



KPMG's Global Manufacturing Outlook 2016 Country Perspectives

**Competing for growth:
How to be a growth
leader in industrial
manufacturing**

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China

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China is transitioning from an investment-intensive, export-led model of growth, to one driven by consumption and innovation.

And, as a result, we are seeing the development of a 'two track' economy in China.

The first track comprises the country's traditional sectors such as the steel, shipbuilding and industrial products sectors. Companies in these sectors are now facing multiple challenges such as slowing demand and significant overcapacity problems.

The other, faster growth track primarily consists of sectors and companies focusing on consumers and services, as well as those driven by innovation and technology. As a result, more advanced and innovative organizations — such as medical device manufacturers and other high-end manufacturers — have seen impressive growth and are poised to continue this momentum into 2016.

At the same time, China's 13th Five-Year Plan highlights Overseas Direct Investment (ODI). The result will be greater competition from China's manufacturing sector eager to expand overseas.

China remains a significant market that can't be ignored by manufacturers looking for growth. Foreign investors able to bring innovation and investment into new technologies should find strong growth opportunities in China. But China's own manufacturers are keen to move up the value chain and expand their global footprints bringing not only competition but also opportunities for collaboration.

- **28%** of China respondents say their growth strategy will be 'very aggressive' versus **18%** globally
- **31%** say they will spend **10%** or more of revenues on R&D over the next 2 years
- **56%** think M&A will help drive their growth strategy

Germany

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As has always been the case in Germany, the surest path to profitable growth is through export growth. But Germany's big export partners are now looking somewhat less secure than before. China's slowing economic growth has disrupted trade, particularly for German manufacturers of heavy machinery. Economic uncertainty in the rest of Europe is slowing investment. And — right around the world — German export goods are starting to see stiff competition from (often lower-cost) Chinese and Asian products.

As a result, German manufacturers have been somewhat more cautious than in the past, favoring growth through organic investment rather than mergers and focusing on cost containment and competitiveness rather than new market entry.

Where German manufacturers should be focusing is on digitization. German manufacturers were among the first to coin the term 'Industry 4.0' and most manufacturers seem to recognize that digitization holds the key to future growth and competitive advantage. Yet progress on the digital agenda in Germany has been slow; most large manufacturers seem content to simply tinker around the edges until either competition or customer pressure forces them to fully commit.

However, German manufacturers are also keen adopters of automation (in large part due to the high wages commanded by German workers and in part due to efficiency gains) which, in turn, will require greater digitization as workers on the plant floor start being replaced by robots and decisions are increasingly made by algorithms. Simply put, if German manufacturers hope to harness the full value (both financially and competitively) of their automation and robotics investments, they will likely need to also invest in digitization.

The coming year — assuming no catastrophic global event — should see German manufacturers start to refocus on growing their export markets and foreign footprints. If they can combine these investments with a focus on digitization, they should be well positioned to win in new markets.

- **53%** of German respondents say economic growth prospects will have the greatest impact on their company's growth
- **45%** will invest into robotics to achieve their growth agenda
- **40%** say their top supply chain priority is to understand cost-to-serve

India

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As other markets stumble and slow, India has emerged as the bright light of economic growth around the world. Global manufacturers cannot afford to ignore India any longer.

In part, this is because domestic consumption is on the rise. Supported by growing consumer affluence and strong economic growth, India's domestic market has become one of the largest in the world. And as the government invests further into infrastructure such as roads, rails and ports, the domestic market is only expected to grow.

It is also because India is proving itself to be a valuable hub from which to sell to smaller — yet growing — markets in the region, as well as larger — yet less cost effective or less stable — emerging markets. Simply put, manufacturers see India as both a low-cost regional manufacturing center and as a vital customer market.

While uptake of Prime Minister's 'Make In India' campaign has been somewhat slower than hoped, it is clear that CEOs at multinational manufacturers are hearing the message. The quantum of announcements and signed Memorandum of Understandings (MoUs) is encouraging, even if it has not fully translated into substantial financial investments. Investment is likely pick up pace over the coming months and years as India's government moves forward to enact and simplify foreign investment requirements and manufacturing regulation.

However, as an increasingly important and integrated part of the global supply chain, India's manufacturers are now starting to recognize that they are not immune to the economic shocks and disruption of other markets. For growth to be sustainable, therefore, India's manufacturers — and those foreign players that rely on India's shop floors — will need to rethink their risk exposure and manage their risks appropriately.

At a time when manufacturers around the world are dealing with deep uncertainty, India is emerging as a strong and reliable bet.

- **76%** of respondents from India voice confidence in their company's growth prospects
- **62%** say they will make significant investments to launch new products
- **68%** think their supply chain is ready for growth

Japan

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As low-cost electronic manufacturing service (EMS) providers based in Asia start to chip away at Japan's global competitiveness in electronics manufacturing, Japan's manufacturers have increasingly started to focus on creating a more targeted and concentrated business portfolio.

For some, this will mean sharpening the focus onto one distinct point solution, incorporating both hardware and software to create a more valuable end-to-end solution. For others, the focus will be on leveraging their existing capabilities and technologies to specialize in high-value manufacturing.

Both business models will require Japanese manufacturers to accelerate their investment into Information and Communications Technology (ICT). The fact that almost a quarter of Japan's manufacturers say they will spend more than 10 percent of revenues on R&D over the next 2 years is an encouraging sign. The recent launch of the 'Industrial Value Chain Initiative' in 2015 should help Japan's manufacturers respond to similar initiatives (such as Industry 4.0 from Germany) and rebuild their global competitiveness.

Japan's manufacturers are also adapting their approach to innovation. Some have started to actively relocate their R&D functions and facilities outside of Japan in an effort to improve innovation and better respond to the needs of customers in different markets. And many are changing their production methods to move from 'subtractive manufacturing' to 'additive manufacturing' methods and tools such as 3D printing.

Those seeking to focus on high-value manufacturing will also need to invest in technology — particularly sophisticated technologies that control heat, manage physical force or incorporate optics into their design. And this will likely require them to work with new partners, either through joint ventures or through mergers and acquisitions.

Given the historically conservative approach taken by Japan's manufacturers, it is not surprising that many say they are going to be aggressive in pursuing their growth objectives. Japan's manufacturers know they need to make significant changes to their business model in order to remain relevant in the global marketplace. And most seem eager to start making those changes now.

United States

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US manufacturers know they are operating in a highly competitive global marketplace. New competitors and disruptors continue to emerge from the East while new technologies are speeding up the product lifecycle.

As manufacturers contemplate this reality, many are also continuing to focus on optimizing their manufacturing operations and managing what is becoming an increasingly complex and interdependent value chain.

Probably the most exciting and compelling story in the US right now is how technology is rapidly changing the US manufacturing environment. 3D printing, nanotechnology, advanced material sciences and — increasingly — the rise of 'connected products' are all changing the way manufacturers design, make and sell products.

With 63 percent of US respondents saying they plan to invest in technologies related to the Internet of Things (IoT), the next few years should bring significant change to existing business and operating models. New, smart and always connected products enable manufacturers to create closed-loop product lifecycle management strategies and — in many cases — shift from selling products to also providing services (which can provide a more secure source of reliable revenue).

Without a doubt, connected products promise to deliver more value to manufacturers' customers. But it's not just about who gets there first, it's also about how 'smart' they can make their machines. The US is ripe ground for data, analytics and cognitive computing to coalesce and, in doing so, create massive competitive advantages.

Not since the rise of digital in the 1980s has the US manufacturing sector been so exciting. However, for US manufacturers to make the most of these advances and technologies, they will first need to improve their own process and analytics capabilities and rethink their value propositions.

- **34%** of US respondents said their highest priority was to protect their existing business
- **81%** will collaborate to achieve traction in innovation
- **63%** will invest into IoT

United Kingdom

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It is no wonder that UK manufacturers are concerned about economic disruption. The EU has faced strong economic headwinds over the past year and concerns over the impact of a potential 'Brexit' may impact on both domestic and foreign investment as executives play a Referendum waiting game.

Oil has remained at low levels far longer than expected, and exchange rate favorability has supported moderate growth, but this will not continue forever. While input commodity prices may continue to fluctuate, manufacturers must understand how to manage effects on profitability.

The prospect of a continued slowdown in growth in the key emerging markets of India, China and Brazil are also creating challenges for those manufacturers exposed to these markets.

With organic growth hard to come by, many UK manufacturers have been rightly focused on costs — both from a gross margin and SG&A perspective — but just focusing on the bottom line won't drive the business model rethink needed to capitalize on technology developments — particularly the Industrial Internet of Things. Many manufacturers, including automotive, have had a largely unchanged business model for years, yet now face a paradigm shift: how to embrace and harness the new connected technologies and deliver customized product features, with increased service opportunities or remain as more basic "metabashers".

For some, the answer will clearly be through a step change in innovation and R&D investment. The UK has always had a rich heritage of excellence in production design and design capability; many clearly hope they can leverage these skills to drive new competitive advantages through R&D — into automated and connected cars for example.

For others, moving to a demand driven supply chain, focused on real-time updates on customer demand and backed by deep visibility across the supply chain can help them keep pace with change.

The UK has always been a strong, innovative and resilient manufacturing nation. Yet it is now at a crossroads: what manufacturing center of excellence does it want to be? My view is that the future is in design capability and innovation, coupled with a strong understanding of innovative technology and cyber security. But this will take both private and public investment, and an unparalleled focus on building the right skills for the industry to thrive in the UK for the next generation.

- **61%** of UK respondents say economic growth will have the greatest impact on their company's growth agenda
- **44%** say they are highly focused on cost and performance
- Another **44%** say they will spend **6%** or more of revenues on R&D over the next 2 years

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