EUROPEAN ALUMINIUM

# SUMMARY OF THE ECONOMIC ASSESSMENT OF THE CHINESE STATE INTERVENTION IN THE ALUMINIUM INDUSTRY

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# Summary of the Economic assessment of the Chinese State intervention in the aluminium industry

## Table of Contents




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## 1. Executive Summary

China has chosen aluminium as a strategic material to foster its economic development. State-planning combined with a lack of genuine market forces to provide corrections, have resulted in significant overcapacities in the aluminium industry, both in primary and semi-fabricated products. While this serious problem is recognized by the Chinese government, its attempts to address the issue through top-down industrial policy aimed at "eliminating outdated capacity" have failed so far.

Based on official data, additional growth of 25% in China is expected by 2020, bringing it to a capacity of 52 million tonnes of primary aluminium compared to a global production of 59 million tonnes in 2016. The growth in production has occurred even though China is a relatively high-cost producer with limited access to clean and low-cost energy sources. Many forms of state intervention support production:

- The state supplies financial loans well below normal conditions.
- The Chinese government influences the coal price which is the source of energy used by the overwhelming majority of Chinese primary aluminium producers.
- The State Reserve Bureau (SRB) in China actively purchased stocks to support its local producers. Furthermore 6 Chinese primary producers, representing 40% of total Chinese production, are planning to form a coalition for commercial stockpiling in cooperation with this Bureau.
- The Chinese government steers the exports of semi-fabricated products through a sophisticated schedule of tax rebates.

Because of the state support and a decreasing domestic demand for aluminium, Chinese producers are flooding the global market with exports. Symptomatic of the vast overcapacity in China is the circumvention of the custom rules by some Chinese companies who export so called "fake semis" (primary aluminium for smelting disguised as semi-fabricated products).

The boom in Chinese export has meant that global aluminium producers (including European ones) have not realised higher market shares despite the increased global demand from end-use sectors such as automotive, packaging, building and construction.

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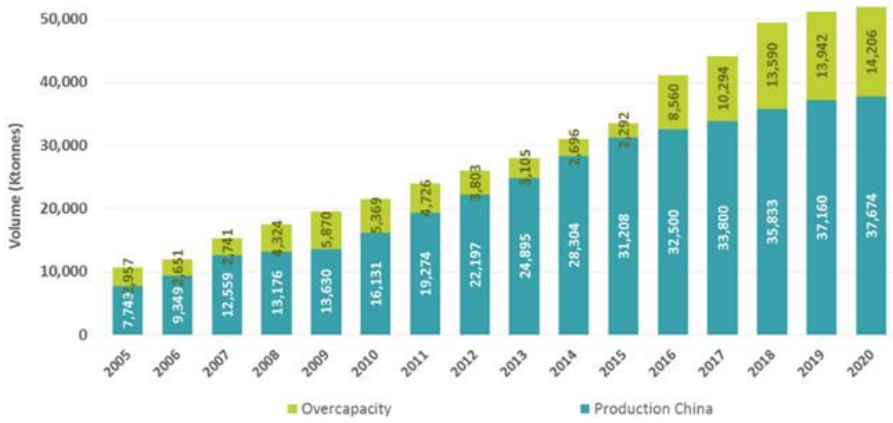
## 2. Size of the Chinese aluminium industry

Aluminium primary smelting capacity in China is estimated to reach 44 million tonnes in 2017[1], compared with consumption of 33 million tonnes either for domestic use or for export of semis and final products.[2] The Chinese domestic consumption is moderating but nevertheless, Chinese companies plan to further expand their capacity to 52 million tonnes, or more than 25% growth by 2020. In no other region or country in the world is the overcapacity structurally expanding as in China. The creation of this overcapacity of aluminium in China is a result of initiatives, support and direct involvement by Chinese authorities (central and/or regional).

In genuine market economies, the creation of overcapacity would normally lead to the least efficient plants becoming unprofitable and inactive. However, due to the non-market based support of Chinese authorities, even the least efficient plants remain in activity even after the demand correction in the past few years. This leads to a significant overcapacity in primary production and distorts trade flows where Chinese producers gain market share around the world at the expense of non-Chinese producers.

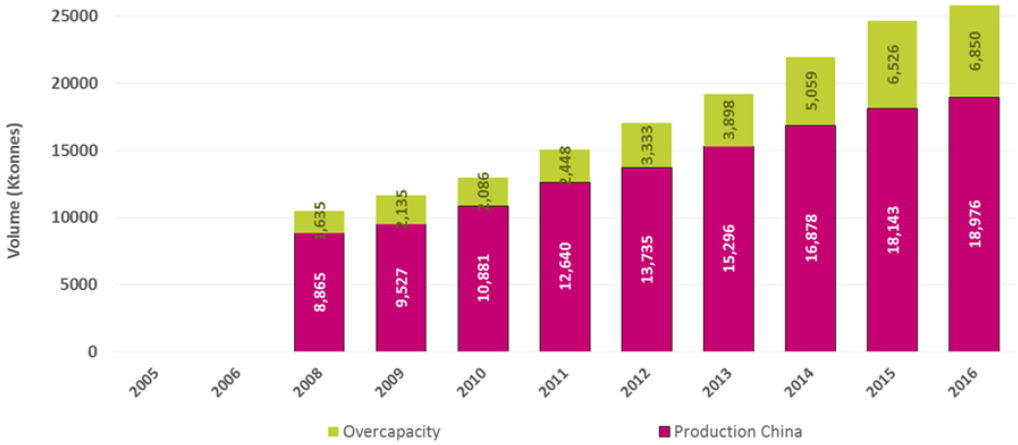
*Primary overcapacity in China (2005-2020)* (*Source: CRU)*




To deal with this overcapacity and add value, Chinese producers develop primary aluminium into semi- and fabricated products for use in China or for export. The massive expansion of its semi-fabricated production capacity (for rolled and extruded products) resulted in a utilisation rate of less than 70% while capacity is continuously increasing without corrections from normal market forces.

[1] CRU estimates primary production in China to be 35 million tonnes in 2017.
[2] For comparison, the primary aluminium production capacity in Europe is 4.4 million tonnes and the world total production is estimated to be 62 million tonnes in 2017.

*Rolled and extruded overcapacity in China (2005-2016) (Source: own elaboration on CRU)*




## 3. Forms of state support

### 3.1 Pegged coal and electricity prices

Aluminium production is extremely electricity-intensive. Therefore, many Chinese aluminium producers generate the electricity needed to produce aluminium using their own steam coal-fired, self-generating power plants. The proportion of aluminium produced in China from self-generated power increased from less than 40% of the total production in 2010 to over 60% of the total production in 2015.

Because electricity costs can comprise up to 40% of the cost of primary aluminium production and most electricity in China is generated from coal, the coal price is a key factor in aluminium producers' cost of production. The Chinese government is providing a substantial benefit to Chinese aluminium producers by using flexible taxes, levies, leases and other mechanisms to ensure that they always pay the same or lower price for coal than the world market.

Furthermore, the Chinese government keeps coal prices pegged to electricity prices through a "linkage mechanism," which only allows a minor fluctuation between the coal price and power price. Specifically, the average coal price can fluctuate by only 5% within a year without triggering a change in electricity prices.

In line with central government directives, provincial and local governments have also provided benefits to aluminium producers by actively supporting the development of industrial clusters in their jurisdictions, which brings coal producers and aluminium producers together. For example, the government of Binzhou city planned to preferentially guarantee its supply of coal to aluminium producers.

### 3.2 Subsidized Financing

Subsidized financing through the state-dominated financial system has been the primary means of state support. This has helped an outsized expansion of capacity and caused global prices to collapse. On a globally priced market, this is adversely affecting all aluminium producers including the European ones. Like other industries in China, this expansion has led to a substantial increase in corporate debt that is weighing down the Chinese aluminium industry.

From of an investigation of 45% of the Chinese primary aluminium industry, it appears that debt subsidies increased strongly over the last years. This part of the industry received between 2007 to 2014 a combined amount of more than 480 billion RMB. That is 50% more than the total turnover of the aluminium industry in the EU.

Furthermore, there is evidence that aluminium companies in China obtain production factors priced below market conditions, and this has an effect all over the value chain. A study by Professor Dr. M. Taube documents dedicated programmes employed by Chinese governmental organisations to provide guidance to the aluminium extrusion sector[3]. The facts are established by the US Department of Commerce in its Countervailing Duty Investigation of Aluminium Extrusions from the People's Republic of China in 2009. Benefits provided to the extrusion industry include reduced cost for land use, over exemptions of construction fees, and the provision of primary aluminium for less than adequate remuneration.

### 3.3 Strategic Stockpiling

The State Reserve Bureau (SRB) is part of the National Development and Reform Commission of the Chinese government. The Bureau is responsible for managing strategic material reserves and it also manages the trade in material reserves such as metals among which aluminium. Before the global financial crisis, the level of aluminium stockpiling by SRB is estimated to be 133 tonnes. To support its local producers, SRB intervened in the market by buying more aluminium, bringing the total stock up to 792 tonnes in 2013. As a comparison, that is more than 1/3 of the current EU primary production.

Over the past few years, SRB has consistently rejected appeals from producers to resume the purchase of aluminium for the stockpile. However, 6 Chinese primary aluminium producers were named to form a consortium in April 2016 to handle primary aluminium stockpiling to support aluminium prices. Several of the 6 companies (Chinalco, State Power Investment Corp, Yunnan Aluminium, Jiugang Group, Jinjiang Group and Weiqiao Aluminium & Electricity) are state owned. Together they produce almost 12 million tonnes of primary aluminium, which is 24% of the Chinese production or the size of the total European aluminium demand.

[3] Assessment of the normative and policy framework governing the Chinese economy and its impact on international competition. Prof. Dr. Markus Taube & Dr. Christian Schmidkonz GbR, August 2015, p 335 and further.

### 3.4 Export control via taxes and rebates

The Chinese Government steers the exports flows from Chinese aluminium products by imposing export taxes on the products that should not leave the country, and by giving tax rebates to process materials to stimulate their export. The below table shows how the rates can change from year to year, and can even fluctuate in the same year.

China is short of bauxite and alumina and thus does normally not impose any export tax on these materials. On the other hand, China does impose export taxes on primary aluminium because this is commonly considered as an energy bank, and China is short of (clean) energy.

| Chinese export tax and vat rebates for aluminium | 2001 | 2002 | 2003 | 2004 | 2005 | 01-Jul 2007 | 01-Aug 2007 | 01-Jan 2008 | 20-Aug 2008 | 01-Dec 2008 | 01-Apr 2009 | 01-Jun 2009 | 01-Jan 2013 | 01-Jan 2014 | 01-Jan 2015 | 01-May 2015 | 01-Dec 2015 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Export tax** | | | | | | | | | | | | | | | | | |
| Bauxite | | | | | | 10% | 10% | 15% | 15% | 15% | 15% | 15% | 0% | 0% | 0% | 0% | 0% |
| Alumina | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% |
| Unwrought non-allo | 15% | -15% | -15% | -8% | 5% | 15% | 15% | 15% | 15% | 15% | 15% | 15% | 15% | 15% | 15% | 15% | 15% |
| Unwrought alloy AL | 15% | -15% | -15% | -8% | 5% | 0% | 0% | 0% | 15% | 15% | 15% | 15% | 15% | 15% | 15% | 15% | 15% |
| Scrap | | 10% | 10% | 10% | 10% | 10% | 10% | 15% | 15% | 15% | 15% | 15% | 15% | 15% | 15% | 15% | 15% |
| Rods and bars | 13% | -13% | -13% | -13% | -13% | 0% | 15% | 15% | 15% | 15% | 15% | 15% | 15% | 15% | 15% | 0% | 0% |
| **Export tax rebate** | | | | | | | | | | | | | | | | | |
| Flat rolled | 13% | 13% | 13% | 13% | 13% | 11% | 11% | 11% | 11% | 13% | 13% | 13% | 13% | 13% | 13% | 13% | 13% |
| Foil | 13% | 13% | 13% | 13% | 13% | 13% | 13% | 13% | 13% | 13% | 13% | 15% | 15% | 15% | 15% | 15% | 15% |
| Hollow profiles | 13% | 13% | 13% | 13% | 13% | 0% | 0% | 0% | 0% | 0% | 13% | 13% | 13% | 13% | 13% | 13% | 13% |
| Other profiles | 13% | 13% | 13% | 13% | 13% | 0% | 0% | 0% | 0% | 0% | 13% | 13% | 13% | 13% | 13% | 13% | 13% |
| Tube | 13% | 13% | 13% | 13% | 13% | 13% | 13% | 13% | 13% | 13% | 13% | 13% | 13% | 13% | 13% | 13% | 13% |

Source CRU

Since many primary producers in China make losses, they put strong pressure on the government to lift the export tax on primary aluminium so that exports will be possible. The level of subsidization combined with the volume of Chinese production in the aluminium sector increased export of Chinese primary aluminium would have a negative impact on primary aluminium production in the rest of the world.

Furthermore, China wants to stimulate adding value to increase income and therefore tax rebates are foreseen for semi-fabricated products.

## 4. Chinese Exports

Last year, Chinese aluminium exports to the rest of the world amounted to more than 6.5 million tonnes.

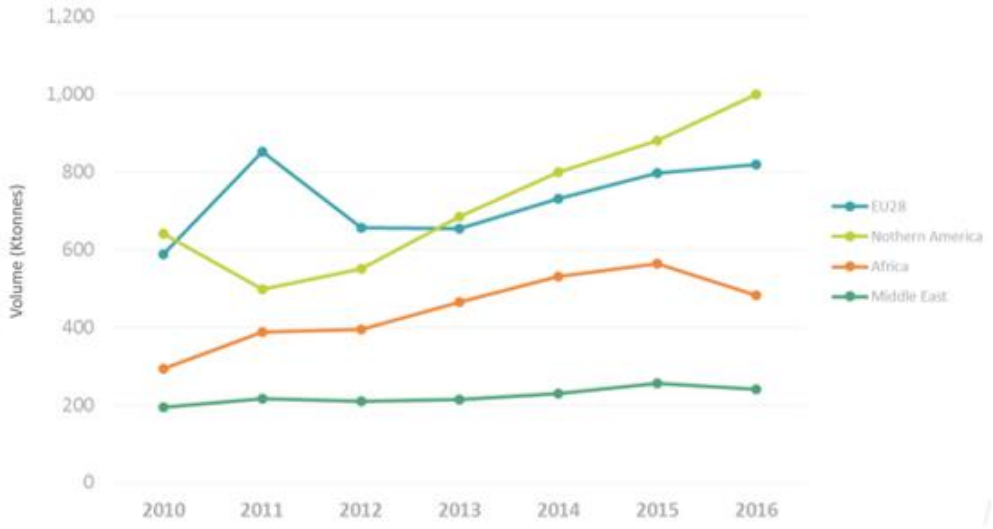
The exports increased by more than 56% since 2010. More than 40% goes to other Asian countries. However, the exports to the EU increased by 39%, to a level of more than 818 tonnes in 2016. These tonnages include all aluminium products under trade chapter 76, however, they do not include the final products using a significant aluminium input.

# Summary of the Economic assessment of the Chinese State intervention in the aluminium industry

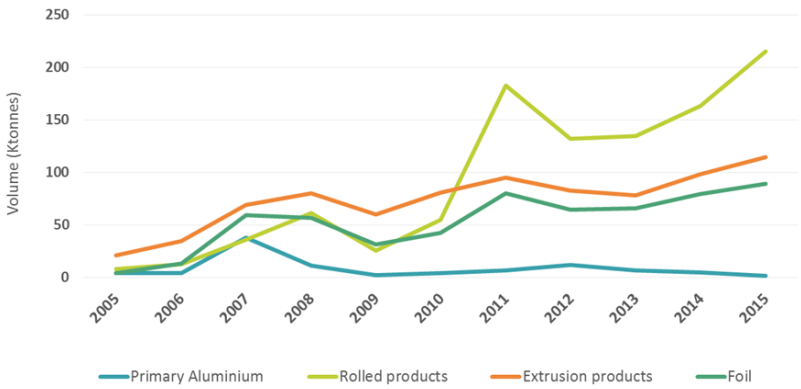
The share of Chinese extrusions and flat rolled products (FRP) imports in the European market is currently around 5%, up from 1% in FRP in 2010, and 2% in extrusion. Chinese extrusion exports to the rest of the world increased by more than 50% during the last 5 years to almost 1.4 million tonnes.

A significant part of these exports are so called “fake semis”. This is primary aluminium cast in a shape resembling a semi-fabricated product (frequently coils or bars) but actually intended for immediate remelt, thus substituting a regular primary aluminium product. The fake semis in the form of remelt bars make up around 600 tonnes.

*Chinese exports of chapter 76 to EU, North America, Africa and the Middle East. (Source: CRU)*




*Chinese exports to the European Union (Source: CRU)*



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**About European Aluminium**

European Aluminium, founded in 1981 and based in Brussels, is the voice of the aluminium industry in Europe. We actively engage with decision makers and the wider stakeholder community to promote the outstanding properties of aluminium, secure growth and optimise the contribution our metal can make to meeting Europe's sustainability challenges. Our 80+ members include primary aluminium producers; downstream manufacturers of extruded, rolled and cast aluminium; producers of recycled aluminium and national aluminium associations are representing more than 600 plants in 30 European countries. Aluminium products are used in a wide range of markets, including automotive, transport, high-tech engineering, building, construction and packaging.