

CAN in the days of US tariff battles and the German export surplus



(Photo: Fotolia)

There are dark clouds in the sky: China and USA started a trade war and Germany's industry export is still not balanced.

The success of CAN is overwhelming. This year, 90 million cars – most equipped with multiple CAN networks – require the largest amount of CAN transceiver chips. CAN networks are not just used in passenger cars; they could be in any control system comprising more than two micro-controllers. NXP, the market leader in CAN transceivers, carries them truck-wise out of its factories. But the CAN business might be affected by the general political and economical situation: The US tariffs on Chinese products have impacts on the CAN business as well as the export surplus of Germany.

US tariffs on Chinese products and the response

Beginning of July, the US administration launched the first tranche of tariffs on \$34 billion worth of Chinese products, because President Donald Trump accused China on unfair trade practice. This included also motorcycles, speedometers, and some other electronic equipment. The Chinese response came immediately: Beijing imposed tariffs on passenger cars and other goods with the same value. The second tranche of tariffs went into effect by end of August. Its value is \$60 billion. Half of the list is related to investment goods – including micro-controllers (8542.31.00), control panels (8537.10.30, and electric motors (8501.nn.nn). But at the end, we all have to pay it. Tariffs take money from our pockets into the treasuries of Washington and Beijing.

Especially the automotive industries are highly networked, linked, and intertwined. The used ECUs are developed and manufactured mainly in Europe, North America, and Japan. It is paradox: The Japanese Honda Odyssey

is the car with the highest portion of parts made in North America. The ECUs implement integrated circuits; the majority of them is assembled and tested in Asia. The chip developments are done mainly in North America, Japan, and Europe. In case of CAN, most of the protocol cores and transceivers are designed in Europe in close cooperation with German and European OEMs (original equipment manufacturers).

The first round of Trump's tariffs affected the purchasing departments of the US automakers. About 40 percent of the content in GM's US-sold vehicles comes from outside the United States, while that figure is 45 percent for FCA and 20 percent for Ford, according to data from research firm Edmunds.com. But just a few CAN-based ECUs are made in China. But when China responded with tariffs on products made in USA, the automakers saw impacts on their business. GM, for example, sells more cars in China than at home. Top managers from FCA, Ford, and GM talked to the US President without changing the mind of Donald Trump. They informed him that the 25-percent tariffs by the Chinese government would raise the price of US vehicles, which could cost jobs in the USA.

Even the German BMW, producing all of its SUVs in South Carolina, exports more of these vehicles to China than selling SUVs in the USA. As said, the automotive industry is a complex network of OEMs, Tier1s, and other suppliers. Changing the supply chain is not that easy, because of long-term contracts and technology partnerships.

It is somehow paradox: In some cases, the US chipmakers have to pay tariff on their own products, because they are assembled and tested in Far East. ▶

They also purchase from China some machinery for their production lines. This is, why the SIA (Semiconductor Industry Association) wants the US Administration to remove 39 products from the tariff list. Still SIA and its members support the aims of the US Government to curtail China's industrial policies and practices on IP (intellectual property) rights. In a statement, the association said: "While the US semiconductor industry shares the Trump Administration's concerns about China's forced technology transfer and intellectual property (IP) practices, the proposed imposition of tariffs on semiconductors from China, most of which are actually researched, designed, and manufactured in the US, is counterproductive and fails to address the serious IP and industrial policy issues in China. We look forward to working with the Administration to explain why imposing tariffs on our products would be harmful to our competitiveness and does not address our challenges with China."

In order to avoid a war on two fronts, China tries to strengthen relations to Europe. Beijing's government allowed for the first a joint venture, in which the foreigner has more than 50 percent of the shares. BMW, one of the German premium automakers, gained the right to take an equity stake in Catl, a world-leading Chinese manufacturer of vehicle batteries. China is well-prepared to improve trade with Europe and Africa. The One Belt, One Road project is part of the long-term Chinese business strategy ([see CAN Newsletter 1/17](#)).

Also, the US Administration tries to avoid a second front. The verbal attacks by Donald Trump on Twitter against Germany did not follow actions up to now – just sable-rattling for the moment.

So far, the American-Chinese trade war has not many consequences for the CAN chipmakers, because the big ones are in Europe and Japan. Cypress, Microchip, and Texas Instruments may have some disadvantages. The automakers need to reorganize some of their supply chains in the short-term and may consider new production lines in China. The market-leading ECU suppliers are headquartered in Europe and Japan. According to the Top 100 list by Berylls, Bosch, and Continental (Germany) defended last year the two first places followed by Denso (Japan), and ZF (Germany). In 2015, ZF acquired TRW Automotive (USA). On the list are just four Chinese companies, two of them for the first time. The US suppliers are ahead in profitability with an average of 10,2 percent compared to the average of 9,8 percent.

Impacts on non-automotive CAN markets

Non-automotive markets are wide spread: From rail vehicle via medical devices and elevator control systems to embedded machine controllers. The tariff lists of the US Administration and the Chinese government are long. CAN device manufacturers may be affected or may be not. This is a matter of chance. ▶



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CiA member Trionic (USA) did not report any problems: “We have China contract manufacturers shipping both to USA and to France and we’ve seen no tariff impact. Probably because the customs tariff code we use, is unaffected.” The company provides among other products, CAN-based I/O devices, vehicle controllers, and electrical and hydraulic drives. Recently, the Xtreme XR1055s telehandler was equipped with the CAN-connectable GP400 controller by Trionic.

Also CiA member RFID (USA) is optimistic. President James E. Heurich sees no impacts: “In terms of a negative way, not so much as we import only a few items from China. Most of our products are made in the USA. On the positive side, we have already begun to see traction and gained some accounts, one in particular for \$280 000 per year due to the fact that we are now able to compete on a price basis. Most of our competitors are German, a few Japanese, in the industrial identification or factory floor space. It simply is not possible for our company to sell into Europe given the tariffs, we have very little market there and must price our products low in order to win the few projects we have there. But we welcome the ability to once again be able to compete fairly here in the USA”.

In opposite, Applied Motion Products (USA), another CiA member, informed its customers about increased prices due to the tariffs: “Most of the motors, drives, gearheads and other essential components within Applied Motion’s product offering are included on the lists of goods that will incur new tariffs of 25 percent.” The company announced a 15-percent surcharge to all products affected by the new tariffs. “We believe there is uncertainty in these new regulations and we are not confident that the China

tariff situation will not change again soon. Accordingly, if the tariff situation changes we may increase, decrease, or eliminate the surcharge applied to our products.” The company is engaged in seeking exclusion of impacted products and essential components from the tariffs.

Germany’s current account surplus decreases slightly

Another economical problem is the German export surplus. In 2018, it is expected to decline to 7,8 percent (2017: 7,9 percent). Economic researchers regard 6 percent as sustainable in the long term. “The decline is attributable to three factors: the surplus in goods exports is unlikely to increase, income from foreign assets is set to decline slightly and, in addition, annual economic output, including inflation, will rise sharply – by 3,7 percent,” stated Christian Grimme from the IfO Institute of Economic Research (Germany). Sustained high current account surpluses can become problematic, if receivables cannot be redeemed, for example, if foreign countries are no longer able to service their interest burden.

Germany is, as in the previous two years, the country with the largest current account surplus again in 2018. With an expected \$299 billion, the German value is ahead of that for Japan, which in the current year is expected to show a surplus of approximately \$200 billion dollars. In third place will be the Netherlands with around \$110 billion. By contrast, the USA is again likely to be the country with the largest current account deficit at just under \$420 billion, which, however, is only 2,2 percent of its annual economic performance.



Figure 1: The Top 100 automotive suppliers grow stronger and are more profitable than the Top 10 automakers (Photo: Fotolia)

The expected surplus in the German current account is attributable to trade in goods; based on the figures for the first half of 2018, there is likely to be a surplus of around \$300 billion for the year as a whole. The main driver for exports of goods in the first half of the year was demand from other €-area countries, other EU countries, and the USA.

This year, China will no longer be among the top three countries with the highest surpluses. Due to very strong imports and weaker exports, China's goods surplus was significantly lower in the first half of 2018, with especially less being exported to the US and Europe.

In regard to the automotive industry, German Tier1 suppliers contribute a significant part of the export surplus. The market researchers from Berylls analyzed that German automotive suppliers showed even more positive figures. They increased their average profitability, which was already at a level of 9,5 percent (2016) to 9,8 percent in 2017 – only topped by US suppliers (10,2 percent). Revenue across all 18 German companies in the Top 100 list grew by a total of 7,5 percent. Overall, the German suppliers thus moved up by six places on average into the Top 100 ranking. Many of them provide CAN-connectable ECUs.

Also non-automotive CAN devices made in Germany are export hits. Especially, CAN-connectable drives and motion controllers are popular. Of course, also encoders and inclinometers with CAN interfaces are developed and manufactured mainly in Germany. Of course, production could be outsourced to other countries. However, 'Made in Germany' is still an important sales argument. ◀

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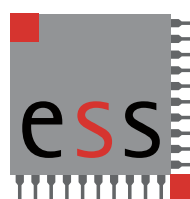
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