

Steel Industry Policies under the Xi Jinping Administration and Their Implications

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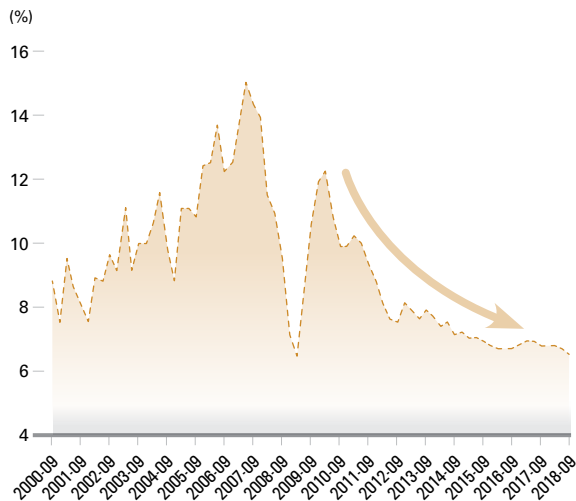
In May of 2013, the President of Shenyang Dongfang Steel in Liaoning Province went into hiding. In an environment of fierce competition among steelmakers, falling steel prices, and rising production costs, this private steel company with an annual steel capacity of 3 Mt experienced a deteriorating performance and finally ceased production. At this point, a crisis began to cast a shadow across the Chinese steel industry. In November of the same year, Xingtai Longhai Steel (annual capacity 2.5 Mt) in Hebei Province filed for bankruptcy due to poor performance and began a search for a buyer.

In 2014, the number of Chinese steel companies declaring bankruptcy began to swell. Haixin Iron and Steel Group (annual capacity 6 Mt) in Shanxi Province underwent a management crisis in March of that year and filed a bankruptcy claim in July. In June, Xilin Steel Group, the largest steelmaker in Heilongjiang Province, slashed its production by two-thirds. Xilin had an annual crude steel capacity of 5 Mt, but its debts had reached RMB 20 billion. On June 21, 2014, Shan-

dong Huayuan Steel went bankrupt as well. Its assets were put up for auction, but no one was willing to take the deal. Huayuan was a joint venture with Malaysian and Chinese capital that produced 1 Mt of crude steel annually. In July 2014, Chuan-yu Steel Group in Sichuan Province also filed for bankruptcy. This company, jointly financed by public and private capital, had as much as a 5 Mt capacity, but had been undergoing a crisis starting in late 2013.

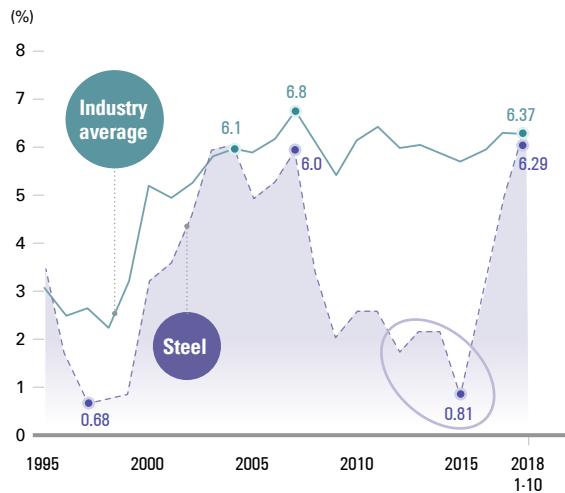
Causes of the crisis in the Chinese steel industry in 2013-2015 and its impact

The Chinese steel industry enjoyed a double-digit growth rate of crude production in the 2000s, but underperforming companies began to spring up. From private steelmakers to joint ventures and state-owned enterprises, the scope of at-risk companies continued to expand. What triggered this crisis in the Chinese steel industry? There are mainly four reasons.

Figure 1. China's Quarterly GDP Growth

First, steel demand plummeted. Influenced by a slowing rate of domestic economic growth, the steel industry faced limits on its growth momentum. In particular, the expansion of investment and steel-consuming industries, which had been a driver for steel consumption, dwindled significantly. After peaking at 12.1% in the first quarter of 2010, China's quarterly economic growth declined steadily to reach 7.0% in the first quarter of 2015. Fixed asset investment slowed from 20.3% in 2012 to 19.1% in 2013 and 15.3% in 2014. Real estate investment growth also declined steeply from 19.8% in 2013 to 10.5% in 2014. Automobile production growth plunged from 14.8% to 7.3%, and home appliance production growth fell from 8.5% to 4.2% during the same period.

Second, the Chinese steel industry suffered a severe supply glut. Overcapacity recorded 260 Mt, accounting for 33% of total consumption and 45% of global overcapacity in 2014. Accumulated overcapacity squeezed profit margins, bringing margins to the lowest among Chinese industries.

Figure 2. Profit Margin Ratio of Chinese Steel Industry

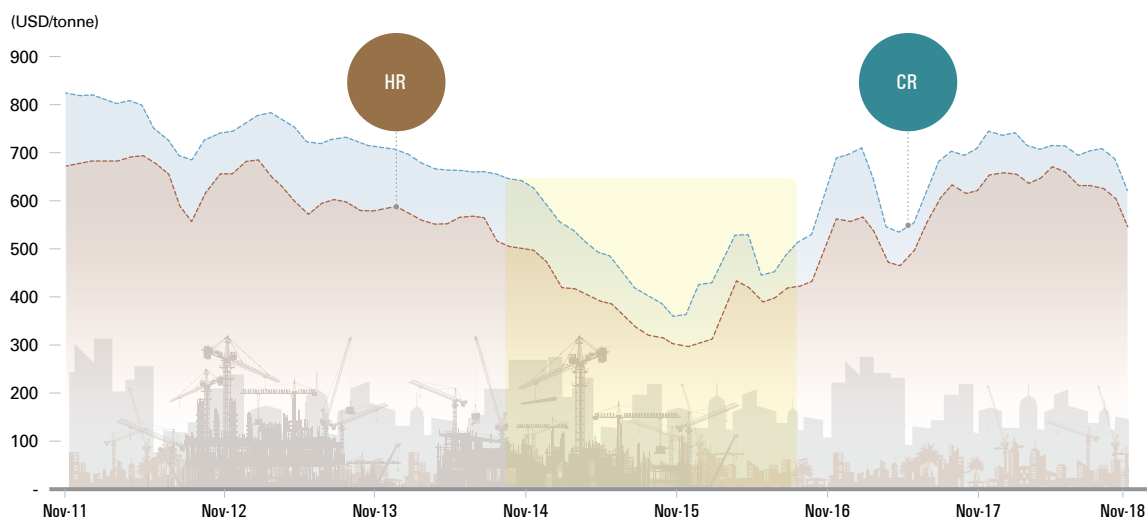
The profit margin for all industries was about 6% in both 2013 and 2014, but that of the steel industry stood below 3%.

Third, steel companies' cost burden has increased sharply. The debt-to-equity ratio in the steel industry surged from 178% in 2010 to 227% in 2013. Short-term borrowing in particular increased significantly. Mid-to-large steel-makers' short-term borrowing rose by a CAGR of 22% from RMB 540 bil. in 2010 to RMB 980 bil. in 2013. Interest rates increased from 4% in 2010 to 7% in 2014. Wages also surged upwards. The average annual wage of manufacturing workers in China increased 23.7% over 2008-2013. After a new environmental protection law took effect in China in 2015, companies' environmental costs increased to three times the profit per tonne of steel produced.

Fourth, crude steel prices declined continuously. China's domestic hot-rolled steel prices stood at USD 770 per tonne in May 2011, but slowed to USD 603 in May 2013, USD 550 in May 2014, and USD 420 in April 2015. As crude steel



Figure 3. Chinese Steel Prices



Source: CRU

prices continued to decline under slowing steel demand and rising overcapacity, the profitability of steel companies deteriorated. The number of badly-performing companies significantly increased, resulting in an unprecedented crisis in the Chinese steel industry.

Given that the Chinese steel industry accounts for about half of global production and consumption, this crisis delivered a severe blow to the global industry. Chinese steel products shook the global market, with finished steel product exports nearly doubling from 62.34 Mt in 2013 to 93.78 Mt in 2014 and 111.24 Mt in 2015.

The surge in Chinese steel exports resulted in a particularly severe impact on neighboring areas such as Korea and Southeast Asia, where the oversupply quickly spread. Chinese steel inflows into Korea rose by 34.9% from 9.93 Mt in 2013 to 13.4 Mt in 2014. China accounted for 59% of

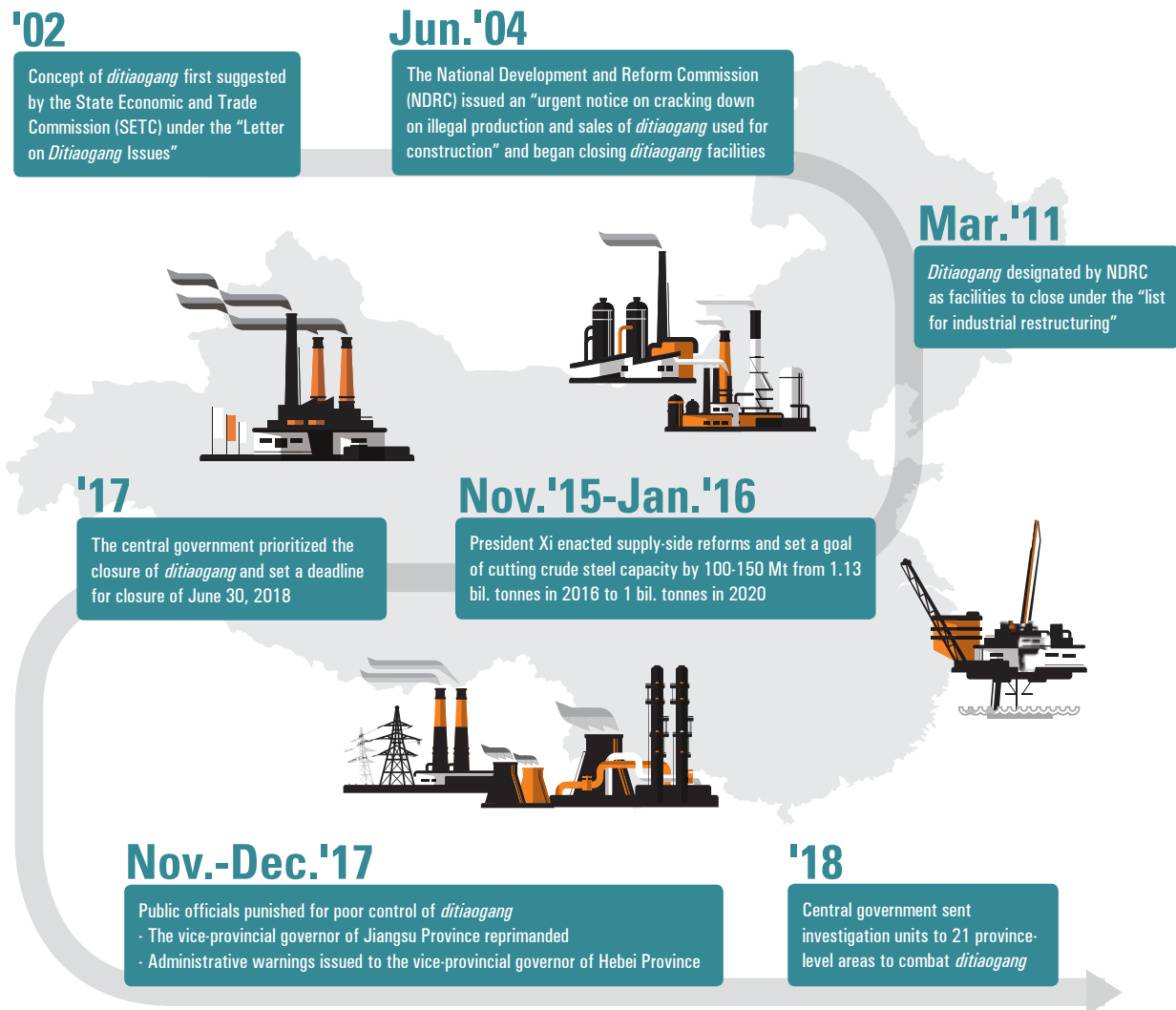
Korean steel imports in 2014.

The decline in Chinese steel prices pushed down global prices as well, and the surge in Chinese steel exports affected companies in many countries. Competitive global steelmakers including the Nippon Steel & Sumitomo Metal Corporation (NSSMC) and POSCO saw their profits wither. As a result, governments, steel institutions, and steel companies all called for vigorous restructuring in the Chinese steel industry.

Strong government-led restructuring drive

The Chinese government fully recognized the severity of the situation in the steel industry. President Xi Jinping himself stressed supply-side reform in

November 2015 and again in January 2016. The

Figure 4. Progress of Closure of *Ditiao* Facilities

Source: Compiled from Chinese government media releases and media reports

Chinese government initiated a sweeping restructuring of the steel industry in 2016. The central government prioritized the closure of plants producing low-quality steel from scrap, known as *ditiao* in China, and set a deadline for their closure by June 30, 2018.

In 2016, low-quality illegal *ditiao* capacity surpassed 100 Mt, or 10% of total capacity, with actual production reaching 40 Mt, or 5% of total

production. *Ditiao* was a main culprit undermining fairness in the Chinese steel industry and causing environmental pollution and safety issues. The central government publicly punished public officials who were slow to eradicate *ditiao* and strengthened the implementation of the capacity cut regulations. In 2017, the vice-provincial governor of Hebei Province received an administrative warning, and the vice-provincial



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governor of Jiangsu Province was reprimanded. Under this strong drive by the central government, related government departments, local governments, and steel associations jointly established an investigative unit. Officials from this investigative unit worked actively in the field to eradicate *ditiaogang*. They eventually succeeded in closing 140 Mt worth of *ditiaogang* facilities.

The Chinese government has set a target of reducing even legal and statistically calculated steel production capacity by 150 Mt by 2020. This target is clearly stated in the Iron and Steel Industry Adjustment and Upgrade Plan (2016-2020). This plan can be considered the 13th Five-Year Plan for the steel industry.

Having learned lessons from underperforming restructuring efforts of the past, the central government has dedicated restructuring funds to bolster its executive power that enforces the capacity cut demands. The government has shared legacy costs with companies, such as surplus labor from state-owned steelmakers, and reserved funds for restructuring. It has established a “bad

bank” to address non-performing loans extended to steel companies by financial institutions. The Chinese government has strengthened the implementation of policies, including environmental regulations, and banned local governments from propping up zombie companies. In addition, it has accelerated mixed ownership reform to allow private and foreign parties to invest in state-owned steelmakers.

Thanks to the resolute efforts of the central government and active support from local governments and steel associations, China reduced crude steel capacity by 120 Mt in 2016 – 2017. It needs to cut only a further 30 Mt in 2018 to meet the goal of the 13th Five-Year Plan two years in advance. After suffering from a supply glut, the Chinese steel industry has restored balance with demand. Furthermore, the Chinese government's strong drive for environmental regulations and production cuts during winter have further narrowed the gap between steel supply and demand and pushed up steel prices, ballooning profits for Chinese steelmakers.



So far, we have reviewed the crisis faced by the Chinese steel industry during Xi's first term, the policies applied to overcome the crisis, and their effects on the industry. The next crucial step is to find answers regarding the next direction for Chinese steel policies and how much impact they will have.

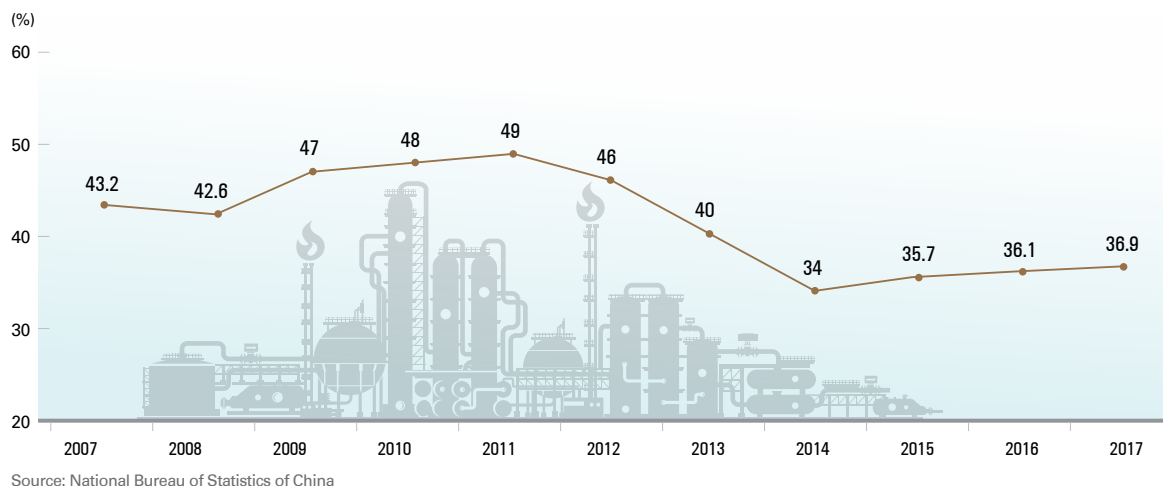
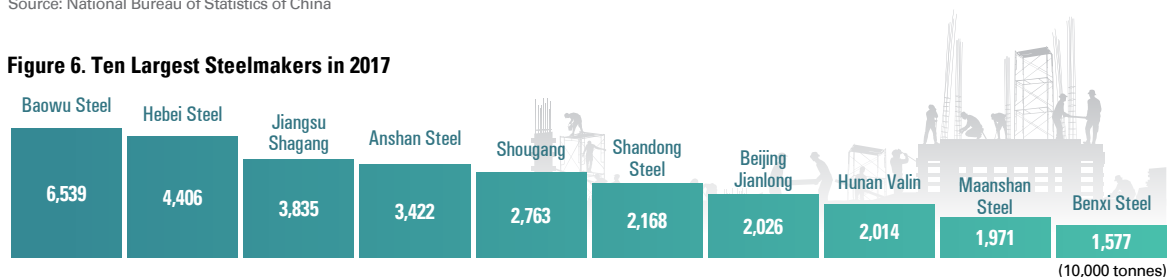
Policy direction for steel industry during Xi's second term and its implications

President Xi launched his second five-year term (2018-2023) upon the completion of China's National People's Congress in March 2018. Steel policies for his second term seem so far to be generally in line with the 13th Five-Year Plan (2016-2020). Considering the strong policy driven by the central government, steel policies will be developed in five directions.

First, China will continue its capacity control and closure of insolvent steel companies. Experts believe that investments in new facilities will

not be allowed during the second term. Facility investment is permitted only to replace obsolete facilities being closed, but investment in all-new facilities will not be allowed. As stated earlier, this year's capacity-cut goal under the 13th Five-Year Plan seems to be achievable. Recent steel policies indicate that facility reduction goals are mainly being focused on low-efficiency facilities at money-losing companies.

Second, it will scale up the size of steel companies via active M & A. In 2015, the country's ten largest steelmakers accounted for only 34% of total steel production. China plans to raise their share to over 60% by 2025 to address the low efficiency problem, fierce competition over overlapping products, resource waste, and weak negotiation power in iron ore pricing. However, it will not be an easy task to achieve this goal. In 2010, the Chinese government set a target of raising the share of the ten largest steelmakers to 60% by 2015, but it managed to reach only 34%. In 2017, China's crude steel production recorded 821.73 Mt, among which the ten largest

Figure 5. Ten Largest Steelmakers' Share of Crude Steel Production in China**Figure 6. Ten Largest Steelmakers in 2017**

steelmakers accounted for 36.9%. Assuming that crude steel production maintains its current level until 2025, a 60% share translates to 500 Mt. This means that the average crude steel production of the ten largest steelmakers should be 50 Mt.

In 2017, Baowu Steel was the largest steelmaker in China with an annual crude steel capacity of 65.39Mt, followed by Hebei Steel (44.06 Mt). In order to achieve the 500 Mt goal, China should possess one or two large steel companies with an annual capacity of 80 Mt, two to three companies with 50 Mt capacities, and three to five companies with 30 Mt capacities. This is why next year the Chinese government will focus on

scaling up steelmakers through M&A. How will the Chinese government achieve this? Here are some trajectories based on experts' opinions.

First, China will actively seek the merger or abolition of state-owned steelmakers. Currently, Baowu Steel and Anshan Steel are state-owned. There were once four state-owned steelmakers—Baoshan Steel, Wuhan Steel, Anshan Steel, and Panzhihua Steel—but in late 2016 Baoshan Steel and Wuhan Steel were merged into Baowu Steel, and Anshan Steel acquired Panzhihua Steel in 2015. As of 2017, Anshan Steel was the fourth-largest steelmaker with a crude steel capacity of 34.22 Mt. If Baowu and Anshan Steel

If the steel policy goals for Xi's second term are achieved, the Chinese steel industry will be upgraded in terms of quality and greatly impact the global steel industry. Scaled-up steelmakers will be able to heighten their global competitiveness by improving technologies and creating higher-quality products. Chinese massive investments in smart and green manufacturing will drive innovations in the global steel industry.

merged, a new steelmaker with an annual capacity of over 100 Mt would emerge. If the crude steel capacity of Maanshan Steel were added, it would become the world's largest steelmaker.

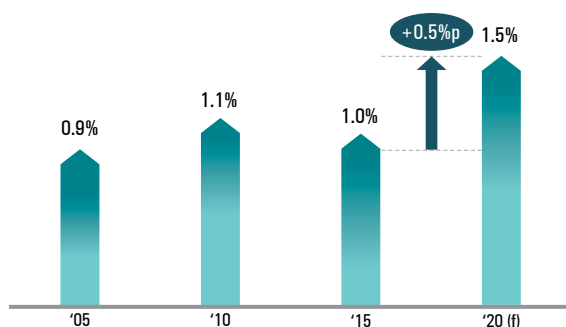
The next direction is the merger or abolition of local government-owned steelmakers, mainly in areas with active steel production such as the Jing-Jin-Ji region (Beijing, Tianjin, and Hebei) and Shandong Province. In 2017, the top-three steel producing provinces were Hebei (191.21 Mt), Jiangsu (142.8 Mt) and Shandong (71.48 Mt). In the Jing-Jin-Ji region, Hebei Steel and Shougang (fifth-largest steel production at 27.63 Mt in 2017) can respectively scale up on their own. If the two companies were then merged, it would result in a large steelmaker with an annual capacity of 70 Mt. Shandong Province plans to scale up Shandong Steel (6th, 21.68 Mt) to an annual capacity of 30-50 Mt.

In addition, the merger or abolition of private steelmakers will also be accelerated. The largest private steelmaker, Jiangsu Shagang, is actively seeking M&A with other steel companies. In

2017, Shagang's crude steel production ranked third, with an annual capacity of 38.35 Mt. The Jiangsu provincial government plans to expand Shagang's annual capacity up to 50 Mt. Furthermore, there will be additional M&As between steelmakers in different regions and between state-owned and private steelmakers. Through this process, a steel company in one city can move to another city or closed. The obsolete facilities of a steel company in another city can be sold off and closed and new facilities expanded in their place.

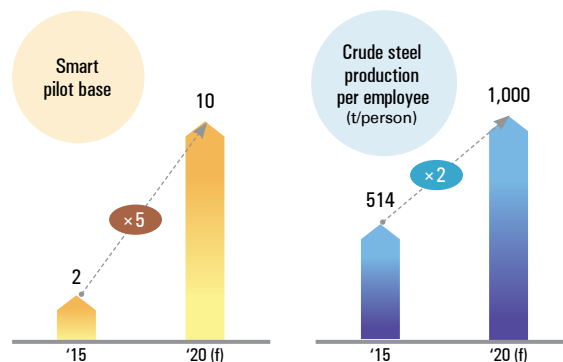
Third, technology investment and the production of high-quality products will abound. Under the 13th Five-Year Plan, the Chinese government has set a goal of increasing the steel industry's share of R&D from 1.0% in 2015 to 1.5% in 2020 and plans to focus on technological development of high-quality steel production, such as automatic control and automotive steel. By doing so, it hopes to replace imports of high-quality steel with comparable domestic products. So far, China has undergone three phases of the enhancement

Figure 7. Chinese Steel Industry Targeted in R&D and Sales Goals



Source: China's Iron and Steel Industry Adjustment and Upgrade Plan (2016 - 2020)

Figure 8. China's Smart Manufacturing Goals



of its steel technology. First, it has introduced advanced steel technologies, including stainless steel and automotive steel, through joint ventures with foreign companies. Next, it absorbed and diffused these technologies. Currently, it is developing indigenous technologies through self-innovation and trying to commercialize them. The Chinese government is determined to strengthen the development and commercialization of high-quality steel.

Fourth, it is emphasizing smart and green manufacturing. With an aim to improve productivity through automation under the name of “smart steel,” it is spreading smart factories and implementing a strategy to smartize the entire Chinese steel industry in alliance with top global companies specialized in Industry 4.0. The Chinese government aims to increase the number of smart steel bases from two in 2015 to ten in 2020. It also plans to improve efficiency by systemizing smart factories and increasing

crude steel production per worker from 5.14 Mt in 2015 to 100 Mt in 2020. In particular, Baowu Steel plans to smartize its factories in collaboration with Siemens and share this experience among local companies. In addition, the Chinese government has raised emission standards for the steel industry and encouraged eco-friendly steel production.

Fifth, it will accelerate globalization. In 2015, the Chinese government lifted its ban on foreign control of steel companies. Under the guidelines for development of the steel industry first suggested by the Chinese government in 2005, foreign companies were not allowed to own more than 50% of equity or hold a management right in a Chinese company.

The Chinese government will encourage foreign capital to participate in the restructuring of the Chinese steel industry and secure advanced technologies, management knowhow, and overseas networks through joint ventures with lead-



ing global companies. Furthermore, it will expand into neighboring markets under the One Belt, One Road (OBOR) initiative with an enhanced competitive edge in exports and investment. Chinese steel exports to Southeast Asia and East Europe surged in 2013-2016. During the same period, China's exports to Indonesia and Vietnam rose by CAGRs of 37.5% and 44.7%, respectively. Turkey and Saudi Arabia saw the figures rise a respective 53.9% and 35.5%. Chinese steel companies' exports to and investments in the OBOR regions will continue to soar.

If the steel policy goals for Xi's second term are achieved, the Chinese steel industry will be upgraded in terms of quality and greatly impact the global steel industry. Scaled-up Chinese steelmakers will be able to heighten their global competitiveness by improving technologies and creating higher-quality products. Chinese massive investments in smart and green manufacturing will drive innovations in the global steel industry.

As a result, China's large steelmakers with their heightened quality will be able to encroach not only into the OBOR regions, but global markets as well through their smart and green production technologies.

If the global steel industry fails to promptly adapt to the changes in Chinese steel policies and the upgrades in quality in its steel industry, it will face severe effects incomparable to those stemming from the quantitative easing in the Chinese steel industry in the early 2000s and the crisis in the Chinese steel industry of 2013-2015. Therefore, the global steel industry should pursue in-depth analysis of the quality improvements in the Chinese steel industry during Xi's second term and conduct regular monitoring of policy shifts to fully grasp the resulting influence on the global steel market. Steel associations, steel companies, and related governments should closely cooperate to jointly respond to the potential changes that China will bring to the steel industry. 🌐