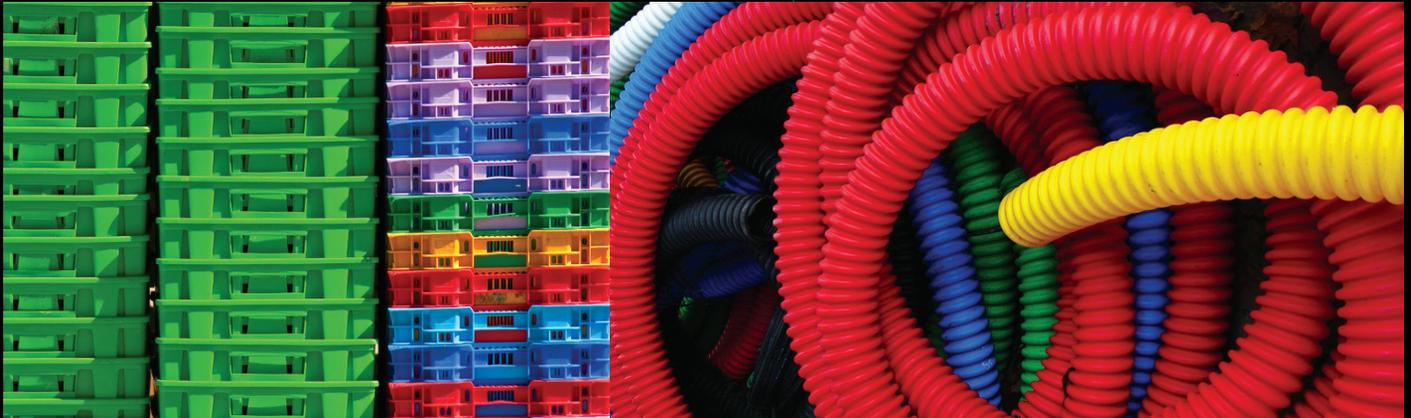


# RESULTS FROM THE 2013-2014 MONTANA MANUFACTURERS SURVEY



**BUREAU OF  
BUSINESS  
AND ECONOMIC  
RESEARCH**

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### ABOUT THE MMIS

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 on the University of Montana's campus at 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 update their profiles.

The Bureau of Business and Economic Research at the University of Montana started an annual survey of Montana's largest manufacturers in 1999. The surveys are conducted each year during November and December and query manufacturers on a variety of business issues pertaining to both the year just completed and the outlook for the coming year.

The results shown here are from the fifteenth such survey, completed in December 2013. A total of over 220 firms were contacted for this year's survey, including Montana's largest manufacturing facilities (as measured by the number of people employed), as well as smaller firms representative of their sectors. Of the firms contacted, 76 percent responded to the survey.

The information collected through the manufacturers survey is featured in the Bureau's annual Montana Economic Outlook Seminar, where it is used in forecasting conditions for the manufacturing sector for the upcoming year. While partial information is published in the *Outlook* booklet and in BBER's *Montana Business Quarterly*, this

publication provides a more detailed description and analysis of the survey results. Additional information and forecasts for Montana's economy, economic conditions throughout Montana, and major economic sectors in the state can be found in the summer issue of the *Montana Business Quarterly* or on the Bureau's website, [www.bber.umt.edu](http://www.bber.umt.edu).

### AN OVERVIEW OF MANUFACTURING IN MONTANA

The manufacturing sector includes more than 3,000 entities ranging from large industrial facilities such as oil refineries, to a broad array of lighter production activities, including the assembly of sophisticated high-technology equipment to small cottage industries.

Overall, the state's manufacturing sector in 2013:

- produced approximately \$14 billion in product output,
- directly employed 22,148 workers (including the self-employed) who earned more than \$1.1 billion in labor income,
- accounted for roughly 20 percent of Montana's economic base.

Manufacturing industries in the state pay high wages with employees averaging over \$49,300 per year (compared to an average \$40,800 per year for all Montana nonfarm workers).

**Table 1**  
Montana Employment in Montana Manufacturing Sectors, 2010 and 2013

Manufacturing Sector	2010	2013*	Percent Change
Wood, paper & furniture	4,216	4,158	-1%
Food & beverage	3,545	3,900	10%
Primary & fabricated metals	2,063	3,180	54%
Chemicals, petroleum & coal	2,085	1,880	-10%
Machinery	1,168	1,400	20%
Nonmetallic minerals	938	1,700	81%
Textiles, clothing & leather goods	784	831	6%
Computers, electronics & appliances	641	749	17%
All other manufacturing	4,362	4,350	0%
<b>Total</b>	<b>19,802</b>	<b>22,148</b>	<b>12%</b>

\*Estimate.

Source: Bureau of Economic Analysis, U.S. Department of Commerce.



## THE YEAR 2013 IN REVIEW

Manufacturing in Montana has experienced three years in a row of improvements, with 2011, 2012, and 2013 each outpacing the prior year in employment, worker earnings, and outputs. Total manufacturing employment in Montana was 19,802 in 2010 and was estimated to have increased about 12 percent to more than 22,100 workers for 2013 (Table 1). Earnings of manufacturing employees exceeded \$1.0 billion during 2012, with five Montana counties showing more than \$50 million in manufacturing employee earnings (Table 2). Manufacturing worker earnings were estimated to have grown about 6 percent, topping \$1.1 billion for 2013. Annual sales from Montana manufacturers in 2013 were estimated at \$14 billion, about 7 percent higher than 2012.

Manufacturing continued to be an important piece of Montana's overall economy, providing jobs with higher than average wages. Manufacturing jobs in Montana produced, on average, about \$49,300 in earnings per employee during 2012 (most recent data available), compared to the average for all sectors—\$40,800 per

**Table 2**  
**Montana Manufacturing Earnings by County, 2010 and 2012**

	2010 Manufacturing Worker Earnings (Millions of 2012 \$)	Percent of Total	2012 Manufacturing Worker Earnings (Millions of 2012 \$)	Percent of Total	Percentage Change 2010 to 2012
<b>Yellowstone</b>	266	27%	288	27%	8%
<b>Flathead</b>	148	15%	163	15%	10%
<b>Gallatin</b>	122	12%	124	12%	2%
<b>Missoula</b>	110	11%	94	9%	-15%
<b>Cascade</b>	62	6%	66	6%	7%
<b>Silver Bow</b>	44	4%	44	4%	0%
<b>Lewis and Clark</b>	37	4%	42	4%	15%
<b>Ravalli</b>	38	4%	36	3%	-6%
<b>Lake</b>	21	2%	23	2%	12%
<b>Park</b>	17	2%	19	2%	12%
<b>Lincoln</b>	8	1%	12	1%	61%
<b>Other counties</b>	127	13%	141	13%	11%
<b>Montana total</b>	1,000	100%	1,054	100%	5%

Source: Bureau of Economic Analysis, U.S. Department of Commerce.

## MANUFACTURING CATEGORIES

Although the manufacturing industry consists of hundreds of highly specific categories, for the purposes of this report, it has been divided into five segments:

### WOOD PRODUCTS

Facilities that process timber into products like lumber, plywood, log homes, MDF, particleboard, 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/PETROLEUM/REFINING

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/BEVERAGES

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 plastic 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.

## RESULTS FROM THE 2013-2014 MONTANA MANUFACTURERS SURVEY

Figure 1  
Overall Outlook for 2014

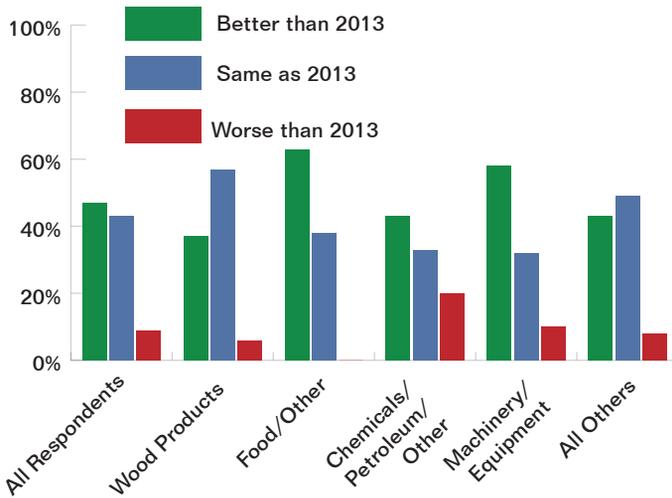


Figure 2  
Sales Outlook for 2014

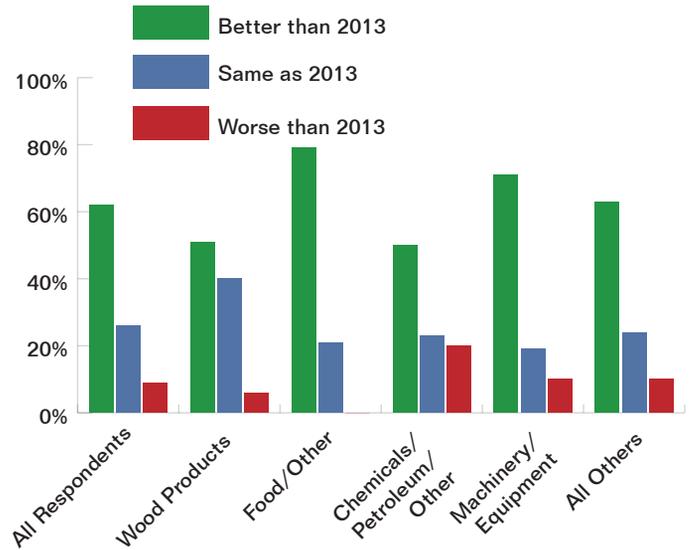


Figure 3  
Production Outlook for 2014

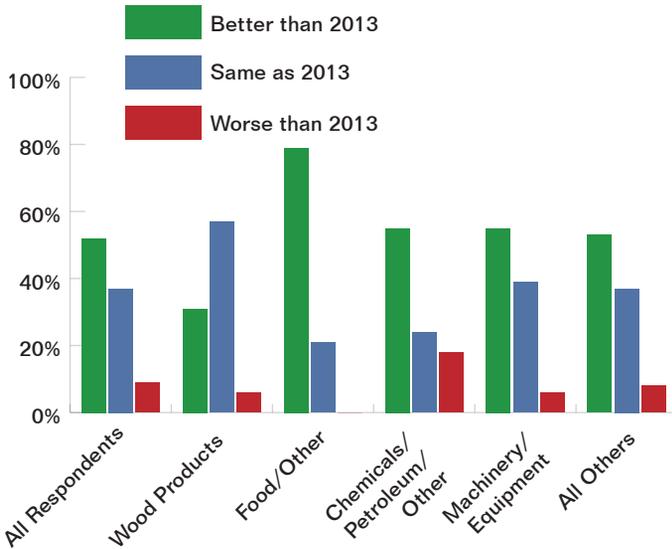
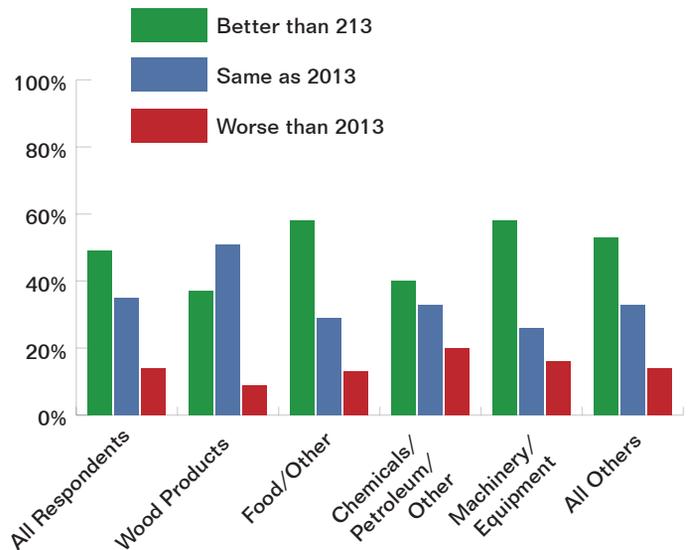


Figure 4  
Profit Outlook for 2014



employee (Table 2). Several sectors such as *non-metallic mineral products manufacturing*, *machinery manufacturing*, *motor vehicle and transportation equipment manufacturing*, and *chemical manufacturing* had annual average worker earnings in excess of \$50,000 per employee, and *petroleum and coal products manufacturing* had worker earnings that exceed \$100,000 per employee during 2012.

In addition to relatively high wages, manufacturing produced significant added value to Montana's economy.

As a measure of economic output, gross state product (GSP) represents the value added to goods and services produced in the state. Although manufacturing accounted for roughly 3 percent of total employment and 4 percent of worker earnings in Montana during 2012 (most recent data available), it accounted for more than 6 percent of GSP. The GSP per employee (\$99,300) in manufacturing was nearly double the average GSP per employee (\$52,870) for all sectors in Montana during 2012, indicating



manufacturing jobs added substantially more value to the economy compared to several other sectors. The growth of real GSP per employee in manufacturing has also been outpacing real GSP growth per employee in other sectors, demonstrating greater efficiency and growing value-added per manufacturing employee.

The BBER survey of Montana manufacturers indicated that 2013 was as good as or better than 2012. Over 40 percent of firms indicated increased sales and production during 2013, and less than one-quarter of firms reported declines in profits—a marked improvement from 2011 and 2012 when more than 30 percent of firms reported lower profits.

Other signs of ongoing improvements among Montana manufacturers included: 50 percent of those surveyed reported making major capital expenditures in 2013 vs. 40 percent in 2012, 27 percent reported new product lines, and 91 percent reported that they did not eliminate any capacity. However, 18 percent of the firms surveyed indicated they temporarily curtailed production during 2013, and 18 percent indicated a shortage of workers during the year. Health care and insurance costs, a lack of qualified workers, cost and availability of raw materials, worker compensation rates, general economic conditions, and uncertainty related to federal policy changes were frequently identified as major issues that affected respondents' businesses during 2013.

### GENERAL OUTLOOK FOR 2014

Forecasters have predicted relatively slow growth in the U.S. economy during 2014. New home starts and existing home sales in the U.S. are expected to increase modestly, and unemployment is expected to decrease somewhat. However, uncertainty lingers in regard to federal policies impacting interest rates, inflation, and health insurance costs. Increased domestic production of oil and gas is expected to help keep energy costs low and boost U.S. manufacturing.

The 2014 manufacturing outlook for Montana is quite positive, with expectations of higher sales, increased production levels, and greater profits among most of the state's manufacturing sectors. Many manufacturers are also predicting increased employment in 2014.

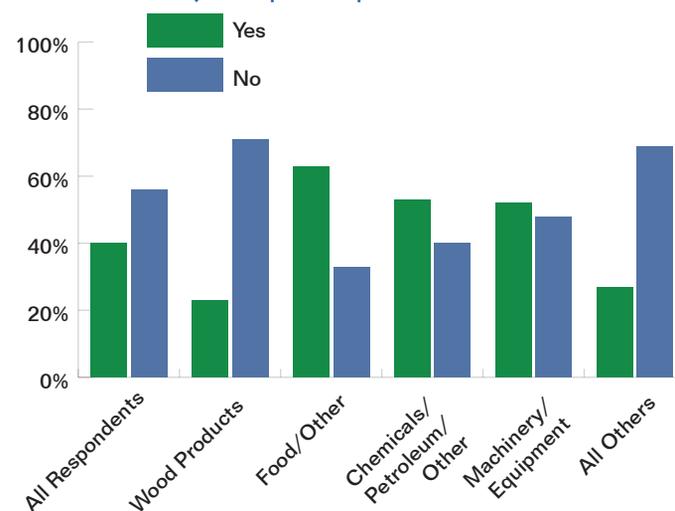
The manufacturers who responded to the BBER's annual survey expressed strong optimism in their outlook for 2014. More than 40 percent expected improved conditions during 2013, and 47 percent expect better conditions for 2014, compared to just 9 percent that expect 2014 to be worse than 2013 (Figure 1). The most optimistic sectors were in the food/beverage and machine/equipment sectors, with 63 and 58 percent respectively, expecting a better year in 2014.

### SALES, PRODUCTION, PROFITS

Sixty-two percent of manufacturers anticipated 2014 sales would increase over 2013 (Figure 2), with 52 percent expecting increased production (Figure 3) and 49 percent anticipating increased profits for 2014 (Figure 4). This is very similar to 2013 when 49 to 54 percent of manufacturers expected increased sales, production, and profits.

*Food/beverage* manufacturers were again the most optimistic about the upcoming year, with more than 79 percent expecting increased sales and increased production in 2014. *Machinery/equipment manufacturers* were the next most optimistic, with 71 percent expecting increased sales, 55 percent increased production and 58 percent are expecting increased profits in 2014. The most pessimistic outlook was among the *wood products* segment with only 51 percent expecting increased sales 37 percent increased profits and 31 percent expecting increased production in 2014.

Figure 5  
Outlook for Major Capital Expenditures in 2014



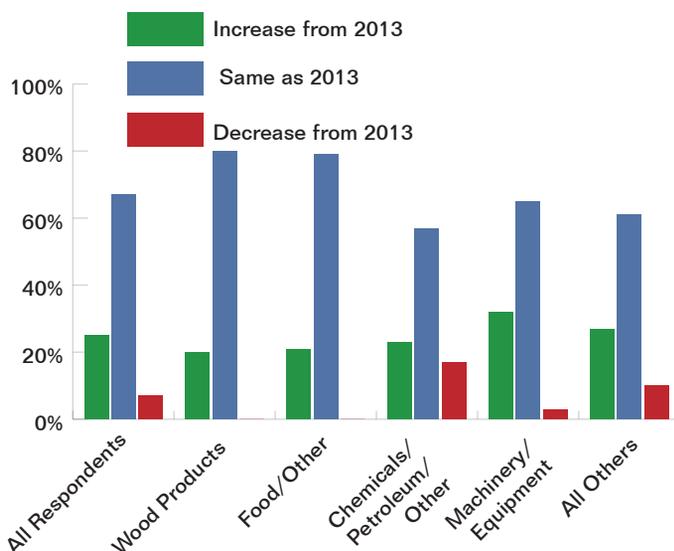
### PLANNED CAPITAL EXPENDITURES

The proportion of firms planning major capital expenditures increased slightly between the 2013 and 2014 surveys, with 40 percent of responding firms planning major capital spending in 2014 (Figure 5) compared with 33 percent in 2013. Food/beverage facilities reported the highest rate of planned capital expenditures with 63 percent planning major capital expenditures while only 23 percent of wood products manufacturers planned expenditures.

### EMPLOYMENT AND WORKER AVAILABILITY

The outlook for employment in manufacturing remains on an upward trend with 25 percent expecting increased employment in 2014 and only 7 percent expecting decreases (Figure 6). Last year, 25 percent of manufacturers expected increased employment in 2013 and 9 percent expected decreases. Entering 2010, 28 percent of respondents expected decreases in employment while only 11 percent expected to increase employment. In the improving economy, the availability of workers has had only a modest impact on Montana’s manufacturers, with only 18 percent of respondents for 2013 reporting “significant worker shortages” (Figure 7), down from 20 percent for 2012. This number is down from 20 percent for 2008 and still significantly less than the over 50 percent of firms that reported significant worker shortages for 2007 and 2006.

Figure 6  
Employment Outlook for 2014

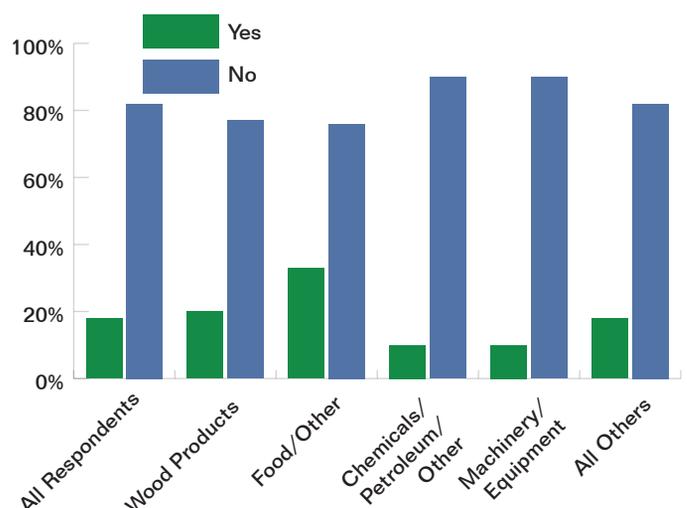


### BUSINESS-RELATED ISSUES

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

Once again, health insurance cost was the number one issue, and 80 percent of respondents rated it very important, very similar to last year. Workers’ compensation rates were very important to 63 percent of responding firms, with workers’ compensation rules rated as very important to 51 percent. Energy costs were somewhat less important to respondents with 50 percent rating them as very important the same as last year. Raw material availability was rated very important by 53 percent of respondent firms. The proportion indicating a shortage of qualified workers as very important in 2013 was 57 percent, a slight increase from 2012 and 2011 at 51 percent, an increase from 41 percent in 2010, 35 percent in 2009, 45 percent in 2008, and 50 percent in 2007, but down from 69 percent in 2006 when the economy was much stronger. Foreign competition was ranked the least important of the eight issues, with 47 percent of respondents rating it as very unimportant and just 17 percent rating it as very important (Figure 8).

Figure 7  
Significant Worker Shortage During 2013





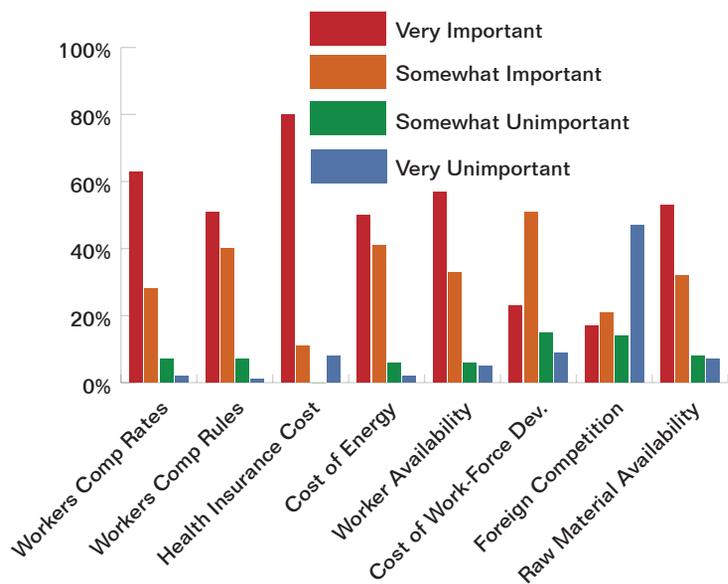
In keeping with the 2014 Economic Outlook Seminar’s theme of entrepreneurship and job creation, several questions were posed to survey participants this year. Over 35 percent of the manufacturers surveyed indicated they have more than 50 employees in Montana. Just over 20 percent indicated their business is more than 50 years old and one-quarter indicated their business had been in Montana 20 or fewer years. When asked about plans for growth and how growth is financed, only 7 percent of respondents indicated they were not planning for growth or business expansion. Almost 70 percent of respondents indicated they use retained earnings or profits to finance growth, and more than half indicated using bank loans. Less than 10 percent of firms indicated using funds from family, friends, partners, or “angel” investors. About 5 percent indicated using funds from other investors, shareholders, or parent companies (Figure 9).

Through a pair of open-ended questions, survey respondents were also asked what they saw as the most significant barriers to starting new or expanding existing manufacturing businesses in Montana and what they saw as the biggest advantages of operating their manufacturing business in Montana.

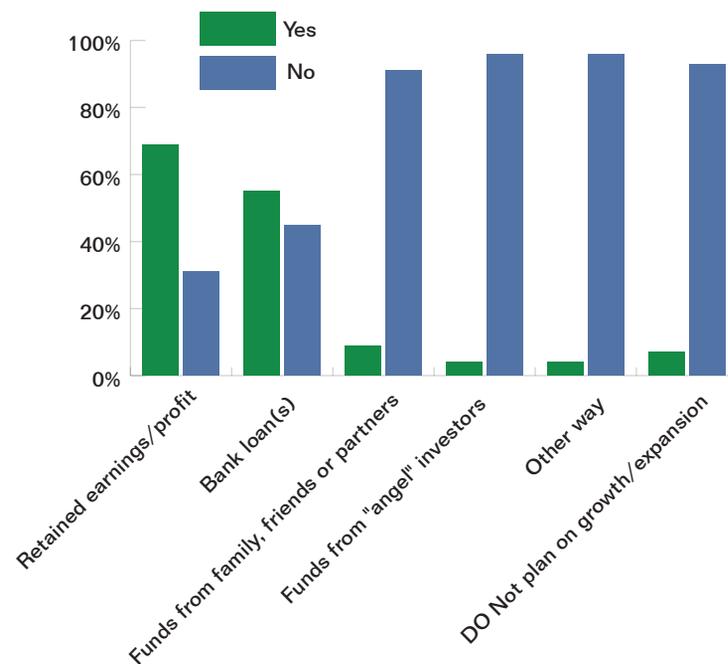
The most frequently indicated barriers to manufacturing growth or new business formation in Montana were: distance to markets and/or associated transportation and shipping costs (18 percent of responses) and lack of skilled or available workforce (26 percent). Regulations and taxes were also very common responses (31 percent), but many respondents did not differentiate between state versus federal regulation or specifically mentioned federal regulations, which would apply in any state. Property tax, equipment tax, and worker compensation rates were frequently identified as Montana-specific issues.

Surprisingly, 12 percent of survey respondents indicated there was no advantage to the business being in Montana. One response was: “None; it’s poverty with a view.” The most common responses were related to the high quality, availability, and low cost of labor (33 percent of respondents) and the high quality of life, Montana lifestyle, and recreational opportunities (29 percent). Other frequently cited advantages of operating in Montana were close proximity to raw materials or markets, lower costs in general, lower taxes, and less regulation.

**Figure 8**  
Other Business-Related Issues



**Figure 9**  
Finance Growth and Expansion



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