Kreischer Miller

PEOPLE | IDEAS | SOLUTIONS

2017 Greater Philadelphia Manufacturing Survey

Contents

Introduction

Manufacturing today is much different than the manufacturing of yesteryear. While it is still very capital intensive, it is generally cleaner, much more efficient, and requires a more advanced skillset. As a result of constant shifts in customer needs and the competitive landscape, manufacturers must remain nimble to adapt to those changes while maintaining their own profitability and growth strategies.

What is not different, however, is the importance of the manufacturing industry to the overall health of the United States economy. According to the most recent data from the Bureau of Economic Analysis (BEA), manufacturers contribute annually approximately $2.2 trillion to the U.S. economy, or roughly 12 percent of GDP. Taken alone, the industry would represent the ninth largest economy in the world!

The impact is even greater when considering the multiplier effect: according to the National Association of Manufacturing (NAM), for every $1 spent in manufacturing, another $1.81 is added to the economy, which is the highest of any sector.

Further data suggests that manufacturers perform over three-quarters of all private-sector research and development in our country, driving more innovation than any other sector (BEA), and employ over 9 percent of our workforce (Bureau of Labor Statistics).

However, while technological advances in manufacturing processes and products are greatly improving the industry, manufacturers continue to be challenged with attracting and retaining skilled labor, weaker domestic and export sales, rising healthcare and insurance costs, and unfavorable regulations and taxes (NAM).

Last year (2016) saw reports indicating manufacturing activity trending steadily higher both nationally and regionally after experiencing declines during most of 2015. This past November's election results made headlines and created buzz in the industry around the potential future impact on regulation, infrastructure, trade agreements, and taxes, among other things. By year's end, the prime interest rate had risen just a quarter point to remain near historic lows, consumer confidence was rising, and the stock market was rallying into 2017.

In an effort to find out what all of this means to the manufacturing industry in our region, Kreischer Miller's Manufacturing Industry Group recently conducted its fifth annual Greater Philadelphia Manufacturing Survey. The survey was intended to gauge the economic results and outlook of regional middle market manufacturers and to provide manufacturing executives and leaders a snapshot of business best practices being utilized by their peers and constituents, as well as trends observed, in areas such as human capital, business processes, resource deployment, growth strategies, and profitability initiatives.

Methodology

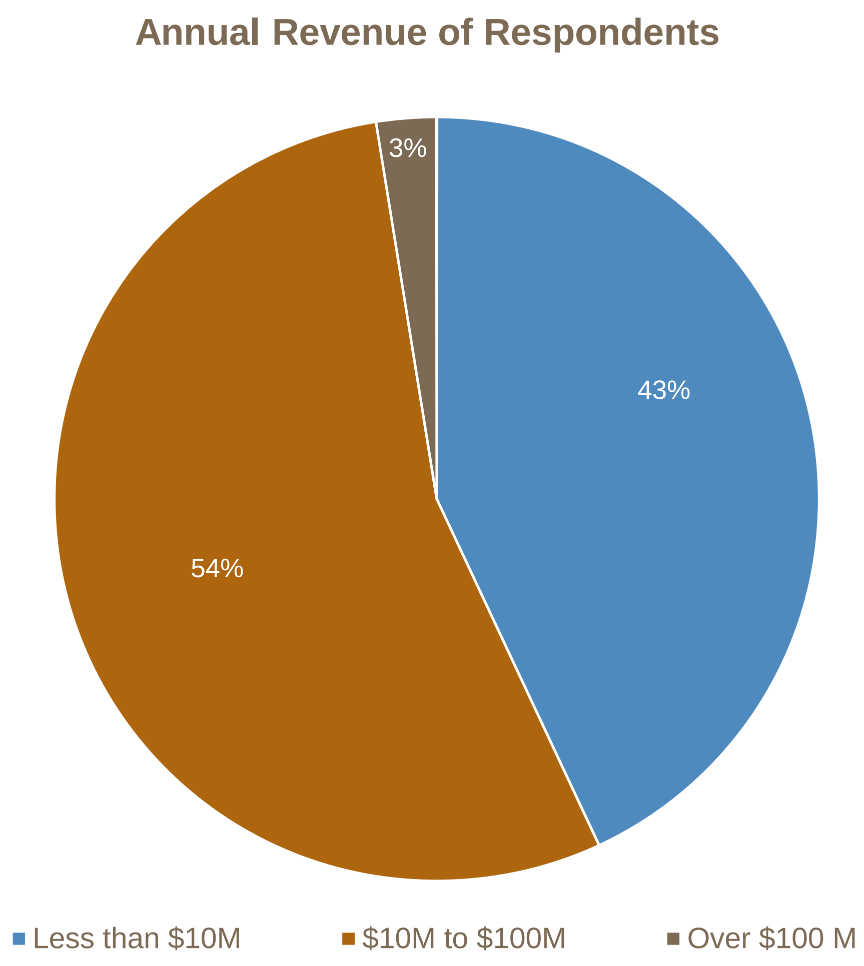
Kreischer Miller's Greater Philadelphia Manufacturing Survey questionnaires were distributed electronically to middle market manufacturers primarily in the Greater Philadelphia region, which includes most of southeastern Pennsylvania, southern New Jersey, and northern Delaware.

Source: WelcometoPhila.com

The survey consisted of 33 questions and was conducted from mid-November 2016 through early-January 2017. There were 101 total survey respondents. Respondents included privately-held companies (90 percent) and public companies (10 percent).

Methodology *Continued*

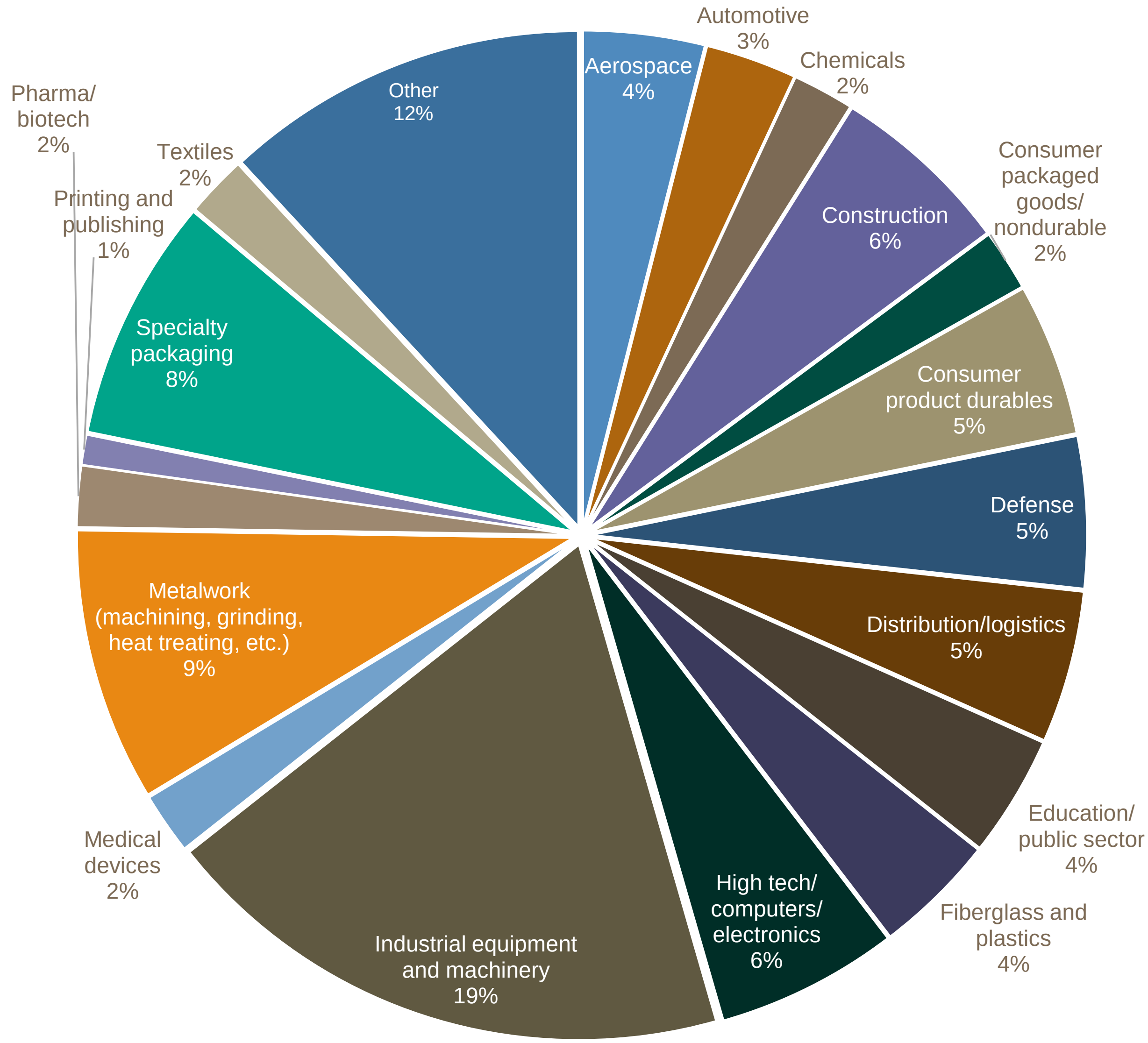
The companies that responded reported annual revenues ranging from under $1 million to approximately $700 million, with average revenues of $30 million. Forty-three (43) percent of respondents reported annual revenues of less than $10 million, 54 percent were between $10 million and $100 million, and 3 percent were over $100 million.



Methodology *Continued*

Respondents represented a diverse cross section of the manufacturing sector in the Greater Philadelphia region.

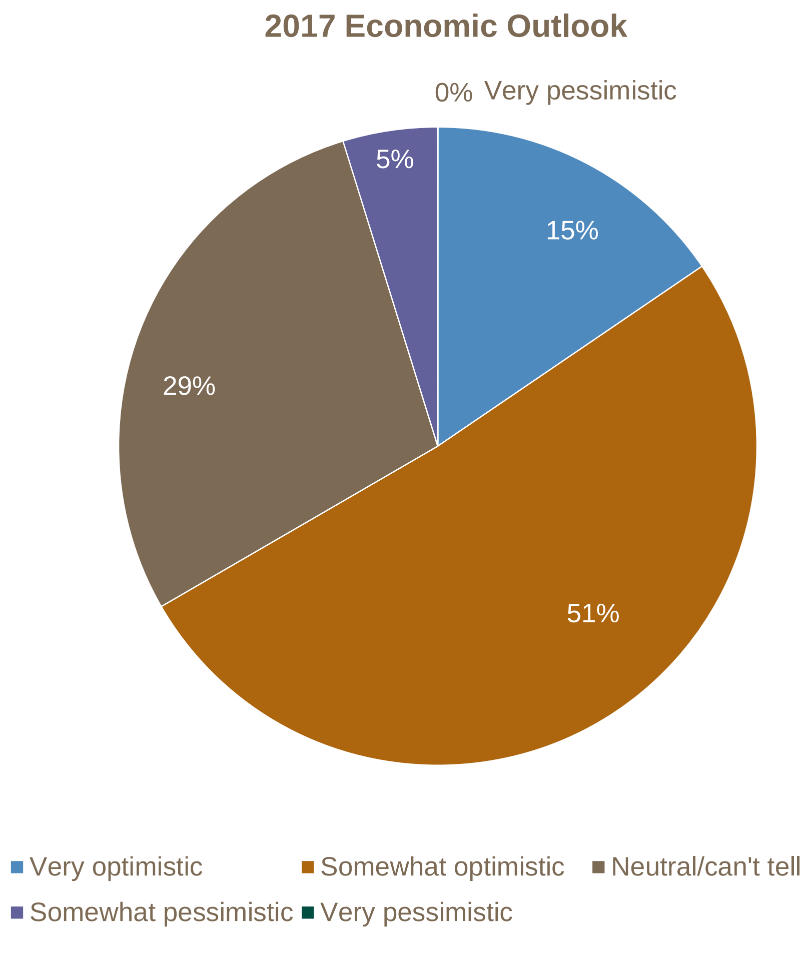
Respondents' Industry Subcategories



Economic Outlook

The majority of respondents indicated a growing positive outlook toward the U.S. economy:

- 66 percent felt some level of optimism, up from 60 percent last year;
- Only 5 percent were pessimistic, down from 16 percent last year and;
- 29 percent said they were undecided (up slightly from 24 percent last year).

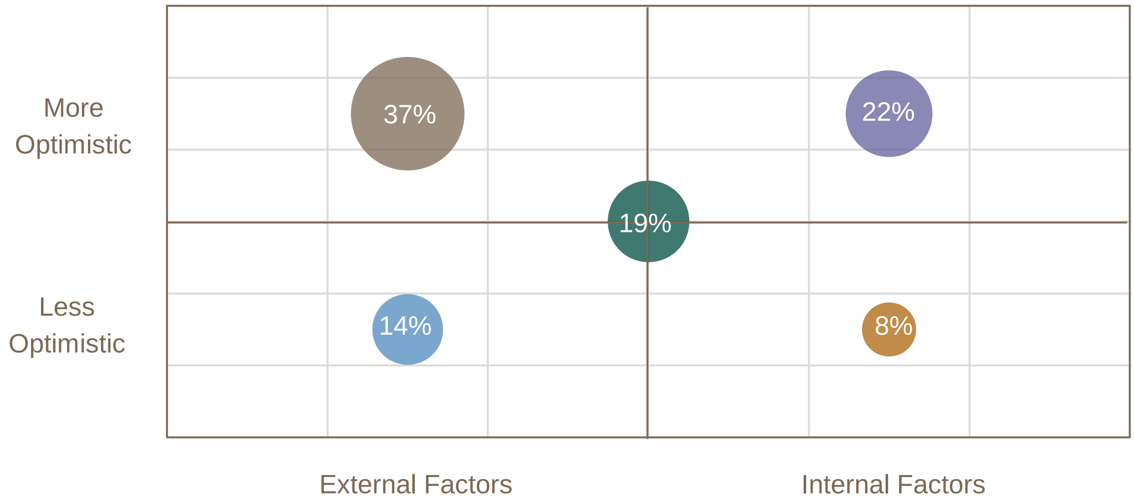


Economic Outlook *Continued*

We also asked survey participants about their optimism regarding their companies' prospects for the year ahead compared to last year. With regard to their own operations, respondents seemed equally optimistic about their outlook:

- 59 percent felt more optimistic, mostly due to external factors such as the economy, industry, and market trends (37%);
- 22 percent were less optimistic, with the cause split fairly evenly between internal (e.g., products, services, operations, and financing) and external factors; and,
- 19 percent said they expect no notable change.

2017 Corporate Outlook

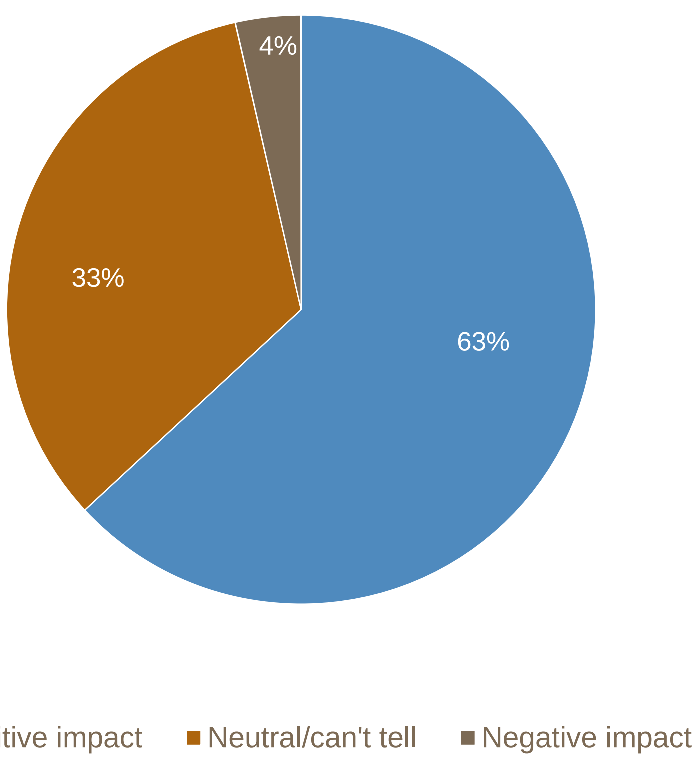


These results are noticeably better than those reported last year, when only 40 percent of respondents were more optimistic about their companies' prospects and 31 percent were less optimistic. Also interesting to note is that compared to last year, corporate optimism has swung from being related to factors within their organizations and control to factors outside of their control.

Economic Outlook *Continued*

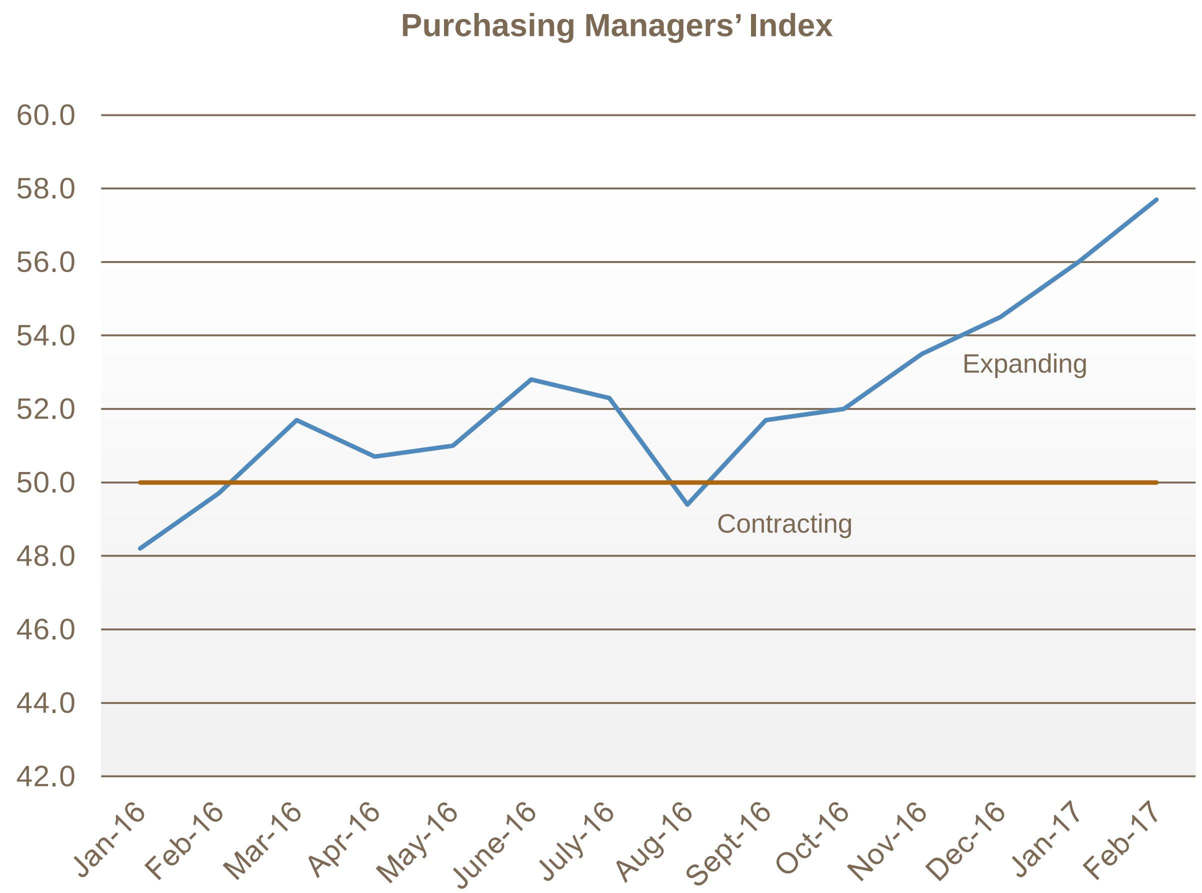
The results of the November 2016 U.S. elections may be playing a role in the increased levels of optimism reported on the previous page. We asked survey participants how they felt the election results will impact the economy and their companies’ prospects over the next year. Approximately two thirds of respondents indicated it will have a positive impact.

Impact of November 2016 Election Results



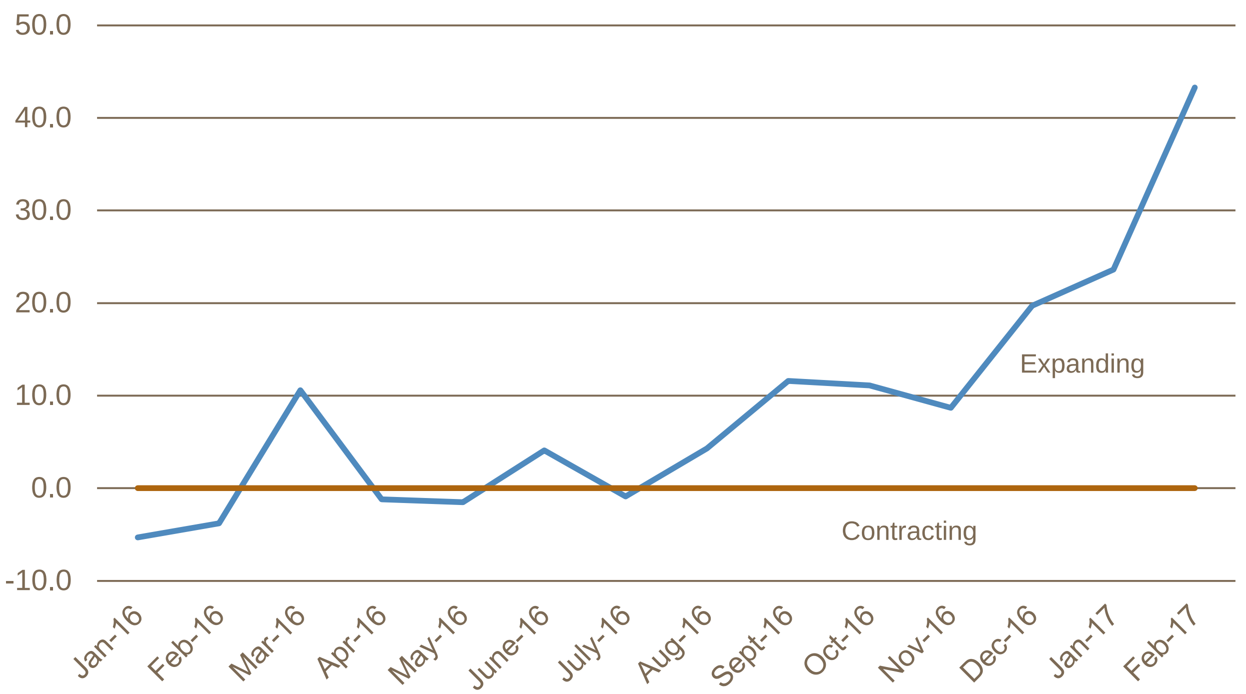
Economic Outlook *Continued*

The overall mood of the respondents is very much in line with national and regional trends. The Institute for Supply Management (ISM), which releases its Purchasing Managers' Index (PMI) on the first of every month, reported an overall increase in the expansion rate of the manufacturing industry during most of 2016, after having spent the majority of 2015 slowing down and ending the year contracting.



Locally, the Federal Reserve Board of Philadelphia has been reporting similar results. Its Manufacturing Business Outlook Survey (MBOS) and index also reported an increasing rate of expansion in the industry during 2016, after spending most of 2015 in a downward trend.

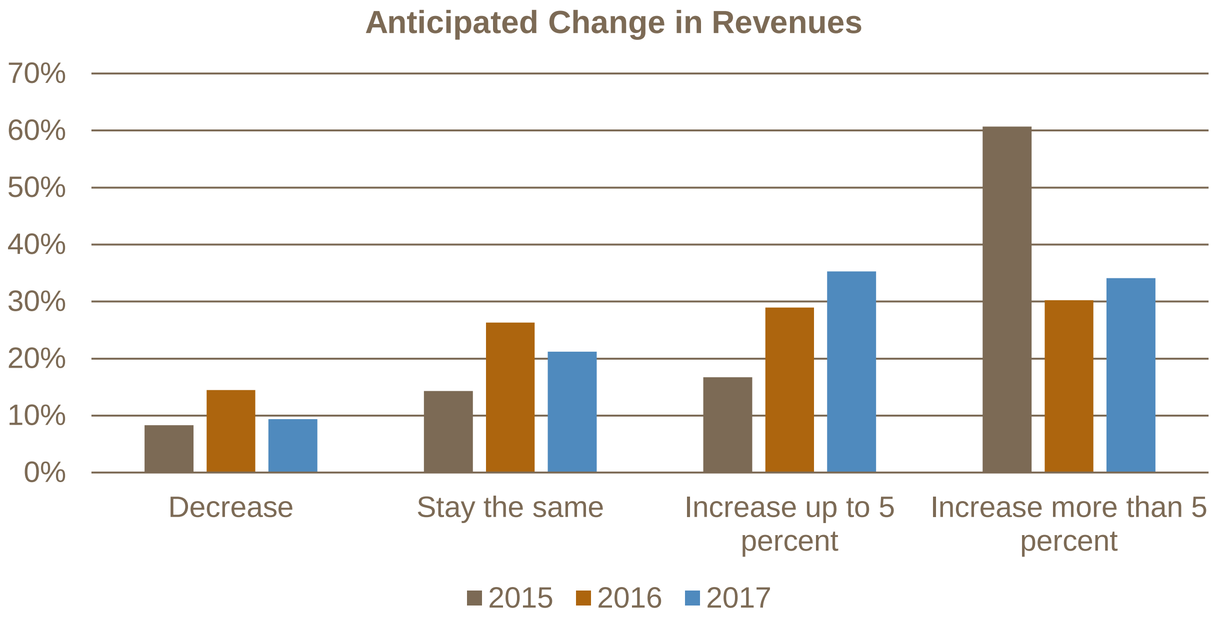
Philadelphia Fed MBOS Diffusion Index



Growth Expectations

We asked survey participants about their expectations for revenue growth in 2017 compared to 2016. The results were more optimistic this year, perhaps positively influenced by the overall economic outlook and election results previously discussed.

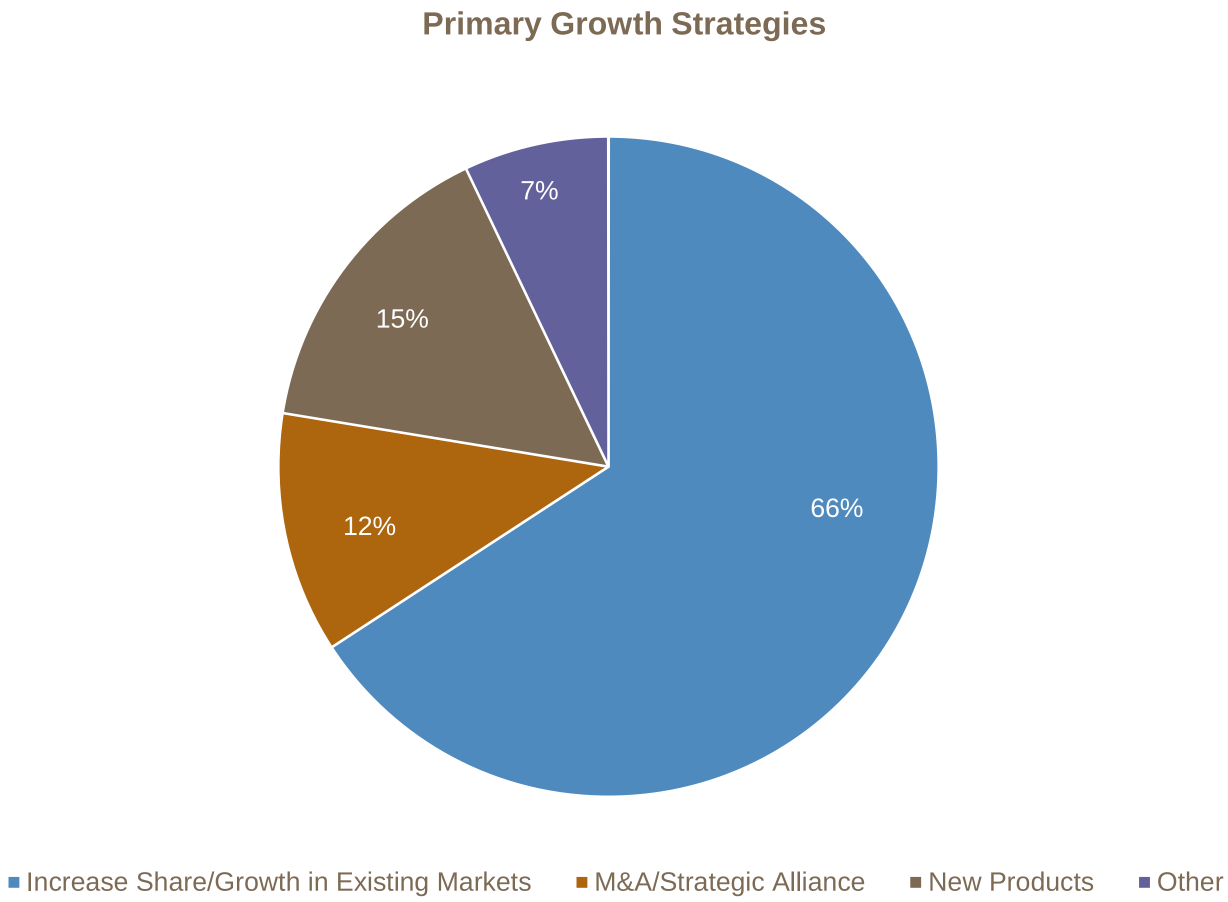
The majority of respondents (almost 70%) indicated that they expect revenues to grow in 2017, while only 9 percent indicated their revenues would decline (down 5% from last year).



Growth Strategies

We asked survey participants to tell us the main opportunity to grow their businesses over the next twelve to eighteen months.

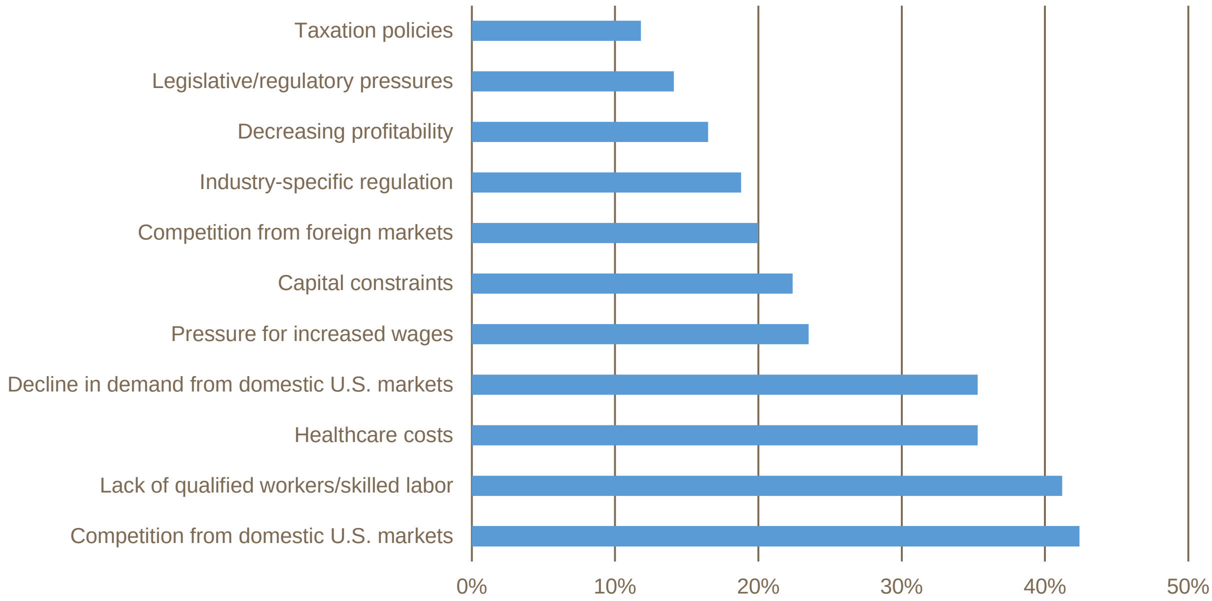
Sixty-six (66) percent cited a focus on existing markets, either by increasing market share (33%) or through organic growth (33%). New product development was identified by 15 percent, followed by mergers, acquisitions, and strategic alliances by 12 percent The latter category experienced an 11 point drop from the 23 percent reported a year ago.



Growth Strategies *Continued*

We also asked participants about the expected barriers to growing their businesses in 2017. The following chart depicts those cited by more than 10 percent of respondents.

Expected Barriers to Business Growth

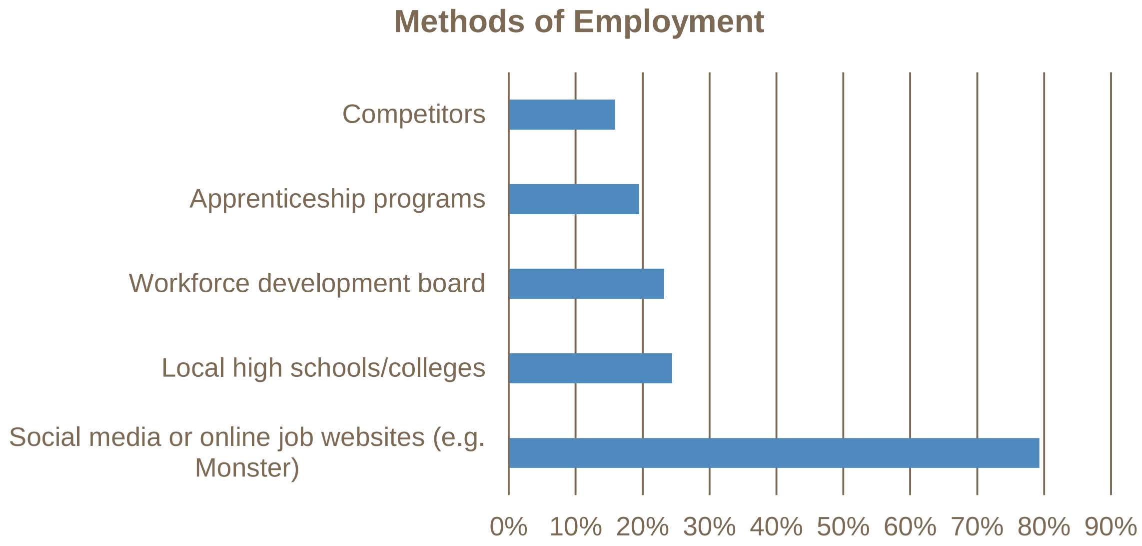


Competition from domestic (42%) markets was the largest barrier cited, up slightly from 37 percent last year. Healthcare costs (35%) and decline in demand from domestic markets (35%) remain major concerns for this year's respondents. There is increasing concern about the lack of qualified workers (41%) and pressure for increased wages (28%), compared to the percentage of respondents who cited these barriers a year ago - 28 percent and 11 percent, respectively.

The skilled labor shortage in manufacturing has been a widespread concern for several years. In a national study conducted by The Manufacturing Institute, the cumulative skills gap will grow to 2 million in the next decade, stemming from Baby Boomers reaching retirement age, and the stigma of manufacturing not being an optimal career path for younger generations. Manufacturers will need to continue to increase recruitment efforts, partner with nearby schools, and increase internal training programs to help fill this gap.

Skilled Labor

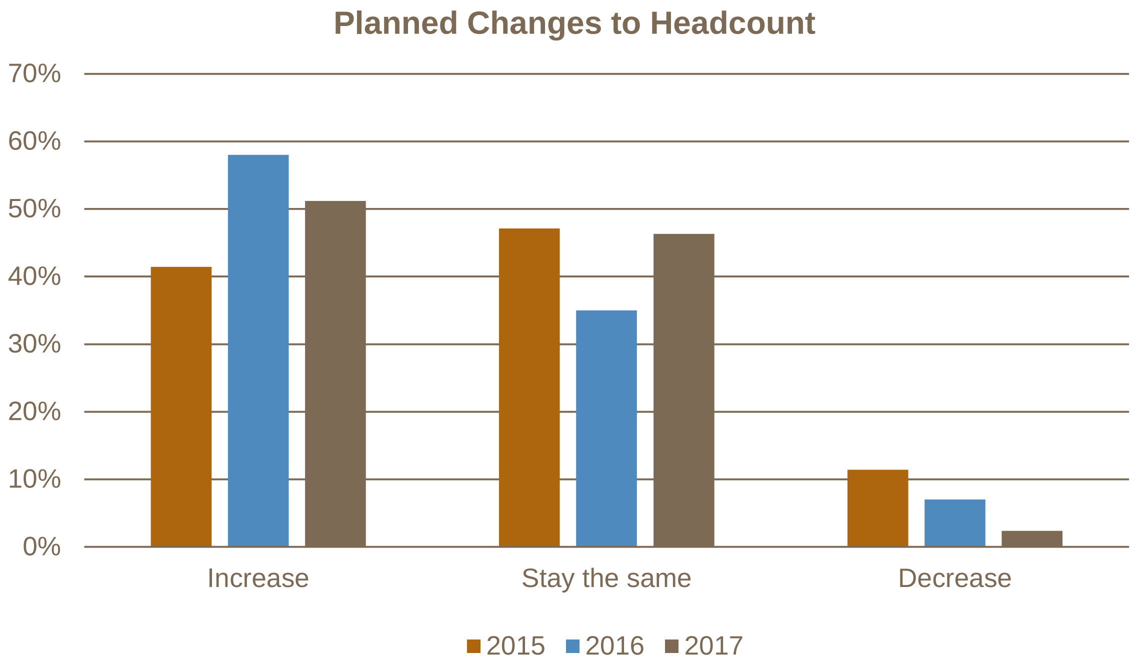
We asked survey participants about their primary sources for filling skilled labor positions. The overwhelmingly popular route for filling such jobs was the use of social media or other online job websites. With the age of social media upon us, the use of various social networks has become a very popular, effective, and inexpensive way to get the word out about job openings.



Human Capital Plans

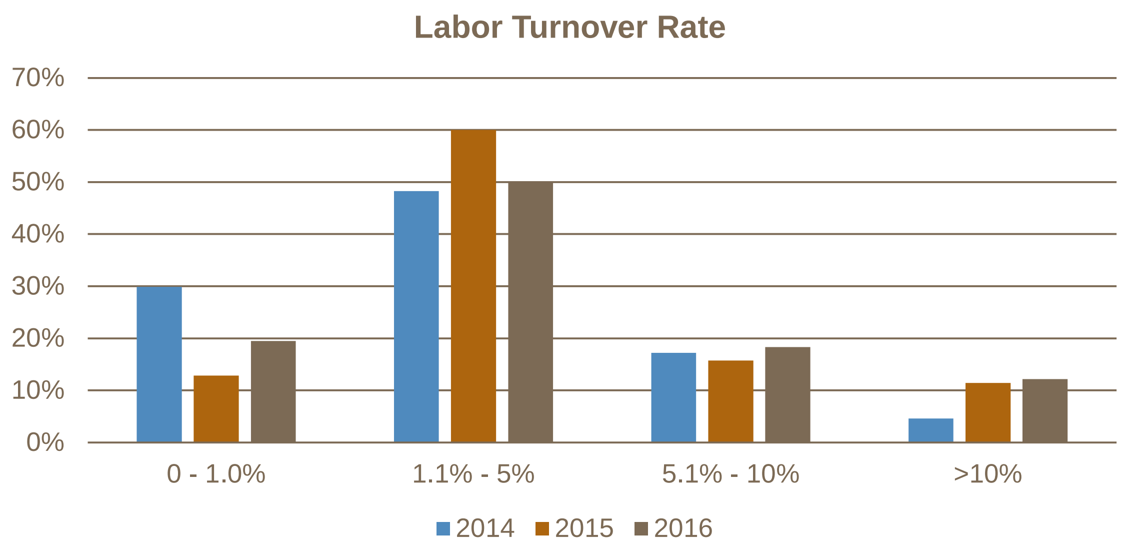
Regarding human capital plans, 48 percent of respondents indicated that they increased full-time headcount in 2016. That figure outperformed expectations, as just 41 percent of respondents in last year's survey said they planned to increase headcount in 2016. Looking ahead, 51 percent of this year's respondents said they plan to increase headcount in 2017.

The number of respondents expecting to decrease headcount fell to 2 percent, versus 11 percent last year. Consistent with other survey responses, there is much more optimism for 2017.



Workforce Turnover

Workforce turnover rates continue to increase. Thirty percent of respondents indicated that their labor turnover rate was over 5 percent for 2016, compared to 18 percent the previous year. In fact, the labor turnover rate in excess of 10 percent increased for the third consecutive year to 12 percent of all survey respondents for 2016.



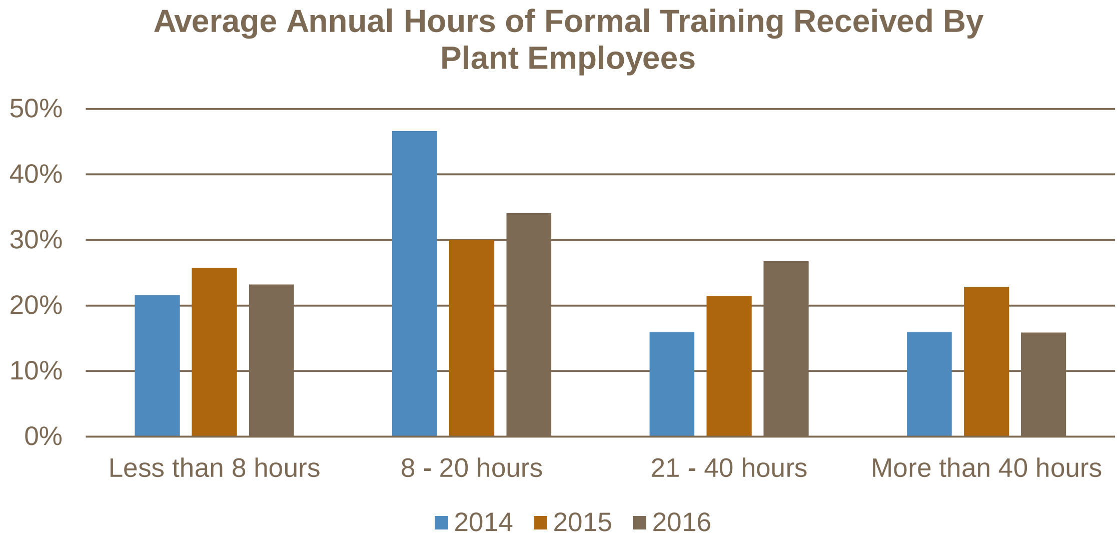
As the job market continues to improve, employees have more opportunity to make a job change. That means attracting and retaining skilled talent will need to continue to be a priority for manufacturers.

Employee Training

Employee workforce training stayed consistent year-over-year. Forty-four (44) percent of this year's respondents indicated they formally train their workforce more than 20 hours per year, in line with the 2015 survey results (43 percent).

This is a marked improvement from the 2014 survey results, in which only 32 percent said they formally train their workforce more than 20 hours per year.

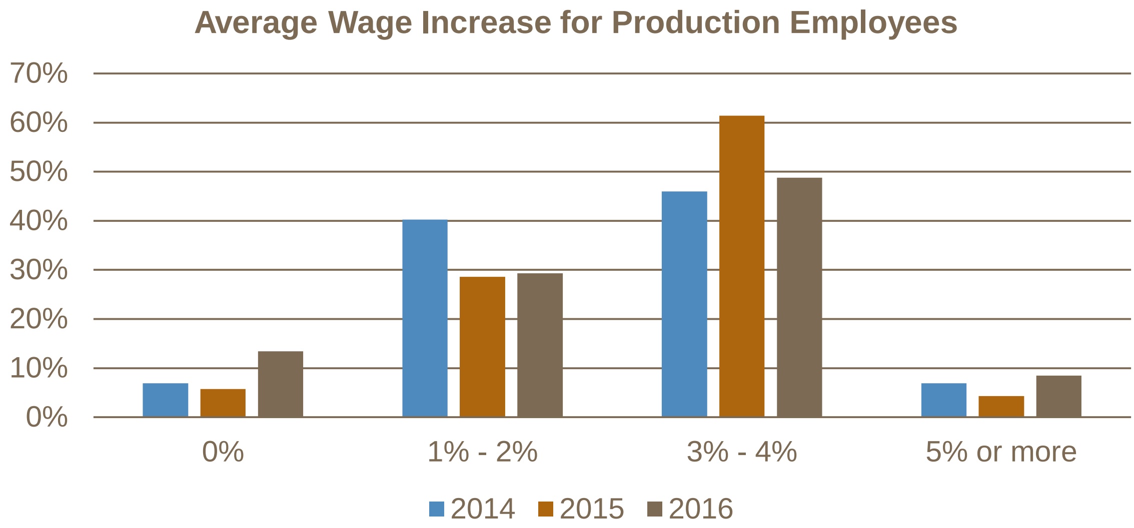
Employers have been wise to invest in their workforce through training. By doing so, they are able to enhance their employees' skill sets and provide them with more career opportunities, thus reducing their turnover rate.



Labor Costs

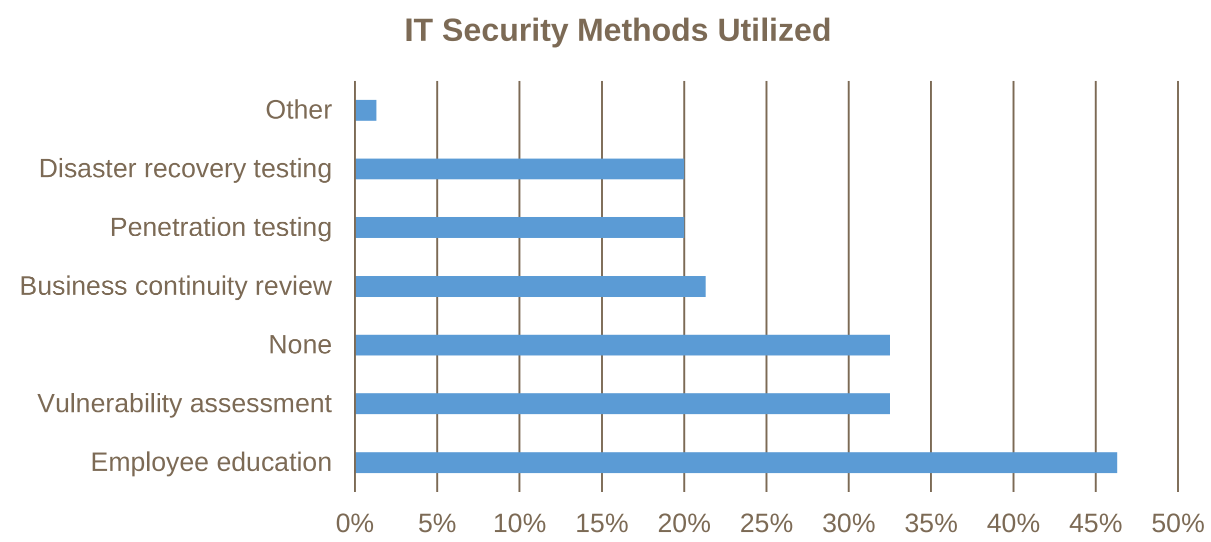
Wage increases saw mixed results for 2016 versus 2015. Fifty-eight (58) percent of this year's respondents reported that they gave increases of 3 percent or more, compared to 66 percent in 2015. However, 9 percent of respondents gave increases of 5 percent or more in 2016, versus just 4 percent in 2015.

Looking ahead to 2017, 77 percent of respondents indicated that they expect labor costs to increase. Only 5 percent felt that increase would be significant.



Cyber Security and Risk Management

Given the increased coverage of cyber incidents in the news media, manufacturers are becoming more aware of the importance of implementing effective information and cyber security programs within their companies. Nearly half of survey respondents (46%) conducted employee information security training last year. However, there is still more work to be done to ensure manufacturers are protecting themselves. Only 32 percent of survey respondents conducted a vulnerability assessment of their information security capabilities, and just 20 percent performed penetration testing to validate such capabilities.



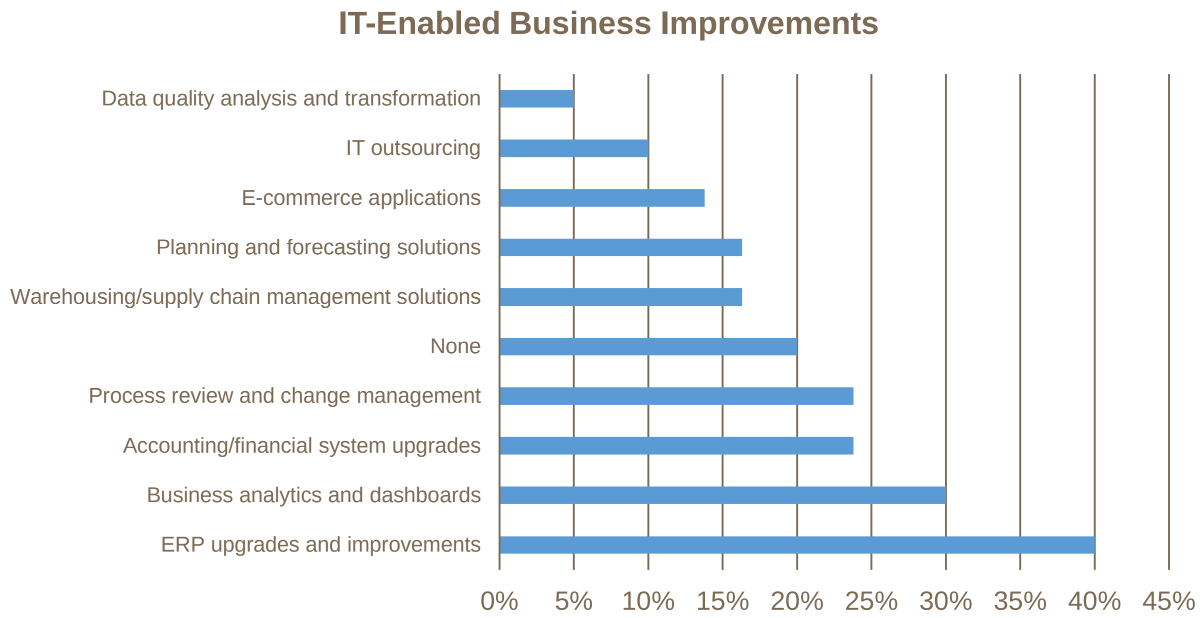
The majority of respondents did not conduct any type of vulnerability assessments or penetration testing. And a large majority (80%) did not conduct any disaster recovery or business continuity reviews or testing. Plus, a significant percentage (32%) have not initiated any cyber and information security measures or programs at all.

With the increased use of automation on the shop floor, manufacturers face a growing level of cyber threats due to the Internet of Things (IoT), machines being connected to the Internet, and outside maintenance and monitoring systems. The IoT realities make it even more imperative for manufacturers to continuously review and address potential cyber and information security risks.

IT-Enabled Business Improvements

Recent advances in information technologies have enabled manufacturers to achieve increased business capabilities through the implementation of updated business management systems and tools.

Our survey indicated that a significant number of respondents (40%) have invested in upgrading their ERP systems – software applications that integrate various facets of the manufacturing enterprise. A significant percentage (30%) indicated undertaking management dashboard and analytics projects in order to better utilize their information assets in support of their decision making needs.



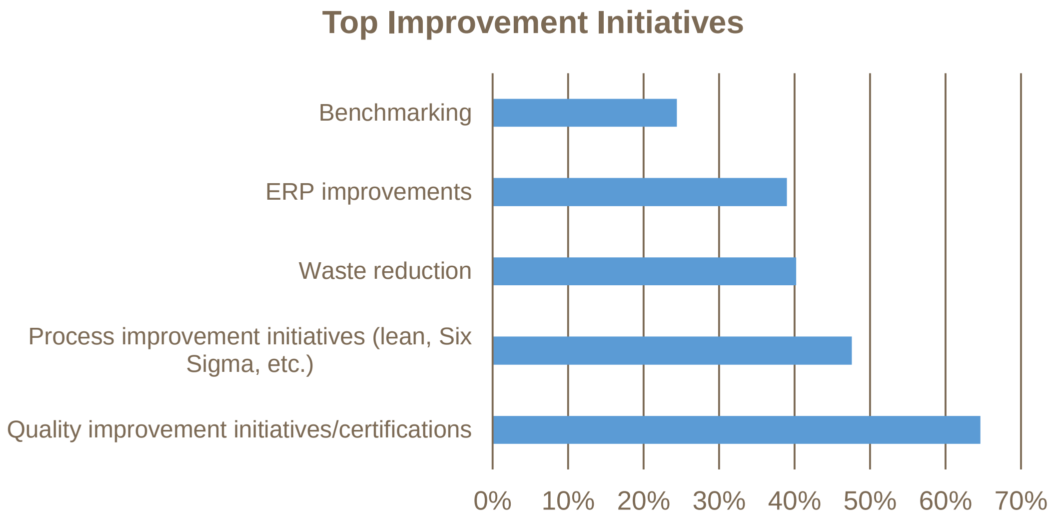
There also seems to be a continued awareness among manufacturing executives about the importance of evaluating and changing business processes when upgrading technology capabilities in order to ensure maximum returns from such initiatives. Data quality analysis and transformation continues to have a low priority (5%) among the respondents, similar to last year (10%), indicating the need for more education and awareness about the importance of data quality in the region's manufacturing sector.

Other Business Improvement Initiatives

In our increasingly global and hyper competitive environment, manufacturers need to continually assess their capabilities with an eye towards achieving business excellence. Business improvement initiatives provide an opportunity for manufacturers to enhance their operational capabilities, resulting in reduced operational costs and improved margins. Beginning such initiatives requires management's belief and commitment to industry best practices and allocating proper resources to assist with execution efforts. Business improvement initiatives are usually most effective when sustained over a several year period rather than a short term horizon. Significant strategic rewards could be reaped by organizations that successfully implement a well-designed business improvement initiative.

We asked survey participants which commonly utilized business improvement initiatives or programs are currently being used by their organizations.

The most common response was Quality Improvement Initiatives or Certifications (65%) – such as Total Quality Management (TQM) and ISO certification efforts – followed by Process Improvement Initiatives (47%) and Waste Reduction Strategies (40%).

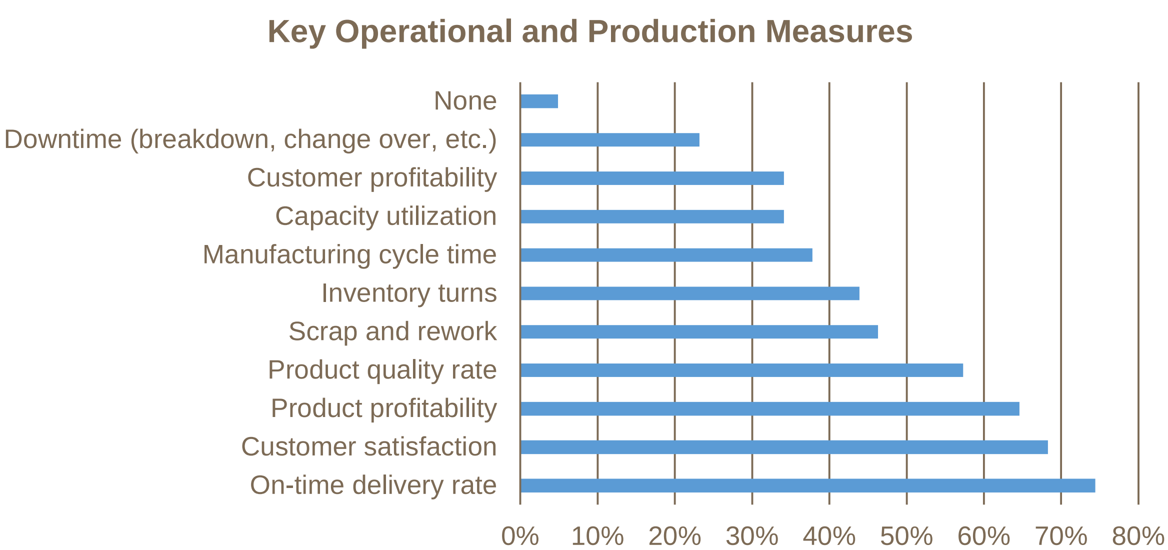


Following closely was ERP improvements (39%), which is focused on leveraging tools and capabilities within the ERP system to improve business process capabilities. Benchmarking (24%) was ranked lowest by respondents, indicating missed opportunities for leveraging this methodology to improve operational capabilities.

Key Operational and Production Measures

The majority of respondents (67%) indicated they use Key Performance Indicators (KPIs) on a regular basis to track business performance. Of those who use KPIs, 61 percent indicated they measure the success of their KPIs against pre-determined organizational goals, while 39 percent measure against a combination of organizational goals and externally published data.

When asked which systems and processes are used to capture KPIs, 40 percent of respondents use spreadsheets and manual processes, while 29 percent use custom applications and 24 percent use their ERP/Financial applications.

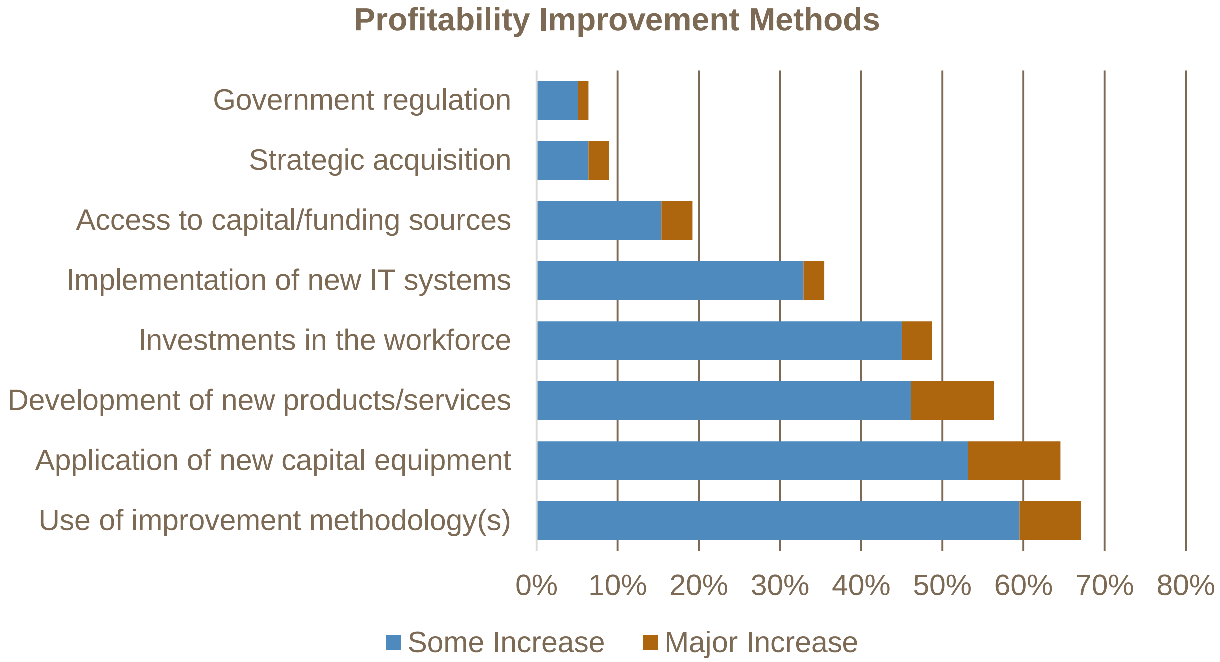


As for the key operational and production measures being tracked within their respective organizations, respondents indicated their greatest emphasis is on on-time delivery rate (74%), followed by customer satisfaction (68%) and product profitability (65%). Other key measurements included product quality rate (57%), scrap and rework (46%), and inventory turns (44%).

Customer satisfaction is now tracked by 15 percent more respondents than in the previous year, and is now the 2nd most utilized KPI. Given that competition is the biggest barrier to expected growth (see Growth Strategies), more manufacturers are focusing on maintaining positive customer relationships as a way to differentiate themselves from competitors.

Profitability Improvements

We asked respondents to cite the key methods they used in the past year to increase profitability or performance.



The use of improvement methodologies was the most frequent response (67%), with 8 percent indicating that improvement methodologies led to a major increase in profitability and performance. Quality and process improvement initiatives were the most common improvement methodologies identified (see Other Business Improvement Initiatives).

Not far behind was the application of new capital equipment (65%), followed by development of new products or services (55%) and investments in workforce (49%). Strategic acquisitions led to an increase in profitability and performance among 15 percent of respondents last year, versus 9 percent this year, indicating an increased focus on organic growth.

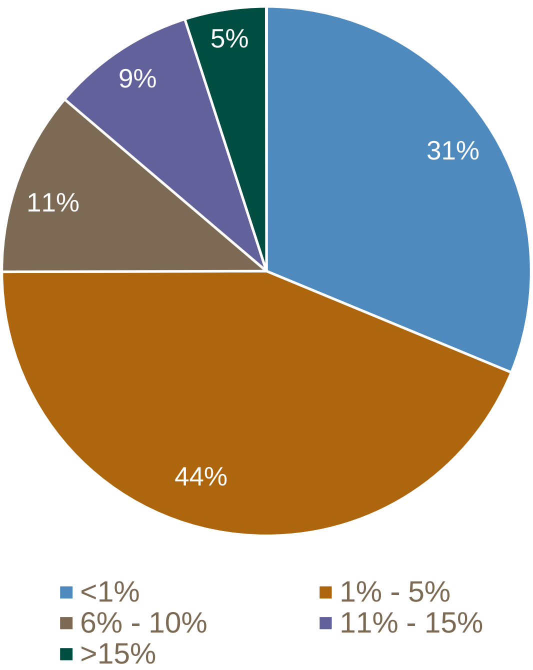
We also asked what impact government regulation had on profitability during 2016. Thirty-five (35) percent of respondents indicated that government regulation **decreased** profitability. It should be noted, however, that the majority of respondents expect the recent elections to have a positive impact on government regulations in the future.

Research and Development Activities

We asked respondents what percentage of sales they currently reinvest in new product development/R&D. Forty-four (44) percent indicated that they invest between 1 percent and 5 percent of sales in such activities. Another 11 percent indicated that they invest 6 to 10 percent of sales, while 31 percent invest less than 1 percent. Responses shifted notably downward compared to 2015, when only 21 percent invested less than 1 percent. New product development seemed to be a secondary focus behind existing markets (see Growth Strategies).

We also asked respondents how their spending on development activities will change for 2017. Sixty-six (66) percent plan to maintain the same level of spending, while 31 percent indicated that they plan to increase spending.

Precentage of Sales Invested in New Product Development/R&D

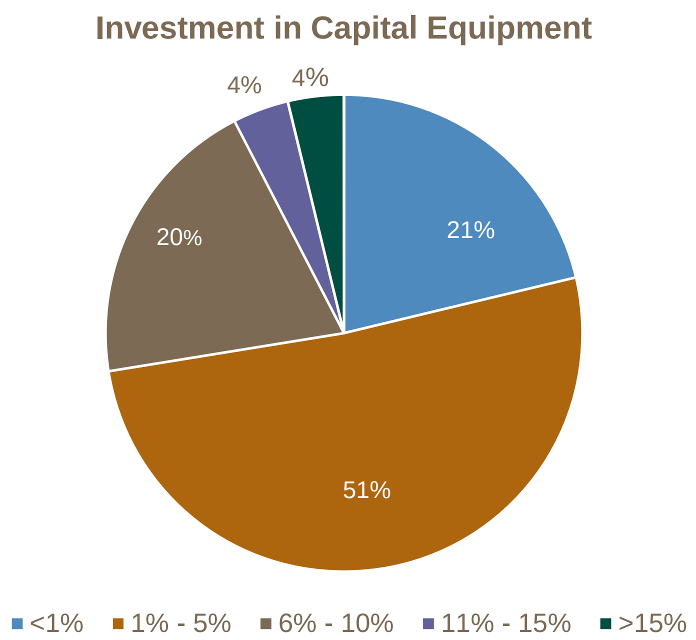


TAX STRATEGY

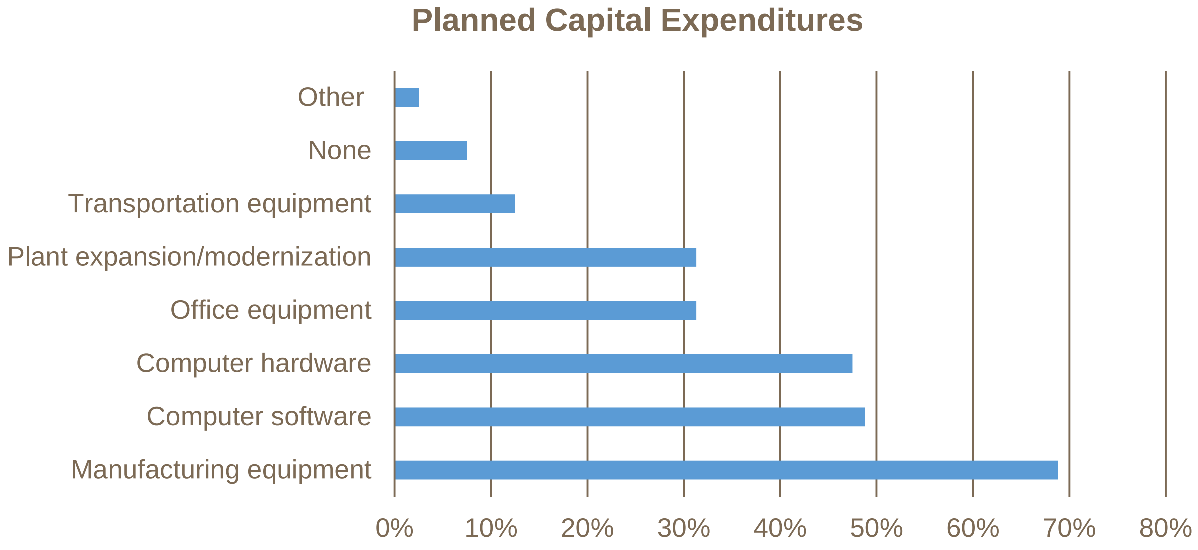
Tax Tip: In addition to becoming a permanent credit, the R&D credit is now available to more companies. Previously unavailable for companies with Alternative Minimum Tax (AMT), new legislation provides companies with $50 million or less in gross receipts to apply the R&D against both regular tax and AMT. Qualifying activities are broader than most people expect, and should be discussed during annual tax planning.

Investment in Capital Equipment

As displayed at right, the majority of respondents (51%) currently invest between 1 percent and 5 percent of sales in new capital equipment, while another 20 percent invest between 6 percent and 10 percent. Twenty-one (21) percent invest less than 1 percent, a 4 point increase in this category from the prior year.



We also asked our survey participants how they plan to invest in 2017. With the focus on operations, most indicated they plan to purchase manufacturing equipment (69%). The next two highest planned expenditures were computer software (49%) and hardware (48%), which indicate that manufacturers are continuing to embrace technology to improve profitability, output, and overall performance.

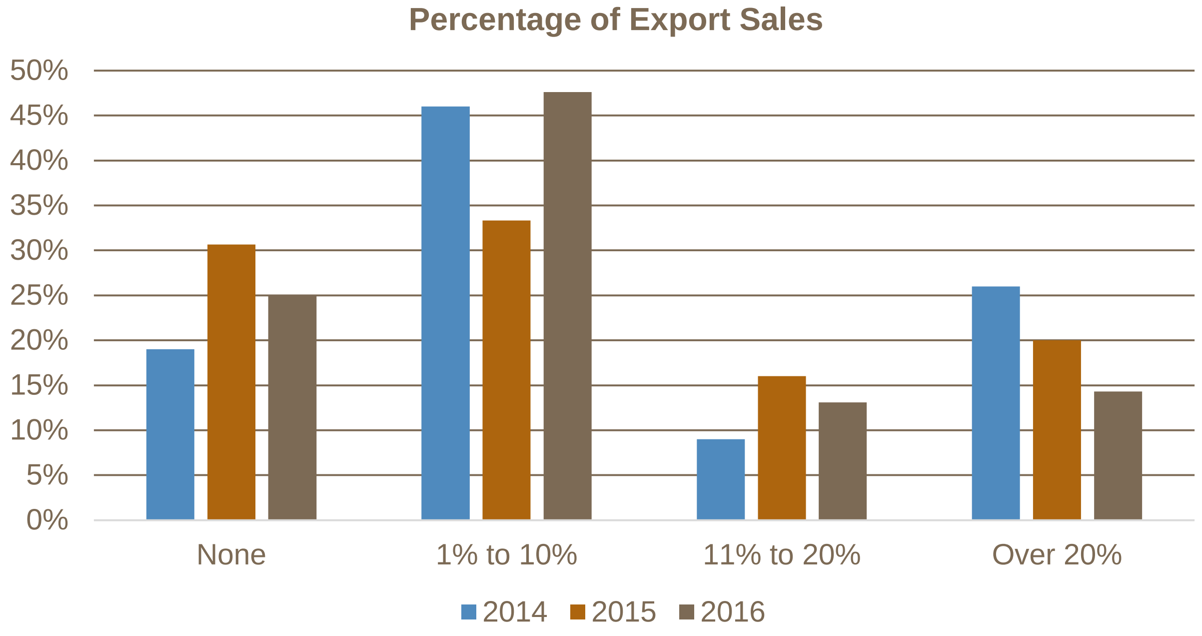


International Activities

We asked survey participants to answer two questions with respect to their international activities: (1) What percentage of your sales are exported internationally, and (2) What percentage of your manufacturing was conducted outside of the United States?

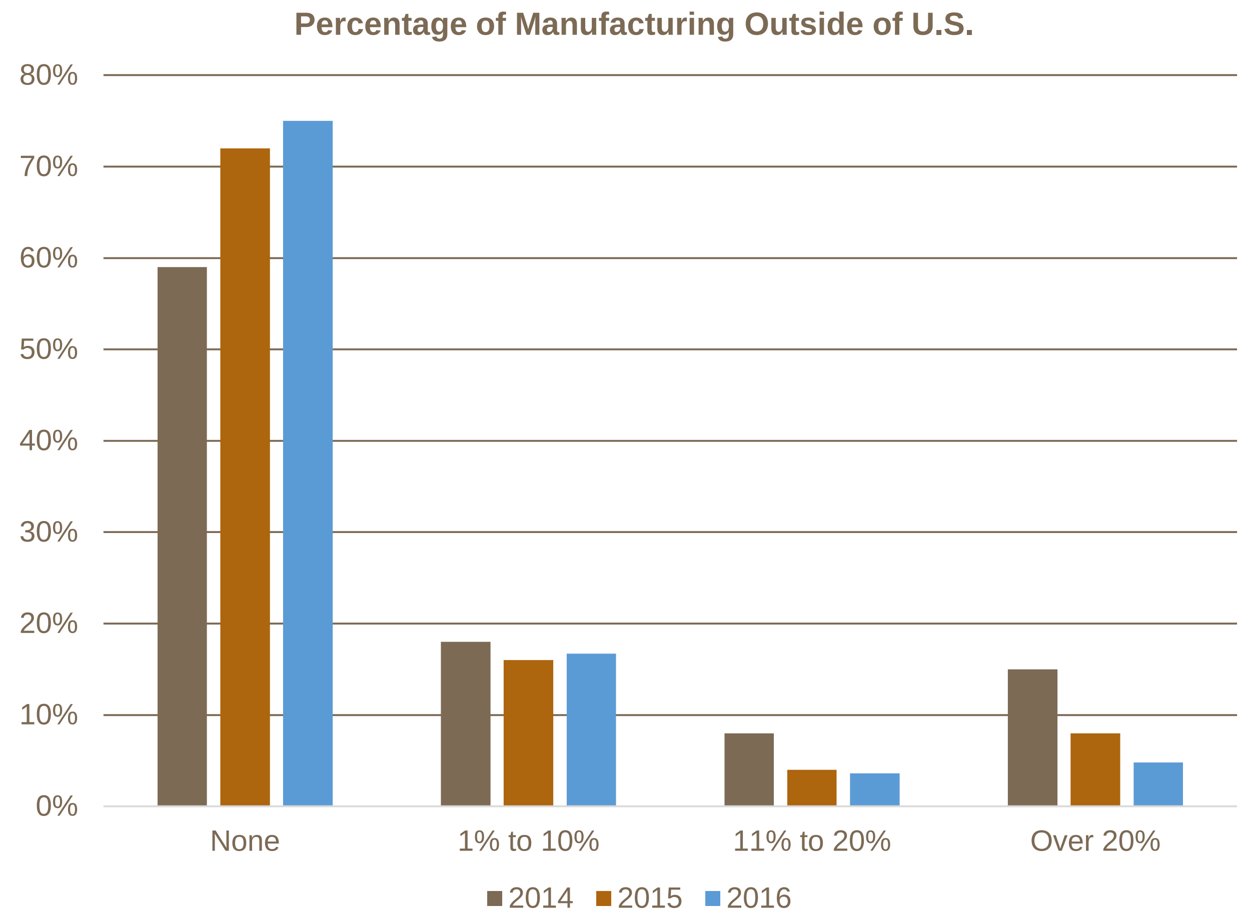
Approximately 75 percent indicated that they engage in some level of international (export) sales. Of that group, almost two-thirds indicated that those activities account for 10 percent or less of sales.

There continues to be room for growth in international markets for our region's manufacturers.



International Activities *Continued*

When it comes to manufacturing activity, respondents tend to concentrate their efforts in the United States, with 75 percent indicating that they do not conduct any manufacturing outside of the country.



Summary

The overall sentiment among middle market manufacturers in the Greater Philadelphia region is that of optimism for both the U.S. economy and their own companies' prospects for the next year. More respondents in this year's survey indicated feeling optimistic than last year, while fewer indicated a negative outlook. And in an interesting shift from last year, most of those who indicated a more positive corporate outlook cited external factors such as the economy and market trends as the reason, as opposed to factors within their own organizations (which had been the predominant reason last year).

Although a relatively large number of respondents (more than one third) expect competition and declining demand from domestic markets to be barriers to growth in 2017, growth expectations for 2017 are still rather robust versus last year: almost 70 percent expect revenues to grow, versus only 9 percent who expect a decline in revenue.

The majority (almost two thirds) of manufacturers responding to our survey also indicated that they expect the results of this past November's elections to have a positive impact on both the economy and their own businesses. This likely results from the fact that the new administration's positions on regulations, taxes, and infrastructure are generally considered to be very pro-business.

Despite the growing optimism, manufacturers are still faced with some significant challenges and threats in the current environment. The lack of qualified workers cited in past surveys continues to be a major concern for our region's manufacturers. Years of negative imagery about the industry, along with technological advances in equipment and processes and an aging workforce, have all converged to create this current dilemma: the labor positions available are more skilled and there are fewer workers to fill them.

In an effort to reverse this trend, local companies are increasing their involvement with students in the region to educate them about careers in manufacturing. One such initiative is the student video contests sponsored by the region's manufacturing alliances through the "Dream It. Do It. PA" partnership, pairing manufacturers with middle schools/high schools to answer the question "What's So Cool About Manufacturing?"

Summary *Continued*

In addition, targeted job fairs and apprenticeship programs are being developed and executed in the region.

Government regulations continue to be a burden to many local manufacturers. Over one third of respondents indicated that decreases in their profitability or performance are attributable to these regulations. For these companies, anything the current administration can accomplish to relieve the burden of regulations would likely yield positive results.

Another threat facing a growing number of manufacturers is in cyber and information security. The Internet of Things (IoT) is connecting more and more machines – and exposing more and more data – to the internet, making many manufacturers vulnerable to cyber attacks. Yet almost one third of survey respondents indicated that they have not initiated any security measures or programs in this area, and 80 percent have not done any disaster recovery testing. In short, what they don’t see may one day hurt them.

Despite these challenges, the manufacturing industry is alive and well in the Greater Philadelphia region and its middle market companies have good reason to be optimistic about the future. Over the next year, local manufacturers will likely be keeping an eye on Washington, D.C. for policy reforms that may impact them, while continuing their own education and training efforts to grow their workforce, and in the process, their revenues and profits.

Acknowledgements

We would like to thank the following organizations for their support.

DVIRC
Barry Miller
President
215.464.8550
bmiller@dvirc.org
http://www.dvirc.org/

Manufacturing Alliance of Bucks & Montgomery Counties
Susan Cloran
Mark Solis
join@manufacturingalliancepa.com
http://manufacturingalliancepa.com

Manufacturing Alliance of Chester & Delaware Counties
Alan Slobojan
Project Consultant
610.321.8234
aslobojan@ccedcpa.com
https://maccdcpa.org/

Manufacturing Alliance of Philadelphia
Stephen Jurash
President & CEO
215.948.9285
stevej@manufacturingonline.org
http://www.manufacturingonline.org/

For More Information

To learn more about the results of Kreischer Miller's 2017 Greater Philadelphia Manufacturing Survey, or to discuss your firm's needs, please contact your Kreischer Miller professional or the authors below.

Michael A. Coakley, CPA
Director, Audit & Accounting
Manufacturing Industry Group Leader
215.441.4600
mcoakley@kmco.com

Sassan S. Hejazi, PhD
Director, Technology Solutions
Specialist, Center for Private Company Excellence
215.441.4600
shejazi@kmco.com

Brian J. Sharkey, CPA
Director, Audit & Accounting
215.441.4600
bsharkey@kmco.com

Steven P. Feimster
Manager, Audit & Accounting
215.441.4600
sfeimster@kmco.com

About Kreischer Miller

Kreischer Miller is a leading independent accounting, tax, and advisory firm that serves the Greater Philadelphia and Lehigh Valley areas. We have built our firm to respond to the unique needs of private companies, helping them smoothly transition through growth phases, business cycles, and ownership changes. The companies we work with quickly adapt and respond to changing market opportunities and challenges. That's why our focus is on being responsive, decisive, and forward-thinking. We're up to the challenge – always looking at the road ahead, not in the rear-view mirror.

Our people are leaders in accounting and advising, and are passionate about helping companies achieve their goals.

Kreischer Miller's Manufacturing Industry Group

With a significant portion of our revenue derived from our clients in the manufacturing industry, Kreischer Miller is one of the leading accounting firms serving manufacturers in the Greater Philadelphia and Lehigh Valley areas. Our experience with a diverse range of organizations—from smaller, local manufacturers to large, Fortune 500 companies with national and international operations —gives us the background and depth to understand the challenges and opportunities that face the industry.

Kreischer Miller is also a member of the Manufacturing Services Association, a nationwide network of independent accounting firms specializing in serving the manufacturing industry.

Learn more at www.kmco.com.