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**“The State-Business Nexus in China’s Steel Industry  
– Chinese Market Distortions in Domestic and International Perspective”**



**This report has been prepared for EUROFER – the European Confederation of Iron and Steel Industries**

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## Executive Summary

- **Chinese steel industry is firmly embedded in a powerful state-business nexus. China's steel enterprises are not operating in a competition based domestic market environment, but rather uphold very close relations to government agencies on local, provincial as well as central levels.** All major developments regarding overall industry organization, concentration levels, regional cluster development, inward FDI policies etc. as well as individual firm strategies regarding product developments, import/export activities, outward bound FDI initiatives etc. are co-determined and directed by government organizations.
- **The government's claim to guide and even direct the developments of the Chinese steel industry is clearly stated in the "Eleventh Five Year Program for Economic and Social Development" and specifically the "Iron and Steel Industry Development Policy" constituting the centerpiece of all steel related policy initiatives by China's government authorities.** This latter document provides:
  - A comprehensive and detailed catalogue outlining the central government's development goals for the nation's iron and steel industry.
  - Instruments the Chinese government intends to employ in order to push the steel industry and individual enterprises in the intended direction.
  - Precise rules determining numerous sanctions to be imposed on companies violating government policies, thereby contradicting the notion of a non-binding character of policy initiatives directed towards the steel industry.
- **In Chinese steel industry, a multi-layered system of alliances can be identified.** At the national (central government) level, the Chinese steel industry is being directed and more or less micro-managed by a politico-business alliance ('China Steel Inc.'). 'China Steel Inc.' is made up by the National Development and Reform Commission (NDRC), the China Iron and Steel Association (CISA), the State-owned Asset Supervision and Administration Commission of the State Council (SASAC) as well as the top management of China's leading steel enterprises.

In addition, often in defiance of the 'China Steel Inc.', local governments and smaller steel enterprises form their own local alliances promoting local steel enterprises and provide them with protection in the face of adverse (central) policies. **The politico-business alliances on the central ("China Steel Inc.") as well as local levels result in a situation where 'market failures' are reinforced by 'policy failures'.** 'Market failures' arise as market mechanisms are not allowed to perform their regulatory function, 'Policy failures' because the juxtaposition of the politico-business alliances results in a rather paradoxical state of over-regulation and excessive political interference on the corporate level while at the same time an overarching regulatory framework is lacking on the macro-level.

- This ‘market failure’ cum ‘policy failures’ results – *inter alia* – in irrational capacity expansion and the creation of massive overcapacities estimated to amount to more than 100 million tons/year covering all product ranges. (Estimation based on supply-demand structures existing before the sub-prime crisis led the global economy into recession. Since then the mismatch between installed capacity and demand is further expanding.)
- The relationship between state and business in China’s steel industry goes beyond joint planning, protection and decision making processes, also involving substantial monetary and non-monetary support and protection by government agencies as well. **A broad array of mechanisms by which governments support ‘their’ steel enterprises can be identified, including grants, various kinds of ‘in-kind’ as well as fiscal subsidies, capital market interventions, preferential tax arrangements, subsidized loan facilities, access to systematically under-priced inputs, non-execution of internationally accepted minimum standards of labor protection and environmental sustainability, etc.**
- Against the background of these findings, we come to the conclusion that the Chinese steel industry is not governed by market principles. Instead a complex array of arms-length state-business interactions is determining industry developments and ‘market’ outcomes. Government organizations are intervening directly and indirectly in industry development as well as the micro-management of individual steel enterprises. As such, **the cost structures and sales prices of China’s steel enterprises do not reflect real market constellations and scarcities. In general, it can be stated that China’s steel enterprises are operating at artificially depressed cost levels.**
- It is against these findings that the emergence of Chinese steel enterprises as major exporters on the global steel markets must be evaluated. In the run of a few years only, **China has transformed itself from a net importing country to the – by far – largest steel exporter in the world.** In 2007, the country already commanded a share of 20.7 percent of global steel exports. **Chinese steel exports to Europe have increased at an even greater speed than China’s total steel exports.** The Chinese share of total EU steel imports has quickly risen to reach almost 20 percent in 2007. A substantial share of these has been in the area of higher value-added products. European imports from China in this category, which among other items include metallic coated sheets and cold rolled stainless sheets, have increased more than eight-fold between 2005 and 2007.
- **The expansion of Chinese export activities is not based on a genuine competitive advantage of China in steel making.** On the contrary, our analysis shows that Chinese steel exports to Europe actually incur higher costs than those that arise to European producers supplying the local markets. Given only minor cost differences in ex-works production costs, the cost/price competitiveness of Chinese

exporters on the European markets hinges on international shipping costs. Adding these to the equation, Chinese steel mills end up with a clear cost disadvantage when trying to sell their products on the European markets.

- However, the **Chinese government is promoting export activities by domestic steel producers on a highly selective basis**, targeting higher value-added, technology intensive products as the vanguard of China's steel exports. Specific measures include an intricate set of cascading value added tax (VAT) rebates and export taxes that provides for a discretionary steering of export activities. These VAT export rebates may be coupled with income tax reductions, preferential export credits and guarantee schemes provided by the China Export Import Bank (China Eximbank) and other state-owned financial institutions.
- The emergence of Chinese steel enterprises as major exporters on the global, and particularly the European steel markets must therefore be understood as being the result of intra-firm cross-subsidization practices as well as serious policy induced distortions in the 'market' process in China. **By distorting the cost/price competitiveness of Chinese steel enterprises vis-à-vis foreign enterprises, Chinese government organizations are interfering in the global market system, impeding its allocative and welfare enhancing function.**

## Introduction: Development Trends in the Chinese Steel Industry

Chinese economic growth starting 30 years ago has, in terms of dynamics and duration, long since surpassed all the “economic miracles” of the modern world that have brought Germany, Japan, and the South East Asian Tigers into the top-league of the industrialized world. Starting as a poor and internationally isolated country, China today has become the second largest economy worldwide on a purchasing power parity basis and now constitutes the third largest player in the trade-based global division of labor.

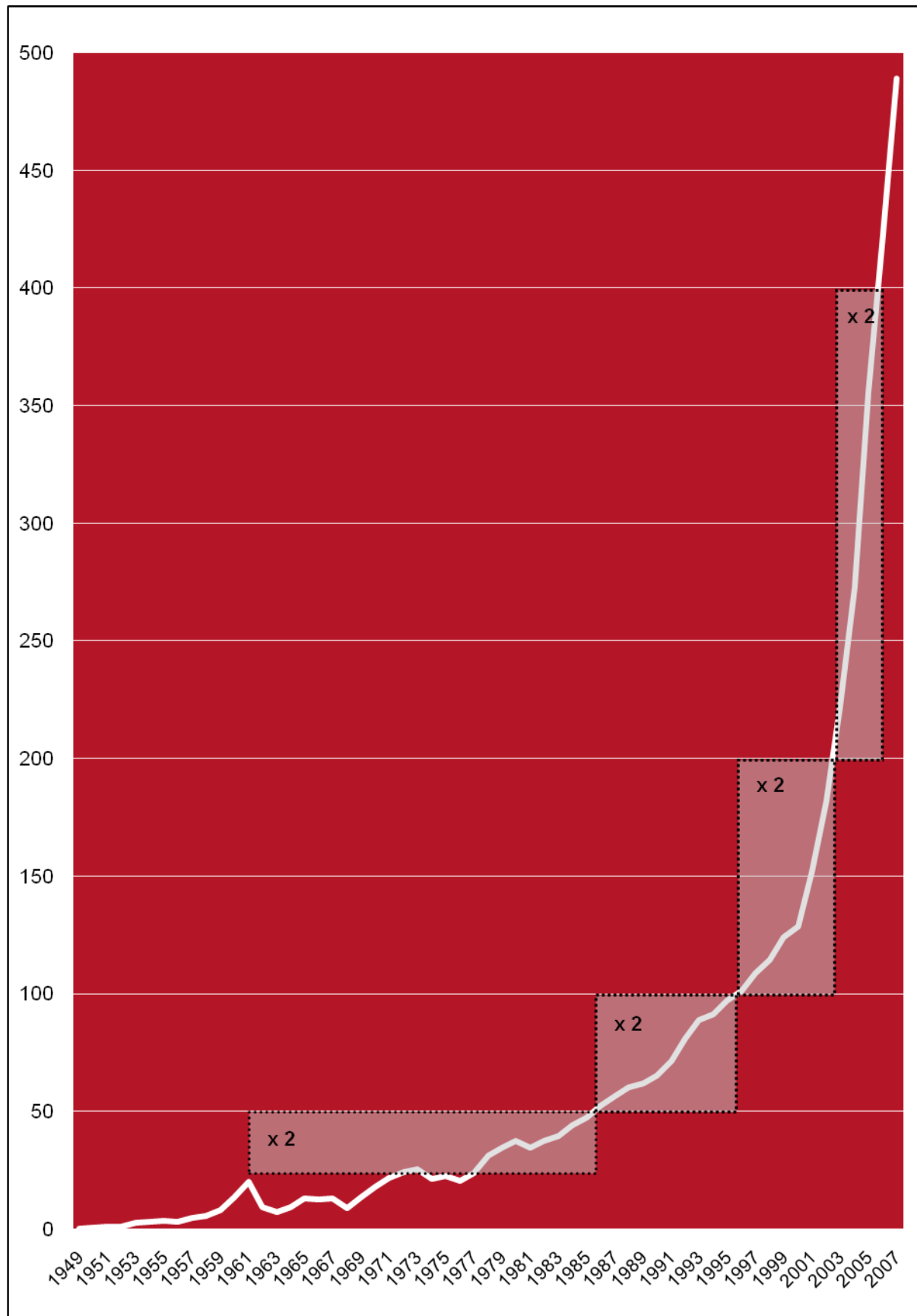
Against the backdrop of these remarkable developments, the Chinese steel industry has written an even more spectacular growth story. For the last 30 years, its crude steel output has grown exponentially from about 25 million tons (late 1970s) to nearly 500 million tons in 2007. Especially in the new century, China’s steel producers have dramatically expanded their production (cf. figure 1). Looking at the installed production *capacities*, the recent expansion of the Chinese steel industry becomes even more astounding. **While not even Chinese authorities seem to know the actual figure, it appears safe to assume that the Chinese steel industry features excess capacities in the range of 100 million tons/year.** These overcapacities are not restricted to low value-added products, but are increasingly to be found in the high-value added product range as well.

**Today, China has become the by far largest steel nation in the world economy. In terms of crude steel production, China presently commands a share of more than one third [2007: 36 percent] of the world’s total output (cf. fig 2).**

A substantial share of the increased steel output has been absorbed by China’s rapidly expanding economy. But, as the mismatch between installed capacities, actual production and domestic consumption indicates, the Chinese steel industry has been expanding much faster than the rest of the economy. As Li Yizhong, Chinese Minister of Industry and Information Technology, has pointed out at a recent industry conference, the government expects the country’s steel output to reach 490 million tons in 2008. This implies a sharp downward correction of annual output estimates from an expected 540 million tons announced earlier in the year. While the extent of capacity expansion remains a wild card, Li admitted that existing facilities could have produced a further 110 million tons. As a result, Chinese steel producers are increasingly venturing out to global markets. While in 2005 China was still featuring net imports of steel products amounting to 153 thousand tons, in 2007 the balance had turned to a surplus with net exports amounting to about 50.9 million tons.

Since 2006, China has become the – by far – largest steel exporter in the global economy (cf. fig. 3).

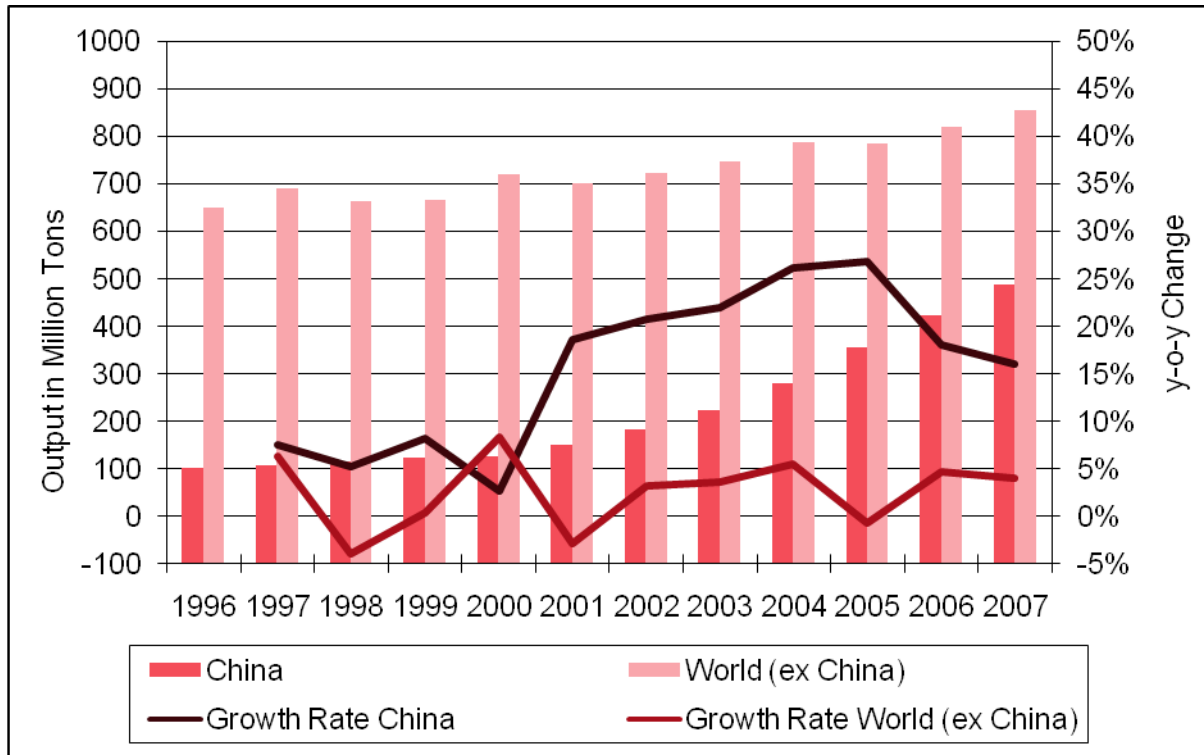
**Figure 1: Development of the Chinese Steel Industry, 1949-2007**



Data: CISA.

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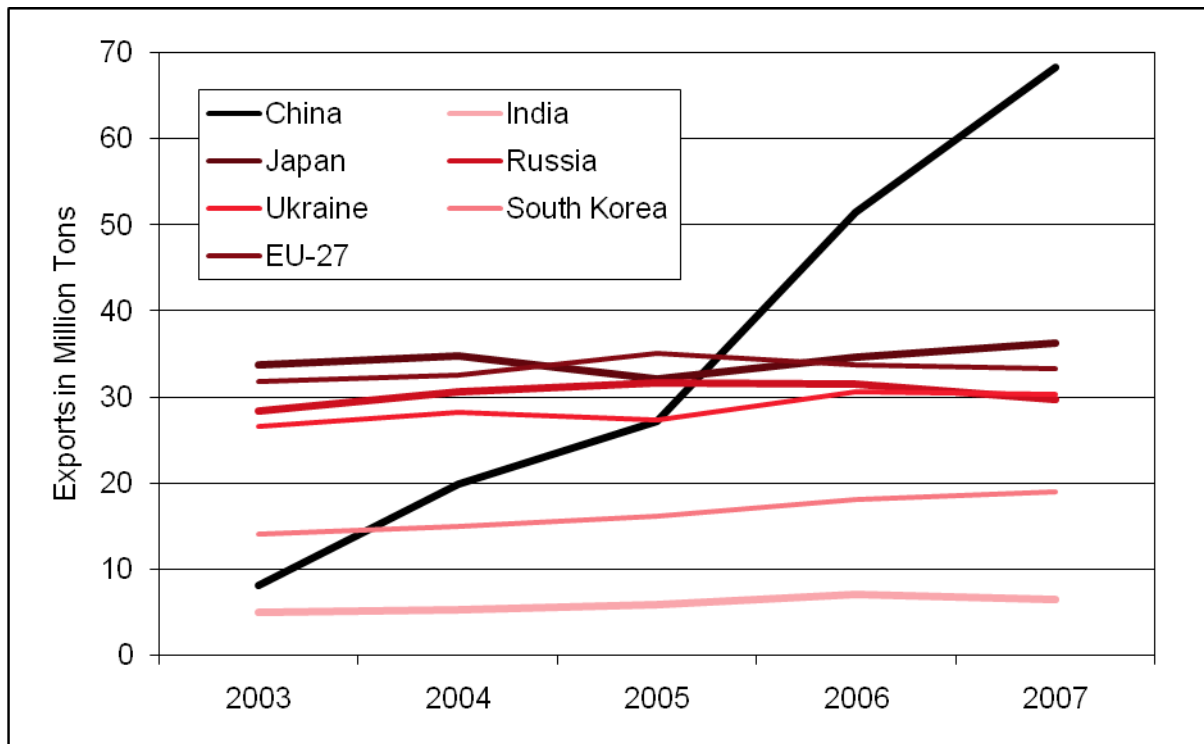
**Figure 2: Crude Steel Production in China and the 'Rest of the World', 1996-2007**



Data: CISA, International Iron and Steel Institute Statistics.

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**Figure 3: China's rise to the top of the world's steel exporting nations**



Data: Iron and Steel Statistics Bureau, Chinese Customs Statistics.

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The modernization and technological upgrading of the Chinese steel industry by itself may be understood as a very welcome phenomenon which has the potential to promote global market development, give rise to new forms of complementary interaction as well as competition based incentives for innovative products, production processes, etc. Furthermore, in terms of the globally shared responsibility for environmental protection and a deceleration of climate change, an industry-wide technological upgrading of the Chinese steel industry would amount to a major step towards improved environmental standards on a global scale.

A closer look at the micro-foundations and the political framework underlying the rise of the Chinese steel industry, however, raises some doubts about its welfare enhancing potential in a competition based market environment as well as the 'green' rents the global community may reap from its contemporary development. The study "The State-Business Nexus in China's Steel Industry – Chinese Market Distortions in Domestic and International Perspective" therefore conducts an in-depth analysis of the driving forces and working principles underlying the development of the Chinese steel industry.

The information presented in this Report is based on a detailed analysis of primary as well as secondary sources. Primary sources include official economic development plans (2001-2005) and Programs (2006-2010) on a national, provincial and local levels as issued by the National Development and Reform Commission (NRDC), official reports by the China Iron and Steel Association (CISA), as well as annual and quarterly financial reports of leading Chinese steel enterprises. These primary sources are mostly available in Chinese language only. Secondary sources include, press reports in Chinese and western media, sector studies as well as trade policy papers as published by supranational organizations (WTO, UNCTAD, ILO etc.), industry representatives and political organizations in Europe, Japan, and North America. Interviews have been conducted with official as well as corporate representatives in China as well as in Europe.

The study is organized in the sequence:

- **RELEVANCE** of the 'China factor' to Europe (section 2)
- **WHO** are the decisive actors in China (section 3)
- **WHAT** do they wish to accomplish (section 4)
- **HOW** are they trying to do this (section 5)
- **EVALUATION** of the developments in China from a European perspective (section 6)

Shown in greater detail, the report is structured as follows. In section 2, we deal with the question of what relevance the present developments in China's steel industry have on Europe. Until very recently, developments in China had no or only negligible influence on European markets. In how far has this changed? What is the impact of rising steel capacities and steel exports originating in China on the European markets? Against this background, in section 3, we take a closer look at the major players in China's steel industry and the general way the Chinese steel industry is run. In particular, we examine the overall interaction



between state and market forces in the Chinese steel industry and highlight the specific state-business nexus in China's post central planning economy. Section 4 analyses the major

policy programs designed to provide guidance to the steel industry and its stakeholders in management positions as well as government agencies at various levels. Here, we focus on the sets of documents constituting China's "Eleventh Five Year Program for Economic and social Development" as well as the "Iron and Steel Industry Development Policy". In section 5, we take a closer look at the specific policy tools and discretionary instruments by which Chinese government organizations are meddling with the micro-management of Chinese steel enterprises and intervene in industry development. In section 6, we wrap up our analysis with a final evaluation of the character of state-business interaction in the Chinese steel industry and its impact on the European markets. Section 7 finalizes the study with some concluding remarks.

## Impact of Steel Industry Developments in China on Europe

For nearly fifty years after the foundation of the new China in 1949, the country was not known to be a significant player in the global steel markets – let alone a major exporter of steel products. For European steel enterprises, China was anything but a central part of their strategic considerations. Developments in China were not monitored in terms of their impact on global price movements until the nineties. This has changed considerably. After the turn of the millennium, China has set out to become a major player in the international steel trade circus and today exerts significant impact on the success or failure of European steel businesses. There is no doubt: For present day steel markets ‘China matters’.

From the perspective of the European steel industry the ‘China factor’ manifests itself in three different forms:

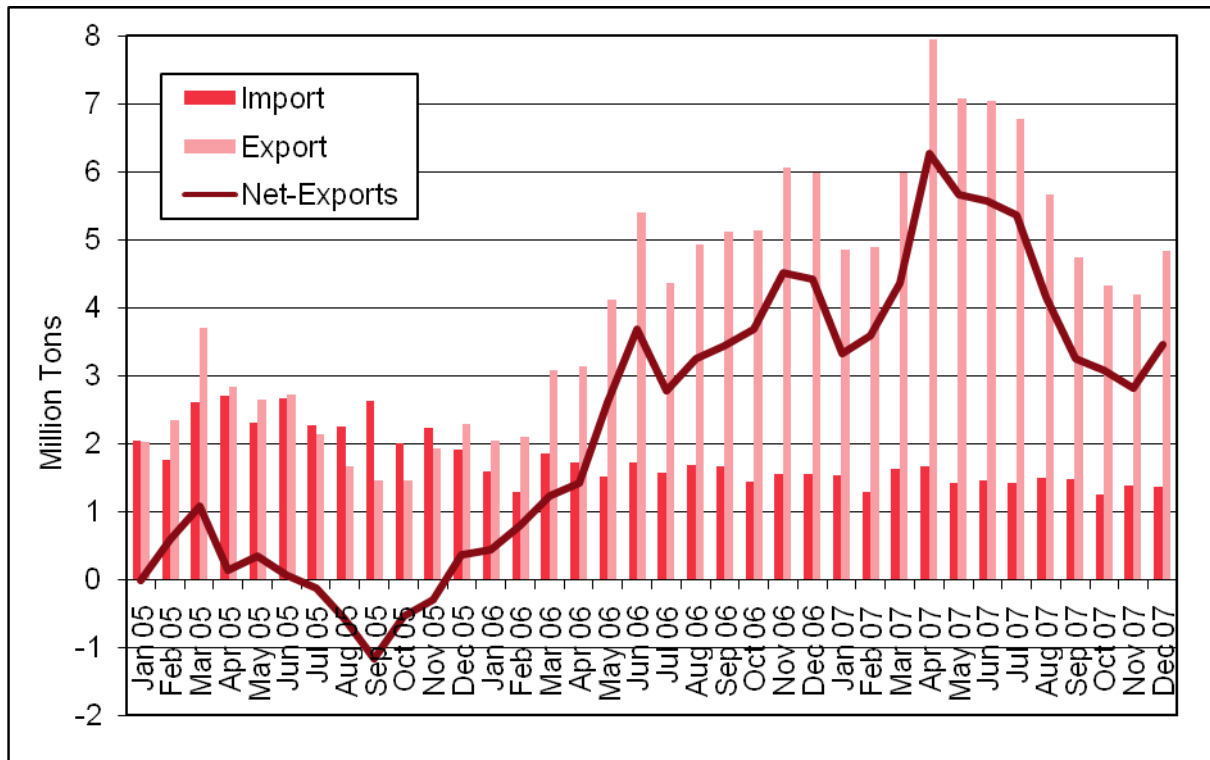
- (1) China as a newly arising competitor in traditional sales markets and in particular the domestic European markets,
- (2) changes in the absolute and relative importance of China itself as a sales market for European producers, and
- (3) changing global prices for raw materials, semis and final products caused by demand (as well as supply – coke) shocks arising from developments in the Chinese steel industry.

### 1.1 China as an Exporter of Steel Products

#### 1.1.1 *Chinese Steel Exports to the Global Markets*

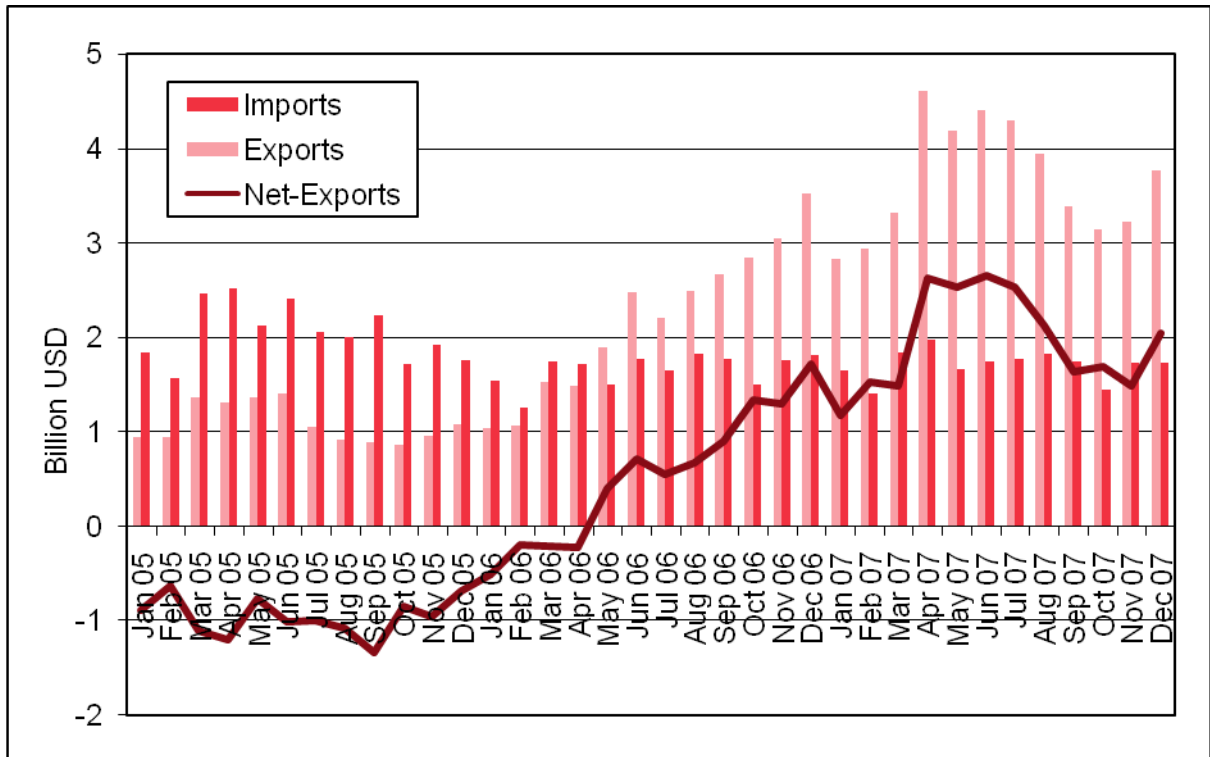
Chinese customs data 2000 - 2007 show that in this short time span alone Chinese steel exports have increased six-fold. Furthermore, in the run of these few years, China has transformed itself from a net importer of steel into the world's leading steel exporter. **Up until 2004, China ran massive trade deficits in terms of the volume of steel products imported, buying huge amounts from OECD produces in order to satisfy its growing domestic demand, and in 2005, the country still narrowly missed the chance to turn into net exporter. But only the following year, Chinese companies realized net exports in steel amounting to 32.3 million tons and turned the country into the world's largest steel exporter. In 2007, Chinese exports surged further holding a share of already 20.7 percent of all internationally traded steel.** Present trends leave no room for speculations that any other country could surpass Chinese export volumes in the near future. (cf. fig. 4 and 5)

**Figure 4: Chinese Imports, Exports and Net-Exports of Steel Products (in tons)**



Data: Wirtschaftsvereinigung Stahl.  
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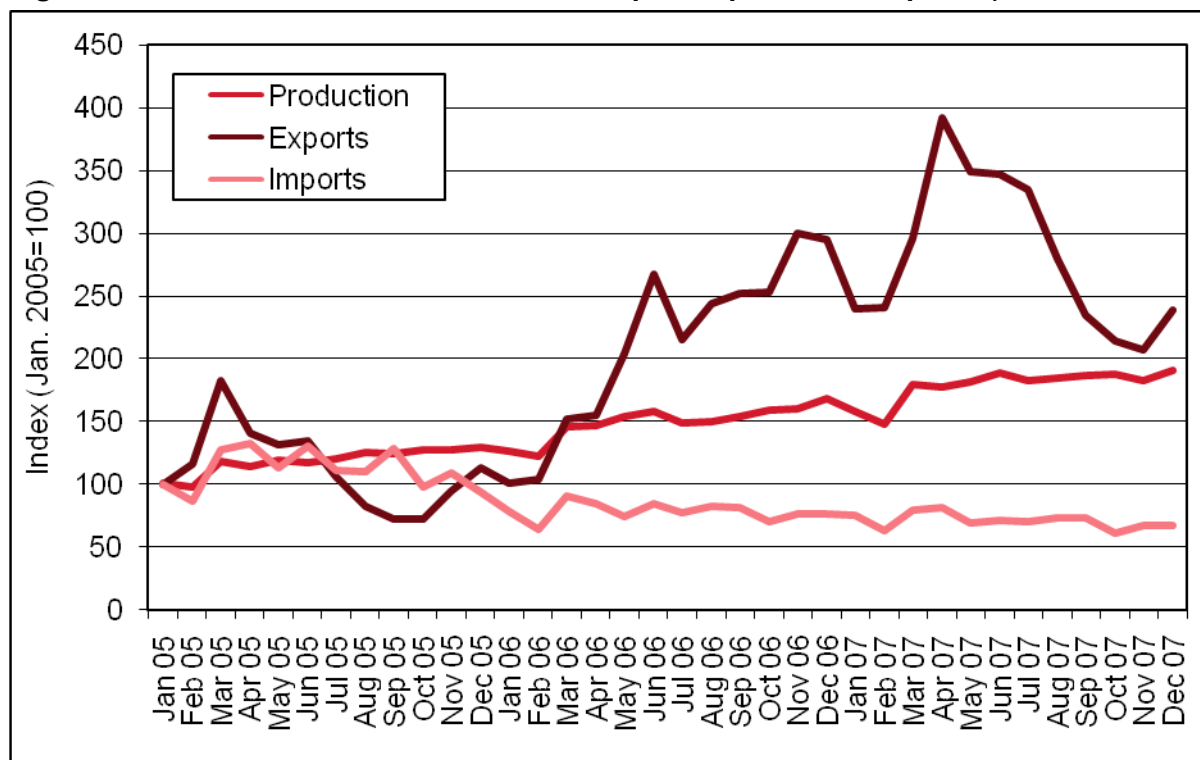
**Figure 5: Chinese Imports, Exports and Net-Exports of Steel Products (in USD)**



Data: Wirtschaftsvereinigung Stahl.  
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But deliveries to international customers have not only increased in absolute terms, as can be measured in tons or US Dollars, but also as a share of China's production output. In 2003, only 4 percent of Chinese steel was sold abroad. While Chinese output surged, exports rose even faster so that in 2007 already 12 percent of the total steel product output was sold abroad (cf. fig. 6 and 7). **Flood of exports helps Chinese companies to operate their newly released production capacities at reasonable utilization levels (over 75 percent of the output of new capacity expansion projects went to feed exports in the first ten months of 2007)**<sup>1</sup> By now, exports have grown strong enough to become a significant factor shaping the development of China's rapidly expanding steel industry.

**Figure 6: Index of Chinese Steel Product Output, Imports and Exports (Jan 2005 = 100)**

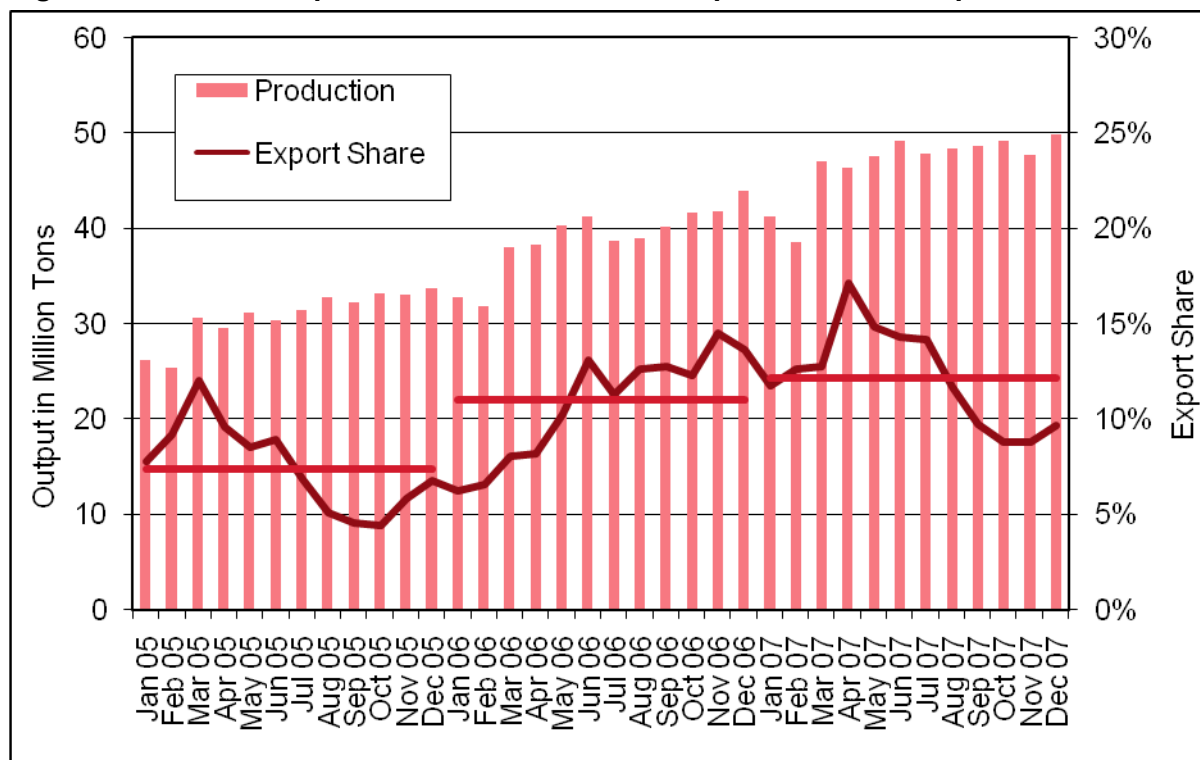


Data: Chinese Customs Statistics, CISA.

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<sup>1</sup> National Development and Reform Commission, November 2007, Analysis of the Operating Condition of the Steel Industry Since the Beginning of the Year.

**Figure 7: Chinese Output of Steel Products and Export Share of Outputs**



Data: CISA.

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### 1.1.2 Chinese Steel Exports to Europe

**The European countries, in particular, have become a major target of the rapidly increasing export activities of China's steel conglomerates.** Dynamic industrial growth in the major economies of Central and Western Europe as well as a fast build-up of infrastructure and production facilities in the new member states have in recent years led to a rising steel demand throughout the European Union (EU)<sup>2</sup> up to mid-2008. As a result, the price of steel products in the European markets rose and/or maintained at a relatively high level.

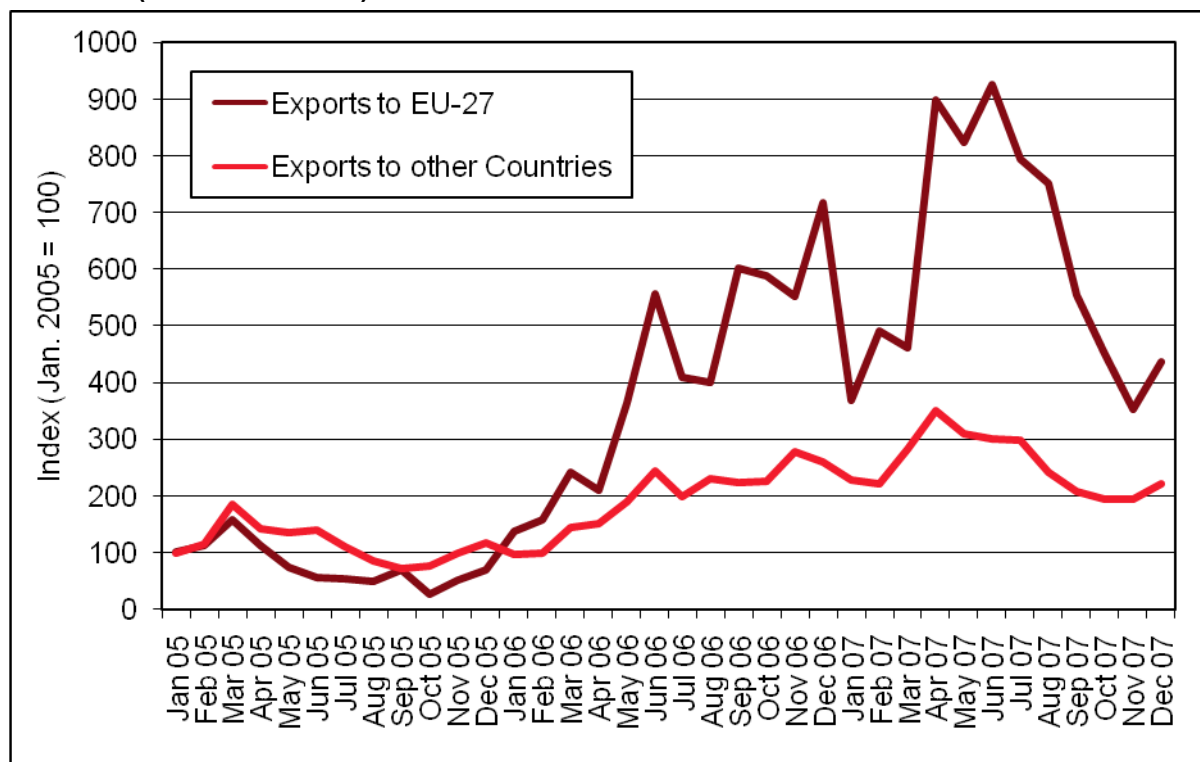
For Chinese steelmakers, plagued by notoriously low price levels in their domestic market, this situation has offered a golden opportunity to establish a foothold in European markets and to consolidate existing market shares.

While the six-fold increase of Chinese steel exports between 2000 and 2007 was already remarkable, the rise of shipments into the EU is even more impressive: Chinese and European statistics indicate a near twenty-fold increase for the same period. The different growth rates reveal a shift of China's export focus toward the EU. The EU has moved up the

<sup>2</sup> Throughout this report the term European Union or EU refers to the current 27 member states unless explicitly indicated otherwise. In order to provide a more transparent overview of recent developments of EU-China trade in steel, the timing of various accession waves since the year 2000 was neglected deliberately.

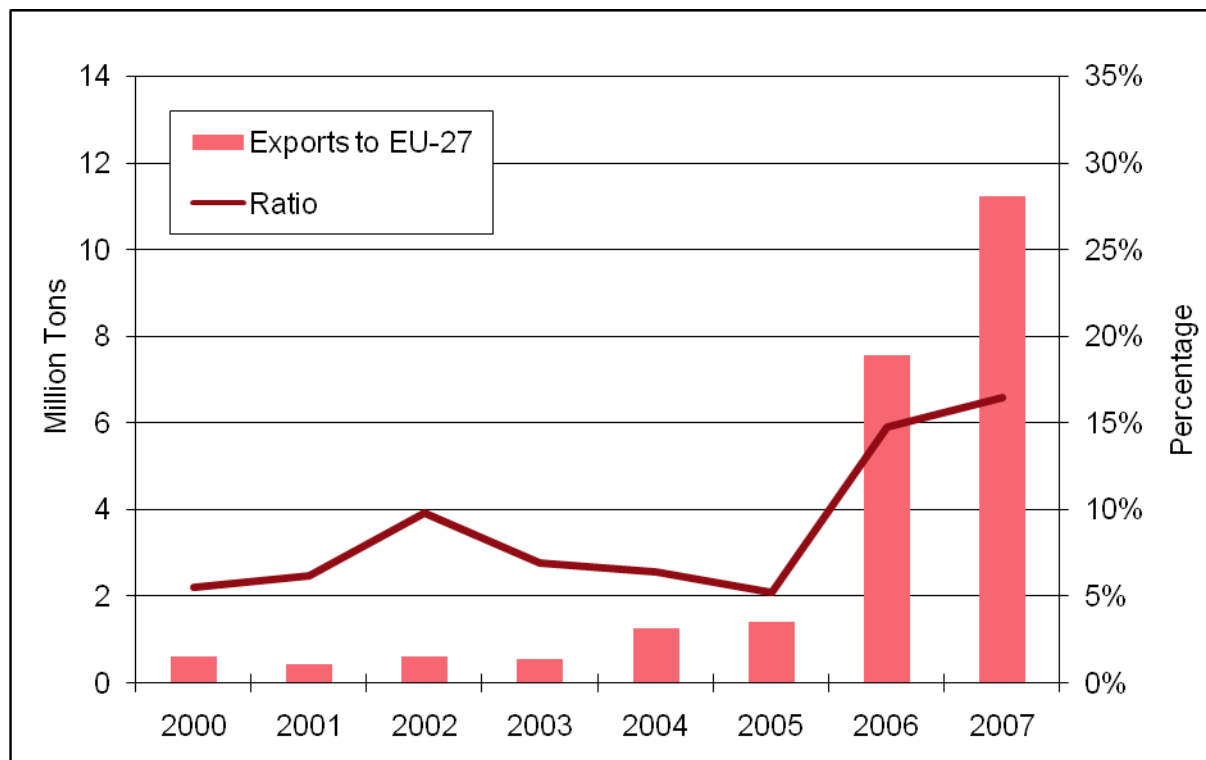
table of China's leading export destinations during recent years. **Seen from the Chinese perspective, shipments to the EU grow much faster than average steel exports taking up a growing proportion among total Chinese steel exports every year.** (cf. fig. 8 and 9).

**Figure 8: Index of Chinese Steel Product Exports to EU-27 and other Countries**  
(Jan. 2005 = 100)



Data: Eurostat, Wirtschaftsvereinigung Stahl.  
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**Figure 9: Chinese Exports of Steel Products to the EU-27 (in tons and percent of total steel exports)**



Data: Eurostat.

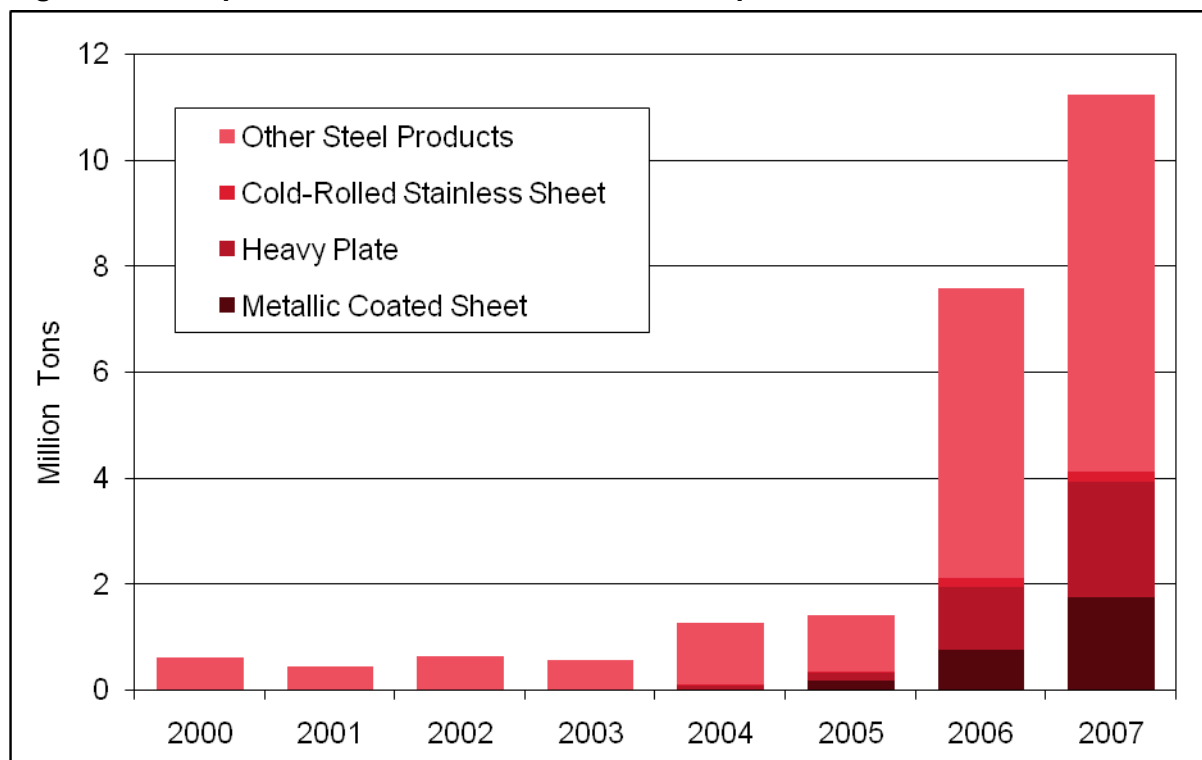
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A further characteristic of China's steel exports to Europe needs to be highlighted: Since the year 2000, Chinese exports to Europe have undergone a marked change in their composition. **Today, China is no longer just a supplier of cheap, low value-added steel; instead it has shifted its focus to export more, higher value-added materials encouraged by government** (see chapter 5 hereafter).

In 2007, about one third of imports from China included higher value-added steel products compared to only 23 percent in the previous year. (cf. fig. 10)

That year, China's EU sales mainly consisted of rolled steel products focusing on five product groups including heavy plates, hot-dip galvanized sheet and strip, hot rolled wide strip, wire rod and cold rolled sheet, together accounting for over 70 percent of the total (cf. fig. 11).

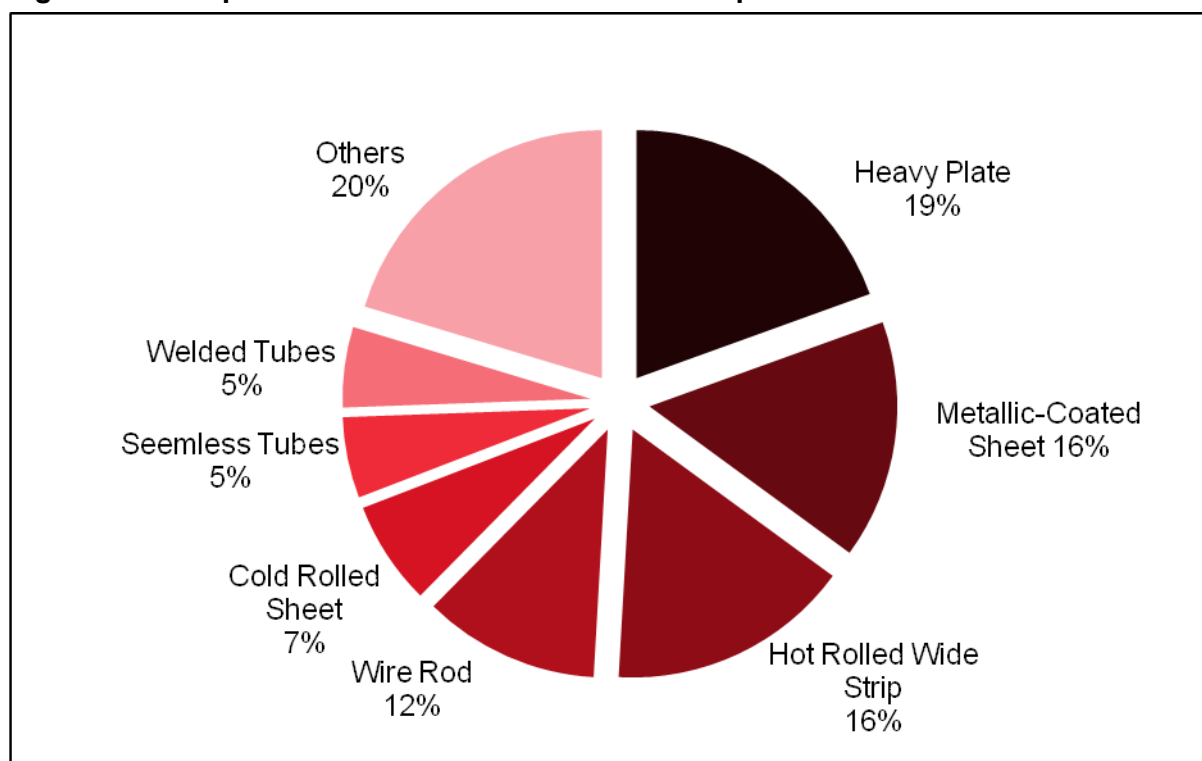
**Figure 10: Composition of Chinese Steel Product Exports to the EU, 2000-2007**



Data: Eurostat.

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**Figure 11: Composition of Chinese Steel Product Exports to the EU in 2007**



Data: Eurostat, Wirtschaftsvereinigung Stahl.

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In the run of these developments, the European markets have become increasingly important for China's producers of steel products of higher value. For example, exports to the EU held a share of 40 percent of China's total exports of cold rolled stainless steel (2007). In comparison, with respect to lower value-added steel products, Europe commanded a rather negligible share of China's total exports. For example, only about 3 percent of Chinese rebar exports went to EU member countries (2007).

In addition, steel products are increasingly exported from China, 'embedded' in higher value-added products like hand pallet trucks, ironing boards, etc. As such, the competitive pressure exerted by Chinese steel producers has been diverted towards market segments down the value chain and is no longer restricted to the European steel producers *per se*, but includes their first and second tier customers – enterprises processing steel products into higher added value products – as well. If they are driven out of the EU market due to Chinese exporters of finished goods benefiting from availability of low-priced, subsidized steel at home, Europe's steel producers' domestic customer base will be severely impacted.

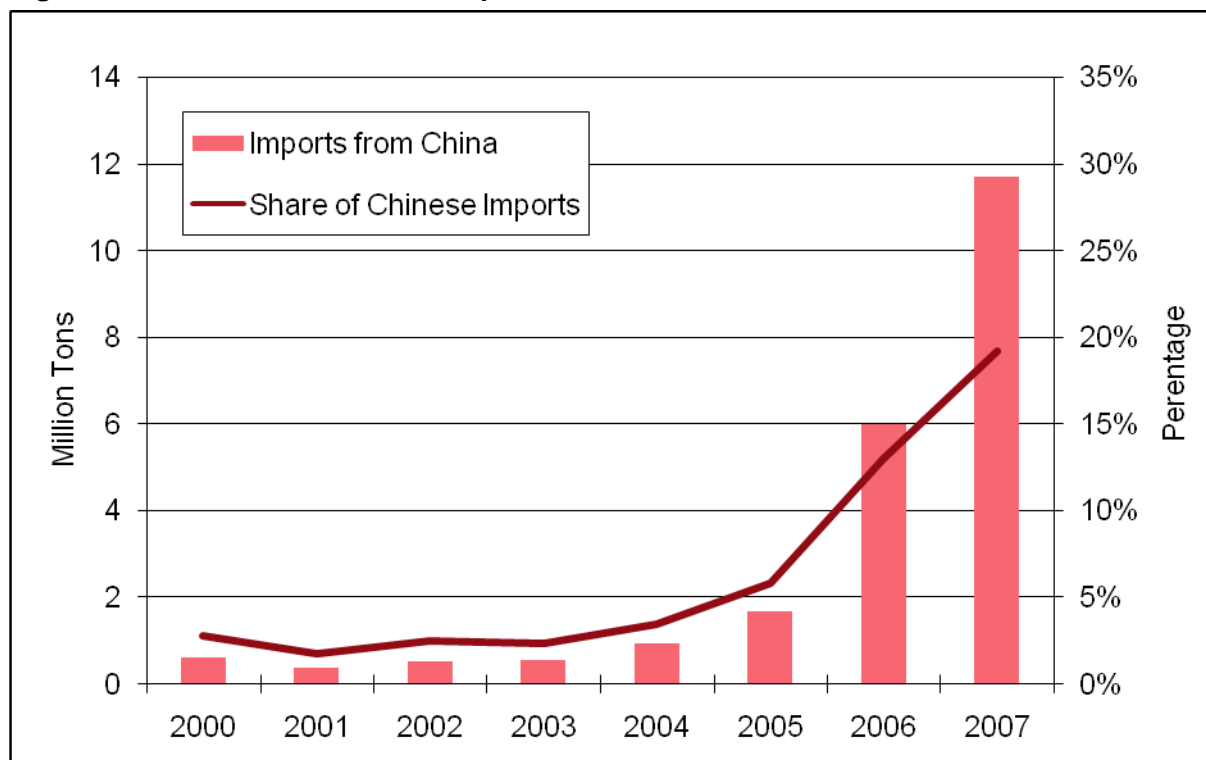
### **1.1.3 Chinese Steel Imports – A European Perspective**

From the European perspective, do these imports from China constitute an important factor in the EU markets? What role are imports from China playing in the EU's total import activities?

Despite of long routes and shipping costs, Chinese steel products have made impressive inroads into European markets. In 2007, total steel imports into the EU grew by about one third year-on-year. During the same twelve months, inflows from China roughly doubled (up to 11 million tons). In recent years, Chinese steelmakers have rapidly expanded their share of total imports into the EU and have replaced competitors as leading international sources. **In 2003, only 2 percent of European steel imports were made in China; over the past four years, the Chinese share of EU imports has significantly risen to reach almost 20 percent in 2007 (cf. fig. 12).**

These aggregated figures only describe the EU-China steel trade in broad terms. They do not reflect the conditions that have evolved in certain product-specific market segments. Here, imports originating in China command shares much higher than the average 'one-out-of-five': in 2007, Chinese steelmakers commanded a share of more than 30 percent of the European imports of metallic-coated sheet and supplied nearly 40 percent of the European imports of heavy plate (cf. fig. 13).

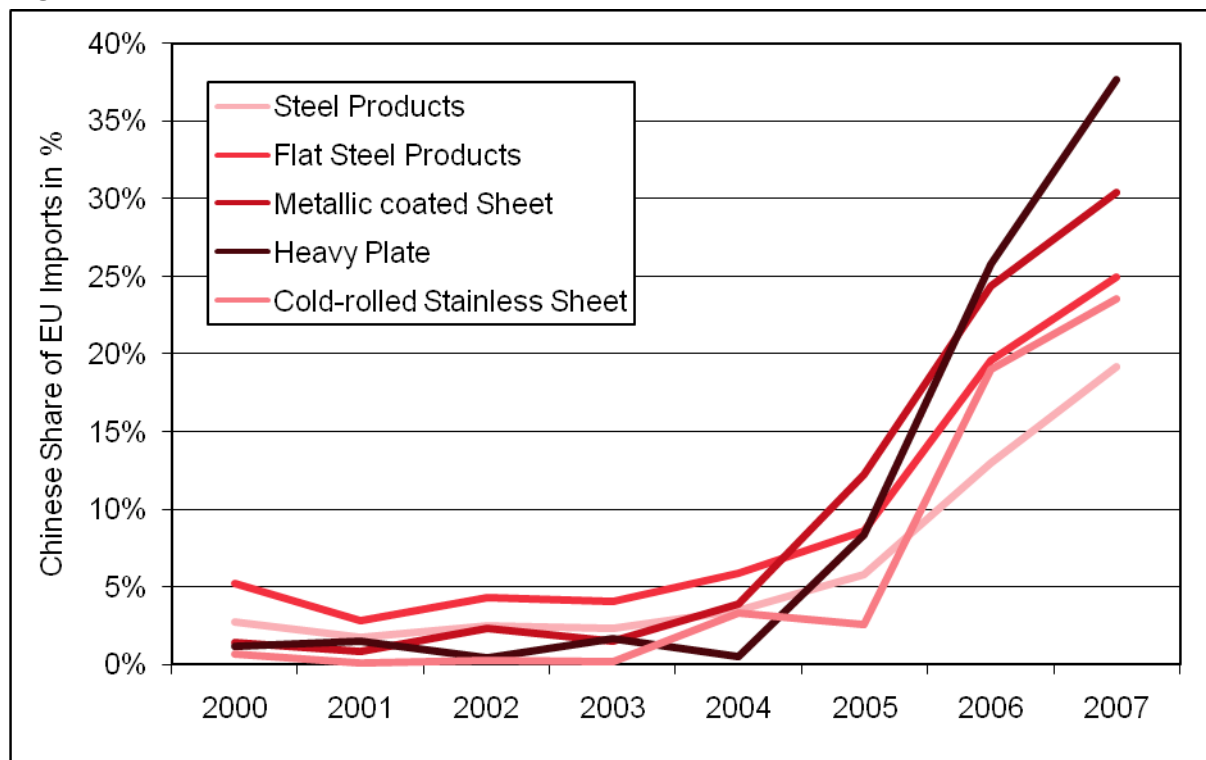
**Figure 12: EU-27 Steel Product Imports from China, 2000-2007**



Data: Eurostat, Wirtschaftsvereinigung Stahl.

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**Figure 13: Share of Chinese Imports in Total EU Imports for Different Steel Products**



Data: Eurostat, Wirtschaftsvereinigung Stahl.

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#### **1.1.4 Europe-bound Exports by Third Countries Induced by the 'China Factor'**

The direct impact of China's changing role as a trade partner for Europe is substantial. It has to be expected that next to the Chinese export offensive on the European markets, other countries which due to the 'China factor' have lost their traditional export and part of their domestic markets will try to increase their Europe-oriented export activity.

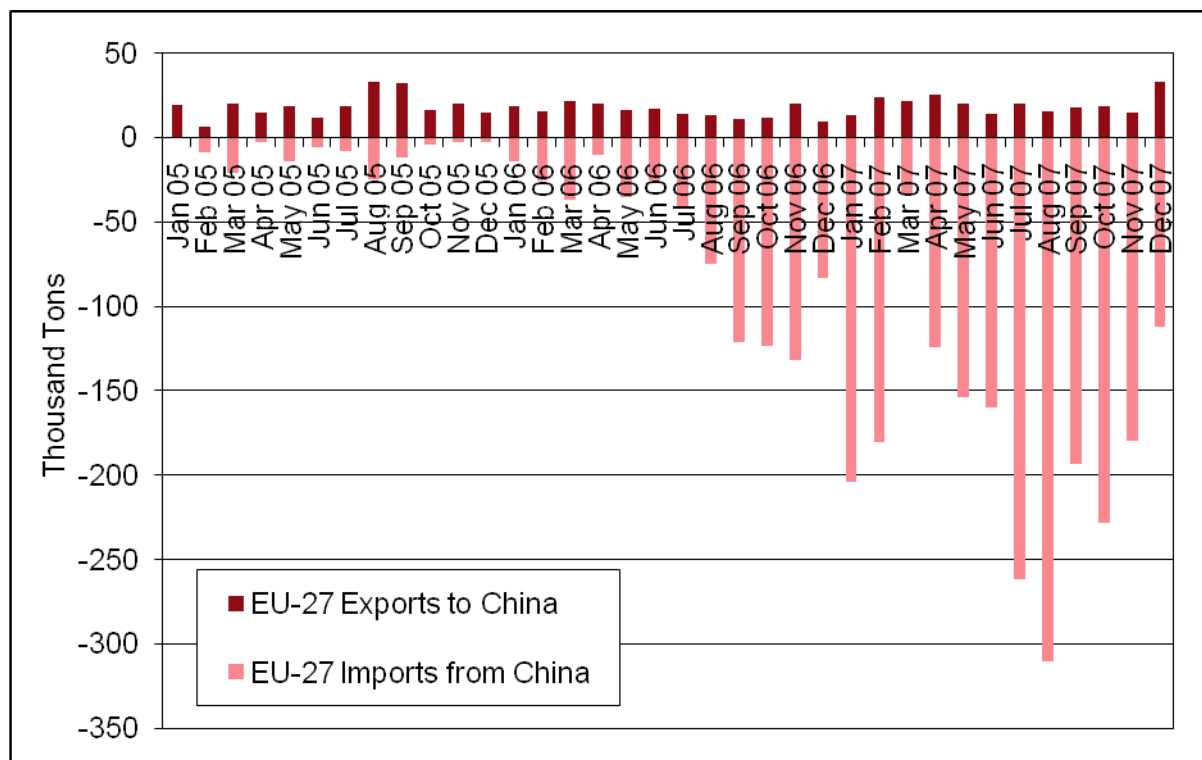
**Rapid expansion of production capacities in China has not only allowed China to meet its steel demand domestically, but due to its irrational build-up, capacities have also depressed steel prices. These depressed domestic price levels are pushing Chinese steel producers to look for external markets, markets which they find not only in Europe but also in Asia. As such, the 'China factor' as experienced by the Asian steel producers comes first of all as a loss of China as an export market and secondly as an import wave of cheap Chinese steel in their respective domestic markets. Displaced from and/or challenged in their major sales markets, steel producers in Taiwan, South Korea, India etc. are forced to look for inroads into other markets. As a result, it has to be expected that these players will substantially increase their efforts to enter the European markets with aggressively priced steel products.**

#### **1.2 China as a Sales Market for European Steel Products**

At the same time that Chinese exports to the EU have exploded, European deliveries to the Chinese market have been reduced to a trickle. During the past few years, most European steelmakers have seen few chances to supply sizable amounts of steel to Chinese customers – not the least because the low price level in China would make most China-sales unprofitable. Subsequently, European exports to China, some of which had been quite substantial in the past, have dried up.

European exports to China fall short of imports from China for total steel trade as well as for high quality steel products. (cf. fig. 14, 15 and 16)

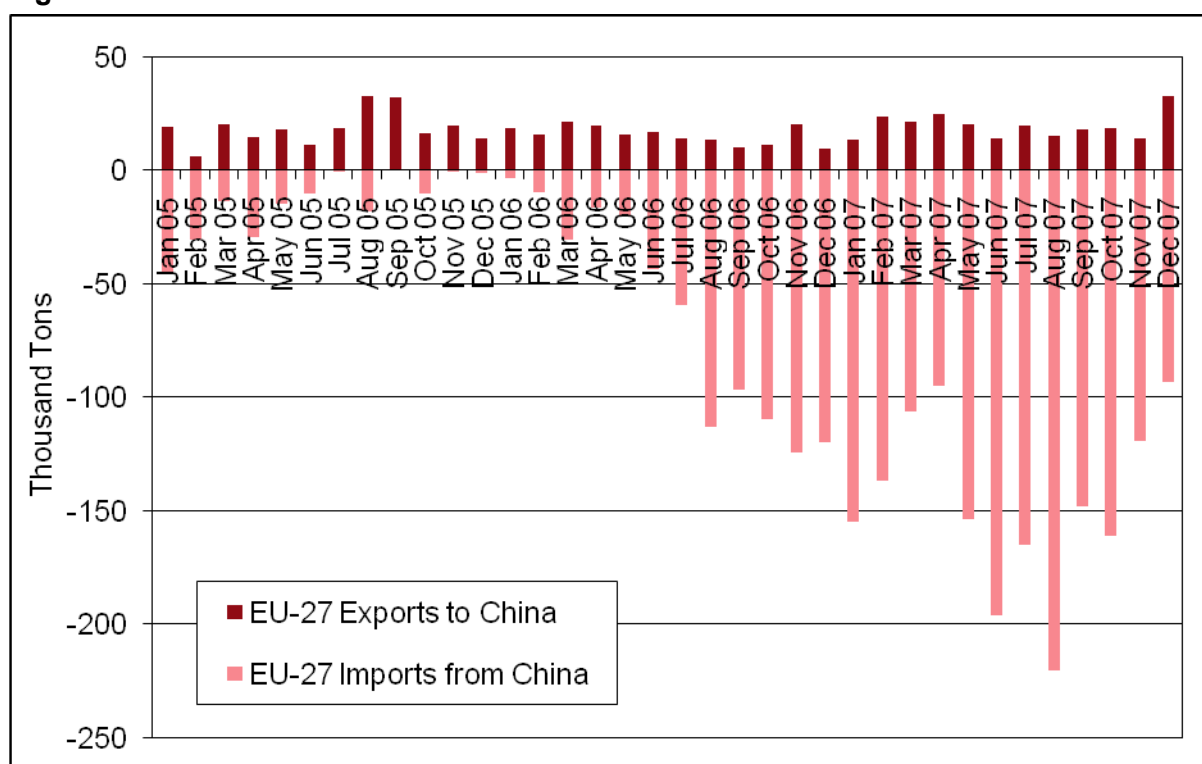
#### **Figure 14: EU-China Trade in Steel Products**



Data: Eurostat, Wirtschaftsvereinigung Stahl.

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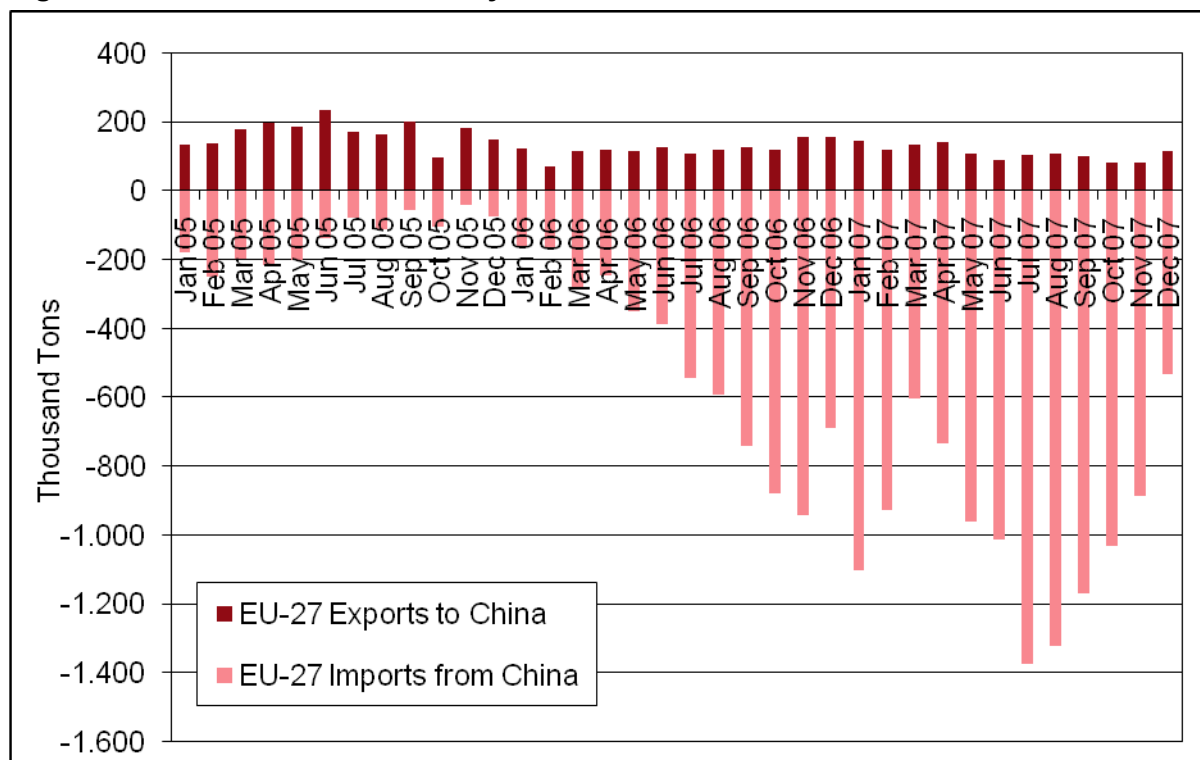
**Figure 15: EU-China Trade in Metallic-Coated Sheet**



Data: Eurostat, Wirtschaftsvereinigung Stahl.

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**Figure 16: EU-China Trade in Heavy Plate**



Data: Eurostat, Wirtschaftsvereinigung Stahl.

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Given these highly unbalanced trade patterns, one wonders if China recently may have gained a competitive advantage in steel production vis-à-vis the European economies. Market developments alone can hardly explain the changes in the Sino-European steel trade patterns, which could be observed in the last few years.

### 1.3 The 'China Factor' in Global Raw Material

Having multiplied its steel production in an astonishingly short time-span, China cannot but have had a significant impact on the absolute availability as well as the prices of steel industry relevant raw materials and transport facilities. As a matter of fact, the 'China factor' has been *the* central parameter of price movements in these sectors and is responsible for a dramatic increase of the cost of producing steel for steel producers world-wide.

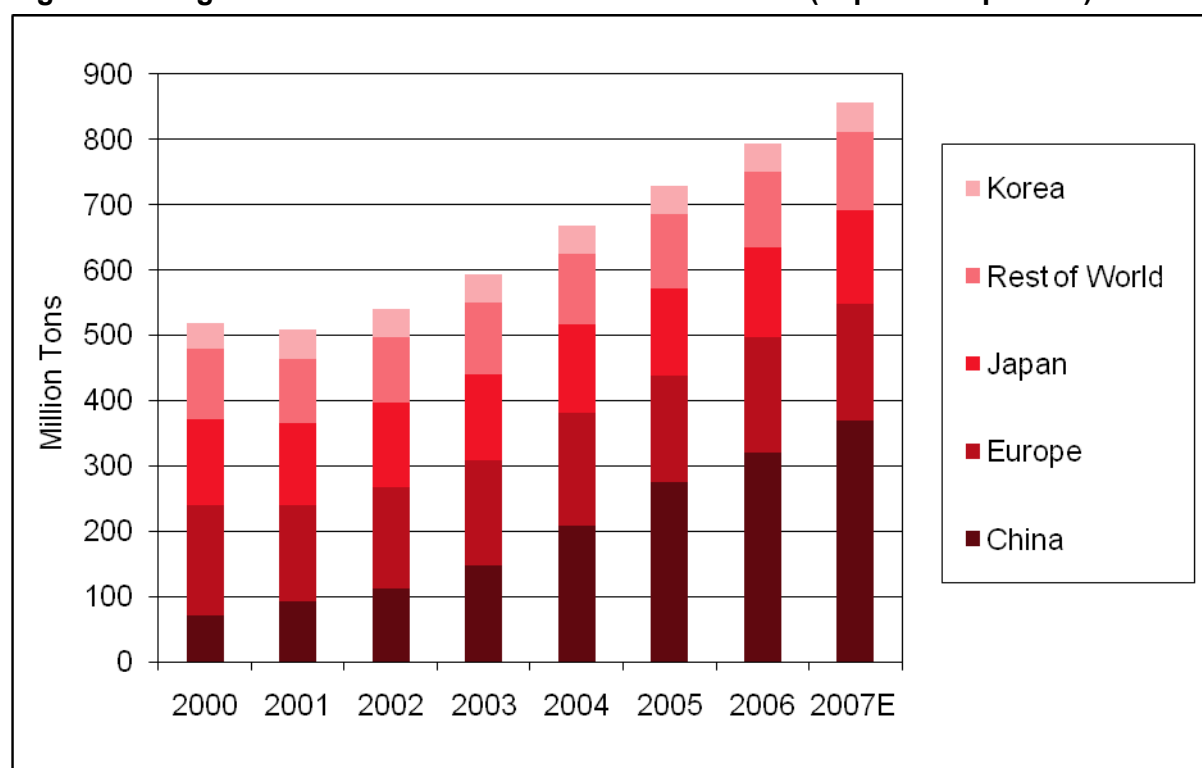
Developments in a few key raw material sectors may serve as examples for this phenomenon.<sup>3</sup>

<sup>3</sup> China's import surge for iron ore as depicted here may serve as an example of similar constellations in the fields of zinc, nickel, lead, copper, etc. as well as scrap.

### 1.3.1 Iron Ore

In recent years, the worldwide iron ore consumption has increased rapidly, resulting from a booming steel production and the predominance of the BOS integrated production process. According to data collected by the International Iron and Steel Institute, apparent consumption of the mineral has increased by 31 percent between 2004 and 2006 to reach roughly 1.8 billion metric tons.<sup>4</sup> The volume of internationally traded iron ore has grown at an even faster pace. Between 2000 and 2007, shipments have jumped by two thirds to about 850 million tons. Fully 89 percent or about 300 million tons of this increase can be attributed to the exploding demand of Chinese steel producers (cf. figure 17).

**Figure 17: Regional Distribution of Global Iron Ore Trade (Import Perspective)**



Data: UNCTAD, IISI, Canaccord Adams estimates.

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<sup>4</sup>

International Iron and Steel Institute, 2004, World Steel in Figures 2006, p. 15 and International Iron and Steel Institute, 2008, World Steel in Figures 2008, p. 21.

Chinese steel producers used to rely solely on domestic iron ore supplies<sup>5</sup> in the past, but with the expansion of production capacities they have turned to the global markets and by now source more than 50 percent [2007: 54 percent] of their consumption from the world market. In 2007, China alone absorbed 383 million tons of international iron ore deliveries accounting for a share of 45 percent of global iron ore imports.

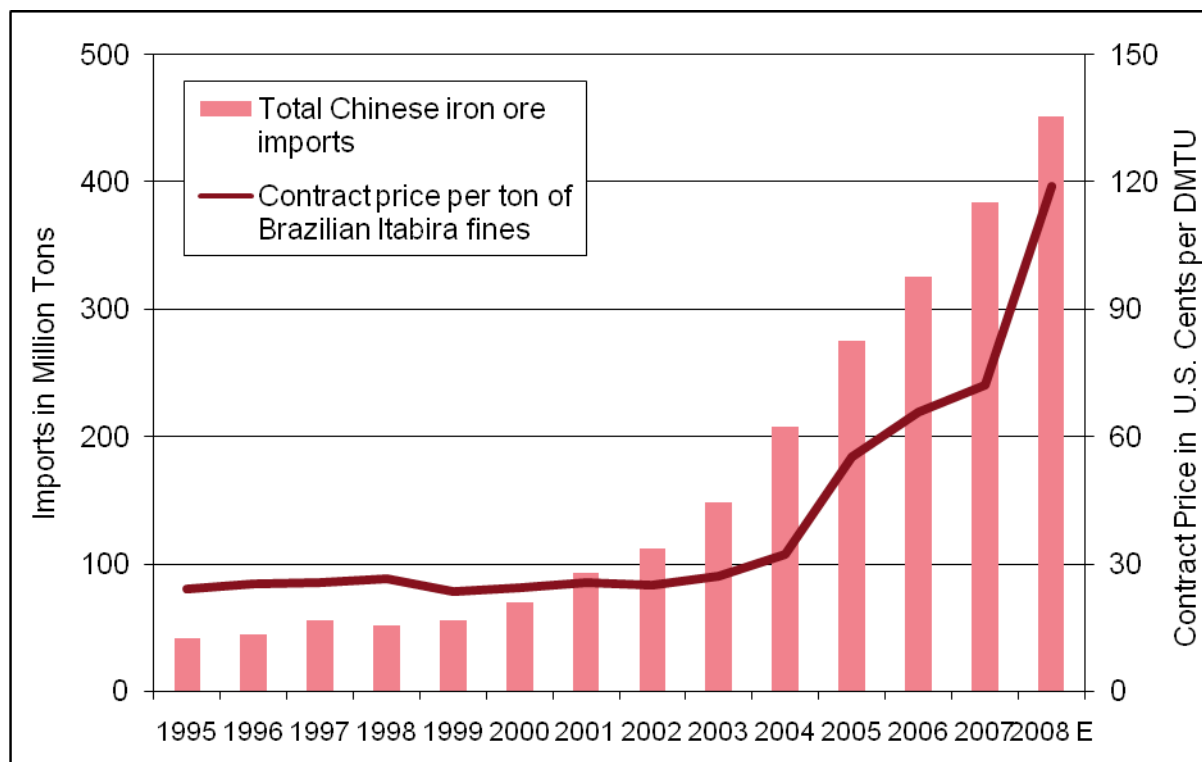
The Chinese steel industry is expected to remain dependent on imported iron ore because steelmaking in China will continue to rely heavily on the blast furnace route. In 2007, the steel output from melting scrap in electric arc furnaces (EAFs) continued to hover at its low level of around 13 percent of total steel production. The Chinese economy as a whole is still in the early stages of economic development, industrialization and urbanization trends are still strong. Though rapid growth in steel-intensive fixed asset investments has continued since the early 1980s, saturation levels have not yet been reached. Massive infrastructure projects still absorb huge amounts of steel every year and the time is not ripe for large scale replacement investments to occur. Therefore, the amount of scrap steel domestically available in China remains low for the foreseeable future. As long as the amount of steel being built into the Chinese economy is still relatively small with regard to its size and shows strong increases, steel scrap will stay in short supply.

The assertion that the dramatic price increases observed for internationally traded iron ore – they expanded by ca. 500 percent between 1995 and 2007 – are to a great extent to be attributed to the ‘China factor’ can hardly be refuted. Figure 18 exemplarily documents the parallel movement of Chinese iron ore imports and contract prices of Brazilian Itabira fines. Both are clearly correlated in a causal relationship running from a rising import demand in China to increasing sales prices in Brazil. (The comparatively minor impact of the ‘China factor’ on Brazilian prices in 2000-2003 is explained by the rather sluggish global steel business during these years which prevented the rising Chinese demand from exerting its full leverage.)

### **Figure 18: Imports and Long Term Contract Prices for Brazilian Itabira Fines**

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<sup>5</sup> As Chinese steelmakers are feeling the heat of rising iron ore prices on the world market they are struggling to offset cost pressures through pushing the domestic iron ore sector. With large proven reserves of the mineral and a long tradition in mining, Chinese iron ore mines have expanded at breakneck speed to catch up with excessive demand growth. In 2007 China was already the world's second largest iron ore producing country. But the prospects for reaching self-sufficiency are dim because Chinese ores are of relatively low quality and mining costs are far higher than in other countries. The ferrous content of domestically mined ore is usually much lower than is the case with imported ores. While Chinese ores on average only contain 30 - 40 percent iron, ores imported from overseas boast a ferrous content of 60 - 67 percent. Worse even, most iron ore reserves around China contain relatively high proportions of phosphorus and other chemical elements which complicate the processing of these ores. However, reports indicate that the high reliance on imports as well as mounting cost pressures have encouraged Chinese mine operators to tap reserves with ferrous contents below 17 percent or high degrees of impurity.



Data: SBB Analytics China.

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### 1.3.2 Coke

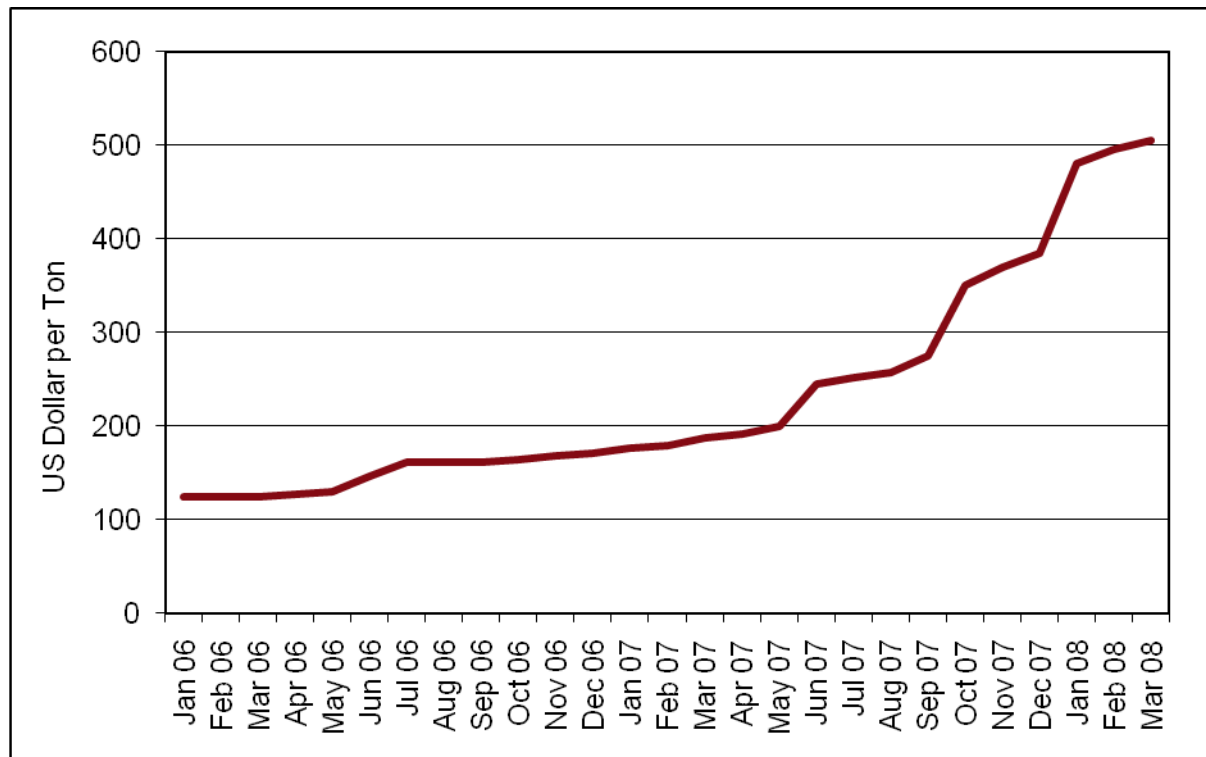
While China has – in a matter of a few years only – become the by far largest importer of iron ore and exerts its impact on the global markets by means of its import suction, with respect to coke, the causal link runs the other way round: here it is a drying out of Chinese exports to the global markets that drives prices up and leaves non-Chinese<sup>6</sup> steel producers competing for an increasingly scarce resource.

International markets for coke have been tight in 2007 because of buoyant import demand, mostly from China's neighbor countries India, Japan and South Korea. As a result prices have been driven up (cf. fig. 19). Irrespective of the international demand constellation, however, the Chinese government has not only continued its policy to set export quotas in order to limit the sale of Chinese coke on the international markets, but has also kept the export volumes at the 2006 level of around 14 million tons. The quantities allowed for export, therefore, constitute only a tiny fraction of China's total coke output of 328 million tons in 2007. As a consequence, the by far largest part of the Chinese coke production is sold domestically irrespective of higher prices that could be realized on the international markets.

<sup>6</sup> It has to be noted that most Chinese steel producers have access to domestic coke at prices ranging substantially below global market prices. We will return to this issue in section 5.8.3.



**Figure 19: Chinese coke (10.5-12.5 percent ash) export quotations FOB Shanghai**



Data: Wirtschaftsvereinigung Stahl.

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#### **1.4 The Impact of Steel Industry Development in China on the European Steel Industry**

While the 'China factor' in the global steel industry has many manifestations ranging from massive increases and considerable volatility of raw material prices and shipping rates to the outright 'loss' of China as an export market for OECD steel producers, the probably most substantial impact of China on the European markets lies in rapidly increasing export volumes Chinese steel conglomerates are directing towards the European markets, thereby displacing traditional supplier structures.

**Given the enormous dimensions of the Chinese steel industry in terms of installed capacities, input demand and production output, even small percentage changes in the absolute volumes or the composition of demand and supply in the Chinese steel sector are bound to trigger significant effects (price, capacity utilization, etc.) on the global and European markets.** Developments in the Chinese steel sector, which until recently had a domestic dimension only, have in recent years become of substantial importance for the global and European steel industry.

As the developments in the domestic Chinese steel industry are increasingly spilling over to the global markets, it becomes necessary to take a closer look at the driving forces and

operating mechanisms in the Chinese steel industry. Is that what happens in the domestic Chinese steel industry founded in the market abiding behavior of profit oriented enterprises competing in a level playing field, or rather the outcome of political interference and 'guidance' in an industry that has not yet shed the old vestiges of a central command economy?

If the latter should be the case - and that is what our analysis of cost structures and potential competitive cost advantages of Chinese steel mills vis-à-vis European players indicates (see box 1) - the Chinese export offensive on the European markets cannot achieve the positive welfare and productivity effects a working market environment will induce. On the contrary, highly productive players would be driven out of the market by – unduly promoted – enterprises possessing only inferior skills and capacities. In this case, stakeholders in Europe, be it industry associations, labor unions or political representatives, would be well advised to act swiftly and decisively in order to protect the integrity of the market based system of free competition serving the European community so well.

**Box 1: Does the Chinese Iron and Steel Industry Possess a Genuine Competitive Advantage vis-à-vis European Steelmakers?**

The significant inroads the Chinese steel industry has found into the global and particularly the European markets raise the question in how far the expansion of market shares held by Chinese steel producers is based on absolute cost advantages. I.e., in the case of Europe, do Chinese steelmakers have a genuine cost advantage vis-à-vis their European competitors according to which their production costs *plus* the costs of inter-continental shipping to Europe are lower than the sales costs of European producers in the European market?

In order to evaluate the comparative cost structures of Chinese and European steel producers and find an explanation for the rise of Chinese market shares on the European markets, it is necessary to take a closer look at the various cost parameters of the steel production process. Table 1 provides information on the absolute values (in Yuan RMB as well as Euro denomination) and the relative shares of various cost components in the production of crude steel by a typical large Chinese steel mill located in the Eastern Chinese “coastal belt” area. The data presented is based on cost structures as existing in June 2008. Table 2 provides corresponding data for a typical European steel producer for both 2007 and 2008.

**Table 1: Ex works Crude Steel Production Costs for a Typical Large Integrated Chinese Steelmaker, 2008**

Cost Factor	Yuan RMB	Euro	Share
Iron Ore Procurement & Transport	1951	181	39%
Scrap	852	79	17%
Coke & Other Reduction Reagents	1056	98	21%
Other Ingredients	280	26	6%
Energy, Water, Natural Gas etc.	129	12	3%
Personnel and Administrative Costs	420	39	8%
Overhead	302	28	6%
<b>Total</b>	<b>4991</b>	<b>463</b>	<b>100%</b>

Data: CISA, Ministry of Environmental Protection, Mysteel, SBB China Analytics. Own calculations

**Table 2: Ex works Crude Steel Production Costs for a Typical Large Integrated European Steelmaker, 2007 and 2008**

Cost Factor	2007		2008	
	Euro	Share	Euro	Share
Iron Ore Procurement & Transport	114	33%	153	31%
Scrap	52	15%	79	16%
Coke & Other Reduction Reagents	66	19%	129	26%
Other Ingredients	35	10%	45	9%
Energy, Water, Natural Gas etc.	14	4%	15	3%
Personnel and Administrative Costs	52	15%	59	12%
Overhead	14	4%	15	3%
<b>Total</b>	<b>345</b>	<b>100%</b>	<b>495</b>	<b>100%</b>

Data: Betriebswirtschaftliches Institut Stahl, own calculations.

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The data presented in tables 1 and 2 clearly show that **raw material and transport costs** constitute the lion's share of overall production costs, not only in China but in Europe as well. As such, these cost factors possess substantial leverage on the enterprises' overall competitiveness. Major cost differentials in this category may therefore have a significant effect on overall cost competitiveness. Can it be that China has an absolute cost advantage in the field of raw material and transport costs which allows Chinese steel mills to produce at substantially lower costs than their European competitors?

Such a natural cost advantage can certainly be observed with respect to **coke**. This specific cost constellation builds on China's massive coking industry and the fact that all large integrated steelmakers run their own coke ovens. As such the corresponding cost component in table 1 has been derived by a 50:50 calculation of production costs in China and Chinese domestic market prices. It is in this cost category that Chinese steel mills can realize the greatest cost advantage vis-à-vis their European competitors.

The same does not hold with respect to **other raw materials**, like for example iron ore. The Chinese iron and steel industry is procuring more than 50% of its iron ore intake on the global markets. That share of iron ore that can be sourced domestically is of much lower qualities than e.g. Australian or Brazilian ore. Players like Baosteel who do not have significant stakes in China's domestic iron ore mines are forced to procure their iron ore at global market prices – just like most other competitors worldwide. The same holds for international shipping costs arising with the import of iron ore and other bulk good materials. Here Chinese steel producers cannot undercut the costs structures of their European competitors but on the contrary are facing at least two serious disadvantages. First, Chinese steelmakers suffer from considerably higher inbound overseas shipping costs for ores sourced from Brazilian mines. The Baltic Exchanges' Capesize Index which tracks the freight costs for several common sea routes for super-large freighter vessels shows clearly that the average rates for the journey from the Brazilian port of Turabao to the Chinese Baoshan, home of Baosteel, are about twice as high as those for the trip from Turabao to Rotterdam. This relative price difference has largely remained unchanged throughout all volatile price movements of recent years. Second, the vulnerability to freight costs is further exacerbated by the fact that even the largest Chinese steelmakers do not operate their own freighter fleets. Although most leading steelmakers have concluded long term delivery contracts with leading shipping companies to handle their ore supplies and some large firms like Baosteel have ordered cargo ships from shipyards, the exposure to high and rising freight costs is more pronounced than for European steel mills.

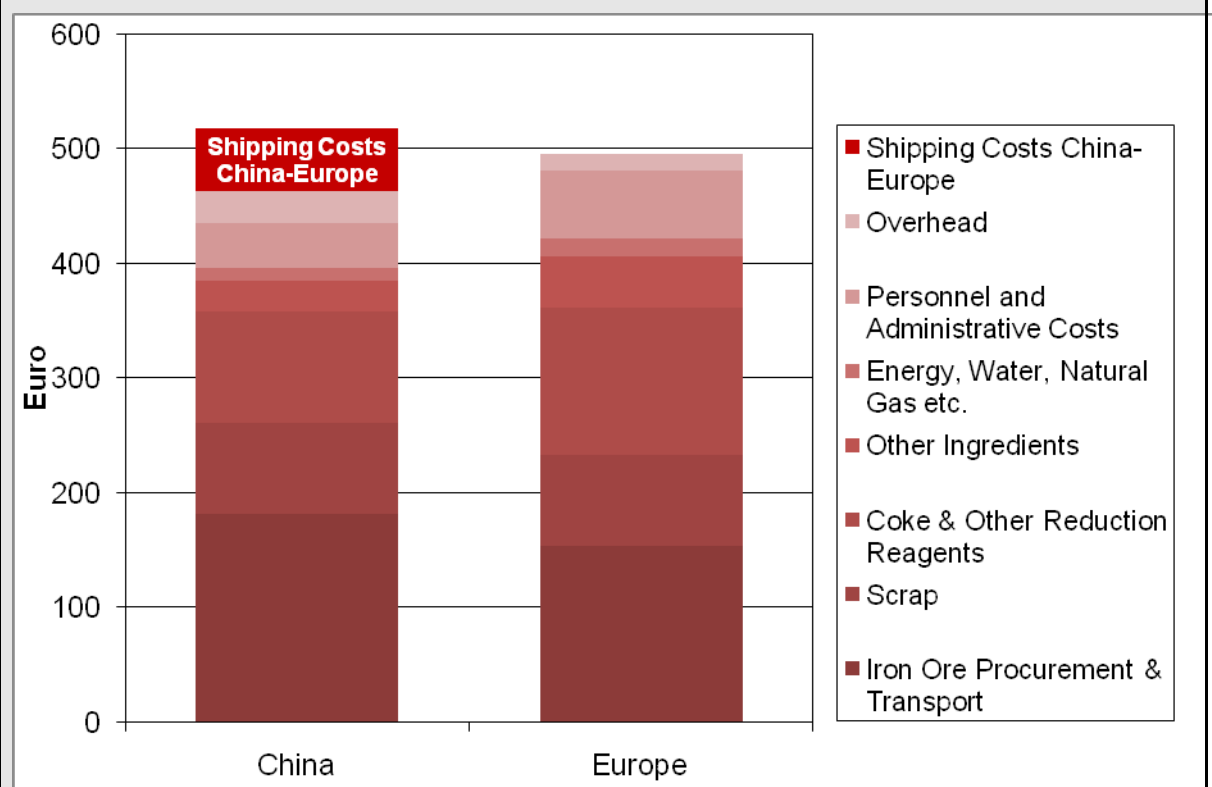
**Personnel and Administration costs**, where Chinese enterprises truly command an absolute cost advantage vis-à-vis their European competitors which are burdened with significantly higher wage levels, amount to no more than 8 percent in China and 12-15 percent in Europe (cf. tables 1 and 2) of total costs. The cost advantages realized in such a small fragment of overall costs hardly suffice to outweigh the heavy burden of high raw materials procurement and overseas shipping costs, let alone explain the offer-price differentials between Chinese and European enterprises as observed in the European markets.

All in all, it can be shown that **for crude steel, Chinese steel mills are featuring a slight ex works cost advantage primarily based on their access to cheap coke and their depressed personnel expenses. However, the high dependence on overseas raw material imports turns these ex works costs highly sensible for price fluctuations on the global iron ore and shipping markets. Given the only minor absolute cost difference between Chinese and European steel mills plus the greater dependence of Chinese mills on these factors, price increases in the area of iron ore and (inbound) inter-continental shipping can easily leave Chinese mills with an absolute ex works cost disadvantage.**

Adding outbound international shipping costs to the equation, Chinese steel mills end up with a clear cost disadvantage when trying to sell their products on the European market. The ex works cost difference of about 30 Euro vis-à-vis their European competitors is more

than absorbed by shipping costs from China to Europe amounting to 55 Euro<sup>(a)</sup> plus harbor handling cost (see figure 20).

**Figure 20: Cost of Crude Steel for Sale at the European Markets, 2006**



Data: Tables 1 and 2; Baltic Exchange, Translink Shipping.

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Against the background of the cost comparisons and the discussion presented above, we can establish with considerable certainty that, in the global economy, China does not possess a genuine cost advantage in the production plus international distribution of steel.

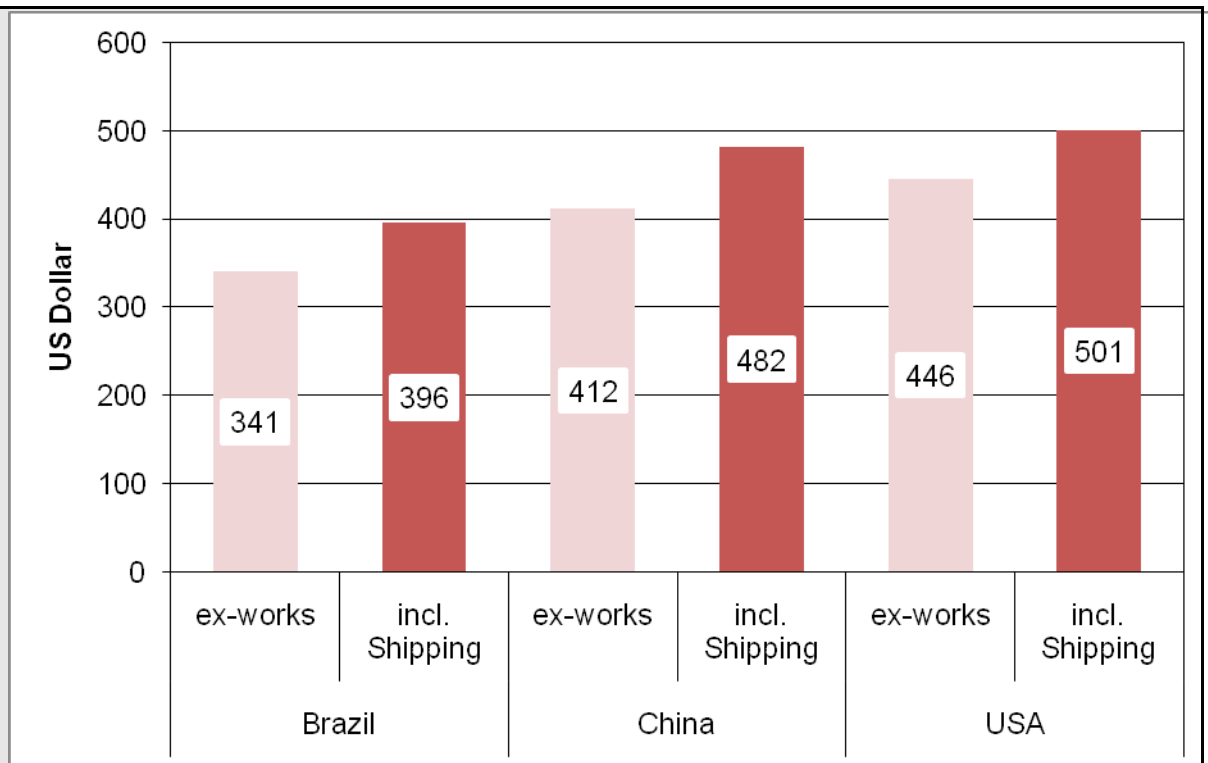
Furthermore, any interpretation of the data presented here must take into account, that the calculations are based on "reported or observed costs". I.e. **the cost structures presented here include all subsidies, preferential loans and tax arrangements etc., these enterprises have been profiting from. Netting out these subsidies, the real "market-based" cost structures of China's steel makers would proof to be substantially higher than indicated here.** For a detailed account of the Chinese steel

industry's subsidy income, its access to preferential loans and tax arrangements as well as other preferential programs please refer to chapter 5.

This assessment is supported by a 2007 study conducted by the Betriebswirtschaftliches Institut Stahl. This study compares the production costs per ton of hot rolled wide strip (BF-route) respectively per ton of rebar (EAF-route) arising in referential steel mills in Brazil, China, Western Europe and the United States of America. Cost structures are analyzed on the basis of the year 2006.

According to this study, ex works costs for hot rolled wide strip are lowest in Brazil (341 US\$), followed by China (412 US\$), Western Europe (423 US\$) and the USA (446 US\$). The marginal cost advantage the Chinese reference mill possesses vis-à-vis Western Europe in the ex works comparison turns into a cost disadvantage when packing and shipping costs for delivery in Europe are included in the calculation. While the Brazilian reference mill with a cost burden of 396 US\$ remains cheaper than the Western European production costs of 423 US\$, the Chinese mill loses ground ending up with cumulated costs of 482 US\$. The US-American reference mill features the highest cost burden amounting to 501 US\$ (cf. figure 21).

**Figure 21: International Cost Comparison Production of hot rolled wide strip, 2006**

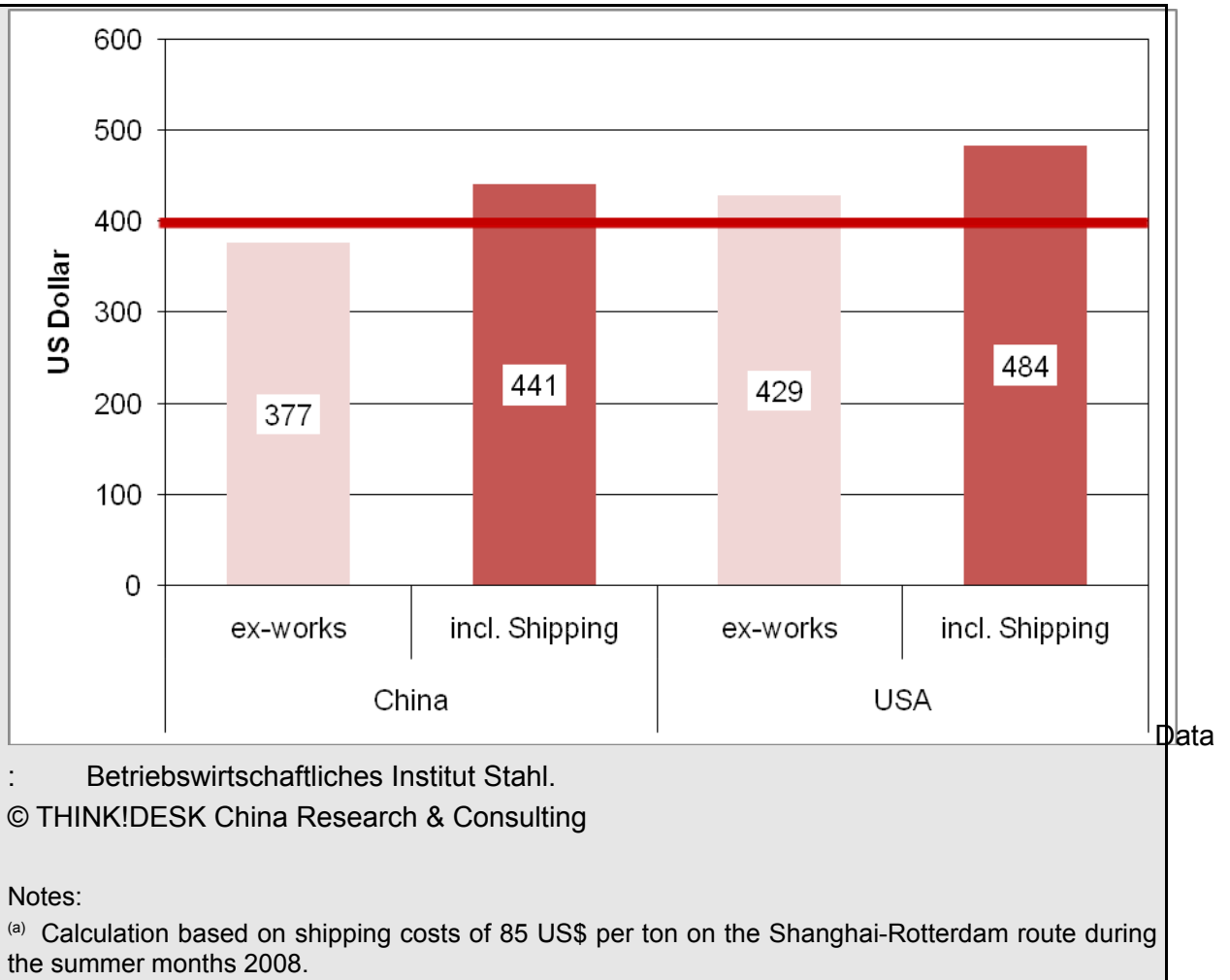


: Betriebswirtschaftliches Institut Stahl.  
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Comparable results arise in the context of rebar. With Brazil not included in the comparison the Chinese reference mill features the lowest ex works costs of 377 US\$. The Western European reference mill follows with a cost disadvantage of 24 US\$ and total costs amounting to 401 US\$, while the US-American mill comes last with a cost burden of 429 US\$. Taking not ex works costs but “Free Delivery at the European Border” as the unit of comparison, the European reference steel mill comes first with an undisputed cost advantage of 40 US\$ vis-à-vis the Chinese producer and about 80 US\$ in comparison with the US-American producer (cf. figure 22).

**Figure 22: International Cost Comparison Production of rebar, 2006**





## Market and State in the Chinese Steel Industry

**Traditionally, the steel industry enjoys substantial attention by China's political elite.**

The development of a strong national steel industry has been and still is understood as a key for the modernization of China's industry and the economy as a whole. All the way from the 1950s until today, senior government officials have stressed the need to become self sufficient in steel production. The "long term development objectives until 2010" that were handed down together with the Ninth Five Year Plan in 1996 contained this goal as well as the Iron and Steel Industry Development Policy and even more recent documents such as the 'Circular on controlling capacities, eliminating obsolete capacities and accelerating the structural adjustment of the steel industry'.<sup>7</sup>

The question to be approached in the context of this study is what role the state assumes in the development of the Chinese steel industry. Does the state intervene directly in order to create an industry from the drawing boards of the government's industry strategists, or does he rather restrict himself to defining and enforcing the rules of a 'game'? A 'game', where independent economic actors compete in a level market place and take full responsibility for the gains and losses arising from to their individual performance.

In the following, we will concern ourselves first of all with the key players who are presently determining sectoral and corporate developments. Based on their characterization we then move on to the way these players interact and actually shape the industry.

### 1.5 Key Players Shaping China's Steel Industry Today

The Chinese steel industry of today has left the realm of central planning and blunt state directionism. However, the legacy of the past is still present and many of the players having a decisive influence on developments in the industry and within specific corporations have their roots in the former planning system.

**National Development and Reform Commission (NDRC):** The NDRC has evolved from the former State Planning Commission. It takes a leading role in the formulation of China's macro-economic and industrial development strategies. According to its official homepage [www.ndrc.gov.cn](http://www.ndrc.gov.cn), NDRC and its 890 civil servants strive to "perform duties assigned by the Communist Party of China [sic] and the people". Among the duties assigned to NDRC are the following:

- Formulation and implementation of national economic and social development strategies, annual plans and medium and long-term plans

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<sup>7</sup>

Fa Gai Gong Ye, 2006, No. 1084.

- Formulation of recommendations on the employment of economic tools and policies
- Analysis of the economic situation and its development at home and abroad as well as adjustments to the daily performance of the national economy
- Formulation and implementation of fiscal and monetary policies as well as industrial and price policies; setting and adjustment of prices of important commodities regulated by the state and important tariffs and fees
- Analysis of restructuring processes of economic systems and formulation of recommendations for improvements in China's socialist market economy system
- Recommendation of the total size of fixed asset investments and the layout of key projects; arrangement of key construction projects funded by central government appropriations, overseas resource development projects, etc.
- Formulation of development plans for oil, natural gas, coal, electric power, etc.
- Strategic readjustment and upgrading of industrial structures including provision of guidance to independent and government led M&A transactions; promotion of high-tech industries; carrying out technological upgrading and provision of guidance for industrial modernization
- Analysis of domestic and international markets and maintenance of an aggregate balance and overall control of important commodities; formulation of plans for the overall import and export volumes of important industrial goods and raw materials

**The NDRC is the most powerful economic policy organization in China being entrusted with the authority to intervene directly in 'market' processes and steer economic development.**

**State-owned Asset Supervision and Administration Commission of the State Council (SASAC): SASAC performs the responsibilities of the state as an investor and administers the state-owned assets under its supervision. It has been entrusted with the micro-economic coordination and regulation of the nation's leading state-owned companies.** In order to strengthen government control, it is invested with rights that before its foundation had been dispersed among different ministries and agencies. SASAC has in the past been holding a firm grip on China's 'national champions', subjecting the top-management of the enterprises under its realm to strict monitoring and disciplinary surveillance. It has been authorized to dispatch supervisory panels to large state-owned enterprises and supervise the daily management of these panels. Consequently, SASAC does have substantial leverage over the behavior of individual enterprises and its managers, although these enterprises are embedded in a supply/demand driven environment and are not subjected to plan directives. It has taken up the central government's doctrine and strives to create 30-50 large Chinese enterprises and holding companies of international standards until the end of this decade. **Enterprises thought to possess the potential to become global players are promoted by a number of preferential policies, including preferential provision of bank credit, access to the capital markets (issuing of stock and corporate bonds), promotion of foreign direct investment activities, support for the creation of research institutes, etc.**

**China Iron and Steel Association (CISA)**: CISA is nominally the lobbying arm of China's steel industry vis-à-vis the government and other market participants. In reality, however, **CISA stands in the middle between being a lobbyist for industry and a spokesman for government.** CISA has not been founded as a bottom-up initiative by the Chinese steel industry but is rather a successor organization of the no longer existing branch ministry for the steel industry. CISA has not only inherited the office buildings of the Ministry of Metallurgical Industries, but also most of its staff and administrative tasks. Formally registered as a non-profit-organization, CISA is therefore not only representing the interests of the Chinese steel industry vis-à-vis other (mostly foreign) market participants, but also exclusively collects statistical data for the Chinese steel industry (in this function CISA acts in the name of and for the Chinese National Bureau of Statistics), prepares and coordinates industry development guidelines and technical standards, etc.

The semi-governmental role of CISA becomes obvious in the Association's substantial entanglement in the design and execution of regulatory measures:

- CISA has been entrusted with the supervision and coordination of all import/export activities of the industry including the administration of value added tax rebates for steel exporters.<sup>8</sup>
- In the "Notice on the control of total output volumes, elimination of backward production capacity and accelerated structural readjustment in the steel industry", dated 14.06.2006, CISA is mandated to ensure that all the various policies outlined in the "Iron and Steel Industry Development Policy" will be implemented as well as to prevent un-orderly competition in and blind development of the industry.
- Since 2005, CISA has not only taken an active part in the definition of the requirements Chinese enterprises would have to meet in order to qualify as iron ore importers. In the campaign to reduce the number of then 523 iron ore importers and curb "blind competition", i.e. install an iron ore import cartel, CISA has also taken up the role of checking the qualifications of the importers and determining those enterprises which would lose their import licenses.<sup>9</sup> Steel enterprises wishing to obtain an iron ore importing license are obliged to formerly report both to CISA and the China Chamber of Commerce of Metals, Minerals & Chemicals Importers & Exporters (CCCME) in how far they comply with the requirements.
- In 2006/7 CISA executive vice president Luo Bingsheng declared that his organization would have a say – i.e. veto right – in the approval of M&A transactions involving foreign steel producers.<sup>10</sup>

How close the relationship between the government and CISA still is may also be seen in the continued usage of the internet address belonging to the former Ministry of Metallurgical

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<sup>8</sup> Such reported in the outline of the organization's role and function on the official CISA webpage [www.ChinaISA.org.cn](http://www.ChinaISA.org.cn). See also G/SCM/Q2/CHN/9, paragraph 5.

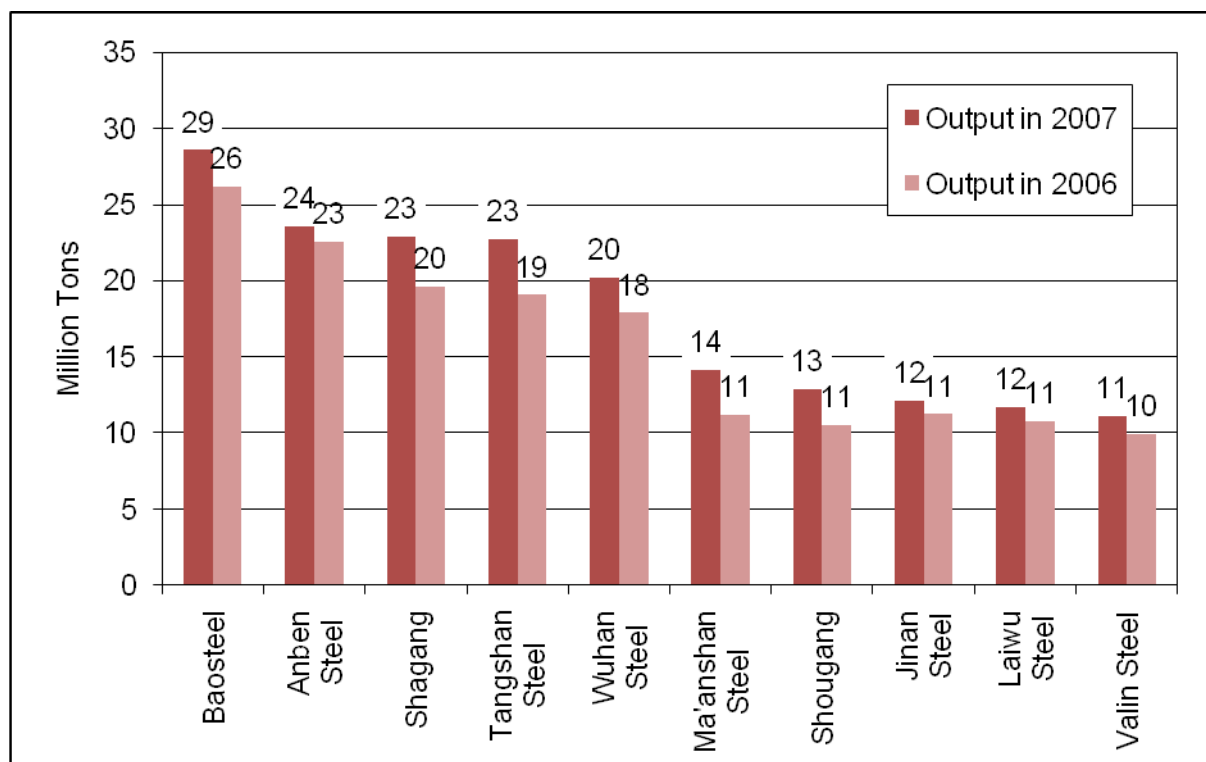
<sup>9</sup> The number of qualified iron ore importers was cut to 118 in 2006 and 90 in 2007.

<sup>10</sup> In the said case Luo was referring to the intention of ArcelorMittal to buy a 38.41 percent stake in China's then eighth-largest mill Laiwu Steel Corp.

Industries, <http://www.mmi.gov.cn> by CISA. Up to the present day CISA continues to update the webpage – classified as a government webpage by the suffix “.gov” – with steel industry relevant news and information.

***China’s leading steel conglomerates and their top-management:*** China’s steel industry is highly fragmented and features a dualistic structure with a few, comparatively strong steel conglomerates and a large number of comparatively weak players existing in protected ‘market’ niches. While the total number of steel mills is estimated to lay in the thousands, the ten largest steel producers in 2007 had a market share of no more than 37 percent (cf. figures 23 and 24) – extremely low in comparison to other OECD markets where top-3 concentration ratios run in a range of 60-85 percent. While some players, like Baosteel, Anben Steel, Wuhan Steel, etc. are upgrading their operations quite rapidly and are increasingly venturing out on the global markets, the prevalence of small steel mills often goes along with technologically outdated, resource-guzzling capacities that burden the environment and depress the industry’s overall productivity levels.

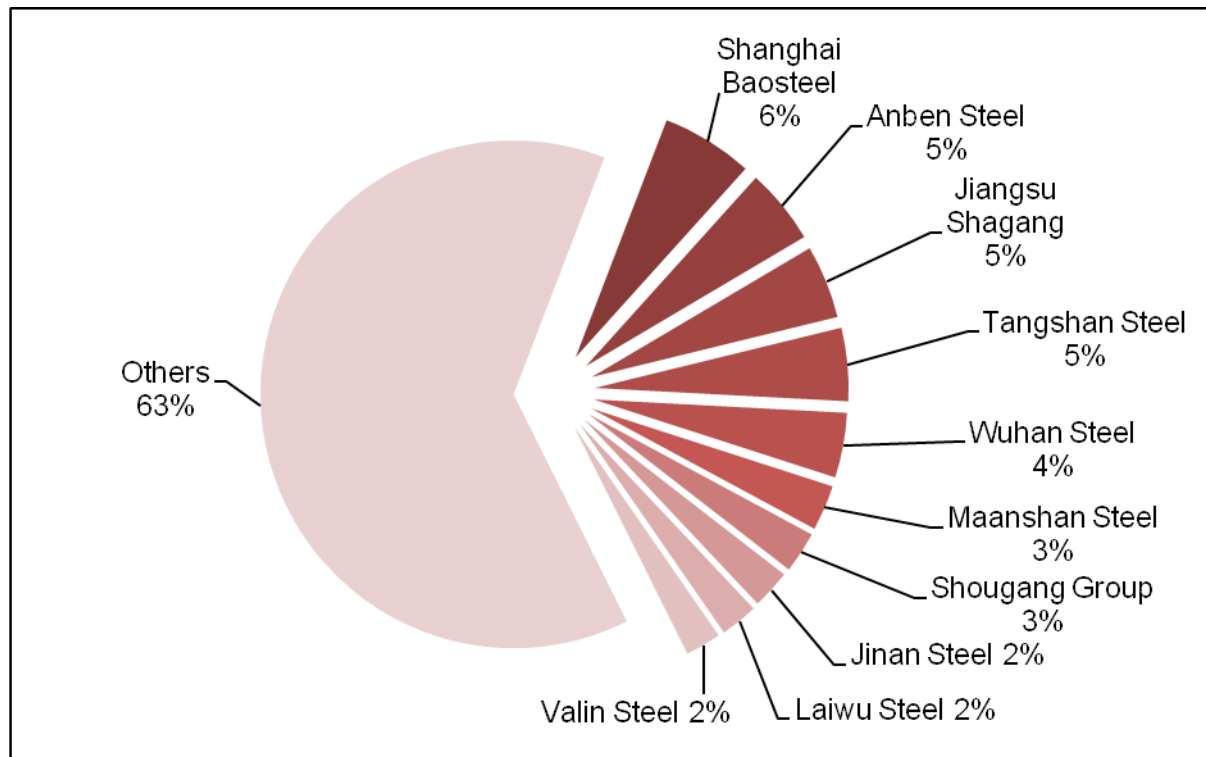
**Figure 23: Crude Steel Output of Major Chinese Steelmakers in 2006 and 2007, in million tons**



Data: Mysteel.

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**Figure 24: Share of Crude Steel Output of Major Chinese Steelmakers in 2007**



Data: CISA.

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**China's leading steel conglomerates are basically government controlled.** Among the top 20 corporations, only Jiangsu Shagang and Foshun are not explicitly state-owned on a majority basis. But even these 'private' corporations have become co-opted to state interests as state organizations have injected equity capital and now own minority shares in these corporations. E.g., nearly half the equity of Jiangsu Shagang, the country's largest so called private steel mill located in Jiangsu Province, may be understood to be directly or indirectly under the control of the government respectively the Communist Party. A share of 25 percent is held by the local SASAC and unquestionably constitutes state property. An additional 23 percent are owned by a local division of the All-China Federation of Trade Unions (ACFTU) which is the one and only legally admitted, centrally administered labor union in the People's Republic of China. It is no independent player by its own right, but is closely linked to and supervised by both the central government as well as the Communist Party. Adding up the stakes belonging to the local SASAC and the union, we arrive at a total of 48 percent. Whether or not the employees, who own a combined share of about 35 percent, should be considered agents of the government is a matter of debate. In any case, authorities will be able to capitalize on their shares and use administrative instruments if necessary to ensure compliance.

Irrespective of their ownership structures, China's steel enterprises are in general profit oriented. Profit maximization, however, may not always depend on entrepreneurial savvy and managerial competencies alone. **Politico-business alliances structure industry development in all spheres of China's steel industry.** While grey market structures prevail

in the local context, **China's leading steel conglomerates are embedded in a state-business cartel that merges corporate and national goals to a highly potent amalgam.**

The top-management of China's leading steel conglomerates belongs to the nation's business as well as party elite. The top positions (CEO, CFO, Chief Engineer, as well as the Chairman of the Labor Union) of China's leading (state-owned) steel corporations are filled exclusively with members of the Communist Party who may rank very high in China's party nomenclature as well as government hierarchy. Mme. Xie Qihua, former CEO and President of Baosteel, for example had been in the rank of a Vice-Premier of the PR China. These managers are usually selected and monitored by SASAC. They are on the one hand committed to standard management goals, but on the other hand represent and are committed to a super-ordinated national cause and development goal. Figure 25 depicts some examples of leading managers holding influential positions in the business world as well as in the Communist Party and the political sphere.

**Figure 25: Business-, Party-, and Government-Functions of Leading Managers in China's Steel Industry**

**Chen Chuanping**

- Chairman of Taiyuan Iron and Steel Group
- Vice Governor of Shanxi Province (home of Taiyuan Steel)

**Xu Lejiang**

- Group Chairman of Baosteel Group,
- Delegate at the Seventeenth National Congress of the Communist Party,
- Alternate Member of the Seventeenth Central Committee of the Communist Party,
- Deputy Chairman of the Eighth Committee of the Science and Technology Association of China,
- Member of the Ninth Party Committee of Shanghai
- Member of Central Discipline Inspection and Control Commission of the Communist Party

**Zhang Xiaogang**

- General Manager of Anshan New Steel Co. Ltd.,
- Party Secretary of Anshan Iron and Steel Group,
- Legal Representative of Anshan ISG,
- Executive Director and Chairman of the Board of Directors at Anshan New Steel Co. Ltd.,
- Delegate at the Seventeenth National Congress of the Communist Party,
- Director of the China Iron and Steel Association,
- Member of the Executive Committee of the International Iron and Steel Institute,
- Member of the Expert Group for Standardization
- Director of the Low-alloy Steel Academic Committee of China

**Deng Qilin**

- General Manager of Wuhan Iron and Steel Group (ISG),
- Deputy Secretary of the Party Committee at Wuhan ISG,

- Legal Representative of Wuhan ISG,
- Chairman of the Board of Directors at Wuhan Steel Co. Ltd.,
- Delegate at the Seventeenth National Congress of the Communist Party and
- Deputy Director of the China Iron and Steel Association.

#### **Wang Jiong**

- Deputy General Manager and Deputy Chairman of the Board of Directors of Wuhan Steel Co. Ltd.
- Member of the Party Committee of Hubei Province,
- Vice Chairman of the Communist Youth League of Wuhan City,
- Party Secretary at Wuhan ISG,

#### **Fan Zhengwei**

- Chairman of the Board of Directors of Panzhihua Iron and Steel Group (ISG),
- Secretary of the Party Committee at Panzhihua ISG,
- Delegate at the Seventeenth National Congress of the Communist Party and Deputy Director of the China Iron and Steel Association.

#### **Li Xinhui**

- Chairman of the Labor Union at Panzhihua Iron and Steel Group (ISG),
- Deputy Party Secretary at Panzhihua ISG,
- Chairman of the Supervisory Board of Panzhihua Co. Ltd.,
- Headmaster of the Party School at Panzhihua ISG and
- Member of the Party Committee of Panzhihua City.

#### **Li Kezhang**

- Member of the Board of Directors of Ma'anshan Co. Ltd. and
- Deputy Secretary of the Party Committee of Ma'anshan ISG and Ma'anshan Co. Ltd,
- Chairman of the Labor Union at Ma'anshan ISG and Ma'anshan Co. Ltd.
- Member of the Fourteenth Executive Committee of the All-China Federation of Trade Unions.

Data: Company sources.

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**Local Governments:** Local government organizations on the district/city level have a very strong interest to keep 'their' local steel enterprises alive, as these enterprises usually constitute a backbone to the local economy, employment and tax income and sometimes dividend revenues. These enterprises are often operating with outdated technology and are not capable of producing higher qualities of steel products, managers of local steel enterprises are often dependent on the good will and protection of government organizations against external competitors and policies designed to wash out old and 'dirty' production capacities. As a significant number of these enterprises has evolved from collective enterprises, many managers are still co-opted in local government and Communist Party functions.



## 1.6 The Struggle Within: 'China Steel Inc.' vs. Local Politico-Business Alliances

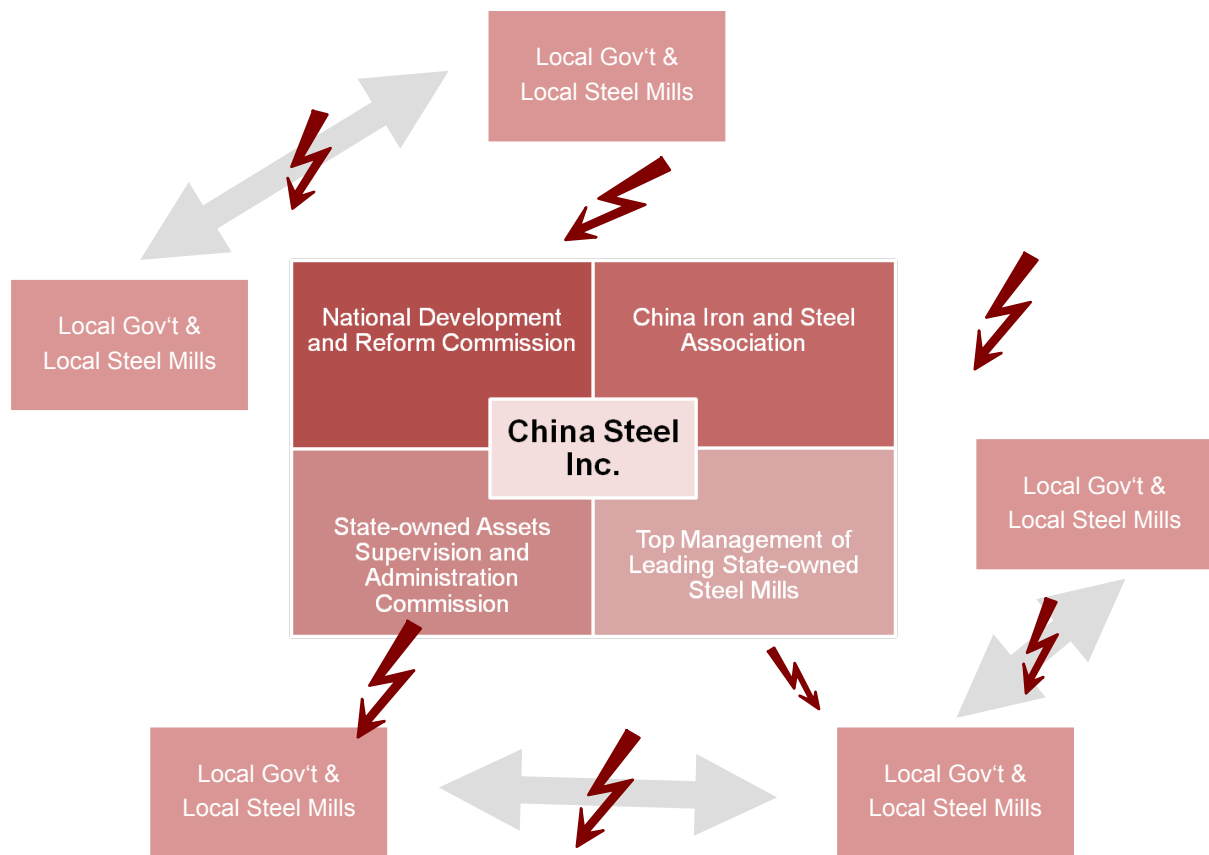
Today, we see the Chinese steel industry as no longer being governed by a top-down central command approach to industry organization, but also as not yet being embedded in a market based system of free competition among independent players.

**We understand the Chinese steel industry as being integrated in a multilayered system of politico-business alliances, which in essence are quite capitalistic in their underlying motivation, but eventually result in a serious obstruction of market forces.**

At the national (central government) level we understand the development of the Chinese steel industry as being directed and more or less micro-managed by what may be called 'China Steel Inc.'. **The 'China Steel Inc.' consists of the National Development and Reform Commission (NDRC), the China Iron and Steel Association (CISA), the State-owned Asset Supervision and Administration Commission of the State Council (SASAC) as well as the top management of China's leading steel enterprises.** This alliance of stakeholders may be interpreted as a politico-business cartel collaborating in the drafting of industry development strategies (as exemplified in the national master-plan communicated in the "Iron and Steel Industry Development Policy" from July 2005 and the steel industry relevant sections of China's Eleventh Five Year Program covering economic development in 2006 to 2010), as well as complementary regulatory measures. These include the provision of infrastructure endowments and access to (cheap) energy inputs and resources, technology standards and upgrading policies, industry consolidation initiatives and mergers and acquisition (M&A) policies, the rules of interaction with international players, be it on the export/import-side, regulations applying to foreign investors in China and Chinese outward investment activities.

The 'China Steel Inc.', however, is not the only form in which state organizations and business representatives of the steel industry collaborate. While the 'China Steel Inc.' may be understood as an elitist club bringing the central government's top policy makers and the top managers of the leading steel conglomerates together, local governments and smaller steel enterprises often do not find their interests mirrored in the policies and business environments created by this elitist club. In response, **local government and smaller steel companies form their own – often very local – alliances designed to promote local steel enterprises and provide them with protection and shelter in the face of adverse (central) policies designed by the 'China Steel Inc.'** Local governments are often more than willing to protect local steel mills from policies by which small, technologically outdated enterprises shall to be squeezed-out of the market in order to uphold local employment, tax-income and, not the least, access to cheap steel products for the local construction industry. As such, these local politico-business alliances are in general less concerned with the strategic issues of national economic development, but are rather the product of particularistic rent-seeking activities and designed for short-term profit/utility maximization.

**Figure 26: China's Politico-Business Alliances**



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A prominent example of the aspirations of the 'China Steel Inc.' to micro-manage the national steel industry may be seen in its efforts to restructure and consolidate the corporate landscape by means of promoting or even enforcing M&A transactions. By limiting the right to initiate M&A transactions to companies complying with specific criteria like turnover figures, technological capacities, etc. the corporate landscape has been divided into 'predators', permitted to incorporate other companies, and 'prey', companies destined to wait for interested buyers. At the same time, however, the example of M&A activity in the Chinese steel industry provides valuable insights into the conflict of interests existing between central and local government organizations as well as their relative power positions. In recent years, local governments have been very successful in their efforts to react to central M&A initiatives with local counter-measures. The merger of the two major steel producers of Shandong Province, Laiwu Steel and Jinan Steel to the newly formed Shandong Iron & Steel Group in July 2006, for example, may be understood as a defensive strategy to prevent a takeover of Laiwu Steel by the Shanghai-based Baosteel. This goal has been achieved, but the merger exists on paper only, with Laiwu Steel and Jinan Steel still operating as individual companies.

All these activities – on the central as well as the local level – are running counter to the principles of a market based industry development.

**The ‘China Steel Inc.’s’ ambitions for a micro-management of the industry themselves create first level market distortions, which are even further aggravated by the disharmonic interaction between central and local government agencies.**

#### **Case Study: The Rise and Fall of Jiangsu Tieben Iron & Steel Corp.**

The case of the rise and fall of Jiangsu Tieben Iron & Steel Corp., Ltd. provides an excellent example of a local politico-business alliance in which a local government promotes the development of ‘its’ enterprise irrespective of directives issued by central government agencies, the ‘China Steel Inc.’. At the same time, it highlights the lack of a macro-economic framework that would channel local entrepreneurship in a symbiotic context. Lacking functioning markets as well as working political macro-guidance, central government has to take recourse to drastic forms of ex-post macro-regulation that result in a disruption of the economic process and a waste of entrepreneurial as well financial resources

The life-span of the Jiangsu Tieben integrated steel works in Changzhou, Jiangsu Province, has been extremely short. Construction work on an 8.4 million t/a steel mill started in June 2003. Only 10 months later, after using up 2.56 billion Yuan RMB of bank loans, construction work was stopped on direct order of China’s premier Wen Jiabao. Since then the construction ruin of Jiangsu Tieben Iron Co., Ltd. served as a symbol of systemic coordination failures in China’s economic and political system and its investment regime, in particular, until Nanjing Steel took over the facilities and now continues the project, however, on a drastically reduced scale.

The short lived story of Jiangsu Tieben began with the vision of private entrepreneur Dai Guofang to create a new steel empire that would surpass China’s leading steel producer Baosteel. Dai’s high flying aspirations were founded in a vita marked by extraordinary entrepreneurial success. Starting as an ordinary construction worker without formal school degree, he had started his career as a private entrepreneur by trafficking with iron scrap until he entered the steel business by investing in three 30 t/a electric steel mills. From there on he quickly expanded his steel production activities and step by step leased (and turned around) various run down workshops from altogether six state-owned enterprises. In 1996 he eventually founded Jiangsu Tieben Iron & Steel Co., Ltd. in Changzhou City. 2003 this private company already produced 800,000 t of steel. Now the time seemed to have come for the next step in Dai’s career.

The entrepreneurial spirit of Dai alone, however, would not have sufficed to start the new Jiangsu Tieben steel mill venture. In order to do so, top decision makers of the local political circle had to provide substantial support. And as a matter of fact, the local political elite was more than willing to promote the project. Economic development, tax revenue

and job provision had already become the most important criteria for political success and career advancement in China's party and administrative 'nomenclatura'. As a consequence China's local decision makers were first of all striving for the facilitation of economic growth in their constituencies – regardless of potential negative externalities that might endanger overall macroeconomic stability, harm economic development in neighboring areas or become visible only after they had moved on. In the case of Jiangsu Tieben, the head of local government had just been transferred to the city and was looking for ways to promote economic development in his new field of responsibility when Dai introduced his plans in 2002. The plans were received enthusiastically. More than that, Dai was offered preferential taxation arrangements and prompted to enlarge his original project design and increase the projected production capacities fourfold to more than 8 million t/a.

In order to bring the project on the ground, Changzhou's political and administrative bodies not only provided substantial support, but in doing so greatly transgressed their authority as well. Once the project design had reached its final stage with 8.4 million t/a steel production capacity and an overall investment volume of 10.59 billion Yuan RMB it greatly surpassed the authorization limits of local administrative bodies. In order to prevent the project from being stopped by central authorities, the project was therefore split up into 22 individual projects each of them small enough to fall within the authorization limits of local administration. The transgression of existing regulations, however, did not stop here. Against existing laws Jiangsu Tieben was allotted land use rights over a total area of about 630 hectares of land, 436 hectares of which had been taken into possession in March 2004. Of the latter 310 hectares was agricultural land, which according to existing regulations was not to be transformed into industrial usage. An environmental impact report, which for this kind of project is prescribed by law, was neither prepared nor asked for, when the project was authorized by local administrative bodies. In order to secure the financial means for the project, local bank offices were pushed to provide multi-billion Yuan RMB credit lines for the project, although the paid in capital amounted to only 676 million Yuan RMB, or a mere 6 percent of the total investment volume.

With China's central governmental and party organizations being immersed in the internal power struggles and consolidation activities accompanying the transfer of power to the new leadership group of Hu Jintao and Wen Jiabao in 2003, the local government of Changzhou had much leeway to put their own policies on the ground. Central government including major stakeholders of the 'China Steel Inc.' were absorbed with internal developments and practiced a policy of 'benign neglect' towards local actors – under the premise that the economy would remain on a stable growth path.

The fate of the Jiangsu Tieben venture was sealed when central government officials felt the need to intervene in the economic process in order to prevent the economy from overheating and rectify structural imbalances. An enormous investment surge in 2002 and 2003 had already created bottlenecks in certain key sectors of the economy. The danger seemed to be imminent that the booming Chinese economy would go bust and enter a period of prolonged recession if central government would not succeed in bringing the

economy back on a sustainable growth path. The problem was aggravated by additional problems evolving in the Chinese steel sector. Based on a generally accepted projection that China would consume 330 million tons of steel in 2010, the fact that Chinese steelmakers were in the process of expanding their production capacities to at least 400 million tons in 2005 already raised serious concerns in Beijing. In order to prevent the creation of massive overcapacities – which would eventually result in a poor return on capital in China's steel industry as well as a new addition of non-performing loans in China's fragile financial sector – Beijing had to intervene and stop new investment projects. Jiangsu Tieben, an investment project designed to incorporate very high technological standards, was certainly not the best project to stop in order to improve productivity in China's steel industry on average. Just the opposite, the plant was planned to be endowed with state-of-the-art production facilities.

But Jiangsu Tieben constituted an open affront against the 'China Steel Inc.'s' claim to industry leadership and had become a challenge to the latter's authority. The stop of construction work in Changzhou and the ensuing unveiling of the 'scandalous' behavior of Dai Guofang and his local patrons and business friends became a huge media sensation. The 'China Steel Inc.' spared no effort to instrumentalize the case in order to communicate a very strong warning to other localized politico-business alliances engaging in similar undertakings. In the end, however, it also provided testimony to the de facto lack of an integrated national framework for industry development in China and the need for – in many aspects very expensive – discretionary ex-post macro-regulation.

## **1.7 Conclusion: State and Business in China's Steel Industry of Today**

Summing up the analysis presented above, it must be stated that the state continues to exert tremendous influence on the macro- as well as micro-development of China's steel industry. But while in the past, the relationship between state and business had been primarily a hierarchical one, today this relationship has been transformed into a system of horizontal alliances of likeminded stakeholders located on the central as well as local levels. The differentiation between government officials, party cadres, as well as enterprise managers is considerably blurred.

However, the dualistic structure of an elitist and in principle very powerful 'China Steel Inc.' on the one hand, and a large group of local 'renegade' state-business alliances defying central policies as well as unwelcome initiatives of other local alliances on the other hand, does result in a rather dysfunctional industry setting.

To put it in a nutshell, we understand the Chinese steel industry as:

- Upholding very close state-business relations. We understand the cartel-like alliances on the central as well as local levels and their activities as standing in conflict with a market oriented industry development, based on the principles of fair competition,

- Being subjected to substantial 'market failures' in so far as market mechanisms are not allowed to perform their regulatory function, while at the same time,
- Being subjected to extensive 'policy failures' as the various politico-business alliances as well cannot exert their full regulatory power. A juxtaposition of central and local interests coupled with an insufficient ability on the side of the 'China Steel Inc.' to assert its policies on a local level results in the watering down or even neutralization of numerous regulatory initiatives.

'Market failure' meets 'policy failure'. Seen from this perspective, the Chinese steel industry exists in a rather paradoxical state of over-regulation and excessive political interference on the corporate level, while at the same time lacking an overarching regulatory framework.

**The macro-economic framework, as well as the individual incentive structures existing in China today, are not in a position to create the welfare enhancing effects a market based industry development might bring about. This is bad for China, but also for the global and European steel industries, which are increasingly finding themselves negatively affected by the spill-over effects emanating from the Chinese system.**

## **Strategic Industrial Policy Programs Guiding China's Steel Industry Development**

It has been shown that the Chinese steel industry is not embedded in a competition driven market environment. Its development is rather decided by a complex array of politico-business alliances which de facto are not integrated in an overarching macro-economic framework. However, there exist some general policy programs designed by the 'China Steel Inc.' to provide guidance and direction to the Chinese steel industry as a whole.

Against the background of an industry that has expanded much faster than had been expected by Chinese government organizations - having become highly fragmented as hundreds and hundreds of new steel plants, rolling mills and processing businesses have entered the scene - the leitmotiv of these policy documents is the wish to regain lost control over the industry (in particular at the central government level) and direct it from a phase of breakneck expansion towards a more sustainable mode of development.

### **1.8 China's "Eleventh Five Year Program for Economic and Social Development"**

Since the beginning of the new millennium, China has broken with its tradition of centralized discretionary planning of economic interaction. The "Tenth Five Year Plan" covering the period 2001-2005 had been the first not to include any directives, but rather to rely on indicative planning and indirect means of control and regulation. Its successor, the "Eleventh Five Year Program for Economic and Social Development", covering 2006-2010, has even shed the term 'plan' and now comes as a 'program'. This new "Five Year Program", however, is no less comprehensive and complex than its plan-forerunners. Like its predecessors, it comprises much more than just the general outline of national economic development goals being publicized at the outset of the plan period. In addition, government authorities on every administrative level, from the central government in Beijing down to the provincial and municipal governments, all formulate their respective Programs with local coverage. In the unpublicized sphere, there exists a further set of detailed Programs for industries and individual enterprises setting development goals and announcing strategic objectives. Hence, there is a multi-tiered system of strategic planning documents in place to coordinate and guide social and economic developments. These Programs are much more flexible than the directives issued in former periods; nonetheless, they do have a very significant impact on the top management of China's leading enterprises.

In the context of these planning documents, the development of the steel industry has been - and continues to be - a major issue in every document issued by the central government as well as by most provincial and many municipal governments. Typically, regional planning departments call for the promotion and support of the steel industry in one way or another.

Many documents especially highlight the strategic importance of steelmaking for the national economy and designate it as a “key”, “pillar”, “lead” or “backbone-industry” (see box 2).

**Box 2: “Pillar Industries” and “Lead Industries” in China’s Industrial Policy**

Since the early 1990s the overall guidelines for the direction of industrial policy have been defined along a more or less well-defined concept about the creation of “pillar industries” and “lead industries”. Pillar industries are understood to determine national economic growth and industry development in the short to medium term. They are, however, not understood to epitomize the future of the national economy. It is the “lead industries” which are thought to determine national economic growth and industry development in the long term and become the pillar industries of the future. Lead industries represent those industries which at the time being are still in an underdeveloped stage but are deemed to possess high development potential. Pillar industries and lead industries are usually referred to as “focus industries” and have to be differentiated from the “backbone industries”. The latter are comprised of industries understood to possess a decisive role for the functioning of the overall economic system like industry branches featuring natural monopolies (telecommunication, electricity grids), providing important public goods (electricity, transport services), or focus on the exploration of important natural resources, incl. oil, natural gas, coal, gold, etc.

The iron and steel industry was not included in the first four pillar industries designated in 1992. These included only the automotive, construction, electronic and petro-chemical industries. It was not even included in the official list of likely candidates, having the potential to become a pillar industry in the future. It took until the late 1990s that the iron and steel industry was included in this select group.

Today pillar industries are no longer defined on a national level only. In addition to the national list of pillar industries, all Chinese provinces as well as a multitude of localities (industry development zones, etc.) have proclaimed their own specific pillar industries. For example Jiangsu province considers itself as specialized in machinery, electronics, chemical industry and automobile whereas for example the Nanjing Economic and Technological Development Zone, itself located in Jiangsu Province, defines its pillar industries as the electronic information industry, bio-pharmaceutical industry, light machinery industry and new materials industry. As a consequence of this development the notion of pillar industries is increasingly becoming an elusive concept, its content differing in an inter-temporal as well inter-regional perspective.

Until the late 1990s, policy documents called for rapid capacity expansions as well as upgrades in both production technology and product quality. The central government’s “Ninth Five Year Plan” (1996-2000), for example, still stipulated that “in 2000, steel output would reach 105 million tons, an increase of 11 million tons from 94 million in 1995 (a target that has been surpassed by a substantial margin) and emphasized the necessity to “build new modern large-sized iron and steel bases to meet the need of economic development”. Next,



the authors pointed out that “supplementary projects for renovating and expanding production lines for manufacturing steel products and stainless steel especially used for railway car, shipbuilding, power stations and oil industry should be carried out as well”.

After the year 2000, the call for further capacity increases has been dropped from the agenda because overcapacities in the steel sector had already become a major concern. The more recent “Tenth Five Year Plan” and the “Eleventh Five Year Program” rather emphasize the importance of technological upgrading in every field of the production. Text passages have been added to condemn the waste of resources and environmental destruction, to promote the development of high quality, high value-added, technology intensive products and eliminate outdated production facilities. Since the “Tenth Five Year Plan”, the adjustment of the industry set-up and a consolidation within the steel sector has become a common theme of all development plans. Large mills are encouraged to acquire smaller local rivals in order to reduce the number of steelmakers, rationalize the market structure and build up large regional steel bases. The ultimate goal of this strategy is communicated to be an enhanced level of efficiency, competitiveness and profitability.

In some cases, Five Year Plans have not only provided guidance for existing economic units but also led to the creation of new companies. Tianjin Pipe, today China’s largest producer of seamless pipes, is such a case. The company – initially labeled the “Big Seamless Project” – was conceived through the “Eighth Five Year Plan” of Tianjin Municipality. Later it was carried on as a “key project” in Tianjin’s “Ninth Five Year Plan”. The entire process of founding the company was state-induced: Because seamless tubes and numerous other steel products were in short supply on the Chinese domestic market, consuming industries strongly depended on imports. Through setting up an all new company, planning authorities intended to finally substitute imports with domestically manufactured products and raise self-sufficiency ratios. The necessary funding for setting up the company was made available by state-owned banks which provided significant amounts of cheap investment capital through low interested loans. In 2004, a report by SASAC clearly stated that the establishment on Tianjin Pipe was the “strategic decision of the Party and State because reliance on imports of seamless tubes and related products was perceived to hinder the development of the domestic Chinese petroleum industry.”<sup>11</sup>

While the discretionary creation of new corporations has been discontinued today, central, provincial and local governments in China continue to provide highly specific guidance to the development of certain companies located within their jurisdictions. In many cases, planners clearly cite and prioritize certain projects, set targets for output volume or sales revenue, define the product mix or specify how the linkages to upstream and downstream sectors should be handled. The presently effective “Eleventh Five Year Programs” as promulgated by governments on various levels provide substantive evidence for these governments’ ambition to actively steer their local steel enterprises in a specific direction and direct local industry development.

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<sup>11</sup> Dewey & LeBoeuf, October 2007, China’s State-Directed Expansion in Oil Country Tubular Goods: A Case Study, p. 60.

**On the central, national level, the “Eleventh Five Year Program” outlines domestic consumption as basic guideline for the steel industry’s development. Planners call for a solution to the overcapacity problem and demand stricter controls for capacity additions, the accelerated elimination of obsolete production and the enhancement of steel product quality.**

With regard to improving resource efficiency and environmental protection, the Program encourages companies to introduce recycling management practices. Large steel mills located inside of cities should follow the example of Shougang and relocate from their traditional sites inside the cities to more suitable areas. As a major consumer of energy, the steel industry is urged to improve efficiency standards.

The Program also addresses the issue of industrial consolidation and states that steel enterprises are encouraged to engage in trans-regional mergers in order to form several companies that possess strong international competitiveness.

As far as the manufacturing of production equipments is concerned, the central government announces its support for six key projects in this field. Among these are large scale hot and cold rolling lines for making thin sheet and processing lines for coating or plating purposes.

Taking the central government’s Program as a basis, provincial authorities had adopted the core statements into their own plans. This way, it cannot surprise that almost every provincial Five Year Program contains references to industrial consolidation, the phasing out of backward facilities or the production of more high value added steel. In addition to these general statements, provincial planners sometimes go into great detail to outline specific plans or goals for their own region. While the major development goals and strategies as communicated in the “Eleventh Five Year Programs for Economic and Social Development” of all of China’s Provincial Governments are documented in Appendix I of this study, we will here restrict ourselves to exemplarily highlight the steel related content of the “Five Year Programs” as formulated by the provincial governments of the central Chinese provinces of Hebei and Hubei.

The Eleventh Five Year Program of **Hebei** Province makes numerous references to the steel sector and explains in great detail, how the planners envision the future development of local mills. First and foremost, steel along with a number of other industries, is designated a leading industry. As such, it is encouraged to set up a large production base, realize large scale projects and become highly competitive. One such project is the construction of a large new center for steelmaking in coastal Caofeidian which stems from the relocation of Beijing’s Shougang works. The Program also defines that the local mills should focus their attention on making high quality sheet, tube, section and three other product categories. Seven so called “leading large industrial focus projects” are identified of which the steel industry is one. As key projects to be especially promoted, are defined the establishment of the Caofeidian steel base, and the structural adjustments and technological upgrading at Handan Steel to

point out only two. Assistance for the steel industry also comes in the form of government supported infrastructure and logistics projects. Among thirty large scale professional logistics projects specified in the Five Year Program, there are three of great significance for Hebei's steel mills: (1) the construction of a special terminal for unloading ores and raw materials from large ocean going vessels, (2) the implementation of a special logistics project for handling steel in the port of Tangshan and (3) a similar steel logistics project in the port of Handan. In addition, planners have identified four cities which supposedly offer favorable conditions for the development of large scale industries like steel. Mills are encouraged to build and expand production facilities in these locations.

**Hubei** Province, home of Wuhan Steel, has announced that it wants to improve the competitiveness of local steelmakers and plans to speed up the formation of steel and eleven other industrial sectors with annual sales incomes in excess of 100 billion Yuan RMB, which it considers to be focal points of its Eleventh Five Year Program. The Program designates the steel sector as a "pillar industry" and promotes the acceleration of its development. It also backs the construction of Wuhan Steel's new production base project. The provincial government also supports "backbone" steel mills to strengthen their scientific innovation while, at the same time, expanding in scale. More precisely, it supports Wuhan Steel to successfully develop automotive sheet as well as other high value-added steel products. The plan goes even further and stipulates that Wuhan Steel should transform itself into a first rate steel enterprise meeting to global standards. Wuhan Steel shall set up the world's largest production base for cold rolled silicon sheet and become a major center for manufacturing automotive sheet in China. The Hubei provincial government also intends to become a center for the large-scale production of special steels. Planners want to 'energetically' develop certain high grade steel products like color-coated or hot-dip galvanized sheet. During the Eleventh Five Year Program period, Hubei Province intends to build up capacities for the production of 22 million tons of steel and 5 million tons of steel products. To achieve these goals, planners indicate their intention to utilize the full potential of Wuhan Steel's converters and thin sheet continuous rolling lines as well as other of the company's productive assets. Among others, the Program points out a cold rolling line for thin sheets and a hot rolling line for wide plates at Ezhou Steel, another steelmaker which has merged with Wuhan Steel in the meanwhile. Further support for the steel industry stems from the promotion and acceleration of logistics projects.

One hierarchical level below the provincial governments, municipal governments are also drafting their particular Development Programs. In this process, local government authorities and enterprise representatives are working closely together, thereby demonstrating the inaccuracy of the notion of a top-down planning approach. In their essence the Development Programs constitute a government-business joint planning effort. Appendix II introduces the steel industry related development goals and strategies as communicated in the "Eleventh Five Year Programs for Economic and Social Development" of eight municipalities with strong steel sectors. Here we will restrict the discussion to the example of Ma'anshan City.

**Ma'anshan** City, located in Anhui Province stipulates, in its Eleventh Five Year Program that “through the effective integration of resources” and vigorous support, Ma'anshan Steel should be promoted to reach a sales income of more than 60 billion Yuan RMB by the end of the plan period in 2010. The government urges to further increase the competitiveness of the steel sector which it designates a leading industry. To this end, the authorities in charge of planning support the speedy construction of Ma'anshan Steel's new production site and the development of high value-added steel products. By 2010, the company's annual steel output capacity is planned to reach 15 million tons with flat products accounting for more than 60 percent. The steelmaker is called upon to become a large, modern enterprise with strong international competitiveness. Authorities also support the development Ma'anshan Steel in non-steel business activities and encourage the company to expand activities along the value chain. To this end, the Program announces the construction of a steel processing base with Ma'anshan Steel at its core. According to the Program, the company can also count on the support of its hometown for acquiring raw material resources abroad.

As the various programs presented in this study indicate, Chinese government authorities are still placing great importance on their respective planning documents. Although these plans are not as specific as their predecessors and also lack their mandatory character, they still indicate the authorities' development objectives and priorities. At the same time they have de facto not lost much of their power to guide enterprise managers to strive for fulfillment of goals and targets outlined in the respective local programs. The targets defined here may be understood as benchmarks against which the performance of individual managers (and SASAC appointed managers in particular) is evaluated and career paths are decided.

All Plans and Programs cited so far are comprehensive planning documents drafted to articulate various governments' views and aims relating to the overall social and economic development. As such, they describe matters in broad terms and only contain the items considered most relevant and important by respective planning officials. It is important to point out that many government agencies on all levels have compiled additional Plans and Programs focusing on certain industries or policy fields. With respect to the iron and steel industry the most important of these complementary documents have been the “Program for Industrial Structural Adjustment During the Tenth Five Year Plan” for the period 2001-2005 and for the period covered by the “Eleventh Five Year Program” the “Iron and Steel Industry Development Policy” (ISIDP).

## **1.9 “Iron and Steel Industry Development Policy”**

Next to the set of documents constituting the “Eleventh Five Year Program” currently the “Iron and Steel Industry Development Policy” (ISIDP) is the most important policy document designed to provide guidance to the Chinese steel industry and its individual enterprises.

**The ISIDP is a comprehensive catalogue of goals and plans for China's domestic steel**

**sector.** It was originally drafted by the NDRC in close consultation with the members of the 'China Steel Inc.' and in July 2005 finally promulgated by the State Council. As the centerpiece of all steel related policy initiatives by government authorities, the ISIDP explains the central government's approach in restructuring the steel industry and outlines its ambitious development objectives in great detail. For the time being, the ISIDP remains the ultimate guideline to shape the future of China's steel sector.

Nonetheless, the ISIDP has to be understood as only one step in a long line of policy documents that date back to the turn of the millennium. In fact, most of the issues addressed in the ISIDP have already been brought forward in earlier stages of industrial guidance initiatives. This is equally true for most of the problems identified, i.e. high and rapidly increasing overcapacities, low technological standards, inefficient resource utilization, as well as the solutions offered, i.e. the elimination of obsolete capacity, technical minimum requirements, increased supervision and control. Seen as a part of China's steel related policy making process, which dates back several decades and has in this course undergone numerous changes of direction, the ISIDP is hardly anything new or revolutionary, but rather a repetition and elaboration of previous initiatives and statements.

Since the turn of the millennium, the central government has published several Circulars which cautioned against a too rapid, irrational expansion which would not sufficiently take into account the actual market demand but result in overcapacities, inefficient use of resources and environmental damage instead.

In late 2003, the NDRC warned of the threat of growing overcapacities, citing statistics showing an excess supply in steel production through already existing facilities. Strikingly the paper also pointed out that additional facilities which, by that time, were still in the planning or construction stages, were likely to cause an escalation of the overcapacity crisis. Among the main culprits identified were regional government authorities who had not only allowed the build-up of local steelworks but had also encouraged it through various kinds of "inappropriate preferential treatment". The document directly or indirectly complains that local authorities had:

- issued land use rights at preferential rates,
- offered tax incentives,
- not thoroughly enforced environmental protection standards
- violated the regulations for project approval under the pretence of encouraging foreign investment.

According to the NDRC analysis, these factors had led to a situation where the whole industry suffered from rampant overcapacities, shortages in the supply of iron ore, irrational industry layout and accentuated structural contradictions among other problems. The authors at the NDRC at that time already made no secret of their frustration with the behavior of government authorities on lower administrative levels and urged that related departments of the State Council should seize the opportunity to formulate a steel policy in order to remedy

the current situation. However, they had to wait another one and a half years before the ISIDP was finally promulgated by the State Council.

But the NDRC had no desire to wait that long. In late 2003, it published a document bearing the little appealing title “Several Opinions on Containing the Blind Investment in the Iron and Steel Industry” announcing a groundbreaking reform in the approval process for steel mills. The adjustment prioritized high technology steel plants and restricted the expansion of low grade, inefficient production technology. The right to decide on applications for building or enlarging steel mills was reserved exclusively for the NDRC at central government level. The project approval process would have to be handled more carefully and on a case-to-case basis to ensure a higher quality of facilities operating around the country.

To ensure that decisions were qualified, the NDRC also introduced thresholds for new entrants in the form of technological minimum requirements for many kinds of steel projects. To be approved, applicants needed to prove that their new projects could meet inter alia the following criteria:

- sintering plants must have a size of at least 180 m<sup>2</sup>,
- coking ovens furnaces needed to have a minimum height of 4.3 meters,
- blast furnaces were required to have a volume of 1000 m<sup>3</sup>,
- converters must exceed a minimum volume of 100 m<sup>3</sup> and
- electric furnaces had to reach a minimum capacity level of 60 tons.

At the centre of almost every statement issued after the year 2000 by any central government office on the development of China’s domestic steel industry are a number of general themes. These are often repeated - sometimes more than once within a single paper – to stress their importance. A smaller number of documents, such as the ISIDP, elaborate further details. Not surprisingly, the two key objectives are to:

- (1) satisfy the domestic steel demand in terms of quantity, quality and variety and to
- (2) improve the international competitiveness of domestic steelmakers.

To this end, government authorities on the central level vigorously demand adjustments to the steel industry’s “structure and physical layout”. Behind this catch-all phrase is a strong political push to seriously pursue a consolidation strategy that

- reduces the number of steel plants and companies,
- supports company mergers to build up larger, more competitive players,
- forces the elimination of outdated production facilities,
- encourages technological upgrading of both production facilities and products and
- furthers company R&D, the creation of IPR as well as successful brands

Warnings against irrational capacity expansion, blind investment, the disregard of market conditions, use of poor production equipment, production of low quality products, low resource efficiency and damage to the environment complement this catalogue.

The ISIDP is no exception to this rule but stands out for two reasons that distinguish it from earlier documents: First, the policy was officially promulgated by the State Council at a regular meeting chaired by Prime Minister Wen Jiabao. As such the policy has been attributed highest political weight, with the highest echelons in China's governmental and Party hierarchy endorsing its contents. Second, the policy goes into great detail to outline what lies behind abstract phrases like the infamous "structural adjustment" which can be found without any further elaborations in most official documents.

As the most essential policy document directing the development of China's steel industry today, the relevant parts will be presented in the following sections. The ISIDP is basically divided in nine chapters that together hold a total of 40 articles. To promote understanding of the major issues, this study will not analyze the articles one by one. It will also not always adopt the division in nine separate parts as found in the ISIDP as this also does not contribute to a better understanding of the general messages of the document. Instead we have identified the following four broadly defined topics which comprise all major issues and policy guidelines:

- (a) Basic information outlining state influence and intervention
- (b) Technological upgrading
- (c) Consolidation and restructuring
- (d) Foreign investors and international trade activities

#### **(a) Basic information outlining state influence and intervention**

*"The iron and steel industry is an important fundamental industry for the national economy, it is a pillar industry for the industrialization process."*

*(Article 1)*

**It is common for government agencies to designate the steel industry as a "pillar industry" or "backbone industry".** Most of the time this appears to be merely a way of highlighting the strategic importance of steel for the development of the industrial sector as well as for the national economy as a whole. Though the ISIDP does not elaborate what implications the status as a "pillar industry" actually has, a Circular published by the State-owned Asset Supervision and Administration Commission<sup>12</sup> explains that **the state should maintain a relatively strong ownership stake in backbone enterprises in fundamental pillar industries, such as the iron and steel industry.** This position is backed by both the Central Government's Tenth and the Eleventh Five Year Plans. The documents leave no doubt that **the state intends to maintain full- or majority ownership status in industries which either possess special relevance to the national economy as a whole<sup>13</sup> or are somehow related to national security.** Furthermore, the state sector is called upon to play a leading role in future developments.

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<sup>12</sup> Literally: "touch the lifeline of the national economy".

<sup>13</sup> "Guiding opinion on promoting the adjustment of state-owned capital and state-owned enterprise consolidation".

Article 2 of the ISIDP then stipulates that by 2010, the domestic steel mills shall be able to satisfy the requirements of major steel consuming industries, such as machinery and automobile industries.

The ISIDP gives a clear indication that government authorities intend to further pursue their strategy of actively guiding and directing the industry's development. In other words, the NDRC and other government agencies are designated to continue their interventionist policies that prescribe market outcomes. Article 7 underlines, that

*“The government, through the policy and the Long and Medium Development Plan, will guide a healthy, sustainable and coordinated development of the industry. The Long and Medium Development Plan for the Iron and Steel Industry (the plan) will be outlined by the NDRC and other related departments.”*

Article 30 announces direct state interventions for the case that fierce competition among Chinese enterprises threatens to drive up procurement prices for raw materials sourced from abroad.

*“When the domestic enterprises generate malignant competition upon the overseas resource, the state can adopt administrative methods to unite enterprises or chose one to make the investment in the purpose of avoiding the malignant competition. The enterprises should obey the state administrative coordination.”*

In a very broad way, article 37 proclaims that

*“The market order should be regulated and the market should be stabilized.”*

This catch-all statement illustrates the NDRC's mindset, as both text passages presented here make it obvious that government authorities are seriously pursuing a strategy of pronounced market intervention. For the NDRC, one way to “guide a healthy, sustainable and coordinated development of the industry” as proclaimed in article 7 constitutes the implementation of a strict approval process for new investments in the iron and steel industry. Article 22 announces that the NDRC will be in charge of reviewing and approving all project applications by domestic or foreign companies concerning the domestic market. In addition the commission will also be tasked to examine all project applications of domestic companies in foreign countries.

**The ISIDP constitutes a comprehensive catalogue of plans and objectives. Since 2005 it “governs” the development of China’s iron and steel sector. Consequently, non-compliance with or violations of the rules laid out in this document are officially sanctioned.** Article 24 determines the consequences if companies disregard the ISIDP, fail



to get project approval based on the conditions determined in the ISIDP or get project approval against the regulations. It warns that for those companies

*“the departments for land and resources shall not conduct the land use procedure, the administration departments of industry and commerce shall not conduct the registration, the business administration authorities shall not approve the relevant contracts and constitutions, the financial institutions shall not provide loans and other types of credit support. The customs administration shall not conduct the import procedure on tax-free equipment, the departments of quality inspection shall not issue the production permit and the departments of environmental protection shall not approve the environmental impact evaluation document and shall not issue the permit on the environmental discharges.”*

The enumeration makes clear that any company or project that runs against ISIDP will be harshly punished.<sup>14</sup> It can even be argued that projects subjected to this administrative punishment have no chance of going ahead. **In theory, sanctions are severe enough to force investors to abandon the project in question. In practice, however, there is ample empirical evidence that local politico-business networks are in a position to construct special arrangements designed to circumvent ISIDP rules.**

In addition to numerous government agencies, banks (regardless of ownership) are also required to assist in enforcing the rules spelled out in the ISIDP. They are being co-opted to act as agents for the government. Article 25 states that

*“The mid- and long-term fixed asset investment loans, issued by various financial institutions to the iron making, steel making and steel rolling projects shall comply with the policy. [...] If the fixed assets investment loan is issued to the newly added capacity of iron making, steel making or steel rolling projects, the financial institutions need to request the project units to provide the approval and examination and filing documents certificated by the NDRC.”*

## **(b) Technological upgrading**

The call for technological upgrading is a major issue addressed by the ISIDP. Existing companies are encouraged and pushed to improve their technical capabilities while new market entrants are confronted with high threshold levels allowing only high grade manufacturing equipment. According to the ISIDP, growth of low-level production must be

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<sup>14</sup> The “Notice on the control of total output volumes, elimination of backward production capacity and accelerated structural readjustment in the steel industry”, dated 14.06.2006, reiterates that any enterprise or project not complying with the policies outlined in the ISIDP will be severely sanctioned and repeats the measures to be taken by the various government agencies as formulated in article 24 of the ISIDP.

avoided by all means. In order to achieve this aim, article 12 prescribes a variety of precise access requirements:

- sintering plants must have a size of at least 180 m<sup>2</sup>,
- coking ovens furnaces need to have a minimum height of 6 meters,
- blast furnaces are required to have a volume of 1000 m<sup>3</sup>,  
(If constructed in the vicinity of deep water harbors along the coast, the threshold rises to 3000 m<sup>3</sup>)
- converters must exceed a minimum volume of 120 m<sup>3</sup>  
(If constructed in the vicinity of deep water harbors along the coast, the threshold rises to 200 m<sup>3</sup>. In addition, the annual crude steel output capacity must be at least 8 million tons)
- electric furnaces have to reach a minimum capacity level of 70 tons.

Obviously, this list is an amended version of a previous list of minimum thresholds published as early as 2003. Of course, the minimum requirements for several items have been increased to reflect an even stricter and more demanding approval process. Adjustments have been made to the minimum height of coking ovens and the minimum volume of converters and electric converters. In contrast to previous documents, the ISIDP also rules that furnaces and converters located in the vicinity of deep water ports have to meet even higher volume levels. By introducing additional requirements for plants located in the vicinity of ports, article 12 reinforces the idea that local characteristics should be better internalized and exploited. It also shows that the government is in principle not opposing the construction of large-scale steel plants as long as they feature modern technology and are located in areas favorable for steelmaking.

Technological upgrading not only involves building larger and more efficient steel plants, it also requires high degrees of technical expertise. Until very recently, Chinese steel companies generally lacked the technological and managerial know-how necessary to thoroughly internalize and assimilate advanced OECD production technology. But during the past years, major Chinese mills have invested heavily in strengthening their R&D capacities and realized some major breakthroughs. Not surprisingly, the ISIDP (article 14) supports all endeavors to

*“accelerate the cultivation of independent innovation capacity of the iron and steel industry”.*

Furthermore it encourages enterprises

*“to establish the institutions for development and scientific research of products and techniques.”*

With regard to the development of proprietary technologies, article 14 states:

*“We should enhance the capacity of development and innovation, develop the working techniques, equipment techniques and products with independent property rights.”*

The following article 15 then specifies various kinds of production equipment and production processes that should be adopted by domestic steel mills, including oxygen enriched coal spraying, large-sized blast furnaces, continuous casting or continuous rolling, to name only a few. The heavy reliance on technology imports that has characterized the Chinese steel sector in the past is seen as a considerable hindrance for its future development. Therefore the NDRC highlights the importance of independent research and development activities and proclaims in article 16 that

*“We should [...] enhance the level of research and development as well as designing and manufacture major technical equipment of our iron and steel industry. The government will work out supporting policies, provide favorable taxation terms, subsidized loans and scientific research funds to support large iron and steel projects which are based on newly-developed home-made production equipments.”*

With respect to the promotion of independent research and development the ISIDP finds further elaboration and complementary, highly specific policy guidance in the *“Medium to Long-term Program on Technological and Scientific Development (2006-2020)”* (MLP) as promulgated by the State Council in 2006.<sup>15</sup> In order to increase the nation’s capacity for indigenous invention and innovation in 2020, the MLP employs a broad range of fiscal incentives, soft loan facilities including interest discounts and preferential loan provision, governmental investment measures, schemes for the promotion of ‘re-innovation’ by assimilation of foreign technology, improved IPR protection, the definition and implementation of Chinese industry- and product-standards, etc.<sup>16</sup> On the basis of the MLP all large state-owned enterprises governed by SASAC – including the Chinese steel conglomerates constituting the ‘China Steel Inc.’ – have been obliged to draft their own company specific *“Medium to Long-term Program on Technological and Scientific Development (2006-2020)”*.

As far as imports of technology and production machinery are concerned, article 18 states clearly, that preference shall be given to home-made equipment whenever possible.

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<sup>15</sup> The MLP constitutes the central strategic document in the Chinese government’s initiative to transform China into an innovation-driven society by 2020 and turn it into the global science & technology leader by 2050. In the context of this program China’s investment in research & development shall increase from 1.34 of GDP in 2005 to 2.5 percent of GDP in 2020. In that year technological progress is planned to contribute 60 percent to economic growth while China’s dependence on foreign technology imports shall be reduced to less than 30 percent.

<sup>16</sup> A comprehensive catalogue of promotional measures has been outlined in the State Council’s “Notification on some policy guidelines for the implementation of the ‘The Middle to Long-term Program on Technological and Scientific Development (2006-2020)’”.

*“Enterprises will be encouraged to adopt domestic equipment and technology and reduce imports.”*

In the future, foreign technology should only be purchased under the condition that it is highly advanced as well as practical and that it cannot be manufactured at all or in sufficient quantities by domestic suppliers. The same passage explicitly forbids companies to buy second hand steel making equipment from either at home or abroad. **Through encouraging the purchase of domestic over international technology and equipment, the ISIDP is directly calling on companies to practice import substitution (Art. 18).<sup>17</sup> In officially declaring import substitution to be a political aim, the Chinese government has violated WTO regulations which prohibit such behavior.** The Chinese government, however, tends to defend this statement as a non-binding guideline that might run against WTO rules in theory but is claimed to have never been enforced in reality. The authors cannot follow this line of argumentation.

Apart from the more general demands that steelmakers should improve their technology levels and introduce more high quality products, article 34 of the ISIDP also specifically encourages companies to turn out more high-strength and corrosion resistant steel products.

On the input side, companies should gradually shift their mode of steel production from the blast furnace-converter route towards electric arc furnaces. In article 35, the NDRC stipulates that mills should make use of an increasing availability of steel scrap in the Chinese market over the coming years and lower their reliance on iron ore as a key ingredient.

### **(c) Consolidation and restructuring**

As pointed out earlier, the government reserves itself the right to conduct far reaching market interventions in order to adjust the industrial structure in the way it deems appropriate. One major goal stated in the ISIDP as well as in several other documents is to reduce fragmentation and promote consolidation in the steel industry. To this avail, article 3 proclaims that

*“by means of adjustment in the organizational structure of the iron and steel industry, mergers and acquisitions will be taken to enlarge the scale of major advantageous groups. By 2010, the number of iron and steel smelting enterprises will be substantially reduced and the top ten domestic*

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<sup>17</sup> In a move to strengthen this proposition the "Circular of the Ministry of Finance, the General Administration of Customs, the State Administration of Taxation, and the State Development and Reform Commission Concerning Import Tax Collection Policies Relevant to the Implementation of Various Opinions Regarding the Acceleration of Development of the Equipment Manufacturing Industry" (Cai Guan Shui [2007] No. 11) issued on Jan 14.01.2007, provides for an increase of import duties on selected types of iron and steel industry equipment from zero to 8-15 percent plus an import VAT of 17 percent to be charged on the sum of the import value and the duty.

*iron and steel enterprises will account for over 50 percent of national total production. By 2020 the proportion shall reach 70 percent”*

Although concentration levels are supposed to rise substantially, the NDRC warns that this must not be achieved through further capacity expansions. On the contrary, echoing previous announcements article 10 of the ISIDP emphasizes that

*“in principle, no more new integrated steelworks, independent iron making plants, and steelmaking plants will be constructed [...] In principle, no more substantial capacity expansions will be allowed.”*

As will be shown in later parts of this study, this announcement has not been followed. The usage of the term “in principle” illustrates that exceptions were already anticipated during the time of drafting the ISIDP. Though the document sheds no light on the nature of these possible exceptions, ensuing policy decisions have shown that approvals have almost exclusively been granted to major state-owned steelmakers for large-scale capacity expansions and technology upgrades (many of which have also added further production capacities). In 2008, government authorities have given their blessing to the construction of two new super-sized integrated steel mills planned by Baosteel and Wuhan Steel - both of which are owned and controlled directly by central government via SASAC.

Though the policy warns against adding more production capacity, it does not generally rule out further investments. On the contrary, the NDRC encourages companies to improve their technological levels or relocate to areas that boast favorable conditions for steelmaking, e. g. through better transport connections or availability of raw materials. Articles 10 and 11 clearly indicate the general investment guidelines.

Acknowledging that an unrestrained expansion drive is unsustainable – if not utterly impossible – the NDRC argues that basic natural conditions need to be properly observed in future developments. All things considered, the regional set up of China’s steel industry is regarded as untenable and in need of adjustments. Subsequently, companies should restructure or relocate to better internalize natural conditions and fully exploit regional development potential where it exists. To this end, article 11 stipulates that:

*“In consideration of iron ore, energy, water and other resources, and in light of transportation capacity, domestic and overseas markets, large scale iron and steel companies should be mainly located in coastal areas.”*

The ISIDP urges companies to carefully search for and develop locations that are most suitable for steel production. Article 11 cites the basic natural advantages and disadvantages for each of China’s six macro-regions and defines their respective potential for the development of the steel industry. The ISIDP identifies very favorable conditions for steel industry development in the resource-rich Northeastern region – the traditional center of China’s steel industry. Local companies are encouraged to

*“construct a production base dedicated to manufacturing high-end steel products”*

and to

*“eliminate backward production capacity and construct themselves into large-scale enterprises with international competitiveness.”*

According to the ISIDP, the steel industry in North China has already severely stressed the natural potential of its home base. Water shortages and structural imbalances are seen as having a serious negative impact on the development of steelmakers in that particular region. As such, the ISIDP dictates that the local industry should

*“focus on structural adjustment, mergers and acquisitions and exercise stringent control over adding further production facilities and expanding installed capacities.”*

By banning the purchase of second hand production equipment the government can ensure that outdated facilities effectively vanish from the scene once they have been phased out. Consequently, steelmakers are forced to buy new, modern machinery and automatically improve their technological abilities with every capacity expansion. The ban on second hand equipment also makes sense in the context that the government is determined to rid the steel industry of obsolete production facilities. In this respect, article 17 announces that

*“Work will be done to accelerate the elimination and forbid the new construction of the backward process and facilities which include primitive sintering, primitive coke [...] blast furnaces at or below a capacity of 300 m<sup>3</sup> [...], converters at or below a nominal capacity of 20 tons and electric arc furnaces at or below a nominal capacity of 20 tons”*

It has been widely reported that Chinese authorities have forced the elimination of small or backward production facilities. **Phasing out inefficient steel plants has proved to be an arduous task and progress has been far slower than expected because of strong resistance from local company managers and local government officials** (who sometimes happen to be the same people). Efforts to shut down obsolete production capacities will be presented in detail in the Case Study “The NDRC’s Struggle to Wash-out Production Capacities”.

The structural adjustment of the industry is another major point emphasized in the ISIDP. The NDRC aims to cut down the number of total players in the market and build up a small group of large-scaled highly competitive companies that dominate the domestic sector and become successful heavy-weights on the world market. Article 20 of the ISIDP proclaims that

*“Steel enterprises shall be encouraged to develop towards the direction of forming large groups. Strategic consolidation shall be made through the alliance between steel giants, mergers and acquisitions among steel producers, and mutual share holding so as to reduce the numbers of steel works. [...] Large scale enterprises are encouraged and promoted to carry out reorganization and form trans-regional alliances. Until the year 2010, two large steel enterprises with an annual steel production capacity of 30 million tons each and several others with the ability to produce 10 million tons each shall be established.”*

Moreover, article 21 adds that

*“The state will support the capable consolidated large integrated steel enterprises to adequately expand the capacity through structural adjustment and industrial upgrade, so as to raise the production concentration. Supporting policies will be given to the separation of non-steel business from the mainstream steel sector, re-employment, setting up of social security, etc.”*

Article 30 goes even further and promises that government authorities will grant

*“Support [...] to the advantageous large key enterprises to set up the overseas production supplying bases of iron ore, chrome ore, manganese ore, nickel ore, scrap steel and coking coal by way of wholly owned investment, joint venture, cooperation and purchase of mineral resources.”*

All three articles corroborate the finding that the government is willing to offer substantial support to large steel conglomerates. As is the case in many other industrial sectors in China, the government is pursuing a strategy of “grasping the large, while letting go of the small”.

**By promoting the formation of a handful of large-scale enterprises, authorities are effectively prescribing the future industry structure. It can also be confirmed that authorities are favoring and prioritizing the development of large integrated mills - which are almost exclusively owned by the state. Given these policies, it appears most likely that the Chinese steel market of the future will provide little room for non-state-owned mills. This way, the government can be sure to maintain a tight grip on and exert strong influence over market developments.**

In what appears to be another move to restrict the development options of small and medium-sized mills, article 23 rules that only the very large companies are allowed to invest on a cross-regional scale. It demands that only steel enterprises which have realized an annual production of at least 5 million tons of common steel in the previous year will be eligible to conduct cross-regional investment projects. For special steel enterprises this

threshold is lower and amounts to a minimum output requirement in the previous year of 500,000 tons.

**(d) Foreign investors and international trade activities**

**The ISIDP makes it very difficult for international steel enterprises to get a foothold in the Chinese market.** Article 23 lists numerous requirements that foreign companies have to match in order to proceed. It demands that an overseas iron and steel enterprise must

*“possess iron and steel technology with independent intellectual property rights and should have produced at least 10 million tons of carbon steel or at least 1 million tons of high-alloyed special steel in the previous year. [...] The investment projects of overseas enterprises must be combined with the renovation and relocation of domestic existing iron and steel enterprises, without launching new construction sites.[...] In principle, foreign investors that make investment in China’s iron and steel industry are not allowed to have a controlling share status.”*

Though entering the Chinese market is tempting for international steelmakers, the entrance requirements are considerable. But even for companies who can meet the thresholds determined by output quantities serious problems and risks remain. It appears striking that only companies which own proprietary technology are admitted. Although these foreign companies are obliged to assist their local partners in relocation and renovation projects, they are not allowed to hold a controlling stake in their investment target. This situation opens the door for an illegal appropriation of intellectual property. Through the institutional set-up described in article 23, the Chinese joint venture partner might have easy access to the foreign company’s advanced technologies.

While the ISIDP explicitly discourages technology imports, it just as explicitly promotes exports of domestic production technology. Article 27 announces that

*“government authorities encourage steel producers and equipment manufacturers to export the domestic advantageous technology and complete sets of metallurgical equipment through setting up industrial plants overseas or exporting merely technology. The state will provide support to such kinds of endeavors in the form of export credit.”*

**The combination of import substitution and export promotion in the ISIDP is striking. It indicates that the NDRC is determined to influence international trade flows just as it influences domestic market conditions.**

The NDRC announces that exports of products that are characterized by production processes which consume large amounts of energy or harm the environment will be restricted through the imposition of an export tax. These goods include raw materials (e.g.



coke) and semi-finished steel products. **The newly levied tax raises the price of Chinese export goods for sale in foreign markets and thereby undermines their competitiveness. Declining exports imply that supply levels in the domestic market will rise.**

**The increased supply depresses domestic price levels and allows Chinese steelmakers cheaper access to these goods.** The market distortions created by this policy are substantial because statistics show an obvious differential for coke prices inside and outside China. The effects of export taxes and other measures meant to discourage exports will be discussed in detail in section 5.8.3 of this study.

The ISIDP does not contain any policy guidance or promotional measures pertaining to the export of specific steel products.

As documented above, the ISIDP constitutes a comprehensive and quite detailed catalogue outlining the development goals China's central government has with regard to the nation's iron & steel industry. In addition the document describes which instruments the Chinese government intends to employ in order to push the steel industry and individual enterprises in the intended direction. Furthermore it contains precise rules determining numerous sanctions to be imposed on companies violating the policy.

Given the substantial range covered and the detailed policy measures outlined in the document the Chinese government's claim that the ISIDP is only providing a 'guideline which is not binding and possesses a purely indicative function' cannot be accepted.<sup>18</sup> On the contrary,

**The ISIDP constitutes an agenda for discretionary government interventions in the market process outlining a range of policy interventions that are clearly running counter to the principles of market based competition.**

## **1.10 Major Areas of Policy Interventions in the Chinese Steel Industry**

As has been documented in the preceding sections, Chinese government organizations at the central, provincial and local levels are all very much concerned with the development of the steel industry in their respective jurisdictions. While the specific interests may vary according to local characteristics, three policy fields can be identified as being of central importance for all government organizations involved<sup>19</sup>:

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<sup>18</sup> The binding character of the ISIDP is also highlighted in various official documents (e.g. the "Notice on the control of total output volumes, elimination of backward production capacity and accelerated structural readjustment in the steel industry", dated 14.06.2006), thereby negating the claim that the policy would constitute a guideline only.

<sup>19</sup> In the past, a fourth policy field used to be the expansion of production capacities. This objective has been largely abandoned around the year 2000 when the problem of overcapacities began to surface. Capacity expansions are still demanded for certain high

- Domestic Market Consolidation
- Technological Upgrading
- Interaction with the Global Markets

## **Domestic Market Consolidation**

A prominent theme in all government publications is the call for market consolidation. In the minds of Chinese planners, this goal is closely associated with the idea of improving the sector's overall competitiveness. Government authorities have realized that the current market landscape, which features a large number of steel mills and low concentration levels, could obstruct a successful industry development. In China it did not go unobserved that major international steel producing countries have entered into a period of rising concentration levels. The number of large independent steel mills in OECD countries has decreased in recent years as M&A activity has picked up. Considering the market strength and influence of international steel giants like Arcelor Mittal, Chinese economic decision makers are concerned that Chinese players may be left behind.

The Chinese weakness of fragmentation has also been regularly exposed during the annual iron ore price negotiations where China has repeatedly failed to take advantage of its role as the world's biggest buyer. But the input side is just one worry. CISA officials frequently point out that high concentration levels in downstream industries hinder steel producers to fetch good prices for their output. CISA officials have therefore once and again stressed the point that domestic steel mills should merge in order to attain the necessary size to evade the trap of being stuck between a handful of raw material suppliers on the up-side and a handful of automotive companies on the down-side.

## **Technological Upgrading**

Technological renovation is another issue to which Chinese planners are attributing great importance. When emerging out of the central command economy, the technological vintage of Chinese steel mills was hopelessly outdated. Technological renovation was therefore a prime objective for future development. As outlined in detail in section 5.4, government authorities have not been shying away from high costs and continued investments in failing enterprises to stimulate technological upgrading.

As China's overall economic development has progressed, steel demand is shifting to include more high value-added products and fewer low-grade goods. Increasing specialization of traditional industries, i.e. in mechanical engineering or shipbuilding, and the emergence of entirely new industries, i.e. semiconductors and automobiles, have led to a major shift in demand structure. The calculation is simple. For China to stay competitive and expand in steel-consuming industries means that the domestic steel sector has to adapt to

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technology steel products. Therefore we will cover this issue in the broader outline of technological upgrades.

the changing situation. The strategic importance of steel is obvious and for planners “developing the steel industry” also means to set the stage for more advanced steel-consuming industries. Seen the other way round, the steel industry has been considered too important for the overall economic development to let it tackle the task of technological upgrading just by itself.

### Interaction with the Global Markets

Interaction with the global markets is understood to constitute a double-edged sword. On the one hand China had been and still is in dire need of foreign technologies and increasingly so with respect to the supply of raw materials; on the other hand the global market place and its competition hardened enterprises are seen as a danger to the development of an indigenous Chinese steel industry. Based on this notion, **Chinese government agencies, which feel uncomfortable letting go of ‘their’ steel enterprises, are trying to design an interface between the Chinese and the global markets, allowing to fully exploit the advantages of global interaction while at the same time protecting domestic enterprises from ‘too much’ competition and undesired influences.** As shown in section 5.8, a complex investment regime as well as a highly differentiated set of direct and indirect interventions in the free cross-border flow of goods and services provide the backbone of these policies.

#### Case Study: Anben Steel – The Merger that Never Was

The consolidation of China’s large but highly fragmented steel industry has been a major objective for government agencies in charge of industrial policy. The Iron and Steel Industry Development Policy expressly calls for a reduction of the number of steel mills and the creation of several super-large players. While the regrouping and combining of state-owned steel enterprises had been commonly practiced since the early days of economic reform, the pace of consolidation had been sped up after the Iron and Steel Industry Development Policy’s release in July 2005. In the following we will present one major merger transaction which clearly illustrates the high degree of government influence and involvement.

Only one month after the Iron and Steel Industry Development Policy was released, Anshan Steel and Benxi Steel, two large integrated steel mills from China’s northeastern Liaoning Province, announced merger plans.<sup>(a)</sup> Both mills belong to the leading group of Chinese steel mills and possess large-scale production capacities featuring advanced technologies. In a grand ceremony held on August 16th in Shenyang, company officials and government leaders celebrated the largest steel merger in Chinese history and hailed it a landmark event for industry consolidation. But soon afterwards, the exuberance wore off and it became increasingly clear that the two large mills were, in fact not eager to combine. Several reasons give some insights to the interaction between government agencies and the companies’ top management:

1. First, though Anshan Steel and Benxi Steel were both wholly-state-owned companies, they were not administered by the same supervising authority. While Anshan Steel belonged to the central government, Benxi Steel was owned by the provincial government of Liaoning Province. As such, disagreements on how the ownership shares should be distributed, how profits should be split and how management positions should be filled became serious obstacles that have impeded the merger's completion until the time of writing.<sup>(b)</sup>

2. Second, the companies themselves did not appreciate the merger deal which appears to have been entirely orchestrated by their supervising authorities. The reluctance of company leaders who preferred to remain independent was cited as another major barrier for a consequential integration of the two companies. An industry analyst concluded that "The merger was initiated by Beijing in spite of the reluctance of the two steelmakers ..."<sup>(c)</sup>

With these two obstacles blocking the way, progress has been exceptionally slow. On the merger's first anniversary in August 2006, little tangible progress had been achieved. The listed arms of both companies were still listed separately. An analyst claimed that Anshan Steel and Benxi Steel "are still not really happy and prefer to operate as independent companies, despite the government's desire for them to work more closely together".<sup>(d)</sup>

In February 2007, the two mills announced they had not yet drafted a detailed plan to merge. Moreover, representatives of Anshan Steel and Benxi Steel dismissed reports that their listed arms would exchange shares in the near future but confirmed that profits were not being shared among the two stakeholders and revealed that cooperation only covered the following fields: R&D, raw material procurement, marketing and sales. In July 2007, Zhang Xiaogang, chairman of CISA and general manager of Anshan Steel told reporters that "Great progress will be made in the merger of Anshan Steel and Benxi Steel in the latter half of this year." But he did not further elaborate and until the end of 2007 no substantial progress was visible.<sup>(f)</sup>

In March 2008, the chairman of Benxi Steel indicated that an official plan for the Anben merger would be released after the combined sessions of the National People's Congress and the Consultative People's Conference and that substantial progress could be expected in 2008.<sup>(g)</sup> Although the sessions were concluded at the time of writing this study, no further information has become available.

#### Notes:

(a) The timing of the announcement was not immediately related to the release of the ISIDP in the previous month. In fact, company sources stated that negotiations and preparations had been going on for at least one year before the official announcement was made.

(b) Mysteel, February 9, 2007, Anshan-Benxi Merger Unlikely to Bear Fruit This Year.

(c) Mysteel, August 2, 2006, Jinan-Laiwu Merger Deal Seen as local Govt's Defensive Move.

(d) Ibid., Anshan Steel and Benxi Steel both have listed subsidiaries whose shares are traded at the Shenzhen Stock Exchange. In addition, Anshan's listed arm is also traded at the Hongkong Stock Exchange

- (e) Mysteel, February 8, 2007, Anshan & Bengang Deny Report of “Further Merger Move”
- (f) Mysteel, July 31, 2007, Anben Capital Regrouping to Eye Significant Progress within 2007—  
Zhang Xiaogang
- (g) Mysteel, March 05, 2008, Anben merger plan to be released soon, says Benxi chairman

## Instruments of Governmental Micro-Management and Interventions in China's Steel Industry

Against the backdrop of the general policies and development guidelines brought forward by the Chinese government, we now take a closer look at the specific instruments and policy tools by which Chinese government organizations are trying to implement the aforementioned policies, respectively their specific (local) interests.

In the case study on Jiangsu Tieben, it has already been shown that local government organizations are in a position to employ a broad range of measures to promote and protect local projects. In the case of Jiangsu Tieben, the investor received direct governmental support inter alia by means of:

- Preferential taxation arrangements
- Preferential access to bank loans
- Preferential provision of land use rights
- Explicit non-implementation of environmental standards

In the following, we now provide a more comprehensive overview of how Chinese government organizations on the central as well as the local level are taking direct influence on strategic management decisions and in which ways they are exerting leverage on the daily business activities of China's steel enterprises.

### 1.11 Shadows of the Past: Pre-WTO Accession Policy Initiatives

**More or less all of large state-owned steel enterprises in China are today benefiting from a 'shadow of the past', i.e. preferential programs which have been terminated prior to or in the context of China's WTO accession but continue to show effects on today's business operations.** Before China joined the WTO on December 11<sup>th</sup>, 2001, state-owned enterprises were systematically prepared for the new business environment and in many cases provided with additional financial and other resources – an 'extra layer of fat' to soften the shock of becoming exposed to the international market place and its atmosphere of competition.<sup>20</sup>

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<sup>20</sup> That the national steel industry would have to dramatically increase its productivity in the post-WTO-accession era had become more than obvious in the run of the 1990s. Government frustration with the poor industry performance and its slow learning process is perhaps best illustrated by a 1996 Xinhua news article which scolds Anshan Steel for completely ignoring market demand as its management was still stuck in planned economy thinking disallowing for competition from or with other steel producers. The article openly states that 40 percent of the company's steel product output in 1994 was stockpiled because it was "something that nobody wanted". Wen Shizhen, governor of Liaoning Province between 1994 and 1998, was quoted as saying that "This extraordinarily large-sized enterprise has failed to extricate itself from the restrictions of the planned economy or to shift production and

In the following, we outline six major instruments and examples of how the Chinese state has been preparing 'his' steel enterprises for the post-WTO-accession era.

### **1.11.1 Grants, Preferential Loans and Debt Forgiveness**

Government organizations at central, provincial and local levels have typically used their respective Five-Year Plans to identify a number of "pillar industries", "backbone enterprises" or "key development projects" that they wanted to promote. Government agencies coordinated the necessary financing with state-owned banks which made funds available for specified companies. In some instances, provincial and city governments have also been known to entrust government-owned financial intermediaries with borrowing abroad and re-lending funds to local enterprises without direct access to the international capital markets. This pattern of state-owned banks and other financial institutions basing investment decisions on government plans rather than commercial considerations was prevalent.

As a recent study on Chinese steel subsidies revealed, **Ma'anshan Steel, based in Anhui Province, has received government infusions of more than 18 billion Yuan RMB during the period from 1993 to 1997.**<sup>21</sup> It goes without doubt that this massive subsidy scheme has helped Ma'anshan Steel develop into the modern and highly competitive steelmaker it is today. As such, the past capital infusions continue to have considerable impact on the company's present situation and its market positioning.

In 1995, **the Chinese government announced that all state-owned companies would receive a 15 percent tax refund on their enterprise income tax payments.** Companies were called upon to invest these funds in a productive manner of their own choice.<sup>22</sup> Based on this 'pre-condition' the money was handed back to state-owned enterprises to their own disposal.

By 1998, many companies had become unable to service their loans. As a consequence, on the one hand, the Chinese government encouraged larger state-owned enterprises to cut back their workforce in order to improve efficiency levels and avoid bankruptcy. On the other hand, authorities appointed 46 steel companies to be regrouped or merged while another 18 steelmakers were chosen to go bankrupt. In the context of this policy initiative, **a write off of non-performing loans amounting to 2.6 billion Yuan RMB became necessary.**<sup>23</sup>

In 1999, the government continued with its industry restructuring strategy and selected 7 steelmakers for mergers and another 5 for bankruptcy. Using the same course of action as

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management thinking into the orbit of the market economy"

<sup>21</sup> Price, A. et. al., 2007, Money for Metal, p. 34.

<sup>22</sup> Dewey & LeBoeuf, 2007, China's State-Directed Expansion in Oil Country Tubular Goods: A Case Study, p. 11.

<sup>23</sup> Specialty Steel Industry of North America, 2007, Chinese Government Subsidies to the Stainless Steel Industry – An Update p. 15 citing China Daily, November 14, 1999, Firm Action on 12 Enterprises to Merge or be Closed Down.

one year earlier, **non-performing loans worth 2.3 billion Yuan RMB were simply written off.**

Also in 1999, the Industrial and Commercial Bank of China was tasked to support the steel industry's restructuring and adjust its lending behavior accordingly.<sup>24</sup> Special attention was given to supporting mergers involving the leading steelmakers Anshan Steel, Baosteel and Shougang and assisting these companies in developing into internationally competitive companies included in the world's top 500 enterprises.

The same year also saw the final governmental approval for the construction of two large-scale stainless steel plants to be built by Baosteel and Taiyuan Steel. Authorities proclaimed, that the two projects would benefit of subsidized interest payments for a 3 year period. The investment sums involved were substantial: Baosteel planned to spend 900 million US Dollar to convert one of its subsidiaries, Shanghai No. 1 Steel Works, into a stainless steel mill. Taiyuan planned far reaching equipment replacements to increase its annual stainless steel output to 500,000 tons.<sup>25</sup>

**Government support for the ailing steel industry also came in the form of project funding by way of treasury bonds emitted by the state on behalf of individual enterprises.**<sup>26</sup> Had the benefiting enterprises placed (corporate) bonds in the market on their own, financing conditions would have been dramatically worse as high risk premiums would have had to be paid. But under this "State Bond Financed Project" facility, individual enterprises did not have to present themselves at the capital markets. They simply had to file applications with the State Economic and Trade Commission which was in charge of selecting eligible projects.<sup>27</sup> In this way, until the end of 2000, 82 projects related to the steel industry were accepted,<sup>28</sup> securing 75 billion Yuan RMB of funding – including complementary bank loans worth 46 billion Yuan RMB.

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<sup>24</sup> Dewey & LeBoeuf LLP, 2007, China's State-Directed Expansion in Oil Country Tubular Goods: A Case Study, p. 31.

<sup>25</sup> U.S. Geological Survey, 1999, The Mineral Industry of China 1999, pp. 6, 8.

<sup>26</sup> People Daily Online, September 14, 1999, China on Way to World Steel Power.

<sup>27</sup> One eligibility criterion had been that the bulk of equipment must be supplied by domestic companies, thereby establishing a case of import substitution in the steel industry's upstream equipment industry. Due to this financing condition the international equipment industry has been estimated to have lost business valued at 800 million Yuan RMB in the light section mills segment alone. Cf. All Business, 2001, China's steel industry in the WTO era: China acceded to the World Trade Organization on 11 December 2001. The affect of this on its steel industry, the largest in the world, was the topic of a conference held in Shanghai towards the end of 2001.

<sup>28</sup> A typical project involved, for illustration, Tangshan Iron and Steel Co., Ltd. As direct financial support to its thin HR strip project, the company received a treasury bond backed loan worth 159.5 million Yuan RMB at discounted interest rates. Tangshan Iron and Steel Co., Ltd. 2001 Annual Report, p. 46, 49.



As such, the steel industry received no less than one third of the total funds made available by means of the “State Bond Financed Project” facility. Baosteel alone profited from allocations worth 17.5 billion Yuan RMB.<sup>29</sup>

In early 2000, one year before China’s WTO accession, the State Administration of the Metallurgical Industry revealed plans to spend more than 6 billion US Dollar in order to ensure that domestic steelmakers would remain internationally competitive after the country had joined the WTO. The announcement proclaimed further, that 3.4 billion US Dollar of this amount would take the form of low interest loans.<sup>30</sup>

In the same year, the central government urged Baosteel to acquire Shanghai Yichang Sheet Company and several other relatively small and inefficient mills.<sup>31</sup> In order to facilitate the transaction, the State Council provided the company with 4.7 billion Yuan RMB of loans with subsidized interest rates.

**In the years 1999 to 2001 – right up to WTO accession – 47 Chinese iron and steel enterprises have been supported with preferential lending facilities amounting to 75 billion Yuan RMB out of the State Key Technology Renovation Project Fund.**<sup>32</sup>

Steel producers receiving significant assistance from the fund included Anshan Steel, Baosteel and Panzhihua.<sup>33</sup> The funds were mainly directed at import substitution projects including cold-rolled silicon steel, stainless steel, die steel and “oil well tube.”<sup>34</sup>

Preferential loan facilities were provided in the form of investment grants covering two to three years of interest payable on loans issued to fund the projects, and “loan interest grants” which partially offset interest payable on loans.<sup>35</sup>

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<sup>29</sup> All Business, 2001, China’s steel industry in the WTO era: China acceded to the World Trade Organization on 11 December 2001. The affect of this on its steel industry, the largest in the world, was the topic of a conference held in Shanghai towards the end of 2001.

<sup>30</sup> Gong Zhengzheng, 2000, Steel Gets Support for Upgrades in China Daily Business Weekly, cited from Dewey & LeBoeuf LLP, 2007, China’s State-Directed Expansion in Oil Country Tubular Goods: A Case Study, p. 28.

<sup>31</sup> Dewey & LeBoeuf LLP, 2007, China’s State-Directed Expansion in Oil Country Tubular Goods: A Case Study, p. 31.

<sup>32</sup> “Progress Achieved in the Technological Renovation,” at <http://www.custeel.com/Scripts/view/Article.jsp?topic=topic&articleID=2243>.

<sup>33</sup> In its 2000 Annual Report, Panzhihua Steel explains that investments in technology renovation during that year had dropped because a continuous casting facility was formally added to the list of Key Technology Renovation Projects and had therefore been financed by the State Treasury Special Project Fund. Though the Report does not state exactly how much government money was involved in upgrading the casting facility, it becomes clear that government funds had been used to substitute corporate investment in technical renovation. Cf. Panzhihua New Steel Vanadium Co., Ltd. 2000 Annual Report, p. 6. Jinan Iron and Steel Co., Ltd. Reports for the same year allocations from the State Key Technology Renovation Fund amounting to 160,800,000 Yuan RMB. Cf. Jinan Iron and Steel Co., Ltd. 2000 Annual Report, pp. 50-51.

<sup>34</sup> “Notice of Ministry of Finance on Taxation Issues of Imported Equipment for Some Technological Renovation Projects Financed by National Debt Fund,” Cai Shui No. 94.

The granting of tax refunds was a less obvious form of subsidization employed in the run-up to China's WTO accession. In an arrangement valid in 2000 and 2001, for example, the Finance Department of Beijing Municipal Government lowered the tax burden for Shougang by refunding a sizable part of its corporate income tax payments. Under this arrangement, the company continued to pay the regular tax rate of 33 percent, while the municipal government returned payments in excess of 15 percent – effectively providing for a 55 percent discount. For the fiscal year 2000, tax returns to Shougang amounted to 170 million Yuan RMB. The following year, another 151 million Yuan RMB were refunded.<sup>36</sup> Analogous constructions were put in place to the benefit of

- Anyang Iron and Steel Co., Ltd.<sup>37</sup>
- Fushun Special Steel Co., Ltd.<sup>38</sup>
- Gansu Jiuquan Group Hongxing Iron and Steel Co., Ltd.<sup>39</sup>
- Lingyuan Iron and Steel Co., Ltd.<sup>40</sup>
- Ma'anshan Iron and Steel Co., Ltd.<sup>41</sup>
- Wuhan Iron and Steel Co., Ltd.<sup>42</sup>
- Xinhua Metal Products Co., Ltd.<sup>43</sup>
- Xinjiang Bayi Iron and Steel Co., Ltd.<sup>44</sup>

<sup>35</sup> "Notice of State Economic and Trade Commission, State Development Planning Commission, Ministry of Finance, Peoples Bank of China on Promulgation of Measures for the Administration for National Key Technological Renovation Project and Measures for the Administration of National Debt Special Fund for National Key Technological Renovation Project," Guo Jing Mao Tou Zi No. 886 (1999).

<sup>36</sup> Beijing Shougang Co., Ltd. 2000 Annual Report, p. 33; 2001 Annual Report, p. 29, 63; 2002 Annual Report, p. 61.

<sup>37</sup> Anyang Iron and Steel Co., Ltd. 2001 Annual Report, p. 10.

<sup>38</sup> Cf. Fushun Special Steel Co., Ltd. 2000 Annual Report, p. 17; 2001 Annual Report, p. 10.

<sup>39</sup> Cf. Gansu Jiuquan Group Hongxing Iron and Steel Co., Ltd. 2001 Annual Report, p. 14, 19.

<sup>40</sup> Cf. Lingyuan Iron and Steel Co., Ltd. 2000 Annual Report, p. 10; 2001 Annual Report, p. 20.

<sup>41</sup> Cf. Ma'anshan Iron and Steel Co., Ltd. 2000 Annual Report, p. 19; 2001 Annual Report, p. 23.

<sup>42</sup> Cf. Wuhan Iron and Steel Co., Ltd. 2000 Annual Report, pp. 19, 28; 2001 Annual Report, pp. 13, 36.

<sup>43</sup> Cf. Xinhua Metal Products Co., Ltd. 2001 Annual Report, p. 14. Being located in China's less developed central areas Xinhua continued to receive a reduced tax rate of 15 percent even beyond the expiration of the program. The tax reduction was held up until 2004. Cf. 2004 Annual Report, p. 16.

<sup>44</sup> Cf. Xinjiang Bayi Iron and Steel Co., Ltd. 2002 Annual Report, p. 26.

Although the arrangement had terminated at the end of 2001, in August 2002, the government of the Xinjiang Uygur Autonomous Region adjusted the tax regulations in a way that allowed Bayi Steel to continue being taxed at a reduced rate. Based on the regular countrywide corporate income tax rate of 33 percent, the company was granted a discount of 55 percent, allowing it to be taxed at 14.85 percent - less than half the standard rate. This arrangement was valid for a period of five years expiring by the end of July 2007.

Xining Special Steel had been profiting from a similar arrangement since 1997. In that year the government of Qinghai Province agreed to a tax cut for Xining Special Steel according to which continued to pay the regular corporate income tax rate of 33 percent, while the provincial Finance Department returned payments in excess of 13 percent, thereby effectively lowering the tax rate by 20 percentage points. This preferential policy was also in effect until 2001.<sup>45</sup>

### **1.11.2 Debt to Equity-swaps**

**Debt to equity swaps have been a major tool to grant debt relief to practically all major state-owned steel companies.** Such transactions were organized as transfers of debts incurred by a state-owned steelmaker at a state-owned “commercial bank” to one of four Asset Management Companies, AMCs. The receiving AMC was then tasked to convert the debt into additional ownership shares in the steelmaker. In other words, the state, acting as creditor, received an (additional) ownership stake in exchange for cancelling existing debt at state-owned companies. For state-owned steel companies this approach does not seem to make much sense since the government had already held controlling stakes or even owned 100 percent of the companies before the transactions took place. As such, acquiring additional shares could not serve to strengthen its influence over the companies. We should also rule out the possibility that government agencies regarded these swaps as equity investments because the desolate state of the enterprises had made it highly unlikely that investments would generate a reasonable rate of return within a reasonable period of time. **It is highly doubtful that private investors, had they been permitted to acquire ownership stakes, would have chosen to do so [debt to equity-swap]. Because these transactions were obviously not based on commercial considerations, they can only be treated as direct cash infusions intended to lower companies’ debt-asset-ratios. Companies welcomed these bailouts because shedding some part of their debt burden also meant a reduction of interest payments.** In fact, a leading official of the State Administration of Metallurgical Industry was quoted by the official China Daily newspaper as saying that the debt-to-equity-swaps were “a big boon for debt stricken steel enterprises struggling for profits.”<sup>46</sup>

Debt for equity swaps took place throughout the late nineties with sharp increases in volume in 1999 and 2000. In 1999, seven steel enterprises, Anshan Steel, Baosteel, Hengyang

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After that deadline was reached, not much changed for the company as the provincial government ruled that the company should continue to be subjected to a reduced corporate income tax rate. Since Xinjiang Region is located in China’s less developed areas, the company could take advantage of regulations providing for tax privileges. Thus, the tax rate only edged up marginally to reach 15 percent. Cf. Xinjiang Bayi Iron and Steel Co., Ltd. 2007 Annual Report, p. 54.

<sup>45</sup> Cf. Xining Special Steel Co., Ltd. 2000 Annual Report, p. 22.

<sup>46</sup> Special Steel Industry of North America, 2007, Chinese Government Subsidies to the Stainless Steel Industry – An Update citing China Daily, March 26, 2000, China Debt-to-Equity Swaps Help Steelmakers.

Steel, Lanzhou Steel, Shougang, Taiyuan Steel, and Zunyi Steel, were permitted by the central government to dispose of loans totaling 27.5 billion Yuan RMB. In this process, Anshan Steel located in northeast China's Liaoning Province was relieved off 6.9 billion Yuan RMB in bad loans in exchange for granting ownership shares to China's AMCs.<sup>47</sup>

In 2000, the authorities stepped up the scale of their relief measures and designated 37 steelmakers for debt-to-equity swaps. Baosteel was included, just as it had been the previous year. But also other of today's leading steel enterprises like Anshan Steel and Panzhihua Steel were relieved of some of their debt burdens. According to the official China Daily newspaper, **all 37 steel producers involved in debt-to-equity swaps in 2000 unloaded a combined total of 62.5 billion Yuan RMB of debts.**<sup>48</sup>

Baosteel was perhaps the largest beneficiary. All in all, four of its subsidiaries became eligible for this kind of debt relief: First, in September 1999, 200 million Yuan RMB in debts accumulated by Meishan Corp. at the China Construction Bank were transferred to Cinda AMC. At the same time, Meishan was transformed into a joint-stock company with its former creditors now acting as shareholders.<sup>49</sup> In 2000, Baosteel Pudong Steel Co., another Baosteel subsidiary stuck in an escalating debt crisis, reached an agreement with Huarong AMC and the China Development Bank to have 2 billion Yuan RMB of debt obligations traded for ownership shares. In the same year, Shanghai No. 1 Iron and Steel Co. and Shanghai No. 5 Steel Co. concluded separate debt-for-equity swaps relieving the companies of 800 million Yuan RMB and 500 million Yuan RMB respectively. In 2000 alone, Baosteel was able to shed 3.3 billion Yuan RMB worth of debts in various commercial banks and substantially improve its debt-asset-ratio.<sup>50</sup> The steps taken to alleviate Baosteel's financial burden were also important since reports indicate that the financial situation of these companies was sufficiently desolate to affect normal operations. The AMCs who had become major shareholders in Baosteel during the series of swaps also used their new role to urge China's largest steelmaker to improve its performance.

Taiyuan Steel, located in Shanxi Province, which had incurred large debts due to mismanagement and its massive expansion in the field of stainless steel production also came to enjoy the advantages of debt-to-equity swaps. A deal signed between the steelmaker and Cinda AMC in 1999 transferred 2 billion Yuan RMB of problem loans away from commercial banks and converted them into new equity shares held by the AMC.<sup>51</sup>

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<sup>47</sup> Nikkei Kinyu Shimbun, July 6, 2000, Government Approves Debt-Equity Swap Nonperforming Loan Problems of China's State-Owned Commercial Banks.

<sup>48</sup> Specialty Steel Industry of North America, 2007, Chinese Government Subsidies to the Stainless Steel Industry – An Update p. 10 citing China Daily, March 26, 2000, China Debt-to-Equity Swaps Help Steelmakers.

<sup>49</sup> Ogilvy Renault LLP, 2007, The Dumping and subsidization of Carbon Steel Welded Pipe Originating in or Exported From the People's Republic of China, p. 83.

<sup>50</sup> Price, A. et. al., 2007, Money for Metal, p. 38.

<sup>51</sup> Specialty Steel Industry of North America, 2007, Chinese Government Subsidies to the Stainless Steel Industry – An Update p. 11 citing China Daily, March 26, 2000, China Debt-to-Equity Swaps Help Steelmakers.

Similar to Baosteel, Taiyuan Steel had fallen into dire straits before the deal. The company operated at half capacity and consequently suffered from low efficiency and profitability.<sup>52</sup>

Other Chinese steelmakers known to have benefited from debt-to-equity swaps include Xingang Steel, Anyang Steel and Ma'anshan Steel.<sup>53</sup>

### **1.11.3 Grants of 'In-kind' Resources**

In its 2000 report to the president, the U.S. Department of Commerce quoted an announcement made by the Chinese Ministry of Commerce which stated that **central government authorities would direct local and provincial governments to grant priority treatment to the steel industry in matters like land use rights, raw materials, transport, equipment, water and power supplies.**<sup>54</sup> Such activities have endowed Chinese steel enterprises with operating assets for which they never had to pay scarcity or market oriented prices. Though the actual transactions have taken place in the pre-WTO era, companies continue to benefit from them up to the present day.

**Land: Many Chinese steel mills never had to pay any real prices for the land they are operating their facilities on.** During the time of central planning, government agencies simply assigned parcels of land to certain steelworks to set up operations. And when the era of economic reform and opening to the outside world unfolded, little changes were made with respect to these arrangements. All steelmakers that emerged from under the burden of the central command economy were state-owned enterprises and simply kept what they had. In later years, when expansion projects were planned and more land was needed, government authorities proved exceptionally generous and granted the required space either for free or provided it at reduced costs.

Compared to steel mills in many other parts of the world, especially the OECD countries, Chinese producers in this manner enjoy a substantial cost advantage. This relative advantage is actually increasing as land prices in China are rising, spurred by strong urbanization trends and a booming real estate industry. This gives companies the opportunity to benefit from more favorable credit conditions when using their land as collateral for mortgaged loans. Though the current Chinese land law does not allow the sale of land – because all land is considered property of the state – it does not rule out to use the land in a commercial way, i.e. renting or trading of usage rights. Because there is no developed

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<sup>52</sup> Specialty Steel Industry of North America, 2007, Chinese Government Subsidies to the Stainless Steel Industry – An Update p. 12 citing Asia Pulse, September 30, 1997, China's Nickel Industry Faces Stiff Challenges and South China Morning Post, July 11, 1998, TISCO Injects Cash in Bid to Gain Share.

<sup>53</sup> Ibid.

<sup>54</sup> U.S. Department. of Commerce, 2000, *Report to the President, Global Steel Trade: Structural Problems and Future Solutions* 146.

market for land, it is nearly impossible to calculate if steelmakers are paying subsidized prices when acquiring additional land use rights.

The case of Baosteel illustrates how land use rights are treated in the books of Chinese steelmakers. In its annual reports, Baosteel classifies them as regular, depreciable assets. A recent study explains that

*“The land use rights are booked at their original “cost”, amortized on an annual basis, then carried at their reduced value.”<sup>55</sup>*

Because there is no information for rental payments available, it is reasonable to consider the company’s annual amortization as an indicator of the cost for land usage. For Baosteel, this cost amounts to a mere 29 million Yuan RMB – surprisingly little as China’s largest steelmaker operates on extensive areas of land with its headquarters in downtown Shanghai and most of its production facilities located in the city vicinity. As Shanghai is known as featuring some of the highest land usage prices in China the figure reported is startling.

Anshan Steel, China’s second largest steelmaker by crude steel output, displays a similar pattern in its annual reports. Anshan Steel is based in Anshan City, an old industrial city and the center of China’s economically ailing rust belt in north eastern Liaoning Province. A mid-sized industrial town completely dominated by heavy industry and three super-large iron ore mines; Anshan City is not world-famous for high rental prices like Shanghai. Still, the area boasts large iron ore reserves that are being exploited by Anshan Steel and allow the company to produce 80 percent of the iron ore it consumes. Considering an annual steel output of about 16 million tons and taking into account the surge in iron ore import prices, it is safe to say that Anshan Steel enjoys a very favorable position. Still, the company’s 2006 annual report shows amortization for land usage in 2006 stood at only 57 million Yuan RMB. Taking amortization as a proxy for land usage cost – like we did with Baosteel – we find the cost advantage for Anshan Steel to be even more striking.

**Water:** Water prices in China are determined by the government exclusively; there are no privately-owned providers in China. As the authorities are setting prices according to political considerations and industrial macro-policies, there is little commercial orientation to be observed. It is a well know fact that Chinese water charges are subsidized and do not reflect the actual costs involved. While the whole country, including private consumers, take advantage of low costs, some industries are benefiting from even more favorable conditions.

Water prices are as a rule determined by government authorities on the local level taking into account local supply and infrastructure conditions. At least two different rate categories exist: one for private consumers and another for industrial enterprises. Under normal circumstances, every industrial end user within a certain area is charged the same price for a given amount of water. But in its recent countervailing duty investigation on light-walled

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Price, A. et. al., 2007, Money for Metal, p. 40.

rectangular pipe and tube from the People's Republic of China, the U. S. Department of Commerce found that at least one company examined paid water rates well below the designated price for its user category.<sup>56</sup> Differentiated water prices are not an exception in China's industry landscape. In its drive to shut down and eliminate obsolete production facilities all over the country, central government authorities, headed by the NDRC, have called upon local authorities to adjust water and energy prices for enterprises which cannot meet the ISIDP's minimum requirements. According to these plans, rates would be fixed on a company-to-company basis with the aim to raise the cost pressures for inefficient, outdated facilities. However, it appears reasonable to assume that prices that are increased in a discretionary manner in order to 'punish' specific companies, can and will in the same way be lowered in order to promote other companies.

***Electricity:*** Electric energy is generated and distributed exclusively by wholly-state-owned companies while the NDRC has been tasked with supervising and adjusting price levels in line with the overall macro-economic policy. **Just like in the case of water, prices for electricity are also determined by the government according to broad macro-economic policies. Another parallel exists: the rates paid by end users do not cover the actual costs involved.**

In its desire to realize a more sustainable growth mode for the Chinese economy, government leaders have urged end users to improve efficiency and reduce energy consumption wherever possible. Naturally, raising prices has been a major tool to encourage compliance. Energy consumers in China are divided in four categories: residential, commercial, large-scale industry and agriculture. Energy prices paid then vary according to category and consumption quantities.<sup>57</sup> In June 2004, China implemented a scheme for electricity price differentiation concerning several high energy consuming industrial sectors, including steel. In September 2007, the NDRC announced that

*"China will pursue more stringent policies on electricity price differentiation in a couple of industrial sectors, including metals"*<sup>58</sup>

But these measures have often failed to produce tangible results at the local level because officials manipulate energy prices to create positive and negative incentives that are not always in line with central government policies. **Guangdong Province for example has**

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<sup>56</sup> United States Department of Commerce, International Trade Commission, 2007, Light-walled rectangular Pipe and Tube from the People's Republic of China: Preliminary Affirmative Countervailing Duty Determination and Alignment of Final Countervailing Duty Determination with Final Anti-Dumping Determination, p. 22.

<sup>57</sup> United States Department of Commerce, International Trade Administration, 2007, Circular Welded Carbon Quality Steel Pipe from the People's Republic of China: Preliminary Affirmative Countervailing Duty Determination; Preliminary Affirmative Determination of Critical Circumstances; and Alignment of Final Countervailing Duty Determination with Final Antidumping Duty Determination, p.32.

<sup>58</sup> China Metals Weekly, September 29, 2006, China to pursue stricter policy on electricity pricing, including metals.

**been openly working against central government initiatives to increase the price of electricity. When price discount programs were terminated, provincial authorities immediately compensated their local companies by means of direct subsidies and grants.** Guangzhou Iron and Steel Co., Ltd., for example, received such subsidies worth 43,468,500 Yuan RMB in the year 2000 and another 18,939,885 Yuan RMB in 2002.<sup>59</sup>

It appears that Economic Development Zones, Industry Parks and various kinds of special areas dedicated to certain manufacturing sectors are offering investors reduced electricity rates. Located in every part of China – even the most remote and least developed areas – these zones are eagerly courting potential investors with among other things preferential electricity rates. In advertising materials publicly available on the internet, parks like the “Special Steel Industry Park” in Inner Mongolia’s Baotou City or the “Ceramics Industry City” located near Shenyang City in Liaoning Province, administrators promise that new entrants would benefit from “large industry energy prices”. Some of these rates go as low as 0.4 Yuan RMB per KWh. It goes without saying that the instrumentalization of electricity prices is providing especially strong incentives to industries characterized by high energy consumption.<sup>60</sup>

Regardless of their location, the large steel mills which are under direct control of the central government appear to benefit from subsidized energy, too. A close look at the annual reports of Baosteel reveals that the company treats electricity as a regular, depreciable asset. This implies that a certain amount of energy credits were received from the government. Similar to land use rights, electricity credits were then amortized on an annual basis. Credits that have not yet been consumed are then being carried at their reduced value.

#### **1.11.4 Steel Import Substitution**

**A further ‘shadow of the past’ from which China’s steel enterprises are profiting up to the present day is the “Steel Import Substitution Policy”**

First implemented in 1987, **the policy served to encourage Chinese end users of steel to replace imports with domestically sourced materials.** This move was intended to spur the development of China’s domestic steel industry and stimulate its modernization drive. But not every Chinese steel mill was able to take advantage of this policy. On the contrary, government authorities drafted lists that held the names and dates of only a few dozen large state-owned steel producers entitled to take part in the policy. Participating steel mills were entitled to receive a 17 percent export-linked VAT rebate and were assigned quotas to define just how much steel they could sell through this special sales channel. After the first list was compiled in 1987, numerous adjustments were made over the years to include or exclude

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<sup>59</sup> Cf. Guangzhou Iron and Steel Co., Ltd. 2000 Annual Report, p 34, 2002 Annual Report, p. 36.

<sup>60</sup> Inner Mongolia Baotou Special Steel Industry Park Preferential Investment Policies, 2008, and Shenyang City Faku County Ceramic Industry City.



specific companies.<sup>61</sup> The scheme's official designation was also changed: from "Import Substitution" to "Special Steel Processing for Export".

**The idea was simple: The domestic sales of steel enterprises were to be promoted by encouraging export oriented manufacturing industries to use domestic steel instead of imports.** The strong growth and stunning export performance of leading industries – particularly in the electronics, machinery, automotive and appliances sectors – rapidly increased the demand for high value-added, high quality steel products. Chinese policy makers realized that this was a golden opportunity to strengthen the fledgling domestic high quality steel sector vis-à-vis its foreign competitors. **By providing incentives for export-oriented steel-consuming industries to source Chinese steel products, Baosteel and other leading steelmakers got the chance to step up their production of stainless steel, hot-dipped galvanized sheets and other technology intensive steel products widely used in the production of goods sold on the global markets.**

**In practice the mechanism worked as follows: Once end products containing domestic steel components were exported, the steel producers, which had provided the steel, became entitled to receive a full rebate of the 17 percent value-added tax (VAT) which they had charged for their domestic sale. Because steel mills could take advantage of these VAT rebates, they were in a position to lower domestic sales prices accordingly. Consequently, processing companies could benefit from low procurement prices for steel as long as they exported their finished products. As a result, domestic steel as well as manufacturing industries were both promoted by the state waiving its VAT claims. The amount of subsidies paid may therefore be calculated as the state's forgone tax income – over the years about 12 billion Yuan RMB.**

According to information released by the State Bureau of Metallurgical Industry, 27 steelmakers participated in the Import Substitution Program in 1999. Under the terms of the program these companies delivered 3.05 million tons of steel to the export manufacturing industry, with Baosteel not only providing the lion's share of roughly 1.4 million tons or 45 percent of the total but also profiting most from the program.<sup>62</sup>

In 2002, the former State Economic and Trade Commission together with other central government agencies announced that the "Steel Import Substitution Policy" would be re-named into "Special Steel for Processing Exports Policy". Starting from 2002, CISA was put in charge of supervising the export-oriented sales and coordinating the steel companies' tax rebate questions.<sup>63</sup> After China's WTO accession, the steel industry's development picked up speed. Soon basic self sufficiency was achieved in most product categories and exports

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<sup>61</sup> Dewey & LeBoeuf, 2007, China's State-Directed Expansion in Tubular Goods: A Case Study p. 107.

<sup>62</sup> Asia Pulse, March 20, 2000, China Achieves Steel Import Substitution Plan.

<sup>63</sup> World Trade Organization, October 6, 2004, G/SCM/Q2/CHN/9, Committee on Subsidies and Countervailing Measures, Request from the UNITED STATES to CHINA Pursuant to Article 25.8 of the Agreement on Subsidies and Countervailing Measures, page 3.

started to rally. Under the changed circumstances, the import substitution scheme lost much of its relevance and was finally abolished in July 2005. According to information from CISA, however, the program had successfully substituted Chinese steel for imports and absorbed an estimated 30 million tons of domestic steel production. In total, the companies entitled to participate in the scheme had benefited from a combined tax exemption of 12 billion Yuan RMB.

All in all, statistics indicate that the import share of domestically consumed steel declined substantially while the policy was in place. In this way it looks to have brought about a significant benefit to Chinese steel mills.<sup>64</sup>

In the following, we leave the shadows of the past and move on to instruments applied by Chinese government in the post-WTO-accession era in order to provide Chinese enterprises with a favorable position vis-à-vis their foreign competitors.

## **1.12 Grants and Unpaid Dividends**

The practice of grants has come under intense scrutiny since this policy instrument is incompatible with the WTO regulatory framework and subjects China to anti-dumping complaints and countervailing action by its trade partners. But this does not mean that Chinese authorities have abstained from grant-giving operations since the country became a WTO member in 2001.

Tangshan Iron and Steel Co., Ltd. reports in the year 2007 to have benefited from a 899,800 Yuan RMB cash grant for environmental protection and another 20 million Yuan RMB Government grant from the Fund to Promote Outward-oriented Economic and Technological Cooperation.

**It is a matter of interpretation in how far the fact that central government is not collecting any dividends from its – quite profitable<sup>65</sup> – state-owned steel producers may be interpreted as a grant ‘in disguise’. What is in no doubt, however, is that such a practice contradicts the normal economic behavior of investors in market based systems. Investors who permanently abstain from collecting the dividends of their investments will eventually lose their financial strength and competitive capacity vis-à-vis other investors reaping interest and dividends on their investments. As a result, at some point in time investors operating in a market economy framework have to collect the fruits of their investments. Not so with the Chinese government which is deriving its financial means from other sources. Seen from this perspective, China’s**

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<sup>64</sup> Dewey & LeBoeuf, 2007, China’s State-Directed Expansion in Tubular Goods: A Case Study, p. 109.

<sup>65</sup> According to CISA industry profits in 2007 amounted to more than 190 billion Yuan RMB, 81 percent of these being realized in the overwhelmingly state owned 20 largest producers. Deducting capital market income from total profits the operative profits amounted to an average of 356.2 Yuan RMB per ton of steel produced.

**state-owned enterprises are in a highly privileged situation compared to competitors based in market economies. To these Chinese players, the concept of (central) state ownership matters: It is providing them with the possibility to hold on to financial assets that market based companies are forced to pay out to the owners of their equity.**

### **1.13 Subsidies**

Subsidies are playing an important role for the implementation of policy goals of Chinese government organizations on all levels. It has to be noted that the Chinese government has increasingly reverted to the practice of hiding subsidies which are targeted at specific industries and enterprises in measures which, in theory, are not limited to certain industries or enterprises but are open for a broad range for market participants. As a result these measures fail to classify as specific subsidies, are not subject to the notification obligation and in international trade disputes cannot be brought forward against China. Nonetheless, in the end it is mostly only the intended group of enterprises that profits from the measure. Recent examples include subsidies granted for research and development activities, technological renovation projects and environmental protection initiatives.

The recent (February 2008) threat of the provincial government of Shanxi Province to charge higher prices for electricity supplies and even cut off the supplies of electricity, water and gas for steel producers that do not comply with the government's initiative to shut down outdated production capacities (see section 5.7) provides an indication in which way government organizations can influence the supply conditions for China's steel enterprises.

That the subsidized allocation of crucial production factors constitutes, especially at the local level, a common practice to promote economic development has become crystal clear in late 2007 when Premier Wen Jiabao declared China would combat air and water pollution as well as global warming by phasing out tax breaks and discounts on land and electricity for highly polluting industries. In this context Wen Jiabao explicitly targeted "local governments that routinely offer free or cut-rate real estate and utilities to developers looking to set up job-creating businesses, such as steel mills or chemical plants." He went on saying that the government would "clean up and rectify preferential policies that give land and electricity discounts or tax breaks to energy-intensive or highly polluting industries."<sup>66</sup> However, such proclamations are nothing new, in contrast, they have been made regularly by various state leaders and government organizations – the problem is, until today, that they have not been implemented sufficiently.

According to the Chinese government's official web site [www.gov.cn](http://www.gov.cn), state-owned enterprises located in the three north eastern provinces Heilongjiang, Jilin and Liaoning<sup>67</sup> are

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<sup>66</sup> Ministry of Water Resources, April 28, 2007, China to Act on Pollution, Water Resources.

<sup>67</sup> Together the three provinces form the Northeast China Macro Region.

eligible for “support in the field of social security”. The program was started in 2004 and has provided local state-owned steel producers with an opportunity to reduce their overstaffed personnel at low costs (severance payments, social security, etc.) as well as to safe on payments in social security funds (especially retirement funds).

Furthermore, steel enterprises in Northeast China are expected to profit from governmental promotion to the local mining industry. In the context of a joint effort by the central and provincial governments to rejuvenate China’s old heavy-industrial base in Northeast China, mining operators in this region have become eligible for a “lightened tax burden”, which allows them to better serve the local steel industry.<sup>68</sup>

The government of Tianjin (a city endowed with provincial rank and privileges) has been promoting the local steel industry in the context of the “pillar industries” campaign. In 2005 Tianjin Municipality has been pumping a grand total of 160 billion Yuan RMB in 560 projects belonging to the locally defined six pillar industries. Out of this amount, **the local steel industry, as one of the “pillars”, has been able to garner financial assistance worth 21.3 billion Yuan RMB.** Beneficiaries have been 39 projects mainly related to manufacturing steel tubes, special steel, cold-rolled stainless-steel sheets and seamless steel tubing.<sup>69</sup> In the following year 2006, the Tianjin Pipe Corporation received additional local government financing for the third phase of its steel tube expansion project - one of five key industrial projects for that year.<sup>70</sup>

A major source of information about subsidies granted to China’s steel industry by government agencies on all levels constitute the annual reports published by listed entities of China’s leading steel conglomerates. Although the information provided only refers to subsidies received by the listed arms of enterprises, it still allows for some valuable insights into the dimensions and forms of state subsidies to the Chinese steel industry in the post WTO-accession era. As presented in greater detail in table 3<sup>71</sup>, **subsidies amounting to 2,151 million Yuan RMB have been assigned to China’s listed steel corporations between 2002 and the first quarter of 2008. In the year 2007 alone, 426 million Yuan RMB in subsidies have been disbursed by China’s government agencies.**

While most subsidies reported are not specified with respect to their purpose, others seem to have been disbursed in order to promote very specific activities. These specific activities deemed to warrant governmental subsidization cover a broad range of issues including employment policies, environmental protection and environmental “clean up” activities, energy cost alleviation and energy conservation measures, R&D activities including items

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<sup>68</sup> People Daily Online, January 9, 2004, China’s old industrial base eyes bright future with ambitious plan.

<sup>69</sup> Asia Pulse, February 22, 2005, China’s Tianjin Allocates More Investment for Pillar Industries.

<sup>70</sup> Enorth, August 21, 2006, Promote Construction of Key Projects.

<sup>71</sup> Appendix III documents all subsidies, preferential loans as well as tax privileges by the reporting enterprises.

like “patent information utilization and development” which seem to be very close to what might be called “re-engineering activities”, specific production capacity upgrading and expansion projects, as well as specific steel export initiatives.

**Table 3: Subsidies Received as Reported in the Annual and Quarterly Reports of Chinese Steel Enterprises Listed at the Shanghai and Shenzhen Stock Exchanges, 2002-2008 Q1**

Year	Company Name	Description	Amount (in Yuan RMB)	Source
2002	Panzhuhua New Steel Vanadium Co., Ltd.	Subsidy income	1,829,537	2002 Annual Report, p. 4.
	Shanxi Taigang Stainless Steel Co., Ltd.	Special funds appropriated by the Government of Shanxi Province for the technical renovation of a stainless cold rolling mill	3,000,000	2002 Annual Report, pp. 31, 32, 64.
	Beijing Shougang Co., Ltd.	Subsidy income	776,925	2002 Annual Report, p. 33.
		Funds appropriated by Shenzhen Municipal Government for technical renovation projects	3,000,000	2002 Annual Report, pp. 30, 54.
	Lingyuan Iron and Steel Co., Ltd.	Support funds for environmental protection	1,000,000	2002 Annual Report, p. 30.
	Ma'anshan Iron and Steel Co., Ltd.	Government appropriations for special projects	525,840,000	2002 Annual Report, pp. 42, 63.
		Subsidy income (includes steel export subsidies)	1,431,000	2002 Annual Report, pp. 27, 69.
	Guangzhou Iron and Steel Co., Ltd.	Energy subsidies from the government of Guangdong Province. The subsidies went to companies that had previously benefited from preferential electricity rates. After the discount program had run out, the provincial authorities granted this subsidy as compensation.	18,939,885	2002 Annual Report, p. 36.
2003	Panzhuhua New Steel Vanadium Co., Ltd.	Subsidy income	2,299,343	2003 Annual Report, p. 4.
		Funds appropriated by Panzhuhua Municipal Government for environmental protection	2,095,000	2003 Annual Report, pp. 22, 43.
2003	Daye Special Steel Co., Ltd.	Subsidy income	3,586,000	2003 Annual Report, p. 2.

Year	Company Name	Description	Amount (in Yuan RMB)	Source
	Beijing Shougang Co., Ltd.	Funds appropriated by Shenzhen Municipal Government for technical renovation projects	300,000	2003 Annual Report, pp. 30, 59.
	Handan Iron and Steel Co., Ltd.	Support funds appropriated by the central government for a galvanizing and pickling line project	144,000,000	Annual Report 2003, p. 34.
	Wuhan Iron and Steel Co., Ltd.	Support funds appropriated by the central government for the construction of No. 2 Cold Rolling Line.	252,000,000	2003 Annual Report, pp. 14, 20, 52 and 2003 Annual Report, pp. 14, 20, 52.
	Baosteel Co., Ltd.	Subsidy income	150,000	2003 Annual Report, p. 38.
		Energy subsidies	1,344,244	2003 Annual Report, p. 66 and 2004 Annual Report, p. 78.
	Jinan Iron and Steel Co., Ltd.	Special support funds for technical renovation projects (Included in the second batch of projects supported by the Central Government's State Key Technology Renovation Fund in 2003).	34,800,000	2004 Annual Report, pp. 50, 51.
	Fushun Special Steel Co., Ltd.	Subsidy income	900,000	2003 Annual Report, pp. 5, 26.
	Ma'anshan Iron and Steel Co., Ltd.	Government appropriations for special projects	276,980,000	2003 Annual Report, pp. 46, 71.
		Steel export subsidies	1,413,783	2003 Annual Report, pp. 3, 78.
2004	Panzhuhua New Steel Vanadium Co., Ltd.	Subsidy income	2,329,502	2004 Annual Report, pp. 4, 70.
2004	Panzhuhua New Steel Vanadium Co., Ltd.	Funds appropriated by Panzhuhua Municipal Government for environmental protection	1,030,000	2004 Annual Report, pp. 29, 56.
	Handan Iron and Steel Co., Ltd.	Technology subsidy for a galvanizing and pickling line	3,000,000	Annual Report 2004, p. 46.

Year	Company Name	Description	Amount (in Yuan RMB)	Source
2005	Baosteel Co., Ltd.	Subsidy income	1,538,087	2005 Annual Report, p. 100.
	Jinan Iron and Steel Co., Ltd.	Various government subsidies	1,630,000	2004 Annual Report, p. 2.
	Xining Special Steel Co., Ltd.	Special funds appropriated for continuous rolling line project	30,000,000	2005 Annual Report, p. 37.
		Special funds appropriated for steel smelting technical renovation projects	600,000	2005 Annual Report, p. 37.
	Ma'anshan Iron and Steel Co., Ltd.	Government appropriations for special projects	19,800,000	2004 Annual Report, pp. 35, 47, 72.
		Steel export subsidies	672,381	2004 Annual Report, pp. 30, 79.
	Guangzhou Iron and Steel Co., Ltd.	Support funds appropriated for technology development by the government of Guangdong Province	4,000,000	2004 Annual Report, p. 40.
2005	Panzhihua New Steel Vanadium Co., Ltd.	Subsidy income	3,349,436	2005 Annual Report, p. 35.
		Funds appropriated by Panzhihua Municipal Government for environmental protection	3,550,000	2005 Annual Report, pp. 34, 57 and 2006 Annual Report, p. 67.
	Daye Special Steel Co., Ltd.	Subsidy income	300,000	2005 Annual Report, p. 23.
	Fujian Sansteel Minguang Co., Ltd.	Support funds appropriated by Sanming Municipal Government for renovation projects	4,567,000	2006 Annual Report, p. 66.
	Inner Mongolia Baotou Steel Union Co., Ltd.	A subsidiary of Baotou Steel located in the Taihe Economical and Technological Development Zone near Shanghai benefited from a grant from a "Government Support Fund".	19,000	2005 Annual Report, p. 58.
	Baosteel Co., Ltd.	Subsidy income	25,080,279	2005 Annual Report p. 43.



Year	Company Name	Description	Amount (in Yuan RMB)	Source
2005	Jinan Iron and Steel Co., Ltd.	Funds appropriated by the Government of Shandong Province for R&D activities related to energy generation through heat reclamation and dust filtering technology. The funds were made available to the company through the second batch of State High Technology Industry Development Projects Fund for Research and Development.	3,000,000	2005 Annual Report, pp. 51, 58.
	Hangzhou Iron and Steel Co., Ltd.	Special support funds for Coke Dry Quenching Project from the central government	8,400,000	2005 Annual Report, p. 53.
		Subsidies for companies located in Ningbo Daxie Development Zone The Zijian Trading Ltd., a subsidiary of Hangzhou Steel, is located in the Daxie Economical and Technological Development Zone in Ningbo. As such, the company is eligible to receive subsidies from the development zone's tax administration.	1,140,000	2005 Annual Report, pp. 2, 58.
		Subsidies related to environmental protection The government of Zhejiang Province chose to support two of Hangzhou Steel's environmental protection projects. For conducting technical renovation work at the company's No. 2 Heating Plant, Hangzhou Steel received 600,000 Yuan RMB. A dust filtering project at a caster earned the company another 60,000 Yuan RMB.	660,000	2005 Annual Report, p. 3.
	Hangzhou Iron and Steel Co., Ltd.	Support funds related to improving information technology from Hangzhou Municipal Government	180,000	2005 Annual Report, p. 53.
	Lingyuan Iron and Steel Co., Ltd.	Funds appropriated for environmental protection projects from Chaoyang Municipal Government	3,950,000	2005 Annual Report, p. 35.
	Nanjing Iron and Steel Co., Ltd.	Subsidy for environmental protection projects from Nanjing Municipal Government	4,360,000	2005 Annual Report, p. 67.
	Gansu Jiuquan Group Hongxing Iron and Steel Co., Ltd.	Funds appropriated for environmental protection	3,000,000	2005 Annual Report, p. 58.

Year	Company Name	Description	Amount (in Yuan RMB)	Source
2006	Fushun Special Steel Co., Ltd.	Subsidies related to worker employment in Daling	459,192	2005 Annual Report, pp. 3, 55.
		Support funds related to environmental protection	1,000,000	2005 Annual Report, p. 56.
	Ma'anshan Iron and Steel Co., Ltd.	Government appropriations for special projects	3,200,000	2005 Annual Report, pp. 3, 21, 50.
		Subsidy income	6,700,000	2005 Annual Report, p. 7.
		Other subsidies	1,992,600	2005 Annual Report, pp. 4, 58.
	Chongqing Iron and Steel Co., Ltd.	Special Funds appropriated for environmental protection	6,990,000	2006 Annual Report, p. 49.
	Tangshan Iron and Steel Co., Ltd.	Appropriations for environmental impact monitoring	500,000	2006 Annual Report, p. 41.
	Guangdong Shaogang Songshan Co., Ltd	Funds appropriated for technical renovation projects by the government of Guangdong Province	1,200,000	2006 Annual Report, pp. 56, 71.
	Bengang Steel Plates Co., Ltd.	Subsidy income	78,168	2006 Annual Report, p. 5.
	2006	Bengang Steel Plates Co., Ltd.	Funds appropriated for comprehensive utilization of iron ore resources by the government of Liaoning Province	7,500,000
		Funds appropriated for three technology development projects by the government of Liaoning Province	2,000,000	2006 Annual Report, pp. 9, 23.
		Funds appropriated for other purposes by the government of Liaoning Province	719,848	2006 Annual Report, pp. 9, 23.
Shanxi Taigang Stainless Steel Co., Ltd.		Subsidy income	2,422,540	2006 Annual Report, p. 4.
		Funds appropriated by the government of Shanxi Province for technical renovation projects	3,400,000	2006 Annual Report, pp. 44, 45, 70.

Year	Company Name	Description	Amount (in Yuan RMB)	Source
		Funds appropriated for environmental protection	24,170,694	2006 Annual Report, pp. 44, 45, 70.
		Funds appropriated for other purposes	5,291,957	2006 Annual Report, pp. 44, 45, 70.
	Angang Steel Co., Ltd.	Government awards	3,000,000	2007 Annual Report, p. 135.
	Beijing Shougang Co., Ltd.	Subsidy income	482,000	2006 Annual Report, pp. 44, 80.
	Inner Mongolia Baotou Steel Union Co., Ltd.	A subsidiary of Baotou Steel located in the Taihe Economical and Technological Development Zone near Shanghai benefited from a grant from a "Government Support Fund".	376,929	2006 Annual Report, pp. 4, 65.
	Baosteel Co., Ltd.	Subsidy income	44,735,420	2006 Annual Report, p. 59.
2006	Xining Special Steel Co., Ltd.	Subsidy income	500,000	2006 Annual Report, p. 2.
		Subsidies for environmental clean-up projects	800,000	2006 Annual Report, p. 51.
		Subsidies for energy conservation	2,300,000	2006 Annual Report, p. 51.
		Subsidies for promoting R&D	1,000,000	2006 Annual Report, p. 51.
	Hangzhou Iron and Steel Co., Ltd.	Subsidies for technical renovation of continuous caster	1,100,000	2006 Annual Report, pp. 3, 63.

Year	Company Name	Description	Amount (in Yuan RMB)	Source
2006		Subsidies for companies located in Ningbo Daxie Development Zone The Zijian Trading Ltd., a subsidiary of Hangzhou Steel, is located in the Daxie Economical and Technological Development Zone in Ningbo. As such, the company is eligible to receive subsidies from the development zone's tax administration.	160,000	2006 Annual Report, p. 67.
		Award for software development	3,300	2006 Annual Report, p. 67.
	Lingyuan Iron and Steel Co., Ltd.	Funds appropriated for environmental protection projects from Chaoyang Municipal Government	2,000,000	2006 Annual Report, p. 41.
	Nanjing Iron and Steel Co., Ltd.	Subsidies for the promotion of technology development projects from Jiangsu Provincial Government and Nanjing Municipal Government	5,500,000	2006 Annual Report, pp. 77, 79.
		Support funds for the promotion of technology development projects from Jiangsu Provincial Government	2,000,000	2006 Annual Report, p. 73.
		Subsidy for environmental protection projects from Nanjing Municipal Government	600,000	2006 Annual Report, p. 74.
	Gansu Jiuquan Group Hongxing Iron and Steel Co., Ltd.	Funds appropriated for environmental protection	8,610,000	2006 Annual Report, p. 75.
	Fushun Special Steel Co., Ltd.	Subsidies related to worker employment in Daling	1,192,562	2006 Annual Report, p. 52.
		Support funds for environmental protection	5,700,000	2006 Annual Report, p. 52.
	Xinjiang Bayi Iron and Steel Co., Ltd.	Subsidy income	600,000	2006 Annual Report, p. 3.
	Xinhua Metal Products Co., Ltd.	Subsidy income	100,000	2006 Annual Report, p. 5.
	Ma'anshan Iron and Steel Co., Ltd.	Government appropriations for special projects	116,566,523	2006 Annual Report, pp. 3, 9, 20, 49.

Year	Company Name	Description	Amount (in Yuan RMB)	Source
2007		Other subsidies	217,501	2007 Annual Report, p. 102.
	Chongqing Iron and Steel Co., Ltd.	Special Funds appropriated for environmental protection	15,981,000	2006 Annual Report, pp. 74, 102.
	Panzhuhua New Steel Vanadium Co., Ltd.	Subsidies for environmental protection	100,000	2007 Annual Report, p. 88.
		Subsidies for reducing energy consumption	300,000	2007 Annual Report, p. 88.
	Daye Special Steel Co., Ltd.	Subsidy income	3,100,000	2007 Annual Report, p. 80.
	Tangshan Iron and Steel Co., Ltd.	Government grant from the Fund to Promote Outward-oriented Economic and Technological Cooperation	20,000,000	2007 Annual Report, p. 79.
2007		Government grant for environmental protection	899,800	2007 Annual Report, p. 79.
	Bengang Steel Plates Co., Ltd.	Subsidy income	4,816,987	2007 Annual Report, pp. 5, 48
	Shanxi Taigang Stainless Steel Co., Ltd.	Funds appropriated for environmental protection	15,148,758	2007 Annual Report, pp. 60, 61, 108.
		Funds appropriated for other purposes	5,670,855	2007 Annual Report, pp. 60, 61, 108.
	Beijing Shougang Co., Ltd.	Subsidies on interest payments	216,000	2007 Annual Report, pp. 95, 96.
	Handan Iron and Steel Co., Ltd.	Government support funds	1,150,000	2007 Annual Report, pp. 49, 55.
	Inner Mongolia Baotou Steel Union Co., Ltd.	Technology subsidy	1,010,563	2007 Annual Report, p. 85.
		A subsidiary of Baotou Steel located in the Taihe Economical and Technological Development Zone near	873,000	2007 Annual Report, p. 85.

Year	Company Name	Description	Amount (in Yuan RMB)	Source
2007		Shanghai benefited from a grant from a "Government Support Fund".		
	Baosteel Co., Ltd.	Government assistance	145,000,000	2007 Annual Report, p. 3.
	Xining Special Steel Co., Ltd.	Government assistance	7,036,667	2007 Annual Report, p. 71.
		Subsidies for environmental clean-up projects	10,000,000	2007 Annual Report, p. 66.
	Hangzhou Iron and Steel Co., Ltd.	"Support Fund for Creating an Advanced Production Base"	1,280,000	2007 Annual Report, p. 101.
		"Support Fund for Water and Energy Conservation"	1,400,000	2007 Annual Report, pp. 101, 102.
		Various support funds related to the information industry	1,360,000	2007 Annual Report, p. 102.
	Hangzhou Iron and Steel Co., Ltd.	"Support Fund for Ecological City Construction"	70,000	2007 Annual Report, p. 102.
	Nanjing Iron and Steel Co., Ltd.	Subsidy income	3,155,388	2007 Annual Report, pp. 95, 96.
		Support funds for the promotion of technology development projects from Jiangsu Provincial Government	800,000	2007 Annual Report, p. 91.
		Support funds for patent information utilization and development (purchase of equipments) from Nanjing Municipal Government	300,000	2007 Annual Report, p. 91.
	Fushun Special Steel Co., Ltd.	Subsidies related to worker employment in Daling	1,672,243	2007 Annual Report, p. 69.
		Government support funds	10,000,000	2007 Annual Report, p. 70.
	Xinjiang Bayi Iron and Steel Co., Ltd.	Subsidy income	100,000	2007 Annual Report, p. 74.

Year	Company Name	Description	Amount (in Yuan RMB)	Source
2007	Xinyu Iron and Steel Co., Ltd.	Subsidy income	19,137,800	2007 Annual Report, p. 85.
	Ma'anshan Iron and Steel Co., Ltd.	Government appropriations for special projects	78,320,000	2007 Annual Report, p. 8.
		Government grants for special projects	20,000,000	2007 Annual Report, p. 102.
		Other subsidies	2,882,907	2007 Annual Report, p. 102.
	Guangzhou Iron and Steel Co., Ltd.	Subsidies to support R&D esp. for products to exported from Guangzhou Municipal Government	700,000	2007 Annual Report, pp. 57, 58.
		Subsidies to support the construction of a logistics base from Guangzhou Municipal Government	161,666	2007 Annual Report, pp. 57, 58.
	Guangzhou Iron and Steel Co., Ltd.	Subsidies for environmental protection from Guangzhou Municipal Government	282,916	2007 Annual Report, pp. 57, 58.
		Subsidies for technology development from Guangzhou Municipal Government	30,919	2007 Annual Report, pp. 57, 58.
		Subsidies for environmental protection from Guangzhou Municipal Government	114,010	2007 Annual Report, pp. 57, 58.
	Chongqing Iron and Steel Co., Ltd.	Government subsidies	18,760,000	2007 Annual Report, p. 65.
2008 (Q1)	Wuhan Iron and Steel Co., Ltd.	Government assistance	984,575	2008 First Quarter Rpt. p. 1
	Baosteel Co., Ltd.	Government assistance	4,000,000	2008 First Quarter Rpt., p.1.
	Ma'anshan Iron and Steel Co., Ltd.	Government assistance	767,900	2008 First Quarter Rpt. p. 2.

## 1.14 Preferential Lending Policies

The heyday of preferential lending in China's steel industry – symbolized by the self service arrangement put in place when Shougang received a license to operate its own bank, Huaxia Bank, in the 1990s<sup>72</sup> – has, as well, become a thing of the past.

However, **subsidized loan facilities and preferential lending arrangements are still available to China's major steel producers**. As the International Monetary Fund points out, up to the present day China's financial sector remains subjected to state control and direction. Banks still play an important role for companies trying to raise funds because equity and bond markets are still in the early stages of development. And while state control over the banking system is still strong, the same cannot be said for commercial orientation. In 2006, an IMF report came to the following conclusion:

*“In the 1997–2004 data, it is difficult to find solid empirical evidence of a strong shift to commercial orientation by SCBs [state-owned commercial banks]. The pricing of credit risk remains rather undifferentiated, and bank lending continues to be driven by availability of funds and does not appear to take enterprise profitability into account when making lending decisions”<sup>73</sup>*

This pattern of state-owned banks and other financial institutions basing their investment decisions on government plans rather than commercial considerations is mirrored in the preliminary determination of the U.S. Department of Commerce's countervailing duty investigation on coated free sheet paper from the People's Republic of China. Here the U.S. Department of Commerce determined that “various levels of government in the PRC, collectively, have not withdrawn from the role of resource allocator in the financial sector, principally the banking sector.”<sup>74</sup> The Canadian Border Service Agency (CBSA) in its countervailing duty investigation on stainless steel fasteners from the People's Republic of China has also confirmed the existence of preferential loans and loan guarantees orchestrated by government agencies.<sup>75</sup>

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<sup>72</sup> For a detailed account of this episode see: Nolan, P., 2001, China and the global business revolution, Basingstoke.

<sup>73</sup> Podpiera, R., 2006, Progress in China's Banking Sector Reform: Has Bank Behavior Changed?, IMF Working Paper WP/06/71, p.4, <http://www.imf.org/external/pubs/ft/wp/2006/wp0671.pdf>.

<sup>74</sup> Spetrini, J. et. al., May 16, 2006, Memorandum for David Spooner, Assistant Secretary for Import Administration, Anti-Dumping Investigation A-570-901, p. 3.

<sup>75</sup> Canadian Border Services Agency, September 24, 2004, Statement of Reasons concerning the making of a final determination with respect to the dumping of certain carbon steel and stainless steel fasteners originating in or exported from the People's Republic of China and Chinese Taipei, p. 37.



It has to be noted, that in contrast to past practices, preferential loan arrangements are no longer disbursed in order to keep uncompetitive ‘dinosaurs’ of the planned economy system afloat but rather to strengthen those enterprises which have been chosen (by the ‘China Steel Inc.’ state-business cartel) to become domestic and international business leaders. As a consequence, today, **preferential lending policies including discounted interest loans and loans with complementary grant elements can be observed mostly in the fields of technological upgrading for environmental protection purposes, on the one hand, and research & development projects as well as innovation oriented capacity building in general, on the other hand.** The respective policy guidelines for these measures have been put down in the “Iron and Steel Industry Development Policy” as well as the “The Middle to Long-term Program on Technological and Scientific Development (2006-2020)” and the “Notification on some policy guidelines for the implementation of the ‘The Middle to Long-term Program on Technological and Scientific Development (2006-2020)’” in particular. On a local level “Some Policy Opinions on Fiscal Support to the Restructuring and Development of Enterprises” (paragraphs 2 and 3 in particular) published by the Bureau of Finance of Liaoning Province on 24.11.2004 already provided corresponding directives to local banks and administrative agencies.

Table 4 documents preferential lending facilities made available to China’s listed steel corporations in the post WTO-accession period. This list – which does not include preferential loan arrangements granted to the non-listed entities of China’s steel conglomerates – already lists preferential loan facilities amounting to 753 million Yuan RMB for the six year period, 2002-2007. These loan facilities have been made available first of all for technological renovation purposes and projects targeting capacity expansions into new high quality segments. In some specific cases, preferential loans have been made available for the implementation of information technologies and, in the case of Guangdong Shaogang Songshan Co. Ltd., the promotion of export activities.

Production facilities and other assets constructed by means of preferential loans granted by government institutions are first carried as special payables before eventually being booked at their actual (non subsidized) costs as fixed assets in the corporate books.<sup>76</sup>

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<sup>76</sup> Cf. For example Ma’anshan Iron and Steel Co., Ltd., Annual Report 2004, pp. 47, 72. Identical Practices can be found with other steel corporations.

**Table 4 Preferential Loan Facilities as Reported in the Annual Reports of Chinese Steel Enterprises Listed at the Shanghai and Shenzhen Stock Exchanges, 2002-2007**

Year	Company Name	Description	Amount (in Yuan RMB)	Source
2002	Daye Special Steel Co., Ltd.	The company received a loan on preferential terms.	5,750,000	2002 Annual Report, p. 2.
2003	Shanxi Taigang Stainless Steel Co., Ltd.	Treasury bond on-lending: For the technical upgrading of its stainless CR rolling mill, Taigang received a discount loan from the Shanxi Provincial Government.	116,300,000	2003 Annual Report, p. 58.
	Handan Iron and Steel Co., Ltd.	Discount loans from the government of Hebei Province for a thin sheet cold rolling line project. Until the end of 2003, Handan saved interest payments of 5.6 million Yuan RMB In 2004 Handan saved interest payments of 11.8 million Yuan RMB In 2005 Handan saved interest payments of 13.5 million Yuan RMB In 2006 Handan saved interest payments of 13.5 million Yuan RMB	288,000,000	2003 Annual Report, p. 33, 2004 Annual Report, p. 45, 2005 Annual Report, p. 45 and 2006 Annual Report, p. 45
	Wuhan Iron and Steel Co., Ltd.	Special loan facilities to assist the technical renovation of Wuhan Steel's thin sheet cold rolling mill.	110,000,000	2003 Annual Report, p. 14, 23, 52.
2004	Tangshan Iron and Steel Co., Ltd.	Discount loans from the Finance Department of Hebei Province. Though the interest rate varies between years, it was always significantly lower than the company's other long term loans. As for the year 2004, the average monthly interest rate of all long term loans was about 4.500 per thousand while the special loan arrangement offered a rate of 1.900 per thousand.	104,500,000	2004 Annual Report, p. 38.
2004	Xining Special Steel Co., Ltd.	Discount loans	500,000	2004 Annual Report, p. 37.

Year	Company Name	Description	Amount (in Yuan RMB)	Source
2005	Xinhua Metal Products Co., Ltd.	Discount loans for technical renovation projects.	1,200,000	2004 Annual Report, p. 45.
	Guangdong Shaogang Songshan Co., Ltd	Discounted interest arrangements for export activities	576,389	2005 Annual Report, p. 57.
	Xining Special Steel Co., Ltd.	Discount loans	500,000	2005 Annual Report, p. 49.
	Hangzhou Iron and Steel Co., Ltd.	Treasury bond on-lending: Discount loans from the Finance Department of Zhejiang Province for the technical renovation of a dry quenching project.	5,600,000	2005 Annual Report, p. 53
2006	Shanxi Taigang Stainless Steel Co., Ltd.	The Finance Department of Shanxi Province allocated funds at discounted interest rates for Taigang's silicon sheet cold rolling mill.	5,000,000	2006 Annual Report, p. 70.
	Handan Iron and Steel Co., Ltd.	Treasury bond on-lending: The company was granted discount loans backed by treasury bonds.	3,000,000	2006 Annual Report, p. 47.
	Lingyuan Iron and Steel Co., Ltd.	Discount loan for the promotion of the company's use of information technology.	896,000	2006 Annual Report, p. 41.
2007	Beijing Shougang Co., Ltd.	Discount loans allocated by the Bureau for Industry Promotion of Beijing Municipal Government to support the construction of Shougang's thin sheet cold rolling mill.	90,000,000	2007 Annual Report, pp. 89, 95, 96.
	Wuhan Iron and Steel Co., Ltd.	Treasury bond on-lending: Special loan facilities were allocated to support the construction of Wuhan Steel's new no. 2 cold rolling mill.	3,900,000	2007 Annual Report, p. 115, 143.
2007	Inner Mongolia Baotou Steel Union Co., Ltd.	Discount loan from the government of Inner Mongolia Autonomous Region to promote the processing of oil tubes at Baotou Steel.	1,000,000	2007 Annual Report, p. 85.
	Xinyu Iron and Steel Co., Ltd.	Treasury bond on-lending: Discount loan from the government of Jiangxi Province.	16,600,000	2007 Annual Report, p. 86.



**Preferential loan arrangements have made a decisive contribution to the technological upgrading of China's leading steel corporations.** The Handan Steel Conglomerate, for example, has been able to take recourse to subsidized loan facilities in order to construct several key projects outlined in the Tenth Five Year Plan as well as a cold rolling mill for the production of thin sheet with an annual capacity of 1.3 million tons. In order to construct a new galvanizing and pickling line the corporation in 2001 received a treasury bond backed two-year discount loan<sup>77</sup> worth 470 million Yuan RMB from the Finance Department of Hebei Province. In 2003 another 288 million Yuan RMB policy loan was made available from the government in Hebei Province in order to finance the company's thin sheet cold rolling line project. And in 2006 the company received an additional 3 million Yuan RMB discount loan backed with treasury bonds. Interest savings arising from these preferential loan facilities have been reported in the Annual Reports as running up to 30.9 million Yuan RMB for the years 2003-2005 alone.

Handan Steel serves as a good example for both the form and magnitude in which China's steel enterprises are profiting from governmental soft loans. Other enterprises have received similar support. **In 2005, for example, the Chinese State Development Bank has committed itself to provide Anshan Steel with an 18 billion Yuan RMB loan facility. The total amount of 18 billion Yuan RMB includes a soft loan component of 10 billion Yuan RMB.** With the provision of this loan facility the State Development Bank intends to support the company's strategic development, its acquisition of strategic resources and its merger with Benxi Steel and provide a stable financial foundation for long term business development. **In a similar way the State Development Bank in August 2007 signed a financing agreement with Wuhan Steel committing itself to provide the company with 20 billion Yuan RMB loan facility. The soft loan component is expected to lay in the same range as with Anshan Steel.** In late 2007 Xining Special Steel, as well entered into a financial cooperation agreement with the State Development Bank. The bank announced its commitment to grant loans totaling 3 billion Yuan RMB and 200 million US dollar during the next few years. In this context the bank declared that it would participate in devising Xining Special Steel's development strategy, provide expert opinion and "omni-directional financial support".<sup>78</sup>

Tangshan Steel is carrying in its books a loan from the provincial tax administration valued at 104,500,000 Yuan RMB. While the nominal value of the loan has not changed from 2004

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<sup>77</sup> This type of treasury bond onlending combines preferential lending practices with capital market measures. In principle the benefiting corporations would have been able to issue corporate bonds on their own in order to collect investment finance from the capital markets. However, given their weaker risk position in comparison to government organizations they would have been forced to pay higher risk premiums to market participants. With government organizations emitting bonds in their own name but on behalf of the steel corporations, the financial arrangements have in total become much less costly for all parties involved.

<sup>78</sup> Mysteel, December 19, 2007.

through 2006, the subsidized monthly interest rate, however, is fluctuating from 1.900 per thousand in 2004 to 2.125 in 2005 and 1.9583 in 2006.<sup>79</sup>

**According to a recent 2007 report, Baosteel has received discount loans worth 5 billion Yuan RMB to fund half of the costs of its new stainless steel plant. The report estimates that China's top 15 steelmakers (listed and non-listed entities) have received loans at discounted interest rates from various banks totaling more than 130 billion Yuan RMB since 2002.<sup>80</sup>**

### **1.15 Capital Market Measures**

Nearly all of China's leading state-owned enterprises have in the run of the last decade brought some of their operative assets to the domestic (and often also the international) capital markets. While the state, as a general rule, maintains a two thirds majority ownership of these new shareholding offsprings, they have allowed their parents to tap the national and international capital markets, issue corporate bonds and gain better access to the domestic and international banking circles and thereby have improved their access to loan facilities.

Important criteria for the ability and cost structure of such capital market operations are the overall market capitalization as well as the stock prices. In both regards, the Chinese government has been providing support to individual Chinese steel enterprises. Baosteel may serve as a case in point: In 2005, Baoshan Iron and Steel Co. Ltd., the listed branch of Shanghai Baosteel Group Corp., issued additional shares to raise funds for three major expansion projects. In total, 5 billion shares were sold at a price of 5.12 Yuan RMB each. Among the buyers: the wholly-state-owned parent company Shanghai Baosteel Group Corp. Strikingly, the holding company was also the largest buyer, paying a grant total of nearly 15.5 billion Yuan RMB for its 3 billion additional shares. In all 60 percent of the newly issued shares went directly to the parent company.<sup>81</sup> What happened was that Shanghai Baosteel Group Corp. transferred equity capital to its subsidiary in a way that encouraged other investors to do the same. The Holding company had announced, that it

- would keep its shares for a certain period of time,
- would not sell its shares for less than 5.63 Yuan RMB each after the window period ended and that it would
- never own less than 67 percent of the shares.

Additionally, the government proclaimed that it would prevent the price of Baoshan Iron and Steel Co. Ltd. shares to ever fall below 4.53 Yuan RMB.<sup>82</sup>

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<sup>79</sup> Annual Report 2004, p. 38; Annual Report 2005, p. 42; Annual Report 2006, p. 41.

<sup>80</sup> Price, A. et. al., 2007, Money for Metal, p. 50, 52.

<sup>81</sup> Baosteel 2005 Annual Report, p. 32.

<sup>82</sup> Price, A. et. al., 2007, Money for Metal, p. 34.

This particular set-up had a substantial promotional component: The public proclamations sent a strong incentive to other investors to buy Baoshan Iron and Steel Co. Ltd. shares since they were reassured that the government would intervene to keep prices stable if necessary. And as a consequence, this implied that the risk of buying and holding Baoshan Iron and Steel Co. Ltd. shares was reduced and the shares could be introduced at a higher offer price due to the reduced risk premium.

## 1.16 Preferential Tax Arrangements

Since the dismantlement of China's former central command economy and the gradual establishment of a decentralized economic system has given new meaning to the concepts of 'fiscal system' and 'taxation', **the idea to direct industrial development by means of tax-based incentives has been widely accepted by China's policy makers. Preferential tax arrangements can be granted by central as well as local government bodies as the Chinese tax system is based on a tax sharing model between central and local government organizations allowing the latter to collect and retain up to 100 percent of certain tax categories. As local authorities get to control a substantial share of total tax income, officials in municipal or county governments have the ability to grant generous tax cuts.**

Preferential tax arrangements have been frequently cited in the context of countervailing duty investigations against Chinese steel products. Most information employed in these findings originates from China's subsidy notification at the WTO. Although China is bound by WTO regulations to submit annual notifications, it took more than four years' time before the country finally filed its first report in April 2006. The document titled "New and Full Notification" sparked an intense debate because it was considered incomplete in many regards. **Unfortunately, it only provides information on 45 preferential tax programs run by central government agencies and contains no information whatsoever on activities of lower government levels.<sup>83</sup> Just as well, it does not mention the support provided by state-owned financial institutions.** Furthermore the "New and Full Notification" only provides information for a period from 2001 until 2004 leaving out anything that happened during the following years. Most of the programs presented describe preferential tax arrangements for foreign invested enterprises and the agricultural sector. Since the notification did not include any information on preferential tax arrangements administered on the local level and because there is little viable information available otherwise, the picture

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<sup>83</sup> Cf. World Trade Organisation, September 14, 2007, G/SCM/Q2/CHN/31 In its reply to question 1 the Delegation of China makes the following statement: "On notification on subsidies from local government, China is now internally discussing how to gather information in an efficient and an effective way. Preparations for notification on local subsidies will entail education of local officials on the SCM Agreement in a more in-depth and technical approach. It will also involve a lot of other preparatory work. Therefore it is still difficult for China to propose a timetable now."

provided of preferential tax programs in China must remain incomplete. Other resources have to be consulted.

Annual Reports of China's listed steelmakers provide ample information about a plethora of tax privileges provided by central and local government agencies (see table 5).<sup>84</sup>

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<sup>84</sup> Appendix III documents all subsidies, preferential loans as well as tax privileges by the reporting enterprises.



**Table 5 Preferential Tax Arrangements as Reported in the Annual Reports of Chinese Steel Enterprises Listed at the Shanghai and Shenzhen Stock Exchanges, 2002-2007**

Year	Company Name	Description	Amount (in Yuan RMB)	Source
2002	Panzhuhua New Steel Vanadium Co., Ltd.	Tax break for the utilization of waste resources	12,200,000	2002 Annual Report, p. 32.
		Tax break for technology development	5,800,000	2002 Annual Report, p. 32.
	Shanxi Taigang Stainless Steel Co., Ltd.	Discount on corporate income tax. Between 1, January 1998 and 31, December 2002, the tax administration of Shanxi Province lowered the tax burden for Taiyuan Steel by refunding some part of its payments. Under this arrangement, the company would continue to pay the regular tax rate of 33 percent, while the provincial government returned payments in excess of 15 percent.		2002 Annual Report, p. 47.
	Xining Special Steel Co., Ltd.	Tax privileges in the context of the national strategy to develop central and western regions. In 2002, the government of Qinghai Province has ruled that the core business of Xining Special Steel is in line with the encouraged development targets for China's western regions as formulated by the central government. According to Xining Special Steel's 2002 annual report, the provincial authorities were convinced that the steelmaker had met the criteria for key encouraged industry, products and technologies. As such, the company is entitled to be taxed at a reduced rate of 15 percent. Company units and subsidiaries located outside Qinghai were excluded from this regulation and therefore unable to benefit from the preferential tax rate.		2002 Annual Report, p. 37, 2003 Annual Report, p. 36, 2004 Annual Report, p. 29, 2005 Annual Report, p. 38, 2006 Annual Report, p. 42 and 2007 Annual Report, p. 51.
2002	Xinjiang Bayi Iron and Steel Co., Ltd.	Preferential corporate income tax rate. During the first seven months of 2002 Bayi Steel paid only 15 percent instead of the regular rate of 33 percent.		2002 Annual Report, p. 26.

Year	Company Name	Description	Amount (in Yuan RMB)	Source
		<p>Preferential corporate income tax rate. In August 2002, the government of the Xinjiang Uygur Autonomous Region granted a discount of 55 percent on the regular corporate income tax rate of 33 percent. Accordingly, the company was taxed at a rate of 14.85 percent - less than half the standard rate. This arrangement was valid for a period of five years and has expired by the end of July 2007.</p>		2002 Annual Report, p. 26, 2003 Annual Report, p. 29, 2004 Annual Report, p. 38, 2005 Annual Report, p. 39, 2006 Annual Report, p. 42 and 2007 Annual Report, p. 54.
	Xinhua Metal Products Co., Ltd.	<p>Tax privileges in the context of the national strategy to develop central and western regions. The Jiangxi provincial government ruled that Xinhua could meet the necessary requirements in order to qualify for tax privileges for companies located in China's less developed central and western regions. Thus, from 2002 to 2004, the company was taxed at 15 percent.</p>		2002 Annual Report, p. 26, 2003 Annual Report, p. 19 and 2004 Annual Report, p. 16.
		Tax refund for steel product exports.	367,416	2002 Annual Report, pp. 2, 33.
	Ma'anshan Iron and Steel Co., Ltd.	<p>Preferential corporate income tax rate. Between 2000 and 2006, Ma'anshan Steel benefited from a 15 percent preferential rate, provided by authorities on the local government level. In 2007, local tax authorities declared that this arrangement should long since have expired.</p>		2002 Annual Report, p. 23, 2003 Annual Report, p. 26, 2004 Annual Report, p. 26, 2005 Annual Report, p. 31, 2006 Annual Report, p. 36 and 2007 Annual Report, p. 42, 43.

Year	Company Name	Description	Amount (in Yuan RMB)	Source
2002	Guangzhou Iron and Steel Co., Ltd.	Preferential corporate income tax rate. From 1996 until 2005, Guangzhou Steel can take advantage of income tax privileges for two reasons. First, the Guangdong Government has recognized the company as an enterprise using advanced technology. Second, special tax policies in place to promote investments by overseas Chinese apply to the company. By these measures Guangzhou Steel's corporate income tax rate was lowered to 12 percent.		2002 Annual Report, p. 16, 2003 Annual Report, p. 18 and 2004 Annual Report, p. 17.
	Chongqing Iron and Steel Co., Ltd.	Tax privileges in the context of the national strategy to develop central and western regions. In 2004, the Chongqing Municipal government ruled that Chongqing Steel could meet the necessary requirements in order to qualify for tax privileges for companies located in China's less developed central and western regions. Thus, from 2001 to 2010, the company was taxed at 15 percent.		2006 Annual Report, p. 44.
2003	Panzhuhua New Steel Vanadium Co., Ltd.	Tax break for the utilization of waste resources	13,500,000	2003 Annual Report, p. 33.
		Tax break for technology development	7,300,000	2003 Annual Report, p. 33.
	Shanxi Taigang Stainless Steel Co., Ltd.	Tax exemption: Shanxi Taigang Stainless Steel Science and Technology Co., Ltd., a subsidiary of Taigang was founded in the High Technology Industry Development of Taiyuan. For the initial two years of operation, the newly established company was exempted from paying income tax (April 1, 2003 to December 31, 2004).		2003 Annual Report, p. 47, 80 and 2004 Annual Report, p. 44.
2003	Inner Mongolia Baotou Steel Union Co., Ltd.	Preferential corporate income tax rate. Tax regulations implemented by the government of the Inner Mongolia Autonomous Region allowed Baotou Steel to pay a reduced corporate income tax rate of 10 percent from January 1, 2003 to December 31, 2007.		2004 Annual Report, pp. 41, 57, 2005 Annual Report, p. 40, 2006 Annual Report, pp. 29, 45 and 2007

Year	Company Name	Description	Amount (in Yuan RMB)	Source
				Annual Report, p. 62.
	Xining Special Steel Co., Ltd.	Tax privileges in the context of the national strategy to develop central and western regions: Corporate income tax reduced to 15 percent. (See description for the year 2002)		2003 Annual Report, p. 36
	Xinjiang Bayi Iron and Steel Co., Ltd.	Preferential corporate income tax rate: Corporate income tax reduced to 14.85 percent. (See description for the year 2002)		2003 Annual Report, p. 29.
	Xinhua Metal Products Co., Ltd.	Tax privileges in the context of the national strategy to develop central and western regions: Corporate income tax reduced to 15 percent. (See description for the year 2002)		2003 Annual Report, p. 19.
	Ma'anshan Iron and Steel Co., Ltd.	Preferential corporate income tax rate: Corporate income tax reduced to 15 percent. (See description for the year 2002)		2003 Annual Report, p. 26

Year	Company Name	Description	Amount (in Yuan RMB)	Source
2003	Ma'anshan Iron and Steel Co., Ltd.	Preferential corporate income tax rate Ma'anshan Wuhu Processing and Distribution Co., Ltd., a holding subsidiary of Ma'anshan Steel was registered in the Economic and Technological Development Zone of Wuhu City, Anhui Province, as a foreign invested company of a productive nature. As such, the company was permitted to take advantage of special tax privileges reserved for foreign invested enterprises. During the first two profitable years of operation, the company would be exempted from paying corporate income tax. During the third to the fifth year of profitable operation, the company was granted a 50 percent tax discount. Starting from the sixth year, the company was taxed a preferential rate of merely 15 percent, as compared to the standard rate of 33 percent.		2003 Annual Report, p. 48, 2004 Annual Report, p. 49, 2005 Annual Report, p. 22 and 2007 Annual Report, p. 49.
	Guangzhou Iron and Steel Co., Ltd.	Preferential corporate income tax rate: Corporate income tax reduced to 12 percent. (See description for the year 2002)		2002 Annual Report, p. 16.
	Liuzhou Iron and Steel Co., Ltd.	Tax privileges in the context of the national strategy to develop central and western regions. In 2003, the government of the Guangxi Zhuang Autonomous Region ruled that Liuzhou Steel could meet the necessary requirements in order to qualify for tax privileges for companies located in China's less developed central and western regions. Thus, from 2003 to 2010, the company was taxed at 15 percent.		2006 Annual Report, p. 30 and 2007 Annual Report, p. 33.
	Chongqing Iron and Steel Co., Ltd.	Tax privileges in the context of the national strategy to develop central and western regions: Corporate income tax reduced to 15 percent. (See description for the year 2002)		2006 Annual Report, p. 44.

Year	Company Name	Description	Amount (in Yuan RMB)	Source
2004	Panzhihua New Steel Vanadium Co., Ltd.	Tax privileges in the context of the national strategy to develop central and western regions. In 2004, the government of Sichuan Province ruled that Panzhihua Steel could meet the necessary requirements in order to qualify for tax privileges for companies located in China's less developed central and western regions. Thus, from 2004 to 2010, the company was taxed at 15 percent.		2004 Annual Report, p. 41, 2005 Annual Report, p. 46, 2006 Annual Report, p. 52 and 2007 Annual Report, p. 63.
		Tax break for the utilization of waste resources	24,100,000	2004 Annual Report, p. 41.
		Tax break for technology development	14,000,000	2004 Annual Report, p. 41.
	Shanxi Taigang Stainless Steel Co., Ltd.	Tax exemption: Shanxi Taigang Stainless Steel Science and Technology Co., Ltd., a subsidiary of Taigang was exempted from income tax. (See description for the year 2003)		2004 Annual Report, p. 44.
	Inner Mongolia Baotou Steel Union Co., Ltd.	Preferential corporate income tax rate: Corporate income tax rate reduced to 10 percent. (See description for the year 2003)		2004 Annual Report, pp. 41, 57.
	Xining Special Steel Co., Ltd.	Tax privileges in the context of the national strategy to develop central and western regions: Corporate income tax reduced to 15 percent. (See description for the year 2002)		2004 Annual Report, p. 29.
	Hangzhou Iron and Steel Co., Ltd.	Exemption from corporate income tax. Two of Hangzhou Steel's subsidiaries - Zijian Trading Ltd. and Zhejiang New Century Metal Products – were exempted from paying corporate income tax in 2004.		2004 Annual Report, p. 2.
2004	Lingyuan Iron and Steel Co., Ltd.	Tax break for technology development	51,800,000	2004 Annual Report, p. 16.

Year	Company Name	Description	Amount (in Yuan RMB)	Source
2004		Preferential tax arrangements in the context of the national strategy to revitalize China's northeastern region. Located in Liaoning Province, the country's former rust-belt, Lingyuan Steel was in a position to take advantage of regulations allowing companies to shorten the depreciation period on fixed asset investments made it possible for Lingyuan Steel to optimize its annual tax deductions.		2004 Annual Report, p. 40.
	Xinjiang Bayi Iron and Steel Co., Ltd.	Preferential corporate income tax rate: Corporate income tax reduced to 14.85 percent. (See description for the year 2002)		2004 Annual Report, p. 38.
	Xinhua Metal Products Co., Ltd.	Tax privileges in the context of the national strategy to develop central and western regions: Corporate income tax reduced to 15 percent. (See description for the year 2002)		2004 Annual Report, p. 16.
	Ma'anshan Iron and Steel Co., Ltd.	Preferential corporate income tax rate: Corporate income tax reduced to 15 percent. (See description for the year 2002)		2004 Annual Report, p. 26.
		Exemption from corporate income tax Ma'anshan Wuhu Processing and Distribution Co., Ltd., a holding subsidiary of Ma'anshan Steel was exempted from paying corporate income tax. (See description for the year 2003)		2004 Annual Report, p. 49.
		Tax privilege	9,900,000	2004 Annual Report, p. 22.
	Guangzhou Iron and Steel Co., Ltd.	Preferential corporate income tax rate: Corporate income tax reduced to 12 percent. (See description for the year 2002)		2004 Annual Report, p. 17.
	Liuzhou Iron and Steel Co., Ltd.	Tax privileges in the context of the national strategy to develop central and western regions: Corporate income tax reduced to 15 percent. (See description for the year 2003)		2006 Annual Report, p. 30 and 2007 Annual Report, p. 33.

Year	Company Name	Description	Amount (in Yuan RMB)	Source
2005	Chongqing Iron and Steel Co., Ltd.	Tax privileges in the context of the national strategy to develop central and western regions: Corporate income tax reduced to 15 percent. (See description for the year 2002)		2006 Annual Report, p. 44 and 2007 Annual Report, p. 54.
	Panzhihua New Steel Vanadium Co., Ltd.	Tax privileges in the context of the national strategy to develop central and western regions: Corporate income tax reduced to 15 percent. (See description for the year 2004)		2005 Annual Report, p. 46.
		Tax break for the utilization of waste resources	13,800,000	2005 Annual Report, p. 46.
		Tax break for technology development	7,500,000	2005 Annual Report, p. 46.
	Shanxi Taigang Stainless Steel Co., Ltd.	Preferential corporate income tax rate: In 2003, Shanxi Taigang Stainless Steel Science and Technology Co., Ltd., a subsidiary of Taigang was founded in the High Technology Industry Development of Taiyuan. Starting from the third year of operation, the company began to pay corporate income tax at a preferential rate of 15 percent.		2005 Annual Report, p. 48.
	Angang New Steel Co., Ltd.	Tax break for technology development	96,400,000	2005 Annual Report, p. 63.



Year	Company Name	Description	Amount (in Yuan RMB)	Source
2005	Beijing Shougang Co., Ltd.	Exemption from corporate income tax / Preferential corporate income tax rates. Beijing Shougang Jiahua Construction Materials Co., Ltd., a holding subsidiary of Beijing Shougang was registered as a foreign invested company of a productive nature. As such, the company was permitted to take advantage of special tax privileges. First, the corporate income tax rate was lowered from 33 percent to 24 percent. Second, for 2005 and 2006, the company was exempted from corporate income tax. Third, between 2007 and 2009, the company would be granted a 50 percent tax discount. Fourth, corporate income tax obligations to local tax authorities will be waived during the first five years of operation (2005-2009) and halved during the next five years (2010-2014).		2005 Annual Report, p. 55, 2006 Annual Report, p. 57, 58 and 2007 Annual Report, p. 70.
	Inner Mongolia Baotou Steel Union Co., Ltd.	Preferential corporate income tax rate: Corporate income tax rate reduced to 10 percent. (See description for the year 2003)		2005 Annual Report, p. 40.
	Xining Special Steel Co., Ltd.	Tax privileges in the context of the national strategy to develop central and western regions: Corporate income tax reduced to 15 percent. (See description for the year 2002)		2005 Annual Report, p. 38.
		Exemption from corporate income tax. Hami Bolun Mining Co., Ltd., a subsidiary of Xining Special Steel located in Hami City, Xinjiang Uygur Autonomous Region, was exempted from paying corporate income tax by the Finance Department of Hami Municipal Government for a three year period starting January 1, 2005.		2007 Annual Report, p. 52.
2005	Xinjiang Bayi Iron and Steel Co., Ltd.	Preferential corporate income tax rate: Corporate income tax reduced to 14.85 percent. (See description for the year 2002)		2005 Annual Report, p. 39.

Year	Company Name	Description	Amount (in Yuan RMB)	Source
2005	Xinhua Metal Products Co., Ltd.	Tax refund for steel product exports.	1,996,097	2005 Annual Report, pp. 2, 37.
	Ma'anshan Iron and Steel Co., Ltd.	Preferential corporate income tax rate: Corporate income tax reduced to 15 percent. (See description for the year 2002).		2005 Annual Report, p. 31.
		Preferential corporate income tax rate: Ma'anshan Wuhu Processing and Distribution Co., Ltd., a holding subsidiary of Ma'anshan Steel was taxed at a rate of 15 percent. (See description for the year 2003)		2005 Annual Report, p. 22.
		Tax privileges	31,100,000	2005 Annual Report, p. 39
	Guangzhou Iron and Steel Co., Ltd.	Preferential corporate income tax rate. Corporate income tax rate reduced to 15 percent.		2005 Annual Report, p. 44, 2006 Annual Report, p. 17 and 2007 Annual Report, p. 30.
	Liuzhou Iron and Steel Co., Ltd.	Tax privileges in the context of the national strategy to develop central and western regions: Corporate income tax reduced to 15 percent. (See description for the year 2003)		2006 Annual Report, p. 30 and 2007 Annual Report, p. 33.
	Chongqing Iron and Steel Co., Ltd.	Tax privileges in the context of the national strategy to develop central and western regions: Corporate income tax reduced to 15 percent. (See description for the year 2002)		2006 Annual Report, p. 44.
2005	Chongqing Iron and Steel Co., Ltd.	Exemption from corporate income tax for local tax authorities. From 2005 until 2007, Chongqing Steel was exempted from paying corporate income tax to the local tax authorities. The company did continue to pay income tax to authorities on the central government level.		2006 Annual Report, p. 44 and 2007 Annual Report, p. 54.

Year	Company Name	Description	Amount (in Yuan RMB)	Source
2006	Panzhuhua New Steel Vanadium Co., Ltd.	Tax privileges in the context of the national strategy to develop central and western regions: Corporate income tax reduced to 15 percent. (See description for the year 2004)		2006 Annual Report, p. 52.
		Refund of both corporate income tax and VAT for steel delivered to the Qinghai-Tibet Railway Project.	12,724,841	2006 Annual Report, p. 70.
		VAT refund. Value-added Tax payments, some dating back to 2001, were returned to the company.	2,734,998	2006 Annual Report, p. 70.
	Bengang Steel Plates Co., Ltd.	Preferential tax arrangements rewarding R&D work. Tax regulations allow for the deduction of 50 percent of either the actual R&D expenses incurred within a certain year or of 2 percent of the company's income. For every year, the calculation method which produces the lower result will be chosen to determine the deductible amount. In 2006 the latter method was chosen.		2006 Annual Report, p. 27
	Shanxi Taigang Stainless Steel Co., Ltd.	Exemption from VAT / Tax privileges for recycling enterprises. In order to set up a circular economy and strengthen the recycling industry, the Chinese government has introduced tax privileges. Preferential treatment includes the exemption from VAT. This was the case with one of Taigang's subsidiaries engaged in the metals recycling business.		2006 Annual Report, p. 39.
2006	Shanxi Taigang Stainless Steel Co., Ltd.	Preferential corporate income tax rate: Shanxi Taigang Stainless Steel Science and Technology Co., Ltd., a subsidiary of Taigang was founded in the High Technology Industry Development of Taiyuan was taxed at a reduced rate of 15 percent. (See description for the year 2005)		2006 Annual Report, p. 39.
	Angang Steel Co., Ltd.	Tax break for the utilization of waste resources	504,000,000	2006 Annual Report, p. 75.

Year	Company Name	Description	Amount (in Yuan RMB)	Source
2006		Tax break for technology development	1,143,000,000	2006 Annual Report, p. 75.
	Beijing Shougang Co., Ltd.	Exemption from corporate income Beijing Shougang Jiahua Construction Materials Co., Ltd., a holding subsidiary of Beijing Shougang was exempted from corporate income tax. (See description for the year 2005)		2006 Annual Report, pp. 57, 58.
	Inner Mongolia Baotou Steel Union Co., Ltd.	Preferential corporate income tax rate: Corporate income tax rate reduced to 10 percent. (See description for the year 2003)		2006 Annual Report, pp. 29, 45.
	Laiwu Iron and Steel Co., Ltd.	VAT refund. Value-added Tax payments were returned to the company.	73,460	2006 Annual Report, p. 53.
	Xining Special Steel Co., Ltd.	Tax privileges in the context of the national strategy to develop central and western regions: Corporate income tax reduced to 15 percent. (See description for the year 2002)		2006 Annual Report, p. 42.
	Xining Special Steel Co., Ltd.	Exemption from corporate income tax. Hami Bolun Mining Co., Ltd., a subsidiary of Xining Special Steel was exempted from paying corporate income tax. (See description for the year 2005)		2007 Annual Report, p. 52.
	Lingyuan Iron and Steel Co., Ltd.	Tax break for technology development	41,100,000	2006 Annual Report, p. 22.
	Xinjiang Bayi Iron and Steel Co., Ltd.	Preferential corporate income tax rate: Corporate income tax reduced to 14.85 percent. (See description for the year 2002)		2006 Annual Report, p. 42.
	Ma'anshan Iron and Steel Co., Ltd.	Preferential corporate income tax rate: Corporate income tax reduced to 15 percent. (See description for the year 2002)		2006 Annual Report, p. 36.

Year	Company Name	Description	Amount (in Yuan RMB)	Source
2006		Preferential corporate income tax rate: Ma'anshan Wuhu Processing and Distribution Co., Ltd., a holding subsidiary of Ma'anshan Steel was taxed at a rate of 15 percent. (See description for the year 2003)		2007 Annual Report, p. 49.
		Tax privilege	24,400,000	2006 Annual Report, p. 40
		VAT refunds	5,632,500	2006 Annual Report, p. 102.
	Guangzhou Iron and Steel Co., Ltd.	Preferential corporate income tax rate: Corporate income tax reduced to 15 percent. (See description for the year 2005)		2006 Annual Report, p. 17.
	Liuzhou Iron and Steel Co., Ltd.	Tax privileges in the context of the national strategy to develop central and western regions: Corporate income tax reduced to 15 percent. (See description for the year 2003)		2006 Annual Report, p. 30 and 2007 Annual Report, p. 33.
		Tax privileges related to energy efficiency. Income tax related to income growth resulting from increased energy efficiency will be waived during the years 2006 and 2007.		2006 Annual Report, p. 40 and 2007 Annual Report, p. 33.
2007	Chongqing Iron and Steel Co., Ltd.	Tax privileges in the context of the national strategy to develop central and western regions: Corporate income tax reduced to 15 percent. (See description for the year 2002)		2006 Annual Report, p. 44.
		Exemption from corporate income tax for local tax authorities. (See description for the year 2002)		2006 Annual Report, p. 44 and 2007 Annual Report, p. 54.
	Panzhihua New Steel Vanadium Co., Ltd.	Tax privileges in the context of the national strategy to develop central and western regions: Corporate income tax reduced to 15 percent. (See description for the year 2004)		2007 Annual Report, p. 63.

Year	Company Name	Description	Amount (in Yuan RMB)	Source
2007	Guangdong Shaogang Songshan Co., Ltd	Preferential income tax rate of only 15 percent. The Science and Technology Department of Guangdong province has designated the company as a "High Technology Enterprise". Therefore, it joined the first batch of so labeled enterprises and was able to enjoy the benefit.		2007 Annual Report, p. 21, 63.
	Bengang Steel Plates Co., Ltd.	Preferential tax arrangement rewarding R&D work. The company could deduct 50 percent of its R&D expenses from its tax obligations.	349,000,000	2007 Annual Report, p. 18.
	Shanxi Taigang Stainless Steel Co., Ltd.	Preferential corporate income tax rate: Shanxi Taigang Stainless Steel Science and Technology Co., Ltd., a subsidiary of Taigang was founded in the High Technology Industry Development of Taiyuan was taxed at a reduced rate of 15 percent. (See description for the year 2005)		2007 Annual Report, p. 86.
	Angang Steel Co., Ltd.	Tax break for the utilization of waste resources	441,000,000	2007 Annual Report, p. 87.
		Tax break for technology development	1,372,000,000	2007 Annual Report, p. 87.
	Beijing Shougang Co., Ltd.	Preferential corporate income tax rates. Beijing Shougang Jiahua Construction Materials Co., Ltd., a holding subsidiary of Beijing Shougang was taxed at 12 percent. (See description for the year 2005)		2007 Annual Report, p. 70.
	Inner Mongolia Baotou Steel Union Co., Ltd.	Preferential corporate income tax rate: Corporate income tax rate reduced to 10 percent. (See description for the year 2003)		2007 Annual Report, p. 62.
		Tax refund for steel delivered to the Qinghai-Tibet Railway Project.	16,718,198	2007 Annual Report, p. 85.
	Laiwu Iron and Steel Co., Ltd.	VAT refund. Value-added Tax payments were returned to the company.	383,138	2006 Annual Report, p. 89.

Year	Company Name	Description	Amount (in Yuan RMB)	Source
2007	Xining Special Steel Co., Ltd.	Tax privileges in the context of the national strategy to develop central and western regions: Corporate income tax reduced to 15 percent. (See description for the year 2002)		2007 Annual Report, p. 51.
	Xining Special Steel Co., Ltd.	Exemption from corporate income tax. Hami Bolun Mining Co., Ltd., a subsidiary of Xining Special Steel was exempted from paying corporate income tax. (See description for the year 2005)		2007 Annual Report, p. 52.
		Exemption from corporate income tax. The Finance Department of Gansu Provincial Government ruled that Northern Gansu Bolun Mining Co., Ltd., another subsidiary of Xining Special Steel located in northern Gansu Province, was exempted from paying corporate income tax in 2007.		2007 Annual Report, p. 52.
	Xinjiang Bayi Iron and Steel Co., Ltd.	Preferential corporate income tax rate (until July): Corporate income tax reduced to 14.85 percent. (See description for the year 2002)		2007 Annual Report, p. 54.
		Tax privileges in the context of the national strategy to develop central and western regions (since August). The government of the Xinjiang Uygur Autonomous Region ruled that Bayi Steel could meet the necessary requirements in order to qualify for tax privileges for companies located in China's less developed central and western regions. Thus, the company was taxed at 15 percent.		2007 Annual Report, p. 54.
	Ma'anshan Iron and Steel Co., Ltd.	Preferential corporate income tax rate: Ma'anshan Wuhu Processing and Distribution Co., Ltd., a holding subsidiary of Ma'anshan Steel was taxed at a rate of 15 percent. (See description for the year 2003)		2007 Annual Report, p. 49.
		Tax privilege	20,700,000	2007 Annual Report, p. 43

Year	Company Name	Description	Amount (in Yuan RMB)	Source
2007	Ma'anshan Iron and Steel Co., Ltd.	Tax refunds	26,192,100	2007 Annual Report, p. 102.
	Guangzhou Iron and Steel Co., Ltd.	Preferential corporate income tax rate: Corporate income tax reduced to 15 percent. (See description for the year 2005)		2007 Annual Report, p. 30.
	Liuzhou Iron and Steel Co., Ltd.	Tax privileges in the context of the national strategy to develop central and western regions: Corporate income tax reduced to 15 percent. (See description for the year 2003)		2006 Annual Report, p. 30 and 2007 Annual Report, p. 33.
		Tax privileges related to energy efficiency. Income tax related to income growth resulting from increased energy efficiency will be waived during the years 2006 and 2007.	7,100,000	2006 Annual Report, p. 40 and 2007 Annual Report, p. 33.
	Chongqing Iron and Steel Co., Ltd.	Tax privileges in the context of the national strategy to develop central and western regions: Corporate income tax reduced to 15 percent. (See description for the year 2002)		2007 Annual Report, p. 54.
		Exemption from corporate income tax for local tax authorities. (See description for the year 2002)		2006 Annual Report, p. 44 and 2007 Annual Report, p. 54.



**The preferential tax arrangements documented by Chinese listed steel corporations come in the form of tax refunds (most notably in the context of export based VAT refunds), as well as tax breaks and tax cuts based on absolute reductions in tax payments due or reduced tax rates.** These tax privileges are granted in the context of a broad range of corporate activities, including R&D investments and technology upgrading as well as the utilization of waste resources and metals recycling projects, etc. Other preferential tax arrangements are obviously based on specific governmental policies and programs targeting regional development. Examples include tax refunds and tax breaks granted in the context of the Qinghai-Tibet Railway Project, the Great Western Development Strategy<sup>85</sup> and the North-East China Revitalization Program. In a number of cases, subsidiaries of listed Chinese steelmakers have put on the label of a Foreign Invested Enterprise in order to become eligible for tax privileges reserved exclusively to foreign investors.

Ma'anshan Iron and Steel Co., Ltd. has furthermore profited from an 'irregular' extension of the tax refund program of the years 2000-2001 (see chapter 1.1.1). This program which had reduced the effective corporate income tax from 33 percent to 15 percent had been ordered to be discontinued by the Finance Department of the Central Government. But despite of this order, local government authorities continued to refund Ma'anshan income tax payments in excess of 15 percent. The special treatment appears particularly disturbing since Ma'anshan Steel is one of nine mainland Chinese companies which had listed shares at the Hongkong Stock Exchange in 1993. Only by mid 2007, local tax authorities changed their minds and declared that this arrangement should long since have expired. While 2007 became the first year for Ma'anshan to pay the regular tax rate, the local financial departments are not expected to reclaim taxes forgone by the so called mistake.<sup>86</sup>

**In so far as concrete figures are available, Chinese government organizations have refrained from collecting taxes worth 7,607 million Yuan RMB<sup>87</sup> from listed steelmakers. This very amount of 7,607 million Yuan RMB has therefore been available to these enterprises to promote their domestic and international market development and improve their competitive stance vis-à-vis foreign competitors. Beyond that, several billion Yuan RMB of taxes forgone by financial departments across the country result from preferential corporate income tax rates. Since many major steelmakers were eligible to reduced tax rates of 15 percent or lower – as compared to the regular 33 percent – corporate income tax payments were but a fraction of what they should have been.**

But it is not only listed steelmakers which have been profiting significantly from preferential tax policies. For the steel sector as a whole, a number of specific categories of and eligibility criteria for tax incentives can be identified:

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<sup>85</sup> Abroad also known as the "Go-West Strategy".

<sup>86</sup> Cf. Ma'anshan Iron and Steel Co., Ltd. 2007 Annual Report, p. 42, 43.

<sup>87</sup> Figure based on data documented in tables XY and YZ.

One important criterion for becoming eligible for tax privileges are independent research and development activities. Article 16 of the ISIDP provides for “favorable taxation terms” for enterprises and projects capable of enhancing the level of research and development as well as the design and manufacture of major technical equipment in the Chinese iron and steel industry. As a forerunner to these policies in 2003 already a major program for a corresponding preferential tax treatment has been set up which is available for domestic as well as foreign invested enterprises. In order to help companies offset at least part of their financial burden incurred in the context of R&D activities, the program offers that

*“research and development of new products, new technologies and new crafts which has increased ten percent or more from the previous year, may be offset by 150% from the taxable income of the year.”<sup>88</sup>*

As all leading Chinese steel mills are pouring large sums of money in projects designed to improve their R&D facilities and narrow the development gap to OECD steel companies, by means of these programs substantial subsidies are paid out to Chinese steel producers.

Companies who are engaged in production processes designated as encouraged in the respective catalogues published by the central government, as well, are entitled to certain tax reductions or exemptions. In China today, there are two separate sets of catalogues: one is valid only for domestically invested enterprises (DIEs), while the other is valid only for foreign invested enterprises (FIEs).

The current catalogue for DIEs, the “Catalogue for the Guidance of Industrial Structure Adjustment” distinguishes between four different categories: processes to be encouraged, restricted or eliminated are explicitly mentioned while those which fall in the fourth category, “tolerated”, are omitted for practical reasons. **Domestic steel companies engaged in areas of production listed in the “encouraged” section are able to take advantage of numerous tax breaks such as VAT exemption for certain types of imported production equipment.**<sup>89</sup> Since the catalogue was first published in 1999, it underwent several rounds of amendments. Many changes have been made to include or exclude certain production processes and prioritize technological development objectives. Considering the subsequent adjustments over the past eight years, it becomes clear that the number and proportion of steel related production technologies in the “encouraged”-section has dropped. While the 2005 edition defined 25 different items, the 2007 edition, which is also the most recent, cut down the number to 13. Those include the manufacturing of ultra-high efficiency graphite electrodes with diameters larger than 550 mm, high speed heavy rail, cold rolled silicon sheet

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<sup>88</sup> World Trade Organization, April 13, 2006, Subsidies - New and Full Notification Pursuant to Article XVI:1 of the GATT 1994 and Article 25 of the SCM Agreement – People’s Republic of China, G/SCM/N/123/CHN, p. 31.

<sup>89</sup> The promotion of imported equipment is restricted to a very small number of high tech items. As shown below, for most other types of equipment substantial tax incentives have been created promoting the purchase of *domestic* equipment.

as well as various kinds of special-use tubes and pipes such as oil well tubes, high pressure boiler tubes, long-distance oil-pipeline tubes and certain high performance (heat resistant, cold resistant, high pressure resistant and corrosion resistant) stainless tubes.

The catalogue valid for FIEs, the “Guidance Catalogue for Foreign Industrial Investment” was created in 1997 and then passed through multiple rounds of adjustments. In this process the number of steel related items was reduced, too. The most recent edition was released in the year 2007 and holds no references to steel related production processes in the encouraged section. The previous version, promulgated in 2005, only named the production of directly reduced iron as encouraged.

**Chinese government authorities clearly favor DIES over FIEs. Two companies who are using identical production technologies to manufacture products that are exchangeable will have different access to preferential tax policies if one is a DIE and the other is an FIE. This constitutes a clear violation of the WTO principle of “national treatment” requesting domestic and foreign players to be treated equally under the law.**

Preferential tax arrangements are also employed in order to promote the utilization of domestically manufactured production equipment. As they clearly favor the use of domestic products over imported ones, these measures encourage import substitution. First launched in 1999, the domestic equipment promotion program also comes in two separate versions - one for DIES and another for FIEs. The latter group had no access to the program until an adjusted version for use by FIEs was issued in the year 2000. In both cases, the **regulations provide that companies investing in technology upgrading projects which are consistent with the state industrial policies can deduct 40 percent of the expenses for purchasing domestically produced equipments from the increment of income tax of that year compared to the previous year.** Should the total increment of income tax be less than forty percent of such expenses, relevant policies rule that the remaining part of the deductible expenses can be deducted from the next year’s increment of income tax. Such a postponement of deductibility is not to last for more than five years. The definition of “technology upgrading projects which are consistent with the state industrial policies” is based on the Catalogue for the Guidance of Industrial Structure Adjustment as far as DIES are concerned. For FIEs, the Guidance Catalogue for Foreign Industrial Investment constitutes the benchmark. **Most listed Chinese steel mills have benefited from these special tax privileges. In total 3,350 million Yuan RMB worth of tax breaks have been granted to China’s listed steelmakers. Among these, Ma’anshan Iron and Steel Co., Ltd. has been profiting the most with accumulated tax savings valued at 703 million Yuan RMB.**

**Table 6 Preferential Tax Arrangements Granted in the Context of Domestic Equipment Purchases as Reported in the Annual Reports of Chinese Steel Enterprises Listed at the Shanghai and Shenzhen Stock Exchanges, 2002-2007**

Company Name	2001	2002	2003	2004	2005	2006	2007	Total 2001-2007
Panzhuhua New Steel Vanadium Co., Ltd.	15,000,000	9,271,738	29,431,956		43,202,335			<b>96.906.029</b>
Tangshan Iron and Steel Co., Ltd.			75,000,000	117,109,200				<b>192.109.200</b>
Guangdong Shaogang Songshan Co., Ltd.			101,405,974	272,343,066	49,034,103		82,817,627	<b>505.600.770</b>
Bengang Steel Plates Co., Ltd.				100,000,000	52,860,516	179,535,508	160,989,100	<b>493.385.124</b>
Shanxi Taigang Stainless Steel Co., Ltd.	9,226,410		6,339,700	29,969,240	48,529,310			<b>94.064.660</b>
Angang Steel Co., Ltd.				37,126,000	24,154,000	163,000,000	17,000,000	<b>241.280.000</b>
Fujian Sansteel Minguang Co., Ltd.					26,060,167	19,301,597		<b>45.361.764</b>
Handan Iron and Steel Co., Ltd.					139,679,681			<b>139.679.681</b>
Wuhan Iron and Steel Co., Ltd.					239,516,695			<b>239.516.695</b>
Laiwu Iron and Steel Co., Ltd.				22,408,497	31,751,624		47,904,036	<b>102.064.157</b>
Xining Special Steel Co., Ltd.				3,533,883	8,553,852	3,008,223		<b>15.095.958</b>
Hangzhou Iron and Steel Co., Ltd.					22,000,000		5,246,840	<b>27.246.840</b>

Company Name	2001	2002	2003	2004	2005	2006	2007	Total 2001-2007
Lingyuan Iron and Steel Co., Ltd.	12,540,000	18,123,338	68,468,628	10,840,000		18,100,000		<b>128.071.966</b>
Nanjing Iron and Steel Co., Ltd.			25,143,544					<b>25.143.544</b>
Fushun Special Steel Co., Ltd.					1,812,839	40,408	3,308,111	<b>5.161.358</b>
Anyang Steel Co., Ltd.						120,223,217		<b>120.223.217</b>
Xinjiang Bayi Steel Co., Ltd.							36,298,468	<b>36.298.468</b>
Xinyu Steel Co., Ltd.				1,756,898	7,800,502	9,143,154	3,280,888	<b>21.981.442</b>
Ma'anshan Iron and Steel Co., Ltd.			238,421,000	110,333,000	19,914,000		334,379,142	<b>703.047.142</b>
Chongqing Iron and Steel Co., Ltd.					12,178,000	52,394,000	53,287,000	<b>117.859.000</b>
<b>Total all listed enterprises</b>	<b>36.766.410</b>	<b>27.395.076</b>	<b>544.210.802</b>	<b>705.419.784</b>	<b>727.047.624</b>	<b>564.746.107</b>	<b>744.511.212</b>	<b>3.350.097.015</b>

Finally, companies which are located in certain Economic Development Areas can take advantage of preferential tax treatment – and other government promotion (see “Case Study: Tax Benefits and Other Subsidies Available to Companies Located in Special Development Zones” for additional details). Guangdong Province for example has implemented special policies to grant far reaching exemptions for VAT and import tariffs on imported goods to companies based in special zones. In other words, investors are free to import the necessary machinery and equipment, spare parts, raw and semi-processed materials, means of transportation and other capital goods for their operation without having to pay value-added tax.<sup>90</sup>

Guangdong Province also offers generous tax rules for companies who re-invest their profits in various Special Economic Zones. Those enterprises can apply for reduction of or exemption from income tax on the reinvested portion. Another requirement: the investment needs to be for a period of more than 5 years.<sup>91</sup>

The City of Tianjin has introduced tax regulations which allow investors to shorten the regular depreciation period by up to 40 percent. But only enterprises located in the three urban areas of Tanggu, Hangu and Dagang as well as in seven functional areas within the Binhai New Area of Tianjin are qualified to benefit from this program.<sup>92</sup> A different type of tax incentives has been installed in the Taiyuan High Technology Industry Development Zone, as exemplified by Shanxi Taigang Stainless Steel Science and Technology Co., Ltd., a subsidiary of Taigang. Founded in the High Technology Industry Development Zone of Taiyuan the newly established company had been exempted from paying income tax from April 1, 2003 to December 31, 2004. After that time, the company has been taxed at a preferential rate of only 15 percent.<sup>93</sup>

**All tax benefits depicted here are clearly contingent on location inside a certain development zone and should be regarded as specific according to WTO rules.**

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<sup>90</sup> Canadian Border Services Agency, November 23, 2007, Statement of Reasons concerning the making of preliminary determinations of dumping and subsidizing of certain seamless carbon or alloy steel oil and gas well casing originating in or exported from the People's Republic of China, p. 35.

<sup>91</sup> Ibid, p. 37.

<sup>92</sup> Ibid, p. 56.

<sup>93</sup> Cf. Shanxi Taigang Stainless Steel Co., Ltd. 2003 Annual Report, pp. 47, 80; 2006 Annual Report, pp. 39, 58.

### **Box 3: Tax Benefits and Other Subsidies Available to Companies Located in Special Development Zones**

To promote investments and attract new companies to set up operations, the administrators of Economic Development Zones (EDZ's) and municipal governments have worked out preferential policies. These policies are comprehensive in nature as they may comprise tax privileges, access to loans at below market interest rates, the relaxation of administrative restrictions and other related measures. In all, preferential policies for companies located in EDZs help provide for a very attractive business environment. In its 2003 Annual Report, Guangzhou Steel for example highlights the positive effects of special policies in the Nansha Development Zone in Guangzhou.<sup>(a)</sup>

In the following, a number of examples for these preferential policies will be presented.

#### **1. Taihe Economic Development Zone**

Concrete accounts of the benefits available to companies in EDZs are contained in the Annual Report of Inner Mongolia Baotou Steel Union Co., Ltd. since one of the company's subsidiaries, East China Sales Co. located in the Taihe Economic Development Zone near Shanghai, is enjoying special advantages. Between 2005 and 2007, East China Sales Co. was granted "Government Support Funds" totaling 1.3 million Yuan RMB from the EDZ.<sup>(b)</sup> The subsequent annual reports explain that the annual transfers are based on the company's VAT payments. It can be argued that the VAT refunds provided by Taihe Zone are connected to the company's export performance.

#### **2. Ningbo Daxie Development Zone**

The Zijian Trading Co., Ltd., a subsidiary of Hangzhou Steel, is located in the Daxie Development Zone in Ningbo. According to information found in the holding company's annual reports, it becomes clear that subsidies were granted from the Development Zone's tax administration. Through its subsidiary in Ningbo, Hangzhou Steel has received at least two kinds of "Development Zone Subsidies": namely "Comprehensive Subsidies" and "Production-Business-Financial Subsidies". In all, the benefit conferred upon Hangzhou Steel amounts to 1.3 million Yuan RMB, split between 2005 and 2006.<sup>(c)</sup>

#### **3. Inner Mongolia Baotou Special Steel Industry Park**

The "Park" offers a wide spectrum of benefits to companies involved in precision processing of stainless steel. The main preferential regulations include.<sup>(d)</sup>

##### **a. Preferential corporate income tax rates**

Companies are taxed at a rate of 15 percent (instead of the regular 33 percent)

##### **b. Value-added tax refunds**

50 percent of the VAT payments destined for the local tax authorities are returned to the company during the first three years of operation. After this

period, prolonging the preferential treatment depends on the company's performance.

c. Waivers of various fees

Fees incurred in the process of registering the company and setting up operations can be waived after consultations with the proper authorities.

d. Preferential and guaranteed access to production inputs at discount prices

Companies enjoy preferential and guaranteed access to production inputs and raw materials provided by the local Huaye Special Steel Corp.

e. Preferential land allocation for production and development

New entrants are provided with favorable land allocation. The actual benefits depend on the size of investments, production technology, time frame and other factors.<sup>(e)</sup>

(a) Guangzhou Iron and Steel Co., Ltd. 2003 Annual Report, p. 13.

(b) Inner Mongolia Baotou Steel Union Co., Ltd. 2005 Annual Report, p. 58, 2006 Annual Report, p. 65 and 2007 Annual Report, p. 85.

(c) Hangzhou Iron and Steel Co., Ltd. 2005 Annual Report, p. 58 and 2006 Annual Report, p. 67.

(d) Preferential Policies for investments in the Inner Mongolia Baotou Special Steel Industry Park, 2008, January 14, Inner Mongolia Baotou Special Steel Industry Park, available online: [www.kunqubaotou.gov.cn/tgyq/NewsInfo.aspx?NewNum=200801140008](http://www.kunqubaotou.gov.cn/tgyq/NewsInfo.aspx?NewNum=200801140008).

(e) Preferential Policies for investments in the Inner Mongolia Baotou Special Steel Industry Park, 2008, January 14, Inner Mongolia Baotou Special Steel Industry Park, available online: <http://www.kunqubaotou.gov.cn/tgyq/NewsInfo.aspx?NewNum=200801140008>.

## **5.7 Discriminatory Action and Prohibition of Access on Domestic Factor and Input 'Markets'**

The Chinese government is not relying on positive incentive mechanism alone in order to promote the domestic steel industry's development. China is also resorting to drastic sanctions and discriminatory action against players who do not comply with policies and standards as outlined in the Iron and Steel Policy or complementary documents.

Such punitive action can mostly be observed in the context of efforts to wash out production capacities operating with outdated technologies, thereby featuring poor resource efficiency and significant environmental damage.

As recently as February 2008 the government of Shanxi Province has announced that it would enforce compliance with its campaign to shut down 10 million tons of technologically outdated, inefficient production capacities in the local steel industry by means of



differentiated power rates - discriminating against steel producers operating with outdated facilities.

If needed, further measures would include terminating the supply of water, electricity, and gas. In addition, transport and logistics companies would be banned from providing services and banks stopped from providing loan facilities. As a means of last resort, the provincial government reserves it the right to revoke business licenses. Given the fact that the measures outlined would suffice to force enterprises to stop their operations the latter threat of revoking business licenses can only be understood as a measure designed to counter evasive action of enterprises protected by local (district, city level) government organizations.

However, policies designed to 'punish' non-compliance have been much less effective than policies trying to reward compliance. Many enterprises have been and obviously still are able to retreat under the protective umbrella of local governments, thereby evading the full consequences of the 'punishment' and rendering this policy instrument into a rather blunt weapon.

#### **Case Study: The NDRC's Struggle to Wash-out Production Capacities**

In its drive to promote industrial consolidation and spur technological upgrading of the steel industry as a whole, the Chinese central government has for several years already been pushing for the elimination of obsolete capacities. Since the problem of overcapacities began to surface, calls have become louder and measures followed where words had failed to bring about the desired effect. Technical minimum requirements for planned, new production facilities like furnaces and converters were first imposed in 2003 and later adjusted within the framework of the ISIDP. While the latter urged companies to upgrade their facilities in order to reach the standards set for new entrants, this was not mandatory and companies were free to adjust on a voluntary basis. One year after the ISIDP was released, the crisis caused by technologically outdated overcapacities was weighing heavy on the Chinese steel sector. As a consequence, in late June 2006, the NDRC issued the first set of technological minimum requirements for production facilities in operation. It ordered that all blast furnaces of less than 200 m<sup>3</sup> as well as all converters and electric arc furnaces of less than 20 tons had to be shut down until the end of 2007. Blast furnaces with volumes of less than 300 m<sup>3</sup> were allowed to operate until 2010.

The document stipulated that local governments must force steel projects which cannot meet these benchmarks to quit. In the event that companies did not comply with closure orders, the NDRC warned that any violation would be investigated and responsible people or agencies would be severely punished. However, the NDRC did try to sweeten the pie for mills which dropped out of business. These companies were entitled to preferential terms in land use and loan lending, as long as they shifted to industries that were in line with industrial policies. Through phasing out small, inefficient and outdated facilities, the NDRC initially hoped to reduce iron smelting capacities by 100 million tons and steel smelting capacities by 55 million tons by 2010. However, it was not meant to be:

- The incentives offered were not strong enough to persuade companies to close down. Shortly after the NDRC Circular was promulgated, domestic steel prices rose significantly and even inefficient, outmoded mills were suddenly in a position to reap good profits. As a consequence, even mills that had already been closed were re-started.
- Many mills could count on the support of local government agencies. As outlined in section 3, local politico-business cartels on the local level proved surprisingly effective in resisting the central government's calls for capacity elimination.<sup>(a)</sup>
- Small mills which could cash in on rising steel prices and/or could rely on government support were all of a sudden able to modernize and expand their facilities in order to avoid closure.

Soon it became clear, that the capacity elimination program did not work out as planned. Elimination targets for 2006 were missed and the deadline to phase out small converters got extended until 2010. After these initial setbacks, the NDRC tried a different approach. In late April 2007, it signed commitments with 10 major steel producing provinces and municipalities, requiring them to shut down and eliminate<sup>(b)</sup> obsolete iron smelting capacities of 22.6 million tons and outdated steel smelting capacities of 8.7 million tons until the end of 2007. The provincial representatives also pledged to phase out and destroy iron smelting capacities of 39.9 million tons and steel smelting capacities of 41.7 million tons during the next five years. In December 2007, the NDRC signed a second round of commitments for capacity elimination with another 18 provinces and municipalities as well as with Baosteel. During this second round, representatives promised to wash out a combined total of 49.3 million tons of iron smelting capacity and 36.1 million tons of steel smelting capacities until 2010.<sup>(c)</sup>

Against the backdrop of these latest policy initiatives, since 2007, it has become a common practice for steel mills to demolish smaller and older productive assets in exchange for government approval of new facilities. According to press reports, Chongqing Steel, for example has bought 12 smaller local steel mills which were operating outdated capacities and were therefore marked down for elimination. The plants were mostly focused on long products and had a combined output capacity of 3.95 million tons per year. Chongqing Steel planned to construct a new mill with a capacity of exactly 3.95 million tons per year once the old facilities had been dismantled.<sup>(d)</sup> Another example is Ma'anshan Steel which reportedly agreed to close 5 small blast furnaces with a total annual capacity of 3.1 million tons as soon as 2 new blast furnaces with annual capacities of 3 million tons each become operational.<sup>(e)</sup>

In late March 2008, Baosteel has finally received government approval for realizing a large-scale greenfield project planned in Zhanjiang, Guangdong Province. According to Baosteel's plans, the new plant will boast state-of-the-art production technology and have an annual capacity of 10 million tons. Like other steelmakers, Baosteel needed to eliminate

obsolete capacities to compensate for the planned expansion in order to get approval. But because Baosteel had already upgraded or demolished most of its own obsolete facilities, the company chose to cooperate with two smaller mills in Guangdong Province.

SBB reported that:

*“Baosteel first proposed building its Zhanjiang plant in 2004. But when it received no response it recruited Guangdong’s Shaoguan Steel (Shaogang) and Guangzhou Steel (Guanggang) and in July 2006 reapplied. Baosteel proposed helping to accelerate steel industry consolidation by linking up with the two smaller mills and scrapping much of their outdated facilities that the Zhanjiang complex would replace.”<sup>(f)</sup>*

Also in March 2008, Wuhan Steel has received official approval for building a large-sized integrated steel plant. The new facility will be located in Fangchenggang port in the Guangxi Zhuang Autonomous Region. In the first development stage, Wuhan Steel targets an annual crude steel output of 10 million tons. But the company has already planned further expansion stages that would ramp up annual output to reach 30 million tons.<sup>(g)</sup> Similar to Baosteel, Wuhan Steel has also invested heavily to improve its technology level in recent years and now belongs to the vanguard of the Chinese steel industry. Consequently, there were not enough obsolete capacities left for demolition within the company itself. Teaming up with Liuzhou Steel, a smaller steel mill in Guangxi Zhuang Autonomous Region made sense, as it provided the opportunity to destroy additional capacities.<sup>(h)</sup>

As these very recent examples indicate, capacity elimination does not mean that total capacity levels are being brought down. Using the term “capacity elimination” at first glance gives the impression that there is a “capacity reduction” taking place in China today. This is highly misleading, as “capacity substitution” would certainly be a more suitable designation. As outlined above, “capacity elimination” as practiced in China presently can take two different forms:

- small-sized, outdated and inefficient facilities are being selectively destroyed. In many cases this has serious negative consequences for the local population, the local economy and the local governments.
- large-scale integrated steel conglomerates buy small mills to destroy their outdated facilities in order to realize their own massive capacity expansion projects.

While of course, the second option is more desirable for local stakeholders the implications for the international steel industry are twofold:

1. The reality that hundreds of small steel companies around China are forced out of business because they were using outdated production equipment has little relevance for OECD steelmakers. This is due to the fact that these companies were largely lim-

ited in their abilities to making low-quality and low-value added steel products and therefore did not compete with large international steel mills nor did they compete in the international marketplace.

2. The fact that large-scale integrated steel conglomerates – most of which are state owned – are ramping up their production capacities does matter. The facilities that are currently being created as replacements for outdated capacities boast advanced production equipment and state-of-the art technologies. More importantly, it should not be assumed that the newly build production capacities are a short-term phenomenon. Since leading state-owned mills are pouring huge sums into these projects, it appears unlikely that these will be “eliminated” anytime soon. They are larger than anything Chinese steelmakers ever had in the past and they are here to stay.

Notes:

(a) Local governments are often stressing the social implications of plant closures. Given that obsolete capacities are concentrated in few areas, the economic and social implications of such a benchmark directed capacity wash out are certainly serious. According to reports, nearly half of the iron smelting capacities and about one quarter of steel smelting capacities of Hebei Province, China’s largest steel producing area, are threatened by closure.

(b) NDRC has demanded that obsolete production facilities are not only shut down, but also completely demolished. So as to ensure that they will not be able to go back online once the market situation allows for profitable operation.

(c) Mysteel, December 28, 2007, Second Round of Written Commitments for Obsolete Steel Capacity Elimination Signed.

(d) SBB, January 21, 2008.

(e) SBB, December 6, 2007

(f) SBB, March 21, 2008

(g) SBB, March 20, 2008

(h) However, this should not imply that Liuzhou Steel does not possess any other relevant properties or assets.

## 1.17 Interventions on the Global Markets Interface

The Chinese government is dedicating substantial resources to the monitoring and micro-management of China’s steel industry’s interaction with the global markets.

**On the one hand, these interventions cover import and export transactions in the fields of relevant raw materials as well as steel products.**

**On the other hand, they target inward as well as outward directed foreign investment activities involving the steel and raw material sectors.**

Given the present turbulences in the global credit and money markets, this report refrains from estimating the ‘correct value’ of the Chinese currency and discussing any advantages Chinese exporters may derive from an undervalued RMB. It should, however, be noted that

we are of the opinion that due to the substantial productivity increases in the Chinese economy in the recent years – especially in relation to the North American and European economies – a revaluation of the RMB against the US dollar and even more so against the Euro is overdue. To which extent such a revaluation of the RMB would reduce the export competitiveness of Chinese steel exporters would eventually depend on the share of foreign exchange denominated imports of goods and services (e.g. iron ore, shipping) and domestic value added in the final exported product.

#### **1.17.1        *Initiatives Targeting the Import of Raw Materials***

China's steelmakers have become increasingly dependent on the import of raw materials like iron ore, zinc, etc. and have faced dramatic price increases for these raw materials as well as corresponding shipping costs. In order to ease the pressure of escalating cost increases, the Chinese government and CISA in particular launched a whole range of initiatives designed to create a Chinese buyers cartel and increase the negotiation power of Chinese enterprises vis-à-vis international iron ore miners and shipping lines.

In a first move CISA has been entrusted in 2005 to participate in the delineation of a catalogue of requirements Chinese enterprises would have to meet in order to qualify as iron ore importers and determine those enterprises that fail to meet these criteria and are to be prohibited from engaging in iron ore import transactions. Since then, the number of originally more than 500 importers has been greatly reduced. In 2007, eventually, the Chinese iron ore import cartel consisted of no more than 90 members.

Against the backdrop of continued price increases, in 2007 CISA has brought forward the idea of dividing China and its steel enterprises into several purchasing areas, each of which would designate a company in charge of negotiating raw material as well as shipping prices for all steel enterprises in its region. According to the CISA plan, Shougang would head a group of steel mills located in Hebei Province, Anshan Steel would represent steel mills from Liaoning Province while other purchasing areas would group around principals in Shandong and Shanxi Provinces, Central China, Southwest China as well as Eastern China.

Based on this initiative, Nanjing Iron & Steel Group (the same which eventually took over the aborted Jiangsu Tieben project) has been reported to try to organize a purchasing alliance among several 5 million ton capacity mills in Southeastern China.

**While the idea of pooling demand in order to increase negotiation power vis-à-vis suppliers is a strategy that is not in conflict with regular market behavior, what is striking in the Chinese case is the state-led organization of such an import cartel on the one hand, and the obvious neglect of the competitive juxtaposition of steel mills in the specific regions on the other hand. Given a normal market framework and**

intensive competition as should be expected in a sector featuring massive overcapacities, the question arises if individual companies would not rather try to 'go alone' and derive competitive advantages from better import prices than their local contenders? Especially the larger corporations designated to conduct the negotiations for the whole group could be expected to profit from separated negotiations. Given their size and corresponding import demand these companies could be expected to negotiate better prices than their local contenders and therefore come into a position to improve their competitive positioning vis-à-vis the latter – up to a stage where they could drive these underperforming companies out of the market and thereby contribute to a much needed consolidation of the industry as a whole.

### **1.17.2      *Export-Promotion for Selected Products***

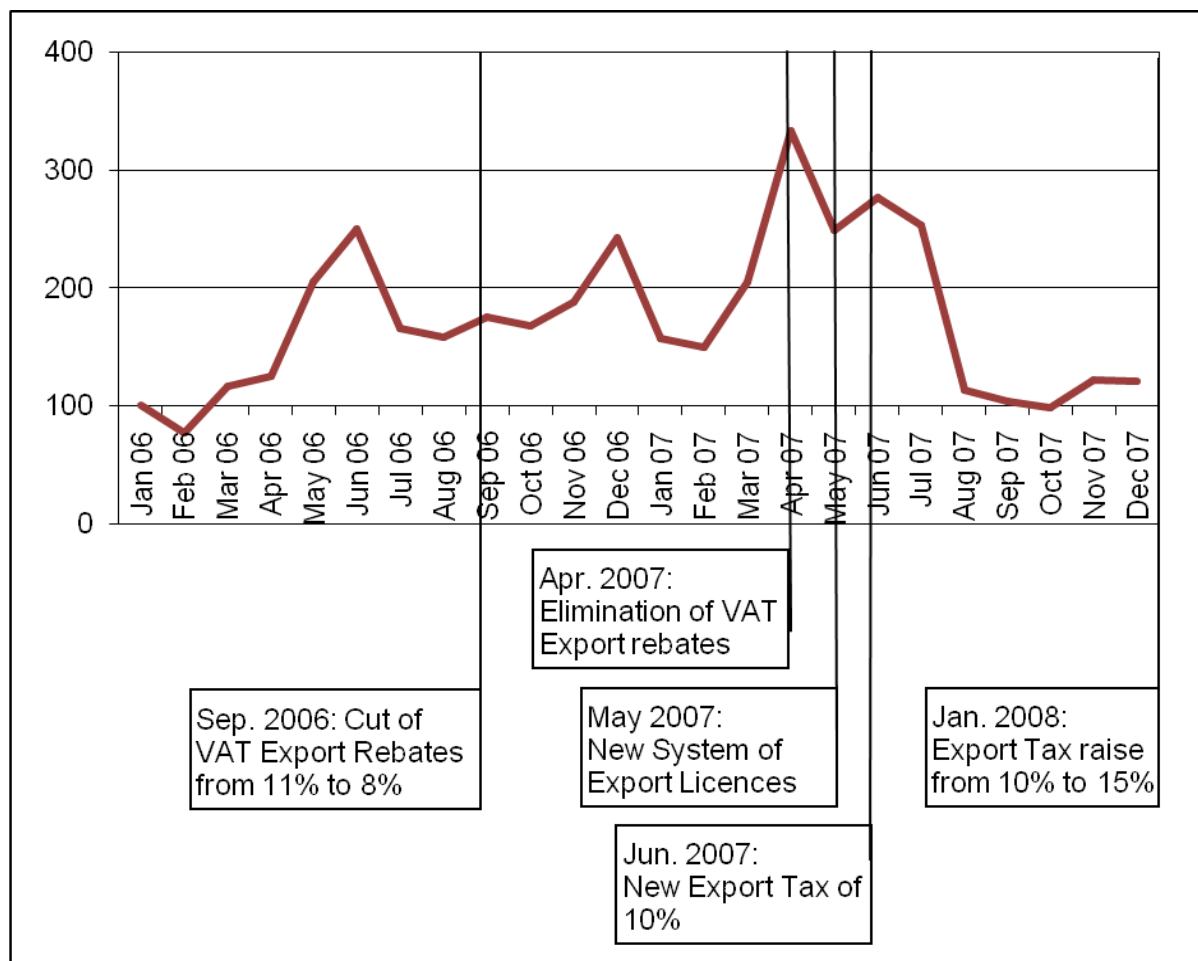
Policy initiatives in the field of export promotion are not covered in the Iron and Steel Policy. This probably not the least because at the time of the drafting of the policy, the idea that Chinese steel producers would be in a position to provide steel products to the global markets still seemed to be quite farfetched.

Nonetheless, China's leading steel conglomerates are benefiting from a broad array of promotional measures. **The Chinese government is promoting export activities by domestic steel producers on a highly selective basis, targeting high value-added, technology intensive products as the vanguard of China's steel exports. Specific measures include first of all an intricate set of cascading value added tax (VAT) rebates that provides for a discretionary steering of export activities.** These VAT export rebates may be coupled with income tax reductions if exports surpass 50 percent of a company's total sales volume. Further measures comprise preferential export credits and guarantee schemes provided by the China Export Import Bank (China Eximbank) and other state-owned financial institutions.

**By determining the amount (and also the timing: instantly or with a delay) of VAT returned to exporters of specific goods, i.e. the full 17 percent or as little as none at all, the Chinese government can steer the profit level of its domestic exporters and thereby increase or decrease their incentives to export.** Anecdotal evidence suggests that in some cases tax refunds had exceeded the initial tax payments made by the companies. Thus, some part of the so called VAT rebates had in fact been direct grants. The VAT rebate system is a highly flexible instrument. If deemed necessary, e.g. due to domestic market conditions or increasing trade frictions, VAT rebates can be reduced by short notice in order to reduce export incentives. Through carefully adjusting VAT rebates and export duties, the NDRC is also capable of influencing the composition of Chinese steel exports and pushing companies to shift their export portfolio towards more high value-added, technology intensive products.

Figures 29 and 30 depict the power of this instrument to promote export activities – and depress export transactions in the same manner when taken back – for high value-added as well as low value added products.

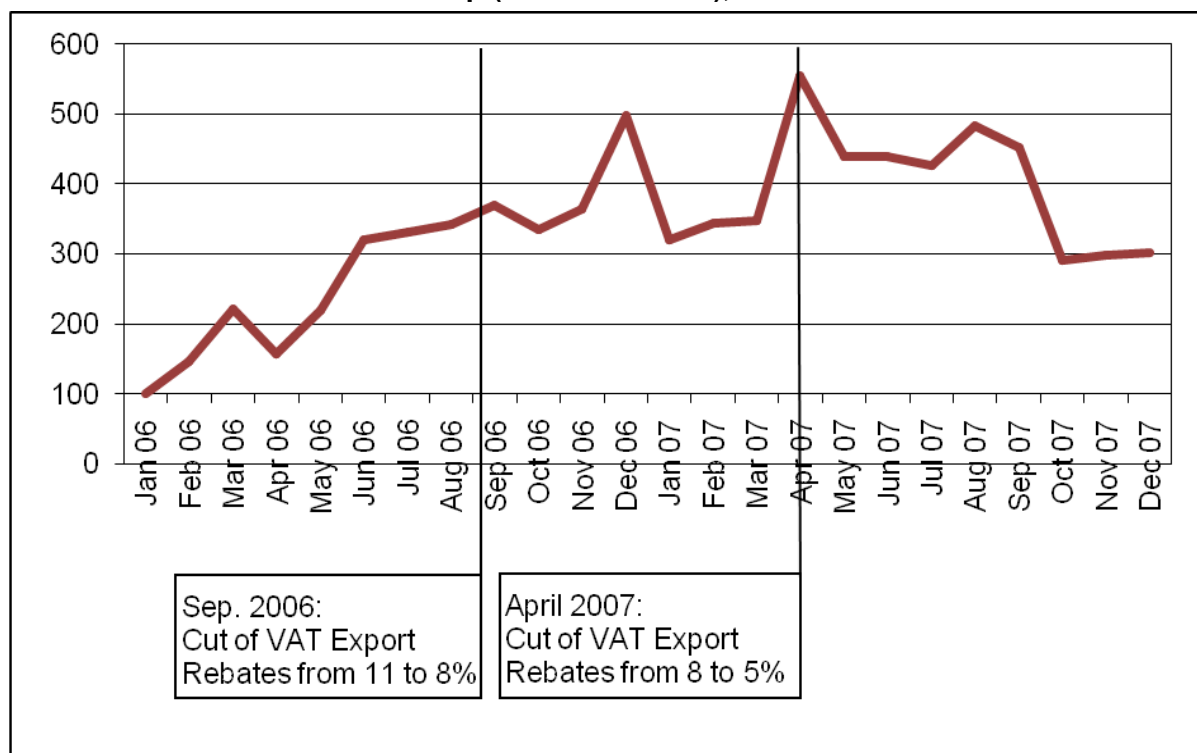
**Figure 27: Chinese Monthly Exports of Low Value-added Steel Products: Wire Rod**  
Jan 2006 = 100



Data: NDRC.

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**Figure 28: Chinese Monthly Exports of High Value-added Steel Products: Metallic Coated Sheet and Strip (width > 600mm), Jan 2006 = 100**



Data: NDRC.

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Beside fiscal measures to influence and promote export activities, directed bank lending also plays an important role. Some state-owned banks who have become shareholders of Chinese steelmakers through debt-to-equity swaps in the past, also have a strong interest in supporting the steel industry conquering international markets.

China Eximbank has been created “a state policy bank under the direct leadership of the State Council” with the mandate “to implement the state policies in industry, foreign trade and economy and finance to provide policy financial support so as to promote exports [... and to] support Chinese companies with competitive advantages to ‘go global’ for offshore construction contracts and overseas investment projects.”<sup>94</sup> In 2004, for example, the Import-Export Bank signed a “Cooperation Agreement of Export Credit Loans to Support International Business” with Baosteel, pledging 10 billion Yuan RMB in export credit loans with low interest rates and long-term maturity to help the enterprise develop internationalized business.<sup>95</sup> Guangdong Shaogang Songshan Co., Ltd. in 2005 received interest discounts worth 576,389 Yuan RMB as a gratification for its successful export activities.<sup>96</sup>

<sup>94</sup> The Export Import Bank of China, Introduction <http://english.eximbank.gov.cn/profile/introduction.jsp>.

<sup>95</sup> Guoji Jinrong Bao, September 10, 2004, China Import-Export Bank's 10 Billion Yuan Credit Loans to Help the Baogang Group "Walking Out," .

<sup>96</sup> Cf. Guangdong Shaogang Songshan Co., Ltd. 2005 Annual Report, p. 57.



In general, it has to be highlighted, that products benefiting from high VAT export rebates, and other promotional measures in China attract an over-proportional amount of capacity increasing investment. By instrumentalizing the national VAT and other systems in such a highly discretionary manner, the Chinese government is distorting the inter-sectoral market structure as well as China's export composition. As such, it is directly intervening in the 'natural' domestic as well as international market development.

### **1.17.3        *Discretionary Restrictions of Exports of Raw Materials, Semi-Finished Goods and Products in the First Stage of Processing***

It appears that measures undertaken by Chinese government authorities to actively discourage the export of raw materials (like coke), semi-finished products (e.g. billet, slab) and products in the first stages of processing (e.g. hot rolled sheet / coils) are aimed at bottling up vital input for steelmaking inside the Chinese market. The increase in domestic supply depresses prices for Chinese steel producers. At the same time, cutting down the export volume reduces the supply of these resources on international markets and thus functions to keep world market prices (and costs of international steel producers) artificially high.

The perhaps most prominent example of China's export restrictions in the field of raw materials and semi-finished goods pertains to **coke**. Not only does China maintain a strict export quota for coke, the government has also undertaken further steps to discourage exports. According to statements by government officials, the restrictions serve to limit the export of goods that are characterized by production processes which either consume large amounts of energy or cause environmental damage. These objectives may be well in line with public interest in a country that suffers from energy shortages and heavily relies on burning coal for electricity generation and heating such as China. But the whole extent of the trade measures surrounding coke exports suggests that there are other goals involved as well, notably the creation of a significant price differential for domestic and international consumers of coke.

As early as December 2006, the Chinese government has imposed a 5 percent export tax on coke. This tax was raised to 15 percent in June 2007 and then raised again in January 2008 to the current level of 25 percent. Addressing the most recent adjustment, the government argues that a rebound in exports had taken place in the second half of 2007 while the tax rate was still fixed at 15 percent so that a further upward adjustment was warranted. Considering, that the export quota had already capped outflows at 14 million tons per year and that this amount represented a share of less than 5 percent of total output, the official argument is hard to follow.

In addition, there is a licensing scheme which allows the authorities to handpick companies who are allowed to engage in coke exports. The application requirements for obtaining an

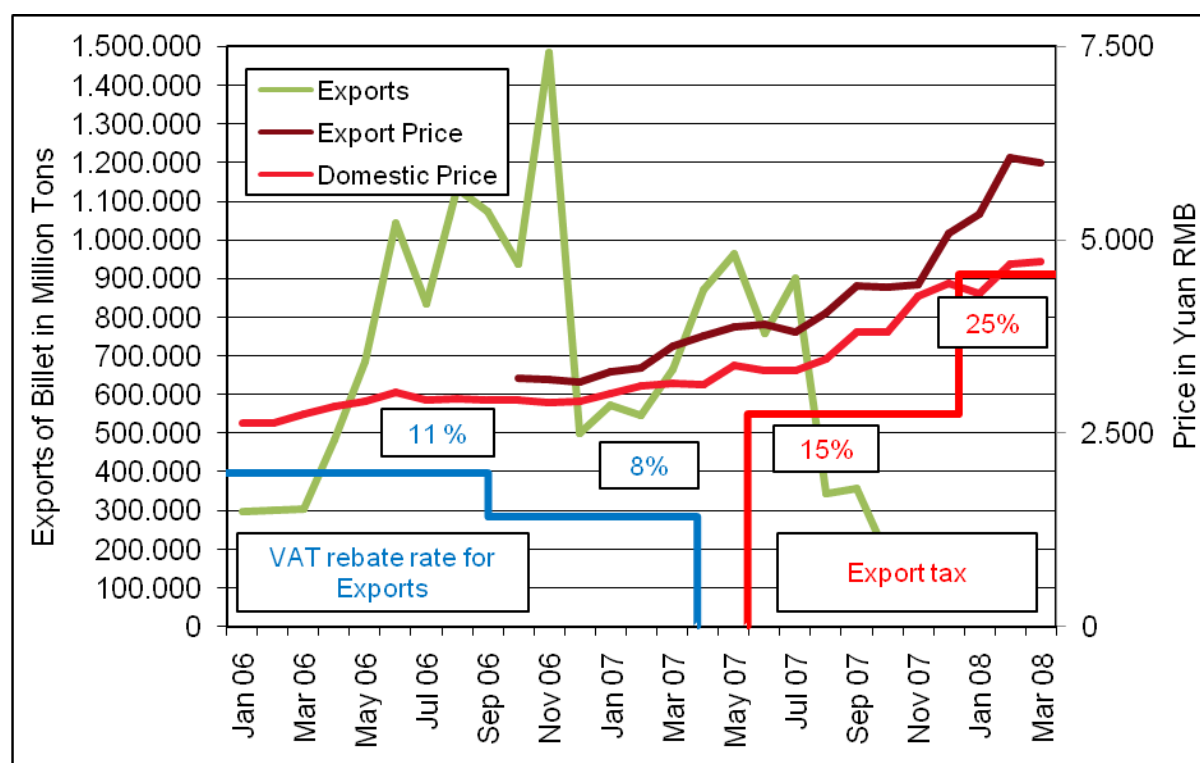
export license in 2008 are high and stipulate that producers should have recorded at least 250,000 tons of coke exports in 2006 or an average of 200,000 tons over the three year period 2004-2006. On top of this, the Commerce Department of Shanxi Province has put forth additional qualifications, i.e. passing the ISO 9000 certification. The thresholds are set exceptionally high in order to ban the majority of players in China's highly fragmented coke market from engaging in export trade. In early 2008, the Ministry of Commerce announced that only 55 enterprises will be eligible for exporting coke.

The 2007 National Trade Estimate Report on Foreign Trade Barriers compiled by the United States Trade Representative outlines as follows: In 2004, China's export restrictions on coke began to have a significant, adverse effect on U.S. integrated steel producers and their customers, as China's increasingly restrictive export restrictions pushed the export price of Chinese coke to the vicinity of \$500 per metric ton, more than three times the price of 2003. After a series of meetings in which the United States urged China to eliminate the practice of using export restrictions, not just for coke but also for other products, China raised the 2004 quota allotment for coke to 12.3 million metric tons, and it indicated that it would eventually raise the quota to the 2003 level of 14.3 million metric tons.

In May 2005 the NDRC announced the cancellation of the coke export quota system as of January 1, 2006. But it was not meant to be. The decision was revised and the quota system stayed in place although with a raised quota of 14 million metric tons for 2006. Until today, the export quota keeps international coke prices high and ensures that coke prices in China remain below world market level. By the time of writing, the export quota system was still in force and there had been no indication of when it might be eliminated.

Semi-finished products like **billet** and **slab** are also subject to export restrictions. Using the same line of argumentation as with coke, the Chinese government has step by step removed VAT rebates contingent on exports and replaced them with an export tax that was already raised several times. In less than 18 months, trade policies have shifted substantially which led to the now familiar effect: a sharp drop in export quantities and a domestic price level which is lower than it should be under normal circumstances. Limiting the outflows of billet and slab means that downstream production processes can benefit from cheaper access to an important input. Though large integrated steel mills usually don't purchase billet from the market but rely on the output of their own converters instead, many rolling mills that do not possess their own steel smelting capacities are depended on the market availability of this semi-finished product. Thus, reduced price levels will eventually show a positive effect on the steel rolling and processing business.

**Figure 29: Discretionary Export Policies, Export Volumes and Price Movements for Billet**



Data: Steel Business Briefing.

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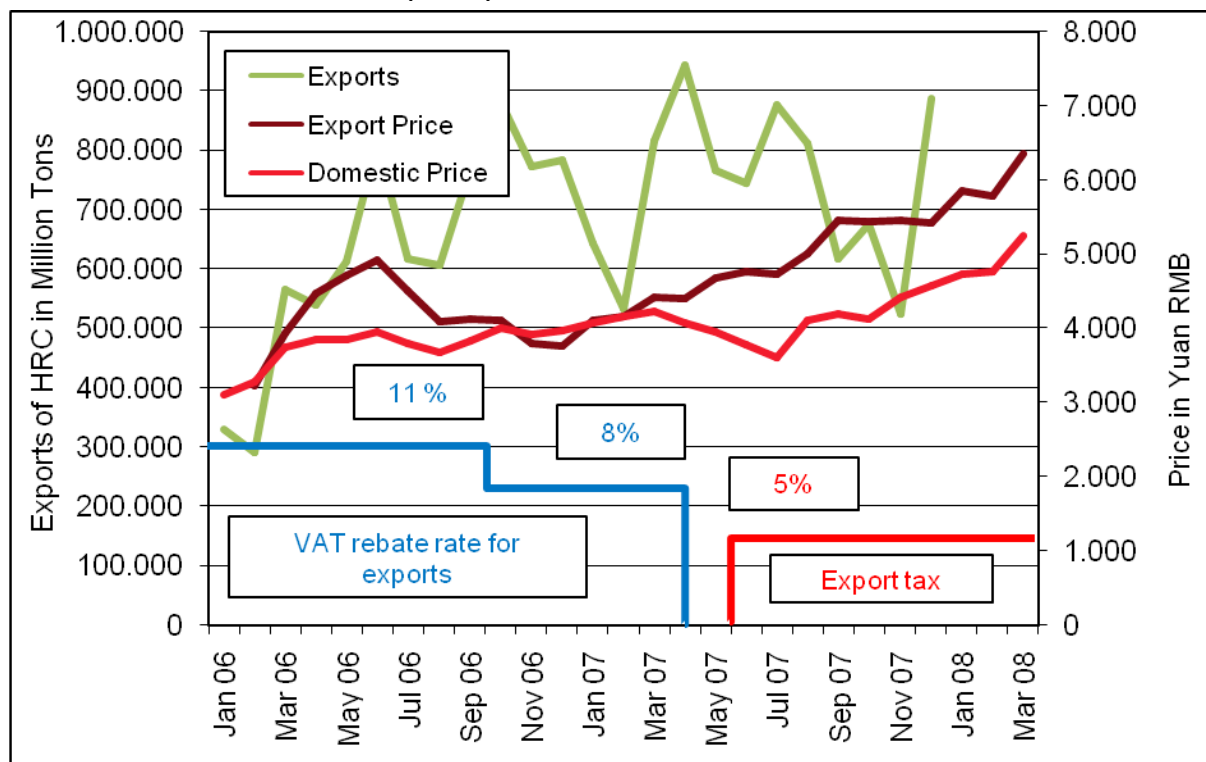
A similar development strategy as in the cases of coke and billet can also be observed with respect to **hot rolled sheet** (HR sheet). HR sheet is a basic steel product which is commonly used as input for making more sophisticated goods. For rolling mills which produce cold rolled sheet (CR sheet), hot-dip galvanized sheet (HDG sheet), welded tubes and many other goods, HR sheet is the single most important input – both in technical and in financial terms. In other words, the cost of making or buying HR sheet usually determines the mills' profitability.

In its 2007 Hot Rolled Sheet Reinvestigation Memorandum, the Canadian Border Services Agency (CBSA) comes to the conclusion, that domestic HR sheet prices in China are largely determined by the government and are not substantially the same as they would be if determined by a competitive market environment. The document cites various news clips and reports that point out the strong government intervention in the Chinese steel industry.

In the run of the last two years, the Chinese government has step-by-step imposed new regulations to discourage the exportation of HR sheet. After having been reduced from 11 percent to 8 percent the VAT rebate for exports was abolished in April 2007. This was followed by the introduction of an export duty of 5 percent starting from June 2007. Government officials have explained that through imposing these measures, they wanted to better control production and exports, prevent more trade disputes, phase out inefficient capacities, cut down energy consumption and protect the environment. In combination,

however, these two actions have made international sales less profitable and have effectively reduced the outflow of HR sheet (cf. figure 32).<sup>97</sup> The increased supply in the domestic market naturally has had a price depressing effect. This effect, however, has only been able to slow down the upward movement of the general price level, as rising raw materials prices have proven to exert an overriding impact.

**Figure 30: Discretionary Export Policies, Export Volumes and Price Movements for Hot Rolled Sheet (Coils)**



Data: Steel Business Briefing.

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Because exports restrictions were limited to HR sheet and did not target downstream products like CR sheet or HDG sheet in the same way, we can establish the fact that there has been a manipulation of input prices for the production of higher value-added goods. So far, no export duties have been levied on the export of high grade CR sheet and HDG sheet. Instead, steel mills are still entitled to receive a VAT rebate of 5 percent on exports of these goods. Through this highly selective application of trade restrictions and trade incentives, the government is subsidizing the production and export of high value-added steel products. By artificially depressing the domestic price of the most important input resource, HR sheet, and, simultaneously offering export incentives for

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According to a public statement by a spokesman of Wuhan Iron & Steel Corp. the company will export 100,000 tons of HRC less in 2008 than in 2007 (HRC exports in that year amounted to about 600,000 tons) as the 5 percent export tax is reducing the profitability of such exports.

finished products, the authorities are effectively stimulating outflows of high value-added, high-tech steel goods like CR or HDG.

#### **1.17.4 Inward Foreign Direct Investment Guidance**

**With respect to the treatment of foreign investors, the Chinese government is following a two-pronged strategy, trying to strike a balance between the need to attract investors in order to get access to superior foreign technology, management skills and business models on the one hand, and the fear of a sell out of national assets and foreign domination of the domestic steel industry – which is defined as a strategic pillar industry – on the other hand.**

The Catalogue for the Guidance of Foreign Investment, which is updated at irregular intervals, and provides for encouragement as well as restrictions for foreign investors depending on parameters like product category, technology content, export orientation, etc. has been of specific importance for guiding foreign investment in China's steel industry especially in its 1997 edition.<sup>98</sup> Since then, the Catalogue has lost in importance for the steel industry and has been replaced by specific local regulations as well as the Iron and Steel Industry Development Policy (ISIDP) published in July 2005 (see section 4.2).

With respect to the intention to attract technologically advanced investment projects, the Iron and Steel Policy provides detailed information on technologies China wishes to attract and which are rather discouraged. In addition, the Iron and Steel Policy (article 23) makes clear, that only experienced enterprises with a considerable track record of successful business operations will be allowed to invest in China. In order to become eligible to apply for approval of an investment project in China foreign investors must:

*“possess iron and steel technology with independent intellectual property rights and should have produced at least 10 million tons of carbon steel or at least 1 million tons of high-alloyed special steel in the previous year.”*

**With these entrance requirements, the Chinese government openly discriminates against foreign investors who face tougher requirements than domestic investors.** Domestic investors who plan investment projects in the fields of iron making, steel making or steel rolling need to fund 40 percent of the total equity by themselves, meet all requirements laid out in various laws and regulations on environmental protection, ecology and production security, possess financial strength, advanced technological and managerial know-how and command a complete sales network. If a Chinese steel company wants to expand across administrative regions inside China, it also needs to prove that it had owned capacities for smelting 5 million tons of carbon steel or 500,000 tons of special steel in the previous year.

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<sup>98</sup> The latest edition of the catalogue in place since the December 1, 2007 does not contain any specific references to steel industry relevant investment fields.

In any case, domestic investors are not required to possess their own technology. Moreover, for a foreign company, capacity thresholds are twice as high as for domestic companies.

**At the same that China is courting (and sometimes prodding) foreign investors to transfer their latest technology to China and make it available to the local steel industry, China rejects the request of foreign investors to conduct 100 percent wholly foreign owned greenfield investment or to acquire majority or controlling stakes in Chinese steel enterprises. As such foreign investors are forced to forge joint ventures with Chinese partners if they wish to enter the Chinese market. According to ISIDP article 23:**

***“In principle, foreign investors that make investment in China’s iron and steel industry are not allowed to have a controlling share status.”***

All foreign investment activities (greenfield as well as M&A transactions) must be approved by the NDRC, which (according to CISA statements) in the approval process consults CISA and the leading (local) steel enterprises. The term “in principle” in the ISIDP paragraph allows for exceptions. Leading representatives of CISA, including executive vice president Luo Bingsheng, however, have made it crystal clear that they do not intend to grant foreign investors a dominant role in individual steel joint ventures (except for very specific reasons in peripheral business fields) and least of all in the Chinese steel industry as a whole. Efforts by foreign steelmakers to acquire stakes in Chinese mills have mostly been thwarted by government intervention. In 2005, Mittal acquired a 37.17 percent ownership stake in Hunan Valin Steel Tube & Wire Co. But the stake was later reduced to prevent Mittal from being the largest shareholder. In 2006, Arcelor signed a contract with Laiwu Steel to buy a 38.41 percent stake in its listed subsidiary, Laiwu Iron and Steel Co. Ltd. for a price of 2.085 billion Yuan.

No matter what the motivation for these restrictions may be, by restricting the role foreign investors can play in the development of China’s steel industry, the government is meddling with the market-based allocation of capital and productive resources. Competitive processes are inhibited and comparatively unproductive domestic players unduly promoted.

#### **1.17.5      *Promotion of Outward Foreign Direct Investment***

The Chinese authorities attribute great importance to developing global raw material sourcing activities of its steelmakers – especially those located in coastal areas. Specifically, it encourages enterprises to invest in mining and refining iron ore and other minerals in various forms of international ventures. CISA has been very adamant in its calls for greater overseas investments of China’s steel conglomerates, urging them to increase the share of directly controlled overseas iron ore resources to one third and eventually 60 percent of Chinese import demand. For the time being, Chinese companies control less than 20 percent of China’s total import tonnage by means of overseas direct investment stakes.

On the background of China's Going Global Strategy, as outlined in the Tenth and Eleventh Five Year Programs as well as the Iron and Steel Development Policy, the central government is providing support in the form of market information, preferential foreign currency denominated loan facilities and easing restrictions on international capital transfers. According to the Ministry of Commerce, for example, Jiangsu Shagang in 2005 received a subsidy of 1.3477 million Yuan RMB for its iron ore project in Australia making the company the largest recipient of such funds in Jiangsu Province in that year. The money was paid out to the Zhangjiagang City based parent company via the local finance and budget offices.

A specific feature of government support constitute "FDI plus official development assistance (ODA)" packages which provide for a complementary set of business investments and infrastructure development. Such activities have in recent years been observed with increasing frequency in Latin America and Africa. With respect to steel industry interests Mauritania as well as Brazil have come into the focus of this new approach. In Brazil, for example, the Chinese government is complementing Baosteel's investments in local iron ore deposits with multi-billion US Dollar investments in the Brazilian railway and port infrastructure. In order to promote the shipment of Brazilian iron ore to China, the Chinese government is even intending to finance a railway track to the Chilean harbor city Mejillones. Shipment from Mejillones, which is able to handle Capesize ships, would cut sea voyage time for Brazilian iron ore by at least 10 days.

#### **1.18 Inappropriate Internalization of Costs Categories**

The Chinese steel industry is not only profiting from preferential tax and lending arrangements, direct and indirect subsidies etc. but also from an inadequate internalization of important cost parameters into the business calculations of its enterprises. As such, **the rise of the Chinese steel industry builds to a substantial degree on a disregard for internationally accepted standards in the areas of workers' safety and health as well as environmental sustainability. If China's steel enterprises – on a national level – would be obliged to invest in the same standards as for example steel enterprises in the OECD countries, their balance sheets would look quite different from today and especially the determination of sales prices covering the true costs of production would result in a drastic reduction of these enterprises' price competitiveness.**

And that the dramatic lack of environmental and overall (workers') safety standards in China's iron & steel industry are of global concern (not only in terms of trade issues) has only recently become obvious, when Italian police seized 30 tons of Chinese made steel that had been contaminated with radioactive cobalt-60 thereby seriously endangering the health of workers and people coming into contact with the material. The steel had been shipped by the Taiyuan Iron & Steel (Group) Co. Ltd. (TISCO), one of China's leading steel conglomerates.

### **1.18.1      *Labor Rights and Work Safety Standards***

While Chinese leaders are tirelessly stressing the importance of a harmonic society and steer the country on a course toward a socialist market economy – albeit with Chinese characteristics – the protection of worker rights seems light years away from OECD levels. As a consequence, Chinese enterprises, including those in the iron and steel industry, are spending little for the provision of social security funds, health schemes and labor safety compared to enterprises located in OECD countries. Furthermore, as Chinese workers are denied the right to strike or establish independent labor unions outside the confines of the All-China Federation of Trade Unions (ACFTU),<sup>99</sup> wages are depressed and do not approach levels deemed appropriate in economies highlighting the principle of conferring equal negotiation powers to employers and employees.

Although workers are denied the right to strike, wage arrears, failure to establish mandatory social security funds, poor work safety standards, lay-offs without compensation payments etc. have in the past led to worker protests, which have been dissolved with the ‘full force of the law’. In October 2005, police ended a two-month series of worker protests at a steel plant in Chongqing Municipality, which had denied any severance payments for laid-off workers. Reports indicate that a police crackdown had left two women protesters dead on the scene with 24 other people being injured.

According to an academic abstract featured on the Radiation, Science and Health Organization website, cancer is the leading cause of death for Anshan Iron and Steel workers, who suffer a death rate significantly higher than that of the local population as well as the population of other cities. Obviously the company’s investments in the health standards of its operations have lagged behind international benchmarks for too long.

Though formalized labor rights in China are weak and below accepted international standards, that does not stop companies from breaking existing regulations and feature even worse working conditions. Baotou Steel, for example, has been reported as having failed to enroll its workers in a mandatory collective retirement scheme. The money saved by the company now results in its retired workers receiving only 400 Yuan RMB pension payments a month, although they would be entitled to a payment of 600 Yuan RMB.

Chinese enterprises seem to export their unqualified labor standards abroad. A Reuters report, dated July 21, 2005, describes labor protests against a Shougang operated mine in the Peruvian port city of San Juan de Marcona. According to labor union officials cited, wages paid are less than half of the average miners’ salary while safety standards in the mine are seriously lacking. In 2004 alone 450 accidents were recorded leaving 22 workers disabled. In the three years 2002 to 2004 at least five workers died in accidents at the mine.

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<sup>99</sup> China has not ratified the International Labor Organization’s (ILO) conventions on collective bargaining (convention 98) and the freedom of association (convention 87).



### **1.18.2      *Environmental Sustainability***

**The massive expansion of the Chinese steel industry has been significantly accelerated by a serious under-pricing of natural resources and environmental assets. This has led to a misallocation of productive assets and resulted in an excessive consumption and waste of natural resources. In spite of the technological upgrading at China's leading steel producers, the market cum political failure to adequately price 'nature' as a scarce resource and to close the country's large number of technologically backward production facilities has led to serious environmental damage.**

According to a recent report by the World Bank, air pollution alone is costing China 3.8 percent of its GDP and killing 460,000 people every year, water pollution is adding another 2 percent GDP loss and an unknown figure of untimely deaths – and China's steel industry is contributing a substantial share to this sorry track record. Shougang alone is responsible for making the inhabitants of the capital Beijing inhale 18,000 tons particulate matter a year – the equivalent of the total emissions of about 100 average-sized manufacturing enterprises. Other steel mills are known to discharge untreated waste water into drinking water reservoirs – including those of cities like Beijing and Tianjin.

As a matter of fact: Closure of China's inefficient and outdated production facilities would cut the coal consumption by 50 million tons per year and at the same time save 100 million tons of water. Additionally, the emission of sulphur dioxide could be reduced by 400,000 tons per year. China's failure to shut down these capacities results in a perpetuation of a situation where the industry is plagued by massive low-tech over-capacities while at the same time struggling with low efficiency levels and poor environmental input/output ratios (in an industry-wide perspective).

China has recently started to address the issue of environmental degradation in a more serious fashion. However, plant closures remain a task that has not been fully tackled. Closures are proceeding only very slowly and almost always involve serious, long-stretched political struggles between central and local government organizations.<sup>100</sup> The Chinese State Environmental Protection Agency (SEPA) has only recently started to rigorously target larger steel companies that cause serious environmental pollution as well. In late 2007 it published a black list of 30 companies that should be barred from receiving any bank loans. The list includes three steel companies in their entirety respectively specific steel projects of these companies. The companies targeted, Xianlian Iron and Steel Co. Ltd, Baoye Industrial Group. Co. Ltd., and Ruannan Huarui Iron and Steel Co. Ltd. are all located in Tangshan city, Hebei Province. Other reports by SEPA indicate that Tangshan has built around 70 steel plants in the confines of the city boundaries, thereby not only by far exceeding the region's environmental capacity, but as only 20 percent of these plants have passed the obligatory Environmental Impact Assessments furthermore seriously ignoring environmental standards.

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<sup>100</sup> See in this context also section 3.2 "The Struggle Within: 'China Steel Inc.' vs. Local Politico-Business Alliances".

If regulations would be seriously enforced, SEPA would not only ask three companies to be sanctioned by a restricted access to loan facilities, but rather shut down more than 50 (80 percent) of Tangshan's steel plants.

Instead, international "Clean Development Mechanism" (CDM)<sup>101</sup> projects seem to have come to constitute the preferred choice. A choice, which allows China to pass the bill for rectifying industrial structures, that have been created in decades of irresponsible neglect for the environment, on to the international community, i.e. foreign tax payers. But as such deals are conducted exclusively by China's leading steel corporations;<sup>102</sup> the problem of China's large number of small and especially 'dirty' plants remains unresolved.

**Seen in perspective, it has to be concluded that China's iron and steel producers are in general not obliged to pay for the full costs of their consumption of 'nature'. As such they must be understood as profiting from illegitimate 'subsidies' (paid for by the Chinese as well as global population) and enjoying an illegitimate backing in their revealed international competitiveness.**

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<sup>101</sup> The "Clean Development Mechanism" (CDM) as agreed upon in the Kyoto Protocol has the intention to reduce global greenhouse gas emissions in those regions where the unit-cost of reduction is lowest. According to this logic, enterprises from industrialized economies can invest in projects that result in a reduction of greenhouse gas emissions in developing countries – as an alternative to much more expensive emission reduction projects in their home countries. Greenhouse gas emission credits can be traded at specific markets.

<sup>102</sup> Recent reports on CDM deals include the following: Baosteel is planning to sell 6 million tons of carbon dioxide emission credits through 2008-2012 to European trade partners. Proceeds are expected to surpass 60 million Euro. The Baosteel daughter Xinjiang Bayi Steel is reported to have signed a similar deal valued at close to 24 million Euro. Anshan Iron and Steel Group is reported to intend to sell 13 million tons of greenhouse gas credits to the European Carbon Fund and Camco International valued 218 million US dollar.

## China's State-Business Nexus in Global Perspective - Conclusions

Summing up the documentation presented in the preceding sections, seven findings stick out as of particular importance:

1. **Developments in the Chinese iron and steel industry do have a global dimension.** After years of exceptional growth, the industry has gained substantial leverage so that today absolute and relative changes in the industrial structure and specifically in the import and export behavior of the Chinese iron and steel industry have direct and significant repercussions on developments in Europe.
2. **Although based on a capitalistic conception of 'business', the Chinese iron and steel industry is not governed by market principles.** Instead a complex array of state-business alliances is determining industry developments and 'market' outcomes.
3. **Government organizations are intervening directly and indirectly in the business process and the micro-management of China's steel enterprises.** As such, the cost structures and sales prices of China's steel enterprises do not reflect real market constellations and scarcities.
4. **China does not possess a genuine competitive advantage in steel making.** The present patterns of Sino-European (steel) trade must be understood as being the result of serious distortions in the 'market' process in China.
5. **The Chinese iron and steel industry receives substantial financial support from central as well as local government organizations.** Data available for China's *listed* steel corporations alone documents discretionary tax breaks valued at 7.607 billion Yuan RMB (plus substantially reduced corporate income tax rates), governmental subsidies amounting to 2.151 billion Yuan RMB, as well as preferential lending facilities worth 753 million Yuan RMB for the period 2002 to 1.Q. 2008.
6. **By distorting the cost/price competitiveness of Chinese steel enterprises vis-à-vis foreign enterprises,** and rendering Chinese players stronger than they actually are, **the global and particularly the European steel markets are compromised and are impeded in fulfilling their allocative and welfare enhancing function.**

## **Appendices**

### **Appendix I:**

**Development Goals for the Chinese Steel Sector as Communicated in the “Eleventh Five Year Programs for Economic and Social Development” at the Provincial Level**

### **Appendix II:**

**Development Goals for the Chinese Steel Sector as Declared in the “Eleventh Five Year Programs for Economic and Social Development” by Municipal Governments**

## 1.19 Development Goals for the Chinese Steel Sector as Communicated in the “Eleventh Five Year Programs for Economic and Social Development” at the Provincial Level

The “Eleventh Five Year Program for Economic and Social Development” is more than just one document outlining the central government’s national development agenda. In reality the “Five Year Program” constitutes a complex set of documents drafted at all administrative levels from the central government in Beijing down to the provincial and municipal governments. Each of these de-central administrations is formulating its aspirations and development goals for the local economy and society.

The whole set of documents is prepared in an iterative process. In the first stage central government development priorities and guidelines are providing structure to the local development programs. In the next stage, the locally drafted development programs, and especially their estimations of resources and capacities available, are fed back into the national development agenda, which is then providing further processed input to the local administrations. Additional feedback rounds between central and local administrations, various government agencies, research institutions, as well as major corporations complete the yearlong process of drafting the complex set of documents constituting the “Five Year Program”.

In the following we will introduce the major development goals and strategies as communicated in the “Eleventh Five Year Programs for Economic and Social Development” drafted by China’s Provincial Governments.

In the context of its Eleventh Five Year Program **Anhui** Province promotes the construction of Ma’anshan Steel’s thin sheet and strip project. The company is envisioned to reach a total annual steel output of 20 million tons by the end of the plan period. Sheet and strip products are supposed to constitute no less than 60 percent of this amount. In addition, the province plans to speed up the construction of a major steel base that has nation-wide relevance.

As far as steel is concerned, the Eleventh Five Year Program for the national capital **Beijing** is clearly dominated by the relocation of Shougang, one of China’s leading mills, from the city proper to Caofeidian, a coastal location in neighboring Hebei Province. The magnitude of the task of moving a large scale integrated steel plant is reflected by numerous references within Beijing’s planning documents. The government promotes the relocation which includes numerous significant construction activities at the new site. During the five year planning period, a major new steel project has already been realized in Shunyi. The new rolling mill has been equipped with state-of-the production technology to produce cold rolled thin sheet.

The Five Year Program of **Chongqing** almost stands as an exception to the general greed for ever larger and more advanced production facilities exhibited by most of China's provinces and administrative regions. The provincial level city's Five Year Program plainly states that the potential of already existing mills should be fully exploited to improve the product mix.

The provincial Five Year Program of **Fujian** Province identifies specific steel mills which shall build up, expand or enhance production capacities. It pushes for the construction of a plate mill at Sanming Steel, a cold rolling mill for thin strip at Mingguang Steel and lists several other producers who shall start new or improved production facilities.

With regard to the steel industry, the Eleventh Five Year Program established for **Gansu** Province states that the government plans to further step up the production capabilities and improve the product mix of its local steel enterprises. At the end of the planning period, sheet and strip products are expected to capture a share of more than 70 percent of total output. If everything goes according to plan, by that time, the output capacity shall have greatly increased to mark 7.8 million tons per year for crude steel and 7.2 million tons per year for steel products. Among the first, stainless steel is to take up 0.9 million tons.

The Eleventh Five Year Program as promulgated by **Guangdong** Province clearly endorses a strong local steel sector. Designated as a "leading industry" the steel industry is encouraged to accelerate its development. Like several other provinces, Guangdong wants to become a national centerpiece for the production of high grade, high value-added goods. To this aim, planners encourage local "backbone enterprises" to merge with large domestic steelmakers and set up production bases in coastal areas. Under the headline "important projects", the Program cites the Zhanjiang steel project with a total capacity of 10 million tons per year and the steel processing base at Nansha which focuses on hot-dip galvanized sheets of superior quality.

The Eleventh Five Year Program as formulated by the authorities of **Guangxi Zhuang Autonomous Region** pushes to assist Liuzhou Steel in accelerating the upgrade of its product portfolio. Planners also press ahead with the construction of a large scale steel production base in the coastal areas.

The Eleventh Five Year Program of **Hebei** Province makes numerous references to the steel sector and explains in great detail, how the planners envision the future development of local mills. First and foremost, steel along with a number of other industries, is designated a leading industry. As such, it is encouraged to set up a large production base, realize large scale projects and become highly competitive. One such project is the construction of a large new center for steelmaking in coastal Caofeidian which stems from the relocation of Beijing's Shougang works. The Program also defines that the local mills should focus their attention on making high quality sheet, tube, section and three other product categories. Seven so called "leading large industrial focus projects" are identified of which the steel industry is one. As key projects to be especially promoted, are defined the establishment of the Caofeidian steel base, and the structural adjustments and technological upgrading at Handan Steel to

point out only two. Assistance for the steel industry also comes in the form of government supported infrastructure and logistics projects. Among thirty large scale professional logistics projects specified in the Five Year Program, there are three of great significance for Hebei's steel mills: (1) the construction of a special terminal for unloading ores and raw materials from large ocean going vessels, (2) the implementation of a special logistics project for handling steel in the port of Tangshan and (3) a similar steel logistics project in the port of Handan. In addition planners have identified four cities which supposedly offer favorable conditions for the development of large scale industries like steel. Mills are encouraged to build and expand production facilities in these locations.

**Henan** government plans to support backbone steel companies in lifting their technology levels. The Program calls for the construction of two 150 ton converters at Anyang Steel and supports the company to reach the threshold of 10 million t/a output. It also names the completion of a rolling mill for wide plate at Wuyang Steel with a target capacity of 1 million tons per year. In addition, the government stipulates the creation of an internationally competitive production base for steel plate. The provincial planners encourage the expansion of steel and other industries in the Yubei-Region of Henan Province.

**Hubei** Province has announced that it wants to improve the competitiveness of local steelmakers and plans to speed up the formation of steel and eleven other industrial sectors with annual sales incomes in excess of 100 billion Yuan RMB, which it considers as focal points of its Eleventh Five Year Program. The Program designates the steel sector as a "pillar industry" and promotes the acceleration of its development. It also backs the construction of Wuhan Steel's new production base project. The provincial government also supports "backbone" steel mills to strengthen their scientific innovation while, at the same time, expanding in scale. More precisely, it supports Wuhan Steel to successfully develop automotive sheet as well as other high value-added steel products. The plan goes even further and stipulates that Wuhan Steel should transform itself into a first rate steel enterprises according to global standards. Wuhan Steel shall set up the world's largest production base for cold rolled silicon sheet and become a major center for manufacturing automotive sheet in China. The Hubei provincial government also intends to become a center for the large-scale production of special steels. Planners want to 'energetically' develop certain high grade steel products like color-coated or hot-dip galvanized sheet. During the Eleventh Five Year Program period, Hubei Province intends to build up capacities for the production of 22 million tons of steel and 5 million tons of steel products. To achieve these goals, planners indicate their intention to utilize the full potential of Wuhan Steel's converters and thin sheet continuous rolling lines as well as other of the company's productive assets. Among others, the Program points out a cold rolling line for thin sheets and a hot rolling line for wide plates at Ezhou Steel, another steelmaker which has merged with Wuhan Steel in the meanwhile. Further support for the steel industry stems from the promotion and acceleration of logistics projects.

In its Eleventh Five Year Program, the provincial government of **Inner Mongolia Autonomous Region** has designated the steel industry a key development target and

expects local steel mills to yield an annual output of 15 million tons until the end of the Program period, 2010. Provincial planners support Baotou Steel's technology upgrading project and call for higher proportions of steel plate, automotive sheet, special steels, stainless steels and other product categories in the overall output.

In a section titled "Accelerate the expansion of pillar industries" of **Jiangxi** Province's Eleventh Five Year Program, the local government lays out in a fairly detailed manner how it plans to support the development drive of the local steel industry. Planners push for the construction of Xinyu Steel's rolling mill project for manufacturing thin sheets which is supposed to spill out 3 million tons once completed. Next, the Plan assigns specific mills to focus on the production of specific products: While Xinyu Steel is supposed to center on making sheets and wires, Nan Steel shall dedicate itself to producing high quality wire goods, screw steel and steel products used for car suspensions. A third company, Pingxiang Steel, is tasked to concentrate on construction steel. In another section of the Plan, the government makes clear what else it expects from its companies: The targeted sales revenue for Xinyu Steel and Pingxiang Steel is at least 20 billion Yuan RMB for each company.

Planners in Northeast China's **Jilin** Province have aimed to upgrade the product mix of local mills and urge steelmakers to increase the share of sheets and tubes in the overall output. Furthermore, the production of hot and cold rolled thin sheet, hot-dip galvanized sheet as well as stainless steel are being promoted. The provincial Planning authorities want to speed up the implementation of Tonghua Steel's 10 million t/a steel project which they have designated as one of only seven key large industrial projects during the Five Year Program. The company's 1 million t/a cold rolled sheet project can also count on government support – the same applies to Tonghua Steel's technology center which shall be set up to push R&D activities.

The Program for **Liaoning** Province emphasizes the importance of the steel sector as a core industry to spur the development in downstream businesses. Therefore the Liaoning provincial government designates the sector as one of four that should spark economic activity in coastal areas. The document urges to plan in entirety the physical distribution of steel mills to stimulate the development of other industries. Production capacities shall be enhanced and expanded to yield 30 million tons of steel output by the end of the planning period in 2010. The government has designated the construction of several large scale production facilities as key projects and promotes their implementation. Among those are Anshan Steel's new steel plants in Yingkou which manufacture steel plate and high quality sheet products at a capacity of 5 million tons per annum. The Program also backs the construction of a large new hot rolling line for wide strip at Benxi Steel and identifies several other projects it wants to promote.

Government planners in **Shandong** Province push for high concentration levels and the formation of a large steel production base in their Eleventh Five Year Program. Though there is no indication what steps are to be taken in that direction, the plan calls upon the steel industry to realize cumulated sales revenues of 760 billion Yuan until 2010.



The Municipal government of **Shanghai** has also announced fairly specific plans for the development of its local steelmakers. The city wants to stay firm on its path to become a major center for the Chinese steel industry and vigorously improve the local product mix to encompass even more automotive sheet, ship building plates, stainless steel and special steels than in the past.

**Sichuan** Province specifically addresses steel products in short supply on the Chinese domestic market. It stipulates that the production of cold rolled thin sheet, silicon plate and other deep-processed steel products shall be expanded. The wish list for future construction projects includes production facilities for high speed wire and medium plate as well as two cold rolling lines with an annual capacity of 400,000 tons each. A hot-dip galvanizing line capable of finishing 300,000 tons of galvanized sheet and several other projects are earmarked for construction.

The Eleventh Five Year Program of **Tianjin**, as published by the municipal government, reveals that the city with provincial status plans to further consolidate its role as leading producer of high grade pipes and tubes. The Program therefore pushes for a further acceleration of the capacity expansion in this specific field. Turning itself into a major national hub for seamless pipes while also promoting the production of cold rolled thin sheet, hot-dip galvanized sheet, color-coated sheet and other high value-added goods. All in all, this is planned to lead to substantial output increases until 2010. The Program targets output volumes as high as 2.6 million tons of seamless tube, 10 million tons of sheet and 1 million tons of other high quality steel products.

**Zhejiang** Province plans to set up a manufacturing base for sheet products of high quality grades and a steel processing base. The Zhejiang Eleventh Five Year Program calls for large companies and large projects to speed up the construction of a major production base for steel and other industries near the coast.

## 1.20 Development Goals for the Chinese Steel Sector as Declared in the “Eleventh Five Year Programs for Economic and Social Development” by Municipal Governments

Municipal governments also draft their particular Development Programs. These include a lot of specific information and outline precisely what to expect in the coming five years in terms of complementary infrastructure facilities and business support. It is surprising to see how frank these Programs address sensitive issues like capacity expansion and export promotion.

The municipal government of **Baotou** City promotes the formation of a steel cluster surrounding Baotou Steel and Huaye Steel in order for the city to become a national center of steel production. Baotou's Five Year Program highlights the importance of steel for local manufacturing and calls for developing processing industries that take steel as a basis. Next, the government announces its vigorous support for several steel projects, including technological upgrading at Baotou Steel and the second stage of the stainless steel project at Huaye Special Steel. Finally, it is revealed that planners strive to ramp up the output of iron and steel to 15 million tons respectively.

**Benxi** City in Liaoning Province presents a detailed program how the local steel industry should move to the future. First of all, Benxi Steel is supposed to double its annual steel production to exceed 10 million tons. Furthermore, during the five years covered by the Program, the company's output mix shall be dominated by hot-dipped galvanized sheet for use in automobiles and home appliances as well as by stainless sheet, color-coated sheet and alloy steel rods. In all, Benxi Steel is urged to become a major base for manufacturing high grade steel sheet and improve its competitiveness. A second local steelmaker, North Steel, is called to keep capacities stable and use already installed production facilities. Development targets are defined as technological upgrading of production equipment and product mix improvements.

Benxi municipal government explicitly urges companies to expand exports. Steelmakers are prompted to enhance the product mix and explore international markets. Moreover, they are expected to increase export quantities and elevate the technological content of export goods. Planners welcome the export of deep-processed, high value-added steel products and a number of other goods. Additionally, Benxi's Five Year Program announces the creation of several export promotion companies.

**Handan** City is one of two centers of steel production in Hebei Province – the other being Tangshan – which in turn is China's heartland for steel smelting and processing. The high relevance of the steel sector, which is designated as one of four pillar industries, for the local economy is fully reflected in the city's Eleventh Five Year Program. No wonder that improving the international competitiveness of major local mills is the overriding policy goal with regard

to the steel industry. To this end, Handan City promotes the construction of a production base dedicated to manufacturing high grade steel. The five leading local mills, Handan Steel, Xinxing Coated Tubes, Wu'an Steel, Zongheng Steel and Zishan Special Steel are supposed to intensify their cooperation and work to introduce more advanced production technologies. Government authorities promote scientific research activities and improving technical innovation at its major steel mills. More specifically, the construction of R&D centers at Handan Steel, Xinxing Coated Tubes and ten other companies will be supported.

Until the end of the planning period, the city government wants to reduce the output share of semi-finished products, increase the proportion of high-tech, high value-added goods. The Program specifically rules that the three product categories sheet, strip and pipe should account for 75 percent of the total output. At the same time, the installed production capacities should keep stable at about 20 million tons for crude steel and 19 million tons for finished steel products.

The steel industry also enjoys a prominent role when it comes to key projects that should be realized. These include the restructuring and technical upgrading at Handan Steel, Tianjin Tiantie's hot rolled coil project (annual capacity: 3.8 million tons), Wu'an Weng Steel's hot rolling milling for thin sheets (annual capacity: 2.5 million tons) and Wu'an Xinjin cold rolling mill for thin sheet (annual capacity: 1.5 million tons).

Concerning the procurement of iron ore, the municipal government of Handan City encourages large steel enterprises to build up a stable supply base overseas.

**Jinan**, the capital of Shandong Province, states in its Eleventh Five Year Program, that the steel industry should be reorganized in order to substitute imports with local production. Furthermore, the Program endorses three particular iron and steel projects, to be realized during the plan period. These include capacity expansions and reorganization projects at Jinan Steel.

**Ma'anshan** City, located in Anhui Province stipulates in its Eleventh Five Year Program that "through the effective integration of resources" and vigorous support, Ma'anshan Steel should be promoted to reach a sales income of more than 60 billion Yuan RMB by the end of the plan period in 2010. The government urges to further increase the competitiveness of the steel sector which it designates a leading industry. To this end, the authorities in charge of planning support the speedy construction of Ma'anshan Steel's new production site and the development of high value-added steel products. By 2010, the company's annual steel output capacity is planned to reach 15 million tons with flat products accounting for more than 60 percent. The steelmaker is called upon to become a large, modern enterprise with strong international competitiveness. Authorities also support the development Ma'anshan Steel in not-steel related business activities and encourage the company to expand activities along the value chain. To this end, the Program announces the construction of a steel processing base with Ma'anshan Steel at its core. According to the Program, the company can also count on the support of its hometown for acquiring raw material resources abroad.

**Panzhihua** City in Sichuan Province is the center of steelmaking in southwest China. The local government authorities promote enlarging steel and other pillar industries and push for increases in production capacity. The Eleventh Five Year Program cites Panzhihua Steel, the city's largest steel mill, stating that full use should be made from its third expansion project and that output quantities in general should rise. In the future, Panzhihua Steel shall become a highly modern and internationally competitive company. The company shall struggle to ramp up production and realize an annual output level of more than 8 million tons by the end of the planning period.

**Taiyuan** City in Shanxi Province is the center of China's stainless steel production. Not surprisingly, the local government's Five Year Program promotes the production and export of this commodity. The authorities are clearly in favor of massive production increases announcing support to the construction of Taiyuan Steel's new stainless steel plant, which will boast a capacity of 1.5 million tons once completed, as well as the expansion of the company's cold rolling mill.<sup>103</sup> By 2010, Taiyuan Steel is expected to reach a production capacity of 3 million tons of stainless steel.<sup>104</sup> More importantly it is prompted to set up the world's largest and most competitive production base for this product.

According to the Program, work on building a development zone dedicated exclusively to the processing of stainless steel shall accelerate. This sector is envisioned to grow in scale to reach an annual capacity of 500.000 tons by 2010. During the same period of time, the quality of locally manufactured stainless steel products shall improve substantially.

To secure the supply of raw materials, Taiyuan Steel is encouraged to engage in mining and production activities in other countries. Setting up a globalized production system and international sales network are further objectives cited in Taiyuan's Eleventh Five Year Program.

Export promotion is an important issue for government leaders and the Five Year Program makes everything crystal clear: Exports shall include more high-value-added products. The city government plans to strengthen the construction of a brand new export base. Among the products particularly encouraged for exportation is, of course, stainless steel.

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<sup>103</sup> Construction of the plant began in 2004 already. Estimates place total costs for this project at about 3.2 billion US Dollar, whereby 2 billion US Dollar of the total investment will be financed through bank loans.

<sup>104</sup> In 2007, Chinese companies have produced 7.2 million tons of stainless steel while industry reports indicate that total capacities have already reached 10 million tons. For 2008, China's stainless steel output is expected to increase by another 25 percent to reach 9 million tons.



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