-place ranking in households with zero net worth and 9th in asset poverty are encouraging. But despite a relatively high rate of private loans to small businesses (6th), the Badger State is near the bottom of the list when it comes to microenterprise ownership (ranked 50th). Wisconsin is on the right track in terms of education, where it received top-20 rankings in Head Start coverage (11th), completion of two years of college (5th), and both math (15th) and reading (16th) proficiency. The state shines in health care (A), where it received top 10 rankings in all measures. In particular, uninsured low-income children (2nd) and parents (5th) are well-protected from the health care costs that are driving many Americans into bankruptcy.
>
> With policies in place that support asset accumulation, such as an income tax threshold that is higher than most states' and tax credits for low-wage workers, Wisconsin finds itself providing more and improved opportunities for financial security. The state also outperforms many others in terms of education policy with state funding for Head Start, above average per-pupil spending, and strong support for need-based financial aid. Wisconsin should next consider addressing its policies around its minimum wage, microenterprise support, and workforce training.[92]

And from a third external survey, 392 business executives were asked 52 questions about the Wisconsin business climate. The purpose of the survey was to help the Wisconsin Department of Workforce Development and the Wisconsin Department of Commerce determine how to retain current business and bring in new business, i.e., address the struggle.

Overall, businesses were "happy" in Wisconsin, though the larger firms were less happy. Many were planning *not* to expand in Wisconsin—which reflects responses to MPI's questionnaire regarding opinions about the projected change in business functions over the next five years. In

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[91] Center for Enterprise Development, "Measures," Assets and Opportunity Scorecard, 2005, p. 1. See www.cfed.org/focus.m?parentid=31&siteid=504&id=509

[92] Center for Enterprise Development, "Wisconsin," p. 1. See www.cfed.org/focus.m?parentid=31&siteid=504&id=526&stateid=49

10 categories, all business functions would be diminished in Wisconsin. The principal reason for leaving Wisconsin was high taxes. But, the respondents liked the state's workforce and reported that Wisconsin was a good place to do business and a good place to live.[93]

6.2 The New Economy

The major focus for Wisconsin is upon the policies and programs that support and enhance the movement from the old to the new economy. The University of Wisconsin-Milwaukee in a newsletter titled "Monitoring Wisconsin" noted that

> The new economy is characterized by high technology industries. These, according to the Bureau of Labor Statistics, are industries in which employment in both R&D and in technology-oriented occupations, account for a proportion that is at least twice the average of all industries. The Humphrey Institute definition of the new economy industries excludes employment in R&D and puts the threshold of high-tech occupation concentration at three times the national average. By these definitions, the proportion of employment in high technology industries and occupations in Wisconsin is below the national average.[94]

The newsletter continues Wisconsin's business climate description by looking at The Progressive Policy Institute's 2002 State New Economy Index assessing the degree to which a state's manufacturing sector is embracing high performance and high skill work practices. The Index includes 21 indicators divided into five categories. Based on these five, Wisconsin ranks low, 40th out of the 50 states. It "ranks in the first or second quartile in the education level of manufacturing employment, online manufacturers, workforce education, technology in schools, digital government, online agriculture and industrial investment in R&D. But as far as new business startups, availability of venture capital, employment in fast-growing companies, export-focused manufacturing, managerial, professional, and technical jobs, Wisconsin's performance is not up to par. The overall ranking of Wisconsin is 40 out of 50. Some neighboring states like Illinois (17 out of 50) and Minnesota (13 out of 50) rank well above Wisconsin."[95]

Overall, there is a consistency among opinions and facts from personal interviews and panels, written questionnaires, and statistical analyses about Wisconsin's business climate. They confirm that for manufacturers, the struggle continues.

6.3 Workforce—The Employment Outlook

A major concern of Wisconsin's manufacturers is the waning of a competent replacement workforce. In 3.1, the MPI Group heard that "There is a two-tiered workforce. Older, reliable, hard-working employees are retiring soon. Their potential replacements are not dedicated to the work ethics of their forerunners and are increasingly difficult to hire and retain."

[93] Steve Mitchell et al., Assessing Wisconsin's Business Climate, Anderson Economic Group, May 9, 2002, p. 1. See www.andersoneconomicgroup.com/Projects/econ_dev/Wisc_DWD/WIDWD_AEGreport.pdf
[94] Monitoring Wisconsin, University of Wisconsin, Milwaukee, Summer 2004, p. 2. See www.uwm.edu/Dept/ISPR/summer04.pdf
[95] Monitoring Wisconsin, Summer 2004, p. 2.

Also, respondents to the MPI online questionnaire indicated their deep concern for the availability of qualified workers. Their answers to two questions appear below.

14. As you consider your industry and business for the next 5 to 10 years, what are the most prominent workforce-related concerns?*

	Frequency	Percent
Availability of skilled, qualified workers	45	61.6%
Healthcare coverage and costs	14	19.2%
Training	4	5.5%
Compensation to workers and compensation levels	4	5.5%
General benefits and insurances	2	2.7%
Other	4	5.5%
Total	73	100.0%

* Open-ended answers grouped by similarity of response where two or more like responses exist.

15. As you consider your industry and business for the next 5 to 10 years, what are the most prominent advantages that the Wisconsin workforce can offer?*

	Frequency	Percent
Work ethic	41	58.6%
Skills/quality of workers	11	15.7%
Manufacturing knowledge/support/education	5	7.1%
Speed to market	2	2.9%
Proximity	2	2.9%
Other	4	5.7%
None	5	7.1%
Total	70	100.0%

* Open-ended answers grouped by similarity of response where two or more like responses exist

Availability of skilled, qualified replacement workers is a concern. Indeed, "Wisconsin is getting grayer. The number of state residents between the ages of 55 and 64 grew more than six times faster than the rest of the population from 2000 to 2003, according to U.S. Census data released today [i.e., September 30, 2004]. Wisconsin lacks the numbers of younger people to replace them in jobs they hold because people are flocking to work in Minneapolis and Chicago, chief economist Terry Ludeman said. State officials expect 70,000 people will turn 65 annually by 2015; by 2030, that number will be about 80,000, he said. Retiring boomers will affect nearly everything. Experienced teachers will be lost. Skilled workers will retire. The nursing industry will be strained. And the state will have to pick up Medicaid tabs like never before. Meanwhile, businesses already struggling with a shortage of skilled workers—particularly in the manufacturing sector—may pull up stakes for other states with larger labor pools, said Jim Pugh, a spokesman for Wisconsin Manufacturers and Commerce, the state's biggest business group."[96]

When will this crisis occur? And, what will it do to jobs? The employment outlook in 2003 by the Wisconsin Department of Revenue made this forecast:

[96] Todd Richmond, State Population Is Getting Grayer: Crisis Looms as Boomers Retire, The Capital Times, September 30, 2004, 1.

> Wisconsin employment is forecast to continue to grow during the second half of this year, although at a slightly slower pace than in the first half. Employment is expected to average 1.4% higher in 2004 than in 2003. Wisconsin employment is expected to increase by 1.8% in 2005, 1.6% in 2006 and 1.7% in 2007. Fastest growing sectors will be Professional and Business services and Educational and Health Services. Manufacturing, trade and government employment is expected to increase at slower than average rates.
>
> Employment in Professional and Business Services is forecast to increase by 5.2%, based in part on strong growth in the first half of the year. This sector includes temporary help services where employment appears to be increasing rapidly.
>
> Other sectors expected to show above-average employment growth this year are Construction (2.8%), Education and Health (2.3%) and Leisure and Hospitality (2.0%).
>
> Manufacturing employment is forecast to increase 0.8% this year followed by gains of 2.4% in 2005, 1.7% in 2006 and 1.2% in 2007. While it is reassuring to see employment increasing in this sector, employment gains foreseen for the forecast period, in the range of 2,000 per quarter, are far smaller than the losses experienced in the 2000 to 2003 period. [97]

And, even allowing that projections behind 2005 may be questioned, the Workforce Development, Office of Economic Advisors, thought that the manufacturing outlook for a number of industries would be downward for most, as shown in the following table. The major reasons for decline may be due to outsourcing of jobs to other countries and/or to the improvement in worker efficiencies. "Whatever the cause, job loss in manufacturing may affect the standard of living in Wisconsin as workers move from relatively higher-paying manufacturing jobs to lower-paying services occupations."[98]

Table 6-1 Manufacturing Employment Outlook in Wisconsin through 2010

Category of Employment*	Estimated Employment 2000	Projected Employment 2010	2000-2010 Lost Jobs	2000-2010 % Change for This Industry
Manufacturing	615,740	603,310	(12,430)	-2.0%
Durable Goods Manufacturing	375,460	36,100	(9,360)	-2.5%
Primary Metal	26,170	23,300	(2,870)	-11.0%
Fabricated Metal	67,790	65,600	(2,190)	-3.2%
Industrial & Commercial Machinery & Computer Equipment	109,410	104,100	(5,310)	-4.9%
Electronic & Electrical Equipment	46,700	44,100	(2,600)	-5.6%
Transportation Equipment	34,240	31,800	(2,440)	-7.1%

[97] Wisconsin Economic Outlook, Division of Research and Policy, Wisconsin Department of Revenue, September 5, 2004, p. 10.
[98] Monitoring Wisconsin, University of Wisconsin, Milwaukee, Spring 2004, p. 2. See www.uwm.edu/Dept/ISPR/spring04.pdf

Category of Employment*	Estimated Employment 2000	Projected Employment 2010	2000-2010 Lost Jobs	2000-2010 % Change for This Industry
Instruments & Related Products	17,730	17,300	(430)	-2.4%
Nondurable Goods Manufacturing	240,280	237,210	(3,070)	-1.3%
Food & Kindred Products	67,180	68,300	1,120	1.7%
Paper & Allied Products	52,250	50,800	(1,450)	-2.8%
Printing & Publishing	54,690	53,400	(1,290)	-2.4%
Rubber & Misc. Plastic Products	39,180	40,000	820	2.1%
Transportation, Communications, & Public Utilities	133,600	142,940	9,340	7.0%

*There is no direct conversion of SIC codes, upon which this table is based, and NAICS codes used elsewhere in this report However, the descriptive categories here are useful for seeing the employment trends in the state.

Source: K. Wells, Wisconsin Projections: 2000-2010, Workforce Development, Office of Economic Advisors, Department of Workforce Development, November 2003, pp. 14-38.

Data Series: Current Employment Statistics, 2001 Benchmark: 2001-2010 Wisconsin Projections
Source: Current Employment Statistics Unit, Bureau of Workforce Information and Projections Unit, Office of Economic Advisors, Wisconsin Department of Workforce Development

6.4 Job Changes

What will happen to jobs when the aging of the workforce, commoditization of low-value industries, the advent of high line products, and increased globalization all coincide? From the changes in the category of industry employment shown in the table above, the changes in jobs can be inferred.

As in the United States as a whole, Wisconsin's economy has fallen since 2000. It declined from 2,839,370 jobs in 2000 by 54,710 to 2,784,660 by 2003, a loss of about 2%. Recovery began in 2004, increasing 1.7%, still less than the losses each year in 2000-2003. It is projected to increase 5.2% above the year 2000 for 2005, 1.7% in 2006, and 1.2% in 2007. Furthermore, between 2000 and 2010, some industries and, consequently, some occupations, will decline, while some industries and some occupations will grow. Primary metal will lose 2,870 jobs; and industrial machinery and equipment, 5,310 jobs. These industrial losses mean occupational losses of 670 team assemblers, 650 cutting, punching, and press setters, operators, and tenders; 460 foundry mold and coremakers; and 460 machinists.[99]

But, lumber and wood products will add 2,780 jobs. And that means 240 more sawing machine setters, operators, and tenders, and 240 more cabinetmakers and bench carpenters. Automation has influenced the rise and fall significantly, from manual to computerized controls. It is

[99] K. Wells, Wisconsin Projections: 2000-2010, Workforce Development, Office of Economic Advisors, Department of Workforce Development, November 2003, p. 58.

estimated there will be a decline of 3,880 positions for machine tool cutting setters, operators, and tenders, but an increase of 780 jobs for computer control programmers and operators.[100]

Other change factors include business practices—shifting tasks from one occupation category to another; global outsourcing—a probable force reducing employment in Wisconsin; changing demographics—aging populations require more health care professionals. Nurses, alone, are projected to add 10,670 jobs during 2000-2010.[101]

Future needs in statewide employment will be greatest for professional industries—health services, educational services, and business services. These mean occupations for database administrators, chemical engineers, psychologists, social workers, lawyers, teachers, musicians, physicians, pharmacy technicians, nurses. With a growth of over 100,000, they will account for 20% of all jobs.[102]

Next, service industries also show growth, in health, business, and social services, as well as in restaurants and government. These employ nursing aides, orderlies and attendants, food preparation and serving workers, and janitors. With 88,000 new jobs, they will comprise 26% of total employment.[103]

But, in production occupations, concentrated in manufacturing, the largest will be industrial machinery and equipment, fabricated metal products, and food-related products, accounting for 1 in every 3 jobs. The first two categories will lose jobs, while the third will gain—but the net change among these three categories is a loss of 8,500 jobs.

In manufacturing, new jobs will be added in furniture and fixtures (1,500), lumber and wood products (1,500), and food-related products (1,000). The occupations needed by these industries are welders, cutters, solderers, and brazers (1,320), packaging and filling machine operators and tenders (830), and computer-controlled machine tool operators (730).[104] These new jobs call for formal training to maintain and increase productivity. At present, Wisconsin's hours of formal training are consistent with those of competing states. While it may be that Wisconsin's low technology industries do not call for a great deal of training, compared to California's high technology industries, the question of just what knowledge and skills would facilitate the manufacturing industries' competitiveness should be asked.

And, 14 of Wisconsin's technical college districts did just that. On January 31, 2005, the Moraine Park Technical College, one of the 14, published, "Manufacturing Solution 1: Summary of Data," a report written for the14 Wisconsin technical colleges (WTCS). They administered surveys to manufacturers across the state, receiving 978 responses from manufacturing employers who represented 127,000 Wisconsin employees. This is a summary of their pertinent findings.

Change in Employment Levels Over the Next Two Years

[100] K. Wells, p. 58.
[101] K. Wells, p. 60.
[102] K. Wells, p. 67.
[103] K. Wells, p. 67.
[104] K. Wells, pp. 67-68

Nearly two-thirds of the employers surveyed anticipated hiring more employees in the next two years, while less than 5% anticipated a decrease. In total, the 29 companies who projected a decrease in employment anticipate losing 547 employees over the next two years. In contrast, the 524 employers anticipating hiring new employees claim they will bring in nearly 8,700 jobs within the next two years.[105]

Average Typical Hourly Wage

Nearly 50% of the jobs will pay $8 - $12 per hour. The next 38% will pay $12 - $16 per hour. And, a remaining 10% will earn more than $16 per hour.[106]

How Could the WTCS or Other Agency Help with Your Hiring and Training Needs?

This was an open-ended question which received about 780 responses. They ranged broadly from very precise needs to ambiguous comments. However, there was a discernible agreement among the employers that these were their major foreseeable hiring and training needs.

Work Life—Basically, good, solid work ethic behavior

Basic Shop Skills—Especially in electrical and mechanical areas, re-enforced by apprenticeships

Advanced Shop Skills—CNC, CAD, CMAN, etc.

Entry-level Management Skills—Team building, LEAN manufacturing principles, Six Sigma, LEAN/Sigma

Continuing On-the-job Training—Through Technical College/Employer collaboration

Trained Hirers—To find and retain qualified workforce

Continuing Spanish Language Vocational Training—Pre- and post-employment development of English competence[107]

Anticipated Expansion

Approximately two-thirds of the respondents planned to expand their product lines in the next two years. They expected to achieve that expansion equally through (1) the use of new technology, (2) diversification, and (3) entrance into other markets.[108]

Beneficial Training

[105] Moraine Park Technical College, Manufacturing Solution 1: Summary of Data, DRAFT, January 31, 2005, p. 3.
[106] Moraine Park Technical College, p. 4.
[107] Moraine Park Technical College, pp. 5-25.
[108] Moraine Park Technical College, p. 42.

> Respondents were asked what types of training would be beneficial in helping their organization to be more productive, export their product, or employ more technology. Interpersonal Communication and Managerial Supervisory Skills rounded out the top two most desired types of training.[109]
>
> **Regional Approach for Business Collaboration**
>
> A "regional approach" means joint purchasing, joint training, business development, vendor sharing, cluster councils, and other shared services. Almost 40% of the respondents favored these collaborative activities to individual efforts.[110]
>
> **Preference for Learning about Training Options**
>
> Contrarily, "respondents prefer to learn about available training options either by contacting the College or University themselves, or by referrals from friends/colleagues. "And, after that primary connection, they turn to trade organizations and the internet.[111]

Again, these statewide findings appear to be consistent with those from other sources, namely MPI's in-person interviews and online surveys, manufacturing studies in other states, and numerous U.S. perspectives. Later Sections on Wisconsin's seven economic regions include written responses to these same topics by individual region. The agreement by regions with the statewide perspective on future manufacturing needs in Wisconsin is nearly identical.

What will it take to win the struggle? Richard W. Judy from Workforce Associates, Inc., deduces from these trends that "American manufacturing companies that prosper in the early 21st century will most likely produce goods that display one or more of the following characteristics:

> They are high-tech, high value-added products that are competitive in global markets.
>
> They are knowledge-intensive in the sense that a large portion of their value stems from their intellectual property component.
>
> They target niche markets that are less vulnerable to off-shore competition.
>
> They are produced at a **total** cost that enables their producers to compete successfully in national and international markets.
>
> Recently developed intellectual property is especially important in their design and/or production.
>
> They are produced in close proximity to customers or suppliers.

[109] Moraine Park Technical College, p. 44.
[110] Moraine Park Technical College, p. 64
[111] Moraine Park Technical College, p. 72.

Their production requires intimate customer knowledge on the part of the producer.

The companies that develop them are close to and interact with a major university or other research center.

They are subject to rapid innovation, i.e. the time cycle from product conception, through design and manufacture, to replacement is short.

Political factors dictate that production should be within the U.S. (This is one of the reasons why Japanese auto manufacturers locate in this country.)

It is uneconomical to import them because international transportation costs are too high.

Logistics and/or customer service by the manufacturer are so closely associated with the physical product that the customer sees them as a joint value proposition.[112]

For reaching these goals, Wisconsin has some handicaps to consider.

6.5 Education and Training

Both the MPI Panel and questionnaire revealed that Wisconsin's manufacturers believe they will have difficulty in hiring and retaining not only the numbers of replacements workers they need but also in finding those with the appropriate skills and work ethic to undertake the move toward a new economy. The answers to questions #17 and #18 of the online questionnaire show that in one category or another the emphasis is on better and greater workplace skills, before employment, and continuing education after employment.

17. What changes, if any, would you like to see in the Wisconsin higher education system to better meet the long-term needs of your industry and firm in the state?*

	Frequency	Percent
Technical education and/or process education	13	21.0%
Basic skills: math, language, writing, etc.	5	8.1%
Encourage manufacturing careers	5	8.1%
Better understanding of industry/business needs	4	6.5%
Lean skills	4	6.5%
Internships/work experiences	4	6.5%
Work ethic	3	4.8%
High-school technical emphasis	3	4.8%
Manufacturing technologies/IT	3	4.8%
Soft skills (including listening)	2	3.2%
Business skills	2	3.2%
Other	10	16.1%

[112] Richard W. Judy, Who Is Manufacturing Tomorrow's Jobs?, Workforce Associates, Inc., February 2005, pp.4-5. See editor.ne16.com/htmleditor/viewonline.asp?FileID=12007

	Frequency	Percent
None	4	6.5%
Total	62	100.0%

* Open-ended answers grouped by similarity of response where two or more like responses exist.

18. Describe any innovative workforce attraction or development programs that you would like to see expanded in Wisconsin?*

	Frequency	Percent
Apprenticeships/internships	8	18.2%
Manufacturing introductory/encouraging programs	5	11.4%
Basic skills training	5	11.4%
Lower healthcare costs/healthcare buying coops	4	9.1%
More affordable training options	4	9.1%
Tax credits, money for training	3	6.8%
Lean training	3	6.8%
WMEP programs/partnering	2	4.5%
Business best practices	2	4.5%
Other	8	18.2%
Total	44	100.0%

* Open-ended answers grouped by similarity of response where two or more like responses exist.

And, their answers to questions about the degree of urgency show their leaning from complacency toward concern for replacement workers with adequate skills.

19. As you consider your business plans for the next 5 to 10 years, please rate the following workforce factors on a scale of 1 to 5:

Entry-level labor: Skill-level

	Frequency	Percent
1 - No Problem	4	5.3%
2	8	10.7%
3 – Neutral	19	25.3%
4	30	40.0%
5 - Major Problem	13	17.3%
Not applicable	1	1.3%
Total	75	100.0%

Semiskilled production labor: Skill-level

	Frequency	Percent
1 - No Problem	1	1.3%
2	6	8.0%
3 – Neutral	22	29.3%
4	28	37.3%
5 - Major Problem	15	20.0%
Not applicable	3	4.0%
Total	75	100.0%

Entry-level managerial labor: Skill-level

	Frequency	Percent
1 - No Problem	2	2.7%
2	9	12.2%
3 – Neutral	28	37.8%
4	24	32.4%
5 - Major Problem	9	12.2%
Not applicable	2	2.7%
Total	74	100.0%

Skilled or technical labor: Skill-level

	Frequency	Percent
1 - No Problem	1	1.4%
2	4	5.4%
3 – Neutral	22	29.7%
4	27	36.5%
5 - Major Problem	19	25.7%
Not applicable	1	1.4%
Total	74	100.0%

Professional managerial labor: Skill-level

	Frequency	Percent
1 - No Problem	4	5.4%
2	7	9.5%
3 – Neutral	26	35.1%
4	24	32.4%
5 - Major Problem	11	14.9%
Not applicable	2	2.7%
Total	74	100.0%

Further details about their viewpoints on worker availability and costs are in the regions Sections, 7 through 13, as the last item in each regional summary. It may be that jobs are

declining and replacement workers are not yet in high demand, but the warning signs are apparent.

Just what skills will be needed? Some general impressions can be gained by reviewing the individual comments made by executives responding to the full questionnaire, especially to the open-ended questions. Since exact corporate identities are not given in the comment attributions, further, on-the-ground exploration of skill needs will be helpful for each industry by region to provide clear directions to the education, research, and business service institutions supporting manufacturing in Wisconsin.

The most disturbing barrier, manufacturers report, to securing needed workers is the broken image of manufacturing in the state. High school students disdain this future, avoid even discussing it with their colleagues, and accept manufacturing jobs apparently with reluctance. Employers are seeking help to change that image. It seems possible that new, high-paying jobs in a new economy will begin to brighten that outlook. Therefore, such a goal might go hand-in-hand with developing very close relationships with the academic and research support systems in the state.

Manufacturers do have a high regard for higher education and technical facilities in Wisconsin. And, as shown by the measures of Wisconsin's business climate earlier in this Section, the State is educationally very competitive.

The state has extensive educational facilities that offer technical, scientific, and engineering education, as well as research and support of Wisconsin's manufacturing industries at its various Web sites, education and research facilities, Wisconsin technology links, Technology Zone Program, private sector R&D resources, and links to business assistance and economic development organizations.

The Federal Government also has an active role in helping manufacturers throughout the country address globalization. The U.S. Department of Commerce's Technology Administration established the National Institute of Standards and Technology to network the nationwide Manufacturing Extension Partnership. These not-for-profit centers, in nearly 350 locations, provide "small- and medium-sized manufacturers expertise and services tailored to their most critical needs, which range from process improvements and worker training to business practices and applications of information technology."[113]

The Wisconsin Manufacturing Extension Partnership has three regional centers and seven field offices serving in the northeast, southeast, and southwest quadrants of the state. It works in coordination with the Northwest Wisconsin Manufacturing Outreach Center.

6.6 Costs of Doing Business in Wisconsin

All interviews, surveys, and studies mentioned earlier in this Study identify Wisconsin's high costs as a major concern in the business climate. The MPI Group respondents said, "Taxes of all

[113] WorkPlace Training—Manufacturing Extension Partnerships, p. 1. See www.wptraining.com/meps.html
The National Manufacturing Extension Partnerships are linked through the National Institute of Standards Technology in the U.S> Department of Commerce.

types are exorbitant in Wisconsin, compared to border and other competitor states." And, there was an "inability to contain manufacturing costs, due to spiraling health care, liability insurance, on-the-job training, and new machinery and technology costs." There is some question about how objective these opinions are when specifically pertaining to manufacturing costs, as opposed to personal income, and quality-of-life factors—as presented earlier in this Section—with some business executives unhappy about business, but happy with life in Wisconsin. Some statistical analyses may help answer the question.

6.6.1 Taxes

One measure that compares state taxes is the "State Business Climate Index," which is prepared by the nonprofit Tax Foundation. This organization is widely recognized as one that provides an amalgam of business and personal taxes in its evaluation. The Index is a measure of how each state's tax laws affect economic performance. It is a "composite of five equally weighted tax measures: the corporate income tax, the individual income tax, the sales and gross receipts tax, the unemployment insurance tax, and the state's fiscal balance. These five indexes are themselves composites of more than 100 separate variables.

For Wisconsin, the first measure, the corporate income tax weighs the economic impact of state corporate income tax laws in place at the beginning of the year. It places Wisconsin 20th out of the 50 states (the closer to one, the lower the taxes). The individual income tax measures the economic impact of state and county individual income tax laws in place at the beginning of the year. Wisconsin is 32nd out of 50. On the sales and gross receipts tax, which also measures the state and county sales tax law influence on the state's economy, Wisconsin is 31st of 50 states. The unemployment insurance tax gives Wisconsin another 31st rating. And, the fiscal balance measure ranks the state in 44th place. The table below shows how Wisconsin's tax climate compares with those of the other eight competitor states.

Table 6-2 State Business Tax Climate Index, Wisconsin and the Eight Competing States, 2004

State	Rank in U.S. (The closer to 1, the better the business climate)
Wisconsin	41
California	38
Illinois	23
Indiana	12
Michigan	36
Minnesota	48
Ohio	29
Tennessee	15
Texas	4

Source: Tax Foundation, "State Business Tax Climate Index, 2004," Table 6. See www.TaxFoundation.org

By contrast, it is informative to look at the top 10 (most friendly) and bottom 10 (least business friendly) states by business tax climate:

> In 2004, the ten states that are deemed to have entered 2004 with the most business-friendly tax systems are South Dakota, Florida, Alaska, Texas, New Hampshire, Nevada, Wyoming, Colorado,

> Washington, and Oregon. On the other end of the spectrum, the ten tax systems least hospitable to business in 2004 are found in Hawaii, New York, Minnesota, West Virginia, Rhode Island, Vermont, Kentucky, Arkansas, Maine, and Wisconsin.[114]

The Wisconsin Department of Commerce publishes the following summary of the state's taxes. Businesses can examine comparable tax rates in other states as they consider the economic benefits of continuing their manufacturing business or establishing new business in Wisconsin. The Department of Commerce web site includes numerous hot links to help companies assess the overall business climate in the state:

Table 6-3 Major Wisconsin Taxes of Interest to Business

Tax	Rate
Corporate Income (flat rate)	7.9%
Apportionment Formula (to become 100% based on sales beginning in 2005):	
Sales	50%
Property	25%
Payroll	25%
Sales/Use	5%
Manufacturing machinery	Exempt
Pollution controls equipment	Exempt
Materials consumed	Exempt
Manufacturing energy	100% Tax Credit
Property Tax (full value state average rate)	2.211%
Computer equipment	Exempt
Manufacturing machinery & equipment	Exempt
Manufacturing inventories	Exempt
Merchant's inventories	Exempt
Pollution controls equipment	Exempt
Unemployment Compensation	
New employers (3 yrs.), payroll < than $500,000	3.05%
New employers (3 yrs.), payroll > than $500,000	3.25%
Base	$10,500
Minimum/Maximum	0.00%-9.75%
FUTA penalty	0%
Workers Compensation	
Average in manufacturing	$4.43/$100.00
Personal Income	
$ 0-$10,630	4.6%
$10,631-$132,259	6.15%
$132,260-$153,249	6.5%
$153,250 +	6.75%
60% Capital gains exclusion	

Source: Wisconsin Department of Commerce, Major Taxes of Interest to Business, p. 1. See www.commerce.state.wi.us/BD/MT-FAX-0709.html

[114] Wendy P. Warcholik, Ph.D., et al., "State Business Tax Climate Index, Background Paper No. 45, Tax Foundation, pp. 2-3. See www.taxfoundation.org/research/show/78.html

A useful adjunct to this table is the Wisconsin Forward commentary on business taxes available at their web site. It is quoted below:

Business Taxes & Costs

- **Wisconsin business taxes are lower than those in 35 other states.** That's the conclusion of a 1999 study by the Federal Reserve Bank of Boston[115] that measures more than 15 taxes that can affect corporate profits. For a summary of the report, see State Business Taxes Below U.S. Average[116]

- **Wisconsin ranks fourth lowest in the nation in business taxes as a percent of all state and local taxes.** . . . business tax changes that have been made in every biennial legislative session since the early 1970s. For a summary of Wisconsin taxes, see Major Taxes of Interest to Business.[117] Here is an overview of Wisconsin's business tax structure:

  Corporate Income Tax

  Businesses that are incorporated in Wisconsin and foreign corporations that have nexus with the state are subject to a 7.9% tax on the income of the corporation. That flat 7.9% rate has not been changed in the past 20 years.

  . . . Wisconsin will soon become even less taxing for companies that conduct business in more than one state. Beginning in 2005, an apportionment formula based solely on the sales factor (as opposed to the current property/payroll/sales formula) will be phased in over a 3-year period. The change will result in corporate income tax savings of more than $45 million for Wisconsin companies.

  Available credits against corporate income tax include research credits for both capital investments and noncapital expenditures related to R&D as well as a credit for sales tax paid on fuel and electricity used directly in manufacturing operations.

  For . . . the beneficial impact of recent corporate tax improvements, see the 10 State Paper Industry Tax Comparison[118]

  Worker's Compensation

  Wisconsin's Worker's Compensation premium rates are among the lowest in the country. During the 1990s, rates declined by 33% resulting in more than $1 billion in savings for Wisconsin companies. Since then, rates have continued to decline with the

[115] Robert Tannenwald and Nicholas Turner, Insterstate Fiscal Disparity in State Fiscal Year 1999, No. 04-4, Federal Reserve Bank of Boston. See http://www.bos.frb.org/economic/ppdp/index.htm
[116] See www.jsonline.com/news/state/nov04/275862.asp
[117] See http://commerce.wi.gov/BDdocs/BD-FAX-0709.pdf
[118] See www.forwardwi.com/forward_docs/uploaded_documents/why_wisconsin/corp_tax_burden-paper.pdf)

most recent 4.15% overall decrease[119] in rate level taking effect Oct. 1, 2004.

. . . The national Worker's Compensation Research Institute has concluded that Wisconsin has "the lowest rate of requests for litigation of any state we have studied" because "management and labor control the system through a labor and management advisory council." Wisconsin's Worker's Compensation rates typically provide significant savings over those of neighboring states as illustrated by a Four State Comparison[120]

Unemployment Compensation

Wisconsin pioneered unemployment insurance in the United States more than 70 years ago . . . *Employers paid the lowest possible unemployment compensation (U.C.) taxes in 2004 for the 13th straight year.* The average Wisconsin employer in 2003 paid 2.2% of taxable wages in U.C. taxes, well below the U.S. average. Employers pay U.C. taxes on the first $10,500 of wages paid annually to each employee.

Property Tax

All property located in the state, except personal furnishings, clothing and property for which there is a specific exemption, is subject to taxation. Manufacturing, telecommunication and utility properties are assessed by the Department of Revenue while all other property is assessed by the municipal assessor. Exemptions from property tax include:

• Machinery and equipment used in manufacturing

• Merchants' and manufacturers' inventories

• Computer equipment

• Pollution abatement equipment

Sales/Use Tax

Wisconsin imposes a 5% tax on the sale or use of tangible personal property that is not specifically exempted from the tax as well as some services. Counties have the option of imposing a 0.5% local sales and use tax on the same items and 58 of Wisconsin's 72 counties have done so. See Sales Tax Rate by County[121] for the complete list.

The use tax is a tax on the use, consumption, or storage of property in the state and applies to property brought into the state without payment of sales taxes.

[119] See www.dwd.state.wi.us/wc/insurance/2004_comp_rates.htm
[120] See www.dwd.state.wi.us/wc/insurance/2004_comp_rates.htm
[121] See www.dor.state.wi.us/faqs/pcs/taxrates.html#txrate11

Exemptions from the sales and use tax include:

• Manufacturing machinery and equipment

• Manufacturers' raw materials

• Pollution abatement, waste treatment and recycling equipment

• Fuel and electricity used in manufacturing

Individual Income Tax

Wisconsin's individual income tax, to a large extent, conforms to the federal personal income tax base. The tax rates are shown in this chart of Individual Income Tax Rates.[122] [See the hotlink footnoted below.]

Since 2001, all individual income tax brackets have been indexed each year based on the consumer price index.

Wisconsin also offers these tax benefits to individual taxpayers to encourage investment in the state:

• 60% exclusion for long-term capital gains (a provision that saved Wisconsin taxpayers $180 million in FY02)

• 100% exclusion of the capital gains from the sale of stock in eligible Wisconsin small businesses if held for 5 years or more

• 100% exclusion for intergenerational transfers of farming and business assets[123]

Wisconsin is a high tax state. It is ranked the 5th highest tax rate of the 50 states. "The top five states where the tax burden as a percent of income is the highest are: Maine (13.0%), New York (12.0%), Hawaii (11.5%), Rhode Island (11.5%), and Wisconsin (11.4%). The United States average is 10.1%.[124] Another report confirms this ranking: "Compared to other states, Badger taxes were fifth highest in the nation . . ."[125]

This is not necessarily an inhibitor of manufacturing, since "a low-tax environment may not attract and retain employers if public services are substandard and regulation ineffective. For example, a tax reduction undertaken to attract businesses may add to the deficit or force service cuts, and these changes may have second-round effects on economic activity and residents' well-being."[126] In fact, a low-tax state might have low-level services, to the extent that no one would wish to live, much less work there. All survey studies reveal that those manufacturers questioned in Wisconsin like the labor force, their ethics, and the place where they live. Ultimately, it is people who make the decisions about where they will locate and the trade-offs, not policy makers.

[122] See www.dor.state.wi.us/faqs/pcs/taxrates.html#1a
[123] Forward Wisconsin, Business Taxes & Costs, pp. 103. See www.forwardwi.com/forward_docs/category.php?category_id=39
[124] Taxes by State, Retirement Information Center, p. 5. See /www.retirementliving.com/RLtaxes.html
[125] New fed figures show true tax ranks, Wisconsin Taxpayers Alliance, No. 15, July 28, 2004, p. 2. See www.wistax.org/facts/2004nnffssttrr15.pdf
[126] Katharine L. Bradbury et al., The Effects of State and Local Public Policies on Economic Development: An Overview, New England Economic Review, March/April 1997, p. 11. See www.bos.frb.org/economic/neer/neer1997/neer297a.pdf

However, there is a great difference among the states in their *capacity* to tax.

> The governments of many states, through no fault of their own, must work relatively hard to provide the services needed by those who reside, work, travel, and vacation within their borders. For example, some have a high proportion of low-income residents, who need cash assistance, special education, and extensive health care. Others have a high concentration of school-age children, who need primary and secondary education. Such states have high fiscal need, that is, they face conditions that increase the cost of delivering state and local services or augment the scope of services they must provide.[127]

But, in Wisconsin, there may be another reason for the state's manufacturers to imply that its taxes are excessive, compared to other states. How many of the state's companies are subchapter S, as opposed to a C corporation? "For tax purposes, the S corporation has a single tax imposed at the shareholder level while a C corporation has a tax imposed both at the corporate level and then again when the corporation makes a distribution to the shareholders."[128] If Wisconsin's industries are subchapter S corporations, the owners may be paying *income* taxes on their corporate earnings. Whereas, if they are C corporations, that person, who is not an owner, may pay taxes on his payroll income only. Thus, it might appear to a small business Subchapter S corporation that Wisconsin taxes are very high. And, the majority Wisconsin manufacturers are small.

In fact, they are. Compared to the state's competitors, Wisconsin has the highest percentage of corporate parents under $100 million in value – 82%.

Table 6-4 Approximate Annual Revenue of the Plant's Corporate Parent, 2004 Survey

Revenue	WI	CA	IL	IN	MI	MN	OH	TN	TX	Other States	All Plants
Less than $100 million	82.4%	62.5%	63.6%	50.0%	59.4%	65.5%	45.5%	35.7%	31.3%	50.4%	53.5%
$100 million-$499 million	8.8%	10.4%	21.2%	31.6%	21.9%	13.8%	18.2%	7.1%	31.3%	15.8%	16.8%
$500 million-$999 million		2.1%	6.1%	5.3%	3.1%	10.3%	9.1%	14.3%	12.5%	5.2%	5.6%
$1 billion-$5 billion	8.8%	12.5	3.0%	7.9%	9.4%		5.5%	35.7%	12.5%	14.4%	11.9%
$5.1 billion-$10 billion		4.2%		5.3%	6.3%	3.4%	14.5%	7.1%	6.3%	6.0%	5.9%
More than $10 billion		8.3%	6.1%			6.9%	7.3%		6.3%	8.2%	6.5%
All Plants	100%	100%	100%	100%	100%	100%	100%	200%	100%	100%	100%

Source: Source: The MPI Group, "Profiles," from manufacturing surveys in the United States, 2004. Proprietary data, p. 4.

[127] Robert Tannenwald, Fiscal Disparity Among the States Revisted, New England Economic Review, July/August 1999, p. 1. See www.bos.frb.org/economic/neer/neer1999/neer499a.pdf

[128] Wisconsin S Corporation Advantages and Disadvantages: Wisconsin S Corporation and Asset Protection, Small Business Solutions, American Incorporators, Ltd., p. 1. See www.residual-rewards.com/wisconsin-s-corporation.html

There are advantages and disadvantages to both corporate structures. But, from a tax viewpoint, the status of individual driver industries may uncover the reality of taxes as a barrier to the new economy.

6.6.2 Insurance

Wisconsin's insurance rates compare favorably with those of Illinois, Michigan, and Minnesota in various industries, though comparable figures were not provided for Ohio and Indiana by the Wisconsin Department of Workforce Development. The table titled 2004 Insurance Rates Comparisons (Rates represent actual cost per $100 of payroll) in the Appendix compare the dollar rates for a number of Wisconsin's driver industries. Wisconsin's business category insurance rates are lowest in almost all categories, and as an average the lowest of the comparison states. Wisconsin averaged $5.08 per $100 of payroll, compared to $9.31 for Illinois, $6.71 for Michigan, and $7.77 for Minnesota.

6.6.3 Worker's Compensation

Wisconsin reduced its worker's compensation insurance premiums in October 2004 by 4.15% in recognition of the importance of competitive rates for attracting and retaining business. Overall its rates have fallen 33% since 1994. See the table in the Appendices titled "A Comparison of Worker's Compensation Premium Rates (Rates represent actual cost per $100 payroll." It compares Wisconsin's rates over a number of industries with those rates of Illinois, Michigan, and Minnesota.[129] In the majority of industries, Wisconsin's rates were lowest, and, as an average, its rates were also lowest: $3.75 per $100 of payroll, compared to $6.92 for Illinois, $5.14 for Michigan, and $4.71 for Minnesota.

6.6.4 Worker's Benefits

There are a number of workforce issues related to benefits that are of major concern to Wisconsin's manufacturers who are trying to compete globally. Consider this summary perspective:

> Americans now retire earlier, live longer, and use more medical care than any previous generation – all of which increases the financial resources necessary to assure a secure retirement. Yet individual savings are falling, and many workers contribute minimal amounts to their 401(k) plans. Social Security, which was not designed to provide full retirement benefits, is less able to meet retirement needs. Although many workers are well prepared for retirement, others are unlikely to be able to meet their retirement needs.[130]

The problem was dramatized in early June 2005 when "General Motors said it would eliminate 25,000 jobs by 2008—in part because of the cost of its healthcare commitments, now amounting to about $1,500 per car." Economist Ned Hill, who is working with MPI on the Wisconsin Manufacturing Study, noted that "trouble in the auto industry is also spreading to the auto-parts

[129] Wisconsin Department of Commerce, A Comparison of Worker's Compensation Premium Rates, p. 1. See www.commerce.state.wi.us/BD/MT-FAX-0711.html
[130] Daniel E. Fuerst, Defined Benefit Pension Plans: Creating Value for Your Employees and Employers, p. 2. See www.mmc.com/views2/Fuerst200404.pdf

suppliers, such as Delphi, which are also carrying significant pension and health care costs for young retirees. He cites Delphi's $150-per-hour manufacturing cost as opposed to China's $1-per-hour cost for auto parts."[131]

However, the problem is certainly not restricted to General Motors. It goes "well beyond GM and the other automakers: Some of the Nation's steelmakers, airlines, and old-line manufacturers—and even some municipalities—are also carrying legacy costs—and may face similar layoffs." The problem for, say, a supplier to an industry driver, such as Janesville to General Motors, is that the supplier is trapped by the driver. If a driver industry does not respond to customer needs, its sales will decline, and its suppliers will also lose business. At Janesville, "which makes the Chevy Tahoe and Suburban and GMC Yukon and Yukon XL, recent news speculated that GM plans to produce the next generation of SUVs at the plant. New vehicles could include hybrid gas-electric models, according to reports."[132]

GM announced in January 2004 that it will spend $175 million to upgrade the plant, while "The State of Wisconsin is providing GM with an incentive package valued at $5 million. The package includes: a $2 million grant from the Department of Commerce, a $1 million grant from the Department of Workforce Development, and $1 million grant from the Department of Administration to help with the acquisition of new energy-efficient technology, and a $1 million grant from the Wisconsin Technical College System to provide training to workers."[133]

Here, we see the costs of shifting from the old economy to the new economy being supported by the taxpayers, rather than the industry's customers. In the future, it is less likely that governmental subsidies will be used to save the Old Economy but, instead, will turn to strategies for turning to the higher paying new economy, which has the greater opportunity for providing appropriate retirement and health care benefits.

6.6.5 Utilities

All projections in this Study predated $70/barrel for oil and probably did not foresee energy costs higher than that. These impose pressures on manufacturing that may differ by driver industry, the cluster, and the state. Products of great weight, states in very cold or very warm climates, industries with long supply and/or delivery lines, high energy processes, different purchasing policies—have already dictated product, manufacturing, and marketing changes. Foreign companies are relocating into the U.S. to avoid some of these costs, airline industries are collapsing, auto companies are improving fuel efficiency, and renewable energy industries are burgeoning. Already, there are substantial differences in electricity and natural gas costs among Wisconsin and the eight competing states, as Table 6-13 shows. The increasing cost of energy in the manufacturing process will require increasing attention to the structuring of cluster industries.

[131] Ron Scherer, Rising benefits burden, Christian Science Monitor, June 9, 2005, pp. 2-3. See www.csmonitor.com/2005/0609/p01s01-usec.html
[132] Ron Scherer, p. 2.
[133] GM Will Spend $175 Million to Upgrade Janesville Plant, The Business Journal, January 28, 2004, p. 1. See milwaukee.bizjournals.com/milwaukee/stories/2004/01/26/daily20.html

Table 6-5 Utility Costs for Wisconsin, the Eight Competing States, & the U.S. ($ per Million BTUs)

State	Electricity		Natural Gas	
	Commercial	Industrial	Commercial	Industrial
Wisconsin	$17.82	$11.85	$6.26	$5.40
California	$28.91	$20.94	$7.71	$5.42
Illinois	$20.57	$14.62	$6.75	$5.69
Indiana	$17.67	$11.16	$5.60	$4.88
Michigan	$23.36	$14.93	$4.62	$3.73
Minnesota	$18.84	$13.40	$5.90	$4.38
Ohio	$21.93	$12.82	$6.74	$4.91
Tennessee	$18.69	$11.98	$6.58	$4.90
Texas	$20.11	$12.96	$5.56	$3.97
U.S. Average	$21.52	$13.60	$6.57	$4.71

Source: Karim Khan, State-by-State Utility Review: Find out How Expensive Electricity and Natural Gas Are in the States You're Considering, Business Facilities, pp. 1-3. See www.facilitycity.com/busfac/bf_03_06_cover.asp

6.6.6 Infrastructure

A review of the suppliers to the driver industries in Section 5 demonstrates the obvious—transportation is absolutely essential to the transfer of supplies and products. It is a key factor in managing costs for all components of the industry clusters. MPI's survey of manufacturers indicates satisfaction with the state's extensive highways, airports, railroads, waterways, and urban transits. Or, at least now it is "no problem."

One exception, however, may be the inadequacy of air transport from areas in Wisconsin other than the Milwaukee location. A general criterion for global travel is how much of North America can be covered in a one-day round trip business visit. Departures and arrivals from commuter lines to international airports to final destinations can extend travel times, their costs, make for longer delivery schedules, and thereby weakening competitiveness. If Wisconsin wished to become more friendly to global investment, it might look at ways to increase the number of direct flights within the state to other business centers where global markets are competing.

The energy infrastructure, on the other hand, is of concern to Wisconsin. Unlike California, with a massive alternative energy program, Wisconsin does not appear yet to have included extensive energy concerns in its planning strategies. A focus on transportation and improvements in controlling and lowering costs would benefit every industry, not just manufacturing.

Globalization also requires competitors to provide robust e-commerce capability through company Web sites that are sophisticated adjuncts to their marketing strategies. This means that drivers, industry clusters, and their consumers should all be readily accessible to each other through state-of-the-art broadband access. This is essential in a global economy where all successful product lines will be information based. Integration of information systems is critical to maintain transparent and accurate information exchange with suppliers and customers worldwide.

How do Wisconsin's driver industries measure up to this new global standard in communication? What needs to be done to make them leaders in meeting the demands of customers who want a new level of service and value bundled around the product?

6.6.7 Regulatory Environment

One of the difficulties for manufacturers in Wisconsin is determining who is regulating what, where, and when? The answers appear to differ everywhere. The Brookings Institute claims that "Competitive regions move with alacrity to seize opportunities, mobilize coalitions, and organize resources to pursue common goals. They are flexible and fast." But, Wisconsin's competitive regions *are* fragmented by many local governments, which regulate them. Fragmentation confounds planners and also increases the cost of government because competing jurisdictions duplicate infrastructure.[134]

The Brookings Institute compiled a list from 2002 records to illustrate the sheer numbers of government entities in the 10 states with the greatest number of general purpose governments at the county, municipality, town, and township levels.

Table 6-6 Top 10 States with the Greatest Number of General Governments, 2002

State	General Governments in 2002	Rank in U.S.
Illinois	2,824	1
Minnesota	2,734	2
Pennsylvania	2,633	3
Ohio	2,338	4
Kansas	2,030	5
Wisconsin	1,922	6
Michigan	1,858	7
North Dakota	1,745	8
Indiana	1,666	9
New York	1,602	10

Source: The Brookings Institution, "Behind the Trends: Historical and Policy Influences," Back to Prosperity: A Competitive Agenda for Renewing Pennsylvania, Center on Urban and Metropolitan Policy, p. 66. See www.brookings.edu/pennsylvania

From another perspective, if we look at Wisconsin and the eight competitor states from the standpoint of the number of general governments per capita, we see the following:

Table 6-7 General Governments per Capita in the Top Ten States

State	General Governments, 2002	Population (as of April 2000)	General Governments per Capita
Wisconsin	1,922	5,363,675	1 per 2,790
California	532	33,094,915	1 per 62,208
Illinois	2,824	12,419,293	1 per 4,397
Indiana	1,666	5,220,031	1 per 3,133
Michigan	1,858	9,938,444	1 per 5,349
Minnesota	2,734	4,919,479	1 per 1,799
Ohio	2,338	11,353,140	1 per 4,855

[134] The Brookings Institution, "Behind the Trends: Historical and Policy Influences," Back to Prosperity: A Competitive Agenda for Renewing Pennsylvania, Center on Urban and Metropolitan Policy, pp. 66-67. See www.brookings.edu/pennsylvania

Tennessee	441	5,106,393	1 per 11,579
Texas	1,450	20,851,820	1 per 14,380

Source: U.S. Census Bureau, Government Organization: 2002 Census of Governments, Tables 3 and 6, Vol. 1, No. 1. Issued December 2002. See www.census.gov/prod/2003pubs/gc021x1.pdf

With respect to its primary competitor states, Wisconsin is second to Minnesota in the number of general governments per capita. What this means for manufacturing in Wisconsin is that officials must spend time that other competitor states don't in creating consensus on taxes, zoning, and other factors that businesses consider when deciding to come to a state or to leave it. Looking for cooperative solutions for attracting new business or making the cost of doing business less for existing companies takes time, and time can be a decisive factor in a company's production planning and product roll-out. Government fragmentation is costly in its redundancy, but it can also discourage continued or new business investments if it obstructs business' capacity to respond quickly to markets and their changing needs.

Other regulatory concerns emerged in the MPI Panel and survey participants, who noted that federal labor regulations, environmental compliance—especially in the paper industry—and tort liability were also part of the business climate that in some cases stifled the freedom they would like to have from these add-on costs. They were not specific about exactly what was troublesome, but it could be useful to determine how manufacturers respond to the proposed Assembly Bill 277 and 278, claiming to reform the regulatory climate while upholding important environmental protections.

6.6.8 Exports

Wisconsin's shipments to its top ten export partners for 2003 and 2004 are shown in the following table. (Exports to many other countries are included on the data files of the CD ROM and Web site access provided by the MPI Group; some have very large percent changes, although of relatively small dollar value.) What were the products? And, why were there substantial changes? These could be fruitful areas to explore.

Table 6-8 Wisconsin's Top Ten Export Countries, 2003-2004 (Current $)

Top Ten Destinations	2003	2004
Canada	$4,349,326,335	$4,856,673,803
Mexico	$788,032,717	$1,064,413,517
Japan	$788,032,717	$624,626,959
China	$548,227,736	$583,303,312
United Kingdom	$493,975,548	$517,304,040
Germany	$448,464,025	$460,588,169
France	$371,092,749	$364,564,630
Belgium	$262,652,736	$330,802,889
Australia	$279,936,693	$325,525,193
South Korea	$258,387,441	$273,018,118
Total All Countries	$11,509,835,058	$12,706,343,147

Source: Source of Data: Source of data: US Census Bureau, Foreign Trade Division prepared by WISER.

Source: Wisconsin Department of Commerce, Wisconsin Export Data, pp. 1-2. See www.commerce.state.wi.us/IE/IE-ExportData.html. And Excel spreadsheet for all product categories from 1996-2004 is available at the site via hot link.

6.6.9 International Trade Issues

Nevertheless, in spite of these promising figures for Wisconsin and other states, the U.S.'s international trade balance is in trouble. In a report prepared by Jeremy Leonard et al. for the National Association of Manufacturers, the author points out that the international trade balance has shifted sharply to the detriment of U.S. manufacturers. Since 1997, exports relative to gross domestic product have stagnated, while imports have risen dramatically, mainly due to trade with China and Mexico. The trade deficit increased from $31 billion in 1991 to $418 in 2002, and it is approaching $650 billion for 2005.

In an attempt to discover where the trade barriers and opportunities might lie, the National Association of Manufacturers looked at the overhead costs of nine of its largest trading partners and those of the United States. The overhead cost index for the U.S. on raw cost was 24.30, while the nine partners average 19.30—Germany the highest at 29.60, and China the lowest at 3.50. The table below also displays corporate, employee benefits, tort, natural gas, and pollution abatement costs of the nine partners as greater or lesser than those same costs in the United States.

Table 6-9 Effect of Key "Overhead Costs" on Raw Cost Index of Nine Largest U.S. Trade Partners, 2002 (in U.S. dollars per hour)

	United States	Avg., 9 Partners	Canada	Mexico	Japan	China	Germany	United Kingdom	South Korea	Taiwan	France
Raw cost Index	24.30	19.30	27.57	8.11	16.92	5.34	29.60	28.30	23.96	16.41	26.50
Corporate tax Rate	-	-5.6%	-3.4%	-6.0%	2.0%	-15.0%	-0.4%	-10.0%	-10.3%	-15.0%	-5.7%
Employee Benefits	-	-5.5%	-4.8%	-9.4%	-9.4%	-12.6%	3.6%	-5.1%	9.0%	-11.5%	10.7%
Tort Costs	-	-3.2%	-3.1%	N/A	-3.3%	N/A	-0.7%	-3.4%	N/A	N/A	-1.3%
Natural Gas Cost	-	-0.5%	-6.0%	-2.3%	12.5%	-2.3%	0.6%	2.1%	4.1%	15.3%	-4.2%
Pollution Abate-Ment	-	-3.5%	-2.8%	N/A	-2.3%	N/A	-2.4%	-3.0%	N/A	N/A	-1.5%
Manufacturing production costs relative to the United States accounting for differences in overhead costs (dollars per hour)											
Effective Cost Index	**24.30**	**16.02**	**22.46**	**6.19**	**16.64**	**3.50**	**29.77**	**23.14**	**22.67**	**12.85**	**25.77**

Source: Author's calculations based on data in subsequent tables and charts

Note: Data for tort costs and regulatory compliance costs are limited to the industrialized partners. Conservative assumptions have been made in estimating the missing values, as described in later sections. Thus, the absence of these data likely understates the overall cost advantage of U. S. trading partners.

Source: Jeremy A. Leonard, et al., How Structural Costs Imposed on U.S. Manufacturers Harm Workers and Threaten Competitiveness, Manufacturers Alliance/MAPI, prepared for the Manufacturing Institute, National Association of Manufacturers (NAM) and the Manufacturers Alliance (MAPI), 2003, p. 2. See www.nam.org/s_nam/bin.asp?CID=89&DID=227525&DOC=FILE.PDF

Leonard et al. interpret that the most critical obstacles to U.S. manufacturing are these:

Excessive corporate taxation

Escalating costs of health and pension benefits

Escalating costs of actual or threatened tort litigation

Escalating compliance costs for regulatory mandates, particularly those related to workplace safety, pollution abatement, and corporate governance

Rising energy costs, particularly natural gas (they did not foresee in 2002 that oil would be upwards of $70/barrel in the next few years)[135]

These are the same costs cited earlier in this Section by MPI's Panel and survey members and the backup statistics. In short, the problems with manufacturing costs within the state extrapolate to the costs of doing business outside of the state.

If Wisconsin's future is in global participation, then these costs become important.

In addition to concentrating on the principal drivers and their clusters, it may be useful to think also about the size of these firms. Stated earlier, Wisconsin, among the nine competing states, has the largest number of drivers that are small. Therein may lie an opportunity where technical support they cannot afford could be provided by outside agencies for some major change toward the new economy.

The U.S. Trade Administration reports from the Department of Commerce's Exporter Data Base that, of the 238,284 companies that exported goods in 2001, 89 percent of them were small businesses with fewer than 100 employees, 5.7 percent were medium-sized companies of 100 to 500 employees, and just 3 percent were comprised of companies of 500 or more employees. The report elaborates on the composition of U.S. export companies with these facts.

- Large firms account for a majority of exports, 70%
- Small- and medium-sized companies comprise roughly 30% of U.S. exports
- Small- and medium-sized revenues rose 77% from 1992 to 2001
- The number of small- and medium-sized businesses grew twice as fast as the number of large company exporters between 1992-2001
- The number of small- and medium-sized companies rose 250% from 1987-2001
- More than two-thirds of the U.S. exporters have fewer than 20 employees.[136]

Small firms have some advantages over larger ones—greater flexibility to respond to change, greater independence—but they also are vulnerable when lower in the supply chain to the viscissitudes of the economy's effect on their Tier 1 and Tier 2 customers: so goes their business, so goes that of the smaller businesses. And, as mentioned earlier, the Subchapter S owner may

[135] Jeremy A. Leonard et al., How Structural Costs Imposed on U.S. Manufacturers Harm Workers and Threaten Competitiveness, Manufacturers Alliance/MAPI, prepared for the Manufacturing Institute of the National Association of Manufacturers, 2003, p. 1. See www.nam.org/s_nam/bin.asp?CID=89&DID=227525&DOC=FILE.PDF

[136] U. S. Department of Commerce, "Summary Graphs," Small & medium-Sized Exporting Companies: A Statistical Handbook: Results from the Exporter Data Base, pp. 6-11. See www.ita.doc.gov/td/industry/otea/docs/SMEseminar.pdf

feel doubly taxed because of how business and personal income are treated under S Corp regulations.

So, what are the prospects of encouraging more small firms to become identified with specific industry clusters? As suppliers, their growth can spur the drivers' growth. And, in turn, if the drivers grow, the suppliers grow. Wealth will be created in Wisconsin. This is one of the challenges and opportunities that Wisconsin, especially, must address as the home to a preponderance of small manufacturing firms.

6.6.10 What Are Wisconsin's Strengths, Weaknesses, Opportunities, and Threats?

First, let's hear, again, what Wisconsin manufacturers are saying. What they say may provide some insight into their awareness of the struggle they are in to leave the old economy and join the new economy and what they know or need to know to move successfully through that transition.

At the MPI Panel in Milwaukee on May 17, 2005, manufacturers stated their ideas about barriers to competitive growth, changes to be made, and policies and programs in place that had been helpful. (MPI has a complete transcript of the session.)

- Manufacturing has a poor image professionally; therefore, it is difficult to attract and then retain high quality labor.
- Taxes of all types are exorbitant in Wisconsin, compared to border and other competitor states.
- Inability to contain manufacturing costs, due to spiraling health care, liability insurance, on-the-job training, and new machinery and technology costs.
- A two-tiered workforce. Older, reliable, hard-working employees are retiring soon. Their potential replacements are not dedicated to the work ethics of their forerunners and are increasingly difficult to hire and retain.

To improve their competitive position, both in domestic and foreign exports, they advocated these changes.

- Reinstate the state tax incentives to encourage the purchase of new equipment and higher technology.
- Subsidize automated manufacturing.
- Provide state-funded on-the-job training, especially for new employees.
- Guarantee freedom from product, workplace, and environmental liability.
- Improve planning to relocate new business in Wisconsin, especially in the southwest.
- Aid in linking to new export distribution channels.

- Overcome ethnic language blocks through pre-employment training or English classes to provide more high quality workers.

The panel, however, recognized state policies and programs that had been helpful to their manufacturing progress.

- The Wisconsin Manufacturing Extension Partnership has contributed notably to their present well-being.
- Lean Manufacturing practices made significant contributions to containing costs.
- The engineering schools are producing excellent employees.
- Wisconsin's quality-of-life has been a powerful attraction to the state's superior workforce.
- Adding value to exported products to gain a competitive edge over prices.
- Restructuring of hiring and employee management practices, enhancing individual growth, first, before company growth.

The written survey of Wisconsin executives also reflected concerns about labor, ranking five tiers of employees with respect to cost, availability, and skill. Respondents ranked these items as either "4" (a problem) or "5" (a major problem):

Percent of On-Line Respondents Who Identified Labor Issue as a Problem (4) or a Major Problem (5)

	Cost	Availability	Skill
Entry-level	28.0	62.7	57.3
Semi-skilled production	38.7	66.7	57.3
Skilled/technical	60.0	76.0	62.3
Entry-level management	28.4	40.5	44.6
Professional management	45.4	51.4	47.3

These data identify skilled / technical labor as the most critical labor problem for manufacturers across all three dimensions. The cost of semi-skilled labor is viewed as a problem for employers, and is a reflection of global competitive pressures. Interestingly, nearly half of the employers indicated that the cost of professional managers was a challenge.

These manufacturers, however, listed by percent of effort the strategies they would undertake to encourage profitable growth over the next five years:

Strategy	**Percent Effort**
Improved operations (e.g. speed, cost, quality, delivery)	81.3%
New products	56.0%
New product markets or distribution channels	56.0%

New features/services on existing products	50.7%
Enhanced service and support	48.0%
Increased customization of products and services by staff	42.7%
Enter new geographic markets	40.0%

They reported that their major trends toward improving competitiveness are primarily three. Two-thirds of the companies indicated they were "very likely" to purchase new equipment over the next five years. But, they are not going to reduce their outsourcing, which, once more, might mean that some of the business functions will leave Wisconsin to go to those new sources. And, approximately 75% of these are going to emphasize Lean Manufacturing and Lean and Six Sigma methodologies to improve their competitiveness, with which they have already experienced great success.

Again, the survey did not generate the methods by which these goals would be undertaken. But, if the California prediction holds, then a good portion of these strategies might be reached through offshore "basic" operations and onshore "customized" production.

The California Bay Area Economic Forum, which came to that conclusion, made these requests to improve California's competitiveness:

> We ask manufacturers to thoroughly assess the full costs and benefits of offshoring, recognizing that it is not a panacea, and to strive for world-class productivity levels. We ask the government to relieve excessive burdens on California manufacturers, help build the vocational skills needed to ensure they are competitive, and promote the state as a competitive site for manufacturing. We ask both to join in a vision with short-, medium-, and long-term goals and monitor them with a scorecard.[137]

Finally, the Council on Competitiveness responded to this question, "How Can Manufacturers Compete?" In its report it stated bluntly, "Innovation will be the single most important factor in determining America's success through the 21st century."[138] Referring specifically to manufacturing, the report pointed out that, "manufactured products remain the primary currency of world trade." It reemphasized this report's main thrust—to innovate—by saying, "We should begin to design and implement a new foundation for high-performance production. This means deploying new manufacturing technologies as fast as they become available. It means integrating new designs, processes, and materials in a modular fashion. It means adopting new human, organizational, financial and policy models for a robust future for manufacturing in America."[139]

In Wisconsin, the statewide business climate is the broad milieu of threats, weaknesses, strengths, and opportunities in which the drivers and their clusters operate—but, they are

[137] Bay Area economic Forum, pp. 2-3.
[138] Council on Competitiveness, "Introduction," InnovateAmerica, December 2004, p. 5. See www.compete.org/pdf/NII_Final_Report.pdf
[139] Council on Competitiveness, "3. Infrastructure—A Platform for the Future," InnovateAmerica, p. 45. See www.compete.org/pdf/NII_Final_Report.pdf

different for each of its seven economic regions. And, that's where to look next for Wisconsin's manufacturing future.

Critical Issues

● Wisconsin needs to address once and for all manufacturers' perceptions about tax and regulatory burdens. Significant disparities should be addressed to policy makers.

● The State must find innovative ways to address the critical labor issues it faces: a labor pool that does not respect manufacturing as a career path; a lack of trained replacement workers for those retiring; well educated and skilled workers; diminishing numbers of available employees; a challenged work ethic among younger workers; and health care and pension benefit costs that are driving a wedge between labor and management.

● Energy costs will continue to rise, and in the absence of a robust federal alternative energy plan, Wisconsin should, as California and other states are doing, work on its own strategies for alternatives to fossil fuels for energy cost containment, not only for its manufacturers' own applications but also in new global product lines.

● In the new economy, information is power. Customers will pay for the products and services that solve their problems, that shorten their to-do lists. Wisconsin manufacturers who adjust to this reality will prosper.

● Dedicated intermediaries in the State are needed to work continuously with manufacturers to stay abreast of global trends in the industry, the economy, evolving customer needs and demands. Those intermediaries must have the best, most current information available at their disposal and get it into the hands of Wisconsin's manufacturers. With it, management can continuously update its strategies and action plans, transforming the information into new wealth in the state, defining Wisconsin as the premier manufacturing state in meeting customer needs in the new economy.