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Protectionist import duties under the Trump Presidency Direct and indirect impact on the German Aluminium industry



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TABLE OF CONTENTS:

EXECUTIVE SUMMARY - DEUTSCH..... 5
EXECUTIVE SUMMARY - ENGLISH..... 7

1 INTRODUCTION..... 9
2 THE STATUS QUO OF GLOBAL ALUMINIUM TRADE 12
3 ASSESSMENT OF THE TRADE-EFFECTS OF A NEW 10% TARIFF ON US ALUMINIUM IMPORTS 18
 3.1 Adjustments in the U.S. aluminium industry 19
 3.2 Direct impact on German exports to the United States of America 21
 3.3 Indirect effects resulting from the re-direction of aluminium articles originating
 in third countries to the German home markets 24
 3.4 Indirect effects resulting from increased competition in third country markets 29
4 THE ROLE OF CHINA..... 31
5 CONCLUDING REMARKS 33

SELECTED REFERENCES 35
DISCLAIMER 36

LIST OF FIGURES

Figure 1: Global Trade Flows of the Aluminium Products Covered by New Tariffs (2016)..... 13

LIST OF TABLES

Table 1 EU Aluminium Exports to the U.S. (in tons)..... 14

Table 2 U.S. Aluminium Exports to the EU (in tons)..... 14

Table 3 EU Aluminium Exports to the U.S. as Share of Total EU Aluminium Export Quantities by Commodity..... 15

Table 4 German Aluminium Exports to the U.S. as Share of Total German Export Quantities by Commodity..... 16

Table 5 EU and German Exports bound for the U.S. in recent years (in tons)..... 16

Table 6 Projected Losses of EU Aluminium Export Quantities to the U.S. by Commodity (in tons)..... 23

Table 7 Projected Export Quantities Destined for the U.S. Market of Major U.S. Trading Partners for 2018 and 2019 (in tons and percent)..... 28

Table 8 Projected Rerouted Shipments to the EU Market of Major U.S. Trading Partners for 2018 and 2019 (in tons)..... 28

Table 9 German Exports of Aluminium Wrought Material to Selected Countries in Tons (2015-2017)..... 31

Table 10 Chinese Aluminium Capacities and Output (2011 – 2016)..... 31

EXECUTIVE SUMMARY - DEUTSCH

Direkte und indirekte Effekte protektionistischer Importzölle unter der Trump-Präsidentschaft auf die deutsche Aluminiumindustrie

Die vorliegende Kurzstudie erörtert die Implikationen der von Präsident Trump veranlassten 10 %-Importsteuer für Aluminiumprodukte auf die deutsche Aluminiumindustrie.

Zwischen Deutschland bzw. der EU und den USA besteht eine grundsätzlich intakte und gesunde intra-industrielle Handelsstruktur für Aluminiumprodukte. Dabei erwirtschaftet die EU einen Exportüberschuss gegenüber den USA. Deutsche Exporte in die USA haben in den letzten Jahren aufgrund von Diversifizierungen absolut abgenommen, wodurch der deutsche Anteil an den europäischen Aluminiumexporten in die USA auf unter 30 % gefallen ist. Quantitativ sind deutsche Aluminiumprodukte nur von untergeordneter Bedeutung und stellen keine Bedrohung für die amerikanische Industrie dar.

Die Einführung eines 10 %-Schutzzolls wird Aluminium und daraus gefertigte Produkte auf dem US-Markt erheblich verteuern. Schätzungen gehen davon aus, dass die Preise bis zu zehn Prozent steigen könnten. Ein gegenläufiger – preissenkender – Effekt wird im Rest der Welt zu verzeichnen sein, da ursprünglich für den US-Markt bestimmte Produktion nun als zusätzliches Angebot auf die Märkte drängt.

Die deutsche Aluminiumindustrie ist über drei zentrale Transmissionsriemen negativ von der Einführung von Schutzzöllen in den USA betroffen: (i) Reduzierung von direkten Exporten in die USA, (ii) erhöhter Wettbewerbs- und Preisdruck auf den Heimatmärkten durch umgelenkte Aluminiumexporte aus Drittländern, (iii) erschwerte Exportbedingungen auf traditionellen Exportmärkten aufgrund umgelenkter Aluminiumexporte aus Drittländern.

Aufgrund von Trägheitseffekten und der Notwendigkeit in den USA neue Kapazitäten hochzufahren, um die zollinduzierte erhöhte Nachfrage nach inländischem Aluminium zu bedienen, werden die negativen Handelseffekte für Deutschland und Europa erst im 4. Quartal 2018 voll durchschlagen.

Für die direkte Exporttätigkeit aus Deutschland wird gegenüber dem Referenzwert von 2017 ein zoll-induzierter Rückgang um durchschnittlich 6,7 % (2018) und 20 % (2019) respektive ca. 6 tausend Tonnen und ca. 18 tausend Tonnen erwartet.

Die größten negativen Effekte werden aufgrund von umgelenkten Exporten aus Drittländern auf die deutschen und europäischen Märkte erwartet. Es ist davon auszugehen, dass die chinesischen Exporte in die USA 2018 und 2019 um jeweils 20 % und 25 % bzw. 95 tausend Tonnen und 110 tausend Tonnen einbrechen werden. Ungefähr ein Drittel dieser Mengen könnte dann nach Europa umgelenkt werden. Die russischen Exporte in die USA werden 2018 und 2019 um 10 %, respektive 30 % zurückgehen. Aufgrund enger bestehender Kundenbeziehungen könnte bis zu ein Drittel der freigewordenen Mengen auf dem europäischen Markt landen. Dies entspräche 25 tausend Tonnen in 2018 und 70 tausend Tonnen im nächsten Jahr. Exporte aus den Golfstaaten in die USA werden erwartungsgemäß um 10 %

(2018) und 30 % (2019) zurückgehen, wovon aufgrund relativ schwach entwickelter Handelsbeziehungen im Aluminiumbereich nur etwa 10 - 15 Prozent bzw. 10 tausend Tonnen 2018 und 30 tausend Tonnen 2019 auf den europäischen Markt umgelenkt werden könnten.

Vor diesem Hintergrund erscheint es notwendig und sinnvoll, mittels dreier komplementärer handelspolitischer Maßnahmen darauf hinzuwirken, dass ein faires und den Realitäten intra-industrieller Arbeitsteilung gerecht werdendes Handelsregime nachhaltig (wieder) etabliert werden kann: (1) Strafzölle gegen die USA sollten in geringem Umfang eingesetzt werden, dabei in erster Linie aber nur eine symbolische Funktion erfüllen; (2) Schutzmaßnahmen gegen umgelenkte Exporte aus Drittländern sollten oberste Priorität haben. Denkbar wären hier in erster Linie Quoten basierend auf den durchschnittlichen Importvolumina der letzten 3 - 5 „normalen“ Handelsjahre; (3) operative Funktionsfähigkeit und Autorität der WTO und ihrer Schwesterorganisationen sollten über alle möglichen Kanäle gestärkt werden, um eine effektive supranationale Ordnung der globalen Arbeitsteilung langfristig sicherzustellen.

EXECUTIVE SUMMARY - ENGLISH

Protectionist import duties under the Trump Presidency Direct and indirect impact on the German Aluminium industry

This short study discusses the implications for German aluminium industries of President Trump's decision to levy a 10 % import tax on aluminium products.

Germany, as well as the wider EU share with the U.S. healthy intra-industry trade ties with regards to aluminium products. In this segment of transatlantic trade, the EU generates a trade surplus. German exports to American customers have declined in recent years, in part due to a regional diversification of the exports structure. The share of German exports as component of overall shipment from the EU has also dropped. The quantities of German and European aluminium products sold on the American market are very modest compared to the U.S.'s other international trading partners.

On the one hand, the introduction of a 10 % tariff will drive up the prices for aluminium and products made thereof both for private and industrial users in America. On the other, it will have the opposite effect in the rest of the world, as output originally earmarked for the U.S. creates supply pressures in many markets.

The adverse effects of the protective tariff on German and European aluminium industries are three-fold: (i) direct exports to the U.S. decline, (ii) increased import competition on their home markets from third country exports that were rerouted from the U.S., (iii) more intense competition on traditional export markets due to diverted aluminium exports from third countries.

Owing to inertia and time lags associated with the restart of American production plants, the negative trade effects for Germany and Europe will not fully materialize until the fourth quarter of 2018.

German exports of aluminium products to the U.S. will suffer a tariff-induced decline of 6.7 % (2018) and 20 % (2019). Export quantities will drop by ca. 6 thousand tons and ca. 18 thousand tons, respectively.

The most detrimental effects will be caused by diverted export shipments from third countries that enter the EU market. This report suggests that Chinese aluminium exports to the U.S. will fall by 20 % (about 95,000 tons) in 2018 and 25 % (110,000 tons) in 2019) when compared to 2017 as reference period. Approximately one third of these quantities could then be diverted to Europe. Russian exports to the US are forecast to drop by 10% in 2018 and 30 % in 2019. Due to an existing customer base and established sales networks in the EU, up to one-third of the quantities deflected from the U.S. could reach European markets. This may represent 25,000 tons and 70,000 tons of additional market supply in 2018 and 2019, respectively. Exports from the Gulf States to the US are expected to decline by 10 % (2018) and 30 % (2019). In the absence of an established customer base in the EU, only about 10 – 15 %

percent may be diverted to the common market. This represents additional supply quantities of 10,000 tons in 2018 and 30,000 tons in 2019.

Against this background, it is necessary and sensible to employ a combination of three complementary trade policy measures in order to safeguard a fair trade regime which restores a sustainable intra-industry division of labour: (1) Retaliatory tariffs against the USA may be used to a limited extent but first and foremost serve a symbolic function; (2) Protective measures against diverted exports from third countries should be a top priority. Quotas based on the average import volumes of the last 3 - 5 "normal" trading years could be a viable option. (3) The functioning and authority of the WTO and its sister organizations should be strengthened by all means possible to ensure an effective supranational order for the global division of labour in the long term.

1 INTRODUCTION

On February 16, 2018, the U.S. Secretary of Commerce Wilbur Ross has released reports evaluating the effect of aluminium and steel imports on national security. The documents marked the end of an almost year-long investigation which had been commissioned by President Trump only weeks after coming into office. In both cases, the reports determined that the quantities and circumstances of imports “*threaten to impair the national security,*” as defined by Section 232 of the Trade Expansion Act of 1962. With regard to the aluminium industry, the report finds that, imports of crude metal had grown strongly while U.S. employment and the number of domestic producers have fallen dramatically.

It also expresses concern that the country may lose the ability to produce aluminium products that are critical for military applications. Consequently, the report outlines three alternative policy options designed to safeguard the long-term viability of U.S. aluminium smelters and boosting their plant utilization from 48 % to a target level of 80 %. All of the proposed recommendations follow the same basic rationale: displace imports by domestic production.

On March 8, 2018, President Trump signed a proclamation in which he declared his broad agreement with the report’s findings and his determination to take resolute action in line with its policy recommendations. (The White House 2018). As a remedy against excessive imports, the President decided to impose a 10 % ad valorem tariff on aluminium articles imported from all countries – going beyond the Commerce Departments proposed 7.7 %. Canada, Mexico and Australia were granted exemptions for the time being. The tariffs are to be implemented on March 23, 2018, and shall cover the following aluminium articles (classification according to the Harmonized Tariff Schedule [HTS]):

- 7601 Unwrought aluminium;
- 7604 Aluminium bars, rods, sections and profiles;
- 7605 Aluminium wire;
- 7606 Aluminium plates, sheets and strips, with a thickness exceeding 0.2 mm;
- 7607 Aluminium foil, with a thickness below 0.2 mm;
- 7608 Aluminium tube;
- 7609 Aluminium pipe fittings;
- 7616.99.51.60 Aluminium castings; as well as
- 7616.99.51.70 Aluminium forgings

The list conspicuously excludes bauxite and alumina as well as aluminium waste, scrap, powder and flakes.

At the time, Mr. Trump posted on Twitter:

“Our Steel and Aluminum industries (and many others) have been decimated by decades of unfair trade and bad policy with countries from around the world. We must not let our country, companies and workers be taken advantage of any longer. We want free, fair and SMART TRADE!”

In an op-ed piece, published in the WSJ on March 9th, Commerce Secretary Wilbur Ross defended the tariffs by insisting that

“steel and aluminum imports have helped erode the domestic industry to the point that it threatens national security. Unfair trading practices from countries like China have distorted the global steel and aluminum markets. It is time to halt the damage. [...] These tariffs aim to reverse this sorry state of affairs.” (Ross, 09.03.2018).

At the same time the underlying (official) rationale of the move, that imports of certain aluminium and steel products threaten U.S. national security and impair the country’s ability to defend itself, were immediately pulled into question by a memo of Defence Secretary Jim Mattis in which he finds that

“the U.S. military requirements for steel and aluminum each only represent about three percent of U.S. production. Therefore, DoD does not believe that the findings in the reports impact the ability of DoD programs to acquire the steel or aluminum necessary to meet national defense requirements.”

Furthermore, Mattis also specifically warned about *“the negative impact on our key allies”*.

The understanding expressed by the Defence Secretary may also explain why neither the U.S. government nor the Pentagon have developed any plans to establish a strategic stockpile of steel and aluminium.

So far, the WTO has not officially commented if the protective tariffs are, in fact, compatible with GATT regulation Art. XXI which affords signatories to restrict imports when and where these may pose a threat to national security. However, serious doubts exist. This latest initiative by the Trump Presidency may be just another, more or less well disguised, protectionist measure in the President’s “America First” agenda.

Against this background, this expert assessment has been prepared in order to evaluate the effects these measures must be expected to bear on the German aluminium industry. In order to do so it will assess (i) the direct impact on German and European exports to the United States of America; (ii) indirect effects resulting from the re-direction of aluminium articles originating in third countries to the German and European home markets; (iii) indirect effects resulting from the re-direction of aluminium articles originating in third countries to traditional export markets of the German and European aluminium industry other than the U.S.

In order to guarantee reliable and at the same time quick results, this study is based on the following methodology. On the basis of a meticulous analysis of trade flows in aluminium products in recent years, an assessment of expected trade developments has been developed by integrating various qualitative sources: (i) an appraisal of the capacity of U.S. industry to substitute rest-of-the-world aluminium imports by domestic production in the short and medium term; (ii) a review of historic changes in import duty regimes with regard to their impact on trade as well as an assessment of their applicability to the present constellation; (iii) an evaluation of the strength and resilience of existing supplier/customer relations in order to assess the propensity to shift suppliers; (iv) confidential expert interviews with aluminium industry representatives in Europe and Asia.

In the following we will first provide a short overview of the contemporary set-up and interaction patterns of the global aluminium industry (section 2) before assessing the expected effects of the new tariff regime on the German aluminium industry in section 3. Section 4 will take a closer look at the situation of the aluminium industry in China, where government direction and subsidization have

helped the formation of large overcapacities which, in turn, sent waves of under-priced imports across the globe. The study concludes with some summarizing reflections and a discussion of potential policy reactions for Germany and Europe in section 5.

2 THE STATUS QUO OF GLOBAL ALUMINIUM TRADE

The most important production centres of primary aluminium are located where energy costs are low – either due to natural conditions or thanks to government subsidies. Ideally, smelting takes place in close proximity of bauxite deposits but as electricity accounts for 40-60% of the total cost, such considerations are secondary. With the exception of Russia which controls substantial bauxite deposits, most other major production centres rely on imports to feed their smelters. At the same time, most major aluminium smelting countries lack sufficient domestic demand from downstream industry and rely on overseas markets.

China may serve as a case in point. Thanks to growing domestic demand, strategic government subsidization and incomplete enforcement of industry rules, the country has established the largest aluminium smelting sector in the world – by far. Cheap capital and lax environmental regulation and enforcement has helped the industry outgrow domestic demand dynamics and led it to be increasingly dependent on input imports and output exports.

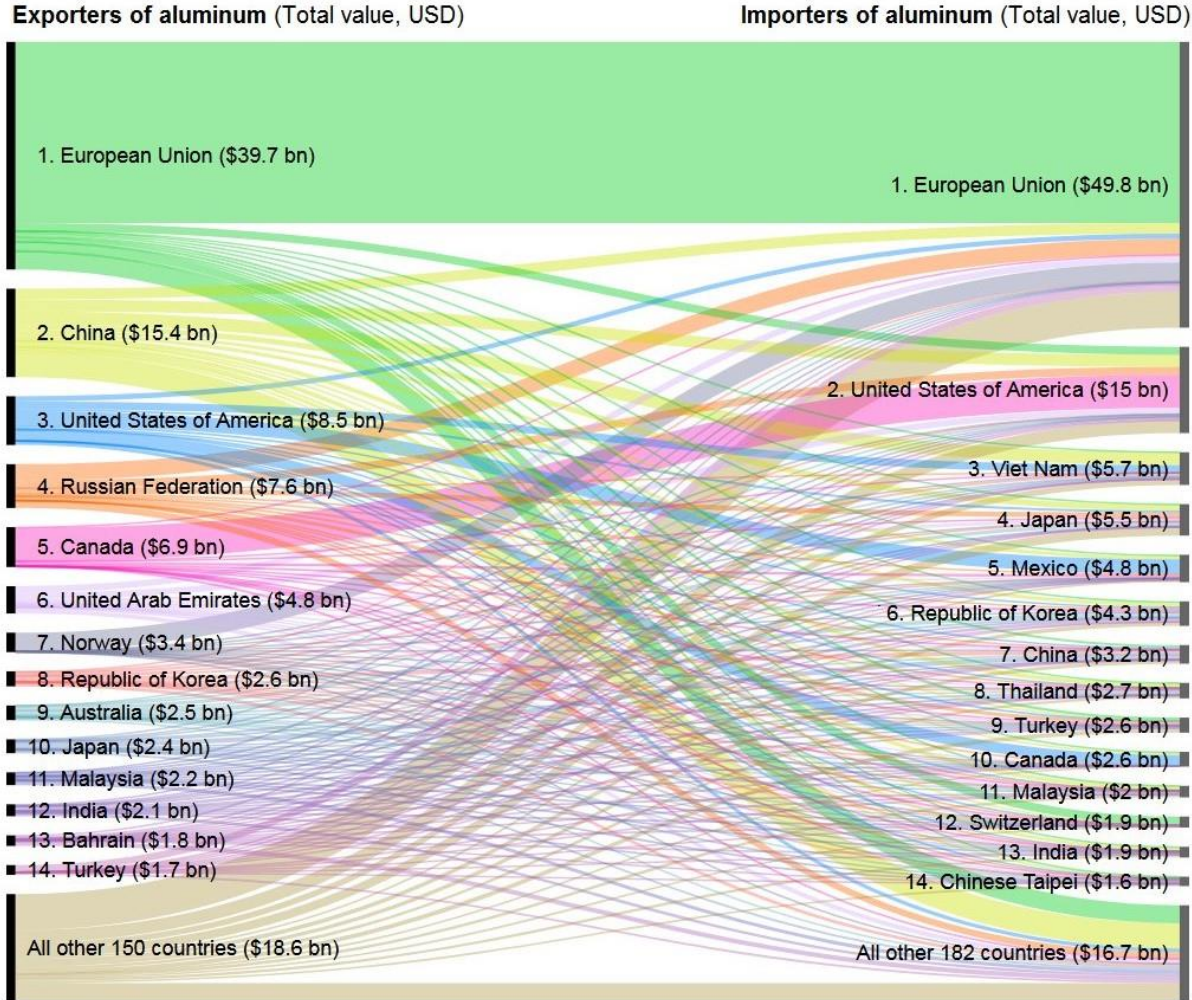
Since the early 2000s, the world market has gradually come to be dominated by aluminium from China, Russia and the Gulf States¹ – none of which have industrial sectors able to completely accommodate domestic supply. Benefitting from government intervention and scale economies, the speed and scale of export growth from these hubs has been truly astonishing. As a wave of low-priced aluminium swept the globe, many traditional producers in the U.S. as well as the EU have faltered. The consequences for corporations, their employees and entire communities have been devastating.

The EU is in a unique position, as it possesses strong aluminium smelting capabilities and vibrant manufacturing downstream so most trade takes place inside the bloc. European aluminium producers for the most part, do not produce for export markets outside the EU but feed the manufacturing sectors at home or in other member states.

Figure 1 provides an overview of contemporary global trade of the products subject to a 10 % protective tariff upon entering the U.S.. It documents the dense web of intra-European trade flows, featuring the U.S. as the major non-European export destination. The U.S. itself is shown to export substantial amounts to its NAFTA partners Canada and Mexico, as well as to Viet Nam. With respect to imports the U.S. markets rely primarily on Canadian aluminium followed by shipments from China, the EU, Russia, and the Gulf States.

¹ For convenience, the term Gulf Cooperation Council (GCC for short) will be used in the following. Members include Bahrain, Kuwait, Oman, Qatar, Saudi Arabia and the United Arab Emirates. With the exception of Oman and Kuwait all members have established significant smelting operations and strong export business.

Figure 1: Global Trade Flows of the Aluminium Products Covered by New Tariffs (2016)



Source: ITC Trade Atlas, compilation by THINK!DESK 2018.

Transatlantic aluminium trade has evolved over decades based on joint development and manufacturing projects. A closer look reveals that the EU commands a significant trade surplus in this trade relationship: American exports to the EU represent just one third of the shipment going the in opposite direction. On both sides plates, sheets and strip (7606) constitute the bulk of trade in an otherwise typical intra-industrial trade pattern between industrialized economies (tables 1 and 2).

Table 1: EU Aluminium Exports to the U.S. (in tons)

Commodity	Description	2012	2013	2014	2015	2016	2017
76	Aluminium and Articles Thereof	283,238	255,935	296,468	294,022	326,112	352,534
7601	Aluminium, Unwrought	16,580	12,351	37,296	22,484	37,088	44,058
7604	Aluminium Bars, Rods and Profiles	19,659	20,037	22,765	22,204	27,411	26,588
7605	Aluminium Wire	14,540	3,272	3,433	3,866	4,353	4,033
7606	Aluminium Plates, Sheets & Strip (>0.2 mm)	145,002	142,048	134,607	147,663	159,873	164,355
7607	Aluminium Foil (<0.2 mm)	30,685	25,157	28,120	30,742	31,377	32,833
7608	Aluminium Tubes and Pipes	5,945	5,626	6,960	5,231	5,684	4,950
7609	Aluminium Tube or Pipe Fittings	422	384	459	350	217	282
7616	Articles of Aluminium	13,153	13,651	16,430	17,673	15,572	15,593

Source: European Aluminium Association

Table 2: U.S. Aluminium Exports to the EU (in tons)

Commodity	Description	2012	2013	2014	2015	2016	2017
76	Aluminium and Articles Thereof	116,549	127,146	103,439	135,812	116,748	123,999
7601	Aluminium, Unwrought	20,243	16,744	10,616	10,879	11,935	11,682
7604	Aluminium Bars, Rods and Profiles	10,472	9,097	11,111	10,337	10,016	12,117
7605	Aluminium Wire	6,075	8,826	8,516	7,728	5,484	7,222
7606	Aluminium Plates, Sheets & Strip (>0.2 mm)	45,671	56,893	35,103	65,252	45,607	50,496
7607	Aluminium Foil (<0.2 mm)	11,376	11,963	12,486	13,619	14,041	14,117
7608	Aluminium Tubes and Pipes	1,001	869	569	682	702	651
7609	Aluminium Tube or Pipe Fittings	621	555	558	665	731	586
7616	Articles of Aluminium	8,234	7,443	6,797	6,476	6,737	7,031

Source: European Aluminium Association

European aluminium companies value the U.S. market as their most important export destination for rolled products. During the first three quarters of 2017, 119 thousand tons or close to 20 % of EU shipments of said goods have been supplied to American customers. Similarly, the U.S. constitutes the second most important overseas market for European aluminium extrusions. Over the first nine months of 2017, EU producers have completed sales covering 21 thousand tons – or 12 % of the bloc’s total exports in this category. As table 3 illustrates, the U.S. has consistently served as a key overseas market and EU companies supply a wide spectrum of goods.

Table 3: EU Aluminium Exports to the U.S. as Share of the Country’s Total Aluminium Export Quantities by Commodity

	2012	2013	2014	2015	2016	2017e
7601 Unwrought aluminium	8.0%	7.0%	18.7%	9.4%	11.9%	12.8%
7604 Bars, rods and profiles, of aluminium	10.6%	10.6%	11.7%	11.5%	12.8%	12.1%
7605 Aluminium wire	19.4%	6.2%	6.3%	6.3%	7.5%	6.6%
7606 Plates, sheets and strip, of aluminium, (> 0.2 mm)	19.1%	18.0%	17.6%	18.9%	18.9%	18.5%
7607 Aluminium foil (< 0.2 mm)	11.2%	9.7%	10.5%	11.4%	11.6%	11.1%
7608 Aluminium tubes and pipes	22.3%	19.1%	23.7%	20.5%	22.3%	18.3%
7609 Aluminium tube or pipe fittings	13.8%	10.6%	12.1%	9.6%	6.3%	8.0%
7616 Articles of aluminium, n.e.s.	9.0%	9.1%	11.6%	13.5%	11.7%	11.0%

Source: Eurostat, THINK!DESK projections

For the German aluminium industry, the U.S. market also possesses strategic significance. Export trade also features a strong focus on various types of rolled products. Table 4 shows that shipments to the U.S. have declined in recent years as exporters from countries like China have gained market shares and German companies diversified their export business.

Table 4: German Aluminium Exports to the U.S. as Share of Total German Export Quantities by Commodity

	2012	2013	2014	2015	2016	2017e
7601 Unwrought aluminium	1.0%	1.0%	1.4%	6.7%	0.3%	0.4%
7604 Bars, rods and profiles, of aluminium	12.5%	13.4%	14.7%	14.6%	13.2%	12.1%
7605 Aluminium wire	2.5%	1.0%	1.1%	1.6%	3.3%	4.8%
7606 Plates, sheets and strip, of aluminium, (> 0.2 mm)	20.0%	19.2%	14.9%	16.1%	15.3%	13.8%
7607 Aluminium foil (< 0.2 mm)	12.8%	12.3%	14.2%	15.8%	15.2%	14.2%
7608 Aluminium tubes and pipes	32.9%	34.1%	39.5%	33.1%	35.3%	27.9%
7609 Aluminium tube or pipe fittings	14.1%	8.1%	8.0%	11.4%	9.6%	7.4%
7616 Articles of aluminium, n.e.s.	19.1%	20.3%	24.7%	24.9%	23.1%	18.9%

Source: Eurostat, THINK!DESK projections

Despite these adjustments, German exports to the American market have remained a large component of total U.S. bound shipments originating in the EU. Table 5 displays the U.S. bound exports from Germany and the EU as a whole spanning the product categories targeted by the new 10 % tariff. The visible decline in the proportion of German sales to the U.S. showcases the increased vitality of other EU country exports, e.g. France, Belgium, Italy and the Netherlands.

Table 5: EU and German Exports bound for the U.S. in recent years (in tons)

	EU exports to the U.S.	German exports to the U.S.	Share of German exports
2012	283,624	121,590	42.9%
2013	256,328	114,159	44.5%
2014	296,909	107,998	36.4%
2015	294,020	111,482	37.9%
2016	325,955	99,700	30.6%
2017	342,664	97,247	28.4%

Source: Eurostat

The composition of U.S. aluminium imports, in comparison, is much less diverse than that of the EU or Germany, as much of their trade occurs within the EU. With regard to primary aluminium and semi-fabricated products about 80 % of German imports and exports take place with EU or EFTA members.

On the contrary, the U.S. receives approximately 90 % of primary aluminium and alloy imports from just three sources: Canada, Russia and the GCC countries. With regard to semi-fabricated and finished products, shipments from China and Canada together make up more than half of American imports. The EU in general and Germany in particular have continued to serve as important trading partners but their contribution to primary aluminium imports is negligible (0.44 % and 0.04 %, respectively). Their share of rolled product imports is limited as well (11.84 % and 3.02 %, respectively).

It follows from the above that the U.S. market is of great importance to the aluminium industry in Germany and the wider EU. The reverse, however, is obviously not true as the footprint of German aluminium products on the American market is disproportionately small compared to those of Canada, Russia and the GCC countries.

3 ASSESSMENT OF THE TRADE-EFFECTS OF A NEW 10% TARIFF ON US ALUMINIUM IMPORTS

By imposing a 10 % ad valorem tariff on US aluminium imports, the US government is breaking up the existing set-up of the global aluminium industry and its fabric of cross-border labour division. This disruption is not restricted to aluminium producers per se, but impacts on the entire aluminium value chain.

The economic mechanism at work is the following. The import tariff will increase the cost of non-American (except Canadian and Mexican) aluminium to American consumers by 10 %. Nota bene: It is not the sales price or cost structure of these non-American suppliers that changes, but rather a border tax levied by the U.S. government that produces these price hikes. Confronted with these price increases, American consumers are expected to shift demand to domestic producers. It is highlighted here that these American suppliers have thus far been unable to attain internationally competitive cost/price structures. Now provided with an (administratively created) 10 % cost/price advantage vis-à-vis their foreign competitors, companies are expected to re-capture a significant share of domestic order volumes. However, domestic firms will and have to increase their sales prices in order to have viable business cases. This will correspondingly reduce the sales-price advantage granted to them vis-à-vis their foreign competitors. As a result prices for aluminium in the US market may increase by up to 10 % until the market reaches a new equilibrium where domestic producers have pushed their sales-prices to the full 10 % margin granted to them by the import duties. For final consumers not employed or invested in the domestic aluminium industry, this implies price increases of varying degrees affecting all aluminium containing goods.

World market prices of aluminium will be affected as well. As the U.S. market had attracted large inflows of aluminium from the rest of the world, the expected reduction in American aluminium imports will disrupt regional supply/demand equilibria everywhere. Given the impossibility to quickly reduce rest-of-world production capacities, the sudden drop in global (i.e. American) demand will result in overshooting supply and exert downward pressure on global aluminium prices.

Exchange rate movements, particularly the Euro-US Dollar pairing, will have substantial influence on the magnitude of trade shifts and price changes. The rather unpredictable and confrontational governance style of the current administration which is characterized by unnatural personnel fluctuation even in top cabinet positions has eroded confidence in the U.S. economy. This uncertainty contributed to the devaluation of the US Dollar relative to other currencies, particularly the Euro. From the perspective of the U.S. administration, this phenomenon may not be unwelcome because a weaker dollar eats into the profits of exporters and lowers their competitiveness vis-à-vis domestic suppliers. The analysis underlying this report expects the US Dollar to depreciate further against the currencies of major international trading partners, like the EU, Japan and China. This effect complements and reinforces the protectionist forces expressed through the 10 % tariff.

3.1 Adjustments in the U.S. aluminium industry

Following the imposition of the new tariff, the U.S. aluminium industry will undergo a series of adjustments. As has been pointed out earlier, the Trump administration clearly hopes to boost domestic output of primary aluminium in the short term. However, the loss of plant equipment through bankruptcies cannot be reversed quickly. Smelters that have been idled or mothballed can be restarted but time lags are unavoidable.

Statements suggest that White House aims for several large smelters to resume operations. However, technical factors dictate a gap of at least half a year of intricate adjustments before such a plant can enter normal operations and begin volume production. With this in mind, the current composition of market supply is unlikely to change before September or October 2018.

The remaining aluminium companies will find opportunities to boost profitability and invest in badly needed technology upgrades. In the face of strong and growing import competition, most U.S. smelters have delayed or cancelled technology renovation projects which promise increases in energy efficiency and product quality. If such an upgrade will also translate to an improvement of the military supply situation, however, remains undetermined.

While the latter appears to have been used as a pretence for the imposition of the new tariff, both Commerce Secretary Ross and President Trump himself have consistently highlighted the need to preserve manufacturing plants and employment inside the U.S.. Other representatives of the current U.S. administration, too, have expressed the hope that plant utilization be raised, competitiveness be restored and import dependence be reduced.

Behind the international competition blocking protective shield provided by the import duties, U.S. aluminium smelters can be expected to increase their operative activities and output as well as to raise their sales prices. Actually, they have to charge higher prices than those equilibrating the present international free trade market set-up in order to become profitable. At the same time these increased price levels will directly reduce the price disadvantage foreign sellers will face after implementation of the import duties. The actual price differential (i.e. disadvantage) foreign suppliers will face after these adjustments, will eventually determine their loss of market shares in the U.S. As it is these relative price differentials that will decide the propensity of aluminium consuming industries to sever well established trade ties with their international suppliers in favour of local partners.

On the other hand, it is questionable if U.S. aluminium companies actually possess the means to fill the gap created by a (hypothetical) sharp drop in imports. American smelting capacity has continuously declined since the early 2000s and with it skilled labour has been lost. A surge in primary aluminium output of the magnitude needed to displace imports of products affected by the tariff would go far beyond any feasible increase in plant utilization. Given that the current political climate stigmatizes imports, Canadian and Mexican aluminium enterprises which – for the time being – continue to enjoy tariff-exempt access to the U.S. market are probably not seeking to increase their footprint on the U.S. market either.

As a result U.S. smelters are probably looking to generate windfall profits from higher prices and increased quantities, ideally to finance plant upgrades and extensions. In how far the additional free

cash flow is invested in projects that boost competitiveness in the long term depends not least on the stability and predictability of political economy frameworks. These represent the institutional set-up which has been shaken by the governance style of the current administration.

In this context, it also remains to be seen where the highly specialized and technology-intensive aluminium products come from that are stated to be crucial to ensure national security in military equipment of various types. In his op-ed for the WSJ, Secretary Ross bemoaned that in the U.S. there was only one aluminium smelter that makes the high-grade aluminium needed for defence aerospace applications. This fact is unlikely to change in the short run, considering that American suppliers have to invest in the development of said high-grade aluminium products. In light of their complexity and the high technology input required, the formation of fresh production plants requires substantial investment over a period of several years. Considering the opposition the Trump administration is facing about the protective tariffs from both inside and outside the country, manufacturing companies may not find the stable and favourable environment they require for a large-scale, long-term and cost-intensive investment project of this kind. In other words, the rocky and erratic conduct of the Trump administration negatively impacts on the investment environment and may thus discourage domestic firms from taking long term business risks associated with the development of aluminium components required for highly advanced military equipment.

Some of the hoped for domestic capacity building effects of the new tariff regime might not come about.

3.2 Direct impact on German exports to the United States of America

German and European firms are strongly committed to the US American markets exporting substantial amounts of aluminium products. With the new tariff regime in place, their traditional customers will be incentivized to switch demand to domestic producers and forego European imports.

Due to their longstanding ties with U.S. clients, the direct effects of the new tariffs for German and EU producers are substantial. Well established and tightly integrated supply chains between companies on both sides of the Atlantic will be disrupted once the new tariffs enter into force. They stand to hurt the long-term joint development of companies committed to industrial production and manufacturing jobs in the EU (and the U.S.). In fact, Heidi Brock, the President and CEO of the U.S. Aluminum Association, has warned President Trump in a personal letter that

“Unfortunately, the tariffs proposed will [be] ... negatively impacting supply chains with vital trading partners who play by the rules. We fear that the proposed tariff may do more harm than good, hurting rather than helping the 97 percent of aluminum industry jobs in the mid- and downstream production processes.”

Thanks to the successful development of manufacturing partnerships, EU shipments of aluminium products to the U.S. market have been trending up over the past years. During the first eleven months of 2017, EU exports to the U.S. covered 342,664 tons of aluminium plates, sheets, bars and other products affected under the new tariff regime.

The importance of the American market and the damage of protective tariffs for German and EU aluminium trade is the greatest in aluminium extrusions and rolled products. In both fields, traditionally almost one fifth of EU export shipments have been destined for the U.S. market – a stable trade relationship which is now in danger. Even considering the superior quality and strong competitiveness of said products, THINK!DESK estimates that shipments to the U.S. will decline by 20 – 30 %. Among other factors, this projection bases on the fact that the EU’s aluminium export business, to a significant extent, consists of deep-processed, technology-intensive products. The opportunities to pass on part of the 10 % surcharge to American customers are above average. The remaining quantities will have to be digested inside the EU’s common market or rerouted to other destinations.

Unfortunately, the vigorous opposition to metal imports of the current U.S. administration makes it particularly hard to develop new trade opportunities. German companies are thus facing an uphill battle when trying to compensate for lost trade volumes in one category through additional ones in another.

President Trump, Secretary Ross, Trade Representative Lighthizer and Director of Trade and Industrial Policy Navarro have repeatedly and emphatically stated that the reduction of imports and their displacement with domestic output constitute overriding goals of the current administration. This narrow set of objectives suggests that the only direction for U.S. bound trade volume is down. The following table 6 displays the projected losses in export trade with the U.S. for 2018 and 2019.

As documented in table 6 THINK!DESK expects export losses to remain comparatively moderate in 2018. Underlying this assumption is the simple fact that the substitution of foreign imports requires

corresponding U.S. production to be in place. But in order to bring larger volumes on line and restart idle capacities, the U.S. aluminium industry will need the larger part of 2018. The full force of U.S. import substitution on German exports will therefore be felt only from 2019 onwards. (Percentage changes for 2018 and 2019 provided in table 6 are all in relation to 2017 exports [data here estimated by an annualization on the basis of first eleven months exports]).

Table 6: Projected Losses of German Aluminium Export Quantities to the U.S. by Commodity (in tons)

	2015	2016	2017	2018e	2018 change	2019e	2019 change
7601 Unwrought aluminium	5,370	391	606	568	-38	492	-114
7604 Bars, rods and profiles, of aluminium	7,679	6,982	6,780	6,441	-339	5,763	-1,017
7605 Aluminium wire	52	135	179	166	-13	139	-40
7606 Plates, sheets and strip, of aluminium (>0.2mm)	58,679	56,312	55,426	51,269	-4,157	42,955	-12,471
7607 Aluminium foil (<0.2mm)	18,117	17,424	17,462	16,589	-873	14,843	-2,619
7608 Aluminium tubes and pipes	3,453	3,848	3,269	3,024	-245	2,533	-736
7609 Aluminium tube or pipe fittings	76	70	66	61	-5	51	-15
7616 Articles of aluminium, n.e.s.	4,981	5,034	4,686	4,451	-234	3,983	-703

Source: Eurostat, THINK!DESK projections

3.3 Indirect effects resulting from the re-direction of aluminium articles originating in third countries to the German home markets

The German and European aluminium industries will also be negatively affected by increasing import competition on their home markets. Aluminium shipments from third countries originally earmarked for the U.S. market will be rerouted to the EU in substantial volumes. As one of the remaining large, open markets with strong economic growth prospects Europe is going to be a prime target.

However, the overall impact of rerouted aluminium shipments will be extenuated by two important factors. Firstly, the price level and demand dynamic of the EU market significantly differ from those across the Atlantic. Furthermore, some of the countries that have previously exported large quantities to the U.S. will need time to establish business relationships in the EU. Similarly, aluminium consumers in Germany and the EU will carefully evaluate their switching costs before walking away from established supply relationships.

Secondly, the EU Commission has consistently valued the bloc's industrial base and put in place anti-dumping tariffs against unfairly priced exports from countries that do not adhere to market economy rules. The Commission has implemented a certain degree of protection against dumped imports of aluminium foil from China and Russia (since 2015) as well as aluminium foil in small coils (since 2012), aluminium radiators (since 2012), and aluminium road tires (since 2008) from China. Antidumping tariffs will, to a certain extent, alleviate the import pressure from aluminium trade shut out of the U.S. market.

However, THINK!DESK is not convinced that existing protection will suffice to prevent a disruption of the common market from a wave of additional imports that are rerouted from the U.S. market. For the EU market this implies that pressure from growing import competition will likely be felt as early as June or July and increasing over the following months. U.S. aluminium consumers will continue to rely on imports for several more months after the tariffs have been put in place as smelters will take until October or November to bring additional capacities on stream. THINK!DESK predicts that the EU market will feel the full effect of rerouted shipments starting from 4th quarter of 2018.

Aluminium plate, sheet and strip may serve as a case in point. Chinese exports of said products to the U.S. have surged in the past years. From March 23rd, the new U.S. tariffs are going to deflect about half of these quantities – most of them to the EU. Between 2013 and 2017, shipments from China accounted for 15 – 20 % of total EU imports of this commodity. It stands to reason, that additional shipments of Chinese plates, sheets and strip are going to drive up imports from the 130 thousand tons entering the common market in 2017.

Experience shows that even where antidumping tariffs are already in place, complete protection from under-priced imports cannot be guaranteed. Although in the EU, protective tariffs against dumped Chinese aluminum foil have been in place since 2015, shipments have grown by another 10 % since then to reach about 290 thousand tons in 2017. A new wave may soon run onshore. In recent years imports of aluminium foil to the U.S. have risen by leaps and bounds, reaching 137 thousand tons in 2016. The market share of Chinese suppliers rose from zero to 22 percent in the span of 15 years. Since

March 5th, 2018 Chinese aluminium foil exports to the U.S. are facing protective antidumping and countervailing tariffs – deflections to the European markets must be expected.

Going forward, import pressures for the EU market are only going to increase. In late February 2018, the U.S. Department of Commerce has issued the final determination in a combined antidumping and countervailing duty investigation against Chinese aluminium foil imports. Deliveries have tripled between 2010 and 2017, reaching almost 200 thousand tons and approximately three quarters of U.S. aluminium foil imports. U.S. Customs are going to apply dumping margins ranging from 48.6 % to 106.1 % and anti-subsidy rates of 17.1 % to 81 %. These punitive tariffs are levied in addition to the 10 % “blanket tariff” implemented by the Trump administration. It does not take much imagination to forecast substantial flows headed for the EU market.

Moreover, the EU is likely to suffer from the incomplete protection of tariffs already instated by the U.S. Until recently, the U.S. market had been shielded only against dumped and subsidized imports of aluminium extrusions from China. Following the imposition of the measures in 2011, shipments of the targeted commodity collapsed initially but until 2017 gradually recovered to a level equivalent to roughly two-thirds of the 2010 quantities. The remarkable resilience of Chinese exporters can be explained in part by the fact that overcapacities in their home market had produced a supply glut which forced surplus production onto the world market at all cost.

In order to circumvent export restrictions on primary aluminium (7601) imposed by the Chinese government, aluminium companies also opted to cast the metal as bars or rods (7604). This mis-declaration allowed enterprises to realize export opportunities which otherwise would have been precluded by China’s own trade regime. After these materials have arrived in the target market, they are melted down and processed into final products. In recent years, several scandals exposed in the U.S. have shed light on these practices which are of course not limited to the American market. Due to 10 % increase of import costs to the U.S. market, shipments of primary aluminium disguised rods and bars must be expected to enter the European market in greater volumes.

While China has been the second largest source of aluminium imports of the U.S., it is only one of three major non-NAFTA suppliers. Furthermore, Russia has come to be a major source of primary aluminium, alloys and semi-fabricated aluminium goods. Second only to Canada, Russian exports have accounted for 14 % of 2017 U.S. imports in the commodity group. Similarly, the United Arab Emirates, Qatar and Bahrain have established themselves as important suppliers of crude metal and alloys.

Both the Gulf States and Russia can draw on ample supplies of cheap energy to power their smelters. As electricity constitutes the principal cost factor in the production of primary aluminium, the two players (in lieu with Canada) enjoy a formidable cost advantage over the American and European competition. Following the imposition of the 10 % import tariff by the U.S. Department, THINK!DESK expects exporters from both regions to actively seek out opportunities on the European market – not only to avoid the new U.S. tariffs, but also to benefit from lower transportation costs.

Based the considerations outlined above, THINK!DESK expects a significant increase in the import quantities of all aluminium product categories covered by the Trump tariffs for the rest of this year 2018. European market prices will come under pressure as more and more material will be chasing buyers. Depending on the extent of price increases in the U.S. and decreases elsewhere as well as on the development of exchange rates, the situation faced by EU companies may very much deteriorate

further in 2019. It remains to be seen how much of the new import tariffs foreign suppliers can pass on to downstream consumers of aluminium. At the same time, it is yet unclear to what extent American producers will drive up prices to exploit their newly afforded cost-advantage. Without a better understanding of the initial adjustments to international trade flows, it is unrealistic to gauge the second and third round effects that will shape the global aluminium market after the summer.

THINK!DESK projects that Chinese shipments to the U.S. will suffer a significantly more pronounced drop than other trading partners. This is due to an expected collapse in aluminium foil exports. Taking account of developments in the market environment of China and the EU, about one third of deflected materials may enter the EU. Another third will be redirected to supply additional industry and infrastructure construction projects in the countries along China's New Silk Road. The final third of quantities failing to enter the U.S. will be digested in the Chinese domestic market. It will drive up stockpiles and probably be released from warehouses around November 2018 as aluminium smelters in some regions will be shut down to limit air pollution. Additional imports from China will predominantly take the form of aluminium foil (7607), bars and rods (7604) as well as plates, sheets and strip (7608). Other product categories may see some import increases as well.

Russian exports to the U.S. of crude metal and semis will take a serious hit from the new tariffs. As a consequence, shipments may drop by 10 % in 2018 and 30 % in 2019 (based on 2017 levels). This factors in political tensions between the two countries. While the Russian industrial base is expected to be unable to generate sufficient additional demand, almost the entire amount of cancelled U.S. orders will seek other export markets. Due to well established trade relations with European customers, about a third of deflected Russian material may eventually enter the EU.

Like Russia, the Gulf States will be forced to find new export destinations for quantities equivalent to about 10 % and 30 % their U.S. bound exports in 2018 and 2019, respectively. With modest industrial bases in the home markets, these materials will chase new export markets in direct competition with Russian products. Unlike Russian exporters, enterprises from the Gulf States lack the established customer base and trade relationships in the EU. Consequently, THINK!DESK forecasts that only 10% of deflected export quantities will eventually end up on EU markets.

In a nutshell: The new U.S. tariff rate regime will set free large volumes of aluminium primary and semis that look for new markets. Germany and the EU constitute prime targets for these redirected trade flows. As a result of the reduced absorption of global aluminium production on the U.S. markets, rest-of-world prices will drop. Prices in the European Union might experience especially strong pressure on prices as in addition to the supply expansion caused by its own rejected U.S. exports, roaming aluminium from third countries will compete for European customers. As Germany and its aluminium industry constitute an integral part of the European industry and as furthermore the distribution of crowding out effects by rerouted material are at the time being still impossible to predict, table 8 focusses on the European markets as a whole and does not differentiate for Germany. Tables 7 and 8 present the above information in a more condensed format. (Percentage changes for 2018 and 2019 provided in table 7 are all in relation to 2017 exports [data here estimated by an annualization on the basis of first eleven months exports]). Note the idiosyncratic pattern of Chinese exports in comparison to Russia and the Gulf States. Chinese exports experience a dramatic drop already in 2018 which results from Chinese exports into the U.S. being not only hit by the 10 % import duty of the Trump presidency, but also the (probably WTO compatible) combined antidumping and countervailing duty measures

against Chinese aluminium foil imports to the U.S. as determined by U.S. Department of Commerce in February 2018.

Table 7: Projected Export Quantities Destined for the U.S. Market of Major U.S. Trading Partners for 2018 and 2019 (in tons and percent)

	2017 (1-11)	2017 annualized	2018	2019	2018 Change	2019 Change
China	420,000	458,182	365,000	350,000	-20%	-25%
Russia	622,000	678,545	610,000	470,000	-10%	-30%
Gulf States	869,000	948,000	855,000	665,000	-10%	-30%

Source: U.S. Department of Commerce, THINK!DESK projections

Table 8: Projected Rerouted Shipments to the EU Market of Major U.S. Trading Partners for 2018 and 2019 (in tons)

	2018 Loss in Exports to U.S.	2019 Loss in Exports to U.S.	2018 Additional Exports to EU	2019 Additional Exports to EU
China	95,000	110,000	30,000	30,000
Russia	70,000	210,000	25,000	70,000
Gulf States	93,000	283,000	10,000	30,000

Source: U.S. Department of Commerce, THINK!DESK projections

3.4 Indirect effects resulting from increased competition in third country markets

Trade diversion effects will not only be felt in Europe, but also in most export markets served by German aluminium companies. Quantities traditionally earmarked for the American market will heat up the competition in third country markets, like Turkey, South Africa or the Balkans. As rerouted materials from across the world meet in and swamp new target countries, the established system of long-term trade relationships will be uprooted. This may be detrimental for both local aluminium industries as well as for European trade partners. As a result, German companies will see part of their exports being crowded out by low-cost large volume exporters like Russia and China. Export revenues from Africa, the Middle East as well as other parts of Asia must be expected to decrease markedly. The presence of German aluminium companies on these markets will be undermined as market shares are lost to competitors from China and Russia which can count on artificially low energy costs and strong state support. Importantly, should these players take over trade opportunities from Union producers and sustain their large exports, this would cut their incentives to tackle overcapacities and engage in meaningful structural reforms.

The export volumes at risk are depicted in table 9, which documents German exports of aluminium wrought material to its major ex-EU and ex-NAFTA destinations. As highlighted by this table, at the time being Switzerland, Turkey, Saudi Arabia, South Africa, Rep. Korea, Serbia, Brazil, constitute the most important non-EU and non-NAFTA export markets for German wrought material. The stability of export relations with these countries, respectively their propensity to shift to new suppliers differs significantly. While a market like Switzerland can be assumed to possess significant inertia, most other markets must be expected to be easily lost to new suppliers primarily competing over the price.

Table 9: German Exports of Aluminium Wrought Material to Selected Countries in Tons (2015 – 2017)

	2015	2016	2017
EFTA			
Switzerland	43,133	55,422	75,253
Norway	3,514	3,573	3,492
Iceland	603	737	1,076
Liechtenstein	746	541	529
EASTERN EUROPE			
Turkey	44,999	45,447	50,499
Serbia	17,624	20,563	22,533
Ukraine	2,484	3,442	3,937
Belarus	1,578	1,968	1,571
MENEA			
Saudi Arabia	62,364	45,313	34,256
India	7,106	7,608	6,997
UAE	4,519	2,834	1,790
Israel	994	1,247	1,497
Kazakhstan	490	1,192	1,054
EASTERN ASIA			
Rep. Korea	27,166	27,479	25,124
Thailand	6,327	5,880	6,549
Japan	8,673	7,479	6,145
Vietnam	3,580	820	1,724
AFRICA			
South Africa	6,314	12,281	25,935
Tunisia	1,719	3,256	1,800
Egypt	2,271	554	723
Morocco	3,548	1,736	265
SOUTH AMERICA			
Brazil	11,004	12,077	11,296
Chile	1,735	1,633	2,422

Source: GDA.

4 THE ROLE OF CHINA

Instead of applauding the newly instated tariffs, Heidi Brock, President and CEO of the U.S. Aluminum Association, has clarified to President Trump that the root cause of the problems her industry faces are not shipments from the EU but the fact that

“China’s illegal subsidies to producers of both primary aluminum and semi-fabricated aluminum products have resulted in significant overcapacity and negatively impacted the operations of U.S. aluminum companies”. She highlights that “the tariffs proposed will do little to address the fundamental problem of massive aluminum overcapacity in China”.

The point made by Heidi Brock is highly reasonable. In 2017, China exported a total of 4.19 million tons of aluminium, aluminium sheet, foil and tubes. Of this, 672,000 tons were exported to the United States, accounting for 16 % of aluminium exports. The major driver of these exports are massive overcapacities.

During the last two decades the Chinese aluminium industry has been growing at breakneck pace, thereby crowding out traditional aluminium producing centres elsewhere. The volume of primary aluminium smelted in China surged from just 10 % of the world total at the time of China’s WTO accession in 2001 to 54 % in 2016 (see table 10). Catalyst of this meteoric rise has been an industrial policy assessment made at the turn of the century. At that time China’s politico-business elite surmised that China’s planned for industrial ascendancy and increasing urbanisation would require the input of massive volumes of aluminium – and acted with unrelenting determination. Chinese government agencies declared the aluminium industry and all supporting facilities (e.g. power plants) as key strategic development projects and opened the flood gates for financing from the state owned banking sector and administrative support from local governments.

Table 10: Chinese Aluminium Capacities and Output (2011 – 2016)

		2011	2012	2013	2014	2015	2016	2017e
Capacities	mln. tons	23.43	27.31	31.2	35.8	38.9	40.7	41.6
Net-Additions	mln. tons		3.9	3.9	4.6	3.1	1.8	0.9
Production	mln. tons	19.5	21.3	24.9	28.1	31.6	32.2	36.6
Increase	%	12.4	9.2	16.9	12.9	10.3	3.9	4.4
Utilization	%	83.2	78.0	79.8	78.5	79.7	77.2	88.1

Source: CNIA, CITIC, Antaike.

Although warnings of excessive aluminium capacities have shown up regularly in Chinese government documents since the early 2000s, authorities did little to rein in runaway plant growth. In 2013, the central government finally announced that no permits for the construction of additional smelters would be issued. This, however, did little to halt or even slow the mushrooming of new plants across the country. In the following year, Beijing stripped local governments off their project approval authority and centralized relevant responsibilities. The effect of this move has failed to produce the desired results as most plant construction and expansion projects were carried out without undergoing proper application and approval procedures. By the end of 2015, China's aluminium smelting capacities exceeded 30 million tons. This implies a doubling over the span of just five years.

In 2015, the Chinese government issued the *Notice on Measures for the Implementation of Capacity Swaps*, effectively creating a way for companies to come clean and legalize their "black plants" (those that had been constructed and operated without government approval). In a departure from previous announcements, authorities dropped their insistence that all such production sites had to be shut down permanently. Instead, operators were offered to "swap" capacities, i.e. retroactively receive approval for illegal plants (provided they can meet industrial policy and operating standards) and, simultaneously, phase out correctly registered plant equipment of equal or larger production capacity that has become outdated or obsolete. As illegal plants typically employed technology of more recent vintage and featured superior production efficiency and cost structures compared to the legal ones, the trade-off proposed by the Chinese government represented an attractive option. By 2016, the authorities finally completed the mapping and registration of all smelter nationwide (including those under construction or in various stages of planning). According to data compiled by Guangfa Securities, the cumulative smelting capacities legalized under the swap mechanism had reached 4.3 million tons by January 10th, 2018. In April 2017, the State Council, China's cabinet, issued the *Work Plan on Cleaning Up and Adjusting Illegal Projects in the Aluminium Industry* which ordered the forced closure (or the termination of planning and construction activities) of all plant equipment without government approval. As a consequence, the capacity cutback has started in earnest. Estimates suggest that plants with a cumulative annual output capacity of 5 million tons have permanently exited the market. Another 6-8 million tons of production potential was stopped before construction was complete.

At the end of 2017, total aluminium smelting capacity in China stood at 41.55 million tons based on statistics compiled by SMM. During that year, about 36.6 million tons of primary aluminium had been produced, an increase of 12.5 % year on year. This translates into an overall plant utilization ratio of 88 %. Guangfa Securities has estimated that new smelters with a cumulative capacity of 3.4 million tons will enter the market in the course of 2018.

Unfortunately, Beijing has waited too long before taking the overcapacity problem seriously. The steps taken so far are encouraging but far from resolving the imbalances created by nearly two decades of excessive investment, capacity, production and export growth.

5 CONCLUDING REMARKS

The President of the United States' proclamation that the existing organization of the global aluminium industry impairs the national security of the United States and therefore requires action outside of the normal ordering mechanisms of the WTO against all foreign producers except those located in Canada and Mexico is not easily comprehensible and appears to be poorly founded in facts. As shown above, the impression arises that the U.S. has not made sufficient use of the WTO mechanisms to protect its economy from imports originating in countries not fully adhering to the principles of competition driven markets. Instead, the Trump administration appears now to try to solve the issue by means of an extremely blunt weapon ignorant of the substantial collateral damage created.

As a matter of fact, the President's action misses one crucial differentiation: (i) trade with partners that adhere to the same norms and values of fair trade and competition driven markets on the one side, and (ii) on the other side trade with trade partners that feature distorted state/business market structures in which the forces of market competition cannot accomplish their (impartial!) function to structure markets and promote the generation of welfare.

By missing this differentiation the U.S. action disrupts transatlantic trade and weakens its welfare creating contribution to both economies. At the same time it fails to correctly address deficiencies in those economies actually compromising the global market process due to their state interventionist regimes. The Russian and Chinese economies will not become "better" members of the global market community by walling them off with protectionist tariffs. Engaging them in rules-based supra-national organisations like the WTO and a further strengthening of the functionality of these organisations will probably better serve the interests of the U.S. – and the "Western world" – than any ad hoc breach of these very rules in order to cater to some particularistic domestic interests.

But, the decision has been made and will become operational on March 23, 2018. If and to what extent it will provide the hoped for positive impulses to the U.S. economy remains to be seen. In the longer run, however, this new tariff regime must be expected to wield negative repercussions on the US American economy. Across the Atlantic, its negative effects will become instantly manifest and trigger substantial negative consequences in the German and European aluminium industries.

Notably Heidi Brock, President and CEO of the U.S. Aluminum Association, has urged President Trump to create

"Exemption[s] for Vital Trading Partners: Avoid disruption of current trading relationships between the United States and critical trading partners countries that operate as market economies (Canada and the European Union)".

The German/European and the US American aluminium industries used to be closely integrated and strongly interlinked along the entire aluminium value chain. As a matter of fact 15 multinational firms are members of both the European Aluminium association as well as the American Aluminum association, signalling not only their commitment to both regions but also the interlocking constitution of these two markets. As a consequence of this close relationship, its disruption by new tariff barriers manifests itself in significant cuts in trade flows, revenue and profits generated. Jobs protected in the US become endangered in Germany and Europe.

The German aluminium industry will furthermore be substantially harmed by redirected exports from third countries to the European home markets as well as traditional export markets of German producers. As a matter of fact, this latter effect must be expected to exert significantly larger negative effects on the German aluminium industry than the direct impact of lost export business to the U.S.

The question arises, what can and should be done in the face of this predicament.

A standard reflex would be direct retaliation. Target of such measures would be the U.S. market (and indirectly the voters and politicians responsible for new tariff regime). By discretion of the European Commission punitive measures encompassing new quota and/or tariffs on any U.S. export products as well as any other type of sanctions might be implemented at short notice.

While such measures might be adequate, simply to demonstrate disapproval and unwillingness to accept and tolerate these new policies, they should not become the main vector of reaction. Not only is the negative direct effect of the new tariffs, although serious, still manageable. But, the danger of dragging ever more industries and value chains into a transatlantic trade war is real and with it a dramatic loss of welfare in the "Western world".

A second, and probably even more important, reaction would have to take into account the indirect effects of the new U.S. trade regime and protect the German markets from redirected exports originating in countries that *really* feature a lack of compliance with the principles of free market competition. Such measures would be restricted to the aluminium industry and target exporters from any country (but probably focus on China). In order to safeguard the domestic industry a quota fixed at the average import volume of the last three to five years might be employed to guarantee "normal" export activity to the EU. However, such measures cannot be implemented over night. They must be based on legal investigations proving a significant rise in imports to the EU as well as proof of serious injury (or threat thereof) to the EU industry.

A third vector of activities should be directed towards a strengthening of the rules-based ordering of global trade and investment. Such activities should address the U.S. and their increasingly protectionist "America First" policies as well as a general strengthening of the functionality of organisations like the WTO in order to increase their authority and credibility in the global arena. As a first step a complaint along the Dispute Settlement Mechanism of WTO should be lodged highlighting the absurdity of White House claims of European aluminium exports endangering the national security of the U.S. The importance of such a complaint would rather lie in the explicit and symbolic appeal to a supranational institution and its rules system, than in the actual outcome, which could not be expected to be determined earlier than two to three years after lodging the complaint. In addition any diplomatic and political initiative designed to improve the operational functionality and adjudicative authority of the WTO and its sister organisations will promote the interests of the German and European economy and their industries.

Only a strong and in its functionality improved supranational rules-based system, as embodied in the WTO and other institutions, will in the longer run make rising powers like China accept supranational ordering structures and comply with jointly agreed upon standards of cross-border economic interaction.

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