



Manufacturing Matters to North Carolina: 2016 Data

North Carolina
Manufacturing Extension Partnership



Manufacturing Matters to North Carolina

North Carolina's manufacturing output in 2015 was the fifth highest in the nation and first in the southeast, at \$100 billion or 20 percent of the state GDP. At nearly \$500 billion, North Carolina had the ninth largest Gross Domestic Product (GDP) in the US in 2015. A large part of that productivity was due to manufacturing.

Despite economic downturns and industry shifts, North Carolina's manufacturing output has grown over the last decade. In 2015, most North Carolina manufacturing workers were producing food products, chemicals and fabricated metal products.

Together, the state's manufacturers employ more than 460,000 people, or 10 percent of the total employed workforce; most of the 10,400 manufacturing companies in North Carolina are small businesses.

In 2014, for example, a staggering 80 percent of those businesses had fewer than 50 employees.

Manufacturing wages in North Carolina ranked seventh among the 19 different industrial sector categories, with an average weekly wage of \$924, or slightly more than \$23 per hour. Workers with specialty skills, of course, earned more. Manufacturing wages were higher on average than healthcare and social assistance, construction, education and retail sectors.

NC Manufacturing Extension Partnership (NCMEP), part of a federal program to help small and medium-sized manufacturers grow and compete and administered by NC State University's Industry Expansion Solutions (IES), collected data from NC manufacturers on the challenges they believe will impact their business in 2017 and beyond



Respondent Demographics

- › Top sectors represented included: fabricated metal, machinery manufacturing, miscellaneous manufacturing, and plastics and rubber manufacturing.
- › Sixty percent of respondents were the owner, president or vice president of the company.
- › Fifty-two percent of the counties in NC were represented, with the greatest number of respondents coming from Alamance, Buncombe, Catawba, Guilford, Iredell and Mecklenburg.
- › When asked where their products end up or what sector they are used in, the respondents ranked the following:
 - › Consumer goods (55)
 - › Industrial machinery and equipment (44)
 - › Construction (35)
 - › Automotive (33)
 - › Defense/military (27)
 - › Aerospace (25)
- › Forty-four percent had between 20 and 99 full time employees; roughly 17 percent had between 10 and 19 full time employees, and another 17 percent had between 100 and 499 full time employees.
- › Fifty-six percent had between one and four contract/temporary employees.
- › Thirty-three percent reported \$3M–\$14.9M in annual sales, and 15 percent reported either \$1.5M–\$2.9M or \$15M–\$74.9M in annual sales.

How They Intend to Increase Sales

- › Increase market penetration or obtaining new domestic markets.
- › Reduce production costs.
- › Develop existing products for broader marketability.



Challenges

More than 65 percent of respondents answered that they agreed or strongly agreed that the inability to find skilled hourly workers and technical workers was a serious problem. Thirty-six percent noted that impending retirements was a major issue. Thirty-four percent noted that a lack of internal workforce development programs was not a problem in meeting their workforce needs.

Sixty-three percent found that US regulations were a significant challenge to their business.

Seventy-eight percent agreed or strongly agreed that rising healthcare costs was a significant challenge; 56 percent said that rising labor costs was a significant challenge.

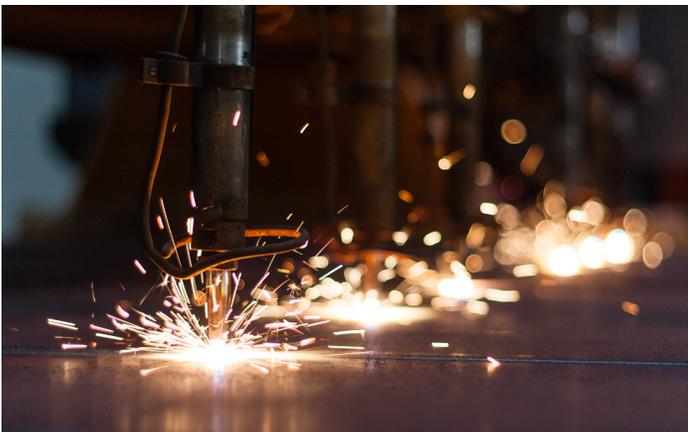
Forty-six percent of respondents considered changing global trade patterns to be a big challenge, and 38 percent believed offshoring remained a big threat.

Understanding changing market demographics was listed as a major challenge by 45 percent of the respondents, and 44 percent responded that technology changes were a challenge. Interestingly, a third of respondents answered “neither agree nor disagree” in response to the threats that understanding changing market demographics, technology/e-commerce, consumer-driven quality

certifications and sustainability requirements could have on their business. Did this indicate a lack of awareness of the impact of these issues on their business?

Roughly the same number of respondents cited domestic and foreign competitive pressures as a serious challenge. Fifty-two percent of respondents agreed that domestic competitive pressure was the primary challenge when it came to competition, while concern over foreign competitive pressure was expressed by 49 percent of respondents.

Innovation and new product development was important. Fifty percent of respondents agreed that the lack of a new product development/innovation process was a serious challenge; leadership transition, managing supply chain relationships and cybersecurity threats were also seen as serious challenges by about 30 percent of respondents. Interestingly, 30 percent of respondents answered “neither agree nor disagree” that cybersecurity threats, ownership/leadership transitions and inadequate transportation infrastructure posed significant challenges, possibly indicating uncertainty about, or unawareness of, these issues.



Solutions

When it came to ISO 9001 certification, 44 percent had either not considered or had decided against implementing it, while 38 percent were in the process of implementing or had already achieved certification.

Fifty-six percent had either not considered, or had considered and decided against, pursuing a specific quality certification such as AS9100, ISO/TS 16949 or ISO 13485.

Fifty-six percent had decided to implement, or were already in the process of implementing, a productivity improvement program such as Lean or Six Sigma.

While only 13 percent had implemented a new product development/formal innovation process, it was being considered by many more companies, with 65 percent reporting that they will adopt one in the future or had already begun the implementation process.

New technology adoption appeared to be less pervasive for manufacturers. When asked about cybersecurity threats, data analysis, industrial automation, 3D CAD modeling, process improvement software, additive manufacturing/3D printing and high performance materials, 45 percent of respondents indicated they had not considered these options.

One-third of respondents had implemented CAD modeling; 43 percent were in the process of implementing industrial automation and 22 percent were taking some action against cybersecurity threats.

When it came to human capital programs, the majority of respondents understood its importance. Sixty-nine percent were in some stage of implementing internal workforce training programs. Fifty-five percent were in the process of implementing professional and leadership development programs; the issue of workforce turnover and retirements appeared to have captured their attention, with

44 percent in some process of implementing a knowledge management program. Sixty-nine percent knew that safety was an issue, and already had implemented safety programs or were in the process of doing so.

Small manufacturers wore many hats and often found themselves handling their own marketing. Seventy-seven percent of respondents had either implemented or were in the process of implementing search-engine optimization, social media, and email marketing. Implementing CRM systems seemed to lag a bit; 51 percent were in the process of implementing a CRM system, but 17 percent said they had not considered a CRM system. Ten percent said they had decided against implementing a CRM system.

Sixty-eight percent reported that they were in the process of implementing networking opportunities and 70 percent reported that conferences were very important to their information gathering.

In fiscal year 2016, NCMEP reported the following impacts:

- › \$933,498,768 in economic impact
- › 2146 jobs created
- › 2849 retained jobs
- › 303 clients surveyed





NCMEP is administered by NC State Industry Expansion Solutions (IES) and is joined by partners from the North Carolina Community College System, NCWorks Customized Training; the Economic Development Partnership of NC; the Polymers Center of Excellence; the Manufacturing Solutions Center; North Carolina A&T State University; and UNC Charlotte.