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Jürgen Matthes

China's Trade Surplus – Implications for the World and for Europe

China's merchandise trade surplus has reached an all-time high and is likely to rise further. A key driver appears to be a policy push to further bolster Chinese domestic manufacturing production, implying the danger of significant overcapacities. China's imbalance between domestic production and consumption implies that China draws on the domestic demand of other countries to sustain its economic growth. It does so at the potential expense of production and employment of those trading partners with high trade deficits with China. As this constellation could be the source of growing trade conflicts, this article analyses China's growing trade surplus in several dimensions with a focus on Chinas trade relation to the EU.

Time and again, large Chinese trade surpluses have been an issue of global relevance. This is true for the 2000s, when the Chinese currency was significantly undervalued, as well as during Donald Trump's US presidency, when he targeted China in order to reduce the immense bilateral trade imbalance. And China's considerably increased trade surplus vis-à-vis the EU was a key concern for the Europeans at the EU-China Summit in December 2023.

The issue is of major relevance as there are fears across the industrialised world that China's industrial policy will result in Chinese overcapacities in high-tech and greentech industries, which would lead to a wave of cheap Chinese exports flooding world markets (Durfee et al., 2023). This is a major bone of contention as advanced economies have comparative advantages in many high-tech sectors, and they are also trying to establish those advantages in many green-tech fields with the aim of providing new jobs in the green sector for those workers who will lose their jobs in the green transition. As these objectives rank very high on the economic agendas of the EU and the US, the danger of new trade conflicts with China is looming large.

An ominous sign of concern regarding rising industrial overcapacities lies in the redirection of state-directed

Jürgen Matthes, German Economic Institute (IW), Cologne, Germany. credit in China due to the real estate crisis (Graham, 2023). New bank loans to the real estate sector have declined from over US \$1 trillion in late 2018/early 2019 to nearly zero recently, while new bank loans for manufacturing have risen continuously from around only US \$60 billion to nearly \$700 billion in the third quarter of 2023. It is well known that bank loans in China that are connected to industrial policy aims are often handed out at subsidised below-market rates (OECD, 2021; DiPippo et al., 2022).

The problem of overcapacity has plaqued the Chinese economic model for a long time. China's state capitalism relies on five-year plans that set supply-side targets, which are followed by many political and economic actors - often with little regard for demand conditions. Overcapacities are frequently the result of this strategy, for example, in the steel or aluminium sector, as well as in many other sectors (EUCCC, 2016; Li et al., 2019; Guo et al., 2022). Currently, there are concerns about excess capacities in electric vehicles, wind turbines or electrolysers (Graham, 2023; Just Auto, 2023). In fact, Durfee et al. (2023) point to a review by Reuters of official documents in China showing that dozens of local and provincial government entities are increasing the share of public loans to green development, advanced manufacturing and strategic industries.

Moreover, China already dominates global manufacturing and exports as two recent studies indicate impressively from different points of view:

Baldwin (2024) points out – based on OECD trade in value added (TIVA) data – that China's relevance as a manufacturing hub has risen from about 5% of global manufacturing production in 1995 to about 35% in 2020. At that level, China dominates global production and global value

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added. Its production share was higher in 2022 than that of the next nine largest manufacturing countries in the world combined, including the US, Japan and Germany. China gained this immense dominance over time at the expense of these other countries. In 1995, the aforementioned nine countries still commanded about two-thirds of global manufacturing production; by 2020, their share decreased to just one-third. When considering global manufacturing exports, China also commands a higher share than any other country, with around 20% in 2020. All other major exporters have individual shares of much less than 10%. The next nine largest exporters in 2020 account for 40% of global manufacturing exports. This share continuously declined from close to 60% in 1995, while China's share rose more than sixfold from about 3% in 1995.

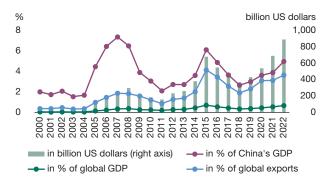
Jean et al. (2023) look at global dominance from another perspective. The authors identify product-level dominant positions in world trade, defined as a share of more than 50% of worldwide exports. Based on this measure, they find that out of a total of about 5,000 products, China held a dominant position in almost 600 products in 2019. This is outstanding and atypical when comparing this result to other countries and over time since 1970. For example, China holds a dominant position in at least six times as many products as the United States, Japan or any other country and twice as many products as the European Union considered as a whole.

The current weakness of China's economy aggravates the situation. Pettis (2023) argues that in an economy with chronically weak consumption, China's aim to sustain a 4%-5% rate of economic growth is only reachable with an ongoing expansion of manufacturing production and exports - and the implied excess capacities. In other words, in order for China to keep growing quickly, other major economies would have to tolerate the decline of their shares in global production. Unless China manages to significantly raise domestic consumption, major trade conflicts are looming also from this perspective. In other words, if China's trade surplus remains so high, other countries will be concerned that China will effectively draw on their domestic demand and domestic production base in order to sustain its economic growth. Against this background, this article dissects the development and the structure of China's rising trade surplus and hints at implications for other countries and particularly for the EU.

Development and state of China's trade surplus

Figure 1 shows that the share of China's merchandise trade surplus as a percentage of GDP has nearly doubled in recent years from below 2.7% in 2018 to 5% in 2022. However, compared to other years after the turn of

Figure 1 China's merchandise trade balance over time



Sources: IMF (2024); IMF (2023); German Economic Institute.

the century, this share does not appear excessively large. Higher levels were prevalent between 2006 and 2008 and in 2015, similar levels in 2005 and 2016. These results are based on data from the Direction of Trade Statistics (DOTS) (IMF, 2024) for merchandise trade and from the World Economic Outlook Database (IMF, 2023) for GDP and exports.

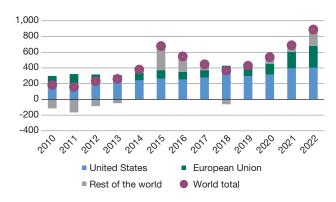
As the relevance of China's economy has grown immensely over the past two decades, its economic impact on other countries is much larger today than when China joined the World Trade Organization in 2001. At that time, China's GDP in US dollars accounted for only 2.3% of global GDP. Today this share is about six times as large – with 13.4% in 2022. Thus, today's global impact of a trade surplus of 5% of GDP in China is not comparable to the impact of a similar trade surplus nearly 20 years ago.

Figure 1 also illustrates this by adding other perspectives on China's trade surplus. In 2022, it amounted to 3.6% of worldwide exports and 0.7% of global GDP – a level that had yet only been reached in 2015. In absolute terms, China's merchandise trade surplus had reached an all-time high of nearly US \$890 billion in 2022.

One could assume that the rise in China's merchandise trade surplus might have resulted from declining imports in light of the weakness of China's economy in recent years. However, this is not the case when a comparison is made between 2022 and 2019, the last year before the COVID-19 pandemic. During this period, China's merchandise trade surplus more than doubled from US \$430 billion to nearly US \$890 billion. This large increase of about US \$460 billion was the result of an increase in imports of more than US \$640 billion that was outweighed by an even larger surge in exports of more than US \$1,100 billion. China's merchandise exports to the world in-

China's merchandise trade surplus by major trading partners

in billion US dollars



Sources: IMF (2024); German Economic Institute.

creased by 44% during these three years alone. This development is striking in relation to the concerns emphasised earlier in this paper.

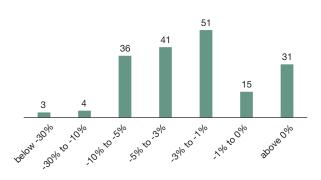
Comparing the data for January-September 2023 to that of the same period for 2022 shows that China's trade balance was as high in 2023 as it was in 2022 – with a level of nearly US \$660 billion in the first three quarters.¹ However, the contributions of exports and imports were completely different compared to the period between 2019 and 2022. In the more recent period, both exports and imports declined by a good US \$150 billion. This amounts to a decrease in Chinese merchandise exports of 5.6% and a decline in merchandise imports of 7.5%. In view of the much larger rise in China's exports between 2019 and 2022, however, the much smaller export decline in 2023 is of minor relevance.

Baldwin (2024) differentiates – based on OECD TIVA data up to 2020 – between various kinds of product categories. He shows that China's trade balance in 2020 is large and positive (and has increased further since 2015) in manufacturing goods, but it is small and negative for agricultural products and moderate and negative for mining products and services. As a result, when only manufacturing trade is regarded, China's trade surplus is likely to be even higher than depicted in Figure 1, which includes agricultural and mining products (but not services). This result justifies the fears that China's dominance as a manufacturing juggernaut could increase even further.

Figure 3

Distribution of 181 countries' merchandise trade balances with China, 2023

Countries grouped by trade balance with China as shares of their GDP



Note: Estimates for 2023 based on data from January to September. Sources: IMF (2024); IMF (2023); German Economic Institute.

Global perspective

It is relevant to analyse how China's trade surplus has developed vis-à-vis other countries. Figure 2 shows that all of the important trading partners had to cope with the rising bilateral trade surplus of China between 2019 and 2022. China's bilateral trade surplus with the US rose by 37% to more than US \$400 billion. The trade imbalance with the EU was somewhat smaller in 2022 with US \$276 billion from China's perspective.² However, China's trade surplus with the EU rose from US \$113 billion in 2019 and thus by 144% up to 2022. Strikingly, China also features an increasing trade surplus with the rest of the world. This is remarkable, as it has not been the case during parts of the period after 2010.

When looking at data for 2023, the trade balance vis-à-vis the world remains broadly the same when data for the first three quarters are regarded. However, the structure of the trade surplus has changed. While China's merchandise trade surplus with the EU and the US decreased by about one-fifth, the rest of the world saw a further increase by over 80% in terms of US dollars.

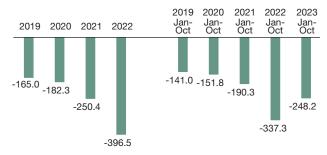
This raises the question of how many countries worldwide have to face up to a Chinese trade surplus. Figure 3 provides an overview by drawing on IMF DOTS data, but from the perspective of China's trading partners, because their trade balance with China is related to their GDP in the fol-

¹ Only data up until September is available for 2023 at the time of writing.

² Due to reporting differences, the imbalance is higher from the perspective of the EU, see below.

Trade balance of goods of the EU with China

in billion euros



Sources: Eurostat; German Economic Institute.

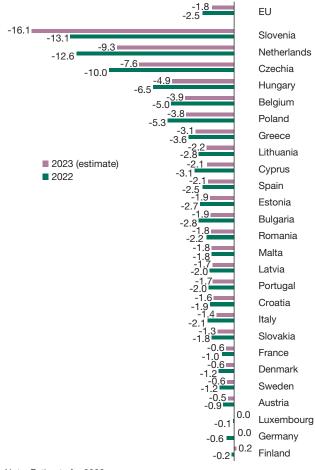
lowing.³ Individual countries' trade balance with China as shares of their GDP are ranked and then grouped into different intervals, as depicted in Figure 3. The following results stand out:

- In 2023, 150 out of 181 countries, i.e. five-sixths, had a merchandise trade deficit with China. Only 31 countries did not, most of which are resource-rich countries like Congo, Angola, Turkmenistan, Australia or Brazil.
- Due to China's large economic size, many countries' trade imbalances are large in relation to their economy. In fact, 43 countries have a trade deficit with China of more than 5% of their GDP and more than 84 countries have a deficit of more than 3%. For 51 countries, the trade deficit with China lies in a more moderate bracket of 1%-3% of GDP, which is still sizeable, however.

A moderate trade deficit with a respective country is a normal phenomenon in a global economy. For example, comparative advantages, differences in competitiveness and capital flows can contribute to such macroeconomic imbalances. Moreover, importing low-priced products from China is attractive for consumers and importing industries. However, a trade deficit of more than 3% of GDP with one country only points to sizeable imbalances. It raises the question of whether China's outsized production sector draws on an excessive portion of domestic demand in the affected countries, to the detriment of their domestic production base. How the pros and cons of such large trade imbalances with China should be weighed requires further analysis and might also be country specific. But the com-

Figure 5

Trade balance of goods of EU countries with China in % of GDP



Note: Estimate for 2023.

Sources: Eurostat; European Commission; German Economic Institute.

bination of Chinese overcapacities, industrial policy subsidies, China's growing size, and the large imbalances are surely a cause of concern that deserves further thought.

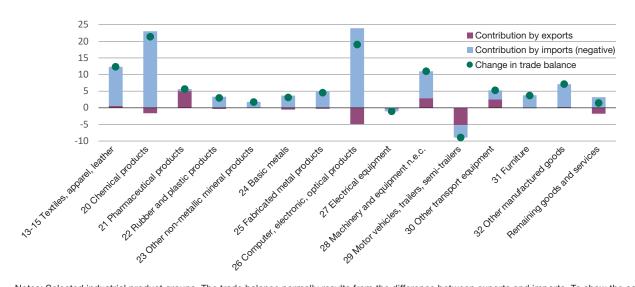
European perspective

The EU's trade deficit with China – the natural mirror of the Chinese trade surplus with the EU – is the focus of this section.⁴ Figure 4 shows a marked rise in the trade deficit with China from the EU's perspective. In 2022, it

³ Due to reporting differences in global trade statistics, exports reported by country A to country B do not always correspond to the respective imports reported by country B from country A. Notwith-standing these statistical caveats, the following analysis gives a good indication of how much China draws on domestic demand of many countries in the world.

⁴ Not only the perspective differs, but also the data source and important additional details. The trade data analysed in the following is from Eurostat. In contrast to IMF DOTS data, which covers merchandise goods trade in US dollars up to September 2023, Eurostat goods trade data also includes some trade in services, is depicted in euros and extends up to October 2023.

Export and import change contributions to the improvement of the EU's trade balance with China of €89.1, Jan-Oct 2023 compared to Jan-Oct 2022, selected product groups in billion euros



Notes: Selected industrial product groups. The trade balance normally results from the difference between exports and imports. To show the contributions of both imports and exports so that they add up as comparable contributions to the trade balance, the import change is depicted with an opposite sign (import decrease: positive sign; import increase: negative sign).

Sources: Eurostat; German Economic Institute.

reached nearly €400 billion. Compared to 2019, the EU's trade deficit increased by more than 140% (similar to the increase based on IMF DOTS data). Comparing data from January to October 2023 to the same period in the year before shows a decline of €89.1 billion or about one-fifth relative to 2022. However, the trade deficit in 2023 is still significantly higher than in 2019, before the COVID-19 pandemic.

Figure 5 depicts the trade balance of EU countries in relation to GDP in 2022 and provides an estimate for 2023. For the EU, this share amounted to about 2.5% of GDP in 2022 and should remain close to 2% in 2023. This is still a high ratio for an individual trading partner when considering that the EU's macroeconomic imbalance procedure (European Commission, 2016) stipulates that an *overall* trade deficit of 4% of GDP is a warning sign for EU countries.

Looking at individual EU countries, large differences are visible in Figure 5. Some eastern EU countries have very high trade deficits. Particularly, Slovenia stands out with two-digit trade balance shares as a percentage of GDP in 2022 and 2023. Also, Czechia, and to some extent Hungary and Poland, far exceed the EU average. This indicates that China uses these countries as bridgeheads into the EU. Likewise, the Netherlands and to a smaller degree Belgium have very high trade deficits with China. However, their large ports distort the picture as the depicted Eurostat data does not take into account whether the goods imported by these countries are transferred to other countries. This becomes obvious when the German trade deficit with China in 2022 based on Eurostat data (€23 billion) is compared to the data from the German Statistical Office (€85 billion). Thus, the de facto trade deficits of the Netherlands and Belgium are lower than shown in Figure 5 while those of countries that import in part via Dutch and Belgian ports are higher.

In the following, the question is analysed as to what contributed to the decline in 2023. Are there reasons to assume that the EU's trade deficit with China will decline further or has 2022 been an outlier with only temporary effects playing out in 2022 and 2023? A look at product groups on a 2-digit and 4-digit level provides some insights.⁵ Particularly, it can show whether the trends have been broad-based or concentrated.

⁵ This analysis uses Eurostat trade data based on the statistical classification of products (goods and certain services) by activity (CPA) because the product categories are related to the economic activities of the statistical classification of economic activities (NACE).

Short-term comparison 2023 vs 2022

Figure 6 focuses on the comparison of January to October 2023 to the same period in 2022 and depicts a selection of important 2-digit industrial product groups where most EU trade with China is concentrated. The overall decline of the EU's trade deficit with China of €89.1 billion in this period implies an improvement in the EU's trade balance with China to the same extent. This positive change in the trade balance is accounted for by a decline in EU exports to China by €4.1 billion (which reduces the EU's trade balance) and a much larger decline in EU imports from China by €93.2 billion (which increases the EU's trade balance with China).

Figure 6 illustrates this way of looking at the contributions of exports and imports. It shows that all depicted 2-digit product groups contributed to some extent to this development, but that some product groups stand out. This is true especially for "computer, electronic, optical products" (CPA classification number 26) and "chemical products" (20), which contributed about €20 billion each (green dots in Figure 6). In both groups, a large decline in imports from China outweighed a much smaller decline in exports to China (please note that the decline in imports is depicted with the opposite sign). An outlier is the CPA group 29 "motor vehicles, trailers, semi-trailers", which is highlighted in more detail below.

A closer look at the 4-digit level of the CPA trade classification reveals that out of some 700 product groups, only a few contributed a sizeable amount to the improvement of the EU's trade balance of \in 89.1 billion with China between January to October 2023 compared to the same period in 2022. This could indicate that a sizeable part of the EU's import decline from China in 2023 might be only temporary.

"Other organic basic chemicals" (CPA classification number 2014) contributed more than €17 billion to the decrease in the trade balance. This large effect likely stems from an outsized special effect in trade statistics – similar to the development in German trade statistics (Matthes, 2023) – because there has been a massive, but only one-off increase of EU imports from China in this product group in 2022 that was no longer relevant in 2023.

"Computers and peripheral equipment" (2620) contributed some \in 15 billion, and "communication equipment" (2630) nearly \in 6 billion to the improvement of the trade balance. Again, a large decline in EU imports from China is solely responsible for this development. This import decline might be explained by a hoarding of these products in 2022 (as a reaction to former severe supply shortages). In this case, well-stocked warehouses could be a key factor in explaining the import decline in 2023. In the medium term, an increase in imports appears likely again as China has comparative advantages in these product groups. This is an argument against a further decline of the EU's trade balance with China as far as these product groups are concerned.

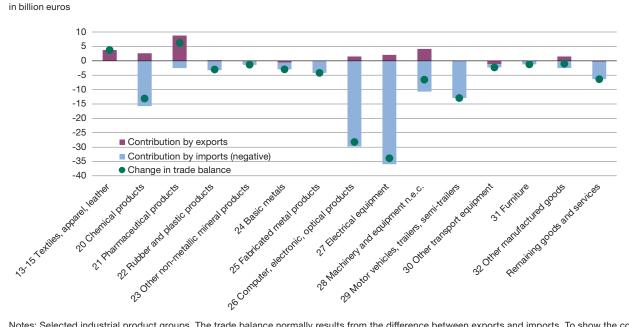
The product groups "batteries and accumulators" (2720) and "motor vehicles" (2910) both had a negative contribution to the reduction of the trade balance, i.e. they raised the EU's trade deficit, *ceteris paribus*. Here again, longer-term effects seem to be at work that were visible before. The trade deficit of the EU in "batteries and accumulators" increased continuously in recent years – from €2.6 billion in 2019 to €21.1 billion in 2022. And with regard to "motor vehicles", the formerly large surplus of the EU also decreased before 2023 – from €16.5 billion in 2019 to €6.3 billion in 2022. This decline was due to a combination of a very large rise in imports and a stagnation in exports. As a result, these product groups are likely to continue to contribute to a rising trade deficit in the future.

The opposite appears to be true for "pharmaceutical preparations" (2120). This product group contributed positively with €5.8 billion to the reduction of the EU's trade balance, mainly because of rising EU exports to China. Here, the EU seems to have a comparative advantage as the positive trade balance in this group doubled between 2019 and 2022 already.

Additional factors might allow the development in 2023 appear to be a correction of other special effects that led to the large increase in the EU's trade deficit with China in 2022. For example, large price hikes in 2022 (that bolstered trade values and thus the trade deficit) might be corrected to some extent in 2023, which could contribute to the decline in the EU's trade deficit. Furthermore, severe lockdowns in the course of the COVID-19 pandemic weakened the Chinese economy in 2022 so that Chinese firms were inclined to export more of their production because demand from domestic buyers was low. This effect is also temporary, as the Chinese economy recovered in 2023 (albeit by less than initially expected).

Overall, a further considerable reduction in the EU's trade balance with China beyond 2023 does not appear likely – the focus on the most relevant product groups does not indicate it, nor does the evaluation of other special effects like hoarding, price developments, or the effects of the COVID-19 pandemic on China's exporters.

Export and import change contributions to the deterioration of the EU's trade balance of €107.2 billion with China, Jan-Oct 2023 compared to Jan-Oct 2019, selected product groups



Notes: Selected industrial product groups. The trade balance normally results from the difference between exports and imports. To show the contributions of both imports and exports so that they add up as comparable contributions to the trade balance, the import change is depicted with an opposite sign (import decrease: positive sign; import increase: negative sign).

Sources: Eurostat; German Economic Institute.

Medium-term comparison 2023 vs 2019

Finally, we analyse which product groups contributed most to the increase in the EU's trade deficit (or decrease of the trade balance) with China of \in 107.2 billion between January to October 2019 and January to October 2023 (see Figure 4). Again, Figure 7 illustrates which role export and import developments played.

In nearly all depicted product groups, import increases (negative signs in Figure 7) were the main contributing factor in absolute value terms. This indicates that the trade relationship with China has grown increasingly unbalanced on a rather broad basis. The only exception are pharmaceutical products (CPA classification 21) and textiles, apparel and leather products (13-15), where exports have increased more than imports.

Again, a concentration on certain product groups is visible. The most marked contributions came from electric and electronic product groups (26 and 27) and from chemical products (20). These three product groups alone contributed about \in 80 billion to the decrease in the EU's trade balance of \in 107 billion.

In addition, machinery products and transport equipment also contributed in a relevant way to the worsened trade balance. This is remarkable particularly from a German perspective, as Germany used to have comparative advantages here and as Germany's overall trade surplus largely stems from both these sectors.

Conclusion

China's merchandise trade surplus has risen significantly in recent years. Relative to China's economic size, the surplus appears elevated but not excessive with close to 5% of GDP, when considering that this share was higher on several occasions in the past two decades. However, China's GDP has grown considerably during this period and the absolute value of China's merchandise trade surplus has reached an all-time high.

On the current policy trajectory, the surplus is likely to increase further in the near future unless China manages to significantly raise the level of private consumption. A key driver of China's growing trade surplus appears to be a significant policy push to bolster Chinese domestic manufacturing production capacities even further. This is indicated by the fact that bank loans to the manufacturing sector have increased immensely in recent years – obviously with the goal of sustaining Chinese growth in the face of an ailing real estate sector. The danger of this policy course is that the spillovers of China's large trade surplus to the world economy could rise even further.

Currently, 150 out of 181 countries have a merchandise trade deficit with China (based on IMF data). Moreover, 43 countries have a merchandise trade deficit with China of more than 5% of their GDP, and more than 84 countries have a deficit of more than 3% of GDP. It is true that cheap imports are a source of welfare and that moderate trade imbalances are a normal phenomenon in a global economy. However, trade deficits of this size with only one country appear to be a cause for concern and need further analysis. China's imbalance between domestic production and consumption implies that China draws on the domestic demand of other countries to sustain its economic growth and its production base. It does so at the potential expense of production and employment of those trading partners with high trade deficits with China. If Chinese trade surpluses should indeed continue to rise, this constellation could be the source of growing trade conflicts.

From the perspective of the EU, the trade deficit with China in goods has also risen considerably since 2019. However, an outsized increase in 2022 that was due to some special effects seems to have led to a moderate decline in 2023. Currently, the EU's trade deficit with China hovers around 2% of GDP. This is a high level for an individual trading partner, considering that an *overall* trade deficit of more than 4% of GDP is considered to be a warning signal in terms of macroeconomic imbalances.

A further considerable reduction in the EU's trade balance with China beyond 2023 does not appear likely. Neither the focus on the most relevant product groups appears to indicate this nor does the evaluation of other special effects like hoarding, price developments, or the effects of the COVID-19 lockdowns on China's exporters.

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