



Too big to ignore: What are China's Competitive's Edges?

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Too big to ignore: What are China's Competitive's Edges?

Agenda

Deloitte survey- China manufacturing competitiveness at a glance

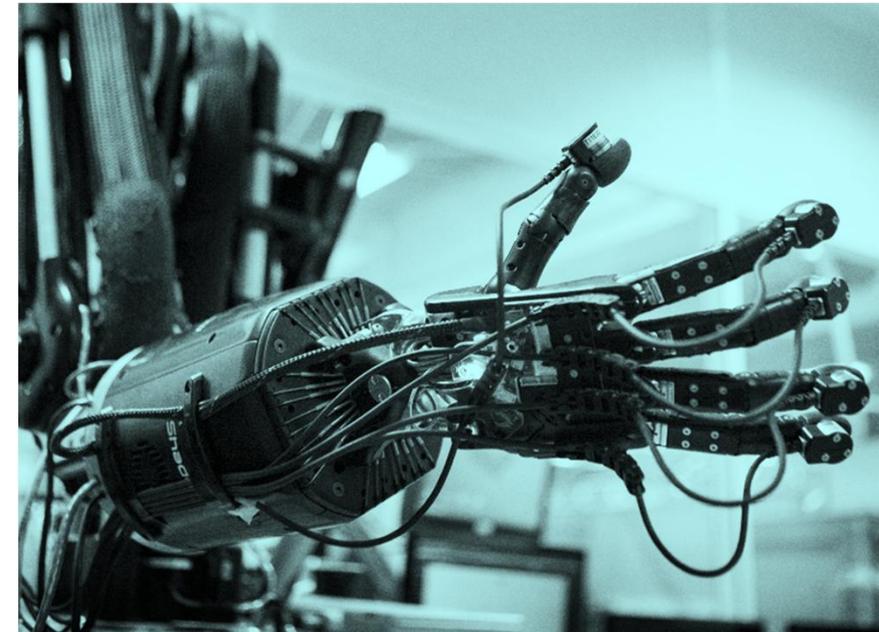
- Advanced manufacturing technologies are key to unlocking future competitiveness
- Executives thoughts on policy advantages and disadvantages
- Advantages, Challenges and Things to watch out

How China can stay competitive?

- Boosting Intelligent Manufacturing (IM) and climb up the value chain
- Worker productivity is increasing
- Advanced infrastructure and strong market potential

What's next

Outlook



Deloitte survey

China manufacturing competitiveness at a glance

China manufacturing competitiveness at a glance

Deloitte report - Methodology

2016 Global Manufacturing Competitiveness Index

With the release of the 2016 Global Manufacturing Competitiveness Index (GMCI), Deloitte Touche Tohmatsu Limited (Deloitte Global) and the Council on Competitiveness (the Council) in the US build upon the GMCI research, with prior studies published in 2010 and 2013. The results of the 2016 study clearly show the ongoing influence manufacturing has on driving global economies. From its influence on infrastructure development, job creation, and contribution to gross domestic product (GDP) on both an overall and per capita basis, a strong manufacturing sector creates a clear path toward economic prosperity.

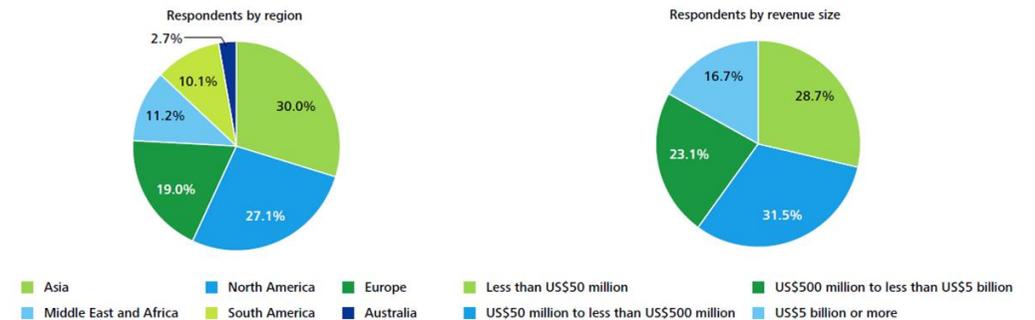


Appendix B1: Methodology – Survey sample distribution

Email electronic survey channel	Number of responses
Deloitte United States	248
Research Now (US)	141
Publibase Manufacturing	91
Fortune China	58
World Wide Business Decision Makers	16
The US Council on Competitiveness	9
Direct web surveys and return mailers	
563 Respondents	
540 Valid responses	

Source: Deloitte Touche Tohmatsu Limited and US Council on Competitiveness, 2016 Global Manufacturing Competitiveness Index

Appendix B2: Profile of respondents by region and revenue size

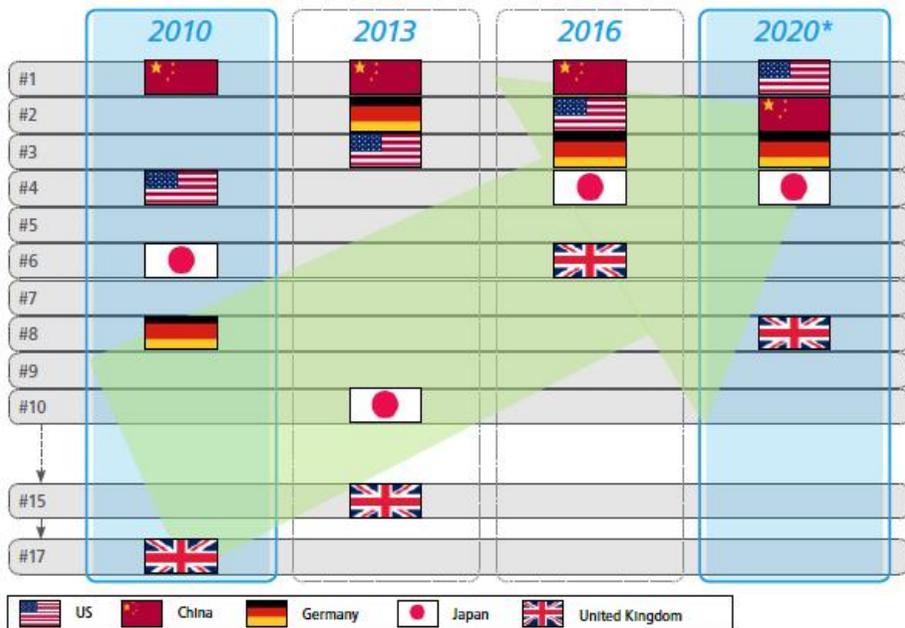


Source: Deloitte Touche Tohmatsu Limited and US Council on Competitiveness, 2016 Global Manufacturing Competitiveness Index

China manufacturing competitiveness at a glance

Advanced manufacturing technologies are key to unlocking future competitiveness

In 2016 China was again ranked as the most competitive manufacturing nation, but is expected to slip to second position by 2020.



Source: Deloitte and US Council on Competitiveness, 2016 Global Manufacturing Competitiveness Index
* represents projected 2020 ranks

Advanced manufacturing technologies are key to unlocking future competitiveness.

As the digital and physical worlds converge within manufacturing, the path to manufacturing competitiveness is through advanced technologies, ranking predictive analytics, Internet-of-Things (IoT), both smart products and smart factories via Industry 4.0, as well as advanced materials as critical to future competitiveness.

Selected country manufacturing competitiveness drivers

	United States	Germany	Japan	South Korea	China	India
TALENT	89.5	97.4	88.7	64.9	55.5	51.5
INNOVATION POLICY AND INFRASTRUCTURE	98.7	93.9	87.8	65.4	47.1	32.8
COST COMPETITIVENESS	39.3	37.2	38.1	59.5	96.3	83.5
ENERGY POLICY	68.9	66.0	62.3	50.1	40.3	25.7
PHYSICAL INFRASTRUCTURE	90.8	100.0	89.9	69.2	55.7	10.0
LEGAL AND REGULATORY ENVIRONMENT	88.3	89.3	78.9	57.2	24.7	18.8

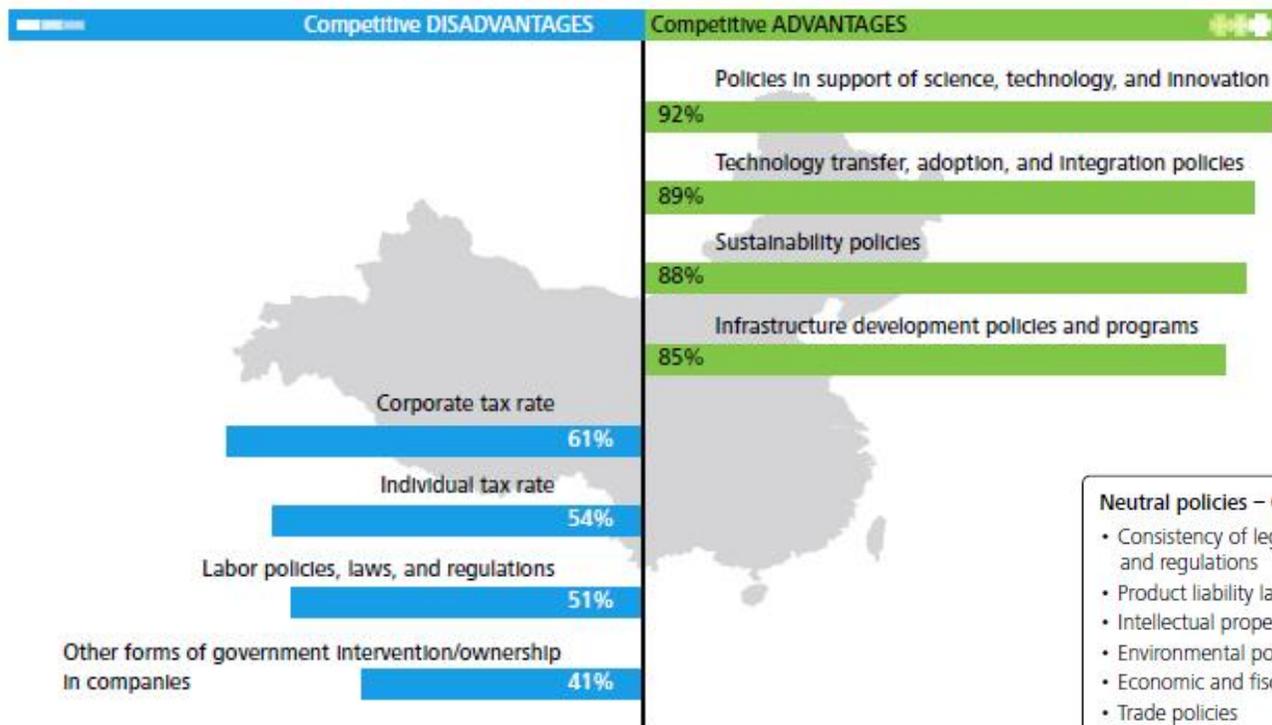
Most competitive ← → Least competitive

Source: Deloitte Touche Tohmatsu Limited and US Council on Competitiveness, 2016 Global Manufacturing Competitiveness Index

China still hold a significant competitive advantage when it comes to the cost of labor and materials but China is also among the least relative to his legal and regulatory environments.

China manufacturing competitiveness at a glance

Executives thoughts on policy advantages and disadvantages



The impact of public policy in China

Chinese perspective: in China policies either encouraging or directly funding investments in science and technology, technology transfer, sustainability, and infrastructure development appear to be helping Chinese-based companies to create a competitive advantage.

But Chinese executives indicate also that some policies are inhibiting their competitiveness, including corporate and individual tax rates, labor laws, and government intervention and/or ownership

Neutral policies – China

- Consistency of legal enforcement of policy and regulations
- Product liability laws
- Intellectual property protection laws
- Environmental policies
- Economic and fiscal policies
- Trade policies
- Safety and health regulations
- Antitrust laws and regulations
- Foreign direct investment incentive policies
- Central bank monetary policies
- Energy policies
- Healthcare policies
- Immigration policies
- Taxation of foreign earnings

Source: Deloitte Touche Tohmatsu Limited and US Council on Competitiveness, 2016 Global Manufacturing Competitiveness Index

China manufacturing competitiveness at a glance

Advantages, Challenges and Things to watch out

Advantages

Advanced electronics manufacturing: Low costs and government support have made China the hub for advanced electronics and resulted in the development of a strong electronics supplier base

Increasing R&D spend: China is the second largest spender on R&D after the United States and lags just the United States and Japan in terms of number of patents filed.

Robust raw material supply base: Ease of raw material availability and coal-based production has lowered input costs.

Physical infrastructure: According to a Deloitte survey, physical infrastructure in China is more competitive than other Asian countries such as India and Vietnam.

Growing middle class: China's middle class is rapidly growing, and is expected to touch 630 million by 2022, or 78 percent of urban households, from 4 percent in 2000.

Challenges

Innovation: Despite the presence of IP protection laws, enforcement of the laws remains a concern

Lack of productivity efficiency: China is focused on improving wages in the country. However, according to a Deloitte survey, China needs to balance wage increases with productivity gains.

Regulatory inefficiency: According to a World Bank study, China is considerably behind other large economies in terms of policy formulation and implementation, with a percentile rank of 42.6 percentile compared to South Korea's 79.9 percentile, Japan's 83.5 percentile, or the United States' 86.6 percentile

Slowing economic growth: China's economic growth has slowed down - Slowdown in economic growth is likely to sustain with output growth at 6.3 percent in 2016 and 6 percent in 2017.

Things to watch out

Rising labor costs

Social cohesion

Environment

Aging population

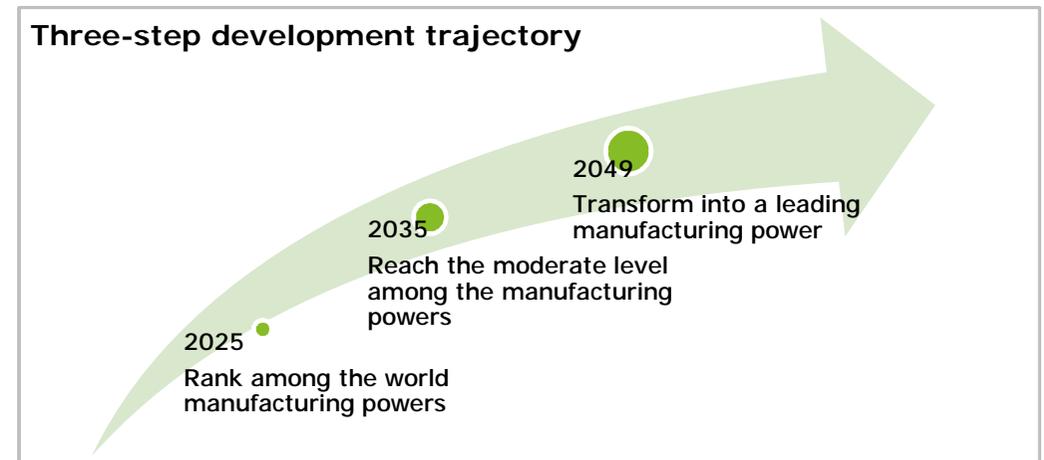
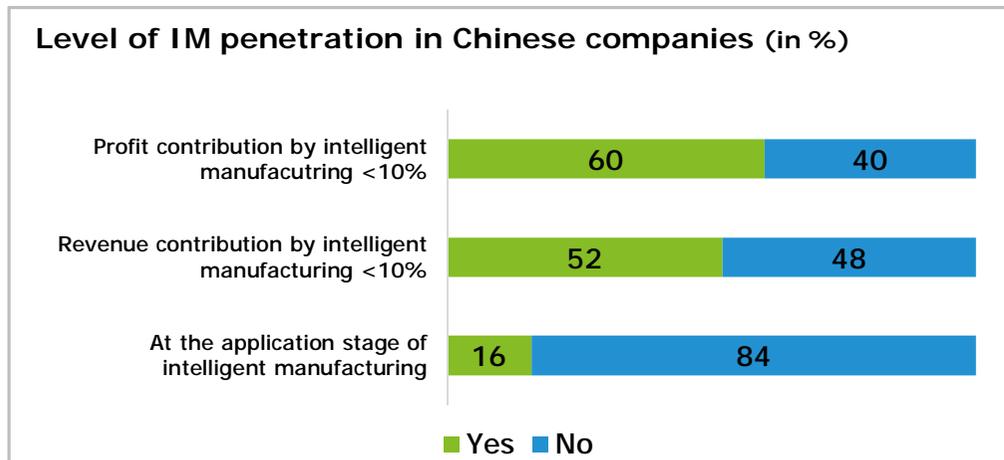
How China can stay competitive?

How China can stay competitive?

Boosting Intelligent Manufacturing (IM) and climb up the value chain

From “Made in China” to “Intelligently manufactured in China”. Three-decade-long efforts to facilitate China to climb up the global value chain.

- National policies issued have laid out the road-map but Intelligent manufacturing remains at low level of development.
- Geographical discrepancies remain in term of quality levels of development (west region is left far behind) and negative factors lie in technology but also in legal, financial, administrative, and talent issues.
- Made in China 2025 is the 1st step in a three-step plan to achieve in 2049 the ultimate goal by becoming the world leader... (2049 is the 100 anniversary of the founding of the PRC).



How China can stay competitive?

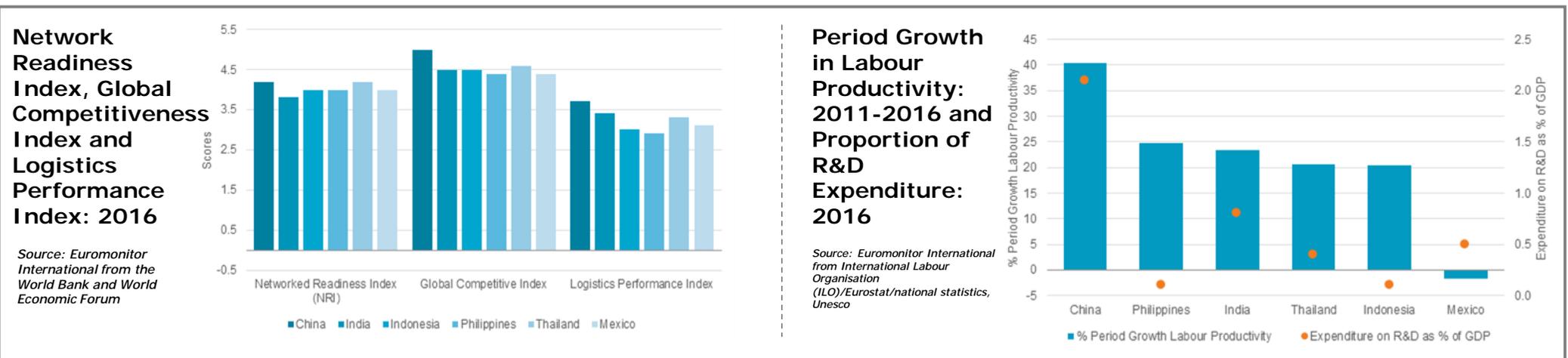
Worker productivity is increasing

China's competitive advantage no longer stems simply from low labor costs.

Rather, it stems from other factors such as the skill level of workers, the degree to which workers use technology, the supply of skilled managers, the transport and power infrastructure, and the legal framework.

A study* finds that hourly wages in China's manufacturing sector are now higher than those in every Latin American country other than Chile and are nearing the level found in some of the Eurozone's lower-income countries such as Portugal and Greece.

Based on that study: productivity of Chinese manufacturing workers actually increased faster than wages. This means that unit labor costs in China (the labor cost of producing a unit of output) declined over the past decade, thereby increasing China's competitiveness



*Study: Oru Mohiuddin, "China still lucrative for businesses despite the rising wage rates," Euromonitor, March 13, 2017, <http://blog.euromonitor.com/2017/03/china-still-lucrative-businesses-despite-rising-wage-rates.html>. [View in article](#)

How China can stay competitive?

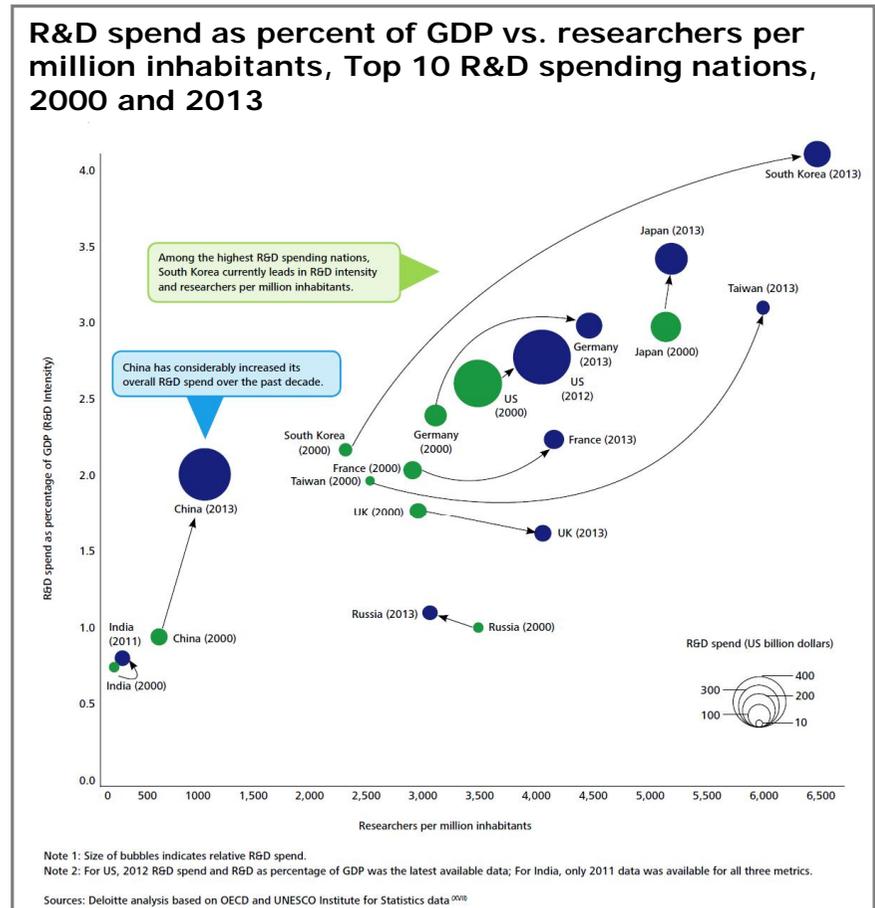
Advanced infrastructure and strong market potential

Innovation / R&D spending

- **Priority to innovation:** China has one of the highest expenditure in R&D as a percentage of GDP among South East Asian countries
- **Rise of the robots**
 - Modernize the manufacturing industry with robotics and automation: shortage of skilled workers / rapidly rising wages
 - Companies are ploughing more & more money into robotics, industrial automation and new product development to offset rising costs but a complicating factor for MNCs is local state-owned competitors do not have to worry (much) about margins

Boost domestic consumption and modernize its economy

- **Customer base in China is just so immense, that's where demand is:** in 2020, China is projected to account for 18.4% if the global consumer market which only compares with regional markets including Western Europe and North America.
- **Long-term opportunity in a richer China**



What's next

What's next

Embodiment of the value of industrial IoT applications in China

Deloitte survey based on 156 companies – 2016 Q4

While China's manufacturers recognize the importance of industrial IoT, they have not yet established clear-cut IoT strategies.

89% believe Industrial IoT is critical to business success in the next 5 years, while 72% have started applications but only 46% have established clear-cut strategies and plans

Revenue growth

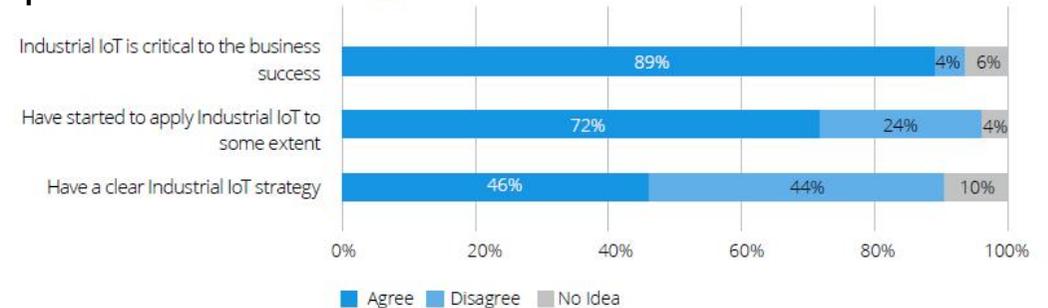
Value proposition of IoT : Industrial companies focus not only on efficiency improvement and cost reduction but also in business growth. Translating the data into applicable market insights to better serve customers and improve customer loyalty and satisfaction.

- 113 companies = 72% of the respondents desire to improve their customer experience and generate revenue growth

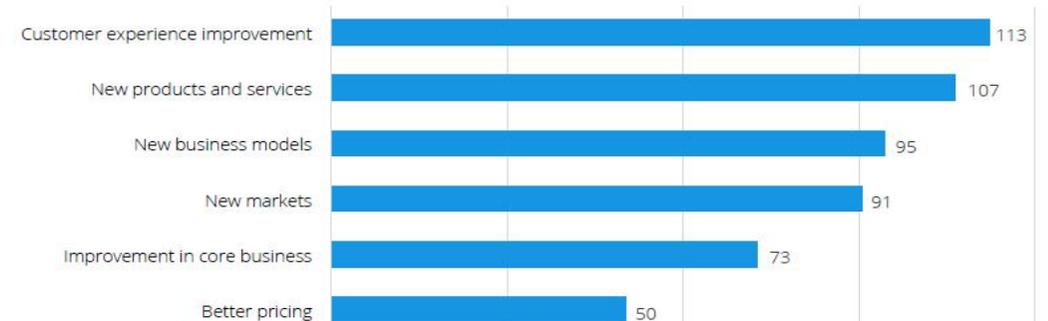
Key challenges

Lack of interoperability standards, data ownership and security as well as under-qualified operators

Awareness and applications of Industrial IoT in the surveyed companies



How companies intend to increase revenue (figures represent the number of firms choosing this option)



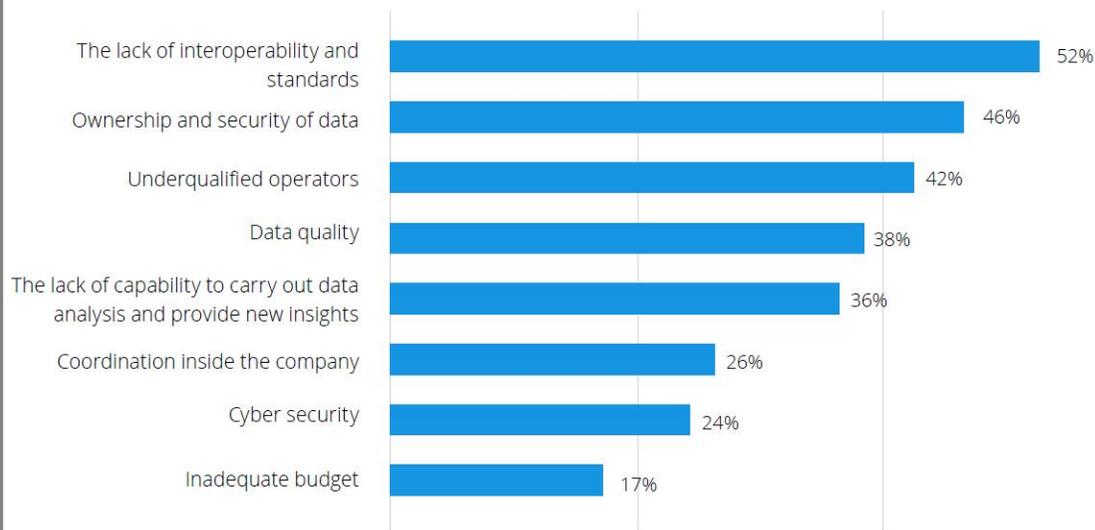
Source: 2016 Deloitte's Survey on the Industrial IoT Applications in Chinese Manufacturing Industry, Deloitte Research

What's next

Deloitte Report - Unleashing the business value of Industrial IoT

Challenges

Biggest issues for companies in applying Industrial IoT technologies (% represents the number of firms choosing this option)



Source: 2016 Deloitte's Survey on the Industrial IoT Applications in Chinese Manufacturing Industry, Deloitte Research

Practical implications

Industrial IoT will become a new source of revenue and improve efficiency and security, creating new value for businesses. To realize such value, companies need to take the following strategies into consideration

- Aim high, start small, creates value and accelerate upgrades
- Focus on the product and customer lifecycles
- Develop the ability to apply big data
- Improve security
- Ensure proper positioning and cooperation in the ecosystem

IoT has proved to be able to help companies create more and sustainable value and to convert one-time transactions in the past to long-term customer relationships

Outlook

China position will continue to "climb up" in the value chain

- Rising costs and declining profits
- Higher productivity
- Innovation - R&D spending

Unique structure of China's eco-system provides strengths and weaknesses:

- Weaknesses : domestic regulatory and legal environment: intellectual property protection, funding costs, inconsistent application of commercial laws and market access restrictions for MNCs in some cases
- Strengths:
 - Market / Opportunities of one of the main consumer market
 - Political system allowing large resource allocation enabling innovation and global competition positioning.

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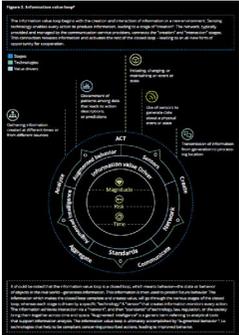
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Main sources

<p>2016 Global Manufacturing Competitiveness Index Deloitte survey - China manufacturing competitiveness at a glance</p>	<p>Deloitte Report From Interpretation to Prediction – Unleashing the Value of the Industrial Internet of Things</p>	<p>Study Euromonitor “China still lucrative for businesses despite the rising wage rates,” By Oru Mohiuddin - March 13, 2017</p>
 	 	
<p>Link: Deloitte - Global Manufacturing Competitiveness Index</p>	<p>Link: Deloitte Report - Unleashing the value of IoT</p>	<p>Link: http://blog.euromonitor.com/2017/03/china-still-lucrative-businesses-despite-rising-wage-rates.html</p>



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