Swiss goods exports and the Sino-US trade war: Conflicting transmission mechanisms

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This paper identifies various channels through which the Sino-US trade war and the January 2020 truce affect Swiss goods exports. As a third party to this bilateral trade war, Switzerland's goods exports were not targeted directly. Nevertheless, Swiss goods exports were implicated and evidence is presented that scales different transmission mechanisms. Given that leading central banks eased monetary policy partly on account of the macroeconomic consequences of the Sino-US trade war, a new dimension to the trade and monetary nexus has arisen. The consequences of this for the conduct of Swiss monetary policy are discussed.

JEL codes: trade war, trade diversion, protectionism, tariffs, China, United States
Key words: F13, F52

1 Introduction

Switzerland's very high living standards depend in part on access to foreign markets. Whenever trade tensions resurface – as they frequently have since President Trump was inaugurated in January 2017 – concerns about the threat of protectionism to Swiss incomes and employment are raised. The purpose of this paper is to examine the different ways in which the Sino-US trade war, which has seen tariffs imposed on hundreds of billions of US dollars of bilateral trade, affects Swiss goods exports.

While no definitive assessment can be given at this time – after all, the Sino-US trade war is not over, notwithstanding the truce reached in January 2020 – the principal mechanisms for transmission from changes in American and Chinese trade policy to Swiss goods exports can still be identified. Not only could knowledge of these mechanisms facilitate better specified empirical analysis, but it can inform policymakers who face potentially conflicting evidence on the effect of this bilateral trade war on the Swiss economy.

That the Sino-US trade war has fortunately not spread to other countries raises various analytical questions. How can a bilateral trade war affect the exports of third parties? Must all of the knock-on effects on third parties' exports be

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negative?[2] How might those third parties respond? And could some responses by a third party increase the risk that its exports are targeted with trade restrictions by one of the protagonists in the bilateral trade war? And more generally, to what extent, if at all, is the effect of a bilateral trade war on a third party different from that generated by a global trade war that results in many nations simultaneously implementing trade distortions?

Many analyses of trade wars employ economic models (e.g., Grossman and Helpman 1995) that assume only two countries exist, so in these approaches a "global" trade war is a bilateral trade war. However, in a world of many nations, the potential for trade deflection and trade diversion need to be considered as well. In this respect, the arguments presented in this paper complement the analysis of Nicita, Olarreaga, Silva, and Solleder (2020) of a global breakdown in trade cooperation, which can also be found in this issue of *Aussenwirtschaft*.

That the US administration may take more actions against Chinese and other national exports also raises the question as to whether Swiss goods exports could be at greater risk in the future. Moreover, in May and November 2019 the Trump administration postponed decisions on whether the importation of cars and car parts represent a threat to US national security. Since German car exports to the United States are sizeable, and given that Swiss firms supply German car manufacturers with parts and components, further restrictive *America First* trade policies imply potential for supply chain-related disruption.[3]

Another risk examined in this paper concerns the potential targeting of Swiss goods exports by the United States. Two grounds for doing so are discussed here and the likelihood of US action assessed. In one of these two discussions, the decisions of the Swiss National Bank will play an important role, thereby shedding light on the link between a bilateral trade war and monetary policy intervention by protagonists and by third parties.

To the extent that other countries' central banks ease their monetary policies, there may be implications for the value of the Swiss franc against the US dollar and the euro, which in turn could have knock-on effects for Swiss goods exports.

2 There may also be effects on the operations, exports, and profitability of third-party foreign direct investments in the protagonists' economies in a bilateral trade war. This observation is particularly pertinent given the large size of the markets in both China and the United States and the use by many Swiss multinational corporations of the Chinese economy as a production base for exporting goods to the United States.

3 Note here that the presence of supply chains magnifies the risk of adverse knock-on effects from US action. This is contrary to the argument, often made before the Sino-US trade war, that international supply chains increase the economic costs of protectionism and, so the argument went, that the presence of such supply chains is likely to reduce the likelihood of trade distortions being implemented in the first place. From the statements of several US officials, it appears that disrupting US supply chains that operate in China is an objective of the Trump administration, turning the argument just mentioned on its head.

This effect is in addition to any adverse implications for investment spending from greater risk premia created by the Sino-US trade war.

The remainder of this paper is organised as follows. In order to put the knock-on effects of the Sino-US trade war for Swiss goods exports in perspective, the section documents the exposure of Swiss exports to the build-up of crisis-era trade distortions. Particular attention is given to the build-up in Switzerland's ten largest export sectors and ten largest export destinations. The policies underlying these foreign trade distortions are also distinguished.

Section 3 of the paper discusses what is known about the potential consequences for Swiss goods exports of the Sino-US trade war as it has unfolded to date. Section 4 explains and assesses the commercial significance of the different transmission mechanisms at work. Concluding remarks are presented in Section 5.

2 Establishing a benchmark: The pre-trade war build-up of crisis-era trade distortions affecting Swiss goods exports

"Compared to what?" is a standard refrain in economics research. If one is to examine the scale of Swiss exports potentially affected by the Sino-US trade war, then it makes sense to benchmark this against other trade policy measures taken against Swiss exports by foreign governments. Since the topic being examined here is bilateral trade wars, which involve the deliberate targeting of a trading partner's exports, then a natural place to start is to identify any cases of foreign targeting of Swiss commerce.

To the best of my knowledge, since the turn of the millennium Switzerland has not been involved in any fully blown trade wars. Still, that does not end the matter as there have been instances where foreign governments have taken action that affect only Swiss commercial interests. Presumably, a necessary condition for a foreign government "targeting" Swiss commercial interests is that only one trading partner be harmed by the act in question. Consulting the Global Trade Alert database reveals that, since November 2008, there have been seven foreign government acts that harmed or could have harmed only Swiss commercial interests (see Table 1).[4]

Table 1: Only seven measures taken by trading partners solely target or affect Swiss commercial interests

Trading partner and description of measure	Intervention type	Announcement date	Implementation date	HS code for goods affected (where relevant)
Pakistan: Initiation and subsequent termination of antidumping investigation on imports of pegylated interferon alpha-2A from Switzerland	Anti-dumping	01/10/2011		300220
Bolivia: Nationalization of the tin and zinc mine Colquiri	FDI: Treatment and operations, nes	20/06/2012	20/06/2012	
Bolivia: Nationalization of Antimony Smelter Plant	FDI: Treatment and operations, nes	01/05/2010	01/05/2010	
Bolivia: The government nationalizes Swiss mineral trader Glencore	FDI: Treatment and operations, nes	02/05/2010	02/05/2010	
Brazil: BNDES backs transportation in Rio with a loan of 1.6 billion reals	Local operations	23/07/2013	23/07/2013	860110
France: Investment support for Valeco Group	Public procurement localization	31/01/2017	31/01/2017	271600
Saudi Arabia: SIDF provides loan worth 116 million SAR for transparent packaging film plant in Dammam	State loan	31/12/2012	31/12/2012	392043

Source: Global Trade Alert database, data extracted 1 February 2020.

Note: Intervention types are taken from the taxonomy used by the Global Trade Alert.

Of these seven acts, only six were implemented (one of the acts that could have implicated Swiss goods exports involved an anti-dumping investigation where import duties were ultimately not imposed). In total, just three of the 1,352 foreign state acts that harmed Swiss commercial interests since November 2008 and that remain in force in early 2020 affect only Swiss goods exports. In February 2020, these three foreign state acts implicated 0.3% of Swiss goods exports – a tiny proportion.[5]

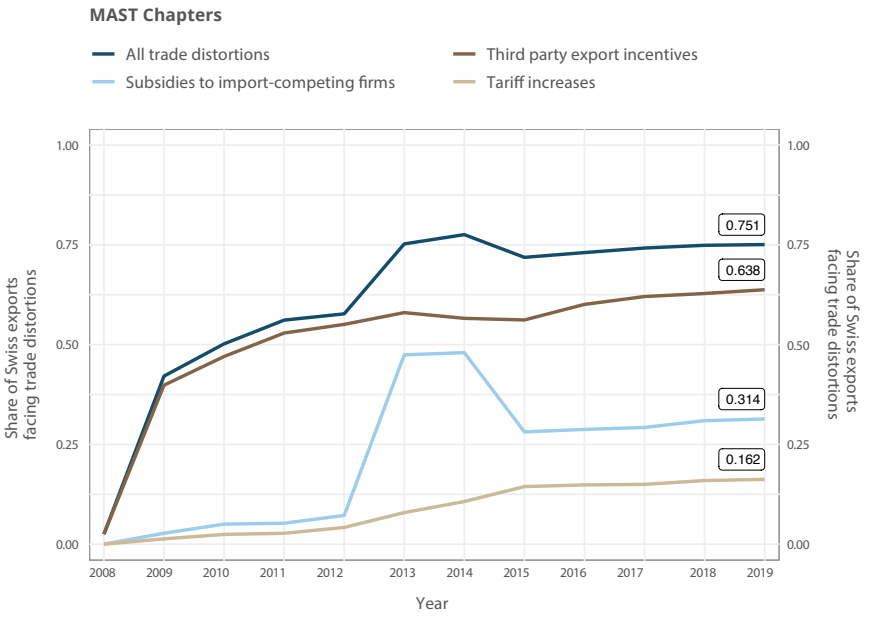
That almost all of the foreign state acts affecting Swiss commercial interests did not single out Swiss commercial interests implies that, when Switzerland's trading partners have tried to tilt the commercial playing field in favor of domestic firms, they have done so in an across-the-board manner. An example is if a foreign government provides a subsidy to local firms that compete against imports from Switzerland and other countries. Such a subsidy does not target Swiss exports, but harms those exports all the same.

In contrast to the share of Swiss good exports singled out by foreign governments, the share of such exports affected by other harmful foreign measures is substantial (see Figure 1). Starting from November 2008, when the G20 Leaders first declared they would eschew protectionism, and taking account when foreign harmful acts come into force and lapse, Figure 1 reports the share of Swiss goods exports affected by harmful foreign acts during the years 2009-2019 that are still in force.

Such is the build-up of foreign trade distortions affecting Swiss commercial interests that three-quarters of Swiss exports now face one or more trade distortions when competing in foreign markets. To put this share in perspective, it is worth recalling that for the last year trade data are available, Swiss goods exports to the United States amounted to 13% of total Swiss exports.

Figure 1 contains other findings worth bearing in mind as one "scales" the significance of the Sino-US trade war for Swiss goods exports. The first is that the trade distortion that Swiss exports are most exposed to is not import restrictions, but policies to boost exports, including export subsidies, tax incentives for exporters, as well as measures to finance exports.[6] One particular disservice of the Sino-US bilateral trade war, which has involved the imposition of principally tariffs (as well as some export bans), is that it has reinforced the impression that taxes on imports are the biggest distortion to world trade. In fact, as the evidence for Switzerland and other countries has shown,[7] measures to expand exports affect by far the largest share of world trade.

Figure 1: Three-quarters of Swiss goods now compete against trade distortions in foreign markets



The second finding of interest in Figure 1 is that since 2012 subsidies to import-competing firms affect many more Swiss exports than face import tariff increases. Switzerland's proximity to the European Union, whose state aid regime is not as restrictive as advertised, accounts in part for the growing exposure of Swiss goods exports to competition from bailed-out or subsidized import-competing firms. That is not to imply that subsidies elsewhere have not grown; they have in China and the United States, for example.

Figure 1 refers to the goods exports from Switzerland to other countries and not to the exports from the subsidiaries of Swiss multinationals located in other countries. It is telling that before the Sino-US trade war began, over 15% of Swiss goods exports faced tariff increases implemented since November 2008 and that were still in effect in 2017. Even so, the share of those Swiss exports singled out by foreign governments is a tiny fraction of the share of Swiss goods exports that pay higher import taxes than ten years ago.

Aggregate export statistics are one measure, but governments and business representatives often prefer breakdowns across significant export destinations and commercial sectors. Figures 2-5 present data on the exposure of Swiss exports to foreign trade distortions for the top ten export destinations (as measured by value of exports in US dollars for the last year for which global trade data is available,

2018) and for the top ten exporting sectors (where sectors are defined using the three-digit level of disaggregation of the United Nations CPC classification).

A heat map is deployed in Figure 2 to present evidence on the shares of Swiss exports facing one or more import distortions implemented by the top ten export destinations in question and still in effect at the end of 2019. Again, the source of data on harmful policy intervention is the Global Trade Alert.

The green cells in Figure 2 imply that no major Swiss export sector faced adverse competitive conditions in Hong Kong at the end of 2019 on account of the importing government's policies. Swiss watches, clocks, and jewelry are exposed to few import distortions in the top ten export destinations for Swiss goods.

In contrast, Swiss exporters of organic chemicals face pervasive import distortions in these foreign markets. Overall, the color coding in Figure 2 highlights the heterogeneity in exposure to foreign import distortions in force at this time. This heterogeneity cautions against drawing general conclusions for all Swiss sectors and trading partners.

Figure 3 differs from Figure 2 by highlighting the Swiss export exposure in sectors and markets where three or more import distortions were in force at the end of 2019 as opposed to one or more distortions being in effect. Figure 3 indicates where Swiss firms must compete against multiple import distortions, which presumably is more challenging and a greater threat to profitability. It is revealing that the non-green cells in Figure 3 relate principally to Swiss exports of organic chemicals and pharmaceuticals to the European Union and to the United States. China has imposed multiple trade distortions affecting sizeable shares of Swiss exports of instruments, special-purpose machinery (principally medical equipment and research equipment), and machine tools.

As noted earlier, however, policies that distort incoming imports are not the only threat to Swiss market shares in overseas markets. State incentives given by foreign governments to their exporters threaten just under two-thirds of aggregate Swiss goods exports (recall Figure 1). These export incentives enable recipient firms to lower their prices and gain market share at the expense of rivals from other countries, including rivals from Switzerland. Alternatively put, when facing rivals that are benefiting from export-related state largesse, Swiss firms determined to maintain their market shares in affected foreign markets must shave their prices and accept lower profit margins, thereby reducing the incentive to export in the first place.

When it comes to the top ten Swiss export sectors and destinations, the large number of red and purple cells in Figure 4 indicates how prevalent state largesse to exporters was in 2019. Exposure of Swiss exports to rivals that can benefit

from such third-party export incentives in the French, German, Japanese, and US markets is particularly high.

Once again, it is possible to identify those top Swiss export destinations and sectors which are affected by three or more foreign export incentives in force at the end of 2019. Figure 5 shows where Swiss export exposure is more frequently exposed to such foreign incentives. Interestingly, the Swiss watches and clocks sector competes against relatively few foreign export incentives. This is the case to a lesser degree for jewelry and for Swiss food exports. Overall, there are not many green cells in Figure 5, indicating that Swiss exporters facing subsidized rivals competing in third markets is largely the norm. Again, large shares of Swiss exports to Germany, Japan, the United Kingdom, and the United States have to compete against foreign rivals that are eligible for export incentives.

Drawing the material in this section together, it is evident that large shares of Swiss goods exports faced an uphill struggle competing against pervasive trade distortions before the Sino-US trade war began in 2018. The most far-reaching of those trade distortions were export incentives offered by foreign governments, affecting Swiss exports multiple times of the total value of Swiss bilateral exports to China or to the United States. For sure, there is variation across top export destinations and across major export sectors, which cautions against over-generalization. Nevertheless, with this information it is now possible to meaningfully benchmark the fall-out of the Sino-US trade war for Swiss goods exports.

Figure 2: Pharmaceuticals and basic chemicals exports faced considerable crisis-era trade distortions

Figure 3: Pharmaceutical and basic chemical exports faced multiple trade distortions affecting large shares of sectoral trade

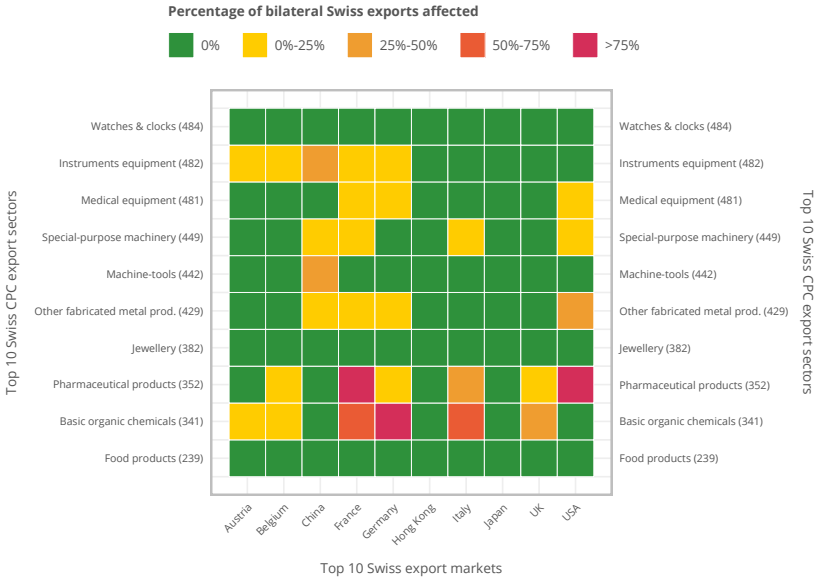


Figure 4: Very few of Switzerland's top ten exports escaped the reach of other nations' export incentives

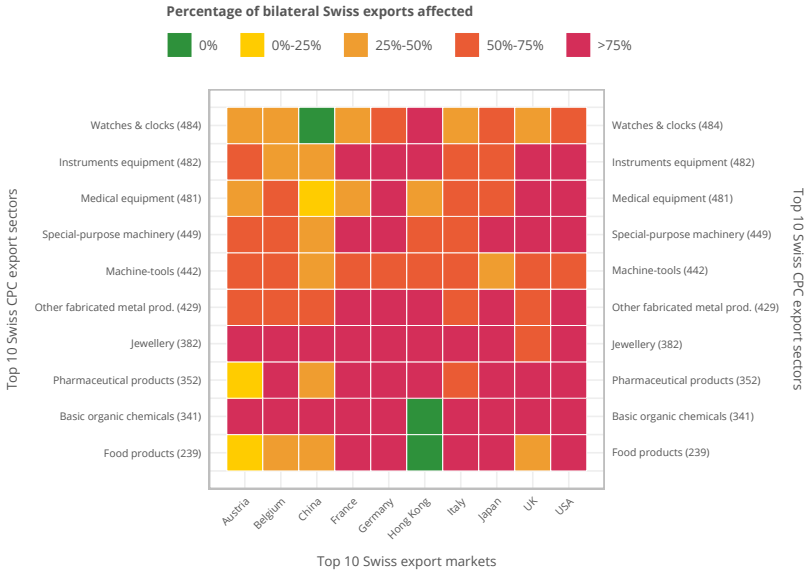


Figure 5: Large shares of Swiss exports of medical equipment, pharmaceuticals, and basic organic chemicals compete against multiple foreign export incentives

3 Swiss goods exports and the Sino-US trade war

To what extent, if at all, were goods exports from Switzerland exposed to the consequences of the United States and China raising import tariffs on each other's goods from 2018 on?[8] This question is interesting as the third-party effects of this trade war have not been much analyzed, even though some of the key mechanisms involved have been known for some time.[9]

This is not to argue that simulations of the current Sino-US trade war have ignored third parties; rather that the mechanisms at work are often not articulated. One goal of this section is to spell out these mechanisms so as to facilitate a comprehensive assessment of the impact on Swiss goods exports.

Recall that China runs a substantial goods trade surplus with the United States. Recall also that, following the journalistic practice of estimating the total value of exports affected by trade war-related tariff hikes in 2018 by using trade flow data from 2017, the United States imposed tariff increases on $278 billion of Chinese exports in 2018. For its part, China imposed tariff increases on $109 billion of US exports in 2018. As a result, over half of the total value of bilateral trade between these two trading behemoths were affected by tariff rate increases (often of the order of 25%) during 2018 alone.

3.1 Trade diversion

The first mechanism that could be triggered by tariff increases on this scale is trade diversion. Rather than switch expenditures from Chinese suppliers to American suppliers, for example, a US buyer could start buying from a foreign supplier outside of China. The extent to which Switzerland could benefit from such trade diversion depends critically on whether the products Switzerland exports to the United States overlap with those for which the US government has imposed hefty tariffs on imports from China. Using publicly available information[10] on the products the United States has raised tariffs on from China since the start of the Sino-US trade war, and detailed information on Swiss exports to the United States, it is possible to calculate the share of Swiss exports to the United States that of products where Chinese exporters face higher tariffs. The same computation can be made for Swiss exports of products where American suppliers face higher tariffs in China on account of the bilateral trade war.

8 For a timeline of the Sino-US trade war, see Bown and Kolb (2019) (latest version available at https://www.piie.com/blogs/trade-investment-policy-watch/trump-trade-war-china-date-guide). For other accounts of the development of that trade war and attempts to scale the war, see Evenett and Fritz (2018).

9 Such as the notion that imports into a nation raising tariffs on a particular source country will be shifted, or deflected, to another foreign source country.

10 Again, such information can be found at the six-digit level of disaggregation for products in the Global Trade Alert database.

In 2017, the year before the Sino-US trade war broke out,[11] Switzerland exported $16.1 billion US dollars of goods to the United States that involved products where Chinese exports were hit with tariffs. This implies that just under a third of Swiss exports to the United States could have benefited from trade diversion. This does not mean that a third of Swiss exporters actually benefited from trade diversion; rather it is a measure of the opportunity. Put differently, because of the limited overlap between the products shipped by China and Switzerland to the United States, over two-thirds of Swiss exports to the United States could not benefit from trade diversion.

With respect to Swiss exports to China, a total of $7.7 billion were in products for which the Chinese government had imposed additional tariffs on US exporters during the trade war. Reflecting the lower total value of Swiss exports to China, this $7.7 billion total represents 81% of Swiss exports to China. Due to a much larger degree of overlap between goods exported by Switzerland and those exported by the United States, proportionally speaking, the opportunities for gains for Swiss exporters from trade diversion are greater in China.

Compared to the global total for Swiss exports reported by the United Nations in 2017 of approximately $299 billion, the total potential exports benefiting from trade diversion in the Chinese or American markets amounts to $23.8 billion, or less than 8% of the total.

3.2 Business confidence and capital expenditures

The second mechanism at work is the impact of the Sino-US trade war on business confidence and investment outlays by firms. In a submission to G20 finance ministers in June 2018, the IMF highlighted the potential adverse impact for global GDP if risk premia rose on account of falling business confidence driven by the trade war (IMF, 2018). In July 2019 the Governor of the Bank of England, Mr. Mark Carney, argued:

> "*The more hostile and uncertain trading environment is coinciding with sharp slowdowns in global trade, manufacturing, industrial production and capital goods orders. As a consequence, the quality of global growth has deteriorated. Across the G7, the growth rate of business investment has almost halved since its peak in late 2017, leaving the global expansion more reliant on consumer spending and reducing its resilience.*"[12]

11 And also conveniently the year before the trade war began and, therefore, immune to concerns about endogeneity. That is, that the reported total was affected by the trade war (in particular by the very trade diversion that is being scaled here.)

12 "Trade wars could shipwreck global economy, warns Mark Carney," *The Guardian*, 2 July 2019.

Falling capital expenditures, a share of which is spent on foreign-produced capital goods, is a potential threat to Swiss exports. In 2017 just under $47 billion of capital goods were exported around the globe by Switzerland,[13] representing one-sixth of Swiss global exports of goods in 2017. To put that share in perspective, it is more than double the share of Swiss exports that could gain from trade diversion. This does not mean that the net effect on Swiss exports of trade diversion and chilled business investment must be negative, but it sets the bar pretty high for Switzerland to be a net beneficiary in trade balance terms from the Sino-US trade war.

Despite investment outlays being, typically, a volatile component of national GDP, it turns out that since 2000 the coefficient of variation of Swiss exports of capital goods is less than that for exports of other, non-capital goods. Moreover, the percentage of Swiss goods exports accounted for by capital goods has fallen from over 27% to 16.7% now. It would seem that the changing structure of Swiss goods exports has made the Swiss current account less vulnerable to a trade war-induced global investment slowdown.

3.3 Preference erosion in the Chinese market

A third mechanism at work relates to the reaction of the protagonists to third parties since the onset of the trade war. Here it is important to note that Switzerland has a free trade agreement with China but not with the United States. On 30 September 2018, China announced it was cutting its most-favored nation (MFN) tariffs on over 1,500 goods.[14] That followed a tariff cut on 1,498 goods by China on 31 May 2018.[15] These two tariff cuts covered 5.4% and 3.6% of Chinese imports, respectively (calculated following the journalistic norm of using 2017 import data). The United States has not engaged in tariff cutting on a similar scale, so in what follows the focus is on the two Chinese tariff cuts.

The significance of these Chinese tariff cuts on an MFN basis is that they reduce the tariff preference margin enjoyed by Swiss exporters under the Sino-Swiss free trade agreement. While China did not extend these tariff cuts to the United States, an unfortunate side effect is that every nation with a free trade agreement with China faces potential export losses as a result of China's decision to reduce tariffs on these two occasions. The extent of the Swiss goods exports at risk will, again, depend on the extent of the product overlap.

13 The list of HS codes classified as capital goods is available upon request.

14 For details, including the official announcement of this tariff reduction, see https://www.globaltradealert.org/state-act/31995

15 For details, including the official announcement of this tariff reduction, see https://www.globaltradealert.org/state-act/30770

In sum, further doubt is cast then on the proposition that the Sino-US trade war benefited Swiss goods exporters overall. Any gains from trade diversion must be weighed against two countervailing factors: reduced capital goods exports and preference erosion to the Sino-Swiss free trade agreement. That is not to say that no individual firm, sector, or sub-sector gained.

4 Potential trade war-related risks to Swiss goods exports

As was evident in the aftermath of the singing of the "Phase One" economic agreement between China and the United States[16] in January 2020, the Sino-US trade war is far from being completely settled. If anything, a truce has been called and hostilities may resume. Moreover, the Trump administration is still pursuing other aspects of its *America First* trade policy. This has included investigating whether car and car parts imports are a threat to US national security as well as criticizing the trade practices of nations with large bilateral trade surpluses with the United States.

The goal in this section is to look forward and assess potential risks to Swiss goods exports in the months and years ahead. The focus, perhaps inevitability, is on actions taken by the United States. That said, as was made clear in Section 2 of this paper, the trend towards trade distortions is broad-based and unlikely to be confined to the United States.

4.1 Trade diversion as a result of the Phase One agreement

The first contingency arises from the implementation of the Sino-US truce agreed in January 2020. Chapter 6 of the Economic Agreement commits China to buying an extra $200 billion of goods and services from US companies during 2020 and 2021. To the extent that Chinese purchases are diverted away from existing Swiss suppliers, then the potential for export losses exist.

Although China has committed in principle to purchasing minimum amounts – in US dollars – of manufacturing goods, agricultural products, energy products, and services, an annex to Chapter 6 specifying exactly how much China will purchase under this accord has not been made public. This makes it difficult to estimate, even approximately, the likely threat to Switzerland's exporters. Still, the risk is there. Worse, the mere expectation that non-US-based suppliers will be squeezed may deter Chinese buyers from placing orders. To the extent that any

16 The text of that agreement can be found at https://ustr.gov/sites/default/files/files/agreements/phase%20one%20agreement/Economic_And_Trade_Agreement_Between_The_United_States_And_China_Text.pdf.

Swiss goods supplier can transfer production to a US-based plant, then this threat can be mitigated. (Of course, not every Swiss producer has that option.)

4.2 US tariffs on cars and car parts

The second contingency is that President Trump decides to impose tariffs on imported cars and car parts. His administration put off taking a decision on this matter in November 2019 and a further delay cannot be ruled out. Still, the uncertainty of whether such tariffs will be imposed lingers.

According to the last year of available data before the Sino-US trade war (2017), direct Swiss exports of car parts to the United States amounted to $99 million. Before concluding that Swiss exports at risk are trivial, however, it is worth recalling that automobiles are a sector where cross-border supply chains are prevalent. Should German exports of finished cars to the United States face high tariffs, then there could be adverse knock-on effects for suppliers of car parts from Switzerland. That Swiss exports of car parts amount to $1.78 billion worldwide means potential knock-on effects cannot be ruled out.

Even so, there are substantial differences across the export destinations for Swiss car parts in terms of the shares of cars exported to the United States. For example, 19% of the Mexican car exports are shipped to the United States, but Mexico buys less than $44 million of car parts from Switzerland. Germany, on the other hand, buys just under $1 billion of car parts from Switzerland, but exports only 2.2% of its cars to the United States. If one were to weigh the Swiss exports of car parts to a destination market by that destination market's share of car exports to the United States, and also add in the direct Swiss shipments of car parts to the United States, then the Swiss car parts exports at risk amounts to $135 million. This is equivalent to 7.5% of the total value of Swiss car parts exports and to 0.05% of annual Swiss goods exports worldwide.

On the face of it, then, the threat of US tariffs on imported cars is unlikely to have a large effect on the Swiss economy. However, the above calculations do not take account of any retaliation by the major car exporters (such as the European Union, Japan, and possibly Mexico). Should such retaliation trigger counter-retaliation by the United States, then further trade diversion effects and adverse consequences for business investment cannot be ruled out. Again, the former may benefit Switzerland's good exports and the latter may harm them.

4.3 Bilateral trade surplus with the United States

The third contingency is that the Trump administration begins systematically targeting those nations with large bilateral trade surpluses with the United States. To date, the Trump administration has shown little interest in service trade balances, so the focus in what follows is on goods trade. Taking the European Union as a single customs territory, the ten territories with the largest goods trade surpluses were identified along with Switzerland and are ranked in Figure 6 according to increasing trade surplus.

Figure 6: There are few possible targets for US criticism ahead of Switzerland

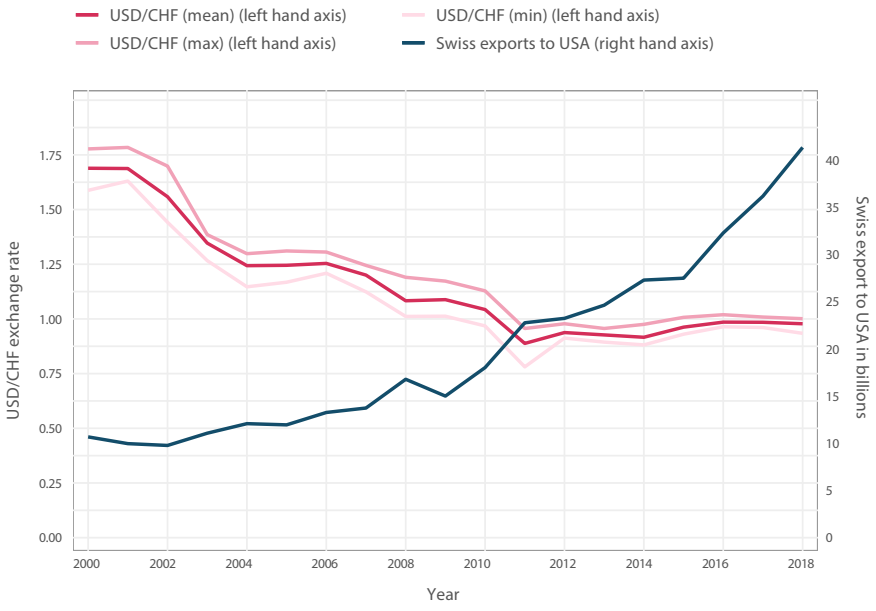
On the face of it, the fact that ten jurisdictions are ahead of Switzerland as far as goods trade surpluses are concerned may provide some comfort. But it is worth noting that the United States has already engaged the top five trade surplus trading partners in negotiations for new trade arrangements. Moreover, India and Korea (ranked seventh and eighth, respectively) are facing pressure from the United States to lower trade barriers. This leaves only three nations – Vietnam, Thailand, and Malaysia – that have larger goods trade surpluses with the United States than Switzerland. The margin of comfort may be smaller than many realize, not least if the Trump administration is re-elected and continues its *America First* policies in a second term. Proposals for negotiating (but not necessarily concluding) a free trade agreement between Switzerland and the United States may be an attractive stalling tactic, if nothing else.

4.4 "Currency manipulation"

A fourth contingency that may arise is, on the face of it, exchange rate-related but has monetary policy roots. The classic concern is that currency depreciation – or as the US government prefers to call it, "currency manipulation" – is used to confer a commercial advantage on a nation's exporters, to the detriment of other nations' exporters.

As Figure 7 shows, since the start of this century there has been a sustained appreciation of the Swiss franc against the US dollar and more than a three-fold rise in the nominal value of Swiss exports to the United States. For various reasons, the Swiss National Bank has at different times during the past decade taken steps to limit the appreciation of the Swiss franc, arguably when the currency's popularity was enhanced by its relative safe-haven status. This may be enough to attract the ire of Washington, although it must be said that, to date, the US Treasury has rarely gone beyond "naming and shaming" "currency manipulators."

Figure 7: Measures to stop the appreciation of the Swiss franc could become a source of trade friction with the United States



Events in 2019 have added a further twist to the currency–protectionism nexus. This year, trade tensions – in particular, the "on again, off again" Sino-US trade war – are regarded by many commentators and officials as contributing to falling business confidence, which has translated into expectations of lower investment and rates of economic growth. So pronounced has this tendency been that the US Federal Reserve Board and the European Central Bank have both signaled that they are likely to ease monetary policy. President Trump has applauded the former and condemned the latter as an attempt to soften the euro and to gain commercial advantage.

A renewed bout of monetary easing by leading trading partners and trade tension-related market nerves triggered by a breakdown of the Sino-US truce of January 2020, or by the imposition of tariffs on cars and car parts, could trigger a move by investors into "harder" or "haven" currencies. The question at that stage would be whether to acquiesce to the resulting appreciation of the Swiss franc against the euro and the dollar, or whether to intervene to prevent the franc's rise. The latter choice is risky as it could attract the ire of Washington.

An important implication of the foregoing discussion is that, once protectionism begins to have unacceptable implications for macroeconomic performance (principally through the investment channel rather than the trade channel), central bankers have been ready to consider easing monetary policy. So instead of viewing exchange rate depreciation as a substitute for protectionism – a view Eichengreen and Irwin (2010) argued fits data for the era between the two World Wars – or currency depreciation as a form of beggar-thy-neighbor activity, so far this year protectionism has been a cause of monetary easing. Our understanding of the monetary policy–exchange rate–protectionism nexus needs to be updated in light of developments during 2019.

5 Concluding remarks

Analysts will no doubt study the Sino-US trade war of 2018 and 2019, and the associated *America First* policies of the Trump administration, for years to come. Policymakers, corporate decision-makers, government officials, and journalists do not have that luxury; they have to assess the consequences here and now. The goal of this paper has been to draw out the implications for Swiss goods exports of what, to date, has largely been a bilateral trade war between China and the United States. Bilateral trade wars differ from global breakdowns in trade cooperation, and some of the transmission mechanisms discussed in this paper reflect that.

Drawing upon available trade flow and trade barrier data, and taking account of existing institutional trading arrangements such as the Sino-Swiss free trade agreement, it is possible to scale and assess the likely consequences for Swiss goods exports of the Sino-US trade war. Trade diversion gains for Swiss exporters are likely to have been offset by lost capital goods exports and some preference erosion in the Chinese market.

According to calculations presented here, the total value of Swiss capital goods exports is double that of the exports that may gain from the trade diversion. Moreover, the Swiss goods exports implicated by the Sino-US trade war are a fraction of the Swiss goods exports that face the thousands of trade distortions that had quietly built up before this bilateral trade war began. Keeping matters in perspective is important during fraught times.

Although it is inevitably more speculative, the forward-looking discussion in the previous section of this paper identifies additional threats to Swiss goods exports. Last year (2019) saw trade tensions and protectionism trigger monetary easing by the central banks of the euro area and US. This easing has put the Swiss National Bank on the spot. Swiss central bankers may be damned if they do (as engaging also in monetary easing to limit the appreciation of the Swiss franc may attract criticism from President Trump) and damned if they don't (as any Swiss franc appreciation could harm Swiss export interests.)

This is not an enviable choice and clearly an assessment of the likelihood of American criticism translating into action against Swiss goods exports would be required. Not every US presidential tweet destroys export opportunities. Of course, some may argue that trade policy considerations should not influence the determination of Swiss monetary policy. But evidently the impact of the value of the Swiss franc on the current account has been a consideration in the past, in which case consistency may require a broader assessment of the Swiss national interest.

The focus of this paper has been on the bilateral nature of the Sino-US trade war. Little consideration was given here to the possibility of this bilateral trade war spreading and drawing in more trading nations that ultimately raise tariffs on imports. One mechanism by which this could come about is if Chinese exports originally destined for the US market are deflected to other nations' markets. The resulting import surges, and harm to import-competing interests, may induce a protectionist response.

Analyses to date of the degree of such trade deflection are inconclusive and hardly point to a massive re-direction of Chinese exports. It is the case that certain industry groups have used the specter of trade deflection to encourage policymakers to take precautionary protectionist measures, and not just against

imports from China. This tendency needs to be carefully monitored, for Swiss goods exports could end up becoming collateral damage in measures to limit trade deflection from the US market.

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