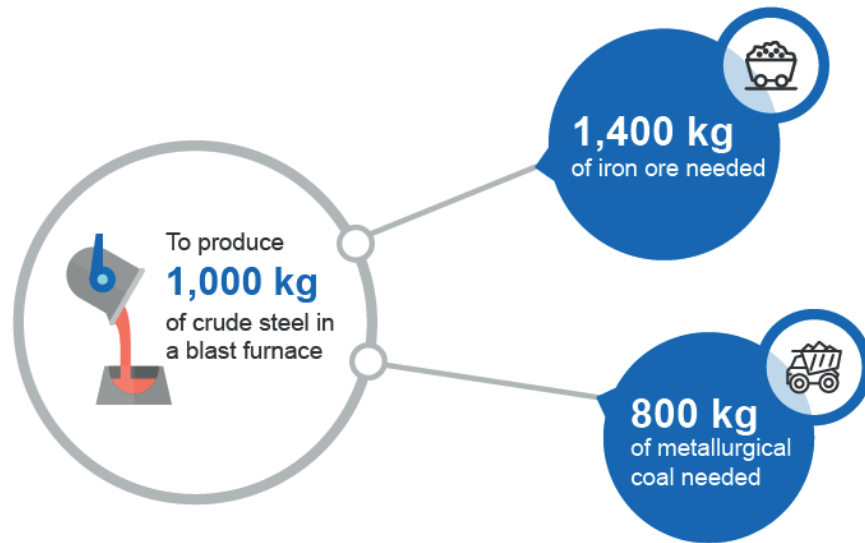
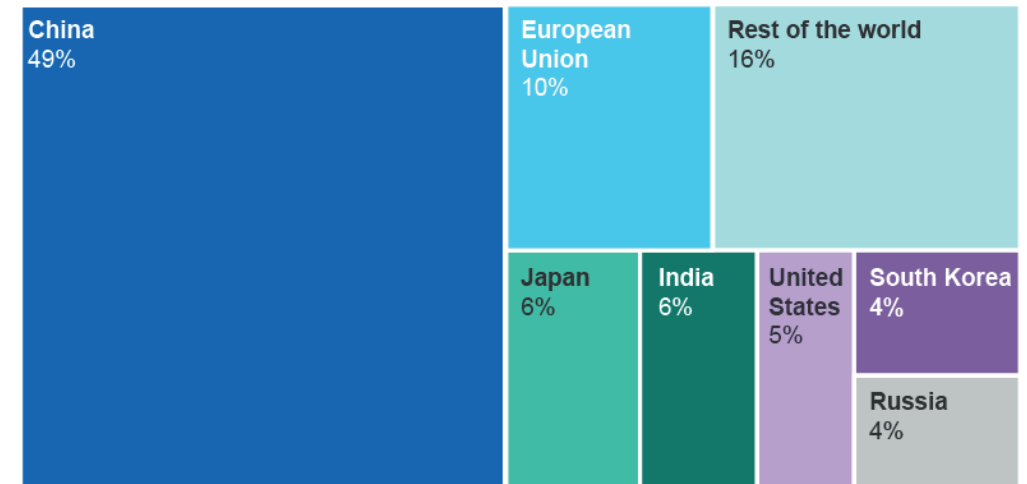


Steel

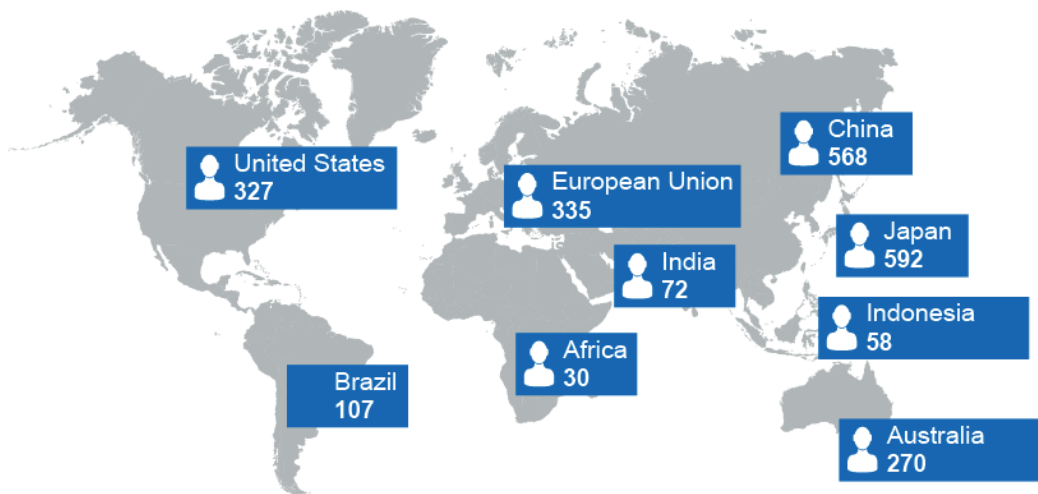
Resources and Energy Quarterly December 2018



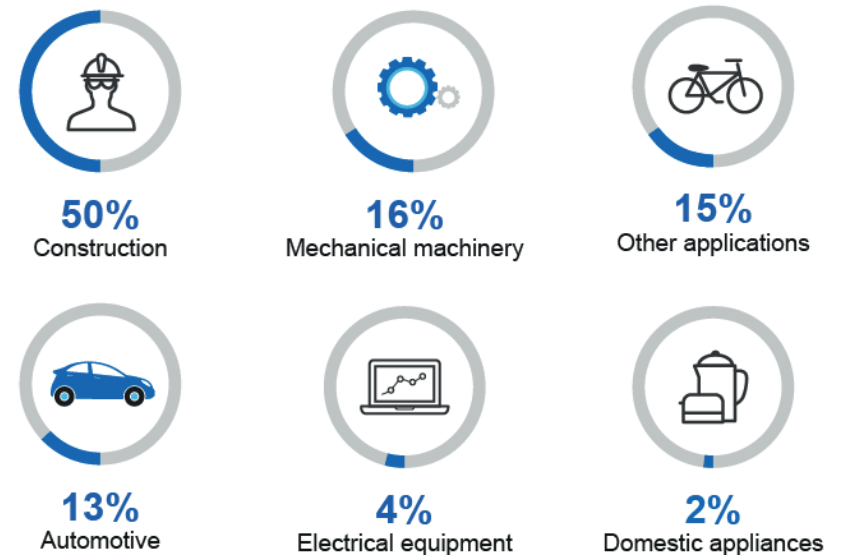
Major steel producers, 2017



Steel consumption per capita (kilograms per person), 2017



Steel use by sector



3.1 Summary

- World steel production is forecast to rise from 1.7 billion tonnes in 2017 to 1.8 billion tonnes in 2020, as broad growth across most major producers keeps pace with consumption.
- Compared to the strong year-on-year growth of 4.9 per cent in 2018, world consumption is forecast to grow at a slower pace over the next two years, due to softening global economic growth.
- Growing consumption will be led by several emerging markets, while consumption in China — the world's largest consumer — is forecast to be steady in 2019 and taper in 2020.
- The threat of escalating protectionist trade policies is expected to have a smaller than previously expected, but still negative, impact on downstream demand for products containing steel.

3.2 World production and consumption

World steel production increased strongly in the ten months to October 2018 compared to last year, driven by high steel prices and margins, robust production in China — the world's largest steel maker — and a rise in the capacity utilisation of steel mills in major producing nations.

World steel production and consumption set to rise

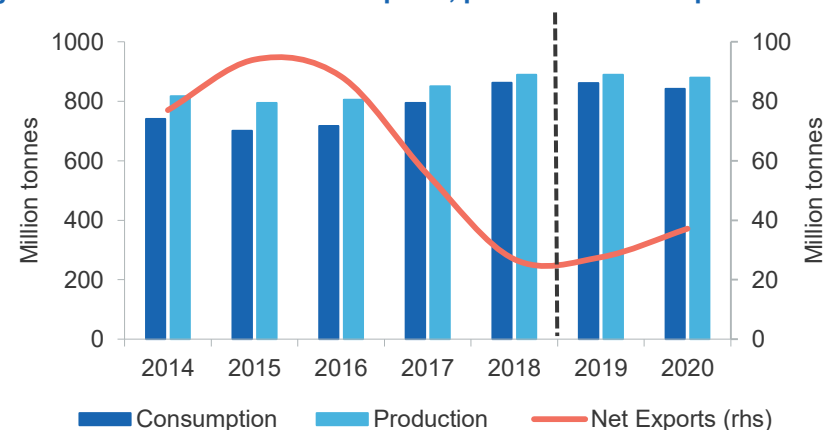
World steel production is forecast to increase by 1.8 per cent annually from 1,689 million tonnes in 2017 to 1,780 million tonnes in 2020. Higher production will be led by growth in India and other emerging markets (Figure 3.2), while production in China — which represents half of world production — is expected to be steady in 2019 and taper in 2020, driven by an expected slow-down in economic growth, offsetting higher infrastructure investment.

World steel consumption is forecast to increase at an annual average of 1.4 per cent from 1,707 million tonnes in 2017 to 1,779 million tonnes in 2020. Higher consumption will be led by growth in India and other emerging markets (excluding China). Demand elsewhere is forecast to be steady, with some tapering in demand from China, the US and European Union, driven by slowing economic growth over 2019 and 2020.

Slowing growth in China impacting on steel production

Chinese steel production is forecast to be steady in 2019 (Figure 3.1). Winter pollution restrictions are expected to reduce steel production in the first quarter of 2019, however steel makers are expected to resume near full capacity over the rest of 2019. Many Chinese steel mills have implemented strategies to mitigate the impact of winter pollution controls and larger, more efficient producers are expected to endure more lenient capacity constraints. Ongoing environmental controls and high steel margins are expected to incentivise the use of scrap material by Chinese steel mills over the outlook period, weighing on the demand for iron ore.

Figure 3.1: China's steel consumption, production and exports



Notes: Net exports is the sum of total steel production minus consumption

Source: World Steel Association (2018); Department of Industry, Innovation and Science (2018)

China's steel production is expected to decline in 2020, driven by slowing economic growth. A government-driven boost in infrastructure spending over 2018 and 2019 is expected to taper in 2020. Supply-side reforms over the past several years — aimed at reducing some loss-making production capacity — are expected to reach a conclusion by 2020. However, ongoing environmental pressure may induce some relocation of steel production across China, creating some uncertainty regarding the net effects on future capacity.

Chinese steel consumption is forecast to be steady in 2019, after three years of substantial growth, driven by strong demand from construction and infrastructure investment. Chinese steel consumption is forecast to moderate to 842 million tonnes in 2020. Cooling economic growth is expected to taper industrial production and urban residential construction from its current rapid pace over the outlook period, weighing on steel consumption. However greater government spending on infrastructure, particularly domestic railways, is expected to partially offset the impact of a slowing economy.

China's net exports of steel are forecast to decline from 55 million tonnes in 2017 to 31 million tonnes in 2020, driven by slowing global economic growth. China's exports are expected to be increasingly directed towards emerging markets in South East Asia, and further supported by the development of One Belt One Road infrastructure projects.

Steady growth elsewhere alongside strong growth in India

Steel production in the EU — the world's second largest producer and consumer — is forecast to increase by 1.3 per cent annually, from 168 million tonnes in 2017 to 175 million tonnes in 2020, in line with the pace of growth in consumption.

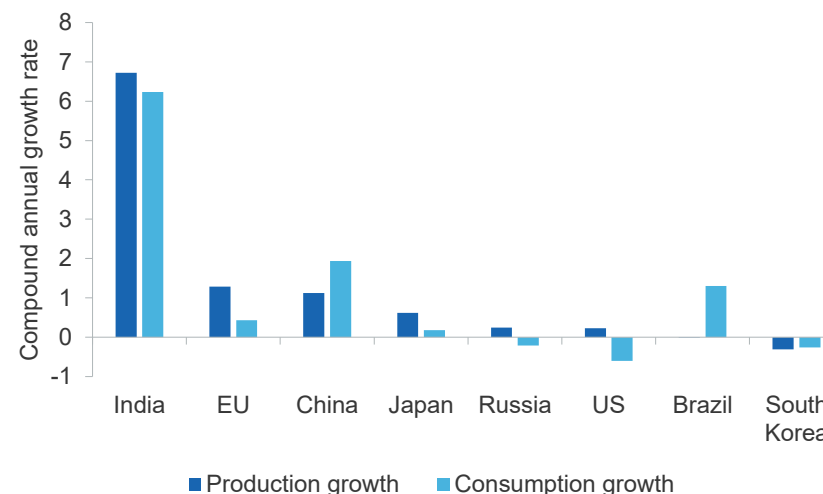
Japan's steel production is forecast to be steady in the short-term, as higher exports offset slow consumption growth. Domestic consumption benefited from 2020 Olympics-related projects, however an increase in consumption tax (from 8 to 10%) from 1 October 2019 is expected to lower consumption, construction and investment. Japan's net exports are forecast to rise over the outlook period, but slowing global growth remains a key risk to the downside as does the threat of US tariffs on vehicles.

Emerging markets (excluding China) are forecast to increase steel production by 2.5 per cent each year, from 328 million tonnes in 2017 to 345 million tonnes in 2020. Higher production will be driven by the ongoing expansion of India's steel-making capacity. India's steel production is forecast to grow by 6.7 per cent annually to reach 123 million tonnes in 2020 (representing 7.0 per cent of world production).

Consumption in emerging markets (excluding China) is forecast to increase by 2.4 per cent each year, from 253 million tonnes in 2017 to 271 million tonnes in 2020. Higher consumption will be driven by rising consumption in India and other parts of Asia. India's steel consumption is forecast to grow strongly over the outlook period, driven by rapid urban population growth, substantial government investment in infrastructure, housing and urban development, and its growing manufacturing sector.

Steel production in the US grew by 4.8 per cent year-on-year in 2018 to an estimated 86 million tonnes, supported by trade tariffs on imported steel products. However, with the onset of slowing residential construction, steel consumption and production are forecast to decline in 2019 and 2020. US tariffs are expected to have a small negative impact on steel consumption over the outlook, but are unlikely to be a key driver of total world consumption, which depends mostly on economic growth.

Figure 3.2: Production and consumption growth from 2017 to 2020



Notes: Calculated as compound annual growth rate from 2017 to 2020

Source: Department of Industry, Innovation and Science (2018)

Table 3.1: World steel consumption and production

Crude steel consumption	Million tonnes				Annual percentage change		
	2017 ^s	2018 ^s	2019 ^f	2020 ^f	2018 ^s	2019 ^f	2020 ^f
World steel consumption	1,707	1,791	1,794	1,779	4.9	0.2	-0.9
China	795	862	862	842	8.5	-0.1	-2.3
European Union 28	172	175	174	174	1.7	-0.2	-0.2
United States	109	109	108	107	0.2	-1.0	-1.0
India	96	103	109	116	6.7	6.0	6.0
Japan	75	75	75	75	0.2	0.2	0.2
South Korea	59	59	59	59	-0.1	-0.3	-0.4
Russia	43	42	42	42	-0.9	0.3	0.0
Brazil	22	23	23	23	0.7	1.7	1.5
Crude steel production	2017	2018 ^s	2019 ^f	2020 ^f	2018 ^s	2019 ^f	2020 ^f
World steel production	1,689	1,785	1,791	1,780	5.7	0.3	-0.6
China	850	889	889	879	4.6	0.0	-1.2
European Union 28	168	171	174	175	1.3	1.6	0.9
Japan	105	105	106	107	0.2	0.8	0.9
India	101	106	115	123	4.8	8.5	6.9
United States	82	86	84	82	4.8	-2.0	-2.0
Russia	71	72	72	72	1.2	-0.5	0.0
South Korea	71	72	71	70	1.7	-2.2	-0.4
Brazil	34	35	34	34	1.3	-2.1	0.8

Notes: ^s estimate ^f forecast.

Source: World Steel Association (2018); Department of Industry, Innovation and Science (2018)