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# Made in North America



A Deloitte Research Manufacturing Study



# Table of Contents

- Introduction..... 1**
- The Competitiveness of North American Manufacturers ..... 3**
- Expansion Plans of North American Manufacturers ..... 6**
- The Impact of the North American Free Trade Agreement ..... 9**
- Barriers to Competitiveness ..... 11**
- Promoting Innovation and R&D..... 13**
- Conclusion ..... 15**
- Appendix: Survey Methodology and Respondent Profile ..... 16**

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# Introduction

## What impact has globalization had on North American manufacturing productivity, competitiveness, and profitability?

To determine an answer to this timely question, the member firms of Deloitte Touche Tohmatsu in Canada, Mexico, and the United States, with the cooperation of the National Association of Manufacturers (NAM), The Manufacturing Institute, and Canadian Manufacturers & Exporters (CME), surveyed 321 executives of leading North American manufacturing enterprises across product sectors to obtain their perspectives on their current and expected future competitiveness. Of those surveyed, 45 percent were from the United States, 36 percent from Canada, and 17 percent from Mexico. Among the companies represented in this survey, 23 percent had revenues over US\$1 billion; 15 percent had revenues between US\$200 million to US\$1 billion; and 62 percent, below US\$200 million in revenues. (See appendix for details on survey methodology and respondent profile.) The survey responses have been summarized and represent the opinions of the executive management of these firms. No supplementary research has been added.

This survey is a first step to help North American manufacturers better assess current strengths and options for future competitive strategies and tactics. Additionally, it touches on these executives' perspectives regarding the North American Free Trade Agreement (NAFTA) and the impact of current trade integration policies between the United States, Canada, and Mexico, revealing the issues and benefits as perceived by senior executives who lead many of North America's most significant manufacturing enterprises.

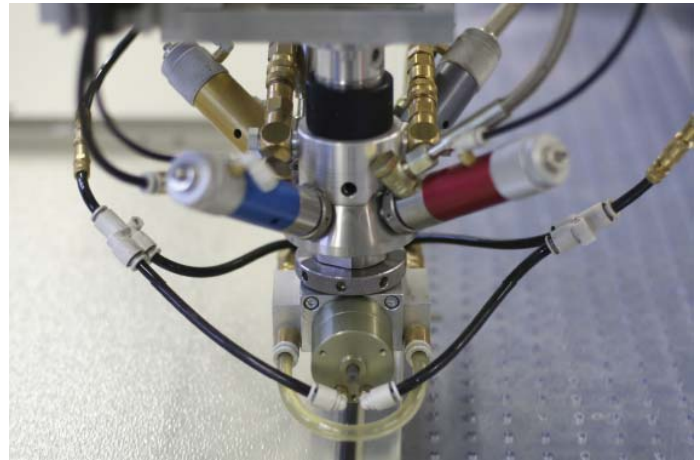
Manufacturing industries are vital to the North American economy and are an indispensable source of the high-paying jobs that are necessary for a vibrant 21<sup>st</sup>-century middle class. Americans have harnessed manufacturing to explore the boundaries of science, technology, and commerce and to create a high standard of living that is envied around the world. The manufacturing economy remains a driving force of economic growth, productivity, and innovation in North America and provides the foundation for many other industries such as financial, retail, health care, technology, and professional services. North American manufacturing had led the world in goods and services since the end of World War II, largely because of its infrastructure, innovation, technology, skilled workforce, large market, and geographic advantages.

However, the world is changing rapidly as other countries and regions acquire competitive advantages that seriously challenge many aspects of North American dominance. High structural and compliance costs; uncompetitive legacy commitments; aging facilities and equipment; insufficient investment; lax corporate governance; and short-term profit agendas: these are (in many cases, self-inflicted) reasons for the loss of manufacturing competitiveness in certain industries. Likewise, uncompetitive tax and labor policies, restrictive immigration policies, faulty trade agreements, burdensome national debt, and many other federal and state or provincial policies and regulations also have put North American manufacturers at a significant disadvantage against their global competitors.

Fortunately, many of the strategic, operational, structural, and compliance inhibitors are correctable. Furthermore, overcoming these barriers can lead to significant opportunities for companies capable and willing to meet the challenges of the global marketplace. The solutions that lead to stronger global competitiveness in the 21st century are complex, but begin with fostering superior manufacturing infrastructures and leadership bold enough to extend and evolve the greatness developed in the last century to the new world of global competition.

Overall, survey results indicate that North American Manufacturing Enterprises (NAMEs) surveyed hold a very positive view of their global competitiveness. The executives who responded to this survey continue to see North America as a vibrant — indeed growing — manufacturing base, essential to their long-term success. Based on their responses, it seems they would strongly prefer North America as a hub for their manufacturing operations in an ever-expanding global economy if proper investments (both public and private) are made, and if government policies focus more on reducing or eliminating competitive barriers. This positive view extends to the impact of NAFTA, through which many executives have seen substantial positive impact on revenue growth and business performance. Those who have been impacted the most by import competition may have a less favorable outlook but, in general, NAFTA is viewed positively.

While there is potential for inconsistency between the opinions of NAMEs executives (as expressed through their answers to this survey) and broader economic data, we believe this survey accomplished its goal of obtaining senior executives' insights on their perceived current levels of global competitiveness and the key issues they believe need to be addressed to bolster their competitive capabilities for the future. The results push us to explore more deeply the complexities of global competitiveness for consumer and industrial manufacturing companies—and the future of *Made in North America*.



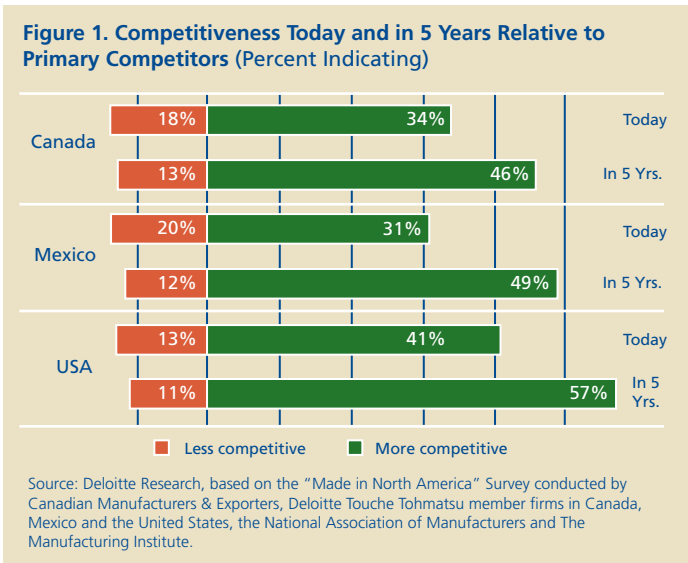
# The Competitiveness of North American Manufacturers

## Are North American Manufacturing Enterprises more or less competitive than their international counterparts?

U.S. manufacturers are confident in their competitive capabilities, with more than 40 percent responding that they currently are more competitive than their primary global rivals, and 57 percent seeing themselves as becoming more competitive over the next five years (figure 1). Perhaps more importantly, only a small minority (13 percent) see themselves as less competitive today than their global competitors, and the percentage sharing that perspective over the next five years is shrinking. While less confidence is shown by executives in Canada and Mexico — only one-third of Canadian and Mexican manufacturers believe they are currently more competitive than their closest global competitors — almost half are optimistic about their competitiveness in five years. Overall, these results are encouraging and suggest accelerated actions are being taken by manufacturing executives in all three nations.

Competitiveness is industry sector specific and depends heavily on each company’s ability to bring value to an alliance with other companies to form a competitive value chain for the customer. Products that are labor intensive, high volume, and noncomplex are more likely to be off-shored from the high-wage countries, such as the United States and Canada, to the low-wage regions, such as Mexico and Asia. In North America, Mexico has the competitive advantage in many labor categories, which explains why the production of many parts suppliers migrated south. Advanced technology products, complex products, and products restricted by national security tend to be developed and produced in the advanced countries, but there is no guarantee that this generalization will last as developing countries increase their capabilities and cost differentials converge. Small companies typically have been more vulnerable to the effects of global competition than the large multinational companies that have the resources to move production, engineering/research and development (R&D), and other operations to the location where they yield the strongest advantage.

However, because of rising logistics costs due to the dramatic increase in energy prices, the decision about where to locate production and other pieces of the value chain is becoming more difficult. Expensive supply chain disruptions, and the associated cost and quality issues encountered with more complex global value chains add to the difficulty. Relative costs and capabilities will continue to change within and between nations over time, forcing companies to reconfigure their supply chains in pursuit of lower-cost, more optimal solutions. Interestingly, this may also include the relocation, or “repatriation,” of operations to their original “home” locations because of the impact of changing cost and demand factors.



Because of the many variables involved in efficient supply chains, economic integration is an important underpinning, especially among contiguous nations such as those included in NAFTA. Economic integration enables the best and most flexible combination of location, logistics, uses of capital, along with human capital and other resources, to be positioned where it yields the highest return. This economic integration could result in a stronger foundation for North American manufacturing.

## Will competitive capabilities be stronger or weaker by 2012?

In assessing the competitiveness of North American manufacturers, it is important to look at the individual pieces of the entire value chain. The future global competitiveness of North America as a location for value chain operations — including sales, marketing, customer service, engineering/R&D, and information technology (IT) — are viewed positively. When asked about the strength of North America as a location by 2012, the results show that the majority of NAMEs expect these locational advantages to be the same or stronger as measured along eight dimensions (figure 2).

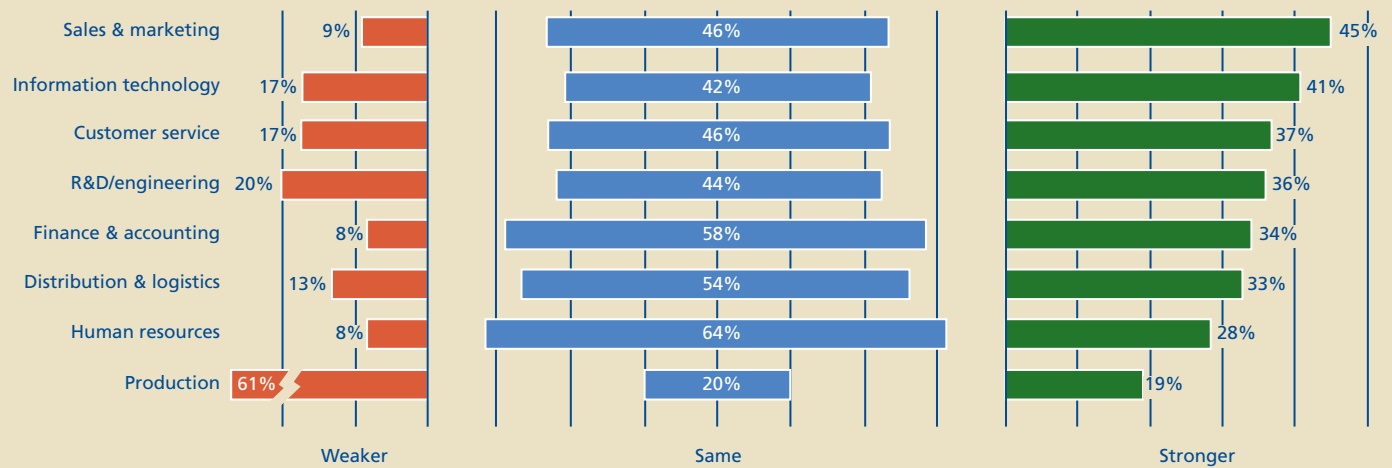
As we dissect those responses, however, fewer than half see North American competitiveness getting stronger along any of the dimensions. Sales and marketing improvements and information technology lead the areas where NAMEs expect North America to be a more competitive location by 2012.

Still, fewer than one-fifth of executives surveyed responded that North America as a location for those operations would be weaker by 2012 along any of these dimensions — with one notable exception.

### Manufacturing production concerns

The survey shows that manufacturing production itself is seen as facing strong competitive pressures over the next five years. More than 60 percent of executives indicate they expect the global competitiveness of production in North America to weaken by 2012, while those expecting their production capabilities to be the same or stronger are split evenly (20 percent and 19 percent respectively). As discussed in the next section on expansion plans, this response about production conflicts with respondents' outlook that they will expand production capacity in the region (figure 3a). We can surmise that while the majority of these executives see their production capabilities losing ground over the next five years to their global competitors, overall they will not be weak in the production area, since such a large percentage plan to expand production in this region. "Weaker capabilities" does not equal "weak capabilities," at least not yet. This might be explained by the anticipated retirement of a large percentage of the manufacturing workforce over the coming decade—half the workers, by some estimates. There may be concern that these workers cannot be replaced easily, prompting production to move to locations where skilled workers are available.

**Figure 2. How Competitive Will North America Be as a Location by 2012? (Percent of Respondents)**



Source: Deloitte Research, based on the "Made in North America" Survey conducted by Canadian Manufacturers & Exporters, Deloitte Touche Tohmatsu member firms in Canada, Mexico and the United States, the National Association of Manufacturers and The Manufacturing Institute.

The declining competitiveness of production in North America represents a significant challenge for manufacturers. This decline seems inconsistent with the fact that the United States leads the world in innovation (patents, technical papers, and so on), technology and productivity; yet the country is considered non-competitive for production.

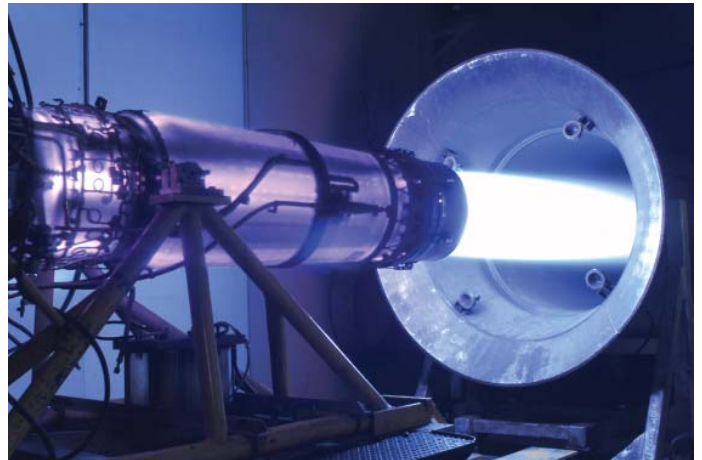
Our interpretation of these results is that NAMEs see labor-related issues—in particular, the large disparity in total labor cost between North America and emerging markets, particularly China, India, and other parts of Southeast Asia—as key obstacles to their manufacturing competitiveness. As we show in the next section, key challenges include labor and compensation cost, skill availability, and tax issues. As a result, NAMEs intend to continue moving some production to low-wage locations as necessary to remain competitive, unless dictated otherwise by significant changes in economics (such as energy costs or quality issues). Yet, low-wage advantage is a temporary advantage, as witnessed previously in Japan and more recently in China.

The winning combination will be one that can provide the “best” total value chain—combining innovation, production, sales, and service for the final customers. Traditionally, the ability to closely integrate product development and production has allowed companies to explore advances in product design and production efficiency, thus pushing the envelope in terms of innovation and productivity. If the production portion of the value chain loses its luster in North America, it remains to be seen whether manufacturers in the region can hold on to their lead in global innovation and continue to march up the value chain to higher value-added, and more profitable, products and services. As described in the next section, the survey results suggest this concern may now be on the horizon for NAMEs.

## Outlook for R&D and engineering

R&D and engineering capabilities are the bedrock of successful manufacturing industries. So it is a concern that the survey showed that 20 percent of executives expect that North America as a location for R&D will be weaker in five years than it is today (figure 2). While R&D and engineering concerns were clearly a distant second to the significant production competitiveness concerns, R&D and engineering follow the same paradoxical pattern as production. Again, plans for expansion of R&D and engineering functions (figure 3d) are dominated by U.S. expansion, yet R&D and engineering rank second to production on the list of capabilities where NAMEs expect to be weaker by 2012. It seems NAMEs may be expressing concern over another critical component of their value chains.

This optimism among executives about the global competitiveness of their North American operations is not baseless. There is recent strong evidence that increasing wages and regulatory costs, quality issues, supply-chain disruptions, and other issues in emerging markets will damage competitive capabilities of rival locations, such as China. Combined with a significantly weakened U.S. dollar, this has created new opportunities for expansion in North America for many of the companies surveyed.



# Expansion Plans of North American Manufacturers

Where will you be expanding production, sourcing, sales and service, and research and development?

**Production:** While much attention — and press — has focused on NAMEs reducing their employment and sometimes production capacity over the past 10 years, interestingly almost 50 percent of the NAMEs responding to this survey say they intend to expand production in the United States over the next three years (figure 3a). Many North American manufacturers make more revenue today than at any time in recent history, and one major reason is investment in new production technology, which often leads to reductions in employment. In fact, NAMEs picked the United States specifically, and North America in general, as their primary target for expanding production over this time horizon. Outside of North America, only China is forecast to challenge the United States as a meaningful location for expansion of the production function, but it still tied with Mexico for second place after the United States. While production function expansion is happening to some degree throughout the world for NAMEs, the data clearly suggests their priorities are in North America, followed by China and India.

Production plans for expansion in Canada also are fairly robust, putting it in a dead heat with India for third place on a global basis as a target for NAMEs. Without benchmark data, this story may change as the value of the U.S. dollar has plunged, making Canadian production more costly. The emergence of Mexico as a key player for production is a testament to the vitality and future competitiveness of North America as a manufacturing region.

**Sourcing:** Perhaps more surprising than plans for expanding production in North America are NAMEs' plans for expanding sourcing (procurement of raw materials, parts, and other inputs) over the next three years (figure 3c). The survey shows a preference for two regions for this expansion: North America and the emerging economies of Asia. Again, the United States and Mexico are the overall preferred locations for NAMEs to

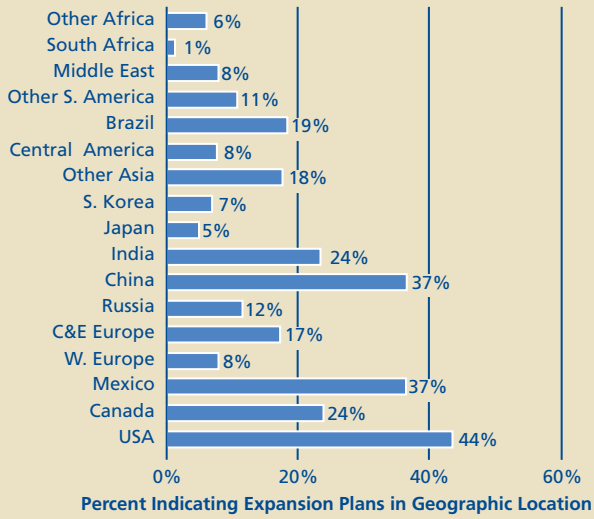
expand sourcing in North America, and China and India the top destinations in Asia. We believe these responses, combined with those around expanding production (figure 3a), suggest that overall global supply-chain considerations will dominate decisions on production and sourcing expansion over the next three to five years. "Low-cost supply-chain effectiveness" could replace "low-wage production and sourcing" as dominant priorities. While sourcing from traditional low-wage locations will certainly continue, companies need to be prepared to shift their focus to *total* supply-chain effectiveness in combination with new emerging lower-wage sources, such as parts of Southeast Asia and Africa. Even small and medium-size companies may benefit in this new world. By partnering more effectively with regional and global players, they may be able to offset some of the disadvantages of manufacturing in North America, while pursuing some of the most promising ones.

**Sales and service:** Manufacturing industries are already among the most globalized. A third of the survey respondents indicate that they receive more than 50 percent of their total revenues from outside North America. Among the larger companies, with revenues of US\$1 billion or more, almost half (48 percent) say that they receive more than 50 percent of their total revenues from outside North America. This trend toward greater globalization is expected to continue in the coming years.

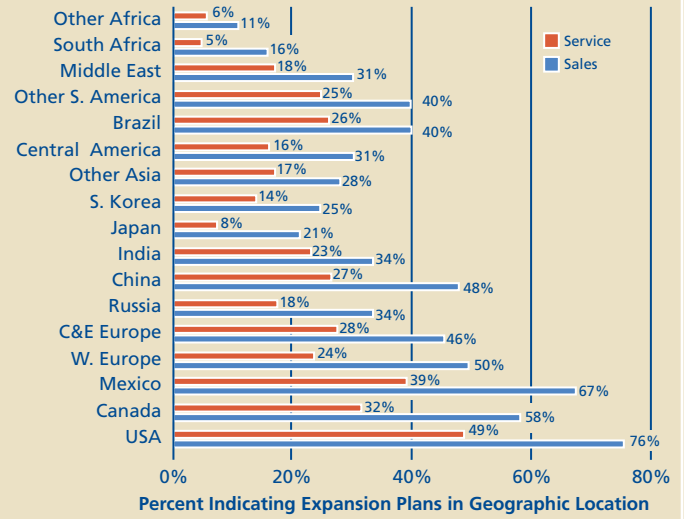
Indeed, sales and service operations top the global expansion agenda as companies are putting revenue growth on the top of their business priorities (figure 3b). This broad-based expansion of international sales and service is a key driver of globalization for North American manufacturers as they follow existing customers and pursue new ones in new markets around the world. To support sales and service expansion, NAMEs appear to be leveraging production at home, as well as in China and India, as mentioned earlier.

**Figure 3. Global Expansion Plans of North American Manufacturers** (Over the next three years)

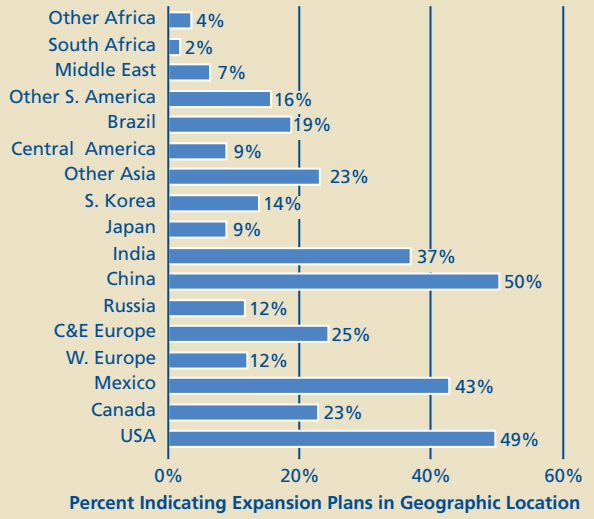
**3a. Where Will You Be Expanding Production?**



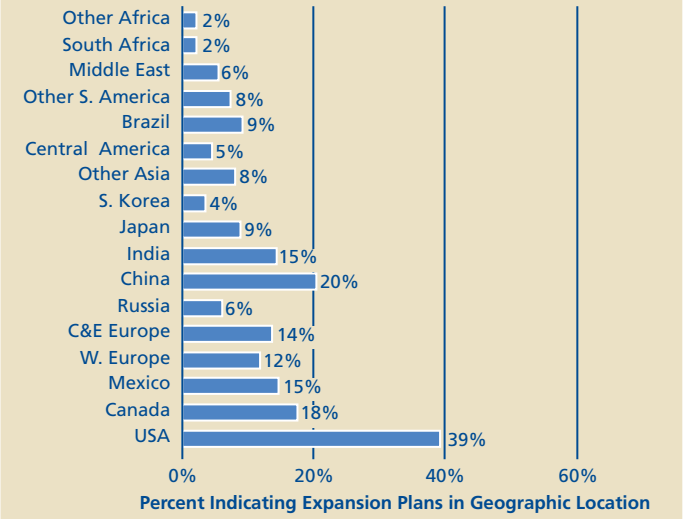
**3b. Where Will You Be Expanding Sales and Services?**



**3c. Where Will You Be Expanding Sourcing?**



**3d. Where Will You Be Expanding Engineering/R&D?**



Source: Deloitte Research, based on the "Made in North America" Survey conducted by Canadian Manufacturers & Exporters, Deloitte Touche Tohmatsu member firms in Canada, Mexico and the United States, the National Association of Manufacturers and The Manufacturing Institute.

All countries in North America are key targets for sales expansion for NAMEs. Manufacturers in Canada (which NAMEs treat as a market more similar to Europe than the United States or Mexico) are putting significantly less emphasis on expanding production or sourcing and considerably more emphasis on expanding sales on a relative basis. The Canadian dollar, which has strengthened significantly against the U.S. dollar over the last 5 years, is no doubt throwing a wrench into Canadian production and sourcing expansion plans. While NAMEs' plans to expand sales and service in the United States and Mexico will pull production and sourcing expansion along, the ratios between sales expansion and production expansion do not hold for Canada, and we expect this will be a cause for concern among Canadian manufacturers.

In China and India, the emphasis is on expanding both production and sales. NAMEs clearly see China, India, and other economies in Asia not just as locations for low-wage production or sourcing of parts and materials, but even more as key targets to expand sales and service to growing middle classes. In all other areas of the world, NAMEs' strategies seem clear: sell and service there, but expand production and sourcing elsewhere — in North America, China, and India.

**Research and development (R&D):** North American manufacturers also are globalizing R&D (figure 3d) — typically the last piece of the value chain to go global. Spreading innovation networks around the world to support global sales, service, and production expansion appears to be a more cautious decision than expanding sales, service, production, and sourcing globally. The United States is the top target for R&D expansion, with 40 percent of respondents planning to do so over the next three years, followed by China (20 percent), Canada (18 percent), Mexico (15 percent), India (15 percent), and Central and Eastern Europe (14 percent). There are no surprises here, as obtaining world-class R&D talent will be a top priority for every company. If the United States dominated in any area as a location for expansion, it was clearly in R&D. Factors such as talent, intellectual property protection, infrastructure and facilities, university connections, tax laws, and access to capital bundle together to drive expansion decisions around R&D — and the bundle offered by the United States still appears most favorable to NAMEs. But despite the current dominance of the United States, we see that the real story may be that China now leads every other location in the world for R&D expansion plans of NAMEs after the United States. Furthermore, India is now on par with Canada and Mexico as a location for R&D expansion by the surveyed NAMEs.

Overall, sales and service expansion in North America suggests that NAMEs recognize unfilled demand in their own backyards. But there is strong and growing recognition that long-term success is dependent on developing, selling, servicing, and producing new products for new and existing customers around the world.

Research and development is a different story. Acquiring access to and developing world-class personnel is a major challenge facing all manufacturing companies and nations. At the national level, this will require cooperation and commitment among academia, government, and businesses to provide the educational infrastructure for producing manufacturing industry talent. Short-term tactics will rely on government-funded incentives for local talent development; yet NAMEs are only somewhat confident in the United States as a location for expansion. Recognizing that no nation can produce the total talent needed for competing in a global economy, the longer-term strategy will be to compete for international talent from the best available source, thus requiring a revamping of immigration policies to ensure a steady source of talented employees, regardless of their nationality. From the perspective of manufacturing executives, a global R&D strategy focused on tapping talent pools in many parts of the world is a key aspect of maintaining and enhancing their global competitiveness.

Finally, despite the lure of overseas markets, North America will remain the top target for expansion, according to the executives surveyed, over the next three years across all areas of the value chain: sales, service, R&D, production, and sourcing. Most interestingly, NAMEs seem to have a renewed preference for North America as the home for actual production despite concerns about the future production competitiveness of North America. While globalization will continue and some manufacturing jobs will follow relocations of parts of the value chain, North America is showing significant resilience, based on the plans of these executives.

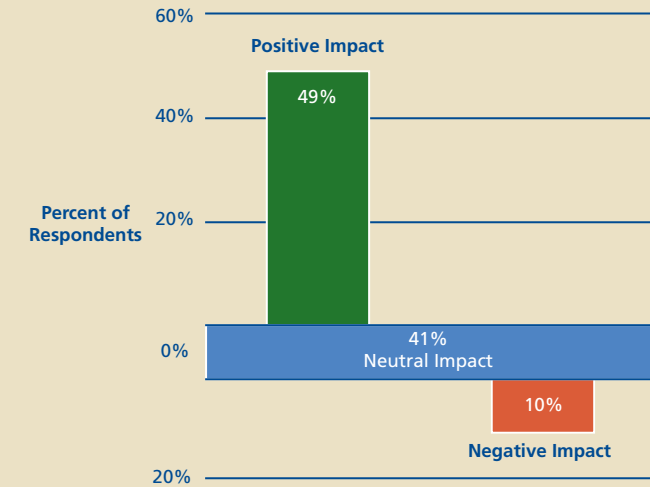
# The Impact of the North American Free Trade Agreement

What impact has NAFTA had on the key elements of your business on global competitiveness?

Almost 50 percent of the senior executives responding to this survey said NAFTA had a positive impact on their businesses, while only 10 percent saw NAFTA as having a negative impact (figure 4). The rest of the respondents (41 percent) were neutral regarding the impact of NAFTA. The overall findings clearly indicate a fairly positive view of NAFTA almost 15 years since it came into effect on January 1, 1994.

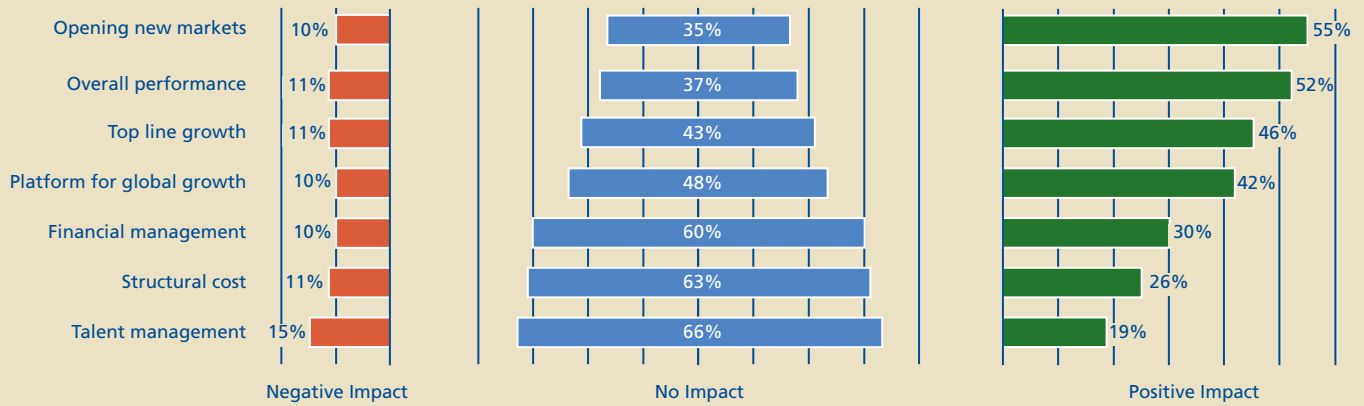
Many of these executives cited a positive impact of NAFTA across a number of dimensions that compose their competitive capabilities. Figure 5 shows seven key dimensions of competitive capabilities, with positive benefits from NAFTA perceived across all: opening new markets; overall performance; top-line growth; creating a platform for global growth; financial management; structural cost; and talent management. Interestingly, executives indicated that the primary impact on their business was improved access and growth into new markets. This was one of NAFTA's primary goals, and it appears that, at least for a majority of these executives, it has been successful. Key infrastructure elements (financial management, structural cost, and talent management) were not affected significantly. What is most notable is that only a small percentage of survey respondents said NAFTA actually had a negative impact on any one of these dimensions. Overall, the vast majority of NAMEs believe NAFTA has had a positive impact or no impact at all on these dimensions of global competitiveness. In addition, more than two-thirds reported revenue growth and bottom-line profit levels of 5 percent or higher over the last three years.

Figure 4. Impact of NAFTA on Your Business



Source: Deloitte Research, based on the "Made in North America" Survey conducted by Canadian Manufacturers & Exporters, Deloitte Touche Tohmatsu member firms in Canada, Mexico and the United States, the National Association of Manufacturers and The Manufacturing Institute.

**Figure 5. What Impact Has NAFTA Had on These Dimensions of Your Global Competitiveness?** (Percent of Respondents)



Source: Deloitte Research, based on the "Made in North America" Survey conducted by Canadian Manufacturers & Exporters, Deloitte Touche Tohmatsu member firms in Canada, Mexico and the United States, the National Association of Manufacturers and The Manufacturing Institute.

Yet, the results of the survey also suggest that competitiveness is fleeting, with some companies thriving while others are not, and that both governments and businesses need to recognize existing and future challenges from international competitors. Executives are indicating that competitive improvement over the next five years is imperative, and that the major issue in the competitiveness debate is not free-trade agreements only, such as NAFTA, but should more broadly focus on how manufacturers can improve their capabilities at home and abroad to form globally competitive product and service value chains. Furthermore, the survey responses suggest that the debate must address how government policies can assist, not hinder, that objective.



# Barriers to Competitiveness

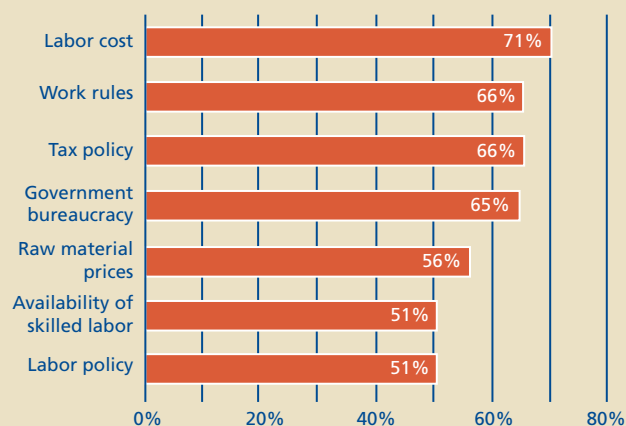
## What are the major barriers to North American competitiveness?

Respondents identified a number of obstacles they believe are weakening manufacturing competitiveness in North America. Figure 6 shows the most significant barriers, which are those cited by at least 50 percent of all respondents from a list of 17 potential issues. According to the executives surveyed, the major barriers to competitiveness are:

**Labor:** Labor cost (including wages, benefits, pensions, and health care) was clearly the top concern, cited by more than 70 percent of respondents. Additionally, while membership of labor unions has declined over the past decades, a large majority of executives (66 percent) view work rules as a significant barrier to manufacturing competitiveness. Historical contractual requirements, such as work rules, labor pools, job classifications, and other rules that often dampen productivity and add costs, are often issues of contention between labor and management. Most of the costs associated with these requirements can be reduced, if not eliminated, through better management and labor cooperation, as we have seen in recent years; but as the survey results suggest, NAMEs believe more needs to be done. Labor policy also made the list of top barriers, with just over half of all respondents identifying it as a concern.

**Government:** Tax policy and government bureaucracy followed as the next most significant barriers to competitiveness, cited by roughly two-thirds of respondents. Executives surveyed clearly believe that North American tax policies must be made more competitive. Government bureaucracy is often manifested through increased compliance costs and introduced as part of regulation around employee health, safety, and environmental protection, product safety, and by financial management oversight and other mandates. While important considerations in their own right, they also impose a burden on companies in terms of investment of time and cost of compliance. Without a level playing field against other competing regions, these issues can become a competitive disadvantage if not carefully designed and managed from a government perspective.

**Figure 6. Top Barriers to Competitiveness** (Percent of respondents indicating significant or extensive barrier)



Source: Deloitte Research, based on the "Made in North America" Survey conducted by Canadian Manufacturers & Exporters, Deloitte Touche Tohmatsu member firms in Canada, Mexico and the United States, the National Association of Manufacturers and The Manufacturing Institute.

**Raw materials costs:** Raw materials costs, including energy costs, were cited by 56 percent of NAMEs as a significant barrier to future competitiveness. At the moment, North American manufacturing industries are among the most efficient in the world, but it's clear that executives are worried about the impact of spiraling raw material costs going forward. For U.S.-based manufacturers, the weak U.S. dollar, while good for export competitiveness, has contributed to rising raw materials costs.

**Skills availability:** Skills availability, which is often associated with the "skills gap," was cited by more than 50 percent of all respondents. This is a barrier whose impact will only become more pronounced as baby boomers retire in large numbers in the decade ahead and many younger workers find a career in manufacturing industries a less attractive option. At the same time, the skill requirements of manufacturing industry jobs are increasing due to advancements in technology and more complex production, R&D, and sales and service networks, resulting in a skills gap that is a significant challenge for manufacturing competitiveness.

## What are the key priorities for government to address to help improve global competitiveness?

Not surprisingly, North American manufacturing executives point to these same competitiveness barriers as areas that government policy makers should address. As shown in figure 7, issues of labor cost, tax policy, the availability of skilled workers, and government bureaucracy were among the top priority issues selected by executives for governments to address. These are also the most significant barriers to improving competitiveness in North America they identified.

**Figure 7. Top Ten Priorities for Government**

1	Labor Cost
2	Tax Policy
3	Availability of Skilled Labor
4	Government Bureaucracy
5	Labor Unions
6	Exchange Rates
7	Raw Materials Prices
8	Trade Policy
9	Energy Policy
10	Labor Policy

Source: Deloitte Research, based on the "Made in North America" Survey conducted by Canadian Manufacturers & Exporters, Deloitte Touche Tohmatsu member firms in Canada, Mexico and the United States, the National Association of Manufacturers and The Manufacturing Institute.

Exchange rates and the disruptive consequences of their dramatic swings also made the list of top 10 priorities executives want governments to address. Raw materials prices and energy costs also were cited as priorities for governments to address. Finally, policy issues around trade, energy, and labor rounded out the list.

While NAMEs generally indicated a preference for less government intervention because they were concerned with government bureaucracy, it is clear they see government assistance and leadership as an important part of the equation to help improve the competitiveness of the region. Our survey did not lend itself to a detailed examination of the specific actions NAMEs would like to see government take in any of these areas. But it is clear from executives' responses that, across North America, they would welcome collaborative public-private partnerships to alleviate competitiveness barriers in many, if not all, of these areas. They see governments as well as labor unions as part of the solution and hence see the necessity to align priorities to address the overriding issues of competitiveness.



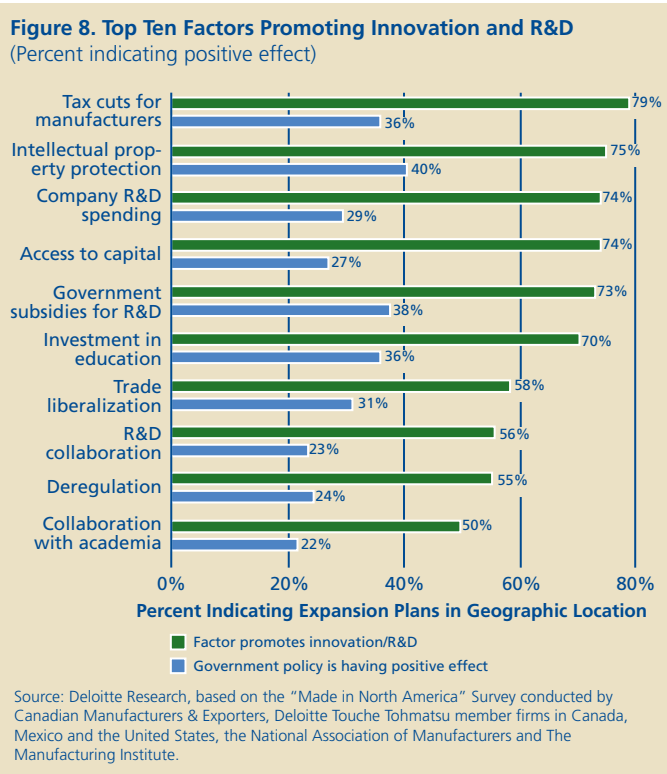
# Promoting Innovation and R&D

What are the key factors promoting major innovation and R&D? How effective are current government policies in supporting these factors?

In manufacturing more than any other business sector, innovation is one of the most important factors in separating winners from losers over the long run. Breakthrough product and service innovations — new products for existing and new markets, as well as process innovations that provide a competitive advantage in time-to-market cost, quality, or customer service — are powerful factors in short- and long-term success. NAMEs have strong opinions regarding what factors are most important for promoting effective R&D and innovation, as well as how well government policies support those factors. Figure 8 shows the top 10 factors promoting R&D and innovation as identified by 50 percent or more of the executives responding to our survey. These were selected from a longer list of possible options.

## Funding and intellectual property (IP) protection:

Topping the list of most important factors are tax breaks, IP protection, company spending levels on R&D, access to capital, government subsidies for R&D, and government investment in education. Executives seem to be united in their opinions that public and private funding levels are significant factors of success when it comes to R&D and innovation. The combination of tax incentives, government subsidies, and easy access to capital can all contribute to significantly increased company spending on R&D. Executives seem to place the importance of funds that they can direct toward innovation at a company level ahead of other important elements that promote broader innovation, such as education supported by government investment, collaboration (with peers, competitors, or academia), trade liberalization, or deregulation. While all of these are obviously deemed important since all were identified by the majority of our respondents, it is clear that executives believe that the overall economic equation must first be supportive at the company level, then combined with strong IP protection to allow innovation to flourish.



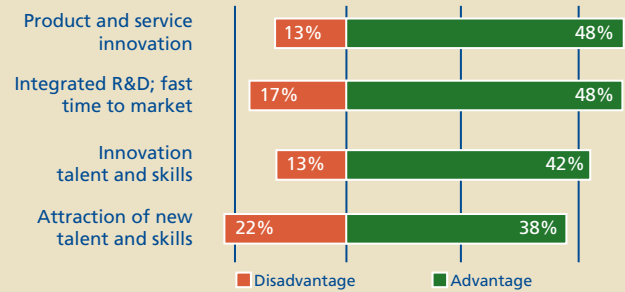
**Insufficient government support:** While executives appear to agree on the most important factors driving innovation and R&D, they also seem to agree that, unfortunately, their governments are not helping as much as they would like. For example, only 40 percent of survey respondents said government policy is having a positive impact on IP protection, and all other factors fared even worse. Slightly more than one-third of respondents said government subsidies for R&D and tax incentives are helping business. And less than one-third of executives believe government is having a positive impact on the remaining top 10 factors.

## How competitive are we today?

Executives indicated that, in general, they hold a competitive advantage over their key global rivals on four key measures of effective innovation and R&D. As shown in figure 9, almost half of the respondents believe they hold a competitive advantage over their global competitors in product and service innovation, and in integrating their R&D operations to more quickly bring new products to market. Combined with those that believe their capabilities are at least equal to their main global competitors (not shown), NAMEs believe they are well positioned today. In fact, fewer than 20 percent of respondents said they are in a position of competitive disadvantage on these measures. This is good news for North American manufacturing as innovation and R&D are two of the key overall measures that tend to consistently differentiate the most successful manufacturers from global competitors over the long term.

When it comes to the talent that is essential to drive all product and process innovation, the vast majority of executives again believe they either have a competitive advantage (figure 9) or are at least equal to their chief global competitors (not shown). Only in the attraction of new talent do NAMEs seem to be showing some concerns, with slightly over one-fifth of respondents indicating that they are in a position of competitive disadvantage today. The battle over talent will only intensify over the coming decade as emerging markets already are producing, and using, ever greater numbers of scientists and engineers. Combined with the dramatic increase in mobility (both physical and virtual) of these same knowledge workers, the challenging battle for talent may intensify to levels that will rapidly alter NAMEs' generally optimistic perspective.

Figure 9. Innovation and R&D Competitiveness Relative to Global Competitors (Percent Indicating)



Source: Deloitte Research, based on the "Made in North America" Survey conducted by Canadian Manufacturers & Exporters, Deloitte Touche Tohmatsu member firms in Canada, Mexico and the United States, the National Association of Manufacturers and The Manufacturing Institute.



# Conclusion

This survey is intended as a first step toward understanding the requirements for manufacturing competitiveness in the 21<sup>st</sup>-century globalization environment. North American manufacturing executives are optimistic regarding the future of *Made in North America*. They see their competitive capabilities as strong and likely to get even stronger over the next three to five years. Despite their optimistic view, they also see much work ahead to remain competitive against increasingly competitive players around the world. The barriers to performance improvement they have identified are real and span government policies and company-level capabilities. Addressing these barriers appropriately will require a holistic view of the overall competitiveness framework for manufacturing companies in North America. Focusing on a single issue, such as labor or trade policy, is insufficient to address the totality of competitiveness challenges as the dynamics of organizational capabilities, geopolitics, and now geoeconomics, are complex and have proved to change in very short order.

The results of this survey clearly reflect a positive view of how trade liberalization is improving sales growth and profitability. This is not to say NAFTA and other free-trade agreements are perfect by any means; it is simply a strong indication that North American executives believe reduced trade barriers abroad are a necessary and positive step toward the globalization of their business and the survival in an evermore competitive landscape. While the debate around existing agreements, such as NAFTA, are only likely to intensify in the near term, and strong arguments will be made regarding needed repairs, NAMEs responsible for manufacturing enterprise growth and success seem to be clearly indicating that the NAFTA trade agreement should not be eliminated and are positive about the impacts of NAFTA overall.

As we continue to see growth in industrial productivity, manufacturing employment has remained flat or dropped in some manufacturing sectors. In many cases, the application of technology has reduced the number of employees needed while boosting the levels of production. At the same time, some low-wage countries have become centers for large-volume manufacturing.

The competitiveness debate often has concentrated on the production link of the manufacturing value chain. While many parts of the North American value chain are in good shape according to executives surveyed, the executives are concerned about North America as a location for production

in the future. This concern particularly encompasses the labor component of their production capabilities, including total labor cost, labor agreements, and availability of skilled workers. Despite these labor challenges, many NAMEs plan to expand production in North America in the coming years. While emerging economies in Asia, particularly China, also are targets for production expansion, survey responses suggest that a more comprehensive analysis of the entire value chain — including not only production, but also sourcing, R&D, distribution, human resources, financial management, marketing, customer relationship management, and sales and service — provides a better understanding of the major factors affecting competitiveness. Far from abandoning North America, executives see the region as the key to managing and developing their global capabilities. In fact, we see signs that more sophisticated supply-chain strategies are emerging that are not being driven simply by low-cost labor but focused more on the overall contribution to growth and profitability of the enterprise.

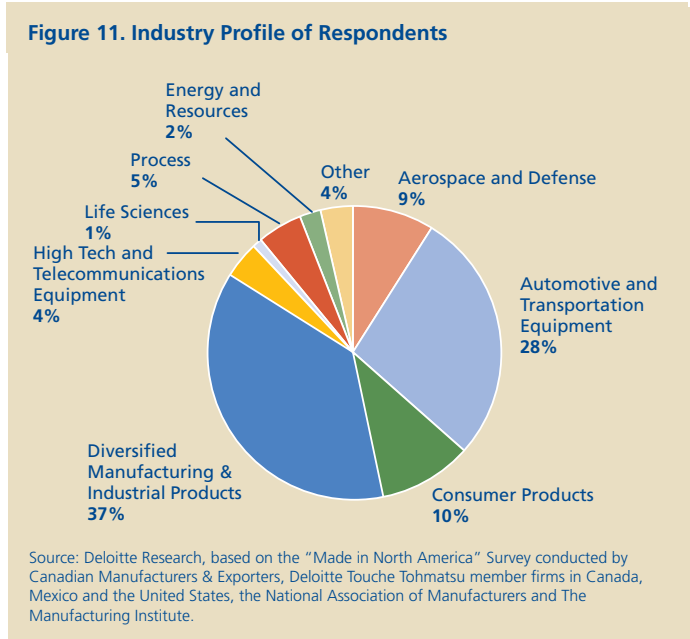
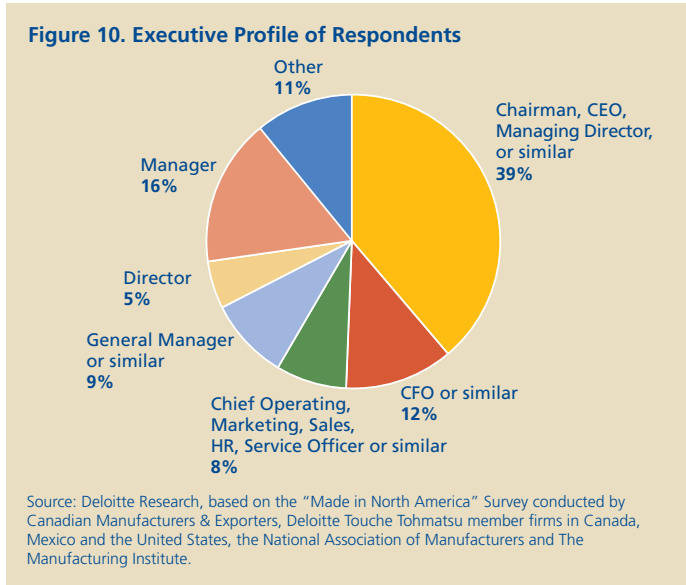
Overall the survey responses indicate that there are no silver bullets. Competitiveness requires a broad set of capabilities, provided by both governments and manufacturers. Collaboration between government, businesses, and labor is paramount to long-term improvement. Additionally, it is important to note that for the nations and manufacturing enterprises of North America, global competitiveness will depend on partnerships versus antagonism; trust versus defensiveness; government research and manufacturing alliances versus special interests; and, perhaps most important, the admission that the changes in manufacturing dynamics are opportunities for improvement and must be welcomed, not avoided. It is becoming increasingly clear that the improvements required for success in this new global economy are not occurring on a linear scale, but rather are exponential, and the thinking and actions needed to remain competitive must be elevated to this new level as well. A shift is indeed occurring in the battle for manufacturing supremacy, but the early rounds of engagement, with low-wage countries gaining quick victories, are hardly the end of the story. North American executives are signaling that their competitive capabilities are robust across the entire value chain, and they are preparing themselves for the future — in North America and around the world. Success will be directly related to their ability to leverage new thinking in combination with new business models on an increasingly complex global scale.

# Appendix: Survey Methodology and Respondent Profile

The *Made in North America* survey was conducted by Deloitte Touche Tohmatsu member firms in Canada, Mexico, and the United States; Canadian Manufacturers & Exporters; the National Association of Manufacturers; and the Manufacturing Institute. The survey was rolled out during the winter of 2007–2008 and was targeted at senior executives of manufacturing companies in Canada, Mexico, and the United States.

Overall, 321 senior executives of manufacturing companies participated in the survey (figure 10). Fifty-one percent of executives responding were chairmen, chief executive officers, managing directors, chief financial officers, or similar roles; 22 percent of respondents were chief operating officers, chief marketing, sales, or service officers, general managers, directors, or similar.

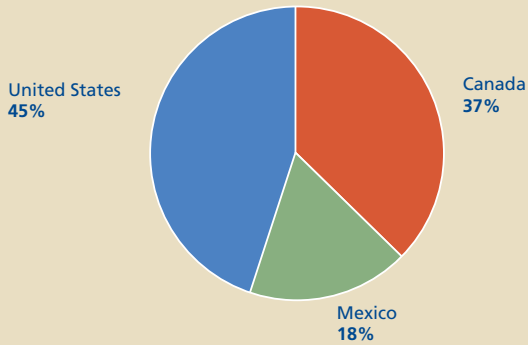
The survey covered a broad range of industries, including diversified manufacturing and industrial products (37 percent of respondents), automotive and transportation equipment (28 percent), consumer products (10 percent), aerospace and defense (9 percent), process (5 percent), high-tech and telecommunications equipment (4 percent), and the remainder from industries such as life sciences and energy and resources (figure 11).



Of all participating executives, 36 percent were from Canada, 17 percent from Mexico, and 45 percent from the United States (figure 12).

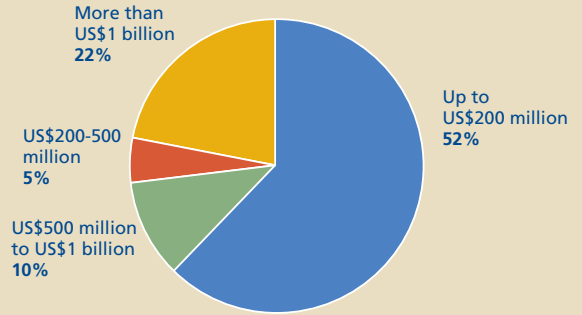
Twenty-two percent of participating companies had annual revenues over the last year of more than US\$1 billion; 15 percent between US\$200 million and US\$1 billion; and 62 percent had less than US\$200 million in annual revenue (figure 13).

**Figure 12. Country Profile of Respondents**



Source: Deloitte Research, based on the "Made in North America" Survey conducted by Canadian Manufacturers & Exporters, Deloitte Touche Tohmatsu member firms in Canada, Mexico and the United States, the National Association of Manufacturers and The Manufacturing Institute.

**Figure 13. Revenue Size Profile of Respondents**



Source: Deloitte Research, based on the "Made in North America" Survey conducted by Canadian Manufacturers & Exporters, Deloitte Touche Tohmatsu member firms in Canada, Mexico and the United States, the National Association of Manufacturers and The Manufacturing Institute.

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