



>
accenture

High performance. Delivered.

Wage Increases in China: Should Multinationals Rethink their Manufacturing and Sourcing Strategies?

• Consulting • Technology • Outsourcing



Contents

Executive Summary	04
Introduction	07
China: Still the manufacturing gold mine?	08
Threats to the gold mine: Understanding wage increases in China	11
Impact of wage increases on the cost structures of MNCs with production bases in China	12
The way forward for MNCs	21
Appendix	23
About the Authors	23

Executive Summary

In today's global economy, the best companies sense shifting sands well before those changes transform the landscape. And they respond quickly and creatively to the shifts. Wage increases in China count among these potentially transformative changes. China's economic growth has intensified competition for skilled labor within China among multinational and local companies doing business there.

As a result, wage levels have risen, particularly in China's urban areas. Wage rates in China have historically been about 7 percent of those in developed markets. This year, however, 13 provinces in China, prompted by their respective governments, have raised the minimum wage level by an average of 20 percent.

Some major manufacturers doing business in China have raised wages to address problems of increasing employee turnover and even suicides. At Foxconn (in the Guangdong Province), for example, turnover had soared from 8.3 percent in 2001 to 14 percent in 2009. In just two months during 2010, as many as 10 employees took their own lives. In response, Foxconn has raised the monthly salary level for factory workers from 900 RMB to 2,000 RMB (US\$300). Honda has also offered salary increases of 24–32 percent to its Chinese workers. Hewitt Associates LLC reported an average salary raise by multinationals (MNCs) in China of 8.4 percent in 2009.

These developments, combined with the government's drive to reduce the country's dependence on exports, raise several questions: Will wage inflation threaten China's competitive position as a low-cost manufacturing destination? And will it have major implications for MNCs' manufacturing and sourcing strategies?

A recent study conducted by Accenture suggests, not surprisingly, that wage increase in China is expected to impact manufacturing costs and the impact will vary across industries and product categories. Most notably, evidence suggests that the impact of volatility in labor costs on end price or margin of companies with a strong manufacturing base in China is significant, but the impact on sourcing decisions is likely to be minimal, given that effects on margins will likely be negated by efficiency improvements. Consider these highlights from our findings:

- Assuming a minimum wage increase of 30 percent, margins for companies with a strong manufacturing base in China (that is, 30–100 percent production in China) are expected to decrease just 1–5 percent. This is because labor costs represent a small portion of the MNC price for these firms. Such companies may offset the impact on margins by increasing their productivity, reducing costs and improving their supply chain processes.

- Although China's wages have grown faster than in many other low-cost countries (LCCs), its hourly wage rates are still more competitive than those in the developed world, especially in industries that require unskilled labor, such as apparel. In fact, the absolute wage differential between China and developed countries is continuing to widen, and China's wage level in the apparel industry represents less than 9 percent of the overall average wage in the UK or the US, owing to historically lower base-wage levels in China.

- We expect that the price increase will remain minimal, with no significant impact on consumer demand. With the growing purchasing power of domestic Chinese consumers, the additional demand is expected to fuel price increases in the long term. However, such a trend may have a negative impact on margins for export goods that are manufactured in China.

Simply put, wage increases in China will drive positive change for MNCs but should not trigger a reactive panic among these companies. For some MNCs that currently outsource largely to manufacturers in China, LCCs such as Vietnam, Thailand, Malaysia and Indonesia may become increasingly attractive as alternative sources for global production. However, MNCs considering these sources could face challenges such as less developed infrastructure in ports, roads and facilities; shortages of skilled workers; and political instability. MNCs with their own manufacturing facilities based in China may continue to

locate more production facilities in China's interior and western regions, where wage rates are still lower than those in the eastern coastal cities.

In general, what can manufacturers do to mitigate the effects of wage inflation in China? Our research suggests four strategic options:

1. Focus on operational excellence

To offset the impact of increased labor costs in China, MNCs need to aspire to higher levels of operational excellence. Namely, they must foster collaboration between their functional areas as well as enhance their productivity, efficiency and process optimization.

2. Expand across West China and the ASEAN

MNCs with their own manufacturing operations in China can also take a "China-plus" model approach, locating more plants in West China as well as in Association of Southeast Asian Nations (ASEAN) member countries. This approach can help lower cost structure and increase flexibility across the region to support future profitable growth. In addition, these companies can shift their production and supply efforts closer to markets with higher demand potential.

3. Optimize across the globe

Instead of taking the drastic step of moving all their production bases outside of China, MNCs can create Centers of Excellence. These centers can help optimize a company's manufacturing footprint globally and focus on a Total Cost to Serve model. With an

optimized global manufacturing footprint, companies can flexibly shift production activities among different facilities as needed to keep costs low and to serve their most demanding markets quickly.

Labor cost is only one of the major volatile indices that continue to put pressure on MNCs' operating margins. As consumer demand continues to grow, MNCs and local manufacturers alike will need to refine their operational excellence and manufacturing strategies to stay ahead of the curve. China specifically, and Asia more generally, will continue to shape the world economic landscape as a leading source of goods and services. For this reason, it is essential that manufacturers strengthen their footprint in this region to maintain their competitive position on the global stage.

4. Grow the local market

With strong demand growth in both business and consumer sectors China remains to be an increasingly important end user market for MNCs. To seize advantage of the opportunities presented by this trend, MNCs with manufacturing operations in China can reconfigure their supply chain management strategies to distribute and sell products to Chinese customers. That will entail making changes such as strengthening capacities in outbound transportation, storage and distribution.



Introduction

For decades, manufacturing companies around the globe have viewed China as a sourcing gold mine — with its cheap raw materials and labor, stable infrastructure and favorable government policies. But the scenario is changing: Raw material costs in China are rising. Infrastructure is becoming more expensive to establish and maintain. Government policies are favoring workers more than ever. And wages are increasing. Given these shifts, will China be able to maintain its attractive profile as a long-term, low-cost option for companies seeking to outsource manufacturing there or to establish their own operations within China? While some experts maintain that wage increases will permanently change the game, others anticipate only a superficial impact on companies and on China. This study shows that wage increases will not be drastically game-changing, even if they increase unit price and possibly affect the strategic options of companies with manufacturing bases in China.

This paper is the first of Accenture's Point of View (POV) series that aims to address the impact of key macroeconomic changes on the supply chain operating models of MNCs manufacturing in China. In this paper, we focus on the impact of rising wages in China, specifically:

- How will volatility in labor costs affect MNCs' end prices and profit margins?
- At what point will wage increases become a tipping point, significantly reshaping companies' manufacturing and sourcing decisions?

- Which products, suppliers and industries will experience the largest repercussions from wage increases in China?

In response to macroeconomic volatilities and manufacturing cost pressures, MNCs may seek to diversify their manufacturing operations and reconfigure their supply chain operating models. This paper discusses the impact of labor-cost volatility and provides strategic options that MNCs with manufacturing operations in the Asia-Pacific region should consider to remain competitive.

Our study suggests that wage increases in China will affect manufacturing costs, and that this impact will vary across industries and product categories. For companies with a strong manufacturing base in China, the volatility in labor costs will likely have a relatively minor impact on end prices and margins. Thus these companies may not need to radically alter their manufacturing and sourcing strategies. Assuming a minimum wage increase of 30 percent, such firms may see only a 1-5 percent drop in margins.

Still, to mitigate the effect of such losses, MNCs may need to look beyond China's historical cost advantage and focus on operational excellence strategies in designing their supply chain operating models. They may also have to assess several key characteristics of each manufacturing location they are using, such as productivity levels, stability of infrastructure, socio-political forces, attention to environmental sustainability and product life cycles.

China: Still the manufacturing gold mine?

China has been a low-cost manufacturing gold mine for the past two decades, attracting an increasing number of MNCs. In 2009, 153 of the largest 200 exporters in China were firms with a foreign stake. Several factors have contributed to making China the manufacturing hub of choice: lower capital investment and domestic sourcing costs, favorable government policies such as foreign direct investment liberalization and tax exemptions for MNCs that outsource manufacturing operations in China, stable infrastructure and low cost of labor. The average hourly wage rate in China is currently about 9 percent of the rate in developed Western economies such as the UK and US (Figure 1).

However, China's low-labor-cost advantage will not last forever. Indeed, since 2008, the cost differential between sourcing in China and elsewhere has narrowed. Increasingly, global pricing is driving raw materials costs. Government policies in China (including currency revaluation and an increase in the minimum wage) are shifting in favor of improving local workers' welfare and away from maximizing benefits to manufacturers and investors in China. A focus on productivity gains among some companies manufacturing in China has also led to rising infrastructure costs as companies invest in more sophisticated equipment.

On the positive side, wage increases in China have been generally stable and predictable throughout the last decade. While China's absolute labor costs may be slightly higher than that of other LCCs (Figure 2), China offers higher productivity (Figure 3) and a higher sense of security—two crucial considerations in companies' outsourcing decisions.

For this study, we examined wage levels for three industries: apparel (footwear), heavy equipment, and high technology (personal computers). For all three industries, the average hourly wage has risen over the past four years (Figure 4), with the highest wages in the high technology industry.

Wages in privately owned companies in China are expected to rise 17 percent annually in the next three years.¹ According to published research, labor-cost increases have pinched margins at 48 percent for US companies with manufacturing operations in China.² Given these projections, it is important to understand the nature of wage increases in China and their impact on the unit cost of products as well as end price or margins of companies.

Figure 1: Average hourly wage, developed economies vs. China (in US dollars per hour)³

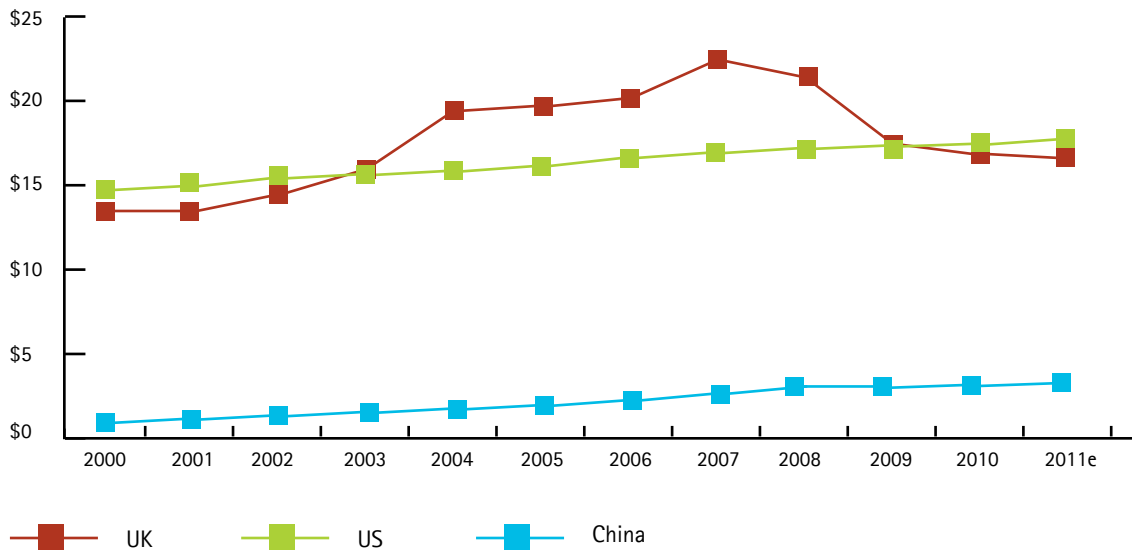


Figure 2: Average hourly wage, neighboring LCCs vs. China (in US dollars per hour)⁴

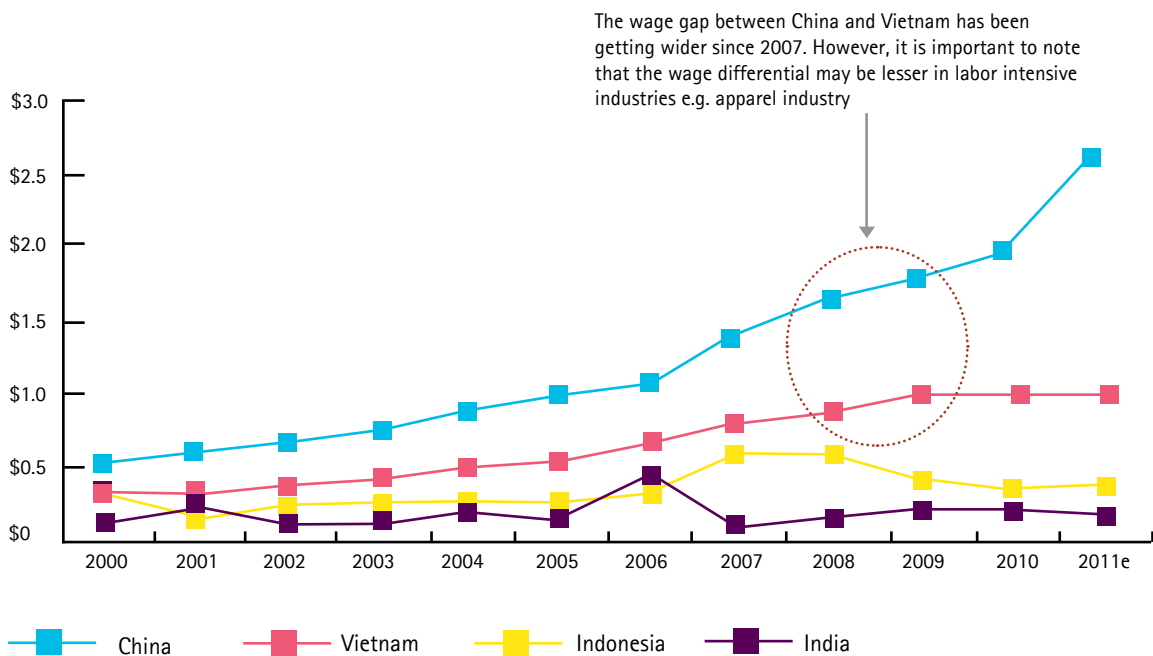


Figure 3: Labor productivity – GDP per person employed across countries (PPP in EKS US\$)⁵

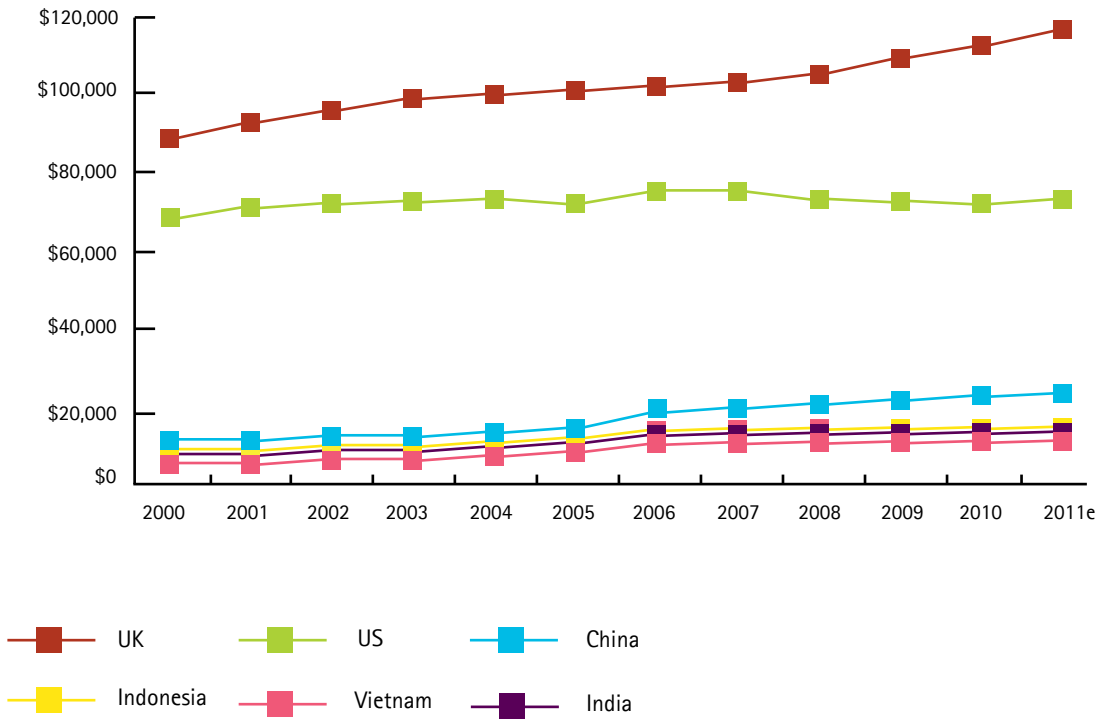
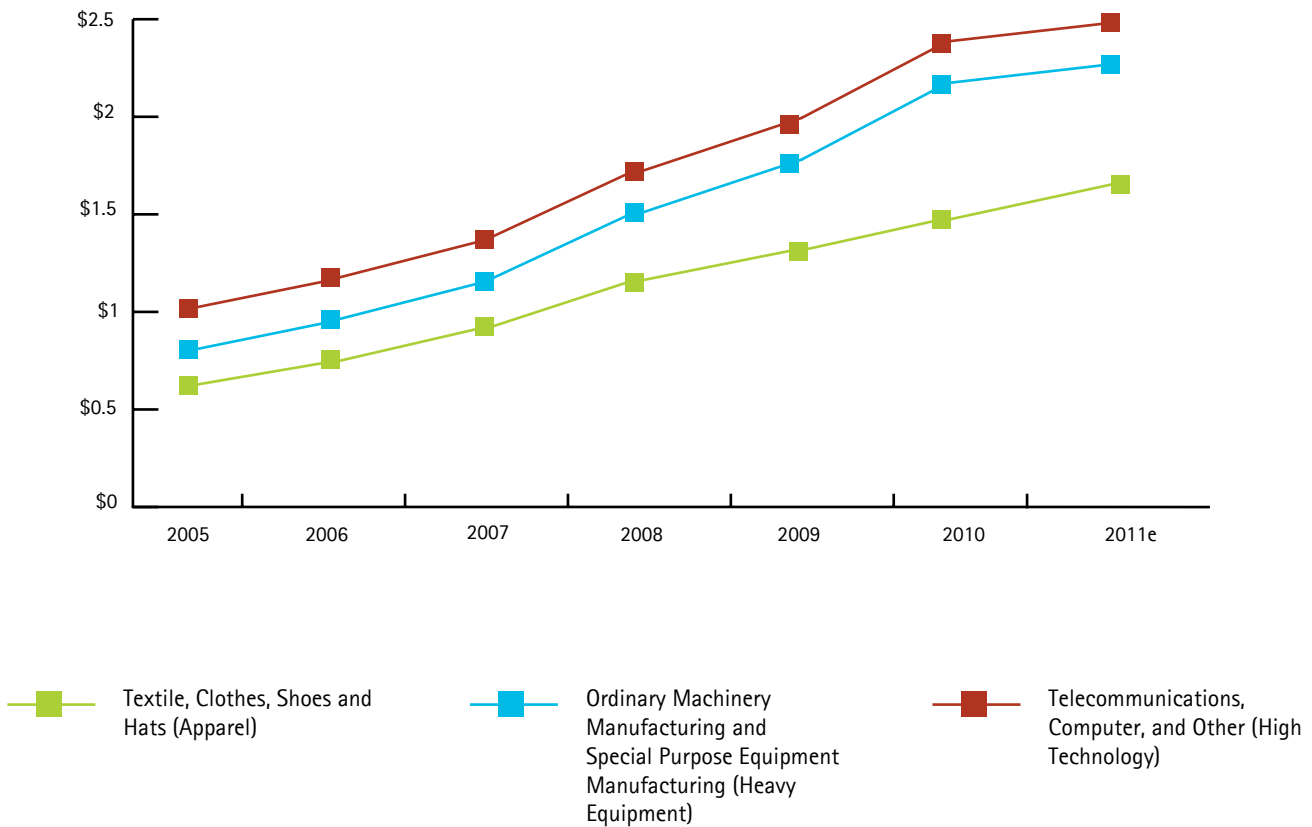


Figure 4: Average hourly wage in China by industry (in US dollars per hour)⁶



Threats to the gold mine: Understanding wage increases in China

Wage increases in China have been driven by a number of forces. First is a shortage of skilled workers in eastern China, where the majority of MNC manufacturing takes place. The shortage stems in part from the rising cost of living in mega-cities like Shanghai and Beijing. For example, the consumer price index (CPI) in Oct 2010 reached a record high in the last two years (4.4 percent), and real estate prices are skyrocketing. Tax cuts in rural areas have also made it more costly for workers to move to China's coastal areas. When the ratio of jobs to job seekers exceeds 0.96, regional labor shortages emerge. That ratio reached 1.01 by May 2010 in eastern China, when the number of rural workers available and suitable for labor-intensive work in the region dropped from 120 million in 2007 to just 25 million in 2010.⁷

Some MNCs—such as General Motors, HMC Enterprise Co., Motorola and Intel—have moved manufacturing facilities inland to source talent as well as open new markets.

Second, aging of the workforce and increasing education levels among younger workers have made it more difficult for companies to get workers to agree to the same terms earlier generations had accepted. As members of the "one child" policy generation begin entering the workforce, they are further contributing to the changing labor mix.

Third, government policies have increasingly favored local workers and their rights, which is part of the government's economic stimulus strategy. For instance, the Chinese government's most recent 5-year plan included a priority to "increase Chinese people's income." To that end, the Labor Contract Law of 2008 improved wage standards as well as provided protection for workers from baseless dismissal. Beijing's government also increased its minimum wage by 20 percent in the third quarter of 2010, bringing it to 960 RMB (US\$140), while Dongguan City raised salaries by 40 percent in 2009, bringing the average to US\$160 per month.⁸ Meanwhile, Chinese law enforcers have grown increasingly tolerant of mass protests, particularly those demanding higher pay and better working conditions from foreign employers.

Impact of wage increases on the cost structures of MNCs with production bases in China

Wage increases in China have directly affected the gross margins of MNCs with production bases in China. To fully understand the nature and extent of the impact on production costs, Accenture used a comprehensive supply chain process model (Figure 5).

“Source” and “Make” are typically the largest cost components across a manufacturing company’s supply chain operations. The contribution of direct labor cost is correspondingly higher in these two components. As such, wage increases in China will likely have the greatest impact on MNCs’ sourcing and manufacturing decisions.

At various levels of production in China (percentage of industries’ manufacturing work performed in China), our analysis shows that a 30 percent increase in wages could affect industries’ retail prices differently, with the largest impact on the high-technology industry (Figure 6).

To maintain the profit levels they have been enjoying without the 30 percent wage increase, companies in these industries would need to increase their retail prices (Figure 7) or consider implementing cost-absorption initiatives.

Figure 5: Supply chain processes of manufacturing companies⁹

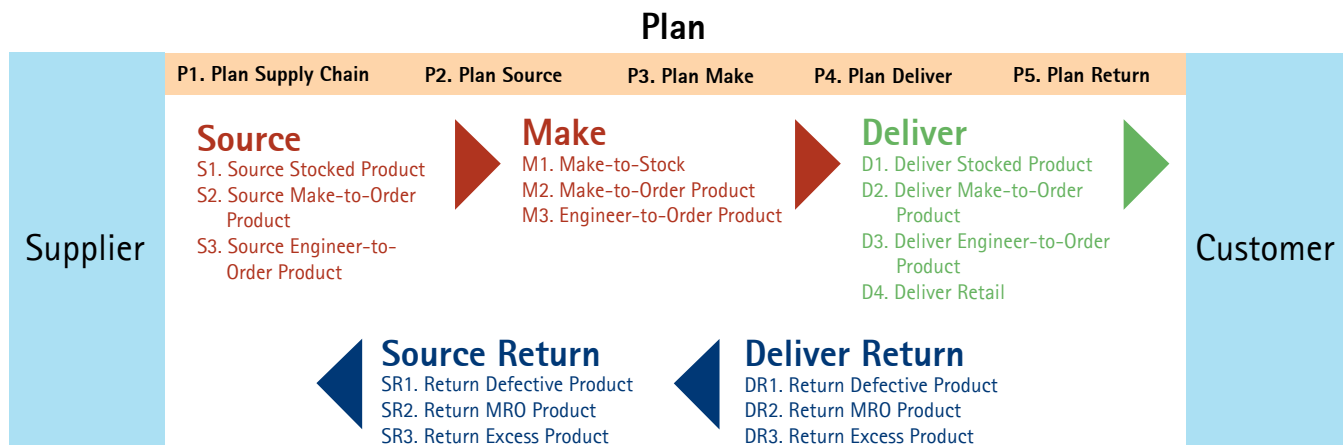


Figure 6: Industry retail price sensitivity analysis¹⁰

Production in China		30%	40%	60%	80%	100%
Price increase due to a 30% wage increase	Apparel (footwear)	0.5%	0.7%	1.1%	1.5%	1.8%
	Heavy Machinery	1.0%	1.2%	1.5%	1.8%	2.2%
	High Technology	1.4%	1.9%	2.9%	3.8%	4.8%

Labor-cost sensitivity analysis

To determine the impact of wage increases on the unit cost of products, as well as the tipping point at which wage increases will materially affect manufacturing and sourcing decisions, we applied a scenario-based labor-cost model (Figure 8).

Our analysis focused on cost structures of select product categories within each of the three industries in our study: apparel (footwear), heavy machinery (crawler hydraulic excavators) and high technology (personal computers). We applied four wage-increase scenarios to the model while keeping all other production factors constant. Secondary research and interviews with subject matter advisors within Accenture augmented our analysis.

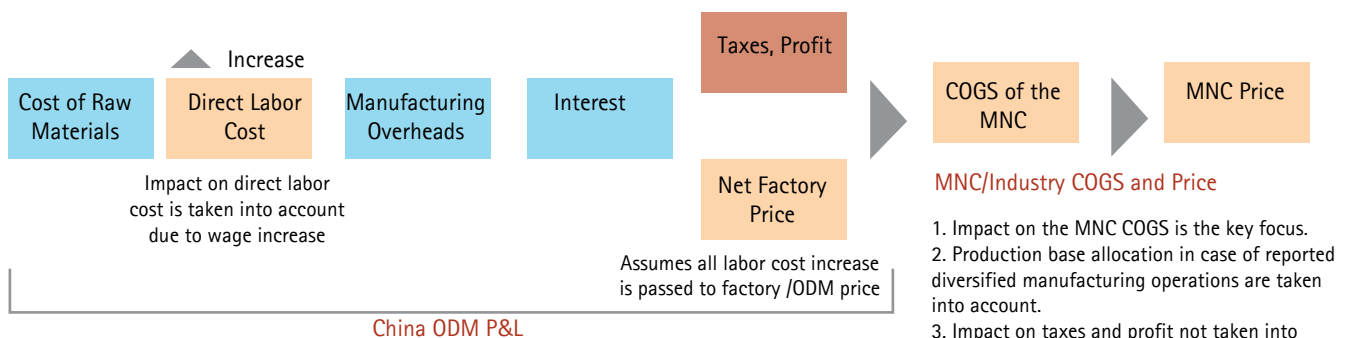
Through the representative industry cost structures of original design manufacturers (ODMs), we assessed the impact of wage increases on selected MNCs' operating P&Ls. The MNCs we chose for analysis are as follows:

- Footwear: Nike, Adidas, Puma
- Heavy machinery: Caterpillar, John Deere, Terex
- Personal Computers: Hewlett Packard, Dell, Apple, Lenovo

Figure 7: Required price increase to maintain profit levels (prior wage increase)

Minimum price increase required to maintain current profit levels at 30% wage increase			
Industry			
Price Increase	Apparel (Footwear) (Industry average of 37% production in China)	Heavy Machinery (Industry average of 60% production in China)	High Technology (Industry average of 90%-100% production in China)
	0.7%	1.5%	4.8%

Figure 8: Labor-cost analytical model





Case I Apparel (footwear)

Footwear industry players tend to adopt a multi-country production strategy and outsource work to ODM partners in China. On average, China accounts for 37 percent of these MNCs' production base, and ODM factory price represents 30 percent of total MNC cost of goods sold (COGS). The footwear industry is labor intensive but involves unskilled workers who are paid relatively low hourly wages. Currently, labor cost represents just 3 percent of MNC COGS (Figure 9).

Our analysis suggests that MNCs can expect to see their COGS increase by 0.2–2.5 percent if labor cost increase by 5–60 percent (Figure 10). Shifting production to a neighboring LCC such as Vietnam would increase COGS by 1.5 percent, primarily owing to

higher manufacturing overheads in Vietnam. Because of China's lower-cost position, shifting production to Vietnam would not provide a cost advantage to companies. However, when China no longer has a cost advantage over Vietnam, companies may make different sourcing decisions. For the footwear industry, the tipping point would be a China production base of 40 percent and above, affected by more than a 5 percent wage increase. Such a change would have a price impact of more than the 1.5 percent, which is greater than the COGS differential between China and Vietnam or the cost advantage currently provided by China.

Assuming that labor cost increases by 30 percent, the footwear industry would need to increase prices by a minimum of 0.7 percent to sustain current profit levels (Figure 11). Companies

that rely heavily on China-based manufacturing or local Chinese manufacturing companies will be more directly affected by this cost inflation.

In response to cost pressures, MNCs in the footwear industry could relocate factories to lower-cost areas and centralize their procurement. The purpose of this last option would be to pass on the cost inflation to end-consumers by raising prices on the companies' products. An increase in consumers' disposable income would suggest that MNCs specializing in mass-market brands could afford to increase prices and benefit from the sales increase.

Figure 9: Footwear industry: MNC cost structure¹¹

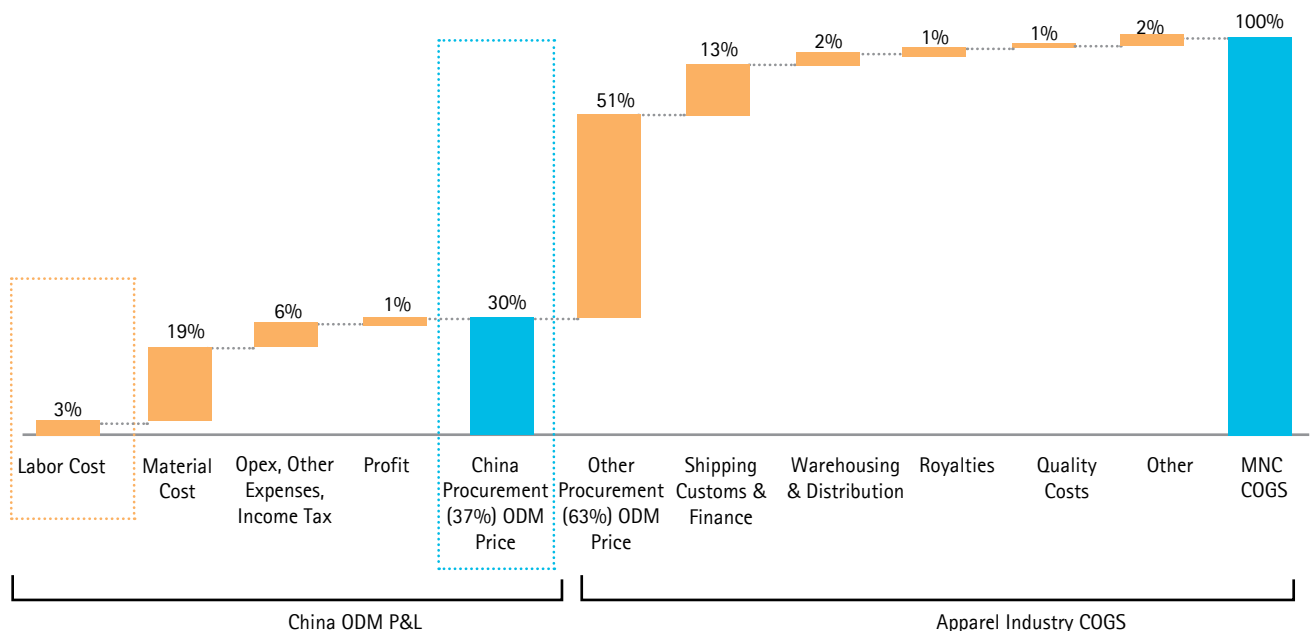
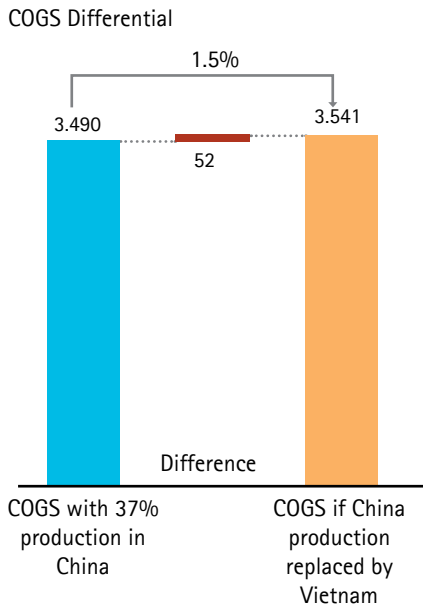


Figure 10: Footwear industry: COGS sensitivity analysis: Production in China and wage increase



Orange shading shows the COGS impact of 0.2%–2.5% with current industry average 37% China production

Production in China		30%	33%	37%	40%	60%	80%	100%
Wage Increase	5%	0.2%	0.2%	0.2%	0.2%	0.3%	0.5%	0.6%
	25%	0.9%	1.0%	1.0%	1.1%	1.5%	2.3%	2.9%
	30%	1.0%	1.2%	1.2%	1.4%	2.1%	2.7%	3.4%
	60%	2.1	2.4%	2.5%	2.7%	4.1%	5.5%	6.9%

Yellow shading shows the tipping point where LCCs such as Vietnam could provide cost advantage

Figure 11: Footwear industry: Price sensitivity analysis: Production in China and wage increase

Production in China		30%	33%	37%	40%	60%	80%	100%
Wage Increase	5%	0.1%	0.1%	0.1%	0.1%	0.2%	0.2%	0.3%
	25%	0.5%	0.5%	0.6%	0.6%	0.9%	1.2%	1.5%
	30%	0.5%	0.6%	0.7%	0.7%	1.1%	1.5%	1.8%
	60%	1.1%	1.2%	1.4%	1.5%	2.2%	2.9%	3.7%

Red circle highlights that assuming wage increase by 30% and current industry production in China average of 37%, the industry would need to increase price by a minimum of 0.7% to sustain profit levels

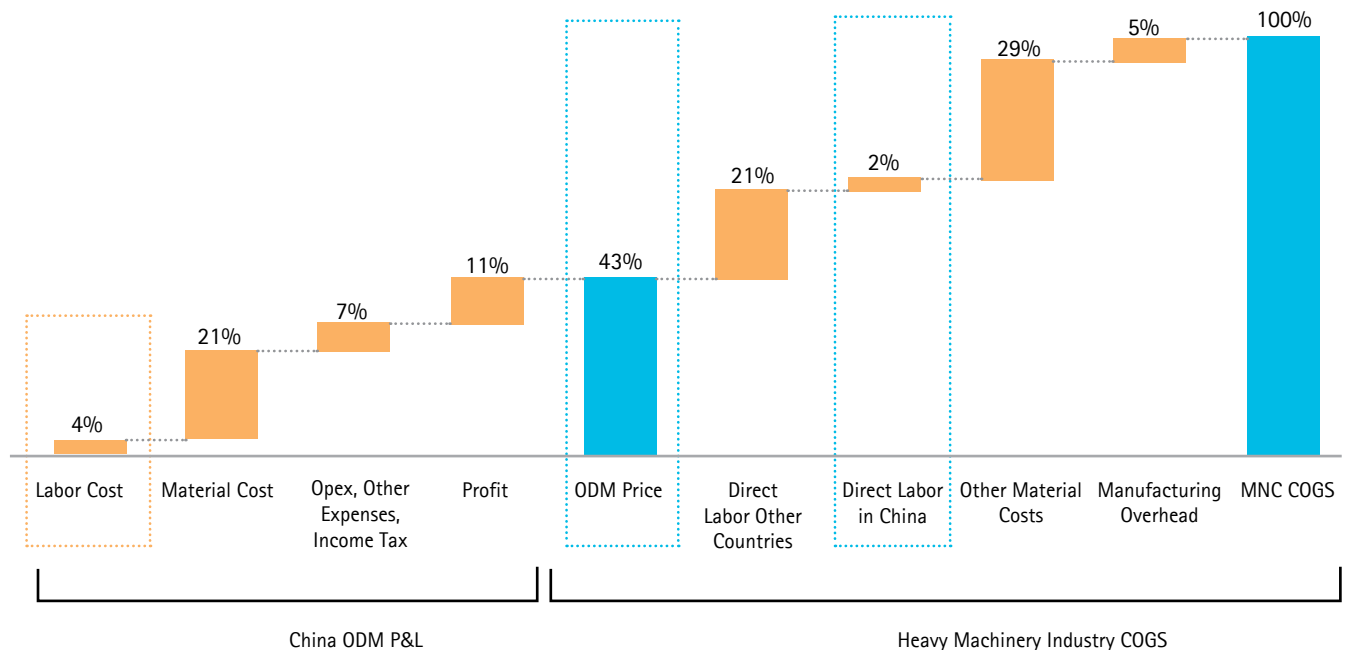
Case II Heavy machinery

Major players in the heavy machinery industry adopt a multi-country production strategy and outsource work to ODM partners for subcomponents manufacturing in China. These MNCs also have their own manufacturing or assembly facilities in China. On average, China accounts for 60 percent of MNCs' production base, and ODM factory price accounts for 43 percent of total MNC COGS (Figure 12). The heavy machinery industry is capital intensive and has a higher hourly wage cost than the low-skilled labor-intensive industries such as footwear. Companies are affected by labor costs at Chinese suppliers to whom they have outsourced manufacturing. They are also

affected by labor costs at their own manufacturing facilities located in China, which account for 2 percent of total MNC COGS.

MNCs in the heavy machinery industry can expect to see their COGS increase 0.3-3.9 percent as a result of various labor-cost increases (Figure 13). Assuming labor costs increase by 30 percent, the industry would need to increase prices by at least 1.5 percent to sustain current profit levels (Figure 14).

Figure 12: Heavy machinery industry: MNC cost structure¹²



Given that relocating manufacturing facilities to a developed economy is not a viable alternative for MNCs in this industry, China will likely maintain its position as the world's lowest-cost components manufacturer for heavy machinery. Within China, local brands dominate the wheeled loader market. However, foreign brands such as Caterpillar, John Deere and Terex own the lion's share of the market for crawler excavators, owing to the products' superior technology. But if these companies' profits drop as a result of wage increases, they may not be able to make large capital investments with the same flexibility they have enjoyed in the past.

MNCs in the heavy machinery industry must weigh other considerations (besides labor-cost increases) while making sourcing and manufacturing decisions. These considerations include the extremely long supply chain characterizing their industry, the high demands and complexity of inventory pipeline and the problem of intellectual property theft in China.

Such companies' need to have their own manufacturing facilities in addition to outsourcing production to China. This may indicate a specialized capability gap that cannot be outsourced entirely to suppliers in China. To minimize their exposure to rising wage costs, MNCs could consider outsourcing their entire production chain to other LCCs.

MNCs planning to subcontract parts of their value chain to other regions should consider offshoring to surmount the challenges of a complex supply chain; quality and intellectual property problems; and higher costs for labor, shipping and inventory management.

Figure 13: Heavy machinery industry: COGS sensitivity analysis: Production in China and wage increase

Production in China		30%	40%	60%	80%	100%
Wage Increase	5%	0.2%	0.3%	0.3%	0.4%	0.5%
	25%	1.1%	1.3%	1.6%	2.0%	2.3%
	30%	1.3%	1.5%	2.0%	2.4%	2.8%
	60%	2.7%	3.1%	3.9%	4.8%	5.6%

Shading highlights COGS impact of 0.3% - 3.9% with estimated industry average 60% China production

Figure 14: Heavy machinery industry: Price sensitivity analysis: Production in China and wage increase

Production in China		30%	40%	60%	80%	100%
Wage Increase	5%	0.2%	0.2%	0.3%	0.3%	0.4%
	25%	0.9%	1.0%	1.3%	1.5%	1.8%
	30%	1.0%	1.2%	1.5%	1.8%	2.2%
	60%	2.1%	2.4%	3.0%	3.7%	4.3%

Red circle highlights that assuming wage increase by 30% and current industry production in China average of 60%, the industry would need to increase price by a minimum of 1.5% to sustain profit levels

Case III High technology (Personal Computers)

Major players in the PC industry have set up their main manufacturing facilities in China. With the estimated industry average of 90–100 percent of production in China, labor costs in China represent 20 percent of MNC COGS, while ODM factory price represents 97 percent of MNC COGS (Figure 15). However, for an MNC like Dell with diversified production bases, these percentages could be lower.

Apart from being capital intensive, the PC industry has the highest hourly wage cost among the three industries we studied.

MNCs in the PC industry can expect to see their COGS increase 1–12.4 percent as a result of various labor-cost increases (Figure 16). With no price increase and

assuming a labor-cost increase of 30 percent, the industry could see its profits decline by as much as 4.8 percent (Figure 17).

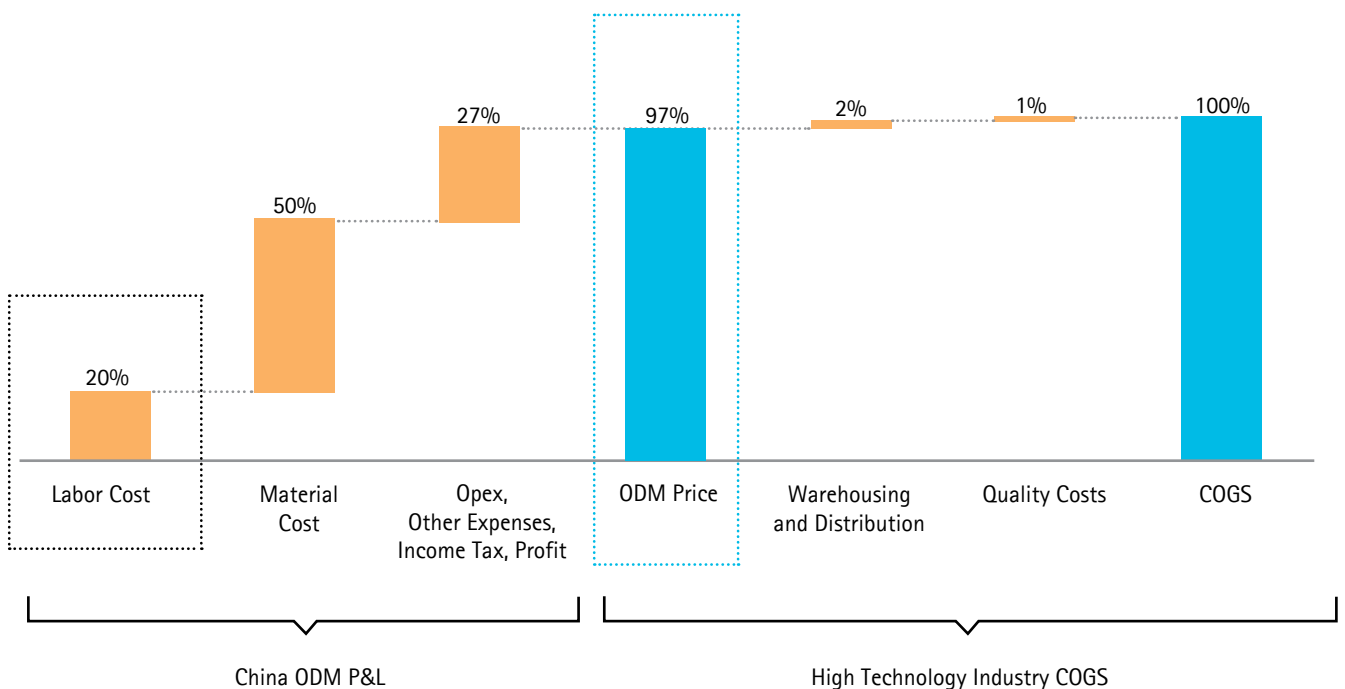
For MNCs in the industry considering raising their prices, we recommend the following actions:

- **Determine demand and price elasticity for the company's products.** Could the firm pass cost increases on to customers? If it must absorb labor-cost increases (for example, by increasing productivity and achieving operational excellence), to what extent can it do so and still remain profitable?
- **Analyze industry suppliers' power.** Fewer suppliers would mean more concentrated power, a situation that would further complicate pricing dynamics.
- **Recognize that labor costs historically account for less of the ODM factory price in the US versus that of ODMs in China** (only 2 percent of ODM

factory price in the US in 2005 versus 20 percent in China).¹⁴ The differential may stem from a combination of factors, such as higher productivity and increased automation in US factories. It is therefore more important than ever for China-based manufacturers to strive for automation, production efficiencies and greater speed to market.

Because of their need to have production and support capabilities in their major markets, MNCs in the personal computer industry are increasingly considering labor costs, transportation logistics, information infrastructure, market access, proximity to markets and government incentives while developing their supply chain strategies. Dell, for example, is operating more plants closer to its major markets. Similarly, China plants for other MNCs are set up to gain market access in the region and to avoid importation costs.

Figure 15: Personal computers industry: MNC cost structure¹³



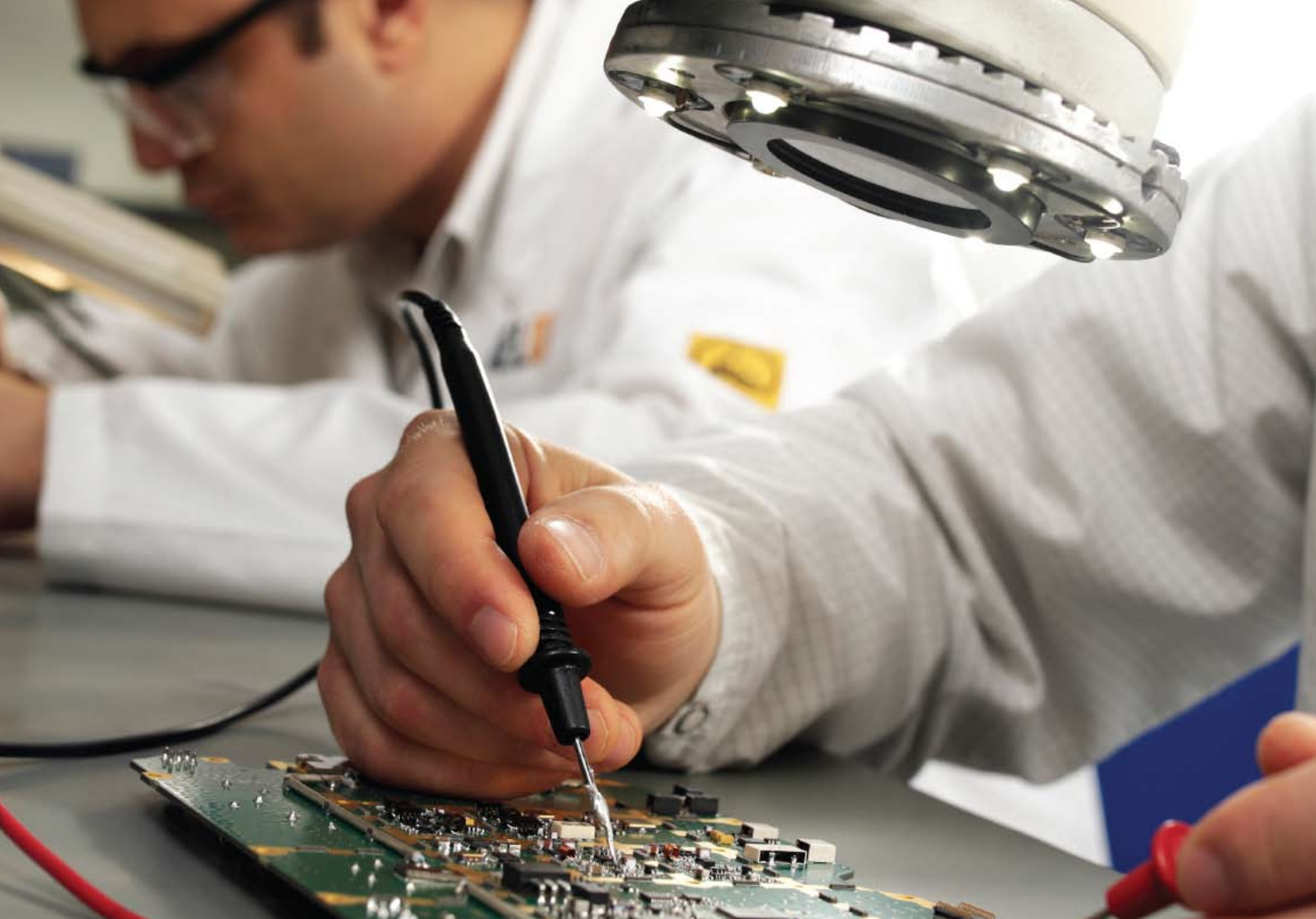


Figure 16: Personal computers industry: COGS sensitivity analysis: Production in China and wage increase

Production in China		30%	40%	60%	80%	100%
Wage Increase	5%	0.3%	0.4%	0.6%	0.8%	1.0%
	25%	1.6%	2.1%	3.1%	4.1%	5.2%
	30%	1.9%	3.0%	4.2%	5.0%	6.2%
	60%	3.7%	5.0%	7.4%	9.9%	12.4%

Shading highlights COGS impact of 1% - 12.4% with estimated industry average 90% to 100% of China production

Figure 17: Personal computers industry: Price sensitivity analysis: Production in China and wage increase

Production in China		30%	40%	60%	80%	100%
Wage Increase	5%	0.2%	0.3%	0.5%	0.6%	0.8%
	25%	1.2%	1.6%	2.4%	3.2%	4.0%
	30%	1.4%	1.9%	2.9%	3.8%	4.8%
	60%	2.9%	3.8%	5.7%	7.6%	9.5%

Red circle highlights that assuming wage increase by 30% and current industry production in China average of 90% - 100%, the industry would need to increase price by a minimum of 4.8% to sustain profit levels

The way forward for MNCs

For China itself, the biggest challenge is how to maintain its competitive advantage over other LCCs. With low-cost labor gradually becoming scarcer (particularly in coastal areas where labor-intensive industries dominate), China could lose its edge to other developing countries in the region that have larger supplies of low-cost labor. Given the importance of its labor supply to China's national economy, employment and foreign trade, local suppliers are likely to adopt cost absorption or productivity strategies to remain competitive.

For MNCs that outsource manufacturing to China or that have their own manufacturing operations there, our research has demonstrated that the impact of wage increases in China varies across industries and product categories, depending on MNCs' operating models and cost structures as well as labor intensity in their industry. Across the three industries we studied, wage increases will likely have the greatest impact on COGS in capital-intensive industries such as heavy machinery and personal computers. For industries relying on unskilled labor or labor-intensive industries such as footwear, wage increases in China will have less of an impact on COGS. However, Accenture foresees a tipping point at which companies in these industries may have to shift production to other LCCs such as Vietnam or consider other strategic options to remain profitable.

While there may be wide manufacturing cost differentials between China and developed economies (particularly in the heavy machinery industry), keeping manufacturing in China would not always translate to

an overall advantage for MNCs. Companies must carefully consider productivity gains and other advantages, such as increased automation, that they could get by locating their manufacturing in developed markets. In assessing alternative countries' competitiveness as manufacturing sources, we suggest that companies should evaluate the viability of the existing transportation and communication infrastructure networks, socio-political systems, regulatory bodies and sustainability efforts and determine whether any "institutional voids" could jeopardize their operations in specific countries. Companies that can capitalize on the strengths of these systems in specific countries are most likely to succeed.

Investing in data analytics could further help MNCs anticipate and monitor macroeconomic volatilities such as labor-cost changes and estimate these changes' impact. However, the trend of rising wages in China requires companies to go beyond monitoring and reviewing their cost models periodically to determine China's cost advantages. As history has proven, the cost benefits provided by LCCs are not permanent. Therefore, China may no longer feature strongly in MNCs' supply chain operating models in the years to come. Take Japan in the 1950s, considered the low-cost manufacturing hub of choice at the time. Subsequent LCCs enjoyed shorter years of being the preferred manufacturing hub. The transition time will likely narrow further as MNCs use all possible low-cost locations and the benefits across the different LCCs even out.

While outsourcing manufacturing operations to China or other low-cost locations will probably remain an important strategic option, it can no longer guarantee exceptional company performance over the long term. For this reason, it is more important than ever for MNCs operating in China to achieve operational excellence, manufacturing and supply chain. We recommend the following strategic options:

1. Focus on operational excellence

To offset the impact of increased labor costs in China, MNCs must focus more than ever on operational excellence—building the right operating model (the "what," "who" and "where" of business operations) and excelling at execution (the "how" of business operations). Namely, they need to foster collaboration between their functional areas, including procurement. Increased collaboration will help companies achieve cost efficiency by leveraging economies of scale and lowering manufacturing costs, which in turn will mitigate the effects of wage increases. Businesses also need to improve efficiency of manufacturing processes. All of these moves will generate significant cost savings. For example, evidence suggests that productivity improvements through shorter lead time or better production planning can reduce costs by up to 40 percent on average across industries.¹⁵

2. Expand across West China and the ASEAN

An alternative path to operational excellence is for MNCs to expand their manufacturing footprint across West China and the ASEAN member countries. Manufacturers in China (whether they are

outsourcing to China or have their own operations there) need to start sourcing suppliers in alternative LCCs. But when considering alternative LLCs, they should also be mindful of any institutional voids in those locations that could present obstacles. By diversifying their operations in this way, they can lessen their exposure to the impact of economic pressures unfolding in China.

In keeping with the “Go West” policy implemented in 2000 by the national government through tax breaks for MNCs that outsource manufacturing operations in China, companies can consider moving manufacturing facilities toward lower-cost inland regions for the short run, instead of exiting China. Some labor-intensive industries may shift their production facilities to West or Central China, where the reserve wage for migrant laborers (the lowest wage for which they are willing to work) might be less than in the eastern coastal cities.

However, sourcing decisions will become far more complex for companies considering dual-sourcing strategies. Complexities that need to be weighed include possible extended lead time for production and corresponding adjustments to supplier networks.

MNCs adopting an integrated regional supply chain strategy will encounter new challenges. China has steadily outperformed its LCC peers in productivity and economies of scale, even though its absolute labor costs are higher than those of other LCCs. Indeed, rival LCCs seeking to achieve manufacturing economies of scale will face a steep learning curve in the short to medium term. Cross-border trade movements, quality problems, political and economic instability and institutional voids in alternative LCCs could present additional difficulties for MNCs.

3. Optimize across the globe

Instead of taking the drastic step of shifting production bases to other countries, MNCs could consider creating Centers of Excellence (CoEs). These centers could help optimize a company's manufacturing footprint globally, increasing flexibility across regions and focusing on a Total Cost to Serve model.

Passing on costs to consumers may mark the end of LCCs, as the narrowing cost advantage would lessen LCCs' attractiveness for multinational corporations. This would require MNCs to reconfigure their global manufacturing networks and their Asia supplier networks. The result will likely be more regional supply models. Some leading companies are already taking this approach, by having as much as 80 percent of regionally manufactured products consumed in the country of production. This trend has become increasingly relevant in China, where wage increases would also mean a strengthening of local consumers' buying power.

Companies will increasingly need to move toward partnership-type supplier relations. They should also cultivate global networks that can include alternative suppliers, so they can forge supply chains with the best delivery capacity and highest cost efficiency for each project. Sourcing from low-cost suppliers and shortening procurement networks' lead times will be vital to success.

Yet labor is only one of the major volatile indices that continue to put pressure on operating margins. As world demand for labor continues to grow, MNCs and local manufacturers will have to continually hone their operational excellence and manufacturing strategies to stay ahead of the curve.

4. Grow the local market

Finally, MNCs with manufacturing operations in China can reconfigure their supply chain management strategies to distribute and sell products to Chinese customers. Strong demand growth in both business and consumer sectors is making China an increasingly important end user market for MNCs. China is still the largest market for many MNCs. For example, GM in the first half of 2010 had sold more cars in China than in the US (1.21 million vs. 1.08 million). In 2009, over 25 percent of the global revenue came from the China market for Samsung Electronics and in Philips, China ranked No. 2 in its consumer electronics sales in 2009 (accounting for about 9 percent of the global revenue, only second to the US at 12 percent).

This development presents significant opportunities for MNCs to transform their focus in China—from manufacturing to sales and distribution in China's domestic markets. But to achieve this transformation, MNCs will need to make some changes in their supply chain strategies, including strengthening capacities in outbound transportation, storage and distribution.

Appendix

Key Assumptions of the Labor-Cost Model

- Only three industries were studied. As such, the cost structure and impact of labor-cost volatility on specific cost models are not necessarily applicable to other industries.
- The model isolates the impact of labor-cost volatility while keeping all other factors comprising total landed price constant. In reality, other volatilities may simultaneously affect the cost model and unit cost of products in a nonlinear manner.
- The end-to-end costs within an industry's supply chain, as well as overall profitability of particular business segments, are not covered in this study. In addition, certain potential hidden costs (such

as cost of quality, intellectual property theft, productivity level and cycle time) are not factored in.

- MNC COGS breakdown is based on publicly available industry estimates.
- For analysis of wage-increase impact on retail price, we assume that all labor-cost increases are passed on to retail prices. Tax implications are not considered in the analysis.
- Production bases are estimated based on publicly reported information.
- Comparisons of labor-cost increases' impact on MNCs' COGS take into account different production bases and wage-increase scenarios.

The tipping point (when it makes sense to shift production to an alternative LCC) identified in this study is when the percentage impact on MNC COGS due to wage increase in China is greater than the current manufacturing cost differential between China and comparative LCC economies.

About the Authors

Jonathan Wright is a Senior Executive in Accenture Management Consulting with a focus on C&HT across APAC and running SCM across ASEAN. Before moving to APAC, he was based in London for 12 years working across Europe. He has over 17 years of experience in Management Consulting especially Global Supply Chain transformation, Fulfillment strategy and Network improvement. He has worked across Retail, Communications, High Tech, Aerospace & Defence and Health & Life Sciences. He is also recognized as a global thought leader in Green and Sustainable Supply Chains. He is based in Singapore.

Manisha Sahni is a Manager in the Accenture Management Consulting Innovation Centre, where she has led research projects in the areas of Banking and Supply Chain Management. She has extensive experience in consulting projects across Financial Services, Telecom and Fashion Industries in Asia & Middle East. She is based in Singapore.

Rowena Zamora is a Consultant in the Accenture Management Consulting Innovation Center (MCIC). She has served as a key contributor in research publications in the areas of Supply Chain Management, Banking, and Human Capital Development. She is based in Singapore.

The authors would like to extend a special note of thanks to the following members of the global Supply Chain Management practice and professional colleagues for their contributions to this research initiative: Brett Margolis, Derek Jones, Ganesan Ramachandran, Saurabh Bhatnagar, Michael Heilala, Suman Jagdev, Vedrana Savic and Scott Egler.

About Accenture

Accenture is a global management consulting, technology services and outsourcing company, with approximately 211,000 people serving clients in more than 120 countries. Combining unparalleled experience, comprehensive capabilities across all industries and business functions, and extensive research on the world's most successful companies, Accenture collaborates with clients to help them become high-performance businesses and governments. The company generated net revenues of US\$21.6 billion for the fiscal year ended Aug. 31, 2010. Its home page is www.accenture.com

About Accenture Supply Chain Management

Accenture Supply Chain Management consulting services help clients across a broad range of industries to develop dynamic supply chains by aligning operating models to support business strategies, optimizing global operations, and enabling profitable product launches. Committed to helping clients achieve high performance through supply chain mastery, we combine global industry expertise and skills in supply chain strategy, sourcing and procurement, supply chain planning, manufacturing, product design, fulfillment, and service management to help organizations transform their supply chain capabilities. We collaborate with clients to implement innovative consulting, technology and outsourcing solutions, and enhance the skills and capabilities of the supply chain workforce. For more information, visit www.accenture.com/supplychain.

About the Accenture Management Consulting Innovation Center

The Management Consulting Innovation Center brings Accenture's thought-leadership and ideas to life through highly interactive and facilitated workshop experience that help organizations explore solutions and develop a course of action for their most important business issues that will differentiate high performers from their peers. The Center also serves as a research hub where industry experts debate, develop and publish insights with specific relevance to the Asia Pacific region to help organizations innovate and outperform their competition. For more information, visit www.accenture.com/mcic

Copyright © 2011 Accenture
All rights reserved.

Accenture, its logo, and High Performance Delivered are trademarks of Accenture.

References

1. Deutsche Bank AG Report, 2010
2. American Chamber of Commerce in China, 2010
3. Accenture Analysis of ILO data. Data for 2010 estimated from official monthly statistics reports, forecast for 2011 based on internal ARIMA regression model.
4. Accenture Analysis of ILO data and data from the General Statistics Office of Vietnam. The China wage rates in US\$ are ex-impact of the Yuan currency appreciation, and have been normalized by taking the base year as year 2000 for currency exchange rate. Data for 2010 estimated from official monthly statistics reports, forecast for 2011 based on internal ARIMA regression model.
5. The Conference Board Total Economy Database, January 2010. GDP statistics are derived based on EKS methodology.
6. China Year Book 2005 to 2008. Forecasts for 2009, 2010 and 2011 are based on internal ARIMA regression model.
7. Bloomberg, 2010
8. Bloomberg, 2010
9. Supply Chain Operations Reference (SCOR) v8.0
10. Assuming all labor cost increase is passed to ODM factory price and retail price
11. Accenture Analysis of company financial statements
12. Accenture Analysis of company financial statements
13. Accenture Analysis of company financial statements
14. US Census Bureau Annual Survey of Manufacturers, 2005
15. Bay Area Economic Forum