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Abstract

Not being a member of the European Union, Switzerland has developed a vast network of 30 free trade agreements (FTA) with 40 partner countries, covering more than 80 percent of Swiss foreign trade. We examine this network and document how much Switzerland and its trading partners benefit from existing FTAs. Furthermore, this study analyzes possible gains from signing additional trade agreements as well as the tariff impact of a hard Brexit. The findings reveal that overall tariff reductions are substantial in absolute terms and balanced for Swiss exports and imports. The total amount of duties paid to Swiss Customs as well as foreign customs authorities is reduced by approximately 2 billion CHF annually. We conclude with the observation that there is limited scope for further tariff reductions, suggesting that a new focus on behind-the-border (BTB) measures is recommended.

Keywords

FTA, Tariffs, Trade Policy, Switzerland

JEL Classification

F14

1 Introduction

After rejecting to join the European Economic Area in 1992, Switzerland remained outside of the European Union. Among other consequences, this implied that Switzerland has pursued its own trade policy. In addition to the EFTA Convention and the 1972 Free Trade Agreement with the European Union (EU), Switzerland currently has a network of 30 free trade agreements (FTAs) with 40 partner countries. Usually, Switzerland concludes its FTAs together with Norway, Iceland and Liechtenstein in the framework of the European Free Trade Association (EFTA). Nevertheless, Switzerland has the option to enter into FTAs outside the EFTA framework as well. This has been the case, for instance, with Japan and China. The aim of Switzerland's trade policy is the improvement of framework conditions for economic relations with key trading partners. Following the State Secretariat for Economic Affairs (SECO), the objective is to provide Swiss companies with an unobstructed, stable and non-discriminatory market access in these countries. Notably, the network is often considered to be an advantage for Swiss firms compared to its non-Swiss competitors. After decades of developing its network of FTAs, Swiss policymakers continue to explore new opportunities for advancement[1]. Potential FTAs with the United States, India, or the MERCOSUR countries are currently discussed.

In this article, we review Switzerland's network of free trade agreements. This is motivated by the increased public interest in such agreements — both among policymakers and researchers (Rodrik, 2018). How important are FTAs for Swiss imports and exports? What are the savings in terms of tariff revenues? How much scope for further agreements is there in 2018? And has Switzerland picked the 'right' partners for its FTAs (Baier et al., 2008)? Our study provides answers to such questions and reviews current Swiss trade policy with a focus on tariffs. This is not meant to neglect the important impact of non-tariff trade barriers (NTBs) but follows from the fact that thus far preferential import duties represent a major part of free trade agreements.

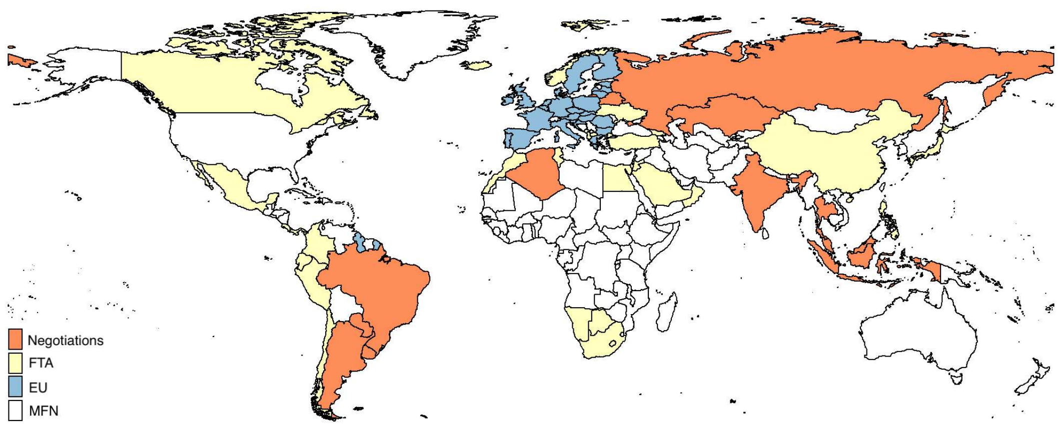
The remainder of the paper is structured as follows. Chapter 2 provides a brief overview of Switzerland's network of FTAs. In Chapter 3, we examine Swiss imports from all trading partners. Subsequently, Chapter 4 provides the mirror image and analyzes Swiss exports. Finally, we conclude and provide policy recommendations in Chapter 5.

[1]It is well established in the international trade literature that free trade agreements are in general trade-enhancing (see e.g. Baier and Bergstrand (2007)).

2 Switzerland's Network of FTAs

As mentioned in the previous section, Switzerland has spent the last decades building a network of 30 free trade agreements (FTAs) with 40 partner countries. We provide an overview of Switzerland's trading relationships in Figure 1. The two main countries that currently have no preferential agreement with Switzerland and also no negotiations are the United States as well as Australia.

Figure 1: Switzerland's Trading Relationships



Note: The figure shows for all countries in the world the trading relationship status with Switzerland. Countries are grouped into EU (blue), bilateral or EFTA free trade agreement (yellow), as well as in FTA negotiations (orange). Countries trading at most-favored-nation WTO terms are not colored. Source: SECO.

In Table 1, we show Switzerland's current trade relationship with its 20 main trading partners. Notably, this covers 85% of Switzerland's trade. The table reveals that except for the United States, all of the top-20 trading partners have signed an FTA with Switzerland. In total, more than 60 percent (or almost 250 out of 406 billion CHF) of Switzerland's trade volume takes place with countries of the European Union. The bilateral FTAs with China, Japan, and other countries cover about 20 percent (or 80 billion CHF) of Swiss trade. The United States' trade share with Switzerland of 11.4% does not benefit from any preferential treatment and current negotiations about an FTA with India, Brazil, Russia, and other countries cover about five percent of Switzerland's exports and imports.[2]

[2]As of this writing, Switzerland negotiates FTAs with India, Thailand, Indonesia, Vietnam, Malaysia, MERCOSUR (Argentina, Brazil, Paraguay, Uruguay), Algeria, Russia, Belarus, and Kazakhstan.

Table 1: Switzerland's Trade Relationships with Top-20 Partners

Rank	Partner	Imports	Exports	Trade	Share Trade	FTA	FTA since
1	Germany	52.33	41.62	93.94	23.1%	EU	1973
2	USA	12.69	33.77	46.46	11.4%	none	
3	Italy	18.01	13.76	31.77	7.8%	EU	1973
4	France	14.74	14.01	28.75	7.1%	EU	1973
5	China	13.00	11.40	24.40	6.0%	Bilateral FTA	01.07.2014
6	United Kingdom	6.09	11.38	17.47	4.3%	EU	1973
7	Austria	7.80	6.67	14.47	3.6%	EU	1973
8	Japan	3.59	7.33	10.92	2.7%	Bilateral FTA	01.09.2009
9	Spain	5.07	5.77	10.84	2.7%	EU	1973
10	Netherlands	5.04	5.13	10.17	2.5%	EU	1973
11	Ireland	7.73	0.99	8.71	2.1%	EU	1973
12	Belgium	3.32	4.13	7.45	1.8%	EU	1973
13	Hong Kong	1.19	5.35	6.54	1.6%	Bilateral FTA	01.10.2012
14	Singapore	1.95	4.25	6.20	1.5%	Bilateral FTA	01.01.2003
15	United Arab Emirates	2.95	2.73	5.68	1.4%	Bilateral FTA	01.07.2014
16	Canada	1.31	3.51	4.81	1.2%	Bilateral FTA	01.07.2009
17	Poland	2.10	2.23	4.33	1.1%	EU	1973
18	Czech Republic	2.44	1.62	4.07	1.0%	EU	1973
19	South Korea	0.71	3.06	3.77	0.9%	Bilateral FTA	01.09.2006
20	Turkey	1.44	1.84	3.29	0.8%	Bilateral FTA	01.04.1992
	Total	185.77	220.58	406.36	100%		

Note: The table shows Switzerland's top-20 trading partners, sorted by total trade volume. Imports and exports are shown in billion CHF as reported by Swiss Customs (excluding gold and precious metals) for 2017.

If current negotiations succeed, this network of FTAs will only lack the United States (11.4% of Switzerland's exports and imports), Taiwan (0.72%), Australia (0.65%), and Bangladesh (0.17%) among the top-50 trading partners. These observations highlight the limited scope for additions to the FTA network. Furthermore, it raises the question how much Switzerland as well as its trading partners currently benefit from preferential tariff rates. We explore this first for Swiss imports and then for exports in the following two sections.

3 Tariffs on Swiss Imports

We begin our analysis by looking at Swiss imports from its 238 trading partners. Given Switzerland's membership in the World Trade Organization (WTO), all of the imported goods are in principle subject to most-favored-nation (MFN) duties. These duties are specified as a certain amount of Swiss Francs per 100kg for more than 99% of products. Note that such duties can be and actually are zero for many goods. If tariffs are above zero and goods originate from a country that has signed a free trade agreement (FTA) with Switzerland, goods could benefit from preferential tariffs. Lower duties, however, are only applied if firms can provide Swiss Customs with necessary documentation (e.g. proofs of compliance with rules-of-origin requirements).

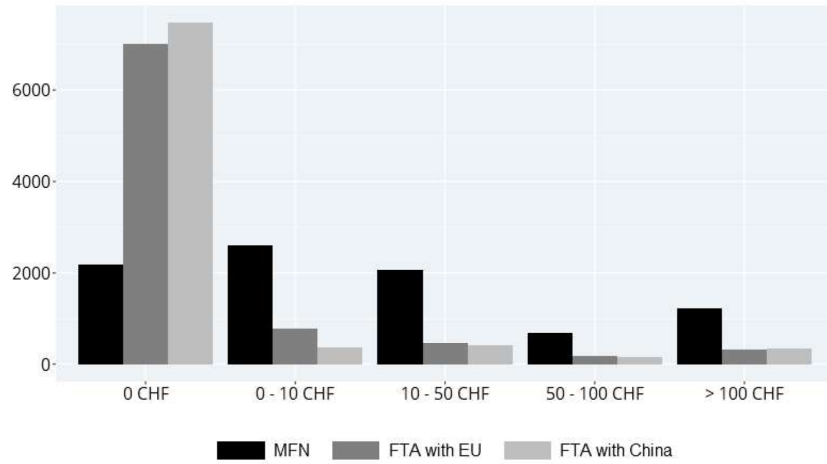
In this section, we address a number of questions researchers, managers, and policy-makers have with respect to Swiss imports. How high are Swiss import tariffs? How much do foreign exporters utilize and benefit from existing FTAs? Which country would benefit the most from an FTA with Switzerland? And what would a hard Brexit mean for UK exports to Switzerland?

How high are Swiss import duties?

Swiss imports are by default taxed at the most-favored-nation (MFN) rate. If products originate from a country that has signed an FTA with Switzerland, preferential rates can be applied. In Figure 2, we illustrate the magnitude of Swiss import duties. Notice that Switzerland uses weight-based tariffs for more than 99 percent of products. The plot shows the distribution of all MFN duties. In addition, Figure 2 highlights how much lower tariffs are in the FTA with the EU or with China. Both FTAs essentially abolish the majority of import duties with most of the remaining non-zero duties affecting agricultural products.

Notice that Figure 2 may indicate that tariffs on Chinese exports are slightly lower than the ones originating from the European Union. However, the opposite is the case: the average tariff on EU products is 23.68 CHF per 100kg and on Chinese goods 24.02 CHF. Both are significantly lower than the average MFN rate of 65.42 CHF per 100kg.

Figure 2: Swiss Import Duties by Regime



Note: The figure shows the number of tariff lines (i.e. products) per import tariff range. All tariffs are expressed as Swiss Francs per 100kg. The three bars show the best possible tariff in 2017 under MFN, for imports from the EU, and for imports from China. Source: Swiss Federal Customs Administration.

Given that import duties in Switzerland are weight-based, it is somewhat difficult to grasp their magnitude. As a percent of import value, how high are Swiss duties? Overall, paid Swiss import duties are on average very low. For every 1,000 Swiss Francs worth of imports only 5.40 Francs were paid in duties. Of the top-15 Swiss trading partners, the only two having to pay on average more than 1 percent of their goods' value in terms of customs duties are China (1.18%) and Spain (1.07%), both having relatively large shares of textile exports to Switzerland.

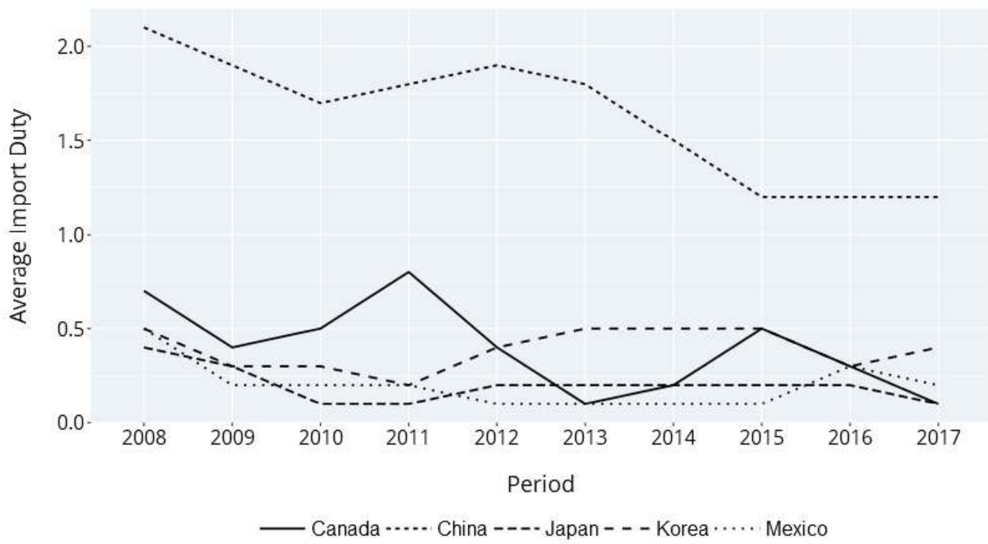
There are two main reasons for why Swiss import duties are so low. First, many of Swiss imports face a zero MFN duty. That is, these goods can be exported duty-free to Switzerland from any country. For many of Switzerland's most important trading partners, a large share of Swiss imports falls into this category. Among imports from Germany, for instance, 40.2 percent are duty-free because the Swiss MFN duty is zero. For the United States (73.1%), Italy (35.2%), France (41.7%), and China (41.7%), there is also a large share of goods that face a zero MFN duty.

The second main cause of the low average duties can be traced back to the free trade agreements Switzerland has signed. If, for instance, Swiss Customs required all importers to pay the MFN duties, the average duty would (ceteris paribus) rise to 1.82% and raise tariff revenue by 2.3 billion CHF.

How much do FTAs lower Swiss import duties?

One of the primary purposes of bilateral free trade agreements that Switzerland has signed in the past is a reduction in tariffs. Given that regular Swiss MFN duties are often very low or even zero, how much do average paid tariffs drop after an FTA comes into force? In Figure 3, we show that there is little capacity for tariffs to decrease.

Figure 3: Average Paid Import Duty for Five Selected FTAs



Note: The figure shows in percent the average paid tariff (i.e. tariff revenue divided by import volume) for five selected FTAs. The agreements came into force at different points in time: Canada (2009), Japan (2009), Korea (2006), Mexico (2001), and China (2014). For Mexico the average duty fell from 1.6 percent in 2000 to 0.9 percent in 2001. Source: Swiss Federal Customs Administration.

In case of the FTA with China, the average paid tariff fell from 1.8 to 1.2 percent. For the other FTAs the average import duty was below one percent during the entire period shown.

How much do Swiss imports utilize available FTAs?

As explained above, preferential tariff rates that are part of FTAs are not applied automatically but require active application and permission (i.e. compliance with rules-of-origin). Hence, on the Swiss import side not all imports that could in theory benefit from FTAs are actually taxed at lower rates. In general, the free trade agreements are utilized to varying degrees among Switzerland's trading partners. As can be seen in Table 2, the FTA utilization rate is usually higher for imports originating from the European Union, as the bilateral agreements have been in force for decades and cover nearly all sectors. However, it should be noted that the variation in utilization rates is not merely due to the scope of the agreements, but also due to the different products imported from each country.[3] This may for example explain why Spain has a utilization rate of just 59.8% compared to Italy's 77.9%, despite the former having a much higher share of MFN-free imports (47.1% compared to Italy's 35.2%).

Table 2: Switzerland's Imports — FTA Utilization

Trading Partner	FTA Adjusted Utilization Rate	MFN-taxed Imports	MFN-free Imports	Imports Benefiting from FTA	Other Imports
Germany	72.2%	14.2%	40.2%	43.2%	2.5%
USA	0.0%	23.1%	73.1%	0.0%	3.8%
Italy	77.9%	11.5%	35.2%	50.5%	2.8%
France	68.5%	12.6%	41.7%	39.9%	5.8%
China	42.4%	32.8%	41.7%	24.7%	0.8%
United Kingdom	39.1%	10.7%	77.2%	8.9%	3.2%
Austria	83.3%	6.7%	44.1%	46.5%	2.6%
Japan	27.1%	23.2%	55.2%	12.1%	9.4%
Spain	59.8%	12.9%	47.1%	31.6%	8.4%
Netherlands	48.1%	17.1%	45.5%	26.2%	11.1%
Ireland	44.0%	1.5%	93.4%	2.9%	2.2%
Belgium	51.1%	19.0%	51.2%	24.9%	4.8%
Hong Kong	0.3%	14.6%	81.6%	0.1%	3.8%
Singapore	3.8%	11.3%	83.7%	0.6%	4.5%
United Arab Emirates	0.0%	8.3%	66.2%	0.0%	25.5%
Canada	18.3%	7.7%	88.7%	2.1%	1.5%
Poland	79.2%	11.5%	33.5%	52.6%	2.3%
Czech Republic	80.6%	12.2%	22.6%	62.4%	2.8%
South Korea	59.1%	26.1%	27.6%	42.8%	3.5%
Turkey	66.3%	22.7%	26.4%	48.8%	2.1%
Total	54.5%	15.3%	55.7%	24.1%	4.2%

Note: The table shows Switzerland's top-20 trading partners, sorted by total trade volume. All data is taken as reported by Swiss Customs (excluding gold and precious metals) for 2017. The adjusted utilization rate is calculated as *(imports utilizing FTA)/(total imports – duty-free imports)*. In case of UAE, 2.27 billion CHF worth of jewelry articles and precious metals were imported almost duty-free on the basis that they were meant for melting and recovery.

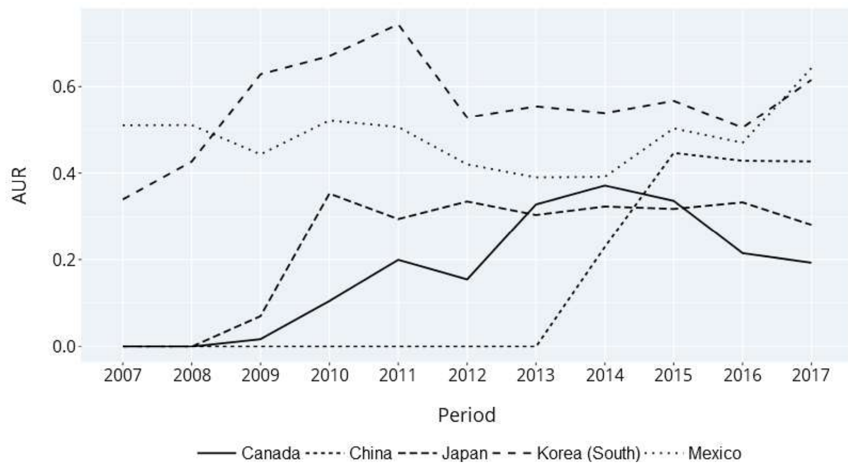
Another interesting observation in Table 2 is that less than a quarter of all Swiss imports benefit from FTAs. This is due to the fact that more than half (55.7%) of imports are duty-free irrespective of where they originate (i.e. Switzerland's MFN duty is zero for these products). Despite the network of FTAs, more than 15% of imports in 2017 were taxed at normal MFN duties. The remaining category 'other imports' contains, for instance, imports benefiting from lower duties as they have dedicated usage in Switzerland (7.7 billion CHF), products utilizing the Generalized System of Preferences for developing countries (1.7 billion), goods of Swiss origin (1.8 million), war material (160 million), or UNESCO goods (135

[3]Furthermore, as would be expected, the utilization rate of FTAs is higher for cases where the benefits from applying the FTA duty rates is greater: utilization rates are positively correlated with higher alternative MFN tariff rates as well as with higher potential tariff revenue savings. Other determinants include firm familiarity with FTAs, technological capability, and membership in industrial clusters (Wignaraja, 2014).

million).

Does the utilization of trade agreements improve over time? If exporting and importing firms have to get familiar with the process of utilizing an FTA, we should observe a positive trend in the adjusted utilization rate. Figure 4 provides little support for this hypothesis.

Figure 4: AUR over Time for Five Selected FTAs



Note: The figure shows the adjusted utilization rate for five selected FTAs. The agreements came into force at different points in time: Canada (2009), Japan (2009), Korea (2006), Mexico (2001), and China (2014). Notice that some agreements came into force during a calendar year. Source: Swiss Federal Customs Administration.

For instance, the adjusted utilization rate for imports from China quickly reached 42 percent but has plateaued at this level. The notable differences revealed in Figure 4 are largely driven by the fact that Switzerland imports very different products from its trading partners. As costs of utilization differ across industries, this makes it also unlikely for Switzerland's trading partners to significantly increase their adjusted utilization rates.

Which country benefits the most from having an FTA with Switzerland?

Given that Switzerland has signed FTAs with 40 partner countries, one might ask which FTA creates the largest savings in terms of tariff revenue. We calculate this in three steps. First, we apply Swiss MFN duties to all imports from a given country. This tells us how much Swiss Customs would have received in the absence of an FTA — assuming that the same goods would have been shipped at higher duties. Second, we subtract from this hypothetical (pure MFN) tariff revenue the actual amount of tariff revenue in 2017. Finally, we calculate how much revenue would be collected if all imports from a given country utilized an available free trade agreement.

Table 3: Switzerland's Imports — FTA Savings

Trading Partner	Actual Tariff Revenue	Tariff Revenue (100% MFN)	Tariff Revenue (100% FTA)	Pot. Savings from FTA	Realized Savings from FTA
Germany	261.2	1'165.2	128.8	1'036.4	904.0
USA	35.9	35.9			
Italy	160.2	489.9	95.9	394.0	329.7
France	109.5	338.8	74.7	264.1	229.3
China	152.9	287.7	1.4	286.3	134.9
United Kingdom	14.6	50.6	5.8	44.8	36.0
Austria	37.3	240.9	29.1	211.8	203.6
Japan	5.7	14.4	0.2	14.2	8.7
Spain	54.1	94.6	32.4	62.2	40.6
Netherlands	44.5	137.6	32.4	105.2	93.1
Ireland	4.3	61.1	3.6	57.4	56.8
Belgium	20.9	79.9	15.3	64.6	59.0
Hong Kong	1.7	1.7	0.1	1.6	0.0
Singapore	0.9	1.1	0.2	0.9	0.2
UAE	0.9	3.2	0.2	3.0	2.4
Canada	2.1	5.3	0.7	4.6	3.2
Poland	12.4	70.9	6.5	64.4	58.6
Czech Republic	9.2	50.3	5.7	44.7	41.1
South Korea	2.6	7.3	0.1	7.2	4.6
Turkey	16.0	60.4	3.8	56.6	44.4

Note: The table shows Switzerland's top-20 trading partners, sorted by total trade volume. All tariff revenue figures are expressed in million CHF. Data as reported by Swiss Customs (excluding gold and precious metals) for 2017.

The results in Table 3 show that by and large Germany is the biggest beneficiary from an FTA with Switzerland. If all of German exports to Switzerland had been taxed at MFN level, Swiss Customs would have collected 1.2 billion CHF instead of 261 million CHF in 2017. Very large savings in terms of tariff revenue are also found for Italy (330 million CHF), France (229), Austria (204), and China (135). In total, Swiss Customs would receive an additional 2.3 billion CHF if MFN duties were applied to all imports.[4] A second key finding of Table 3 is that some FTAs, like the ones with Japan and Canada yield very low savings in terms of tariff revenue.

Which country could benefit substantially from an FTA with Switzerland?

In terms of countries which could benefit from an FTA with Switzerland, we can examine how much they currently pay in tariffs. The largest trading partner yet to sign an agreement with Switzerland, the United States, currently faces tariffs totaling just 35.9 million CHF. Similarly, Vietnam faces tariff costs of 22.3 million CHF, and India 21.1 million CHF.

[4]Note that this number assumes that Switzerland would import the exact same goods in equal volume. In reality, if MFN duties were applied to all imports, Switzerland would import less and thus receive less than 2.3 billion CHF in additional revenue.

Table 4: Switzerland's Imports — Potential Future FTA Savings

Trading Partner	Swiss Imports (bn CHF)	Tariff Revenue (m CHF)	Average Applied Tariff
USA	12.69	35.88	0.28%
India	1.46	21.09	1.45%
Taiwan	1.19	8.55	0.72%
Brazil	0.57	7.71	1.35%
Australia	1.24	3.50	0.28%
Russia	0.21	2.05	0.99%
Thailand	0.94	9.42	1.00%
Vietnam	1.42	22.32	1.57%
Malaysia	0.53	11.31	2.15%
Argentina	0.10	6.80	7.00%

Note: The table shows Switzerland's top-10 trading partners that have not yet signed an FTA with Switzerland, sorted by total trade volume. Data as reported by Swiss Customs (excluding gold and precious metals) for 2017.

Expressed as average applied tariff (i.e. tariff revenue divided by total import value), American exporters only pay 0.3 percent. For Vietnam and India, the average tariff applied is higher but modest at about 1.5 percent. Table 4 documents that Argentina is the only country in the top-50 of Switzerland's trading partners and without FTA that pays an average tariff beyond 3 percent. This raises the question whether there are many countries left with a strong interest in signing a bilateral FTA with Switzerland.

There are, however, two qualifications to this statement. First, tariffs for specific goods and industries are still significant. Thus, while the overall tariff on products from the United States is negligible, there are sectors such as paper and paperboard (4.4 percent average tariff paid) or beverages (7.9 percent) in which an FTA would lead to significant improvements. From India, various textile products currently face average tariffs of 3 to 11 percent and could strongly benefit from an FTA. Second, a hypothetical FTA with the United States or other countries would likely reduce tariffs on goods that are currently not exported from these countries to Switzerland. If Swiss MFN duties are prohibitively high, this does not show up in Table 4 but would still create an incentive to negotiate an FTA with Switzerland. This is true for American dairy products (HS Section 04), for example, which were taxed at 35.6 percent when entering Switzerland in 2017. The total volume of such products, about 13.4 million CHF last year, would certainly be much larger if Swiss tariffs were reduced — potentially in a bilateral FTA. However, given the strong opposition to opening Switzerland's agricultural market, we do not see this happening soon.

What would a hard Brexit mean for UK exports to Switzerland?

One of the largest potential shocks to Switzerland's future international trading relationships is the upcoming exit of the United Kingdom from the European Union. While it has not yet been decided on what terms the UK will leave, policy-makers and businesses alike have to prepare for a variety of scenarios. For sure the largest change would occur if there will be a hard Brexit and the UK would leave the EU Customs Union without signing new trade agreements. In such a scenario all Swiss imports from the UK would be charged the MFN duty as they would no longer qualify for preferential rates set out in the 1973 Swiss-EU FTA. If we assume that this hard Brexit occurs and apply MFN duties on all of British exports to Switzerland in 2017, we estimate about 50.6 million CHF in tariff revenues on 6.1 billion CHF worth of Swiss imports from the UK. These two numbers suggest that potential savings from a free trade agreement between Switzerland and the United Kingdom (subsequent to a hard Brexit) would be minimal in terms of tariff revenue[5]. However, a hard Brexit would also entail a series of non-tariff barriers (NTBs) that would cause additional costs for UK exports to Switzerland.

How much do poor countries benefit from GSP in Switzerland?

Participating in the so-called Generalized System of Preferences (GSP), Switzerland offers preferential import duties to a group of low-income countries. In 2017, a total of 1.4 billion CHF of imports were duty-free because of this scheme. A further 294 million CHF worth of Swiss imports benefited from GSP because of reduced import duties. Since the introduction of the bilateral FTA between China and Switzerland in July 2014, the largest beneficiary of GSP in Switzerland is India with almost one third (or 500 million) of its 1.5 billion CHF benefiting from GSP. Altogether, this reduced the amount of tariff revenue collected by Swiss Customs from 32 million CHF (under pure MFN treatment) to about 20 million CHF in 2017. Other significant beneficiaries from GSP when exporting to Switzerland were Thailand (saving about 7.6 million CHF in tariffs), Brazil (4.3), and Vietnam (2.2).

[5]In a separate paper, we find that Switzerland is by far an exception in terms of potential MFN tariffs faced following a hard Brexit. UK trade with other European countries would on average face much higher import tariffs (Legge and Lukaszuk, 2018).

4 Tariffs on Swiss Exports

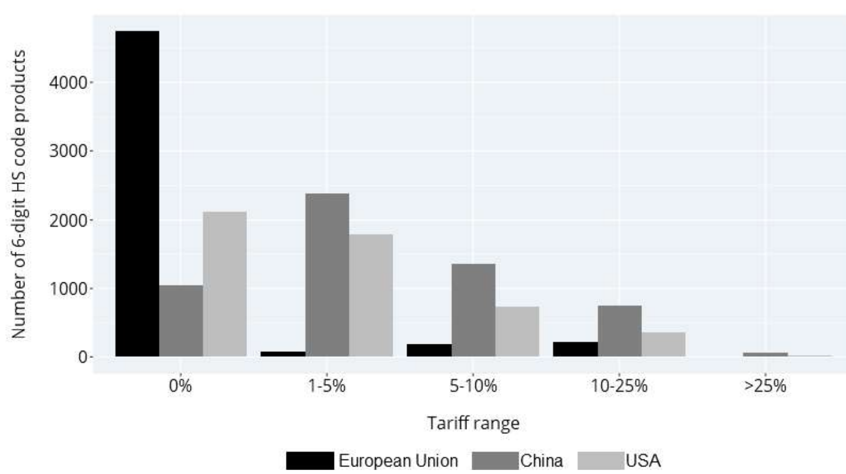
We now turn to Swiss exports and examine which tariff barriers are still significant, how much Swiss firms benefit from the network of FTAs, and which additional export destinations should be targeted for a trade agreement.

To analyze FTAs on Switzerland's export side, we combine data on Swiss exports with import duties applied by trading partners. Given that imports are typically reported with greater accuracy than exports, we use information on imports reported by Switzerland's trading partners (instead of exports reported by Swiss Customs). All such data is recorded for 2017 at the 6-digit product level by UN Comtrade. Information about import tariffs are provided by the WTO Download Facility.[6]

How high are import duties (MFN) on Swiss exports?

The trade-weighted average MFN duty that Swiss exports would face in the EU in the absence of tariff preferences is roughly 1.65%. In China, the average MFN tariff would be slightly higher at 2.07%. Meanwhile, the current average tariff faced by Swiss exporters to the United States is 0.8%.

Figure 5: Import Duties by Export Destination



Note: The figure shows number of ad valorem tariff lines (i.e. 6-digit HS code products) per import tariff range. All tariffs are for the year 2017 and expressed as percentages of the imported value. The three bars show the best possible tariff faced by Swiss exporters in the European Union, China, and the United States. Source: WTO Tariff Download Facility.

[6]We focus on *ad valorem* duties, that is duties determined as percentage of the imported value. Some products, mostly agricultural produce, may be subject to duties that depend on other units (weight, mass), for which we do not have sufficiently granular data.

If we do not take into account the actual trade flows and look at the simple average tariff rate faced by Swiss exporters, Figure 5 shows that due to the FTA, the European Union offers by far the lowest import duties on Swiss exports with an average duty of just under 1 percent. Meanwhile, the average non-trade-weighted duty faced in the United States is almost 3.5% and in China even 5.2%. As a result of the Sino-Swiss FTA that came into force in July 2014, Chinese tariffs on Swiss products will decline further until the year 2023 (Casas et al., 2018).

How much do Swiss exporters utilize available FTAs?

It is difficult to assess the actual scope to which Switzerland has benefited from its FTAs, as origin-specific tariff revenues from each trading partner would be required.[7] Nevertheless, calculating the difference between pure-MFN and full-utilization-FTA tariff revenue paid by Swiss exporters in each destination country can provide at least an idea of the scope of each signed FTA.

Taking such an approach, Table 5 reveals that Swiss firms can benefit from tariff cost reductions of roughly 2 billion CHF when entering the EU market, almost half of which can be attributed to goods sent to Germany. Given that the utilization rate for exports into the EU is about 93% (UNCTAD, 2018), this translates into reduced tariffs worth approximately 1.9 billion CHF each year. Similar to what we found in our analysis of imports into Switzerland, such large savings from preferential tariffs cannot be expected from other FTAs. As the report by Casas et al. (2018) indicates, Swiss exporters to China have an adjusted utilization rate of 44%, amounting to realized tariff reductions of about 100 million CHF.

In which country does Switzerland benefit the most from having an FTA?

As described above, we are unable to calculate the exact tariff revenue savings of Swiss exports due to data availability. Nonetheless, given available FTA and MFN tariff rates, we are able to at least calculate the potential savings from a signed FTA. Furthermore, if we assume that Swiss exporters utilize tariff preferences to the same degree as their corresponding foreign exporters, we can estimate approximate savings from the FTAs. This calculation yields the savings shown in the last column of Table 5.

[7] There is some evidence for certain jurisdictions. For example, the utilization rate of the FTA with the European Union for Swiss exporters was at 92% in 2009 and at 93% in 2013 — which is significantly higher than the utilization rate of EU exporters to Switzerland (75% in 2013) (UNCTAD, 2018).

Similar to imports into Switzerland, the largest savings for Swiss firms occur when exporting into the European Union. Nevertheless, as Table 5 documents notable savings of nearly 300 million CHF could be realized when exporting to China and fully utilizing the FTA. Also worth mentioning are the approximated savings of 70 million CHF from the FTAs with the United Arab Emirates and South Korea.

Table 5: Switzerland's Exports — FTA Savings

Trading Partner	Tariff Revenue (100% MFN)	Tariff Revenue (100% FTA)	Pot. Savings from FTA	Approx. Savings from FTA
Germany	1'028.5	19.5	1'009.0	880.1
USA	291.3			
Italy	189.8	1.3	188.5	157.7
France	340.0	3.6	336.4	292.1
China	685.0	372.5	312.5	147.2
United Kingdom	61.1	0.5	60.6	48.7
Austria	128.8	4.7	124.1	119.3
Japan	48.5	14.6	33.9	20.7
Spain	69.8	2.5	67.3	43.8
Netherlands	36.8	1.6	35.2	31.1
Ireland	18.3	0.1	18.2	18.0
Belgium	39.2	0.1	39.1	35.7
Hong Kong	0.0	0.0	0.0	0.0
Singapore	0.0	0.0	0.0	0.0
United Arab Emirates	95.3	4.2	91.1	70.3
Canada	33.2	0.8	32.4	22.5
Poland	32.2	0.4	31.8	28.9
Czech Republic	30.1	0.2	29.9	27.5
South Korea	166.8	62.1	104.7	67.5
Turkey	45.0	8.9	36.1	28.3

Note: The table shows Switzerland's top-20 trading partners, sorted by total trade volume. All tariff revenue figures are expressed in million CHF. Data are for 2017 and as reported by UN COMTRADE and the WTO Tariff Download Facility. The approximated savings are based on the assumption that Swiss exporters utilize tariff preferences to the same degree as exporters of the corresponding FTA partner.

Would Swiss exporters benefit from an FTA with the United States?

In terms of potential tariff reductions, Switzerland has a clear incentive to sign a free trade agreement with the United States, its second largest export market. Swiss exporters currently pay an estimated 291 million CHF in tariffs to the American customs authorities. Excluding China, that amount is roughly equal to the tariff costs Swiss exporters face in all their other 20 largest export destinations combined (assuming a utilization rate of 100%).

Notably, there is a sizable difference between tariff revenue collected by Swiss and American Customs on the bilateral trade. While US exports led to 35.9 million CHF in tariff revenue, Swiss exporters paid an estimated 291 million CHF. Abolishing all tariffs would thus come at a much larger cost to the American government. Given the current stance of the US trade policy regarding tariffs, it should be perceived as unlikely that Switzerland will be able to negotiate a significant decrease of the 291 million CHF in tariff revenues within a bilateral trade deal.

Should Switzerland seek an FTA with MERCOSUR?

The countries of the MERCOSUR are Brazil (0.7% of Swiss trade), Argentina (0.2%), Uruguay (0.05%), and Paraguay (0.01%). Together, they account for about one percent of Swiss foreign trade. Tariffs in these trading relationships are still significant. We estimate that Swiss firms face a 6% average duty in Brazil and about 7% in Argentina. Hence, there is a Swiss interest in reducing such tariffs. For both Brazil and Argentina, however, one key goal in an FTA would be to reduce Swiss import barriers for agricultural products. Given a strong opposition in Switzerland to open its agricultural market, however, we expect negotiations to be difficult. In the case of Argentina, for example, 1.1 billion CHF worth of precious metals exports in 2017 were entirely duty-free in Switzerland. Of the remaining 100 million CHF exports, there were 18 million worth of beverages (facing an average tariff of 16.2%), 14 million worth of meat (6.3%), and 7 million worth of cereals (9.4%). Without concessions in agriculture we see little incentive for Argentina to sign a trade agreement. Similarly, for Brazil many exports to Switzerland are duty-free already, leaving meat or dairy products with current tariffs above 7% as key targets for reduction in a bilateral FTA.

Which other country should Switzerland approach for an FTA?

While potentially less beneficial than an FTA with the United States, Switzerland should also seek reducing tariffs faced in BRICS countries with which it has not signed an FTA yet (but is in fact negotiating), namely Brazil, Russia, and India. In these three countries, Swiss exporters currently face tariffs of about 372.5 million CHF, or an average tariff of 6.1%. Assuming that Switzerland will manage to negotiate this average tariff down to a level similar to the one currently faced under the FTA with China (3.4%) and have a similar utilization rate (44%), this would reduce the annual tariff costs by roughly 73.2 million CHF. In India and Russia, Swiss firms currently pay an estimated 150 and 90 million CHF, respectively. At the same time, these countries faced import duties of only 21.1 and 2 million CHF when shipping goods to Switzerland in 2017. As in the case of the United States, this imbalance in tariff revenue will make it difficult to negotiate a bilateral trade agreement.

What would Brexit mean for Swiss exports to the UK?

As discussed above, the future trading relationship with the United Kingdom is still undecided because the details of Brexit remain unclear. However, we can estimate the consequences of a hard Brexit — a situation in which Switzerland and the UK would trade under WTO rules and apply MFN duties on all imports. If we follow this scenario and apply a tariff schedule equal to the MFN tariff schedule of the European Union to all of Swiss exports to the UK in 2017, the total revenue would be approximately 61 million CHF. To put this number into context, under full utilization of the FTA that Switzerland has with the EU, we estimate that in 2017 Swiss exporters paid only 0.5 million CHF in duties in the UK. However, the average applied tariff would increase from virtually zero to about still less than one percent. Hence, as far as tariffs are concerned there is not much of an impact in case the UK was to leave the EU without a new trading agreement with Switzerland.

5 Conclusion and Policy Recommendations

Since it became clear that the Doha Development Round — trade-negotiations within the World Trade Organization since 2001 — would not yield fruitful improvements, many countries have used bilateral trade agreements to foster international exchange. The total number of trade agreements has surged to more than 300 as of this year.[8] While some economists are sceptical of FTAs in general (Felbermayr, Teti and Yalcin, 2018; Rodrik, 2018), a better understanding of how much FTAs actually facilitate —rather than distort— international trade is needed. For Switzerland, as for other countries, further research is required to examine just how much firms and consumers benefit from a network of trade agreements.

In this study, we undertake a first step in this direction and examine Switzerland's network of free trade agreements. Summarizing by how much Swiss imports and exports benefit from the trade agreements, Table 6 shows that among the top-20 trading partners tariffs have been substantially reduced. Swiss exporting firms save about 2 billion CHF annually in tariffs abroad. At the same time, Swiss Customs collects about 2.3 billion CHF less in revenue. Notice, however, that these 2.0 and 2.3 billion CHF of revenue arise from 181 billion

[8]Such agreements must be reported to and approved by the World Trade Organization. The WTO website (https://rtais.wto.org/UI/PublicMaintainRTAHome.aspx) provides additional information and Melchior (2018) examines the spread of Free Trade Agreements (FTAs) since the turn of the century.

CHF worth of Swiss exports and 163 billion CHF worth of Swiss imports (among the top-20 trading partners). These numbers show just how low tariffs are on average.

Table 6: Switzerland's Net FTA Savings

Trading Partner	Realized Import Savings from FTA	Approx. Export Savings from FTA	Net Estimated Savings from FTA	Net Potential Savings from FTA
Germany	904.0	880.1	-23.9	-27.4
USA				
Italy	329.7	157.7	-172.0	-205.5
France	229.3	292.1	62.7	72.3
China	134.9	147.2	12.3	26.2
United Kingdom	36.0	48.7	12.7	15.8
Austria	203.6	119.3	-84.3	-87.7
Japan	8.7	20.7	12.0	19.7
Spain	40.6	43.8	3.3	5.1
Netherlands	93.1	31.1	-61.9	-70.0
Ireland	56.8	18.0	-38.8	-39.2
Belgium	59.0	35.7	-23.3	-25.5
Hong Kong	0.0	0.0	0.0	-1.6
Singapore	0.2	0.0	-0.2	-0.9
United Arab Emirates	2.4	70.3	68.0	88.1
Canada	3.2	22.5	19.3	27.8
Poland	58.6	28.9	-29.6	-32.6
Czech Republic	41.1	27.5	-13.6	-14.8
Korea (South)	4.6	67.5	62.9	97.5
Turkey	44.4	28.3	-16.1	-20.5
Total Top 20	2'250.1	2'039.6	-210.4	-173.2

Note: The table shows Switzerland's top-20 trading partners, sorted by total trade volume. All tariff revenue figures are expressed in million CHF. Data are for 2017 and as reported by Swiss Customs, UN COMTRADE, and the WTO Tariff Download Facility (excluding gold and precious metals). The approximated export savings are based on the assumption that Swiss exporters utilize the tariff preferences to the same degree as the exporters of the corresponding FTA partner.

Given that tariff rates both on Swiss imports and exports have been largely reduced to very low levels, there remains little room for improvement in terms of negotiating tariff reductions with Swiss trading partners. The notable exceptions are the United States and to a lesser extent the remaining BRICS countries. After decades of developing this network, there are few additional FTAs to be negotiated. Overall, Switzerland has almost reached the end of the road in terms of tariff reductions through bilateral trade agreements. This finding suggests that Swiss trade policy ought to shift more towards tackling non-tariff behind-the-border (BTB) barriers. This means addressing, for instance, localization requirements, large-scale export subsidies, and growing trade finance schemes (Evenett and Fritz, 2017).

References

Baier, Scott L., and Jeffrey H. Bergstrand. 2007. "Do free trade agreements actually increase members' international trade?" *Journal of International Economics*, 71(1): 72–95.

Baier, Scott L., Jeffrey H. Bergstrand, Peter Egger, and Patrick A. McLaughlin. 2008. "Do economic integration agreements actually work? Issues in understanding the causes and consequences of the growth of regionalism." *World Economy*, 31(4): 461–497.

Casas, Tomas, Stefan Legge, Patrick Ziltener, Xianquan Tu, Jian Han, and Yue Lu. 2018. *Sino-Swiss Free Trade Agreement - 2018 Academic Evaluation Report.* Basel:MDPI.

Evenett, Simon J., and Johannes Fritz. 2017. "Will Awe Trump Rules ? The 21st Global Trade Alert Report."

Felbermayr, Gabriel, Feodora Teti, and Erdal Yalcin. 2018. "On the Profitability of Trade Deflection and the Need for Rules of Origin." *CESifo Working Paper No. 6929.*

Legge, Stefan, and Piotr Lukaszuk. 2018. "The Tariff Impact of Hard Brexit: Taking back Control Comes at a Price." *University of St.Gallen Discussion Paper 2018-10.*

Melchior, Arne. 2018. *The Global Landscape of FTAs.* pp. 37-48, Cham.:Palgrave Macmillan.

Rodrik, Dani. 2018. "What Do Trade Agreements Really Do?" *NBER Working Paper #24344.*

UNCTAD. 2018. *The Use of the EU's Free Trade Agreements.*

Wignaraja, Ganeshan. 2014. "The determinants of FTA use in Southeast Asia: A firm-level analysis." *Journal of Asian Economics*, 35: 32–45.

A Additional Table and Information

Table A.1: Switzerland's Imports From Its Top-50 Trading Partners

Rank	Trading Partner	Total Trade (mio. CHF)	FTA	% MFN Imports	% MFN-free Imports	% Imports FTA	% Imports GSP
1	Germany	93'945	EU	14.2%	40.2%	43.2%	0.0%
2	USA	46'460		23.1%	73.1%	0.0%	0.0%
3	Italy	31'768	EU	11.5%	35.2%	50.5%	0.0%
4	France	28'752	EU	12.6%	41.7%	39.9%	0.0%
5	China	24'399	FTA	32.8%	41.7%	24.7%	0.0%
6	United Kingdom	17'471	EU	10.7%	77.2%	8.9%	0.0%
7	Austria	14'473	EU	6.7%	44.1%	46.5%	0.0%
8	Japan	10'919	FTA	23.2%	55.2%	12.1%	0.0%
9	Spain	10'835	EU	12.9%	47.1%	31.6%	0.0%
10	Netherlands	10'166	EU	17.1%	45.5%	26.2%	0.0%
11	Ireland	8'713	EU	1.5%	93.4%	2.9%	0.0%
12	Belgium	7'454	EU	19.0%	51.2%	24.9%	0.0%
13	Hong Kong	6'539	FTA	14.6%	81.6%	0.1%	0.0%
14	Singapore	6'195	FTA	11.3%	83.7%	0.6%	0.0%
15	UAE	5'682	GCC-FTA	8.3%	66.2%	0.0%	0.0%
16	Canada	4'811	EFTA-FTA	7.7%	88.7%	2.1%	0.0%
17	Poland	4'332	EU	11.5%	33.5%	52.6%	0.0%
18	Czech Republic	4'065	EU	12.2%	22.6%	62.4%	0.0%
19	South Korea	3'771	FTA	26.1%	27.6%	42.8%	0.0%
20	Turkey	3'288	FTA	22.7%	26.4%	48.8%	0.0%
21	India	3'102	Negotiations	43.0%	24.6%	0.0%	30.7%
22	Taiwan	2'933		53.3%	41.7%	0.0%	0.0%
23	Brazil	2'793	Negotiations	6.6%	79.2%	0.0%	7.2%
24	Sweden	2'735	EU	8.8%	43.2%	44.8%	0.0%
25	Australia	2'624		9.4%	88.6%	0.0%	0.0%
26	Russia	2'449	Negotiations	11.2%	85.7%	0.0%	0.0%
27	Mexico	2'330	FTA	9.2%	73.1%	16.8%	0.0%
28	Hungary	2'138	EU	17.1%	28.8%	51.7%	0.0%
29	Thailand	2'125	Negotiations	12.6%	79.9%	0.0%	6.3%
30	Vietnam	2'034	Negotiations	38.9%	49.1%	0.0%	8.4%
31	Saudi Arabia	2'025	GCC-FTA	18.1%	54.1%	17.1%	0.0%
32	Portugal	1'904	EU	17.6%	14.5%	67.2%	0.0%
33	Denmark	1'758	EU	14.8%	39.8%	44.5%	0.0%
34	Slovakia	1'517	EU	22.8%	19.6%	56.4%	0.0%
35	Romania	1'416	EU	20.5%	20.6%	57.6%	0.0%
36	Israel	1'271	FTA	61.1%	18.6%	13.3%	0.0%
37	Malaysia	1'266	Negotiations	40.5%	52.3%	0.0%	5.3%
38	Finland	1'257	EU	1.8%	74.3%	23.5%	0.0%
39	Norway	1'003	EFTA	2.9%	49.2%	43.9%	0.0%
40	Greece	988	EU	14.5%	35.1%	47.0%	0.0%
41	South Africa	986	SACU-FTA	20.0%	68.9%	9.6%	0.0%
42	Slovenia	957	EU	15.4%	29.5%	54.6%	0.0%
43	Egypt	946	FTA	7.3%	83.3%	8.4%	0.0%
44	Argentina	888	Negotiations	5.7%	92.1%	0.0%	0.2%
45	Indonesia	830	Negotiations	75.5%	11.1%	0.0%	4.4%
46	Nigeria	709	EFTA Coop.	1.6%	98.3%	0.0%	0.0%
47	Bulgaria	700	EU	25.9%	14.9%	57.2%	0.0%
48	Qatar	681	GCC-FTA	15.7%	13.0%	0.0%	0.0%
49	Bangladesh	677		62.8%	0.6%	0.0%	36.4%
50	Kazakhstan	661	Negotiations	7.7%	83.3%	0.0%	0.7%