Global Manufacturing: The End of China's Golden Age?

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For several decades, China has been the low-cost epicenter of global manufacturing.

EXECUTIVE SUMMARY

Average annual GDP growth of 10.2 percent over the past 30 years has turned China into a global economic power. The country's manufacturing sector has been among the dominant drivers of this explosive growth and a fundamental piece of China's economic transformation. Since the mid-2000s, however, manufacturing has faced several challenges, most notably wage inflation. Rising wages have been a costly byproduct of China's rapid economic growth, resulting from intensified competition and demand for skilled labor. Increases in raw material costs, slowing fixed-asset investments, stricter government policies and an appreciating currency have also added to the headwinds.

Many businesses that moved into China for its low-cost advantages, especially multinational corporations (MNCs), have been forced to reconsider their sourcing strategies in light of China's eroding competitive advantage. In this paper, we analyze the implications that a flight of manufacturing from China will have on the country's future economic growth and dissect the resulting strategic options for MNCs seeking to diversify their supply-chain risk.

CHINA: STILL THE WORLD'S FACTORY?

For several decades, China has been firmly established as the low-cost epicenter of global manufacturing. Inexpensive labor and supplies, lower capital-investment requirements and favorable government policies were among the many reasons China became an ideal choice for MNCs deciding where to build new manufacturing plants. In fact, as demonstrated in Figure 1, the country's manufacturing output increased more than 400 percent for the 10-year period that ended in 2011.

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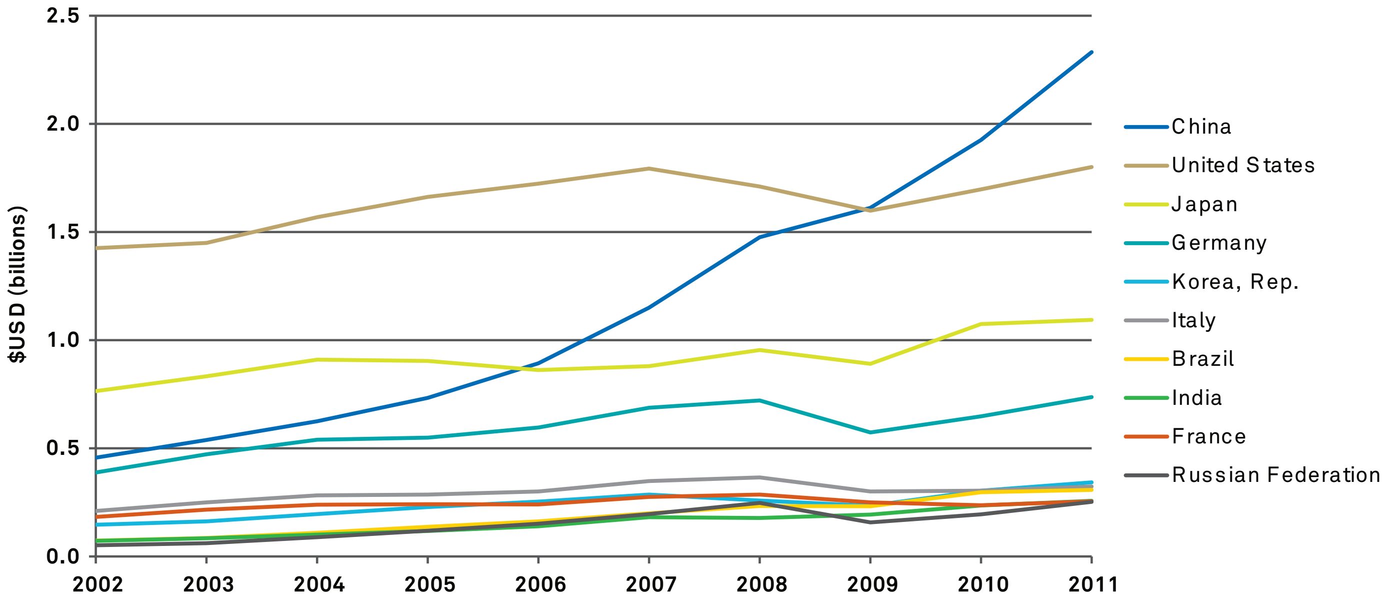
Figure 1: Global Manufacturing Output



Source: World Bank

However, this dynamic started to change in the mid-2000s. While redesigned processes and efficiency gains at most MNCs were initially able to mitigate the impact of rising wages, raw-material prices and an appreciating currency, the dislocation eventually became too great to overcome. For example, several manufacturers in China that were surveyed by Bank of America Merrill Lynch in 2007 reported a 20 to 40 percent rise in labor costs, an 8 to 13 percent reduction in value-added-tax rebates and a 10 to 50 percent increase in fuel-related costs — compounded by a 9 percent appreciation in the renminbi.[1] At the end of that year, technology companies were struggling to remain profitable, and many textile and apparel makers were generating losses. The landscape since then has only grown more challenging, as we detail below. Based on our analysis, we believe the following factors will pose the biggest threat to China's manufacturing dominance:

Rising wages. According to research from Boston Consulting Group, pay and benefits for the average Chinese factory worker rose 10 percent annually between 2000 and 2005. From 2005-2010, that figure nearly doubled, with annual wage hikes reaching an average of 19 percent.[2] Driving this rise were the need for and subsequent wider availability of skilled laborers. As MNCs implemented process enhancements and efficiencies to their existing operations, they required better-educated laborers who understood the more complex systems. Because these workers had more sophisticated training and education, the premium for their skills was higher.

Also lifting wages was a series of newsworthy events that attracted unwanted attention to the manufacturing industry. In one example, a supplier to a major auto manufacturer was forced to increase wages by almost 50 percent after worker strikes. In another example, a giant contract manufacturer doubled wages in order to combat a flurry of worker suicides.

1 Cui, David, et al. China: On the Beat, Issue No. 6. World Factory No More? Bank of America Merrill Lynch. March 12, 2008.

2 Sirkin, Harold L., et. al. Made in America, Again – Why Manufacturing Will Return to the U.S. The Boston Consulting Group (BCG). August 2011.

Declining/aging population. China's working population, or individuals aged 15 to 59, has been steadily shrinking. In 2013, that group fell by 2.44 million people to 919.54 million, its second consecutive year of decline.[3] The forces behind the drop are the country's low fertility rate and the government's one-child policy to control the population size. According to the CIA World Factbook 2014 estimates, mainland China's fertility rate is among the lowest in the world, ranked 185 out of 224 nations considered.[4] Additionally, while the country's leadership has started to ease the long-standing one-child policy, its effects since being introduced in the late 1970s will still weigh on population growth for some time.

China's working population of individuals aged 15 to 59 has been steadily shrinking.

Additionally, the working-age demographic is shifting to an older average age. In 2002, 40 percent of this group was over 40 years old. By 2012, that number had grown to 52 percent and is estimated to reach 58 percent by 2032, which translates into approximately two out of every three working-age people.[5]

This dwindling and aging working population will likely result in fewer people entering the workforce. Those workers will likely be better educated in order to distinguish themselves from other workers, which will further compress the labor market and push wages higher.

Evolving consumer demand. Another complication for the industry is the shift in consumer preferences. Historically, goods were manufactured in large batches according to predefined specifications, enabling manufacturers to benefit from scalability. The finished goods were then packed onto container ships and transported to their global destinations. However, consumers' tastes have changed. They now want more customized products delivered as quickly as possible. The advent and proliferation of automation and additive (3D) manufacturing have made these demands more realistic, while minimizing human error. The combined cost savings associated with these product-cycle changes align perfectly with the strategic objectives of many global manufacturers.

To better understand and predict such shifts in consumer demand, many manufacturers have also refined the way they interact with their customers. MNCs now realize they must better understand consumers' needs from the product-development phase all the way through to aftermarket services. As a result, more companies are investing in research and development to identify local trends early and implement them into product development and design.

Increased volatility. Coincidentally, the global economy has been in a state of flux since roughly the same time China's manufacturing industry started to turn. While much of the analysis of China's GDP normalization has focused on manufacturing activity, many other industries have also been depressed. China's steel industry, the largest in the world, produces approximately half of the world's steel. Yet, constrained government spending around the world due to a volatile economic environment has caused many countries to delay infrastructure projects, resulting in losses for China's steelmakers.

Within manufacturing, increased volatility has been weighing on capacity utilization and margins at many MNCs, in addition to lowering the barriers of entry for competition. Some MNCs have cautiously restrained capital spending during periods of heightened volatility in the global markets.

3 Harjani, Ansuya. This is how fast China's workforce is shrinking. CNBC website. 20 January 2014. http://www.cnbc.com/id/101349829. Accessed 11 September 2014.

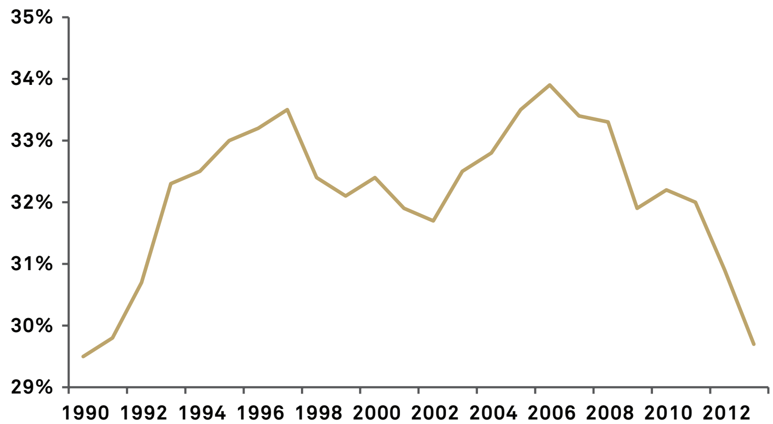
4 The World Factbook 2013-14. Washington, DC: Central Intelligence Agency, 2014. https://www.cia.gov/library/publications/the-world-factbook/rankorder/2127rank.html. Accessed 11 September 2014.

5 Global Demographics Limited. China's Changing Demographics and its implications for the Economy and Consumer Markets. February 2013.

China's long-term economic growth is likely to be impacted by companies moving their operations out of the country.

These four factors — coupled with less significant influences, such as rising raw-material and fuel costs, an appreciating currency and stricter government regulations — have further suppressed manufacturing growth. Because China's dependence on manufacturing has been a critical component of the country's double-digit GDP growth, it stands to reason that government officials and manufacturing executives have grown increasingly concerned about future GDP trends.

Figure 2: Manufacturing as % of GDP



Source: OTEXA, Macquarie Research, April 2013

WHAT THIS MEANS FOR CHINA'S FUTURE GROWTH

Although China remains the world's largest manufacturing nation after overtaking the US in 2010,[6] the aforementioned factors pose significant headwinds. Manufacturing accounts for 29.7 percent of China's GDP[7] and 93.2 percent of the country's entire export market.[8] Given that backdrop, China's long-term economic growth is likely to be impacted by companies moving their operations out of the country.

From a macro perspective, the impact of manufacturing reallocation out of China is still relatively small. In 2012, total manufacturing outward direct investment, or the total amount foreign firms spent on manufacturing in China, was US$8.7 billion, which only accounts for 0.1 percent of China's GDP.[9] Over time, however, rising labor costs, increasing use of automation and technology and ongoing manufacturing reallocation out of China will continue, depressing GDP growth in a more meaningful way. As shown in Figure 2 below, manufacturing as a percentage of China's GDP has continued to decline after peaking in 2006.

6 Giffi, Craig. 2013 Global Manufacturing Competitiveness Index. Deloitte Touche Tohmatsu Limited, 2013.

7 Hu, Larry PhD: Head of China Economics. Macquarie Equities Research. E-mail correspondence. 28 February 2014.

8 Giffi, Craig. 2013 Global Manufacturing Competitiveness Index. Deloitte Touche Tohmatsu Limited, 2013.

9 Hu, Larry PhD: Head of China Economics. Macquarie Equities Research. E-mail correspondence. 28 February 2014.

China's dependence on exports has also started to work against itself and has begun to pose a headwind to economic growth. According to data from the Office of Textiles and Apparel (OTEXA), China's market share of US apparel imports grew from 8 percent in 2000 to 39 percent in 2010, but has since begun to decline, slipping to 38 percent in 2012.[10] (See Figure 3.)

A similar trend was observed in the European Union. China's market share of EU apparel imports increased from 21 percent in 2000 to 46 percent in 2010, but declined to 41 percent in 2012, according to the European Commission.[11] (See Figure 4.)

Figure 3: China Market Share of U.S. Apparel Imports

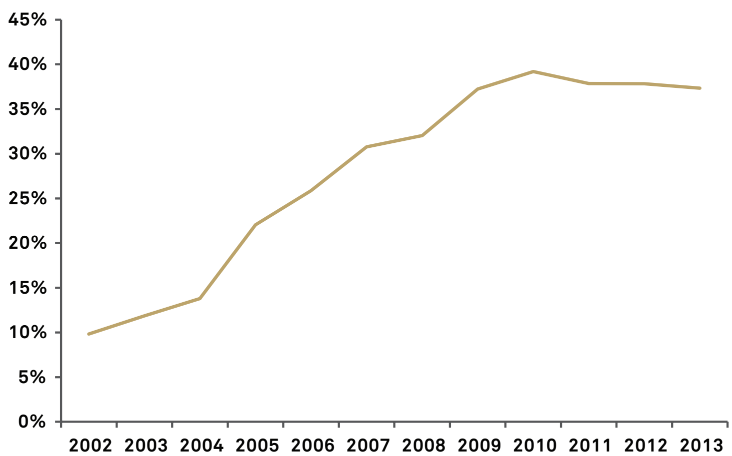
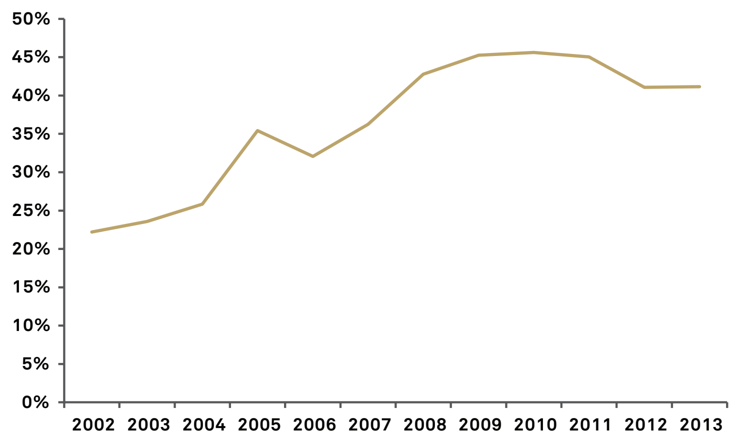


Figure 4: China Market Share of EU Apparel Imports



Source: OTEXA, Macquarie Research, April 2013

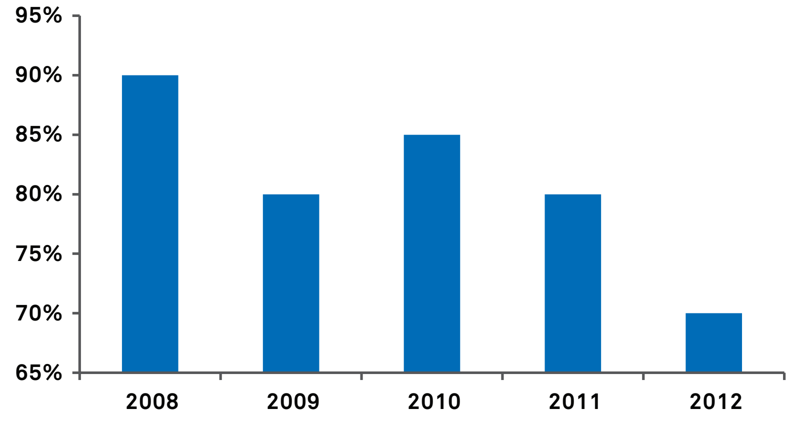
One Japanese apparel manufacturer has already started making the necessary adjustments to its operating plan. The company, a specialty retailer of private label apparel (SPA), employs a vertically integrated business that spans from procurement of materials, product planning, development and manufacture through distribution and retail to inventory management. This approach has helped the company explode over the past decade to become one of Asia's biggest clothing retailers. It also means that management is heavily involved in every facet of the clothes-making process, employing 170 people to oversee international production management at over 70 contract manufacturing companies. As a result, adapting to changes in the company's operational environment becomes even more critical to the firm's long-term success. Since realizing the need to diversify away from one manufacturing location, this company has lowered its China-sourced production from 90 percent in 2008 to 70 percent in 2012 (Figure 5), and has set a long-term goal of further reducing this allocation.

10 Jian, CFA, Corinne, et. al. Taiwan Textile sector: A decade of revival. Macquarie Equities Research. 23 April 2013.

11 Ibid.

Given declines in manufacturing and exports, the Chinese economy is unlikely to maintain its growth pace.

Figure 5: China as % of Sample SPA's Outsourced Production



Source: Company data, Macquarie Research, April 2013

Given the declines in manufacturing and exports, the Chinese economy is unlikely to maintain its growth pace. A May 2014 reading of the HSBC Holdings Plc and Markit Economics Purchasing Managers' Index was 49.7, below the expansion-contraction demarcation line of 50.[12] Meanwhile, the comparable US index is above 50, and the US economy is growing at approximately 2 percent annually.

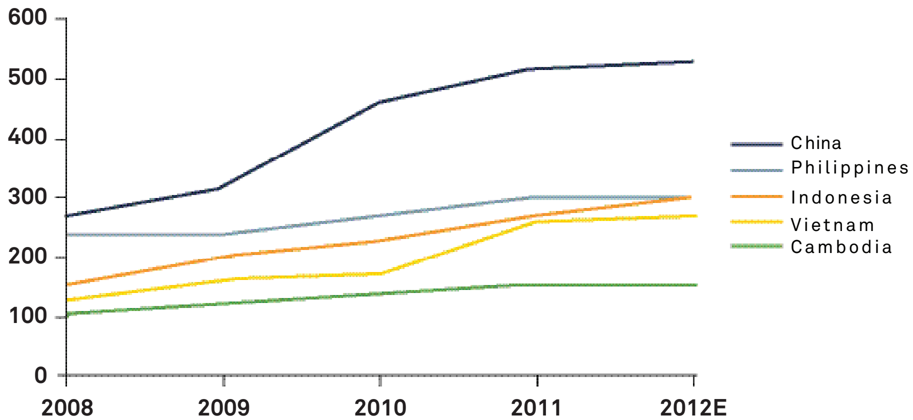
Although China will probably not be replaced entirely as a desirable manufacturing location, multinational corporations that diversify their exposure beyond the country should enjoy a cost advantage, as wages worldwide have become more competitive with China.

ALTERNATIVES TO CHINA

Other low-cost countries. As low-cost labor becomes scarcer in China, particularly in the country's coastal regions where labor-related industries are concentrated, other developing countries in the region with larger supplies of inexpensive labor have become more attractive. As illustrated in Figure 6, the monthly average salary in China has steadily risen, while comparative costs in countries like Vietnam, Indonesia, the Philippines and Cambodia have either remained flat or increased modestly.

12 China Manufacturing Gauge Rises in Sign of Stabilization. Bloomberg News. 22 May 2014. http://www.bloomberg.com/news/2014-05-22/china-manufacturing-gauge-rises-in-sign-of-economy-stabilizing.html. Accessed 11 September 2014.

Figure 6: China's Rising Labor Cost (*Monthly Average Salary $US)*



Source: Company data, Macquarie Research, April 2013

However, in the Far East and Southeast Asia, the cheapest countries also tend to be the riskiest. For example, political instability and the lack of infrastructure in the Philippines have to be balanced against the country's cheaper labor and material costs. In Bangladesh, the world's second-largest garment exporter, factory fires and collapses over the past few years resulted in the US government suspending the country's trade benefits due to "insufficient progress by the Government of Bangladesh in affording Bangladeshi workers internationally recognized worker rights."[13] As a result, some MNCs will allocate only a limited percentage of their operations to these very high-risk countries.

Reshoring to the US. One destination that has become increasingly attractive is the US. According to an August 2013 survey by Boston Consulting Group, 54 percent of US manufacturers with more than $1 billion in sales have planned to reshore operations from China to the US.[14]

US manufacturing has become more competitive due to many incremental changes over the past decade.[15] A revival of manufacturing employment growth spurred by many issues — including a weaker US dollar versus a stronger renminbi, narrowing wage differentials, declining natural-gas prices and shifting dynamics in the global supply chain — have all caused MNC executives to reconsider the US as a low-cost manufacturing destination.

13 Office of the United States Trade Representative. Statement by the U.S. Government on Labor Rights and Factory Safety in Bangladesh. 19 July 2013. http://www.ustr.gov/about-us/press-office/press-releases/2013/july/usg-statement-labor-rights-factory-safety. Accessed 11 September 2014.

14 Sirkin, Harold L., et. al. Made in America, Again: Behind the American Export Surge. The Boston Consulting Group (BCG). August 2013.

15 Mills, Shirley. Potential Beneficiaries of a U.S. Manufacturing Renaissance. The Boston Company Asset Management, LLC. May 2012. http://www.thebostoncompany.com/assets/pdf/views-insights/May12_Views_Insights_Potential_Beneficiaries_US_Manufacturing_Renaissance.pdf. Accessed 11 September 2014.

Near-sourcing: Made in Mexico. Another destination that provides similar benefits as the US manufacturing renaissance is Mexico.[16] Many MNCs looking to expand or to relocate their manufacturing facilities outside China have found an appealing alternative in Mexico amid the country's evolutionary changes in economics, leadership and policy. Ultimately, Mexico's reasonable costs and wages and its proximity to the US offer MNCs another viable option for diversifying their supply chains and operational capabilities.

In our view, multinational corporations must consider several factors for success amid the changing manufacturing landscape.

DISTINGUISHING THE WINNERS AND LOSERS

In our view, MNCs must consider several factors for success amid the changing manufacturing landscape. In order to mitigate the effects of wage inflation and other challenges facing the industry, MNCs need to remain focused on the following:

Operational efficiencies. The continued assessment and implementation of operational efficiencies are important for any business to succeed and grow. It is especially critical for MNCs, given the size of the industries in which they operate and the breadth of competition they face. In many cases, instituting a seemingly small change to the supply chain can result in significant cost savings. Those savings can then be reinvested in technological advancements like automation and 3D manufacturing to help reduce costs and better predict sales patterns on a more real-time basis, thus making business planning and forecasting easier, while nimbly catering to the aforementioned evolution in customer demand. China-based manufacturers will find that implementing operational efficiencies is especially critical to help offset rising costs in order to remain competitive on the global manufacturing landscape.

Diversity. In conjunction with instituting operational efficiencies, MNCs with manufacturing operations in China — proprietary or outsourced — will need to spread out their sourcing suppliers. When weighing the alternatives, like other low-cost countries, Mexico and the US, each MNC will need to consider the appropriate mix of locations in order to provide more on-demand and real-time services for customers. It also enables MNCs to provide more tailored products to specific regions. Another advantage of diversifying sourcing strategies is the ability to mitigate manufacturing disruptions. An MNC that concentrates its manufacturing in one geographic area elevates its risk significantly if the plant encounters any event that delays production. While diversifying sourcing strategies across the globe adds more complexity to the decision-making process, we believe the benefits more than outweigh the challenges.

16 Bogar, CFA, Mark A. and Donley Holmes, Michelle. Made in Mexico: An Increasingly Viable Alternative to Chinese Outsourcing. The Boston Company Asset Management, LLC. June 2013. http://www.thebostoncompany.com/assets/pdf/views-insights/June13_Views_Insights_Made_In_Mexico.pdf. Accessed 24 June 2014.

Local market growth. China — the world's second-largest economy — is becoming less driven by exports and more by consumption. The size of its population makes it a considerable end-user market for many MNCs, which will grow as demand strengthens in consumer and business segments. For example, China, now the world's largest auto market by sales, eclipsed the elusive 20 million-units-sold mark in 2013, representing a 13.9 percent year-over-year increase.[17] By comparison, the US registered 15.6 million units sold during the same period, still a 7.6 percent gain over the prior year's numbers.[18] An MNC with existing operations in China has a significant advantage to penetrate this large and growing customer base.

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Ultimately, the winners will be distinguished as the MNCs that have already begun to take action on the aforementioned factors. As already noted, more than half of US manufacturers with more than $1 billion in sales have planned to reshore operations from China to the US. Apple Inc. is one company that has recognized this trend. The company's CEO, Tim Cook, announced to a US Senate subcommittee in May 2013 that Apple would spend $100 million to bring assembly and sourcing of its Mac Pro back to the US.[19] Similarly, Google designed and manufactured its Nexus Q, a media streaming device, in the US.

Several China-based manufacturers have acted on this trend as well. Among them is the world's largest branded footwear manufacturer. The company initiated a plant diversification program away from China in the fourth quarter of 2012 and is set to complete the relocations by the end of 2014. Taking this proactive step has allowed the company to mitigate the effects of rising wages by establishing several manufacturing destinations while simultaneously curtailing the supply-chain impact of labor strikes at two of its plants in China.

Conversely, companies that fail to address this issue could be left behind. Many manufacturers have been scrambling to make up for lost profits as MNCs diversify their supply chain activity away from a concentrated model that employs a single manufacturing hub. Several information technology companies have recently made headlines facing this obstacle. Names that had previously enjoyed the coveted role of sole component supplier for some of the hottest devices in the market are now struggling, as the shift to a diversified manufacturing plan has weighed on quarterly earnings and caused many manufacturers to lower their guidance and outlook.

17 China Association of Automobile Manufacturers (CAAM). The sales and production set another record and enjoyed a dramatic growth. 13 January 2014. http://www.caam.org.cn/AutomotivesStatistics/20140113/1605112294.html. Accessed 11 September 2014.

18 Woodall, Bernie, et. al. U.S. auto sales hit six-year high, December disappoints. 3 January 2014. http:/www.reuters.com/article/2014/01/03/us-autos-sales-usa-idUSBREA020ER20140103. Accessed 24 June 2014.

19 Lai, Tammy, et. al. Macquarie Equities Research: Taiwan automation sector. 17 January 2014.

CONCLUSION

Evidence of China's waning competitive advantage as a global manufacturing hub is more than ample. The steady decline that began in the mid-2000s is the result of several changing factors in the manufacturing landscape, most notably wage inflation. While the implications this will have on China's near-term GDP growth might not be immediately evident to the casual observer, deeper analysis reveals broader consequences for the country's long-term economic growth. Many multinational corporations have been keenly attuned to this evolving dynamic, and we expect the ones who remain nimble and continually assess operational excellence, while diversifying their sourcing strategies and growing their share of the local market, will be rewarded accordingly.

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