Challenges to Manufacturing Growth in Montana

2013 MONTANA SMALL MANUFACTURERS SURVEY



MONTANA STATE UNIVERSITY EXTENSION

U.S. DEPARTMENT OF COMMERCE ECONOMIC DEVELOPMENT ADMINISTRATION

Montana Governor's Office of ECONOMIC DEVELOPMENT

MONTANA MANUFACTURING EXTENSION CENTER
An affiliate of the NIST Manufacturing Extension Partnership

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Manufacturing—Your Tomorrow—Today

Rev. 1

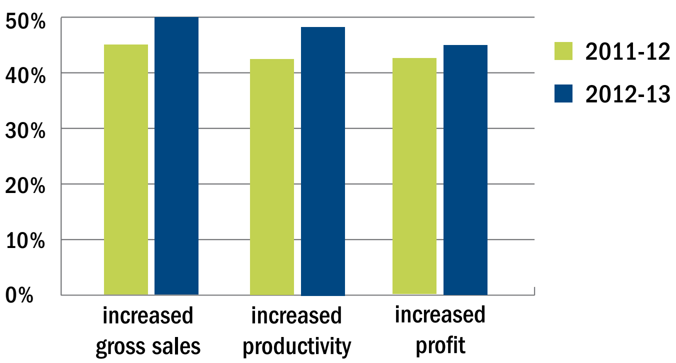
This publication highlights the full study conducted in 2013 that explores the concerns of Montana's small manufacturers, develops a profile of them (products, employment, sales, input suppliers, access to credit and other factors), assesses their plans for the next year (employment, capital purchases, inventory and other); evaluates current and future constraints to growth; and identifies key service needs. The study utilized focus groups and a quantitative survey of over 400 small manufacturers. Its findings may be useful to educators, economic development organizations, and policy makers.

SMALL MANUFACTURER RESPONDENT PROFILE

Survey responses represented a wide cross-section of business types: Over 18 percent metal fabricators; 15 percent food, tobacco or alcohol producers; 14.5 percent textiles and apparel producers; nearly 14 percent wood products producers. Though small, over 63 percent of firms were organized as corporations, subchapter s corporations, or limited liability companies. About half of these firms had other family members working in the business, and 36 percent of owners worked more than 40 hours per week.

- Over 60% only one owner
- Over 70% under 5 employees
- 40% no employees
- 76% worked only in their establishment
- Over two-thirds owned by men
- Over 60% owned by people age 51 or older
- 26% in business 10 years or less
- 21% in business 30 years or more

REALIZED AND EXPECTED PERFORMANCE



Source: 2013 Montana Small Manufacturers Survey responses of 415 manufacturers.

CONSIDER THIS

As a group, these small manufacturing owners were relatively well-educated. Over 80 percent have some education beyond high school. Nearly 47 percent have a college degree or more.

Food manufacturers, larger firms and firms owned by younger owners were significantly more optimistic about the future than other manufacturers.

SUMMARY OF FINDINGS

Growth: Twenty-five percent of manufacturers expected to make major capital expenditures in 2013. Over 35% of respondents indicated that 2013 was a good time to expand their business; 14% indicated immediate job openings.

Major obstacles: The most important challenges/obstacles to growth were demand for their product (sales) and several supply-related issues, including production costs (and availability of resources), labor costs, and government regulations and taxation.

Primary cost concerns: Focus group interviews identified seven primary costs facing manufacturers: health insurance, workers compensation, energy, hiring (and training) qualified employees, responding to foreign competition, raw materials, and business equipment taxes.

Infrastructure: An overarching theme in discussions was the lack of manufacturing infrastructure in Montana. Basic infrastructure from the manufacturers' perspective includes input suppliers, maintenance organizations, and support services.

Training Requirements: The top five training topics in rank order were marketing (40%), efficiency (38%), access to financial capital (33%), sales (31%), and finding qualified employees (30%). Firms with younger owners had significantly higher training needs than others.

Out- and In-Sourcing: Over 35% of firms sell 50% or more of their output to out-of-state customers. Less than 30% purchase more than half their inputs from out-of-state suppliers.

Financing: Access to credit was less difficult for only 17% of firms; over 35% indicated that access to credit was more difficult than one year ago.

Performance in 2012: Business performance improved substantially from 2011 to 2012; 45% of firms increased gross sales, 43% increased production, and 39% increased profits.

Expected Performance in 2013: Business performance expected to improve substantially from 2012 to 2013; over 50% of firms expecting increased gross sales; 47% expecting increased production, and 45% expecting increased profits.

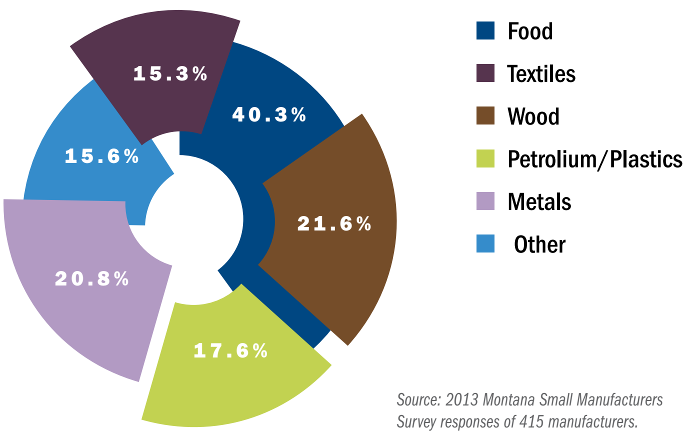
WORKFORCE CHALLENGES

The quantity, cost, and quality of labor are critical issues for small manufacturers in this study. Hiring qualified employees was most important for firms with younger owners/managers and larger firms.

Manufacturing Group by Age or Size	% indicate quality employees critically important	% Expect to add employees in 2013
Age Under 40	about 60%	over 40%
More than 10 employees	over 60%	over 40%
Age 50 and over	over 36%	less than 15%
1 to 5 employees	less than 45%	less than 20%

The same firms, younger and larger, were most likely to have increased employment from 2011 to 2012 and expect to increase employment from 2012 to 2013. Food manufacturers were more likely than other manufacturers to increase employment in 2013. Over 40 percent of food manufacturers expected to increase employment in 2013, which outpaced all other manufacturers. Overall, 21% of firms expected to increase employment. Over 10 percent of manufacturers faced significant worker shortages in 2012, most severe for food and textile/apparel manufacturers (over 12 percent) and larger manufacturers (over 18 percent of firms with 6 or more employees).

INCREASED EMPLOYEES FROM 2012 TO 2013



Source: 2013 Montana Small Manufacturers Survey responses of 415 manufacturers.

Labor costs, an important production cost, were the second most important concern with pressure from the Bakken oil patch economic boom putting pressure on wages and retention.

The most challenging workforce issue is the lack of skilled labor in Montana. Surveyed manufacturers indicated workers need to learn technical skills but also important soft skills (such as showing up for work on time and personal responsibility) and what constitutes a quality mindset. Several manufacturers supported the notion of initiating apprenticeship programs to address the skills issue.

CONSIDER THIS

Over 10 percent of manufacturers faced significant worker shortages in 2012.

Labor costs have risen because of the Bakken oil patch economic boom.

Food manufacturers more likely than others to increase employment in 2013.

Potential employees need appropriate training but also a quality mindset; i.e., understanding of variation, statistical process control and Lean manufacturing concepts.

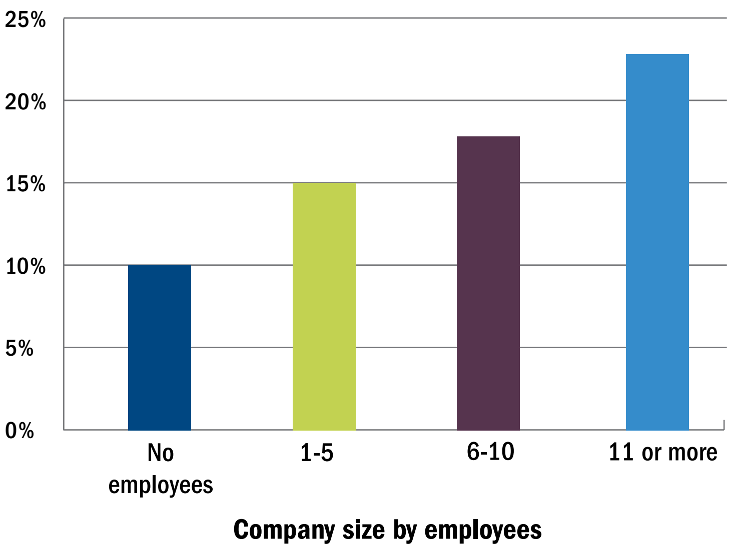
Size matters: Less than 2% of firms with 1-5 employees hired at least one person; over 38% of firms with 10 or more employees added workers.

GOVERNMENT REGULATION, REPORTING, AND TAXATION

Regulations present a mixed bag for manufacturers – for some manufacturers regulation is perceived as punitive and unnecessary, for others regulation is perceived as necessary and important to the success of their business. Regulation enforcement imposes substantial costs on manufacturers, especially those with employees. Manufacturers incur additional costs because regulatory decisions aren't delivered in a timely manner and they are not consistent across geographic boundaries; and regulatory audits require extensive time and financial resources (lawyer and accounting fees).

Small businesses, especially those with few or no employees, are unwilling to allocate large amounts of time to unproductive activities, such as completing questionnaires. More efficient methods of gathering this information must be explored.

REGULATION, REPORTING, & TAXATION AS SIGNIFICANT OBSTACLES TO GROWTH



Government issues were significantly more important for companies with more employees; largest firms were more than twice as likely to consider government issues as their most significant obstacle to growth.

Source: 2013 Montana Small Manufacturers Survey responses of 415 manufacturers.

> "Now Amazon is pushing for a sales tax online. ...eventually we would either have to license their software or something like that, which would allow them to tap into my business and understand my customers and everything. It's pretty insidious..."

While taxation is typically reported as a "hot" topic among small business owners, this group of owners was mostly concerned about business equipment and proposed sales taxes. The most important business equipment taxation issues included complying with tax schedules that extended well beyond the useful life of the equipment. Manufacturers selling to out-of-state customers were concerned about U.S. wide sales taxation: the impact on their sales volume and how they will comply with requirements to pay sales taxes in each state.

CONSIDER THIS

This group of owners was mostly concerned about business equipment and proposed sales taxes.

The high tech equipment today often becomes useless more quickly than traditional capital equipment; the tax schedules for business equipment need to consider this.

In some communities, the local political environment was reported to be very challenging with agricultural interests, retirement lifestyles, environmental issues, and building codes enforcement as significant constraints.

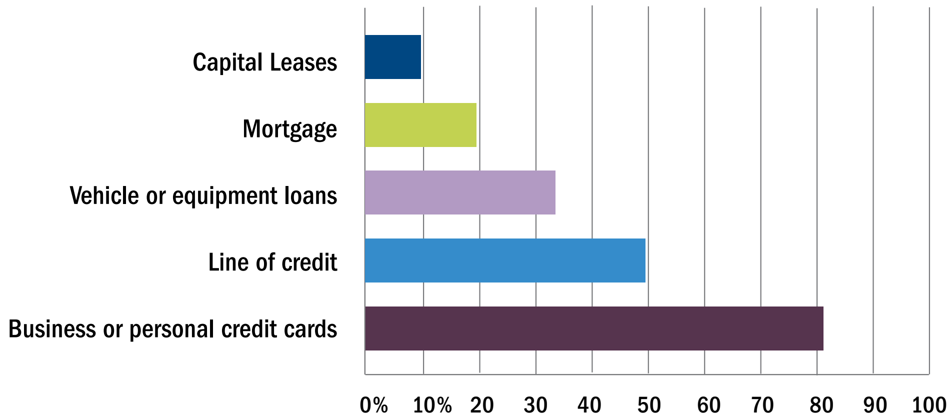
Manufacturers selling to out-of-state customers were concerned about two issues: the impact on their sales volume and how they will comply with requirements to pay sales taxes in each state.

Delays caused by regulatory agencies are costly to manufacturers.

ACCESS TO FINANCIAL CAPITAL

Interestingly, financial capital issues were only of minor importance to these manufacturers. Established manufacturers faced only minimal capital access issues, primarily for two reasons: they were totally financed by equity capital investors or they had long-term relationships with their lenders. Sixty-three percent of these small manufacturers used traditional credit, such as lines of credit, mortgages, vehicle or equipment loans or capital leases. Credit cards have become the most widely used source of short-term credit with over 80 percent of the firms using personal or business credit cards. Access to equity investors seemed to be more important to these owners than access to debt, although, less than 13 percent of the surveyed manufacturers had acquired new equity investment in the past year.

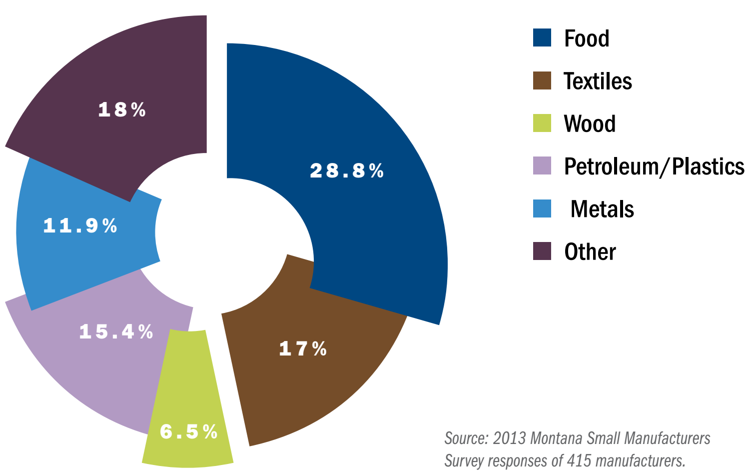
CREDIT TYPES USED BY SMALL MANUFACTURERS, 2013



Source: 2013 Montana Small Manufacturers Survey responses of 415 manufacturers.

Food manufacturers had easier access to credit than other manufacturers with nearly 30 percent of food manufacturers indicating that access to loans and leases had become less difficult than one year ago. Wood product manufacturers had more difficulty accessing credit than other manufacturers.

ACCESS TO LOANS AND LEASES LESS DIFFICULT IN SOME SECTORS



Source: 2013 Montana Small Manufacturers Survey responses of 415 manufacturers.

Even though there appeared to be minimal debt capital concerns, some owners were faced with challenges of outgrowing their bank; while other owners were concerned about all of the merger and acquisition activity among depository lenders, which requires the business owner to work with new loan committees.

And finally, the consolidation of distribution channels has given distributors more market power; hence, they are able to set trade credit and other delivery terms with no input from the small manufacturer, who has no market power.

CONSIDER THIS

25% of manufacturers expected to make major capital expenditures in 2013.

Food and petrol/plastics manufacturers more likely to make capital expenditures than other firms.

About two-thirds of small manufacturers use traditional forms of credit such as lines of credit, mortgages, vehicle/ equipment loans or capital leases.

80% have NO mortgage on the business.

82% of firms applying for loans "always approved."

35% indicated 2013 would be a good time to expand.

21% expected to increase employment in 2013.

FOUR TYPES OF INNOVATION

Product Innovation Technologically new products or significantly improved existing products	**Process Innovation** Technologically new or significantly improved practices, technologies, service or delivery
Organizational Innovation New or significant changes in manufacturer's structure, management methods or exchange systems	**Marketing Innovation** New or significant changes to packaging, design, sales methods or distribution channels

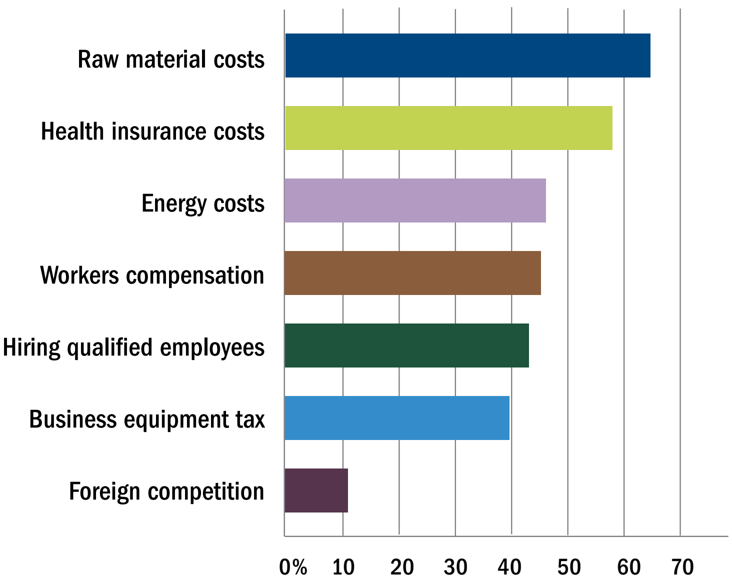
Source: Georgia Manufacturing Survey 2013

POLITICAL UNCERTAINTY

Much of the focus group concern around health care costs was the uncertainty associated with the implementation of the Patient Protection and Affordable Care Act (PPACA). For some manufacturers, sales taxes on medical equipment (as specified in the PPACA) would increase their costs; while for most others rising health insurance costs and the implementation of the PPACA were foremost on their minds.

While nearly 60 percent of the surveyed manufacturers suggested that health insurance was a very important cost item, only about four percent listed health care issues as a major challenge to growth. Food manufacturers and firms with no employees were somewhat less likely than other manufacturers to be concerned about health insurance costs.

MOST IMPORTANT COST RELATED CONCERNS



Source: 2013 Montana Small Manufacturers Survey responses of 415 manufacturers.

CONSIDER THIS

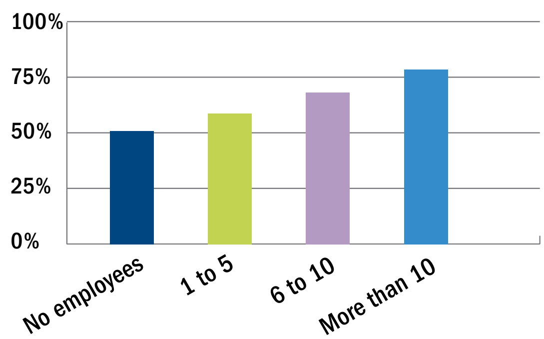
Over 50 percent of the manufacturers identified raw material and health insurance costs as very important costs.

Health care cost concerns greater in larger firms.

Wood product manufacturers significantly more concerned about resource availability.

Political uncertainty is costly to manufacturers in terms of planning, investment decisions, and employment.

HEALTH CARE COST IS VERY IMPORTANT BASED ON NUMBER OF EMPLOYEES



Source: 2013 Montana Small Manufacturers Survey responses of 415 manufacturers.

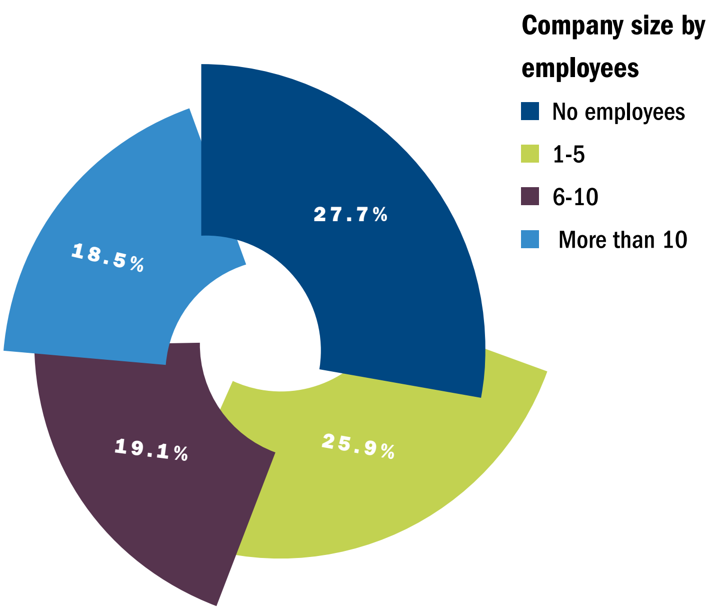
MARKETING AND SELLING

Product demand became an increasingly important concern following the Great Recession. For a majority of the small manufacturers in this survey, they were still concerned about product demand returning to levels experienced before the recession. Looking forward, many manufacturers were concerned about effectively marketing their products.

The recession had mixed impacts on small manufacturers. Many respondents realized a substantial downturn in sales and have experienced a relatively slow recovery. For some, sales volume declined by 60 percent or more, while others realized substantial growth. Some manufacturers faced less competition because their competitors left the market (either went out-of-business or moved) and took advantage of slower times to make their firms more efficient, utilized labor incentives provided in the American Recovery and Reinvestment Act, or benefited from the increased economic activity in the Bakken oil patch.

In the quantitative survey the most important concern was marketing and advertising, with smaller manufacturers more concerned than larger manufacturers. Marketing training was also identified as the top training need by 40 percent of respondents; sales training by 31 percent.

MARKETING AND SELLING AS SIGNIFICANT CHALLENGES TO GROWTH



Source: 2013 Montana Small Manufacturers Survey responses of 415 manufacturers.

> "I think most manufacturers come from a technical background so just have trouble parting with money for marketing or building brands."

CONSIDER THIS

Smaller manufacturers seemed to be more concerned about marketing and sales issues than larger manufacturers.

About 25% of manufacturers launched new products in 2012.

Textile manufacturers were more concerned about marketing and sales than other industries.

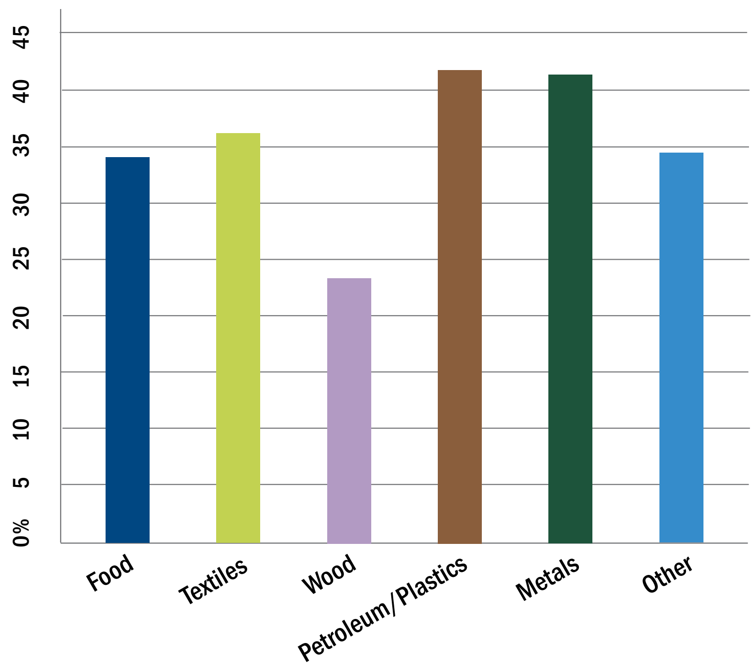
INFRASTRUCTURE/SUPPLY CHAIN

The major overarching theme in this study was the lack of manufacturing infrastructure in Montana. Basic infrastructure from the manufacturers' perspective includes input suppliers, maintenance organizations, and support services. The lack of local input suppliers means that these manufacturers must send more advanced manufacturing processes out-of-state (for instance, anodizing going to Spokane) and incur additional transportation costs by purchasing from out-of-state suppliers. Other firms are faced with using maintenance firms from other places. In addition, there simply aren't many support services for manufacturers in Montana.

Wood products firms paid the lowest percentage of production costs to out-of-state firms, while petroleum/plastics manufacturers paid the highest percentage of production costs of out-of-state firms. Thirty percent of firms report that 50 percent of production costs are paid outside of Montana.

During focus group discussions, many owners suggested that they "just need to be more self-sufficient." It was noted that self-sufficiency has a cost. Addressing manufacturing infrastructure would support growth and keep manufacturers from moving to where needed services are more available. It was suggested that the concerns of businesses that provide inputs, maintenance, and other support to these manufacturers also be considered in efforts to bolster manufacturing growth in the state.

PERCENTAGE OF PRODUCTION COSTS PAID TO OUT-OF-STATE FIRMS



Source: 2013 Montana Small Manufacturers Survey responses of 415 manufacturers.

> "(It's) basic manufacturing infrastructure that we just don't have."

CONSIDER THIS

Manufacturing infrastructure includes input suppliers, maintenance organizations, support services and training – a perspective different than more traditional view of "infrastructure."

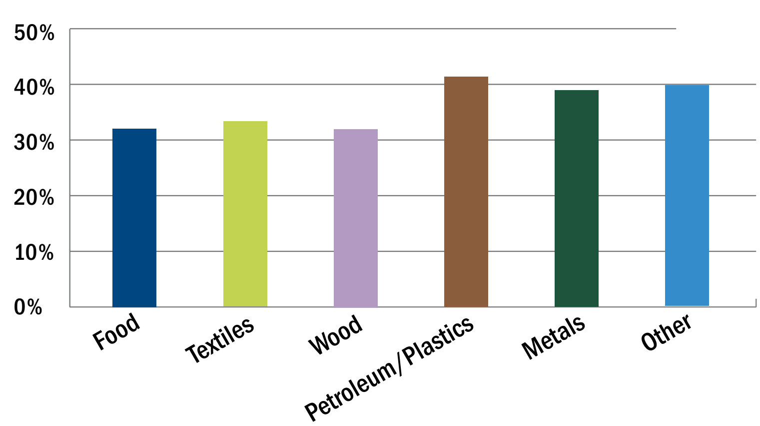
Local support appears to be critically important for the initial development and subsequent growth of a manufacturing sector.

Following the recession, raw materials inventories shrank with time lags between orders and delivery of raw materials.

35% of those surveyed report more than half of their sales outside of Montana.

> "When our system crashes, getting somebody [from Texas or California] to come and fix it can take weeks . . . Every minute that I can't be manufacturing I am losing money."

PERCENTAGE OF SALES TO OUT-OF-STATE CUSTOMERS



Source: 2013 Montana Small Manufacturers Survey responses of 415 manufacturers.

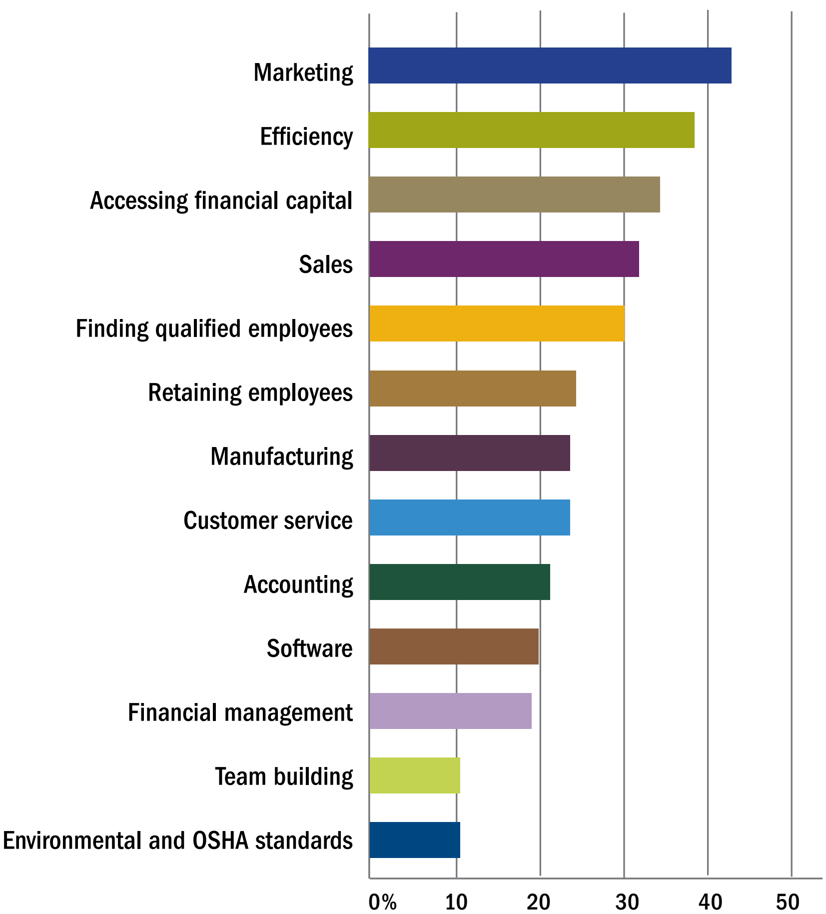
Conclusion: The 2013 Montana Small Manufacturers Survey evaluates current and future challenges to growth faced by Montana's small manufacturers. It explores how they are recovering from the Great Recession and their optimism level as well as past and expected business performance. It identifies demand for key services and training, needs and concerns regarding financial capital and workforce, a surprise perspective on infrastructure as it relates to manufacturing, and how government regulation, reporting, and taxation impacts small manufacturers in the state. Educators, Economic Development organizations, and Policy Makers may derive information from the full study to improve the business climate and thus create opportunity to bring additional new money into the state from this important sector of Montana's economy.

MONTANA MANUFACTURERS IN THE MONTANA ECONOMY

- **Produce over $13 billion in output (sales) annually; export $1.5 billion.**
- **Number more than 3,146 companies (NAICS 31-39) directly employing 21,146 workers (includes sole proprietors).**
- **Pay $1.1 billion per year in worker earnings and an average annual wage of approximately $43,000 per worker compared to an average of $35,000 for all Montana workers.**
- **Make up 20% of Montana Basic Industry as percent of Labor Income.**
- **Create jobs – each of which results in an average of 2.6 related jobs.**

(source: The State of Montana Manufacturing, 2013, Bureau of Business & Economic Research, University of Montana)

TRAINING NEEDS



Source: 2013 Montana Small Manufacturers Survey responses of 415 manufacturers.

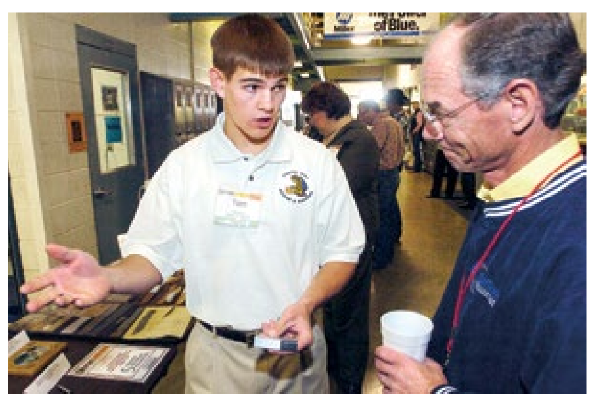
CONSIDER THIS

Textile/apparel manufacturing firms are more likely to demand sales training than other firms.

Younger owners are significantly more likely to demand training in the areas of efficiency and sales training.

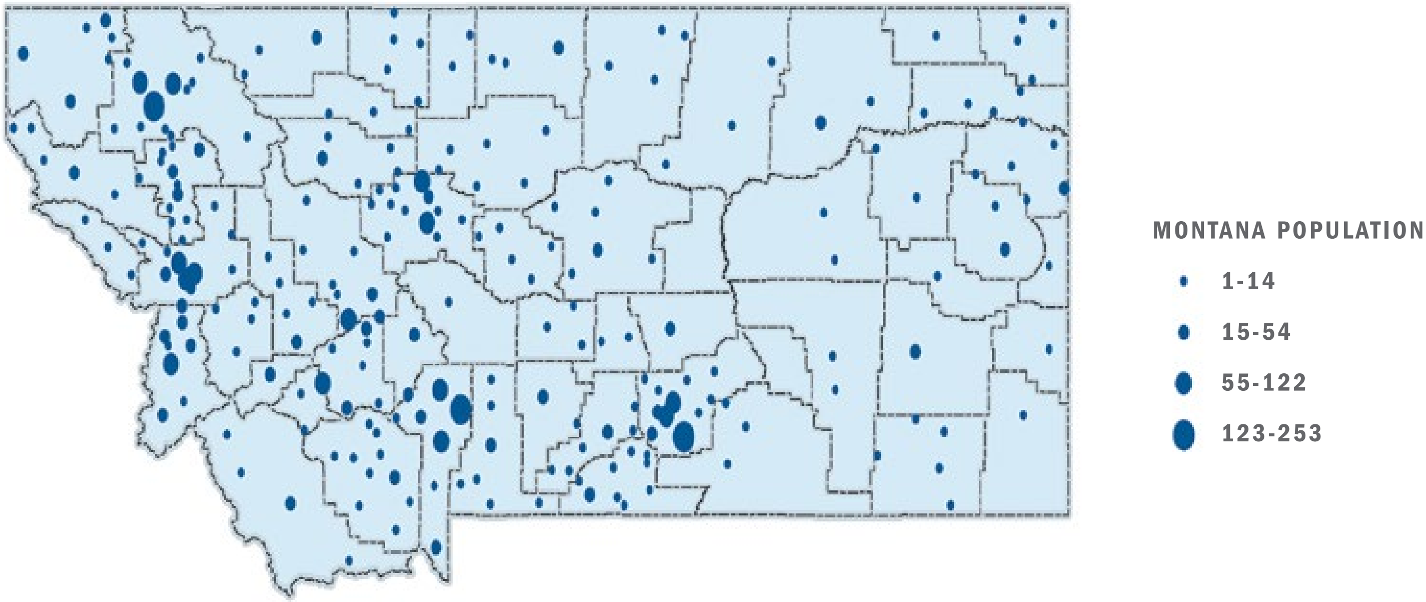
Firms with younger owners are more likely to benefit from help accessing financial capital and help finding qualified employees.

Training on OSHA and environmental standards is readily available at safety conferences across the state.



SURVEY SAMPLE LOCATIONS IN MONTANA

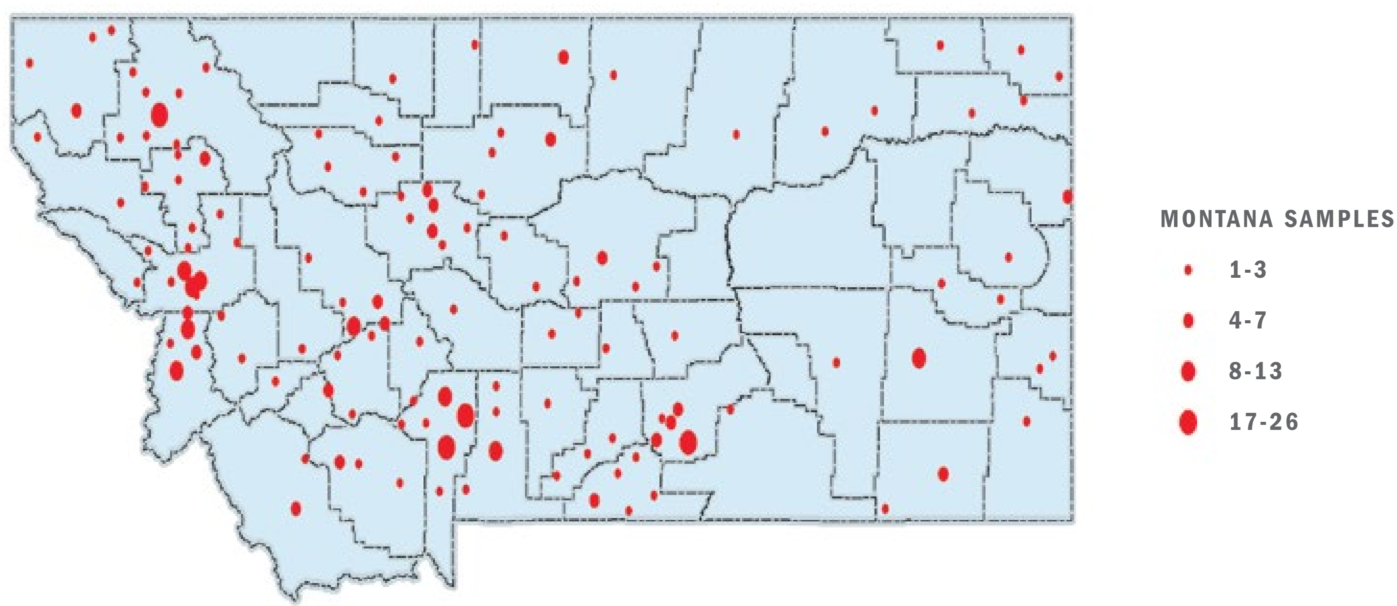
MAP OF POPULATION LOCATIONS



Source: Compilation of the manufacturing population locations provided by the Montana Manufacturing Extension Center.

Survey sample below had a strong parallel distribution to that of manufacturer locales shown above.

MAP OF SAMPLE LOCATIONS



Source: 2013 Montana Small Manufacturers Survey responses of 415 manufacturers.

CONSIDER THIS

25% of manufacturers expected to make major capital expenditures in 2013.

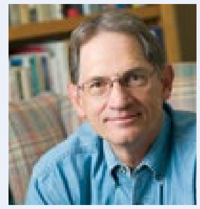
45% of firms expect the cost of major inputs to increase in 2013.

35% indicated that 2013 would be a good time to expand.

21% expected to increase employment in 2013.

ABOUT THE PRINCIPAL INVESTIGATORS

George Haynes, PhD, ('80M) at Montana State University, is a Professor in the Department of Agricultural Economics and Economics and Extension Specialist. MSU Extension is a statewide educational outreach network that applies unbiased, research-based university resources to practical needs identified by the people of Montana in their home communities. George's doctoral degree is in Consumer Economics and Housing from Cornell University.



Steve Holland (MSU '75, '76M) is the Director of the Montana Manufacturing Extension Center in the College of Engineering, also representing the Land Grant Mission of MSU. MMEC provides the positive and growing economic impacts of technical, engineering, and business management outreach to manufacturing firms across Montana. Steve has over 30 years of manufacturing and manufacturing consulting experience.

"Montana manufacturing has entrepreneurial roots and a strong role as job creator paying higher than average wages. However, the future growth and vitality of the state's manufacturing industries cannot be taken for granted. It is important that Montana policy makers and service organizations understand the unique challenges that small manufacturing companies face as they struggle to grow, not just to survive. In 2008, a total of 3,273 manufacturing establishments were identified across Montana. Only 1,320 (40.3%) of these establishments had employees. Amid concerns with the lack of information about firms with few or no employees, a study was launched in late 2012, identifying 1,000 of the smallest firms for survey (415 responses) with the hope that feedback and analysis of the responses would help determine additional ways to facilitate economic development and job growth."

– Steve Holland, Director, MMEC

"Firms with younger owners and the larger small firms seem to have the most significant growth potential. Younger owners have a longer time horizon for considering capital expenditures, hiring additional employees and expanding their businesses. Larger firms, those with 10 or more employees, have experience entering the labor market and with expansion. In 2012, these firms realized the most significant growth in gross sales and profitability and expect the most significant growth in these areas for 2013. Most importantly, these firms seem to be the most optimistic about the future."

– George Haynes, MSU Extension

MONTANA DEPARTMENT OF COMMERCE

This study received additional support from the Montana Department of Commerce Big Sky Trust Fund. Special appreciation to Stuart Leidner, Executive Director, Prospera Business Network, for managing those funds.

Special thanks for additional research assistance from the Bureau of Business and Economic Research (BBER) at the University of Montana: John Baldridge, Director of Survey Research, for designing and conducting the survey that went out to 1,000 small manufacturers across the state and to Todd Morgan, Director of Forest Industry and Manufacturing Research at BBER, for survey question input and assistance disseminating study results.

Visit http://www.mtmanufacturingcenter.com to view this summary or the full report.