Results of the 2003-2004
Montana Manufacturers Survey

In 1999, the Bureau of Business and Economic Research at The University of Montana-Missoula began surveying Montana's largest manufacturers. 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 upcoming year. The results shown here are from the fifth such survey, completed in January 2004. This year's questionnaire was sent to 180 of Montana's largest manufacturing facilities (measured by the number of people employed), with 111 (62 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.

An Overview of Manufacturing in Montana

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

- produces about $4 billion in output annually,
- directly employs over 25,000 workers earning more than $900 million 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 $35,000 per year (compared to an average $26,000 per year for all Montana workers) and,
- accounts for over 20 percent of Montana's economic base.

MONTANA MANUFACTURERS INFORMATION SYSTEM
www.mmis.umt.edu

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.

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The Year 2003 in Review

Based on the responses to last year's survey, expectations for 2003 were somewhat optimistic within Montana's manufacturing community, with at least half the companies contacted in 2002 anticipating improved business conditions for the year ahead. However, this year's survey results indicate these expectations were not met. While 47 percent of the responding firms reported increased production, and another 47 percent noted higher sales, only 36 percent saw increased profits in 2003.

The manufacturing industry fared slightly better in Montana than it did nationally in 2003. However, even in Montana, firms struggled against economic forces often beyond their control. While 50 percent of the firms queried reported that their employment levels stayed the same, 32 percent noted a decrease in number of workers, making job elimination more common than in 2002. This trend is consistent with the fact that 33 percent of firms curtailed production at some point during the year, and one in 10 firms permanently eliminated some production capacity.

On the positive side, 38 percent of the responding firms reported the introduction of new product lines, and 51 percent reported making major capital expenditures during the year (compared to 30 and 49 percent, respectively, for 2002).

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 products like lumber, plywood, log homes, pulp and paper, and posts and poles, as well as facilities that further process primary wood products into products such as furniture, laminated beams, trusses, window and door frames, and wood carvings.

Chemicals/Others – a wide range of facilities, including those that manufacture 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 manufacturing), and facilities engaged in smelting and refining ferrous and nonferrous metals (primary metals manufacturing).

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

Printing/Miscellaneous – facilities engaged in printing or performing services for the printing trade such as bookbinding, as well as those engaged in mostly light manufacturing such as plastic products, sporting goods, games and toys, apparel and jewelry.

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.

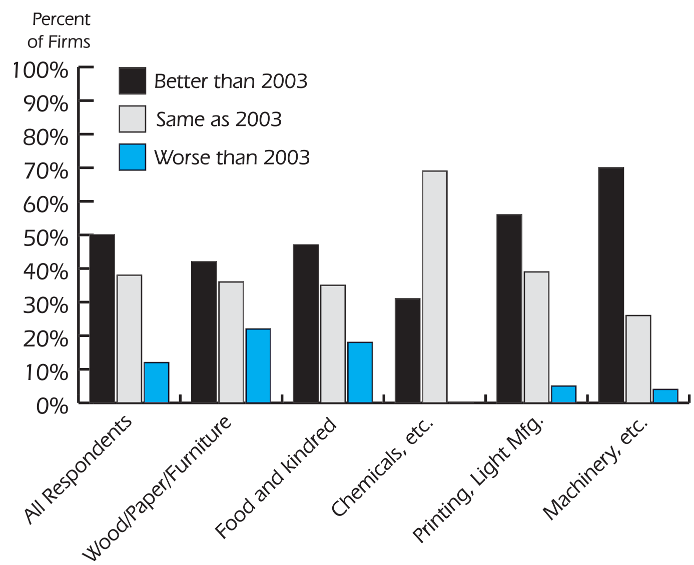
Outlook for 2004

Montana's manufacturers looked ahead to 2004 with cautious optimism, hoping for a year of improved business conditions. Down slightly from last year's survey, 50 percent of respondents expected increased activity in 2004, while another 38 percent believed conditions would remain about the same (Figure 1).

More than half of the respondents anticipated increases in production, gross sales, and profits in 2004. Forty percent expected to make major capital expenditures. The most optimistic sectors included machinery/equipment and printing/miscellaneous.

Tempering this cautious optimism were signs that some firms also had concerns about the upcoming year. Only 31 percent of the respondents were expecting prices to increase, while another 61 percent anticipated prices to remain steady. Similarly, while 65 percent of respondents expected employment levels to remain the same, 13 percent foresaw a reduction. The wood/paper sector expected the most employment decreases.

Figure 1
Overall Outlook for 2004



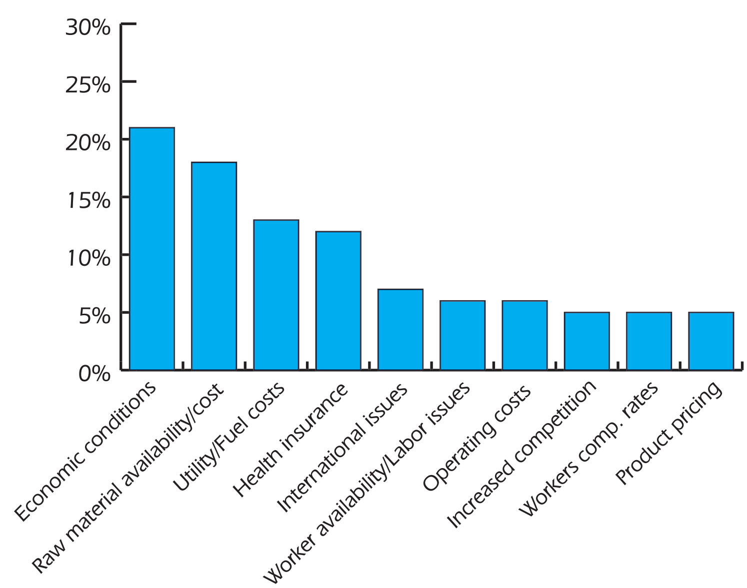
Major Issues for 2004

Beyond those questions regarding recent and expected operations, manufacturers are asked each year to identify major issues they expect to impact their operations in the following year. In last year's survey, the primary concern was the issue of growing competition, especially in the wood/paper sector in reference to Canadian and other foreign imports. 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 overall condition of the national economy was the major concern for 21 percent of respondents, as many were hoping for an economic upturn in 2004.

The cost of raw materials, paired with availability, was still a concern for 18 percent of Montana's manufacturing community, primarily the wood/paper sector. Other issues that were expected to significantly affect the state's manufacturers included utility and fuel costs (13 percent), the cost of employee health insurance (12 percent), international trade issues (7 percent), worker availability and other labor issues (6 percent), and increased operating costs (6 percent) (Figure 2).

Figure 2
Major Issues for 2004

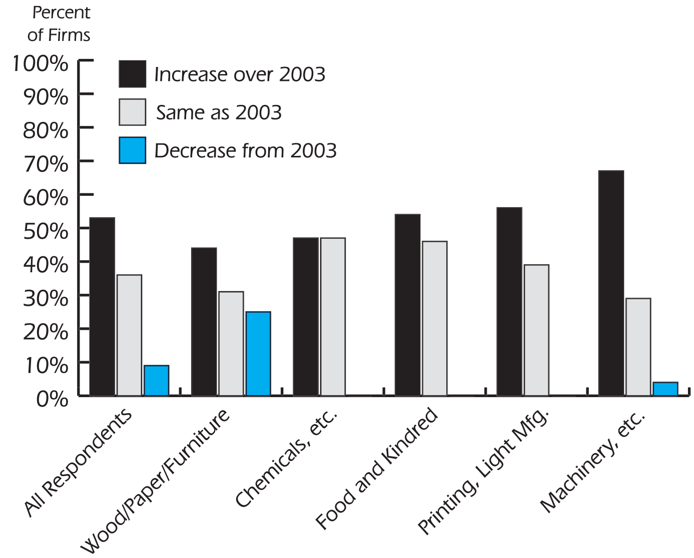


Outlook for Operations in 2004

Production

Thirty-three percent of responding manufacturers reported that they had curtailed production at some point in 2003, a reduction from 2002, when 41 percent reported curtailment. However, 53 percent of Montana's manufacturers expected increased production levels in 2004, compared to 49 percent in 2003. More machinery/equipment firms expected a production increase than firms in any other sector, followed by printing/miscellaneous and food/other. At least 54 percent of the respondents in these three sectors expected increased production levels in 2004. Thirty-six percent of all respondents anticipated production to remain about the same, compared to 40 percent of last year's respondents (Figure 3).

Figure 3
Production Outlook for 2004

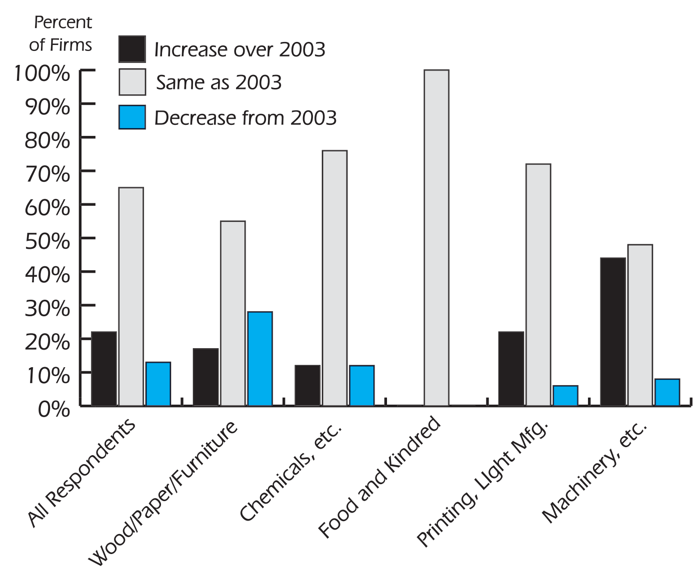


Employment

Sixty-five percent of respondents to the 2003-2004 survey anticipated their employment levels this year to remain even with 2003, up from 61 percent of last year's respondents. However, 13 percent of this year's respondents expected to reduce employment during the upcoming year, up from 12 percent who had the same expectations for 2003. Additionally, while 27 percent of last year's respondents expected employment to increase the following year, only 22 percent had such expectations for 2004.

The machinery/equipment sector in particular appeared to be expecting expansions, as 44 percent of respondents in this sector indicated intentions of adding employees in 2004. No firms in the food/other sector expected to reduce employment. However, between 6 percent and 28 percent of all other sectors anticipated some employment reduction in 2004 (Figure 4).

Figure 4
Employment Outlook for 2004

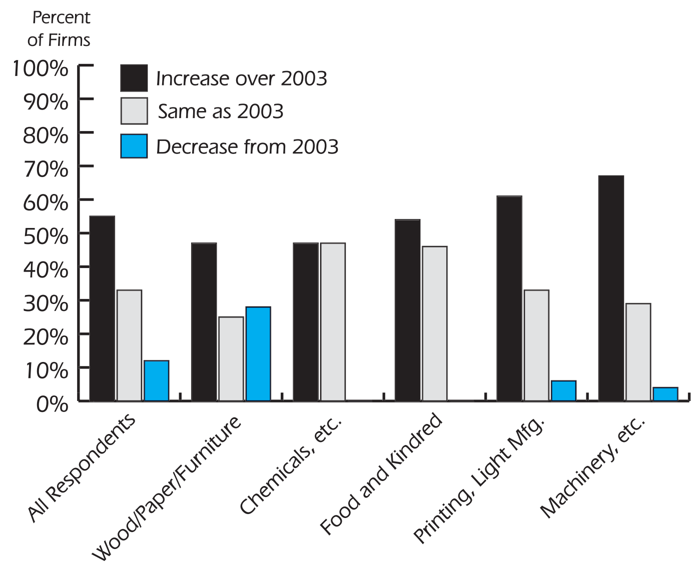


Sales

Fifty-five percent of Montana's manufacturers expected 2004 sales to outpace those of 2003. This figure is well above last year's expectations (48 percent). However, the portion of respondents expecting declining sales has gone down only slightly, from 13 percent last year to 12 percent on this year's survey (Figure 5).

Once again, the machinery/equipment sector stands out, with 67 percent of the respondents indicated anticipating higher 2004 sales. The printing/miscellaneous and food/other sectors also appeared optimistic with well above half of respondents (54 percent and 61 percent, respectively) reporting they were looking forward to stronger sales in 2004. By contrast, 28 percent of firms in the wood/paper sector expected lower sales in 2004, despite improved prices in late 2003.

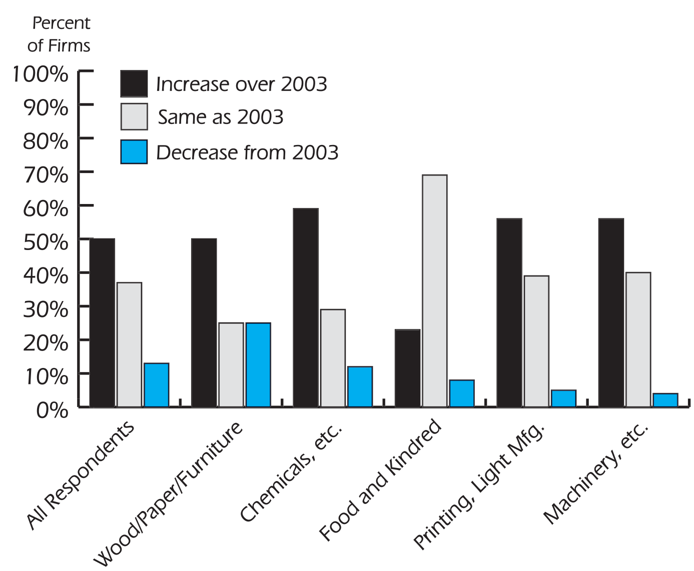
Figure 5
Sales Outlook for 2004



Profit

The profit outlook for 2004 appears rather optimistic, especially in light of the decreases reported for 2003. Exactly half of this year's respondents expected 2004 profits to show an increase over 2003, almost the same portion that expected 2003 profits to increase over 2002 (49 percent). The chemical/others sector was notable, with 59 percent of respondents expecting increased profits for 2004. The majority of respondents in the machinery/equipment and printing/miscellaneous sectors were also looking forward to higher profits (56 percent each). Only in the wood/paper sector did a notable portion express concerns about profits in 2004 – 25 percent of the respondents in this sector expected profits to decline (Figure 6).

Figure 6
Profit Outlook for 2004

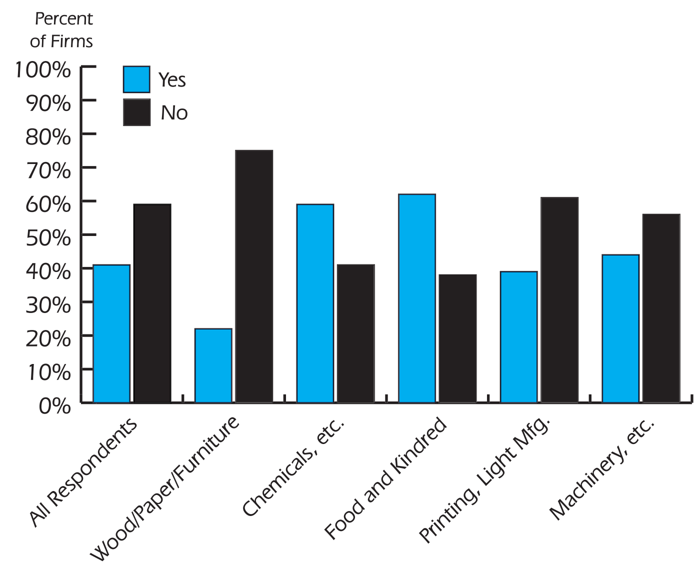


Major Capital Expenditures

With regards to plans for major capital expenditures, survey respondents appeared less optimistic this year than they were last year. Although 41 percent indicated intentions for making such expenditures in the coming year, this figure is down from 48 percent of last year's respondents. However, while 48 percent indicated in 2002 that they intended to make capital improvements in 2003, 51 percent later reported actually making such investments.

For 2004, firms in the food/others sector was most likely to report intentions of making major capital expenditures (60 percent), while only in the wood/paper sector did less than 25 percent of respondents indicate an intention of adding such improvements (Figure 7).

Figure 7
Outlook for Major Capital Expenditures in 2004



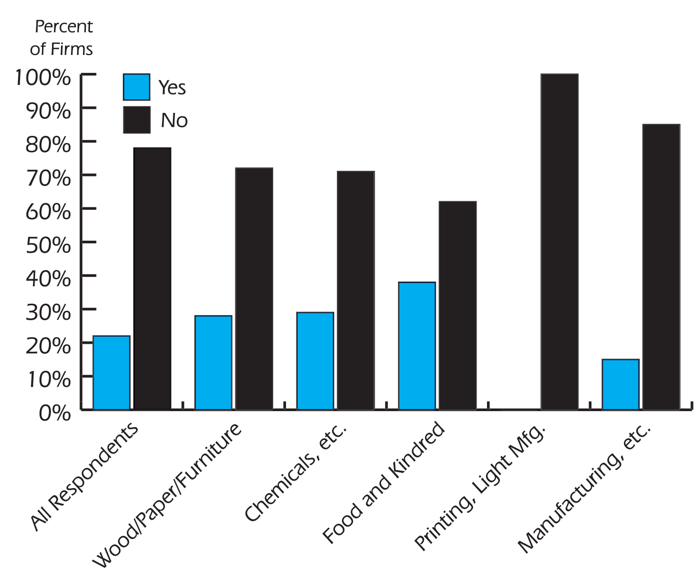
Labor Supply and Training

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 survey indicated that worker availability was not as substantial a problem in 2003 as it was a few years ago. While 22 percent of the responding companies still reported a significant worker shortage, this constitutes a smaller portion than the nearly 33 percent of respondents with worker shortage problems in 2001. It is notable that this problem was more prevalent for firms in the food/other sector. By comparison, the printing/miscellaneous sector did not report worker shortages in 2003 (Figure 8).

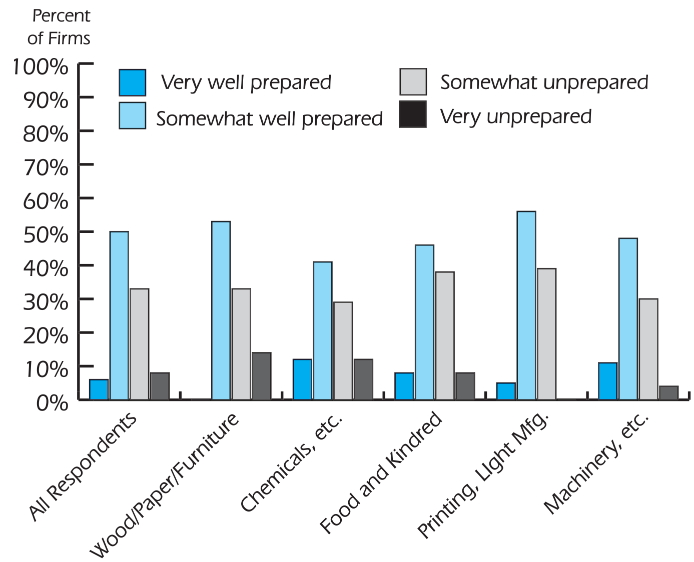
When it comes to the preparedness of the new hires made in 2003, this year's survey showed an improvement over the previous year's survey (Figure 9). The number of respondents reporting that their new employees were *very well prepared* declined to 6 percent in 2003 (from 9 percent in 2002), while those reporting their new employees as *very unprepared* increased to 8 percent (from 1 percent in 2002). Despite those facts, 57 percent of respondents were satisfied with their new hires' level of preparedness (compared to 47 percent in 2002). Two sectors were particularly notable: the wood/paper sector did not report hiring any workers who were *very well prepared*, and 47 percent of respondents here felt their new hires were somehow unprepared. The printing/miscellaneous sector, on the other hand, did not report hiring any workers who were *very unprepared*, and 40 percent of respondents here felt their new hires were unprepared in some way.

Figure 8
Significant Worker Shortage in 2003?



Respondents to the 2003-2004 Manufacturers Survey were asked about the general skill level exhibited by their new hires for 2003. 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, 37 percent of respondents indicated that their new hires fell below their needs, while 45 percent felt their new hires met their needs. Only 18 percent had new hires that either somewhat or significantly exceeded their needs, a slight improvement over last year. In terms of math skills, 67 percent felt their new hires' math skills met their needs, compared to 42 percent in 2002. However, only 12 percent felt these skills to be exceeding their needs. Written communication skills were rated as exceeding needs by a mere 10 percent, while 42 percent found skills in this area to be deficient. Verbal communications skills, while meeting the needs of 60 percent, were found deficient by 25 percent. Basic job-specific skills, such as electrical, mechanical, wood working, and construction fared the best, likely because skills in these areas were the main reason for the new hires. Twenty-one percent of respondents indicated that skills in this area exceeded their needs, while 36 percent indicated these skills met their needs. Computer skills, on the other hand, did not fare as well, with 35 percent of respondents reporting skill deficiencies in this area and 46 percent indicating skills meeting their needs. Surprisingly, 19 percent of respondents hired people with computer skills that exceeded their needs.

Figure 9
Level of Preparedness of New Hires in 2003



About the Montana Manufacturers Information System

Because of Montana's large size and sparse population, Montana manufacturers often are not aware of other manufacturers within the state, which leads to missed business opportunities. The primary goal of the Montana Manufacturers Information System (MMIS) is to eliminate this situation by having one place where in-depth 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 manufacturers in the wood products industry. Manufacturers in the machinery, equipment, and instrument sector are currently being added, with firms in the various light manufacturing industries to follow.

Those firms listed in MMIS can enter the system through a password-protected program to add and update their profiles.

For more information or questions about the MMIS contact Bob Campbell or Charles Keegan at the address below.

MMIS
MONTANA MANUFACTURERS INFORMATION SYSTEM

www.mmis.umt.edu

Visit our Web site for a directory of Montana manufacturers.

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