

Challenges to Manufacturing Growth in Montana

2013 MONTANA SMALL MANUFACTURERS SURVEY

Full Report with
Appendices



Montana Governor's Office of
ECONOMIC DEVELOPMENT



An affiliate of the  Manufacturing Extension Partnership

TABLE OF CONTENTS

Introduction	1
Profile	1
Personal and Demographic Characteristics	1
Financial Characteristics.....	2
Performance in 2012 (Winners and Losers)	3
Expected Performance in 2013	4
Major Concerns	5
Challenges and Obstacles to Growth	7
Training Demands	8
Optimism Index (patterned after NFIB scale)	9
Focus Group Summary (Major Themes)	10
Recession	10
Constraints to Growth – Workforce Issues	12
Constraints to Growth – Government Taxation, Regulations and Paperwork	14
Taxation	14
Regulation	14
Paperwork	15
Constraints to Growth – Access to Financial Capital	16
Constraints to Growth – Local Environment	17
Constraints to Growth – Health Care	18
Constraints to Growth – Marketing and Selling (Direct Marketing)	18
Constraints to Growth – Infrastructure	19
Other Issues Constraining Growth.....	19
Conclusions	20
Methods	23
Focus Groups	23
Quantitative Survey	23
Appendix A – Tables 1 through 6	25
Appendix B – Focus Group Guide	39
Appendix C – Maps of the Population and Sample	43
Appendix D – Small Manufacturer Questionnaire	44

Challenges to Manufacturing Growth in Montana 2013 Montana Small Manufacturers Survey

Introduction

This study explores the concerns of small manufacturers; develops a profile of them (products, employment, sales, input suppliers, access to credit and other factors), assesses their plans for next year (employment, capital purchases, inventory and other), evaluates current and possible future constraints to growth faced by their small businesses, and forecasts the demand for services from MMEC and MSU Extension. The study utilized focus groups and a quantitative survey of over 400 small manufacturers.

Profile

Personal and Demographic Characteristics

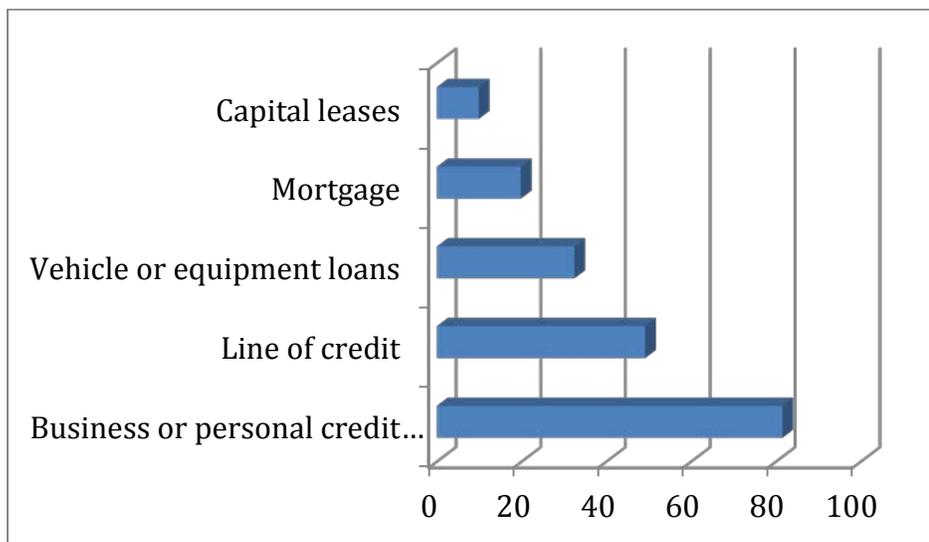
This study focused on small manufacturers. Over 60 percent of these manufacturers had only one owner with over 35 percent of these owners working over 40 hours each week in the business (Appendix A - Table 1). Over 70 percent of these manufacturers had less than 5 employees; 40 percent of these firms had no employees. A majority of these firms hired part-time employees. These firms represented a wide cross section of business types: Over 18 percent were metal fabricators; 15 percent were food, tobacco or alcohol producers; 14.5 percent were textiles and apparel producers; and, nearly 14 percent were producing wood products (wood, paper, printing and furniture). Even though these were small manufacturers, over 63 percent of the firms were organized as corporations, subchapter s corporations, or limited liability companies. Over two-thirds of the firms were owned by men, and over 60 percent were owned by people 51 years of age or older. As a group, these owners were relatively well-educated with over 80 percent of them having some education beyond high school. Remarkably, nearly 47 percent have a college degree or more. Twenty-six percent of the firms had been in business 10 years or less, while 21 percent had been in business 30 years or more. About half of these firms had other family members working in the business. And finally, three-fourths of these owners worked only in this manufacturing business.

The firms in this sample were relatively small. Over 45 percent of the firms had gross sales of less than \$100,000; only 20 percent of the firms had gross sales of over \$1 million (Appendix Table 2). These manufacturing firms are important exporters of products, which bring new money into the Montana economy. About 35 percent of the firms sell 50 percent or more of their output to out-of-state customers. Less than 30 percent of the firms purchase more than 50 percent of their inputs from out-of-state suppliers. In short, these firms make substantial contributions to Montana economy by exporting products produced with inputs purchased in Montana.

Financial Characteristics

About two-thirds of these small manufacturers used traditional forms of credit, such as lines of credit, mortgages, vehicle or equipment loans or capital leases (Appendix A – Table 2). 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. Firms manufacturing wood and plastic products and larger firms were more likely to use lines of credit than other firms. Less than 20 percent of small manufacturers held mortgages. The largest firms were much more likely to hold a mortgage than the smallest firms (38.5 versus 10.2 percent). Less than one-third of small manufacturers held a vehicle or equipment loan. Food manufacturers, larger manufacturers, and younger businesses were more likely

Chart 1 Use of credit by small manufacturers



to hold vehicle and equipment loans than other firms. Capital leases are used sparingly by small manufacturers with less than 10 percent of these firms holding them. Food manufacturers and larger manufacturers are more likely hold capital leases than other firms.

Short-term capital has typically been supplied by line-of-credit loans from commercial lenders, including banks, savings and loan associations, finance companies, and others; however, short-term capital is much more likely to be supplied by credit card companies. While only 70 percent of firms with no employees utilize credit cards, over 90 percent of all firms with employees utilize them.

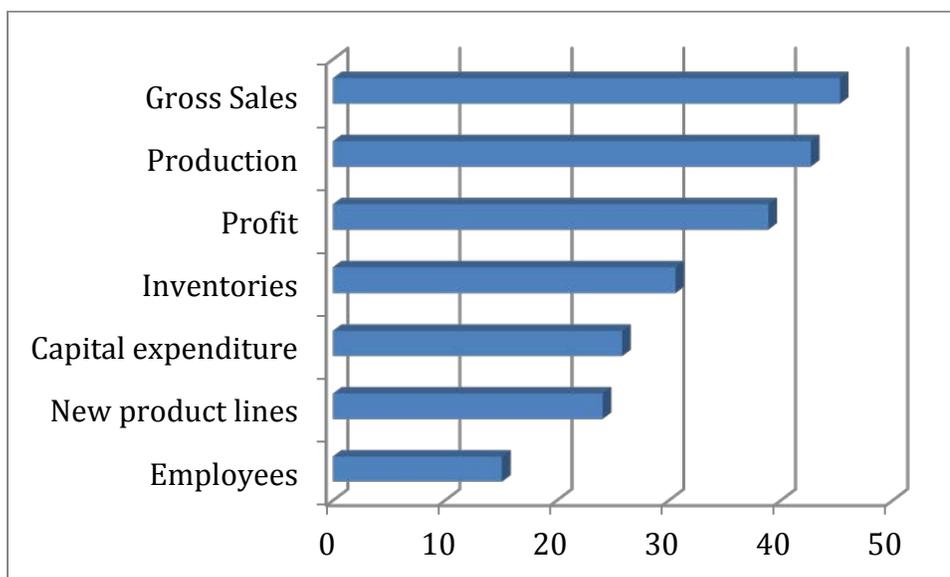
Access to financial capital is critical to the growth and development of small manufacturers. A majority of these firms had no traditional loans outstanding; although, for those firms participating in the credit market over 80 percent always were successful in getting their loan applications approved. Manufacturers with no employees, who were often younger businesses, were less likely to have their loans approved than firms with employees. When asked about credit access in general, 17 percent suggested that access to

credit was less difficult while 35 percent suggested that access to credit was more difficult than one year ago. Food manufacturers had less difficulty accessing credit, while wood manufacturers had more difficulty accessing credit than other manufacturers. And finally, 12 percent of these firms had new equity investments in the past year.

Performance in 2012 (Winners and Losers)

Business performance improved substantially from 2011 to 2012 with 45 percent of firms realizing increased gross sales, 43 percent realizing increased production, and 43 percent of firms realizing increased profits (Appendix A – Table 3). Food, textile/apparel, and metal manufacturers were more likely to realize increases in gross sales than other firms; and larger firms and firms with younger owners were more likely to realize

Chart 2 Changes in Business Performance, 2011 to 2012



increases in gross sales than other firms. Larger firms were nearly twice as likely to realize increases in production, while firms with younger owners were over 40 percent more likely to grow than firms with older owners. Food and textile/apparel manufacturers were more likely to realize increases in profits from 2011 to 2012 than other firms. In addition, larger firms and firms with younger owners were more likely to realize increases in profits than other firms.

Other measures of business performance are changes in inventory, new capital expenditures and product lines, and number of employees. Over 30 percent of these manufacturers increased inventories with 18 percent decreasing inventories. Firms with younger owners and owners with less education were slightly more likely to increase inventories than other firms. Twenty-five percent of these firms made major capital expenditures in 2012. Wood products and smaller firms were less likely to make these capital expenditures than other firms. In fact, only 15 percent of firms with no employees made major capital expenditures, while nearly 60 percent of firms with 10 or more

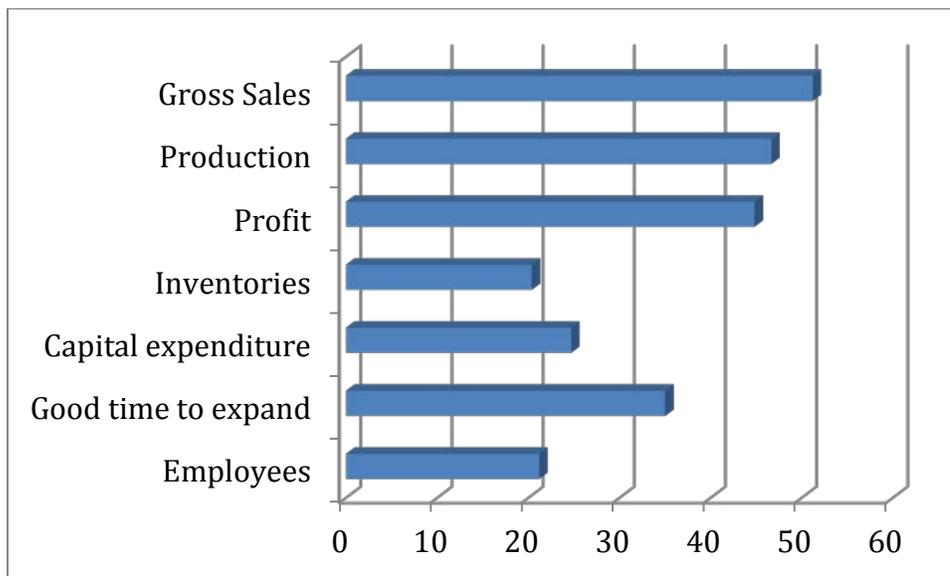
employees made major capital expenditures. Twenty-four percent of these firms introduced new product lines in 2012. Only 15 percent of these manufacturers increased the number of employees in 2012. Food manufacturers and larger firms were more likely to increase the number of employees than other firms. Once again, firm size matters; less than 2 percent of firms with no employees decided to hire at least one employee, while over 38 percent of firms with 10 or more employees added employees in 2012.

Some firms were faced with the prospect of either permanently or temporarily curtailing production. Five percent of the manufacturers permanently eliminated production. Textile and apparel manufacturers were less likely to eliminate production, while firms owned by less educated individuals were more than 3 times more likely to eliminate production as other firms (3.4 percent versus 12.7 percent). Nineteen percent of manufacturers temporarily curtailed production in 2012. All firms were equally likely to have curtailed production in 2012.

Over 10 percent of manufacturers faced significant worker shortages in 2012. Workers shortages were most severe for food and textile/apparel manufacturers (over 12 percent reported worker shortages) and larger manufacturers (over 18 percent of firms with 6 or more employees reported worker shortages).

Expected Performance in 2013

Chart 3 Expected Changes in Business Performance, 2012 to 2013



Montana manufacturers were very optimistic about business performance in 2013 (Appendix A – Table 4). Business performance is expected to improve substantially from 2012 to 2013 with over 50 percent of firms expecting increased gross sales, 47 percent expecting increased production, and 45 percent expecting increased profits. Food manufacturers, larger firms, and firms with younger owners are more likely than other manufacturers to expect increased sales and higher production in 2013. Over sixty-five percent of food manufacturers expect higher sales and higher production; over 37 percent

of firms with no employees and over 56 percent of firms with 5 or more employees expect higher sales and higher production; and over 62 percent of younger owners expect higher sales, while only 36 percent of older owners expect higher sales and higher production. Profit expectations were even higher than production and sales expectations for many manufacturers. Food, textiles/apparel, wood, and metal manufacturers are expecting higher profits. Food manufacturers were the most optimistic with over 60 percent of the respondents expecting higher profits in 2013 than 2012. Firms with no employees were generally less optimistic (38 percent are expecting higher profits), while firms hiring any employees were more optimistic (57 percent are expecting higher profits). And finally, 62 percent of firms with younger owners are expecting higher profits, while only 38 percent of firms with older owners are expecting higher profits.

Other measures of expected business performance are expected changes in inventory, new capital expenditures, business expansion, and number of employees. Over 20 percent of these manufacturers expect to increase inventories with 12 percent expecting to decrease inventories. Food manufacturers were twice as likely as other manufactures to expect inventory increases. Firms with younger owners were more than twice as likely to expect inventory increases as other firms.

Twenty-five percent of manufacturers expected to make major capital expenditures in 2013. Food and petrol/plastics manufacturers were more likely to make major capital expenditures than other firms. In addition, larger firms and firms with younger owners were more likely to make major capital expenditures than other firms.

Over 35 percent of these manufacturers indicated that 2013 was a good time to expand their business. There was no statistically significant difference by manufacturing sector, size, owner age, or owner education. Approximately the same percentages of manufacturers expect the economy to be better or worse in 2013 than in 2012, although, food, textiles/apparel and wood manufacturers were more optimistic about the economy improving in 2013 than other manufacturers. Over 87 percent of manufacturers thought the outlook for their business was at least as good as 2012. Larger manufacturers and those with younger owners were significantly more optimistic about the outlook for their business in 2013 than other manufacturers.

Nearly 40 percent of manufacturers expect output prices to increase because of stronger demand for their products, while 45 percent of manufacturers expect input prices to increase. Textile/apparel manufacturers are most concerned about output price increases, while smaller manufacturers, especially those with no employees, are most concerned about input price increases in 2013.

One indicator of the financial health of the business is their demand for employees. Twenty-one percent of these manufacturers expected to increase the number of employees in 2013. Only 14 percent of the manufacturers indicated that they had immediate job openings. There was no statistically significant difference by manufacturing sector, size, owner age, or owner education.

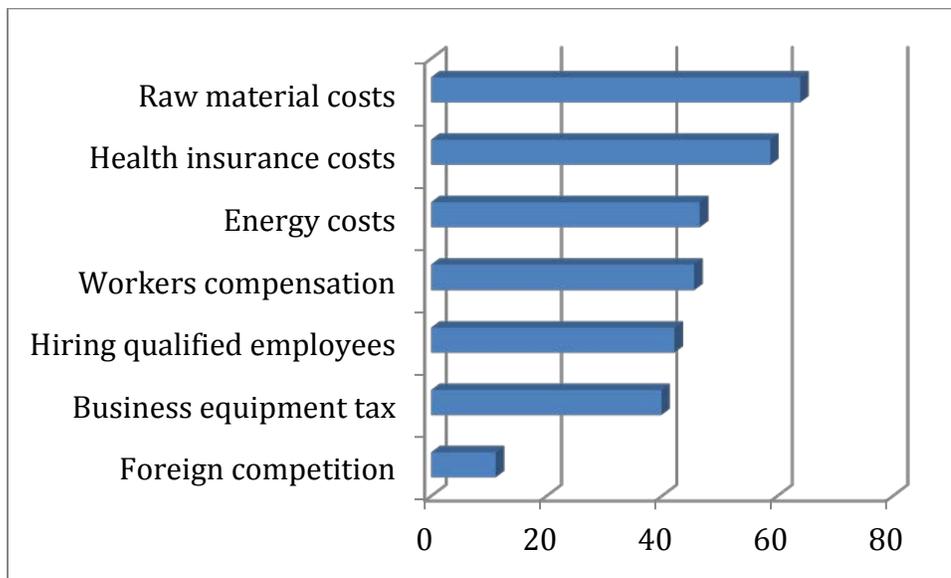
Major Concerns

Based on focus group interviews, manufacturers identified seven primary costs facing them: health insurance, workers compensation, energy, hiring (and training) qualified employees, responding to foreign competition, raw materials, and business

equipment taxes. Over 50 percent of the manufacturers identified raw material (64 percent) and health insurance (59%) costs as very important costs (Appendix A - Table 5). Food, petrol/plastics, and metal manufacturers were more likely than other manufacturers to be concerned about raw material costs. Food manufacturers and firms with no employees were somewhat less likely than other manufacturers to be concerned about health insurance costs.

Over 39 percent of manufacturers were concerned about energy (47 percent), workers' compensation (46 percent), hiring qualified employees (42 percent), and business equipment taxes (40 percent). Textile/apparel manufacturers were somewhat less likely than other manufacturers to be concerned about energy costs. Textile/apparel manufacturers were less concerned about workers' compensation taxes than other manufacturers. In addition, manufacturers with owners having a low level of education (high school diploma or less) were more concerned about workers compensation taxes than manufacturers with owners having a higher level of education. Obviously, firms with no

Chart 4 Major Concerns

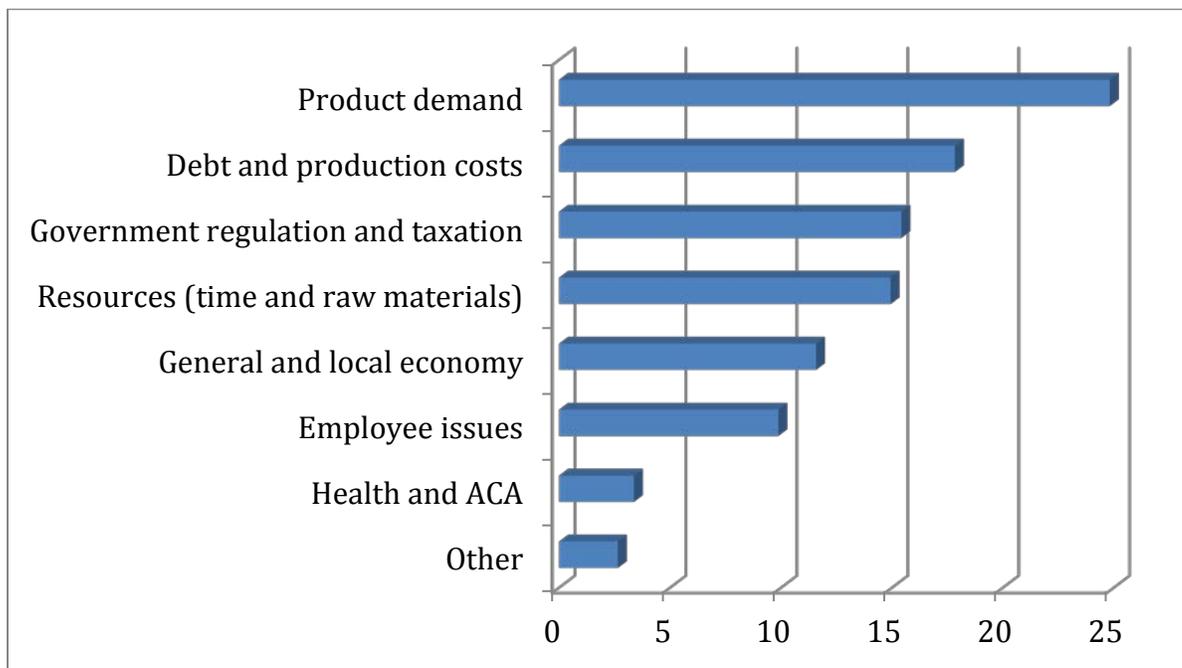


employees were not concerned about workers' compensation taxes because they are not obligated to pay them on themselves as owners. Only firms with younger owners were more concerned about hiring qualified employees than other firms. Metal manufacturers were significantly more concerned about the business equipment tax than other manufacturers. In addition, manufacturers with less educated owners were more concerned about the business equipment tax than other manufacturers. And finally, only 11 percent of manufacturers were concerned about the costs of responding to foreign competition. Petrol/plastics manufacturers were nearly three times more likely to be concerned about foreign competition than other manufacturers.

Challenges and Obstacles to Growth

The final question on the survey asked owners the following: “What is the most significant challenge or obstacle to growth currently facing your business?” The seven most significant challenges or obstacles were product demand, which included, impact by competition from large business, foreign competition, and consumer confidence; debt and production costs, which included marketing and advertising costs, input costs, transportation and shipping costs, cash flow concerns, and inventory concerns; government regulation and taxation, which included government regulations, taxes, licenses, and fees; resources, which included time, raw materials, capital improvements, research and development, technology changes and legal concerns; general and local economy, which included general economic conditions, local economic conditions, population decline, housing market changes, and price level changes (inflation); employee issues, which included finding, training and retaining employees; health and Patient Protection and Affordable Care Act (PPACA), which included the purchase of health insurance and health status of the owner; and, other, which included family and personal

Chart 5 Challenges to Growth



issues, weather uncertainty, and other miscellaneous factors. Nearly 25 percent of the manufacturers were concerned about selling their product (product demand). There was no significant difference by size, or owner education or owner age; however, textile/apparel manufacturers were significantly more concerned about product demand issues than other manufacturers. About 18 percent of manufacturers were concerned about production costs and debt. The smallest firms (those with no employees) were significantly more concerned about production costs and debt issues than larger firms.

About 15 percent of the manufacturers were concerned about government regulation and taxation. Firms with 10 or more employees were more than twice as likely to be concerned about government regulation and taxation as other small manufacturers. Just under 15 percent of manufacturers were concerned about resource availability. Wood products manufacturers were significantly more concerned about resource availability than other manufacturers.

The condition of the general and local economy was the major challenge for over 11 percent of the manufacturers. Firms with younger owners were significantly less concerned about the economy than other firms. Less than 10 percent of firms were very concerned about employment issues, especially finding, training, and retaining employees. No significant differences existed across firms, except for those firms not hiring any employees. Even amid discussion about the Patient Protection and Affordable Care Act (PPACA) less than 4 percent of manufacturing firms listed health or health care as major challenges. No significant differences existed across manufacturing firms. And finally, under 3 percent of manufacturers had other major challenges. Firms with younger owners were slightly more likely to cite other challenges than firms with older owners.

Training Demands

Chart 6 Training Demands of Small Manufacturers



The two previous sections have summarized major issues and challenges facing these manufacturing firms (Appendix A – Table 6). This section explores the demand for employee training, where several training opportunities are discussed. The top five training topics were (1) marketing (40 percent), (2) efficiency (38 percent), (3) access to

financial capital (33 percent), (4) sales (31 percent), and (5) finding qualified employees (30 percent). No significant differences existed among manufacturing types, size, owner age, or owner education. Firms with younger owners were more likely to demand efficiency training, benefit from help accessing financial capital, and demand sales training than firms with older owners. In addition, textile/apparel manufacturing firms were more likely to demand sales training than other firms. Firms with younger owners were more likely to benefit from help finding qualified employees than other firms.

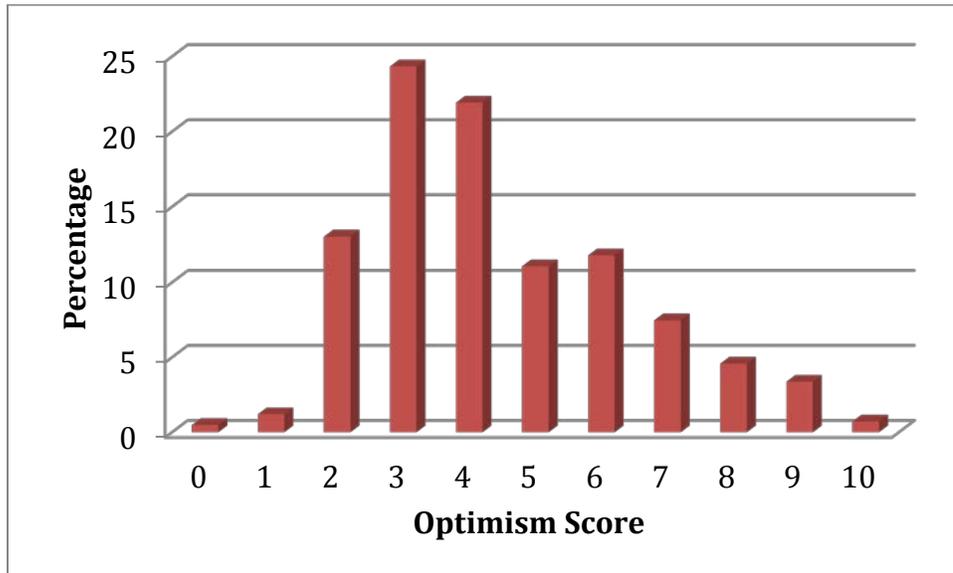
The remaining training demands were mentioned by 25 percent or less of the manufacturing firms. Firms with younger owners were more likely to benefit from help retaining employees than other firms. Survey responses indicated that metal manufacturers and firms with younger owners were more likely to benefit from manufacturing training than other firms. Food manufacturers and firms with more employees are more likely to benefit from employee training on customer service than other firms. Food and petrol/plastics manufacturers and firms with young owners are more likely to benefit from accounting training than other firms, while wood products manufacturers are less likely to benefit from accounting training than other firms. Larger firms are more likely to benefit from software training than smaller firms. Petrol/plastic manufacturers and firms with younger owners are more likely to benefit from financial management training than other firms. Metal manufacturers and smaller firms are less likely to benefit from team building training, while firms with younger owners are more likely to benefit from team building training. And finally, food and petrol/plastics manufacturers and firms with younger owners are more likely to demand training on environmental/OSHA standards than other firms, while smaller firms are less likely to demand this type of training.

Optimism Index (patterned after NFIB scale)

Firms most likely to grow and develop are those most optimistic about the future. This optimism index, which was patterned after a similar index used by the National Federation of Independent Businesses, is based on 10 dimensions: (1) expected employment increase, (2) expected capital expenditures, (3) expected additions to inventory, (4) expected improvement in the economy, (5) expected higher sales, (6) increased inventory since last year, (7) current job openings, (8) easy access to financial capital, (9) good time to expand (as indicated by the owner), and (10) net profit increase from last year.

Food manufacturers, larger firms and firms owned by younger owners had significantly higher optimism scores than other manufacturers. Food manufacturers had an average optimism score of 5.6, followed by metals (4.4), textiles/apparel (4.1), wood (4.1), and petrol/plastics (3.9). The smallest firms had an average optimism score of 3.9, while the largest firms had an average optimism score of 5.4. And finally, firms with younger owners had an optimism score of 5.0, while firms with older owners had an optimism score of 4.1 (22 percent difference).

Chart 7 Optimism Index



Focus Group Summary (Major Themes)

The quantitative study utilizing a survey of 415 owners and managers of small manufacturing firms was complemented by a qualitative study utilizing focus groups involving 45 owners and managers of small manufacturing firms. The purpose of conducting the focus groups was to gain a greater understanding of the needs of the manufacturing sector, determine how they are recovering from the recession and assess their potential for growth. This report discusses the major themes from two general areas of interest, the recession and constraints to growth.

Recession

The major themes emanating from the focus group discussion were as follows: (1) Mixed impacts of the recession – ranging from substantial sales declines to substantial sales increases; (2) less competition; (3) incentives to adopt lean manufacturing; (4) lower costs (and some labor incentives); (5) external factors (North Dakota oil boom); (6) long-term planning (those not responding to booms seemed less likely to bust).

The recession had mixed impacts on small manufacturers. For some the recession was crippling with sales volume declining by 60 percent or more, while others realized substantial growth. The severity of the downturn was expressed by a manufacturer, who said, “We moved from two locations in two states with 30 employees and \$3 million revenue to 1 location in one state with 2 employees and \$1 million revenue.” For many of these firms, the recovery has been slow and deliberate, as expressed by one owner, who

said, “There has been no recovery; it went to the bottom (and) is kind of hanging out there.” Manufacturers dependent upon the general U.S. economy seemed to be facing a more difficult recovery than those dependent upon the local economy or significant Federal government contracts. One manufacturer noted, “We probably weathered the storm better than most, because our primary customers the Department of Defense (DOD), and although they struggle for funding for a lot of things, the recession really didn't seem to effect the defense department's spending that much.”

The recession had many positive impacts for some manufacturers, including less competition, incentives to adapt lean manufacturing processes, lower building costs, and incentive programs to hire labor. With competitors going out of business, some manufacturers realized increases in gross sales and lower input and labor costs. In addition, several manufacturers responded to the recession by adopting lean manufacturing processes (thereby, reducing waste) and updating and upgrading certification ratings. As one manufacturer noted, “. . . as far as recovering from the recession, that was tough. It was all about right sizing, making sure we were staffed appropriately everywhere and that we had the right people and right positions. It was not an easy task, we found ourselves running extremely lean for a long, long time.”

Lower input costs encouraged some manufacturers to enter the market or expand. One manufacturer even offered a tacit apology. “It is sad to say, but we took advantage of the recession in building our own plant.” Other manufacturers took advantage of labor programs to hire additional workers at lower costs utilizing American Recovery and Reinvestment Act provisions.

The oil boom in Western North Dakota and Eastern Montana had a generally positive influence on firms during the recession. One manufacturer noted, “We had our best year right in the middle of this bad economy. What helped us was the fracking in the Dakotas and the flooding in 2009 or 2010; we had one of our best years. So as far as the downturn we had some really good years the last three or four years.” While the oil boom helped ease the impact of the recession, many manufacturers had planned for “leaner” times in long-term planning and were ready for the downturn. For some manufacturers who had never experienced major growth during some boom time, the recession seemed to have less impact because they weren't faced with employee layoffs.

Several manufacturers were concerned about the additional regulatory activity during the recession, especially on health and safety issues. One manufacturer noted, “. . . maybe it's coincidental, but I don't think it is. There is more of it, and the state has become, instead of being relaxed in a difficult time, they have become more vigilant about getting into our faces.” Some manufacturers were concerned that during the recession the regulatory burden for some agencies had declined in some industries, such as construction, which required regulators to justify their existence (and raise revenue) by more closely regulating other industries, such as manufacturing.

Following the recession, raw material inventories have shrunk. Several manufacturers were concerned about the time lags between orders and delivery on raw materials as suppliers were using just-in-time inventory strategies.

Constraints to Growth – Workforce Issues

The major themes emanating from the discussion of workforce issues were the following: (1) Oil development in Bakken formation has impacted wages; (2) labor quality, which includes soft skills, education, experience, and apprenticeship programs, is critically important; and, (3) Workers' Compensation remains an issue.

The most significant issue constraining the growth and development of small manufacturers is the cost and quality of labor. The Bakken oil boom has made the labor market more competitive, which has been good for workers but challenging for Montana manufacturers as labor costs have been driven up. One manufacturer suggested that “it (the Bakken) has been good for tax dollars for employment revenue but not for Montanans that have to operate a business here.” Several employers suggested that it was difficult to recruit and retain employees in Montana because wages and benefits are often lower than in other states. One manufacturer suggested that when employees choose a Montana company they are asked to pay the Mountain Tax, where the lower pay is offset by the opportunity to “look out the window and see the mountains.” One manufacturer was even more emphatic about the wages for Montana labor, saying, “... I think there is a quality of life in Missoula that people want, but really the pay here is horrible.” One of the challenges is that Montana doesn't have a manufacturing base (or manufacturing infrastructure) and associated trained workforce; therefore, manufacturers are forced to look out-of-state when hiring employees.

This study focused on small manufacturers with no or very few employees. Once the smallest companies, who currently have no employees, decide to become employers, they not only incur the wages and benefits of the new employee, but also the paperwork requirements of the Federal and State government. The added full-time employee requires a substantial increase in sales. One manufacturer with eight employees estimated that an additional employee required an increase in sales of 20 percent to cover wages, benefits and associated taxes.

Training is expensive for the employee, too. One manufacturer suggested that “the College of Technology (COT) is not cheap; it is expensive (and) you know these kids are coming from poor families; they can't afford to go there to be trained.”

In addition to higher costs of labor, several quality issues emerged. The challenge, as stated by one manufacturer is the following: “The constraint that I face is finding suitable workers that have the potential to move in, become productive, and turn a profit for me relatively quickly.” That's a very tall order to satisfy in the labor market. Two major concerns with quality workforce surfaced: (1) appropriate education and (2) soft skills.

A majority of focus group participants expressed concern about the educational opportunities available in Montana. Many high schools have downgraded or eliminated their “shop” and other technical training opportunities. It was noted that “the local school system is not educating people to take manufacturing jobs – it's all academics and sports.” High school graduates are faced with the stigma of attending a technical school rather than one of universities or colleges. One manufacturer noted, “. . . the fact of the matter is our teachers are unaware of the opportunities that exist in all of these companies that are really pleasant places to work. I think one of the things that we need to do as economic developers is to drag the teachers out of the classrooms (to see what career opportunities are in manufacturing).”

Higher education institutions appear to have minimal interest in technical education; although, there has been more interest recently with the establishment of vocational colleges within both Montana State University and University of Montana. The educational institutions are faced with the challenges of offering highly specialized education for people entering the manufacturing arena. While some manufacturers need welders, others need machinists, other need chemists, and so on. This challenge was articulated very succinctly by one manufacturer who said, “For you and I, we can get our workforce, because we hire welders; but you know when you get into the technical fields like there, there is Aerospace, there is Biotech, and if your company is only hiring a couple, if you have multiple companies, can you really support a state-sponsored curriculum at a higher education to support that.”

Perhaps, the most spirited discussion addressed the establishment of apprenticeship programs. An active school to work apprenticeship program existed in Kalispell a few years ago but has since been terminated. Several manufacturers were willing to financially support an apprenticeship program. Some manufacturers suggested they would pay from one-half to all of the apprentice’s wages. Others suggested that the some of the financial support could be offset by a tax credit. In short, these manufacturers were asking for appropriate training (education) for their workforce. Given the lack of manufacturing infrastructure in Montana, they’re faced with the challenge of training their own workforce or encouraging in-migration of trained workers.

In the food (organic agriculture) business, Montana has minimal infrastructure. Organic producers often utilize educational programs in Washington State for the processing of berries and other organic crops and are dependent on education from Wisconsin for cheese and other dairy product manufacturing.

Not only do potential employees need appropriate training, but also they need a quality mindset, the focus groups revealed. Students trained at the colleges of technology need to “have those basic ideas and mindset and understand why we operate the way we do,” one person commented. What constitutes a quality mindset? A quality mindset requires that students understand sigma, statistical process control and lean manufacturing concepts. Unfortunately, students with this type of training are typically engineers, which demand much higher salaries than line workers. The challenge, as voiced by several manufacturers, was “we can’t afford to hire them.” In addition, it was noted, “We can only have so many managers; we’ve got to have somebody who can drive a nail, use a cutting torch, and weld – you know, figure out stuff.”

Soft skills (such as showing up for work on time, getting along with other employees and work ethic), are the other substantial challenge that surfaced. One manufacturer stated, “There are two things that we look for on an application. Have you ever worked for (another manufacturer) and McDonalds, or have you ever been involved in 4-H. Guess what both of those require? Personal responsibility.”

And finally, Workers’ Compensation is a substantial labor issue for manufacturers. Some manufacturers were concerned about the conflicting involvement of Workers’ Compensation and physicians on treatment and decisions determining when the employee can return to work. One manufacturer noted, “. . . a lot of times they think they know how to treat a patient better than the medical profession does, so they will dictate the regimen that the patient will go through, and it is not always the best for the patient.” Another manufacturer expressed frustration with physicians by suggesting that “. . . we need to

have (the) employee, (but when) they get into the medical system the tendency of doctors or medical system is not necessarily to clear anybody, because of their potential malpractice or their insurance rates.”

Company history matters when considering the impact of Workers’ Compensation. One manufacturer suggested that “dealing with Workers’ Compensation is dealing with the culture of company.” It can be age-related issues, where “older guys . . . are not willing to take the short cuts; it’s the younger guys.” A culture of safety in the business is likely to be manifest in lower Workers’ Compensation rates.

Constraints to Growth – Government Taxation, Regulations and Paperwork

Taxation

The only major taxation issue raised in the focus groups was concern with business equipment taxation. Two issues emerged with business equipment taxation: Business equipment taxes are not applied equitably and tax collections extend beyond the useful life of the equipment.

Taxation is typically reported as a “hot” topic among small business owners; however, these small business owners were only moderately concerned about taxation. In fact, this group of owners was only concerned about business equipment taxes. Two business equipment tax concerns were voiced by these owners: (1) Honesty in reporting of business equipment and (2) taxation schedules on business equipment extend beyond the depreciable life of the equipment. The reporting challenges caused some owners to label these taxes as “punitive and ridiculous.” However, the most important consideration was the difference in “honest” reporting by other business owners. Updated equipment taxation schedules have become increasingly important with the advent of high tech equipment, which often becomes useless much quicker than traditional capital equipment but remains on the equipment tax roles.

Regulation

The major themes emanating from the discussion of government regulations were as follows: (1) Regulation is a mixed bag – for some it’s perceived to be punitive and unnecessary, for others it perceived as vitally important to the success of the business; (2) changes in culture in the regulatory agencies are needed; (3) timing is critical – delays caused by regulatory agencies are costly; (4) regulations must be consistently enforced across time and space (geographical area); and, (5) regulatory audits must be efficiently conducted and proportional (one size does not fit all).

Among those manufacturers perceiving the regulators as punitive, the sentiment was expressed by one manufacturer who said, “. . . they certainly give the impression that they are not there to improve working conditions and oversee the stewardship of the land; they are there to pure and simple levy fines against you and generate revenue to pay their costs ...”

When regulations change, timing becomes a critical issue. When the manufacturer doesn’t understand the regulation change and the regulator staff doesn’t understand how the manufacturer should respond to the new regulation, manufacturers lose valuable production time and most importantly, lose customers (especially, those manufacturers competing in the global marketplace). If regulations are updated (changed), there must be

some process for updating regulatory manuals. One manufacturer noted that a sanitarian in a western Montana county was still using a manual that was several years old (over 20 years old) with the new regulatory language written in the margins. She said, "... my sanitarian has a book with all these stuff handwritten on the side and I regularly point out that the handwritten side that hasn't been put into type doesn't count. I am glad she feels more comfortable if I do this, but until they spend \$20 a page to update it, it is not a regulation." Delays in responding to regulatory questions is often a personnel issue, where there is simply not enough staff to handle the requests. When a shortage of staff is combined with delays in interpreting new regulations, unnecessary costs are imposed on producers waiting for responses.

Regulatory consistency is an important issue for processing and marketing through farmers markets. One processor noted that requirements to sell her product were different in each county. She noted, "There are three different sanitarians that I have to talk to, where it should just be seamless." Consistent regulations across county lines would reduce the marketing costs for these producers. In addition, regulations are not consistent across agencies. In fact one processor noted, "There is an additional layer as a farmer producer; I can make jam in my kitchen with my cat watching me and take it to the Farmer's Market and sell it. Nobody can say anything to me about it. But once I get that license I can't do that anymore. It makes no sense at all. Then I am a different level and the hoops I have to go through, because I have a license; but making it in the licensed kitchen I have a whole set of rules that I have to abide by when I sell it."

For many manufacturers regulation was very important to them. One consumables manufacturer stated it succinctly, "(We) want the industry to make sure that whoever is manufacturing these products out there that they are not giving the industry a black eye, so from that standpoint, I appreciate (them and) I think the regulations are appropriate." Another manufacturer was started and has grown because they were able to satisfy the specifications established by the regulator. While they noted, "... it is just sometimes hard to wade through all the codes when we are selling to a lot of different international companies," it is a major factor in keeping their product safe. Another manufacturer said, "I think all the rules and regulations that we have to go through yearly separate us as a company and actually makes us a better competitor in the market." In addition, several manufacturers noted that regulators are often very willing to help if you ask for consulting assistance before they arrive at your business and assume an enforcement role.

And finally, regulatory audits can be time consuming and expensive. Not only does the owner need to dedicate substantial time away from more productive activities, but accounting and legal support are needed to effectively respond to the audit. Large firms can accommodate audits with existing support staff, while small firms are faced with additional expenses. Several manufacturers suggested that auditing process should be redesigned for small firms – one size does not fit all.

Paperwork

No small business owner relishes the opportunity to complete more surveys or regulatory paperwork. One manufacturer brought a questionnaire to the focus group where the regulatory agency issuing the questionnaire estimated it would take 14 hours to complete. Small businesses, especially those with few or no employees, are unwilling to

allocate large amounts of time to unproductive activities such as completing a questionnaire. More efficient methods of gathering this information must be explored.

Constraints to Growth – Access to Financial Capital

The major themes emanating from the discussion of equity and debt financing were the following: (1) 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; (2) those manufacturers wanting to grow were faced with increasing stringent collateral and cash flow requirements from the lenders (which were imposed by regulators); (3) trade credit issues (either on the accounts receivable or accounts payable side) are posing some problems.

This study only assesses capital access for existing businesses because no interviews were conducted with nascent entrepreneurs. While there was a perception that access to adequate financial capital was difficult for nascent entrepreneurs and new business ventures, only a few existing businesses were financially constrained. Several businesses were active in the private equity market for most of their financial capital needs, while other small businesses had established relationships with commercial banks and other lenders that met their financial capital needs.

One manufacturer invested her retirement money to start a business; another manufacturer found an equity investor who covered all of the start-up expenditures and now supplies operating capital to the firm. Others utilized the Montana Private Capital Network to fund their ventures. Several owners thought some effort should be expended to establish a venture capital fund for Montana.

In general, these existing firms had good relationships with lenders and faced only minor access issues. For some borrowers, attempts to expand were met with some resistance by lenders concerned about having adequate collateral and cash flow. One manufacturer, frustrated with the collateral demands, suggested that “if you can’t collateralize it, you won’t get it.” In this post-recession environment of increasingly strict auditing and lower valued collateral (such as houses), collateral and cash flow requirements are unlikely to be relaxed in the near future. Government sponsored debt programs, such as SBA’s 504 program and Montana Department of Agriculture’s Growth Through Ag program have proven to be valuable sources of debt capital. And finally, some manufacturers were concerned that many banks and other lenders don’t know much about their business; hence, they’ve been required to find lenders that understand their business. Startup manufacturers could benefit from a list of lenders interested in financing 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 require the business owner to work with new loan committees. In selected cases, the business found the local bank to be an excellent partner, while others with higher debt demands found larger regional banks to be essential to their growth.

Trade credit, another source of debt capital, has created interesting challenges for manufacturers. Changes in the terms of credit have been imposed by large customers on

their small suppliers. One small manufacturer who supplies Fortune 500 companies noted, "I love the form letter that comes out with no name, no phone number, [stating] 'our terms are now 120 days.' You need to be asking . . . are small businesses financing big business?" In addition, 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 manufacturer, who has no market power. Other manufacturers are concerned about the other side of the balance sheet, accounts payable. An example described was when other firms in financial distress need money, the "next thing you know your phone is ringing before the bill is even due."

Constraints to Growth – Local Environment

The major themes during the focus group discussion on the local environment were as follows: (1) Local political support is important; (2) educating farmers/ranchers, environmentalists and retirees about the advantages (tax) of manufacturing is important.

Local support appears to be critically important for the initial development and subsequent growth of a manufacturing sector. In a frustrated tone, one manufacturer noted, "Our local government is doing virtually nothing to attract, promote, or facilitate a growth of manufacturing or business . . . But there should be no reason why manufacturing can't thrive and grow and succeed in rural Montana. But you need to have local government that is willing to get on board and to help promote that."

In some communities, the local political environment was very challenging as agricultural interests, retirement lifestyles, environmental issues, and building codes enforcement were significant constraints; while in other communities, the local political environment was neither hindering nor enhancing growth. Many Eastern Montana communities are well established agricultural communities, where those with financial wealth and political power defend agricultural interests. As one manufacturer expressed, "I don't dislike ranchers, but they don't want to change . . ." Perhaps, the solution to this lack of understanding is education. One manufacturer suggested, ". . . We as manufacturers in this group need to work along with this state, educating the Ag people that their local tax bill will go down. It is not going to happen now, not going to happen in five years, but within ten years (it will happen); but, just butting heads with them isn't going to win us any favors." This educational effort could involve economists and business finance professors from the Montana University System. In addition, manufacturers could benefit from more networking among themselves to address issues and organize responses to other concerns about their growth and more direct political involvement in their local communities. At the other end of the spectrum, environmentalists are concerned about manufacturers damaging the environment. Many of these manufacturers perceived that environmental interests, such a recreation, run counter to their interests. As with the agricultural issues, some education and thoughtful dialogue are needed.

Retirement communities can be challenging because residents like the small town atmosphere and are uncertain about any change. And finally, such community sentiment can be exercised through local regulations, such as building codes. Several manufacturers were concerned that "it doesn't seem like there is a clear vision of what they want out of the community and where they want to take this community." Undoubtedly, more

education is needed to consider the costs and benefits of a manufacturing sector in the community.

Constraints to Growth – Health Care

Two major themes emanated from the discussion on health care: (1) Sales taxes on medical equipment decreases the quantity of product sold; and, (2) health insurance costs are on everyone's mind (even though, they weren't discussed much in these focus group sessions).

Interestingly, health care and the Patient Protection and Affordable Care Act (PPACA) were not major topics of interest in these focus groups, conducted in late 2012 and early 2013. In fact, the PPACA was discussed only on two occasions; once when discussing medical equipment sales taxation and once when discussing higher health insurance costs. One manufacturer was concerned about the 3.8 percent sales tax being levied on medical equipment. Even though focus groups didn't discuss health care issues often, other evidence from our quantitative survey suggests that it's on "everyone's mind right now as health insurance costs have gone up tremendously over the last few years," as was stated by one manufacturer.

Constraints to Growth – Marketing and Selling (Direct Marketing)

The major themes emanating from the discussion of marketing and selling were the following: (1) Marketing is costly and assessing marketing impact is challenging; and, (2) direct marketers face the challenging of walking a pricing tightrope.

In the quantitative survey the most important concern was marketing and advertising. One manufacturer addressed the issue by suggesting that "... most manufacturers come from a technical background so you just have trouble parting with money for marketing or building brands." That may be one of the issues, but these manufacturers were concerned about efficient use of advertising dollars, methods of marketing (through the Internet or face-to-face), and pricing considerations. Advertising is expensive and it's difficult to find marketing assistance. As suggested by one owner, "(It's) tough to find good marketing help; Madison Avenue may not work for a Montana company." One manufacturer tried national marketing through a very popular magazine, but found that "all we got out of it was letters from convicts; all they wanted was the magazine."

These manufacturers utilized advertising methods ranging from nearly 100 percent Internet marketing to nearly 100 percent direct marketing (face-to-face). For some, Internet marketing provided a valuable buffer during and after the recession because they effectively expanded the geographic reach of their marketing effort. Those manufacturers dependent on a national or international market were very interested in the Made in Montana label being promoted more broadly.

The direct marketing manufacturers were utilizing farmer's markets for retail sales and face-to-face wholesale marketing with prospective retailers. These manufacturers must walk a pricing tightrope, where they can offer a profitable price to their direct customers while still allowing their retail store owners to charge a profitable price. One manufacturer noted, "We have a challenge that we do a lot of direct sales, and there is this

perception that ... direct sale ... should be significantly less expensive. We try to find the price for those who retail our product so they can make money and so we can make some money. But we intentionally, do not sell significantly cheaper for direct sales, because I don't want to be competing with my retail people.”

Constraints to Growth – Infrastructure

One of the overarching themes in discussions of the manufacturing sector was the lack of manufacturing infrastructure in Montana. One manufacturer summarized these concerns by noting, “(It’s) basic manufacturing infrastructure that we just don't have.” Basic infrastructure 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. One manufacturer noted, “(It’s) a challenge because people who service our company and service our systems are in Texas or California. So it is really hard sometimes when our system crashes to get somebody to come and fix it, because it can take weeks, and that puts, you know, every minute that I can't be manufacturing I am losing money.” In addition, there simply aren't many support services for manufacturers in Montana; hence, many owners suggested that they “just need to be more self-sufficient.” If the costs of self-sufficiency become too high, manufacturers needing these service will move. Effort needs to be expended to not only address the concerns of manufacturers, but also address the concerns of business that provided inputs, maintenance, and other support to these manufacturers.

Other Issues Constraining Growth

Several secondary issues were raised by focus group participants. These are the other important issues discussed: (1) Legislation is outdated and needs to be reviewed; (2) a US-wide sale tax may not be in the best interest of small producer (because of competing with large business or having to utilize their services to handle the sale tax billing); (3) trade protection (Berry Amendment) is helpful; (4) distance and transportation costs are substantial issues; and, (5) owners face substantial stress in “up” and “down” markets.

One example of outdated legislation is Montana law governing the use for grade B milk. Artisan cheese manufacturers must use grade A milk in their cheese products. This constraint makes it difficult for artisan cheese manufacturers to compete. This challenge was voiced by one manufacturer who said, “We pay full price for milk, people come up to us and say, oh we want local artisan cheese, but they want to pay what they pay a gigantic company; well, if I (used) grade B milk, but there is not grade B milk in the state of Montana.”

Sales taxation at both the state and federal level has become an important topic of discussion as small firms contemplate the impact on their sales volume and consider how they will comply with requirements to pay sales taxes in each state. This dilemma was clearly articulated by one manufacturer noting that “now Amazon is pushing for a sales tax online. So you got to figure anything good for Amazon is bad for little business. So what eventually happens is that 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, you know."

Foreign competition is challenging for many of Montana's manufacturers competing in the global market place. Some protection is afforded by the Berry Amendment, which requires the Defense Department to give preference in procurement to domestically produced, manufactured, or home-grown products, most importantly food, clothing, fabrics, and specialty metals. One manufacturer suggested that "if it wasn't for that amendment, you would have no U.S. manufacturing of textiles and I would imagine a lot of other things that supply the defense industry." For other manufacturers, it was challenging to compete against foreign businesses which copied your product and sold it on the U.S. market for much lower prices. For other manufacturers utilizing foreign manufacturers for some of their processing, there were substantial costs associated with monitoring these producers.

Perhaps the most difficult challenge for Montana manufacturers is the cost of transportation to import raw materials and export products. While Montana is mineral (coal, oil, natural gas, copper, and other minerals) and commodity (wheat and cattle) rich; many of these manufacturers required other raw materials which can only be acquired outside of Montana. In addition, Montana is sparsely populated state; hence, these manufacturers needed to export products with associated costs.

And finally, small business owners find themselves moving from one urgent problem to the next; hence, time management is critically important (and an area where some manufacturers would like support). The stress of effectively managing the business is compounded by two other sources of stress depending on how the business is doing. One stressor occurs when sales are down and the owner is "wondering if they even have a pulse." The other stressor occurs when sales are booming and the owner is asking, "Did I pop a vein in my neck (or how do I get all of this work out)."

The following conclusions section utilizes results from the quantitative and qualitative surveys.

Conclusions

This study profiled the surveyed manufacturers, assessed their performance in 2012, examined their expected performance in 2013 and beyond, explored their current optimism, evaluated their constraints to growth, and forecast the demand for services supplied by MMEC and MSU Extension. Larger manufacturers and manufacturers with younger owners seemed to have had the most successful performance in 2012, expected the most successful performance in 2013, and were the most optimistic about the future. Their 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. And finally, firms with younger owners had significantly higher training demands than other firms.

Product demand became an increasingly important concern following the Great Recession. The recession had mixed impacts on small manufacturers. For some the recession was crippling with sales volume declining 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), 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. However, many manufacturers realized a substantial downturn in sales and have experienced a relatively slow recovery. 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.

Production costs posed critical issues for these manufacturers with the price and availability of raw materials being the most important. These small manufacturers were concerned about the higher raw material prices because of the consolidation of distributors after the recession. In addition, they were concerned about availability as many distributors were carrying less inventory; hence, raw materials were delivered later and larger orders were often required.

Labor costs, another important production cost, were the second most important cost consideration. For some manufacturers labor costs have risen because of the economic boom in the Bakken which has given workers other opportunities; hence, these manufacturers have chosen to pay higher wages to retain and hire labor. However, the most challenging workforce issue is the lack of quality labor in Montana. One of the challenges is that Montana doesn't have a manufacturing base (or manufacturing infrastructure) and associated trained workforce; therefore, manufacturers are forced to look out-of-state when hiring employees or providing training for their workers. These manufacturers were concerned about the lack of educational opportunities at the high school or higher education levels for skilled labor. Not only do these laborers need to learn technical skills, but they need to learn important soft skills (such as showing up for work on time) and what constitutes a quality mindset as it relates to manufacturing. Several manufacturers supported the notion of initiating apprenticeship programs to address the labor quality issue.

Government regulation and taxation was the next most important cost consideration. 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. A regulatory culture, where regulators educate and consult rather than punish would be preferred by many small manufacturers. In addition, manufacturers incur additional costs because regulatory decisions aren't delivered in a timely manner and are not consistent across geographic boundaries; and regulatory audits require extensive time and financial resources (staffing, lawyer and accounting fees).

Taxation issues focused on business equipment taxation and health care, especially the Patient Protection and Affordable Care Act (PPACA). Many producers expressed concerns about "honesty" on business equipment tax reporting and taxation schedules that extended beyond the useful life of the equipment. Much of the concern around health care costs was the uncertainty associated with the implementation of the 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.

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 total financed by equity capital investors or they had long-term relationships with their lenders. Access to equity investors seemed to more important to these owners than access to debt financing. Eighty percent of these manufacturers were always successful in getting loan applications approved, although, 35 percent of these manufacturers thought credit access was more difficult in 2013 than before. In addition, several manufacturers were concerned about “outgrowing” their bank as smaller local banks face additional regulatory constraints (and have less capital to loan out) forcing some manufacturers to move their accounts to larger regional banks.

Support of the local community is important for local economic development. While several manufacturers expressed concern about going outside of their local community to find financial resources, other manufacturers were concerned about local political support. In some communities, the local political environment was very challenging as agricultural interests, retirement lifestyles, environmental issues, and building codes enforcement were significant constraints; while in other communities, the local political environment was neither hindering nor enhancing growth. Undoubtedly, more education is needed to consider the costs and benefits of a manufacturing sector in the community.

Firms with younger owners and larger firms seem to be the businesses with 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 previously expanding their firms. These firms realized the most significant growth in gross sales and profitability in 2012; and, these firms expect the most significant growth in gross sales and profitability in 2013. Most importantly, these firms seem to be the most optimistic about the future, as measured by an optimism index. Smaller firms, especially those with no employees, seem to be more content with their current size and are less interested in hiring employees to expand. While the tax code provides substantial incentives (such as depreciation) to purchase capital equipment, hiring employees substantially increases compliance, taxation (social security, workers’ compensation, and unemployment), and training costs.

If educators were to focus their attention on these producers, what type of training do they demand? Younger owners are significantly more likely to demand the following types of training than other owners: (1) Efficiency, which would include lean manufacturing processes taught by MMEC; (2) access to capital, which would include creating lists of equity investors and providing opportunities for owners to meet these equity investors. This training could be provided by MMEC or MSU Extension in collaboration with the SBA and local development organizations; (3) sales training, which would include marketing/advertising and direct sales training offered by business colleges in Montana’s public and private higher education institutions; (4) find and retain employees, which would include providing human resources training for these manufacturers, which could be offered by MMEC or MSU Extension and other resource providers; (5) accounting, which would include manufacturing accounting methods. This training could be offered by MSU Extension with support from MSU’s Business School and by MMEC; (6) financial management, which would include financial and economics training. The training could be offered by MSU Extension with support from MSU’s

Business School and the Department of Agricultural Economics and Economics and MMEC; (7) team building, which could be offered by MSU Extension specialists and MMEC; and, (8) environmental (OSHA and Montana DEQ) standards, which could be offered by MMEC in collaboration with the regulatory agencies. All of this training is essential for the development of manufacturing infrastructure in Montana, which is critically important for the growth of the manufacturing sector.

Methods

Focus Groups

This study conducted focus groups and implemented a mail-in questionnaire to explore the concerns of small manufacturers; develop a profile of them (products, employment, sales, input suppliers, access to credit, and other factors), assess their plans for next year (employment, capital purchases, inventory and other), evaluate current and possible future constraints to growth faced by their small businesses, and forecast the demand for services from MMEC and MSU Extension. Focus groups were conducted in Lewistown, Billings (2 groups), Missoula, Ronan, and Kalispell. A quantitative survey was implemented by the Bureau of Business and Economic Research at the University of Montana.

The participants were invited to the focus groups by the local manufacturer organizations. The six focus groups sessions were attended by 45 people. The focus group meetings generated interesting discussions lasting from 1.5 to over 3 hours. The focus group exercise began with a welcome by the moderator, followed by a discussion of the impact of the recession and constraints to profitability and growth, and a review of the questionnaire to be used in the quantitative analysis. A copy of the focus group guide used for this study is included in Appendix B.

Quantitative Survey

The questionnaire was designed by MMEC and MSU Extension and implemented by the survey unit in the Bureau of Business and Economic Research (BBER) at the University of Montana. The sample of 1,000 potential respondents for this study was selected from a comprehensive list of Montana manufacturers purchased from Dun and Bradstreet, which contained the names and addresses of 3,579 firms. Of the 1,000 manufacturing businesses selected, 415 completed the questionnaire; hence, the response rate for this survey was 41.5 percent. Please see Appendix C for maps of the population and sample.

The study is largely descriptive, where means and frequencies were used in this report. Substantial recoding efforts were needed for two open-ended questions regarding other issues and constraints to growth and development. Regression models were used to more carefully assess constraints to growth. In this study, control variables for the food, textiles, wood products, petroleum, and metals industries; number of employees; and age and education of the owner were used. The analysis was able to explore which types of manufacturing companies, identified by product type and number of employees, and owners -- differentiated by age, gender and education -- were impacted the most.

The questionnaire was addressed to the owner or manager of each company; hence, when owner is mentioned in the report it may be the owner or manager. Based on the cover letter accompanying the survey, it's assumed that all respondents are either an owner or manager. A copy of the questionnaire used for this study is in Appendix D.

Appendix A - Tables 1 through 6

Table 1 – Characteristics of the Sample

Table 2 – Financial Characteristics

Table 3 – Business Performance, 2011 to 2012

Table 4 – Business Performance Expected, 2012 to 2013

Table 5 – Importance of Current Business Costs

Table 6 – Training Demands

Table 1 – Characteristics of the Sample

Characteristic	Frequency	%	Missing
Number of owners working in business			13
0	36	9.0	
1	230	57.2	
2	116	28.9	
3 or more	20	5.0	
Number of hours worked per owner			0
10 hours or less	99	23.9	
11 to 20 hours	34	8.2	
21 to 30 hours	38	9.2	
31 to 40 hours	95	22.9	
41 to 50 hours	88	21.2	
51 or more hours	61	14.7	
Number of employees working in the business			19
None	172	43.4	
1 to 5	112	28.3	
6 to 10	47	11.9	
10 or more	65	16.4	
Number of hours worked per employee			0
20 hours or less	234	56.4	
21 to 30 hours	33	8.0	
31 to 40 hours	107	25.8	
41 hours or more	41	9.9	
Type of business (NAICS classification)			9
Food (311)	53	13.1	
Tobacco and alcohol (312)	10	2.5	
Textiles and apparel (313)	59	14.5	
Wood/paper/printing (321)	42	10.3	
Petroleum/coal/chemical (324)	10	2.5	
Plastics (326)	8	2.0	
Nonmetal minerals (327)	16	3.9	
Primary metals (331)	3	0.7	
Fabricated metals (332)	75	18.5	
Machinery (333)	2	0.5	

Table 1 – Characteristics of the Sample (continued)

Characteristic	Frequency	%	Missing
Computer and electronic (334)	5	1.2	
Electronic equipment (335)	11	2.7	
Transportation (336)	12	3.0	
Furniture (337)	14	3.4	
Miscellaneous manufacturing (339)	62	15.3	
Other (non-manufacturing - 399)	24	5.9	
Legal organization			3
Sole proprietorship	132	32.0	
Partnership	20	4.9	
Corporation	87	21.1	
Subchapter S corporation	90	21.8	
Limited liability company	83	20.2	
Respondent gender			7
Female	130	31.9	
Male	278	68.1	
Respondent age			0
40 or less	77	18.6	
41 to 50	85	20.5	
51 to 60	157	37.8	
60 or older	96	23.1	
Respondent education			7
Less than high school	5	1.2	
High school graduate or GED	76	18.6	
Some college or associate degree	105	25.7	
Trade school or vocational school	32	7.8	
College degree or more	190	46.6	
Respondent experience			0
10 years or less	109	26.3	
11 to 20	129	31.1	
21 to 30	89	21.5	
30 or more	88	21.2	

Table 1 – Characteristics of the Sample (continued)

Characteristic	Frequency	%	Missing
Family business			3
No	204	495.0	
Yes	208	50.5	
Business is only employment			5
Yes, only employment	312	76.1	
No, have full-time job	50	12.2	
No, have part-time job	48	11.7	

Table 2 – Financial Characteristics

Characteristic	Frequency	%	Missing
Gross sales for last year (categorical)			10
\$10,000 or less	65	16.1	
\$10,001 to \$49,999	71	17.5	
\$50,000 to \$99,999	55	13.6	
\$99,999 to \$499,999	92	22.7	
\$500,000 to \$999,999	36	8.9	
\$1 million to less than \$5 million	50	12.4	
\$5 million or more	36	8.9	
Percentage of business sales out-of-state			6
None	70	17.1	
1 to 10	89	21.8	
11 to 30	70	17.1	
31 to 50	35	8.6	
51 to 70	20	4.9	
71 to 90	67	16.4	
91 to 100	58	14.2	
Percentage of production costs out-of-state			13
None	111	27.6	
1 to 10	62	15.4	
11 to 30	57	14.2	
31 to 50	52	12.9	
51 to 70	25	6.2	
71 to 90	64	15.9	
91 to 100	31	7.7	
Business has line of credit			4
No	209	50.9	
Yes	202	49.2	
Business has mortgage			6
No	328	80.2	
Yes	81	19.8	
Business has vehicle and equipment loans			5
No	277	67.6	
Yes	133	32.4	

Table 2 – Financial Characteristics (continued)

Characteristic	Frequency	%	Missing
Business has business or personal credit cards			4
No	76	18.5	
Yes	335	81.5	
Business has capital leases			
No	366	90.2	9
Yes	40	9.9	
Most recent loan application experience . . .			6
Always approved	218	53.3	
Sometimes approved/sometimes denied	36	8.8	
Always denied	13	3.2	
Not applicable, no loans	142	34.7	
Has access to loans and leases become . . .			69
More difficult	122	35.3	
Stayed about the same	165	47.7	
Less difficult	59	17.1	
New equity investment in past year			7
No	291	71.3	
Yes	50	12.3	
Not applicable	67	16.4	

Table 3 – Business Performance, 2011 to 2012

Characteristic	Frequency	%	Missing
Business sales in 2012 ...			7
Increase	185	45.3	
Stay about the same	122	29.9	
Decrease	101	24.8	
Business production in 2012 ...			5
Increase	175	42.7	
Stay about the same	152	37.1	
Decrease	83	20.2	
Business profits in 2012 ...			9
Increase	158	38.9	
Stay about the same	133	32.8	
Decrease	115	28.3	
Business inventories in 2012 ...			6
Increase	125	30.6	
Stay about the same	209	51.1	
Decrease	75	18.3	
Any major capital expenditures in 2012			1
No	307	74.2	
Yes	107	25.9	
Any new product lines introduced in 2012			8
No	309	75.9	
Yes	98	24.1	
Number of employees ...			23
Increased over 2011	59	15.1	
Stayed about the same as 2011	292	74.5	
Decreased from 2011	41	10.5	
Permanently eliminated production capacity in 2012			13
No	381	94.8	
Yes	21	5.2	

Table 3 – Business Performance, 2011 to 2012 (continued)

Characteristic	Frequency	%	Missing
Temporarily curtailed production in 2012			7
No	330	80.9	
Yes	78	19.1	
Significant shortage of workers in 2012			14
No	357	89.0	
Yes	44	11.0	

Table 4 – Business Performance Expected, 2012 to 2013

Characteristic	Frequency	%	Missing
Business sales in 2013			7
Increase over 2012	209	51.2	
Stay about the same as 2012	145	35.5	
Decrease from 2012	54	13.2	
Business production in 2013 ...			8
Increase over 2012	190	46.7	
Stay about the same as 2012	168	41.3	
Decrease from 2012	49	12.0	
Business profits in 2013 ...			9
Increase over 2012	182	44.8	
Stay about the same as 2012	155	38.2	
Decrease from 2012	69	17.0	
Business inventories in 2013 ...			8
Increase over 2012	83	20.4	
Stay about the same as 2012	274	67.3	
Decrease from 2012	50	12.3	
Any major capital expenditures in 2013 ...			2
No	311	75.3	
Yes	102	24.7	
A good time to expand in 2013			21
No	256	65.0	
Yes	138	35.0	
How would you rate the economy in general			6
Better than 2012	114	27.9	
About the same as 2012	186	45.5	
Worse than 2012	109	26.7	
How would you rate the overall outlook for your business			6
Better than 2012	184	45.0	
About the same as 2012	174	42.5	
Worse than 2012	51	12.5	

Table 4 – Business Performance Expected, 2012 to 2013 (continued)

Characteristic	Frequency	%	Missing
Prices your receive for your products ...			7
Increase over 2012	162	39.7	
Stay about the same as 2012	229	56.1	
Decrease from 2012	17	4.2	
Cost of major inputs ...			12
Increase over 2012	183	45.4	
Stay about the same as 2012	200	49.6	
Decrease from 2012	20	5.0	
Number of employees ...			14
Increase over 2012	85	21.2	
Stay about the same as 2012	295	73.6	
Decrease from 2012	21	5.2	
Number of employees ...			14
Increase over 2012	85	21.2	
Stay about the same as 2012	295	73.6	
Decrease from 2012	21	5.2	
Any job openings right now			10
No	348	85.9	
Yes	57	14.1	

Table 5 – Importance of Current Business Costs

Characteristic	Frequency	%	Missing
Importance of each of these costs . . .			
Health insurance			10
Very important	238	58.8	
Somewhat important	60	14.8	
Somewhat unimportant	30	7.4	
Very unimportant	77	19.0	
Workers compensation			20
Very important	180	45.6	
Somewhat important	83	21.0	
Somewhat unimportant	32	8.1	
Very unimportant	100	25.3	
Energy costs			7
Very important	190	46.6	
Somewhat important	137	33.6	
Somewhat unimportant	49	12.0	
Very unimportant	32	7.8	
Hiring qualified employees			19
Very important	167	42.2	
Somewhat important	73	18.4	
Somewhat unimportant	51	12.9	
Very unimportant	105	26.5	
Foreign competition			12
Very important	45	11.2	
Somewhat important	58	14.4	
Somewhat unimportant	76	18.9	
Very unimportant	224	55.6	
Raw material costs			10
Very important	259	64.0	
Somewhat important	106	26.2	
Somewhat unimportant	27	6.7	
Very unimportant	13	3.2	

Table 5 – Importance of Current Business Costs (continued)

Characteristic	Frequency	%	Missing
Business equipment tax			9
Very important	162	39.9	
Somewhat important	144	35.5	
Somewhat unimportant	42	10.3	
Very unimportant	58	14.3	

Table 6 – Training Demands

Characteristic	Frequency	%	Missing
Benefit from business efficiency training			23
No	243	62.0	
Yes	149	38.0	
Benefit from help finding qualified employees			21
No	276	70.1	
Yes	118	30.0	
Benefit from help retaining employees			18
No	299	75.3	
Yes	98	24.7	
Benefit from help accessing financial capital			22
No	262	66.7	
Yes	131	33.3	
Benefit from employee training on customer service			15
No	305	76.3	
Yes	95	23.8	
Benefit from employee training on manufacturing			16
No	304	76.2	
Yes	95	23.8	
Benefit from employee training on financial management			15
No	323	80.8	
Yes	77	19.3	
Benefit from employee training on environmental/OSHA standards			15
No	354	88.5	
Yes	46	11.5	
Benefit from employee training on software (MS Office, etc.)			16
No	318	79.7	
Yes	81	20.3	

Table 6 – Training Demands (continued)

Characteristic	Frequency	%	Missing
Benefit from employee training on team building			15
No	354	88.5	
Yes	46	11.5	
Benefit from employee training on sales			15
No	275	68.8	
Yes	125	31.3	
Benefit from employee training on marketing			15
No	239	59.8	
Yes	161	40.3	

Appendix B – Focus Group Guide

MMEC Focus Group Guide

Purpose: The purpose of this endeavor is to gain a greater understanding of the needs of the manufacturing sector, determine how they are recovering from the recession and assess their potential for growth. This study will explore the concerns of small manufacturers, develop a profile of them (products, employment, sales, input suppliers, access to credit and other factors), assess their plans for next year (employment, capital purchases, inventory and other), evaluate current and possible future constraints to growth, and forecast the demand for services from MMEC and MSU Extension. This focus group session will concentrate on helping us understand the constraints facing small manufacturers.

I. Welcome, set-up

Thanks for your willingness to meet with us regarding issues facing small manufacturers in Montana

1. Introduce yourself and the moderator role.
2. Explain focus group-- A focus group is a discussion that centers on one particular topic. The purpose is to gather a variety of detailed information about the topic.
3. The topic today - - *This focus group time will be used for two purposes: (1) to assess the needs, constraints, and major areas of concern among small manufactures – we mostly interested in identifying the barriers to growth and development of your business and what educational interventions (delivered by MMEC and MSU Extension) might be useful to you; and, (2) to assess a survey instrument we plan to use – we’re interested in know what you’ll answer (and what you won’t).*
4. In today’s discussion, there are no correct answers—only your thoughts and opinions.
5. It is important that we hear from everyone today.
6. Introduce the Note-taker and his/her role.
7. Audiotape—because I want to concentrate on what you say and not misinterpret or leave out anything, a tape recorder will be on. The tape will only be used for compiling notes from this discussion and will not be shared in any other context.
8. Here are just a few ‘ground rules’ for our discussion today :
 - Please, because we’re taping, if only one person talks at a time, that is most helpful. I’m afraid I’ll miss some important comments.
 - Don’t ask me questions because what I know and think aren’t important—it’s what you think and how you feel that’s important. That’s why we’re here. So address each other with your comments.
 - Don’t feel bad if you don’t know much about some of the things we’ll be talking about—that’s OK and important for us to know.

- If your view is different from that of others in the group, that's important to know. Don't be afraid to be different.
 - We're not looking for everyone to agree on something unless they really do.
9. We need to cover a series of topics, so I'll need to move the discussion along at times. Please don't be offended.
 10. Reporting — a summary of the discussion will be produced. All answers from the respondents will be held in strict confidence and you'll never be identified in any reporting. In fact, when you speak today, please refer to yourself by the number on the "tent" – for instance, when person number 1 speaks, please say "this is person 1" and then proceed with your comment. In addition, your participation in this focus group is voluntary. You are welcome to depart any time.
 11. Food and refreshments — help yourself at any time.
 12. Bathroom breaks — you may excuse yourself any time.
 13. *Any questions?*

II. Introductions & Warm-up; Community context (60 minutes)

1. Introductions around the room — **Please introduce and describe your manufacturing business** (where are you located, what do you produce) **and how the recession impacted your firm.**

III. Body

Great. Let's get started by discussing constraints to profitability or growth.

2. **Thinking about Federal or state government regulations (laws), which Federal or state regulations are most important in constraining your business growth (or profitability – for those owners not interested in getting larger)? Why?**
3. **Thinking about the business climate in your community, what local issues are most important in constraining your business growth? Why?**
4. **Thinking about your business operation, what production issues are most important in constraining your business growth? Why?**
5. **Thinking about your business operations, what management issues are most important in constraining your business growth? Why?**
6. **Thinking about your business operations, what financial issues are most important in constraining your business growth? Why?**

Great, now we have excellent list of constraints that you've discussed. Now let's discuss what you need to make your business more profitable?

- 1. Thinking about Federal or state government regulations (laws), what regulatory changes would you recommend?**
- 2. Thinking about the business climate in your community, what changes would you recommend to leaders in the community (or fellow business owners).**
- 3. Thinking about the your business operation, what changes are most important in the next year, or five years, in . . .**

Production

Management

Finance?

Great, now we have an excellent list of proposed changes. Now let's discuss what MMEC and MSU Extension can do for you?

- 1. Thinking about Federal or state government regulations (laws), what regulatory analysis or education would be helpful to you?**
- 2. Thinking about the business climate in your community, what analysis of community issues or education of community leaders would be helpful to you.**
- 3. Thinking about the your business operation, what analysis or education would be helpful to you in . . .**

Production

Management

Finance

IV. Questionnaire Assessment

Great, now we need your help in reading our question that we plan to use with 1,000 small manufacturers in Montana.

1. We would like your help in determining the following:

- **What questions are you willing to answer (truthfully)**
- **What questions are you not going to answer**
- **What are we missing**

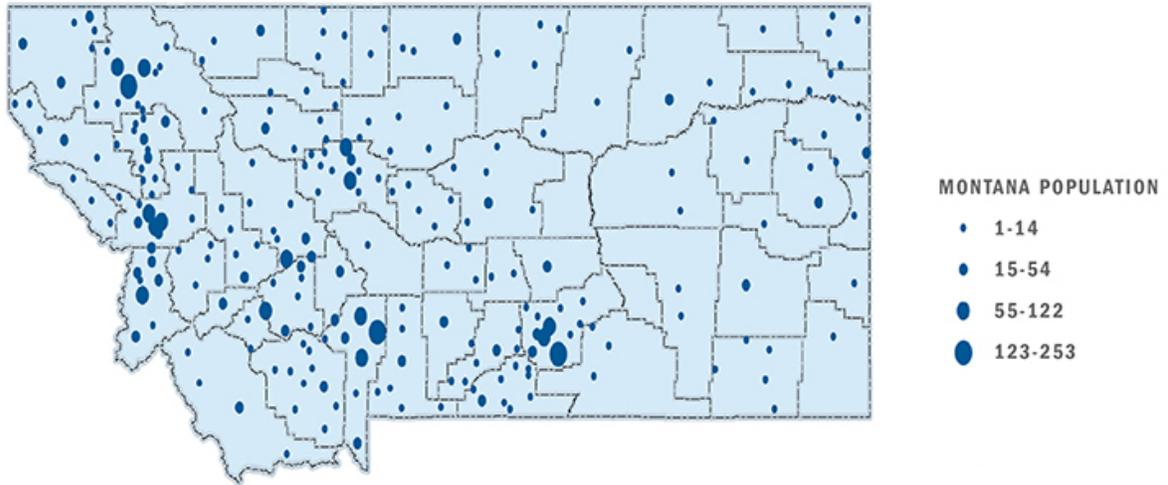
Thank you very much for participating in this focus group.

Appendix C – Maps of the Population and Sample

Population Map

SURVEY SAMPLE LOCATIONS IN MONTANA

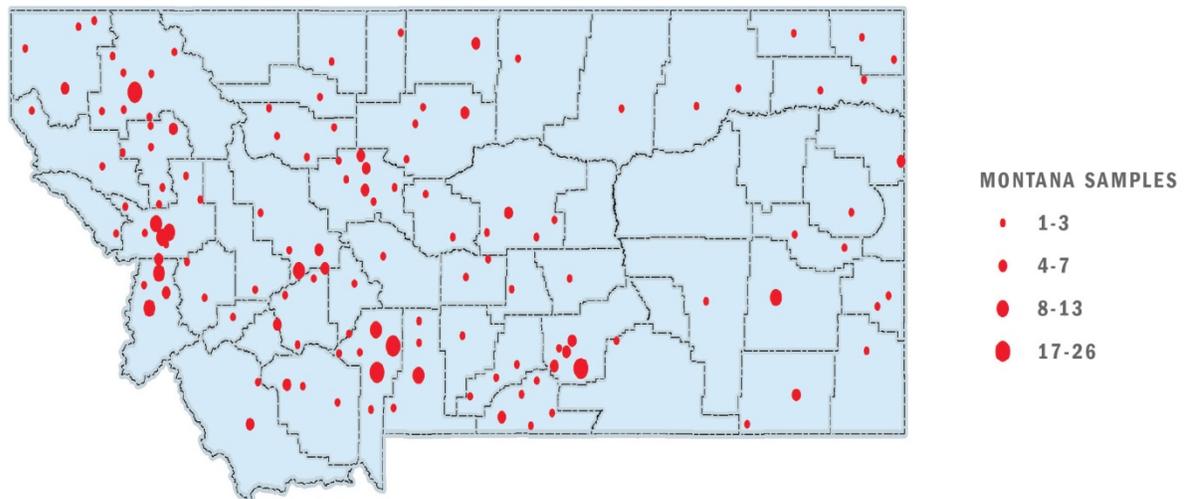
MAP OF POPULATION LOCATIONS



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

Sample Map

MAP OF SAMPLE LOCATIONS



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

Appendix D – Small Manufacturer Questionnaire



2013 SURVEY OF MONTANA MANUFACTURERS

A survey to learn more about Montana manufacturers and the challenges that they face.

Sponsored by:

Montana Manufacturing Extension Center and
Montana State University Extension
Montana State University-Bozeman

Administered by:

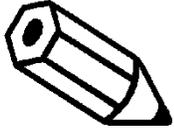
Bureau of Business and Economic Research
University of Montana-Missoula

- Even very small businesses are eligible to participate in this survey!
- To be completed and returned by the owner, manager, or person responsible for operations at your location.

INSTRUCTIONS

Please mark one box (X) or write in the most appropriate response for each question.

START HERE



1. **Is this business currently in operation, that is, incurring revenue and expenses?**

Yes

No

2. **What zip code do you use for your business address?**

_____ zip code

3. **How many owners worked in the business last week (or during a typical pay period)? If “0” skip to question 4.**

_____ owners

3.1. **How many hours did all of the owners work in the business last week?**

_____ hours

4. **How many paid employees worked in the business last week? If “0” skip to question 5.**

_____ employees

4.1. **How many hours did all of the employees work in the business last week?**

_____ hours

5. **What does your business produce or what service do you provide?**

6. **Are you organized as a sole proprietorship, partnership, corporation, subchapter S corporation or limited liability company?**

Sole proprietorship

Partnership

Corporation

Sub-chapter S corporation

Limited liability company

7. Are you male or female?

- Male
- Female

8. How old are you?

_____ years old

9. What is the highest level of school you have completed?

- Less than high school
- High school graduate or GED
- Some college or associates degree
- Trade school or vocational training
- College degree or more

10. How many years of experience have you had managing or owning a business, including this business?

_____ years

11. Do family members, apart from yourself, work in the business? (Family members include brothers, sisters, parents, spouses, children, grandchildren, aunts, uncles, cousins, etc. both natural and adopted.)

- Yes
- No

12. Is this business your only employment or do you have another full- or part-time job?

- Only employment
- Have another full-time job
- Have another part-time job

13. Does the business have any lines of credit used for business purposes?

- Yes
- No

14. Does the business have any mortgages used for business purposes?

- Yes
- No

15. Does the business have any vehicle or equipment loans used for business purposes?

- Yes

No

16. Does the business use any business or personal credit cards for business purposes?

Yes

No

17. Does the business use any capital leases for business purposes?

Yes

No

18. Were your most recent loan applications always approved, sometimes approved and sometimes denied, or always denied?

Always approved

Sometimes approved/sometimes denied

Always denied

Not applicable

19. In your opinion, has access to loans and leases become more difficult, stayed about the same since this time one year ago, or become less difficult?

More difficult

Stayed about the same

Less difficult

20. During the last 12 months, did the business obtain any new equity investment from existing owners, or new or existing partners (excluding retained earnings)?

Yes

No

Not applicable

21. Could you estimate your business's total sales or receipts for last year within one of the following ranges?

\$10,000 or less

More than \$10,000, but less than \$50,000

\$50,000 to less than \$100,000

\$100,000 to less than \$500,000

\$500,000 to less than \$1,000,000

\$1,000,000 to less than \$5,000,000

\$5,000,000 or more

22. For calendar year 2012, did your business's total sales increase, stay about the same, or decrease from 2011?

- Increase
- Stay about the same
- Decrease

23. For calendar year 2012, did your business's production increase, stay about the same, or decrease from 2011?

- Increase
- Stay about the same
- Decrease

24. For calendar year 2012, did your business's profits increase, stay about the same, or decrease from 2011?

- Increase
- Stay about the same
- Decrease

25. During 2012, did you increase or decrease your inventories?

- Increase
- Stay about the same
- Decrease

26. By the end of 2012, did your business make any major capital expenditure in facilities or equipment during the year?

- Yes
- No

27. By the end of 2012, did your business introduce any major new product lines?

- Yes
- No

28. By the end of 2012, what happened to your business's number of employees?

- Increased over 2011
- Stayed about the same as 2011
- Decreased from 2011

29. By the end of 2012, did your business permanently eliminate production capacity during the year?

- Yes
- No

30. By the end of 2012, was your business forced to temporarily curtail production for reasons other than normal maintenance or down-time?

Yes

No

31. Did your business have a significant shortage of workers at any time during 2012?

Yes

No

32. Does your business have any job openings that you are not able to fill right now?

Yes

No

33. Looking ahead to calendar year 2013, what do you anticipate will happen to your business's production?

Increase over 2012

Be about the same as 2012

Decrease from 2012

34. What do you anticipate will happen to the prices you receive for your products in 2013?

Increase over 2012

Be about the same as 2012

Decrease from 2012

35. What do you anticipate will happen to your business's gross sales in 2013?

Increase over 2012

Be about the same as 2012

Decrease from 2012

36. What do you anticipate will happen to your business's profit in 2013?

Increase over 2012

Be about the same as 2012

Decrease from 2012

37. Do you expect, on balance, to add to your inventories, keep them about the same, or decrease them in 2013?

Increase over 2012

Be about the same as 2012

Decrease from 2012

38. Do you anticipate that major capital expenditures will be made in your business during 2013?

- Yes
- No

39. What do you anticipate will happen to the number of employees in your business in 2013?

- Increase over 2012
- Be about the same as 2012
- Decrease from 2012

40. What do you anticipate will happen to the cost of your major inputs in 2013?

- Increase over 2012
- Be about the same as 2012
- Decrease from 2012

41. Considering all factors, how would you rate the overall outlook for your business for 2013?

- Better than 2012
- About the same as 2012
- Worse than 2012

42. Do you think 2013 will be a good time for small business to expand substantially, or not?

- Yes
- No

43. And what about the economy in general, do you think that general business conditions in 2013 will be better than they are now, about the same, or worse?

- Better than 2012
- About the same as 2012
- Worse than 2012

44. How important is cost listed below to your business? Is it very important (VI), somewhat important (SI), somewhat unimportant (SU), or very unimportant (VU)? Please mark one box (X) for each cost below.

	<u>VI</u>	<u>SI</u>	<u>SU</u>	<u>VU</u>
a. Health insurance costs	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b. Workers Compensation.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c. Energy costs	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d. Hiring qualified employees.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
e. Foreign competition.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

- f. Raw material costs...
- g. Business equipment tax

45. What other issues have impacted your business in 2013?

46. Would it benefit your business if specialized training was available to make your business operate more efficiently?

- Yes
- No

47. Would it benefit your business if specialized training was available to help find qualified employees?

- Yes
- No

48. Would it benefit your business if specialized training was available to help retain employees?

- Yes
- No

49. Would it benefit your business if specialized training was available to help access financial capital?

- Yes
- No

50. What employee training would benefit your business? Please mark ALL THAT APPLY.

- Customer service
- Manufacturing
- Financial management
- Accounting
- Environmental and OSHA standards
- Software (MS Word, Excel, Access, PowerPoint, etc.)
- Team building
- Sales
- Marketing
- Other skills: (write in below)

51. What is the most significant challenge or obstacle to growth currently facing your business?

Thanks for participating in this survey!

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 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

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Montana Governor's Office of
ECONOMIC DEVELOPMENT



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