

### Topical Section: Steel Sector: The Need for a Long Term Strategy

For overall economic development of a country, a developed steel industry is very crucial. In the early stages of economic development, steel consumption is expected to increase at a faster rate because huge quantities of steel are required to build basic infrastructure, including bridges, dams, railways, and power generation, distribution and transmission projects, etc. Steel is also a principal raw material in the production of all kinds of machinery, equipment and vehicles.

Pakistan is a developing economy with abundant potential to attain faster industrial growth. However, sustainable industrial and economic growth depends on an assured supply of steel. Inadequate availability of steel acts as a natural drag on development efforts in almost all sectors of the economy. Therefore, planning for steel production should be a critical part of overall development planning in the country.

Presently Pakistan produces around six million metric tons of steel per year. This includes: raw products (iron ore and scrap); flat products (sheets and plates, used in the automotive sector); and long products (steel bars, wire rods, rails and structures used in infrastructure development and tubes and pipes). However, per capita steel consumption in Pakistan is very low at 23.5 kilograms, against 58.6 kilograms in India, as well as the Asian average of 261.3 kilograms and the global average of 216.9 kilograms (**Table S1.1**).

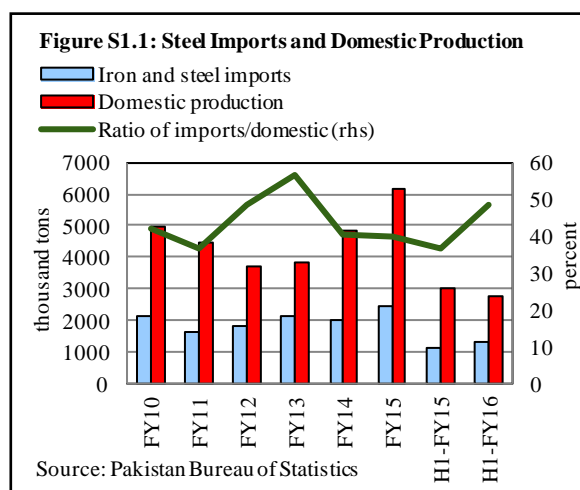
**Table S1.1: Per Capita Consumption of Finished Steel Products (kg)**

|               | 2010    | 2011    | 2012    | 2013    | 2014    |
|---------------|---------|---------|---------|---------|---------|
| Bangladesh    | 12.3    | 13.1    | 14.9    | 15.5    | 16.9    |
| Pakistan      | 16.5    | 16.3    | 18.1    | 19.3    | 23.5    |
| India         | 52.8    | 55.9    | 57.3    | 57.6    | 58.6    |
| Vietnam       | 119.7   | 108.6   | 121.3   | 128.8   | 156.2   |
| Indonesia     | 37      | 44.7    | 50.4    | 50.5    | 50.7    |
| China         | 438.2   | 475.6   | 487.0   | 539.5   | 519.0   |
| South Korea   | 1,067.2 | 1,142.5 | 1,089.9 | 1,038.4 | 1,108.8 |
| Asia          | 226.7   | 242.9   | 247.5   | 266.3   | 261.3   |
| World average | 193.2   | 206     | 207.4   | 217.8   | 216.9   |

Source: Steel Statistical Yearbook 2015

The government's increased focus on infrastructure has resulted in the initiation of a series of development projects during the last two years. These include foreign-funded projects, particularly those under the China-Pakistan Economic Corridor (CPEC) framework. Besides, this policy focus has also encouraged private firms to invest in various projects. Given the critical role of steel in the development of roads, railway, dams and power infrastructure, as well as the current pace of development projects being pursued in the country, the demand for steel and allied products is expected to increase significantly. In order to meet this higher demand without resorting to imports over the medium- to long-term, the country will need sizable investment in this industry in the coming years.

Pakistan's steel industry comprises a complete and a closely intertwined value chain – from pig iron furnaces to downstream sectors and end-user industries. However, steel production has not been very stable in the country (Figure S1.1).<sup>1</sup> Part of the reason for this lack of dynamism is that the steel industry is extremely fragmented: there are at least 600 players in the industry, with no clear leaders that are able to provide vision and direction.



Moreover, Pakistan's steel industry is characterized by small plants, most of which are utilizing obsolete technology. In particular, most melting, re-rolling and fabricating firms have small-size plants compared to their competitors in steel-exporting countries. Similarly, the use of outdated (and energy inefficient) technology raises these firms' cost of production and results in output with low quality and varying standards.<sup>2</sup>

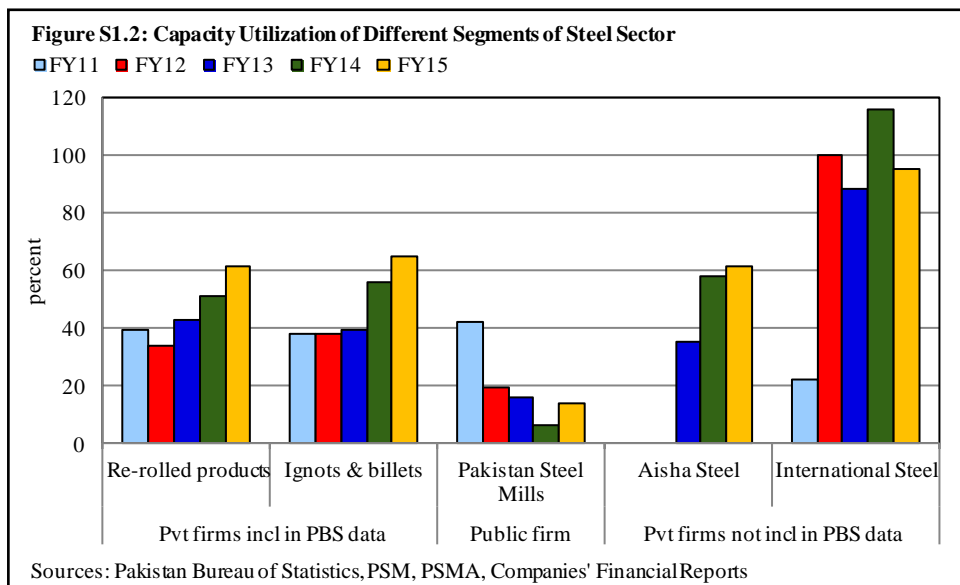
As a result, these products cannot compete with cheaper imports, particularly from India and China,<sup>3</sup> where manufacturers enjoy benefits from economies of scale

<sup>1</sup> Although the industry is far from exploiting its full market potential, some individual players have seen significant growth in the past few years. These include Agha Steel, which produced 150 thousand tons in 2015 (and aims to double this capacity to 300 thousand tons in 2019); Amreli Steels which manufactured 180 thousand tons in 2015 (and aims to reach half a million tons in 2017); and International Steel Limited, which produced 463 thousand tons in 2015 (and aims to increase this capacity to a million tons in 2016).

<sup>2</sup> Steel production is highly energy intensive (energy constitutes 20 to 40 percent of total cost). Sophisticated energy management systems have led to reductions of about 60 percent in the energy required to produce a ton of crude steel since 1960 in most top steel producing countries (World Steel Association). However, in Pakistan, most of the domestic production units are about half as efficient in their energy consumption as international benchmarks.

<sup>3</sup> A big challenge for Pakistan's steel industry is Chinese imports. Pakistan has a free trade agreement with China, which ensures that finished goods are imported at concessional rates of duty. In 2015, China produced 823 million tons (about 50 percent of world steel production) and exported a record 100 million tons; Pakistan, being one of its largest importers, witnessed a sharp increase (of 22 percent) in steel imports from China during H1-FY16.

and more efficient production processes.<sup>4</sup> The domestic industry therefore operates at only 60 percent of its installed capacity, despite strong local demand for steel products (**Figure S1.2**); this further raises the firms' cost of production.<sup>5</sup> Thus, not surprisingly, almost all segments of the value chain continue to remain heavily dependent on imports. Indeed, the healthy growth of 24.8 percent in steel production during FY15 was associated with a 34 percent increase in quantum imports of iron and steel scrap (at a cost of US\$ 2.6 billion).<sup>6</sup>



Power shortage is also a big concern for local manufacturers; besides, the cost of electricity is also very high. These, coupled with the challenge of competing with low-cost imports, has compelled steel manufacturers to divert investment to self electricity generation and dedicated feeders. From a long-term policy perspective, the local industry will need to acquire economies of scale and modern, efficient technology to become competitive. This is not to say that no large manufacturers currently exist in Pakistan: Pakistan Steel Mill (PSM), International Steel, Aisha Steel and Amreli Steel etc. are some large-scale domestic producers. But they require adequate policy support in order to smoothly run their operations.

<sup>4</sup> Local plants are unable to meet the domestic demand for high quality products (particularly those that are used in the assembling of automobiles and appliances).

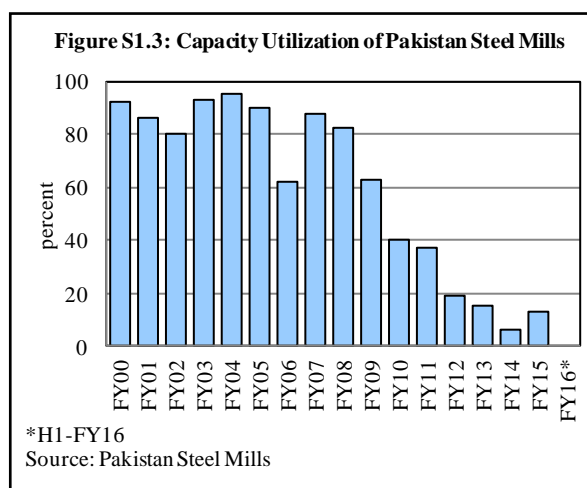
<sup>5</sup> The global average capacity utilization has remained around 80 percent during the last few years.

<sup>6</sup> Falling international prices of iron, steel and allied products over the last few years made it feasible for the domestic sector to import huge quantities; the industry would not be able to sustain this level of imports if prices revert.

PSM, despite having outdated technology, still holds the largest production capacity in the country.<sup>7</sup> However, despite several bailout packages, the persistent administrative and financial constraints are keeping it far from becoming self-reliant, (Figure S1.3).<sup>8,9</sup>

PSM's sluggish performance has repercussions for the entire value chain: most of the small firms in steel smelting and re-rolling rely on low quality scraps (mainly form ship breaking). The resulting quality impacts output in the later stages of the value-added chain. Privatization would help restore PSM's operations on a sustainable basis, and this would also have positive spillover on the rest of the supply chain.

In the private sector, two large-scale steel plants (International Steel and Aisha Steel)<sup>10</sup> utilizing efficient and internationally proven technology came online during the last five years.<sup>11</sup> Tuwairqi, the largest steel complex in Pakistan, could not start commercial operations, primarily due to gas pricing issues. As far as Aisha and International Steel are concerned, they have the potential to contribute to the



<sup>7</sup> PSM can feed downstream industry – steel melters, re-rollers and engineering industries – with a wide variety of products, like pig iron, billets, slab sheets and coils.

<sup>8</sup> The government had provided several bailout packages to retire PSM's outstanding liabilities, but these could not revive the mill's operations on a sustainable basis. For example, on 25<sup>th</sup> April 2014, the Economic Coordination Committee had approved a restructuring plan of Rs 18.5 billion. Despite this support, PSM's capacity utilization remained below 20 percent during FY15, against the target of 77 percent. Since July 2015, PSM's production has come to a standstill due to unavailability of gas.

<sup>9</sup> Since 2006, PSM's debt and accumulated losses (net) have soared to Rs 170 billion. Due to nonpayment of dues (Rs 18.1 billion), gas supply to the firm has also been stopped, resulting in a complete closure of the mill. This is adding around Rs 1.6 billion in losses a month (Source: PSM).

<sup>10</sup> Aisha Steel Mill started commercial operations in 2009 and produces hot rolled (HR) and cold rolled (CR) products. International Steel came online in 2011 and manufactures HR, CR, galvanized and color-coded steel products.

<sup>11</sup> Both plants are based on Japanese technology.

industry with their large scale and modern technology, if adequate policy support is provided.

In view of the significance of steel for other sectors of the economy, Pakistan needs a clear and consistent policy. Such a policy should identify segments in the steel chain that need protection at the initial stage; define and enforce quality and performance standards; and ensure fair competition in the market. This policy should also consider the level of protection available to steel manufacturers in Pakistan's competitors, especially China and India. Here it is important to recall that due to ongoing public developmental spending, and the initiation of infrastructure projects under CPEC, steel consumption is likely to remain strong in coming years. If investment and domestic production in the country fails to keep pace, the additional demand for steel will have to be met by imports, putting additional burden on the country's balance of payments.