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China's low costs to last for a decade, or more ... – Automation is taking over from low-skill, low-cost work

*Following the Communist Party Congress and the new leaders' promise of **doubling China's average salaries by 2020**, this is the second of our series of analysis looking at three important, but common, misperceptions about China:*

- *Slowing growth makes China a less attractive opportunity than previously (or than other emerging markets)*
- **Fast rising wages mark the end of low production costs in China**
- *China copies intellectual property and will not turn into a scientific and technological power*

The explosion of the middle class (expected to grow 10-15 fold from 2010 to 2020) and its high income expectations, the 3 to 4 fold increase in minimum wages planned for this decade and the peaking of the young work force due to the one child policy have lead many to the conclusion that China will soon no longer be a competitive, low-cost production base. This is illustrated in the many headlines that announced the "end of China's low costs", "the drying up of China's endless pool of labor" and articles about international manufacturers moving their productions out to Vietnam, Indonesia or Bangladesh, or about the difficulties of factories in coastal regions to recruit enough workers.

This appears to be reassuring, particularly for manufacturers in developed countries, finally seeing in China more market opportunities from consumers with increasing spending powers, than competition from rising producers. But while the market opportunities are clearly materializing, **China's peak in production competitiveness may not be reached for many years, if not decades.**

While the cost of exported Chinese products is no longer going down (in US dollars terms), the cases of foreign companies relocating their production out of China are still very anecdotic. Only a limited number of industries where automation cannot replace unskilled labor are seeing a transfer of production out of China, typically the apparel and plush toys industry, for which no machines can replace the sewing work. Other cases arise for very low quality products or potentially polluting industries, for which China starts enforcing international standards while other emerging countries do not yet enforce a sustainable manufacturing regulatory frame.

Though the increasing labor costs in China and the underlying trends are all true facts, those interpreting them do not take into consideration a number of China specific factors and the situation of the other low cost competitors when forecasting that China is becoming uncompetitive.

Fueled by imposed minimum wages increases, the migration to urban centers is in full swing

The most important "China factor" having an impact on the evolution of production costs is also the most often mentioned: the size of its population. Upon becoming the country with the world's second largest GDP, the general perception is that it has become a developed economy. While it is true that parts of China are truly developed and that the country can finance its own development, we tend to forget that,

in 2010, 38% of its workforce was still engaged in agriculture and over 50% of China's population was rural.

In order to bring this proportion down to 24% by 2020¹, 142 Mio people will migrate from the countryside to cities by then². That is a pool of job seeking, low-skilled labor moving into cities 1.6 times the size of Vietnam's total population. By 2030, an estimate 235 Mio. people will have migrated to urban centers in search of better opportunities, a number close to Indonesia's current population!

Another important China specific factor not to be neglected is the top-down managed nature of the Chinese economy. Indeed, workers salary increases are not driven by labor force shortages, but by the government imposed increase of minimum wages (13% per year during the current 2011 - 2015 five year plan, or a total of 84% in 5 years). The traditional demand and supply factor does not apply in China's case, and what could be interpreted as a shortage of labor is, in fact, a government driven phenomenon.

Why then has there been so many reports early in the year of factories in South China failing to recruit enough workers? Most of these reports failed to note that the province of Guangdong postponed increasing its minimum wages level at the beginning of the year³. As a result, the salary differential between inland provinces and Guangdong was reduced and many migrant workers decided to stay in their home provinces where they had better opportunities, when considering proximity to their homes and the general cost of living.

Actually, increasing minimum wages throughout the country is a powerful tool that the government uses to “kill four birds with one stone”: keep the migration to cities going, increase domestic consumption through higher disposable income of the lowest income citizen, reduce social inequalities by developing the inland, and move the economy up the technology value chain.

Robotics are booming and productivity is increasing faster than production costs

As a result, entrepreneurs currently relying on low-cost unskilled assembly workers for manufacturing have a choice of moving inland (where minimum wages can still be as low as half those on the coast), expatriating themselves to other low cost countries and/or introducing automation.

A good example of this is the Taiwanese manufacturing giant Foxconn, who currently employs 1.2 Mio unskilled Chinese workers on assembly lines typical of the production chains we pioneered in the West 100 years ago. Unsurprisingly, Foxconn's Chairman publicly announced the installation of 1 Mio robots in its factories. While he must expect healthy growth in the business, automation on such scale is certainly also intended to reduce the workforce, and in turn fight increasing production costs associated with imposed rising wages.

While Foxconn is one of the most prominent examples, most producers whose industries allow are embracing automation as fast as they can. Indeed, due to the overall cheap and flexible labor force in China, there previously was no need to increase productivity by reducing costs and improving their supply chain processes. As a result, China's manufacturing is very far from being optimized and the potential for improvement and increased productivity through management and technology is huge.

Consequently, the automation industry is booming. Kuka, the European leader in robotics, will increase its assembly capacity in China to 5'000 units this year, from fewer than 1'000 two years ago. ABB has moved its global robotics division headquarters to Shanghai in 2006 and became the No 2 maker and seller of robots in China last year⁴. Today one out of three ABB robots is sold in Asia. Overall, **China is expected to pass South Korea and Japan to become the world's largest robot market in 2013.**

Therefore, even though the Consumer Price Index (CPI, used as a benchmark to measure inflation) keeps rising, automation and productivity improvements of all kinds are large enough to bring down the Producer Price Index (PPI, the price at which producers are selling). **In October producers in China**

¹ Projections of the World Bank and the DRC (Development Research Center of the State Council, People's Republic of China)

² *Health care in China: Entering 'uncharted waters'*, McKinsey, November 2012.

³ *Guangzhou workers increase pressure on government over wages*, 19 June 2012, <http://www.clb.org.hk/en/node/110081>.

⁴ Yaskawa is No 1 in China, while Fanuc and Kuka are No 3 & 4 according to the New York Times "*German Maker of Robots Gains as Chinese Wages Rise*", 13 April 2012. Other information about foreign robot makers in China is largely drawn from this same article.

sold their goods on average 2.8% cheaper than they did a year before. Despite all the recent talks of rising production costs in China, the PPI shows that, overall, these costs are now only 0.8% higher than in November 2010 (and 22.3% higher than in 1996, while manufacturing salaries increased over 400% over the same period of time!).⁵

The China pool of underemployed will remain considerable, together with the skills shortages

The transformation of production methods from early 20th century labor intensive to 21st century intelligent automation has actually just begun. The combination of China's massive urbanization and robotics solutions economically produced locally points to a lasting and large pool of low-skilled workers and competitive production costs to remain available for many years to come.

As a result, large numbers of Chinese seek to educate themselves, eventually also creating large pools of job seekers with higher skill sets. The university graduates situation illustrates well the effect of this pressure from the base of the job market: **out of the 6.8 million students who graduated in 2011 an estimated 570'000 did not find a job a year later**⁶.

As a result, the average starting pay of students in 2011 just reached RMB 2'520, but only when considering the three best paying industries (real estate, financial and IT). The average salaries of those graduating from vocational colleges (still in the three highest paying industries) barely reached RMB 1'900⁷. When compared with workers minimum wages of RMB 1'500, RMB 1'450 and RMB 1'260 for Shenzhen, Shanghai and Beijing (first tier cities), one realizes that this pressure from the bottom translates in little income differential for education, despite the fact that skilled and educated employees are very much in demand.

In fact, China does not have a labor shortage but a large skills gap: an important part of the available work force, be they workers, technicians or university graduates, do not have the skills needed by the economy. In the development rush, while everyone is trying to acquire better skills, the education system has also rushed to train more educated citizen, but quantity has taken precedence over quality. This is the main reason why foreign companies' biggest headache still is hiring enough qualified employees, despite the glut of formally educated Chinese. That is why top tier companies pay much higher starting salaries to compete for the comparatively few very good graduates. This skills gap is obviously also a cause for low productivity at the work place. Lack of management skills, for example, is a source of important waste in the supply chain that many foreign managers still struggle with.

While this is a very serious problem, potentially important enough to derail China's fast development, it can be fixed by the reform of the education system. Yet, no matter how fast and far-ranging reform is carried out, its effect will also take a decade to bear fruits and significantly adjust skills and attitudes. The productivity gains that closing the skills gap will bring may however come at the right time to maintain low production costs, after the main effects of the automation starts have born fruits, therefore allowing China a competitive production base well into the 2020s.

Chinese exports increasing mostly towards underdeveloped nations

Despite the slow American recovery and renewed crisis in Europe, Chinese exports continue to increase. They did so by over 7% in the first 10 months of the year, while year on year export growth was 11.6% in October (and 9.9% in September). Taking a closer look at the figures shows that direct export growth to the EU, US and Japan have practically stagnated (about 1% growth overall), so that China is gaining market share exporting to underdeveloped, lower cost countries. **Chinese exports to the ASEAN (which includes Vietnam and Indonesia) grew over 25% last month, compared to October 2011.** This displays China's continuous competitiveness compared to countries seen as low-cost.

Many claim that the exports are artificially supported by an undervalued Chinese currency. However, this may no longer be the case. China's current account surplus has dropped below 3% of its GDP in 2011 and is expected to stay below this rate in the coming years. This is the measure of an acceptable surplus articulated by the G-20, so that China falls now in internationally accepted norms with regard to

⁵ Figures from International Labor Organization: average manufacturing salary in 1996 was RMB 470 and 2016 in 2008.

⁶ *Jobless college graduates trigger concern*, China Daily, 7 November 2012.

⁷ *Average starting pay of Chinese college grads hits 2500 yuan*, People's Daily, 24 May 2011.

its surplus. Besides, UBS in Beijing recently commented that they “believe that fundamentally, the Renminbi is no longer much undervalued”.

Additionally, inflation in China is much lower than in its main contenders for low-cost production. Since 2010, Vietnam’s consumer prices increase has routinely been 2-3 times faster than China’s, while Indonesia’s has been 1.5 to 2 times higher. These competitors’ currencies would have to depreciate a lot against the Yuan in order to compensate this difference in inflation.

In the next one or two decades, only India, with its billion people, could become a match for China in terms of production cost. This however assumes that production costs mostly depends on labor costs, which, history has shown, is unreasonable due to the enormous advances in material science, information technology and robotics and their increasing impact on the workshop floors.

China’s long term production competitiveness will not depend on its labor cost, but on its ability to catch up with modern production techniques and to automate its factories faster than its people’s living standards increase. That is why it is currently so important for China’s leader to push the development of science and technology along with the education. The success of these programs will be, most probably, the most important factors for China to continue its fast development and to have a chance to achieve living standards close to those of the developed world for its people.

The last part of our analysis trilogy will focus on these aspects and detail the less-known government incentives available to technology companies in China.

We hope that the above can be of support for your China strategy and plans. For more information about this topic, do not hesitate to contact n.musy@ch-ina.com.

Should you be interested to read our last analysis detailing why China is arguably the most attractive business opportunity of the decade, please follow this [link](#).

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