MONTANA MANUFACTURERS INFORMATION SYSTEM

MONTANA MANUFACTURERS SURVEY

RESULTS FROM 2004-2005

SURVEY AUTHORS

Thale Dillon
Bureau of Business and Economic Research

Charles Keegan III
Bureau of Business and Economic Research

Bob Campbell
Montana Business Connections

John Baldridge
Bureau of Business and Economic Research

This survey is conducted through the Montana Manufacturers Information System, a joint project of the Bureau of Business and Economic Research and Montana Business Connections.

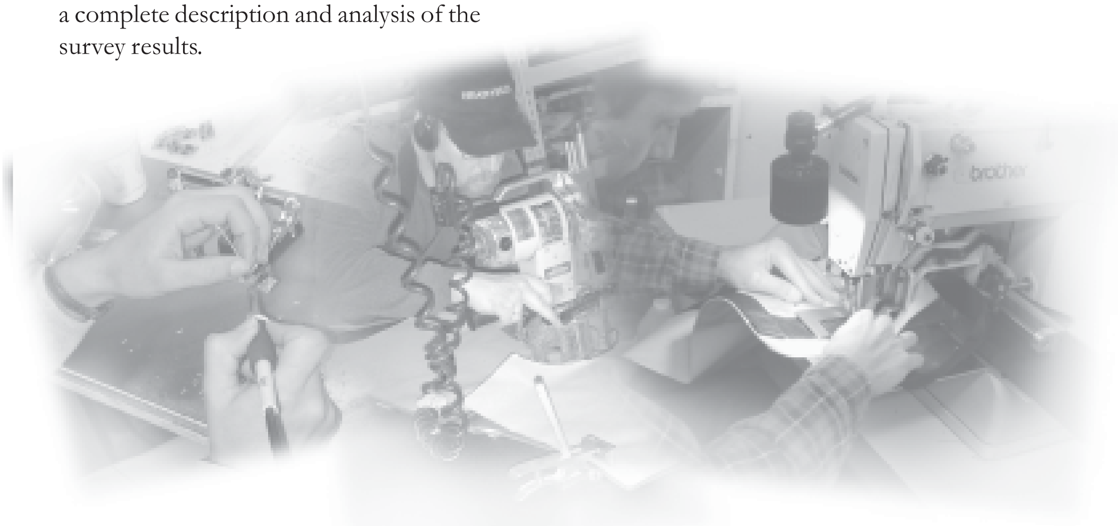
The Bureau of Business and Economic Research at The University of Montana-Missoula started an annual survey of Montana's largest manufacturers in 1999. Conducted each year in December and January, the survey queries manufacturers on a variety of business issues pertaining to both the year just completed and their outlook for the coming year. The results shown here are from the sixth such survey, completed in January 2005. This year's questionnaire was sent to 230 of Montana's largest manufacturing facilities (measured by the number of people employed), with 151 (66 percent) of the firms completing and returning it.

The information collected through the manufacturers survey is featured in the Bureau's annual Economic Outlook Seminar, where it is used in forecasting conditions for the industry for the upcoming year. While partial information is published in the Outlook booklet and in BBER's Montana Business Quarterly, this publication provides a complete description and analysis of the survey results.

Montana Manufacturing: An Overview

The manufacturing sector includes traditional heavy industries as well as a broad array of lighter production activities, ranging from the assembly of sophisticated high-technology equipment to small cottage industries. Overall, the state's manufacturing sector:

- produces about $5 billion in output annually,
- directly employs over 24,000 workers earning over $1 billion in annual labor income,
- includes over 2,000 entities such as factories, logging companies, and at-home cottage industries,
- pays high wages with employees averaging about $34,000 per year (compared to an average $25,000 per year for all Montana workers) and,
- accounts for over 20 percent of Montana's economic base.



BUREAU OF BUSINESS AND ECONOMIC RESEARCH

Visit our Web site for a directory of Montana manufacturers.

www.mmis.umt.edu

BUREAU OF BUSINESS & ECONOMIC RESEARCH
The University of Montana
Gallagher Building, Suite 231
32 Campus Drive #6840
Missoula, Montana 59812-6840
Phone: 406-243-5113
FAX: 406-243-2086

Manufacturing Categories

Although the manufacturing industry consists of hundreds of highly specific categories, for the purpose of this report, we have divided the industry into five segments:

Wood/Paper
Facilities that harvest and/or process timber into lumber, plywood, log homes, pulp and paper, and posts and poles, as well as facilities that further process primary wood products into furniture, laminated beams, trusses, window and door frames, and wood carvings.

Chemicals/Petroleum/Others
Includes a wide range of facilities, such as those manufacturing products by transforming organic and inorganic raw materials by a chemical process (chemical manufacturing) or by transforming mined or quarried nonmetallic minerals such as sand, gravel, stone, or clay (nonmetallic mineral product manufacturing), as well as facilities engaged in the transformation of crude petroleum and coal into usable products (petroleum and coal products manufacturing), and facilities engaged in smelting and refining ferrous and nonferrous metals (primary metal manufacturing).

Food/Others
Facilities that manufacture food and beverages, including primary processors of Montana's crops and livestock, as well as those producing for retail sale. Examples include sugar beet plants, flour mills, bakeries, and dairies.

Machinery/Equipment
Facilities engaged in manufacturing machinery, equipment or instruments. Included here are industrial and commercial machinery, computer equipment, electrical equipment, transportation equipment, and fabricated metals.

All Others
Facilities engaged in mostly light manufacturing such as plastics products, sporting goods, games and toys, apparel, and jewelry, as well as those engaged in printing or performing services for the printing trade such as bookbinding.

The Year 2004 in Review

Last year's survey indicated a cautious optimism on the part of manufacturers with respect to their expectations for 2004. Half of responding companies expected 2004 to improve over 2003, while 38 percent anticipated approximately the same conditions. Only 12 percent expected 2004 to be worse than 2003. These survey results indicate that 2004 met most expectations and even exceeded some.

Although total production did not increase by much in 2004, 62 percent of firms saw their production increase somewhat. Only 19 percent reported any curtailment of production during 2004, a considerable reduction from 2003 when 33 percent reported curtailments. Furthermore, sales were up for 68 percent, with 58 percent experiencing higher profits. In short, 2004 appears to have been a year of economic recovery for Montana manufacturers.

One-third of responding firms hired more workers in 2004, while 48 percent stayed the same size. Only 19 percent experienced any job elimination, a considerably lower percentage than in 2003.

Only 7 percent permanently eliminated production capacity in 2004, and over one-third (36 percent) of respondents released new product lines, while close to two-thirds (61 percent) reported making major capital expenditures (compared to 38 and 51 percent, respectively, in 2003).

General Outlook for 2004

2004 was a relatively good year for Montana manufacturers, with some firms looking ahead to 2005 with moderate optimism and hoping for a year of further improved business conditions. Down slightly from last year's survey, 47 percent of respondents expected increased activity in 2005, while another 34 percent believed conditions would remain about the same (Figure 1).

More than half of all respondents anticipated increases in production and sales, however, less than half (45 percent) expected higher profits in the coming year. Forty-six percent expected to make major capital expenditures. The most optimistic sector was **machinery/equipment**.

Tempering this cautious optimism were signs that some firms had concerns about the coming year. Only 47 percent of the respondents were expecting prices to increase, while another 36 percent anticipated prices to remain steady. Similarly, while 57 percent of respondents expected employment levels to remain the same, 13 percent foresaw a reduction.

Figure 1
Overall Outlook for 2005

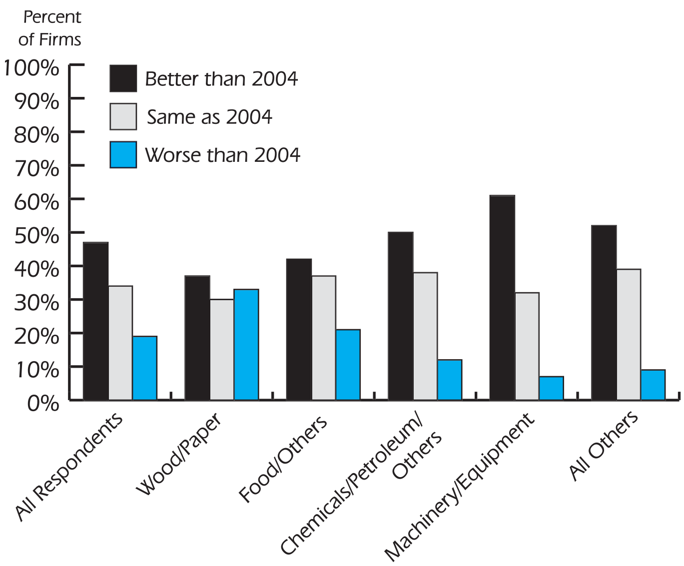
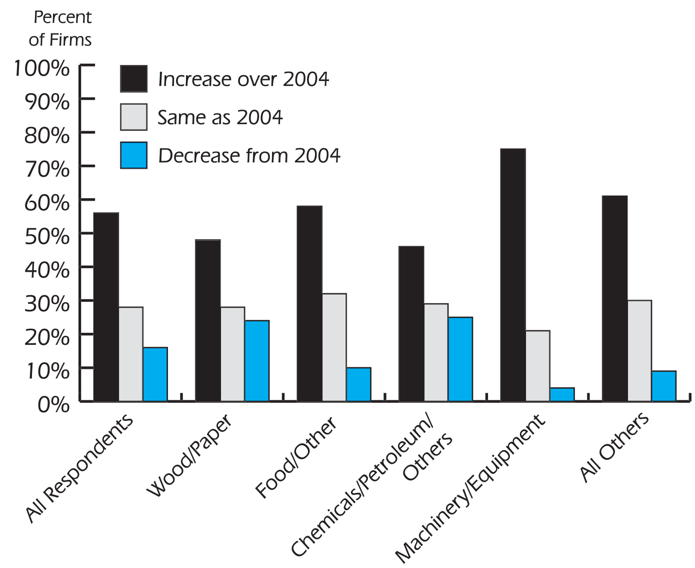


Figure 2
Production Outlook for 2005



Outlook for Operations in 2005

Production

Fifty-six percent of Montana's manufacturers expected increased production levels in 2005, compared to 53 percent in 2004. More **machinery/equipment** firms expected a production increase than firms in any other sector, followed by **all others** and **food/others**. At least 58 percent of the respondents in these three sectors expected increased production levels in 2005. Twenty-eight percent of all respondents anticipated production to remain about the same, compared to 36 percent of last year's respondents. In terms of expected production declines, these were concentrated in the **wood/paper** and **chemicals/others**, where at least 24 percent were expecting decreased production in 2005 (Figure 2).

Sales

Fifty-seven percent of Montana's manufacturers expected 2005 sales to outpace those of 2004. This figure is slightly above last year's expectations (55 percent). However, the portion of respondents expecting declining sales has gone up, from 12 percent last year to 18 percent on this year's survey. Once again, the **machinery/equipment** sector stands out, where 74 percent of the respondents anticipated higher 2005 sales. The **all others** and **food/others** sectors also appeared optimistic with a strong majority (70 percent and 63 percent, respectively) reporting they were looking forward to stronger sales in 2005. By contrast, 32 percent of firms in the **wood/paper** sector expected lower sales in 2005 (Figure 3).

Figure 3
Sales Outlook for 2005

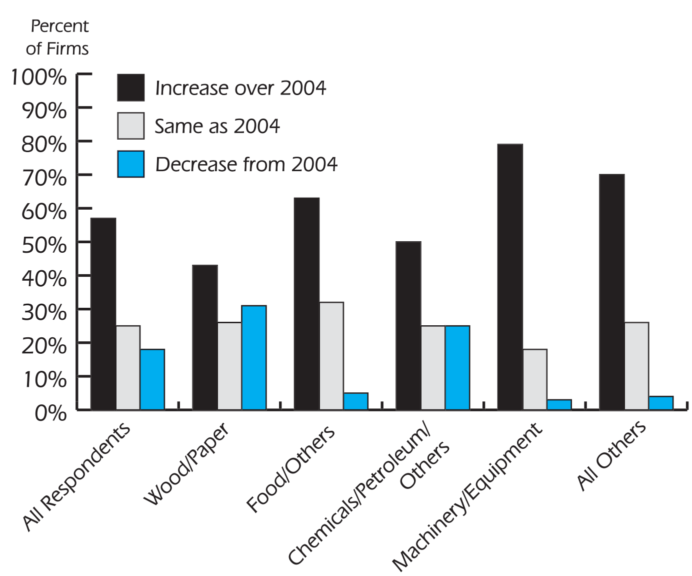
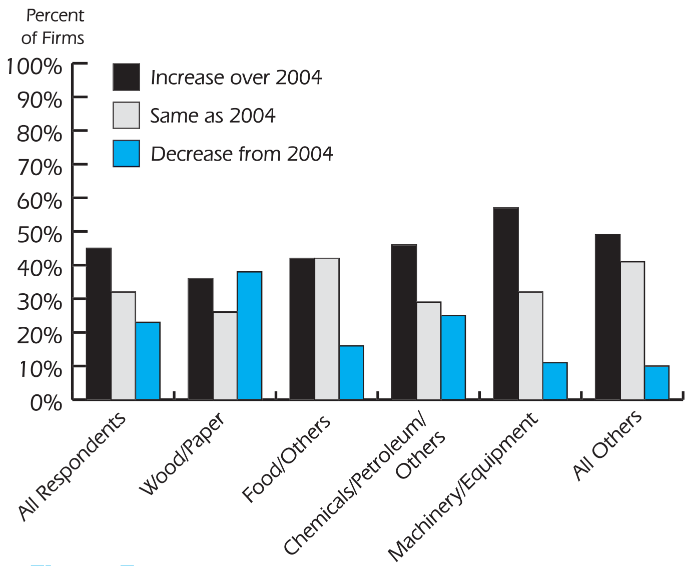


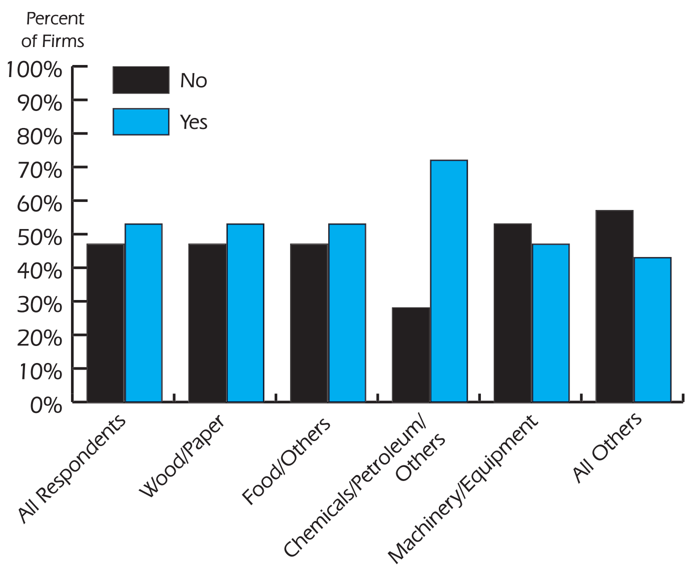
Figure 4
Profit Outlook for 2005



Profit

The profit outlook for 2005 may appear somewhat less optimistic than last year, given that less than half (45 percent) of respondents expected 2005 profits to show an increase over 2004. However, 2004 was a relatively good year, making this a positive outlook. The **machinery/equipment** sector was notable, with 54 percent of respondents expecting increased profits for 2005. Only in the **wood/paper** sector did a notable portion express concerns about profits in 2005 – 37 percent of the respondents in this sector expected profits to decline (Figure 4).

Figure 5
Outlook for Major Capital Expenditures in 2005

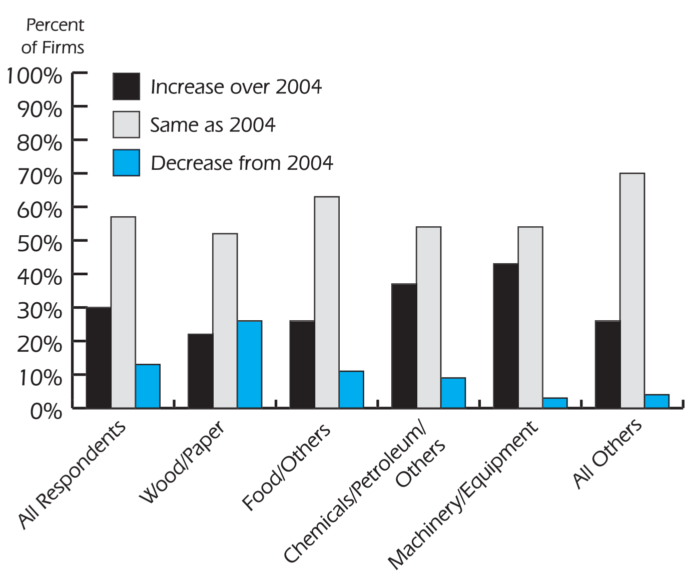


Major Capital Expenditures

With regards to plans for major capital expenditures, survey respondents appeared more optimistic this year than they were last year. Fifty-three percent indicated intentions of making such expenditures in the upcoming year, up from 41 percent of last year's respondents. However, while 41 percent indicated in 2003 that they intended to make capital improvements in 2004, a full 62 percent later reported actually making such investments.

For 2005, firms in the **chemicals/petroleum/others** sector were most likely to report intentions of making major capital expenditures (72 percent), while only in the **machinery/equipment** and **all others** sectors did less than half of respondents indicate an intention of adding such improvements (Figure 5).

Figure 6
Employment Outlook for 2005



Employment

Thirty percent of respondents to the 2004-2005 survey expected to increase employment in 2005, compared to 27 percent who had such expectations for 2004. Additionally, fifty-seven percent of respondents anticipated their employment levels in the upcoming year to remain even with 2004, down from 65 percent of last year's respondents. However, 13 percent—the same as last year—expected reduced employment in the upcoming year. The **machinery/equipment** sector in particular appeared to be expecting expansions, as 40 percent of respondents in this sector indicated intentions of adding employees in 2005. Twenty-six percent of firms in the **all others** sector expect to increase employment, while between 8 percent and 26 percent of other sectors anticipated some employment reduction in 2005 (Figure 6).

Figure 7
Significant Worker Shortage in 2004?

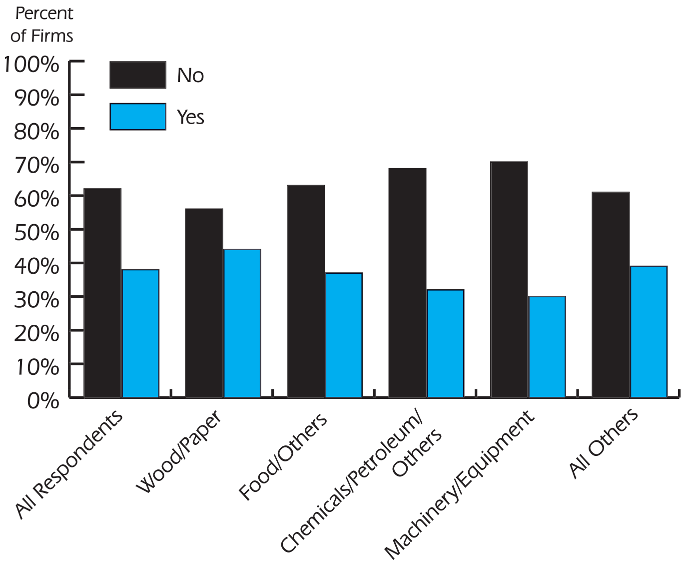
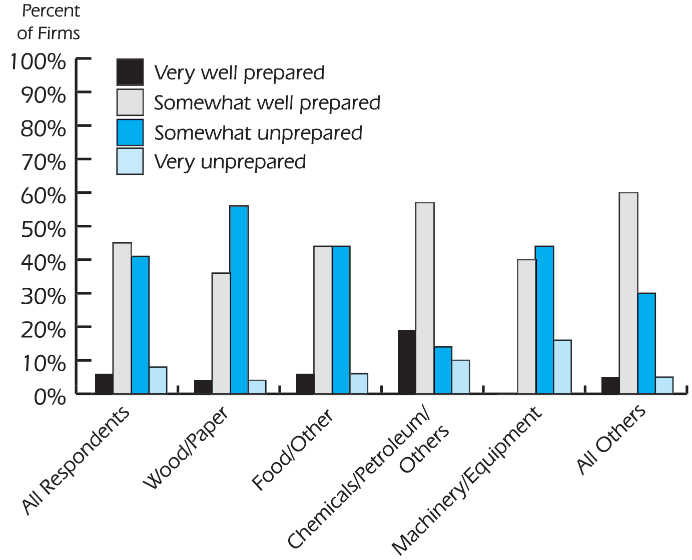


Figure 8
Level of Preparedness of New Hires in 2004



Worker Availability and Preparedness

One section of the manufacturers survey involves the availability of workers, as well as questions regarding worker preparedness and productivity.

Generally, respondents to the 2004-2005 survey indicated that worker availability has become an increasing problem. A full 37 percent of responding companies reported a significant worker shortage, which constitutes a significant increase from the 22 percent who reported a shortage last year. This is an even larger portion than the nearly 33 percent of respondents with worker shortage problems in 2001. This problem was more prevalent for firms in the **wood/paper** sector, but all sectors reported some degree of worker shortage in 2004 (Figure 7).

When it comes to the preparedness of the new hires made in 2004, this year's survey showed a deterioration compared to last year's levels. Only 5 percent indicated that new employees hired in 2004 were *very well prepared* (a decrease from 6 percent in 2003), although 7 percent of respondents reported their new hires as *very unprepared* (down from 8 percent in 2003). Overall, 45 percent of respondents were satisfied with the level of preparedness in their new hires, while 43 percent were not. Twelve percent were undecided. One sector was particularly notable: the **machinery/equipment** sector did not report hiring any workers who were *very well prepared*, and respondents here felt that 50 percent of new hires were somewhat unprepared. In both the **all others** and the **chemicals/petroleum/others** sectors, over half of respondents reported hiring new employees who were either *very well prepared* or *somewhat well prepared* (Figure 8).

Respondents to the 2004-2005 Manufacturers Survey were asked about the general skill level exhibited by their new hires for 2004. Respondents were provided with a list of six general skill areas and asked to rate each one based on whether or not exhibited skill levels met their needs. When asked about work ethics and personal responsibility, 40 percent of respondents indicated that their new hires fell below their needs, while 45 percent felt their new hires met their needs. Only 11 percent had new hires that either somewhat or significantly exceeded their needs, a considerable deterioration from last year. In terms of math skills, 50 percent felt their new hires' math skills met their needs, compared to 67 percent in 2003. Additionally, only 7 percent felt these

skills exceeded their needs, down from 12 percent last year. Written communication skills were rated as exceeding needs by a mere 4 percent of firms (down from 10), while 34 percent found skills in this area to be deficient. Verbal communications skills, while meeting the needs of 69 percent, were found deficient by 22 percent. This was the only area showing improvement over last year.

Basic job-specific skills, such as electrical, mechanical, wood working, and construction have fared the best in the past, however, only 6 percent of this year's respondents found their new hires' skills in this area to somewhat exceed their needs, while none reported skills significantly exceeding their needs. Although 44 percent indicated that the skills of their new hires meet their needs, 43 percent indicated deficient skills. Computer skills, while not applicable to over 20 percent of respondents, met the needs of 40 percent of respondents, while 33 percent found these skills deficient. Only 19 percent of respondents hired people with computer skills that exceeded their needs.

Tax Issues

With 2005 a legislative year, the Manufacturers Survey included some questions that dealt with issues likely to be raised in the Legislature. The first of these was taxes: survey recipients were given a list of six state taxes and were asked to rate each in terms of its importance to their business.

The business equipment tax turned out to be the most important to respondents, with 66 percent indicating it as *very important* and 28 percent indicating it as *somewhat important*, for a total of 94 percent. In fact, only two respondents found the business equipment tax to be *very unimportant* to their business. The real property tax was indicated as important to 88 percent of respondents (56 percent *very important* and 32 percent *somewhat important*), the corporate income tax was important to 85 percent (63 percent *very important* and 22 percent *somewhat important*), and the personal income tax was indicated as important to 84 percent (50 percent *very important* and 34 percent *somewhat important*). Other taxes that were listed include the capital gains tax (*very* or *somewhat important* to 67 percent), and the inheritance tax (*very* or *somewhat important* to 43 percent) (Figure 9).

Other Business-Related Issues

Beyond those questions regarding recent and expected operations, manufacturers are asked each year to identify major issues they expect will impact their operations *in the coming year*. This is an open-ended question which clearly specifies the time frame (in this case the issues are restricted to 2005). In this year's survey, 23 percent of respondents left it blank. It is common in survey research for open-ended questions to have a higher non-response rate than the rest of the survey.

Another question which was included for the first time on this year's survey asked respondents to rank a list of business-related issues. The list specified eight issues, selected based on last year's responses to the "major issues" questions, with no time frame indicated. This question had a non-response rate of 3 percent.

The difference in specified time frame, as well as the difference in response rate, and by extension the difference in willingness to write in a response as opposed to simply marking a box, are the reasons for the seemingly inconsistent results obtained from these two questions.

Figure 9
The Importance of State Taxes to Montana Manufacturing Firms

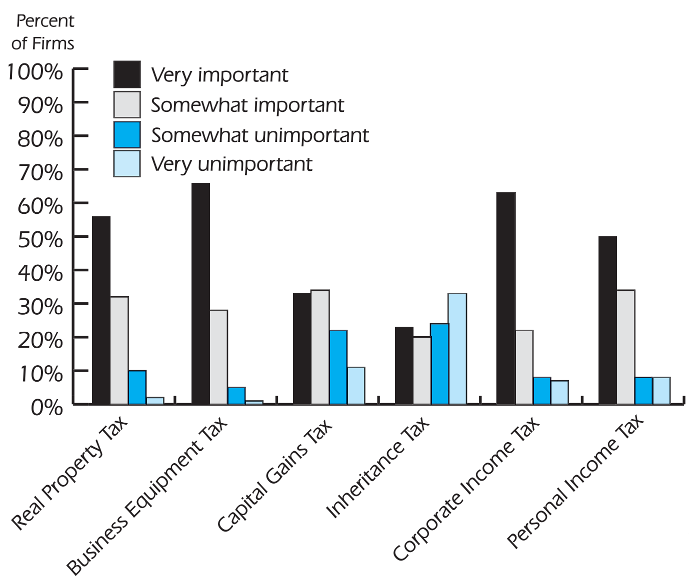


Figure 10
Major Issues for 2005

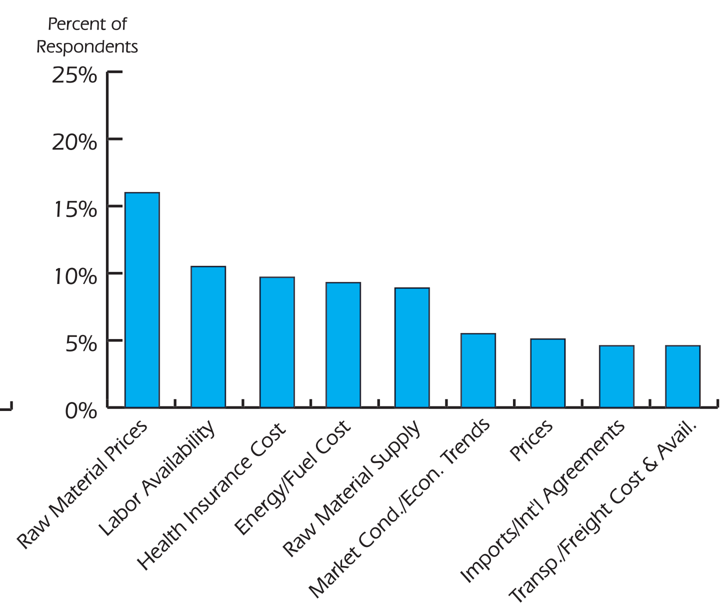
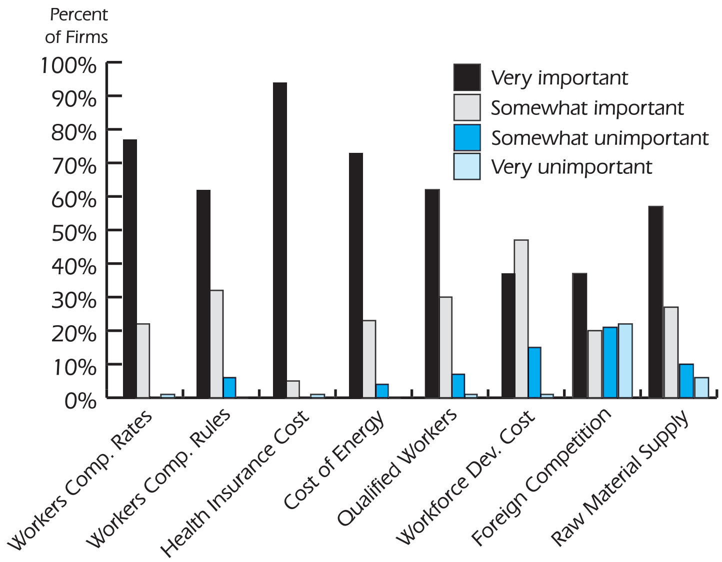


Figure 11
Importance of Various Business Issues to Montana Manufacturing Firms



Listing of Major Issues for 2005

In last year's survey, the primary concern was the overall condition of the national economy. Another issue was the rising cost of inputs, both when it comes to the price of raw materials and employee–related costs, such as health insurance.

This year, the effects of high raw material prices were the major concern for 16 percent of respondents, along with raw material availability at 9 percent. These issues were found primarily in the forest products industry in the 2003-2004 survey and related to timber availability. According to the recent survey, however, they now impact users of a wide array of raw materials, including steel and petroleum-based products such as plastics. Labor availability, addressed separately elsewhere in this publication, was a concern for 11 percent, and the cost of health insurance concerned 10 percent. Energy and fuel costs (9 percent) are still of concern, but have taken the back seat to more pressing issues, as have prices and international competition and trade agreements (5 percent each). A new issue to emerge is the cost and availability of transportation/freight (5 percent) (Figure 10).

Rating of Business-Related Issues

Survey recipients were given a list of eight business-related issues other than taxes and were asked to rate each in terms of its importance to their business. There was no specified time frame, indicating the more general and enduring nature of these issues as opposed to those detailed above.

Under this approach, the issue found most important by respondents was the increasing cost of health insurance. Ninety-four percent of respondents indicated this was *very important* to their business, with an additional 5 percent finding it *somewhat important*. Only 1 percent indicated that the cost of health insurance was *very unimportant* to their business.

Workers' Compensation rates were indicated as v*ery important* by 77 percent and as s*omewhat important* by 22 percent. Again, only 1 percent found Workers' Compensation rates to be *very unimportant*. By comparison, Workers' Compensation rules were important to 94 percent of respondents (62 percent *very important* and 32 percent s*omewhat important*). The cost of energy was important to 96 percent of respondents, while 92 percent indicated that worker availability was important to their business. Outside of this cluster, raw material availability was indicated as important to 84 percent of responding firms, as was the cost of work force development, while the threat of foreign competition came in last, important to 57 percent (Figure 11).

About the Montana Manufacturers Information System

Because of Montana's large size and sparse population, Montana manufacturers are often unaware of other manufacturers within the state, leading to missed business opportunities. The primary goal of the Montana Manufacturers Information System (MMIS) is to eliminate this situation by providing one place where detailed and up-to-date information about Montana manufacturers and service providers can be found. A second goal is to provide additional exposure to Montana manufacturers' products and capabilities. A third goal is to collect and report accurate information about manufacturing in Montana, helping people make informed decisions.

MMIS is located at The University of Montana's Montana Business Connections and has been developed in cooperation with the Bureau of Business and Economic Research, Montana State University's Montana Manufacturing Extension Center, and the Montana Department of Commerce. The system allows for the inclusion of detailed information regarding products, processes, equipment, certifications, and licenses. MMIS currently contains data on over 1,200 facilities, and those firms listed in the MMIS can enter the system through a password-protected program to add and update their profiles.

MISSOULA 1893 The University of Montana