KOMMERSKOLLEGIUM
NATIONAL BOARD OF TRADE SWEDEN

The Economics of the EU's Trade Defence Instruments

Winners and losers of anti-dumping policies

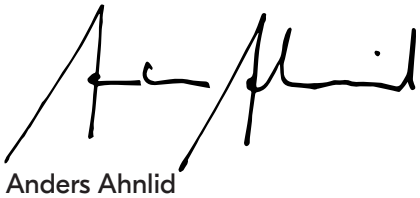
2022

Foreword

The purpose of the report is to analyse the economic effects of a series of anti-dumping and anti-subsidy measures imposed by the EU between 2008 and 2015. This report is a continuation of a previous report from the National Board of Trade Sweden (2021) in which the effects on prices and traded quantities were analysed. In this report, we study the monetary effects of the imposed anti-dumping and anti-subsidy measures on the EU's consumers, producers, and tariff revenue.

The following experts at the National Board of Trade Sweden have contributed to this study: Patrik Tingvall, Nils Norell, and Maria Johem. Valuable comments and suggestions from Jonas Kasteng and Kristina Olofsson, the National Board of Trade, and Håkan Nordström at the Swedish Agency for Growth Policy Analysis are gratefully acknowledged.

Stockholm, May 2022



Anders Ahnlid
Director-General
National Board of Trade Sweden

Summary

The central purpose of the EU's trade defence instrument is to level the playing field between intra-EU and extra-EU producers competing on the EU market. A levelled playing field will in turn allow EU firms to increase their sales and regain their market shares on the EU market.

This report analyses the economic effects of a series of EU anti-dumping and anti-subsidy measures on EU consumers, EU producers, and tariff revenue. One finding from this report is that EU producers do not benefit from the imposed measures. Instead, the results point at marginally lower intra-EU trade and an estimated loss of 653 million euros (MEUR) for EU producers. Hence, the goal of increased intra-EU trade has not been achieved.

While EU producers are hurt, EU consumers and total welfare are only marginally affected by the imposed measures. The relatively limited impact on consumers and EU welfare is mainly driven by increased tariff revenue and lower import prices from non-targeted third-country suppliers. We also show that the uncertainty of the effects is substantial, suggesting that anti-dumping and anti-subsidy measures are imprecise trade policy tools.

Three takeaways from this report are the following:

- It is found that intra-EU trade has not increased despite domestic firms being shielded from price dumped imports and perceived unfair trade practices. Similar results have been found in previous studies on EU anti-dumping measures. Since regaining intra-EU market shares is a key goal behind the imposition of these instruments, this finding questions the precision of the anti-dumping and anti-subsidy measures.
- EU consumers are harmed by the increased prices of imports from targeted countries. This cost is dampened by a lack of increased, and even reduced, prices from alternative suppliers. Hence, competition seems to be maintained after the imposition of the measure. One explanation for the apparent lack of a negative effect on competition may be that the measures target suppliers with a relatively small market share. On average, the targeted suppliers analysed in this study had a market share of about 20 per cent of the EU market. The EU competition legislation defines a 40 per cent market share as a benchmark for a dominant position. Hence, the risk of targeted firms possessing a dominant position is in many cases low.
- The negative economic effects from anti-dumping and anti-subsidy measures are mitigated by a relatively large increase in tariff revenue. In technical terms, it is found that the demand for targeted products was inelastic, meaning that consumer expenditures on targeted products from targeted suppliers increased. This is an indication that alternative suppliers can often be difficult to find and are therefore not always in a neck-and-neck competition with domestic intra-EU producers.

Based on our findings, we propose three policy recommendations:

(i) To enhance well-informed policy decisions, we call for a renewed focus on impact assessments and for such assessments to include a welfare effect analysis as well as a risk assessment of possible non-intended 'external effects'.

(ii) As trade measures such as anti-dumping and countervailing duties can increase trade costs and thus delay the diffusion of climate-mitigating technologies, we propose that climate objectives should be considered to a greater extent before implementing measures against climate-related products. This can be achieved by better utilising the so-called Union interest test.

(iii) There is a substantial variation across cases and uncertainty about the effects. The instruments should therefore be used in a restrictive manner. A shift of the EU anti-dumping legislation towards stricter competition legislation can help to achieve this goal.

Table of contents

Abbreviations

AD	Anti-dumping
ASCM	Agreement on Subsidies and Countervailing Measures
BEC	Broad Economic Categories
CN	Combined Nomenclature
CVD	Countervailing Duties
GATT	General Agreement on Tariffs and Trade
HS	Harmonized Commodity Description and Coding System or Harmonized System
MFN	Most-Favoured Nation
SCM	Synthetic Control Method
TARIC	The Integrated Tariff of the European Union
TDI	Trade Defence Instrument
WTO	World Trade Organization

1. Introduction

Perceived unfair trade practices adopted by companies from third countries towards companies in the EU can be addressed by anti-dumping or anti-subsidy measures to correct the possible injury. The purpose of this report is to analyse the economic effects of a series of anti-dumping and anti-subsidy measures imposed by the EU between 2008 and 2015.

This report builds on the results from our quantitative analysis reported in National Board of Trade (2021), in which we analysed the impact of these measures on traded quantities and prices using the synthetic control group method. We concluded that the analysed anti-dumping and anti-subsidy measures reduce the imports from targeted countries by 28 per cent on average, while we found little evidence suggesting that shielded EU producers regained their market shares. Instead, we found that the imports from non-targeted third countries replaced the declining imports from targeted countries.

In this report, we continue our investigation by analysing the economic impact of these measures on other parts of the economy, in other words, what anti-dumping and anti-subsidy measures mean in monetary terms for EU consumers, producers, tariff revenue, and economic welfare.

The report is structured as follows. Chapter 2 presents the economic analysis, in which we first view our cases and data from a descriptive point of view and examine the effects on prices and quantities. We thereafter use the estimated effects on prices and traded quantities to calculate the monetary gains and losses that are due to the trade remedies imposed by the EU. Chapter 3 concludes with a discussion and recommendations. The calculations of the economic welfare effects are provided in the technical appendix.

Box 1

Introduction to EU anti-dumping and anti-subsidy measures

Anti-dumping measures

EU producers can make an anti-dumping complaint to the Commission if they consider that a product (i.e., goods not services) is being exported to the EU at dumped prices and they are being injured provided that the EU company is supported by at least 25 per cent of the EU total production and can provide evidence.

Provisional and/or definitive anti-dumping duties (in the form of ad valorem, variable, or specific duties) can be imposed, after an investi-gation by the Commission, on goods from a non-EU country sold in the EU at a price below the sales price in their domestic market or below the cost of production. There must also be a material injury to the EU industry producing the like product, and the dumped imports must be a cause of the injury.

Provisional measures can last for up to 9 months, and definitive measures can last for 5 years but can be prolonged after a review.

The EU reported 340 anti-dumping measures to the WTO during the period 1995—2020.[1]

Anti-subsidy measures

EU producers can make an anti-subsidy complaint to the Commission if they consider that they are being injured by imports from a countervailable subsidy provided that the EU complaining companies account for at least 25 per cent of the total EU production and evidence can be presented.

Provisional and definitive countervailing duties can be imposed by the Commission after an investigation if a non-EU government or a public body provides financial contributions to companies to produce or export goods imported to the Union at prices substantially lower than the normal commercial value and the EU industry therefore suffers material injury.

Provisional measures can last for up to 4 months and definitive measures can last for 5 years but can be prolonged after a review.

The EU reported 45 countervailing measures to the WTO during the period 1995—2020.[2]

The EU rules are based on the following WTO agreements: the Anti-dumping Agreement, that is, the Agreement on Implementation of Article VI of GATT 1994, and the Agreement on Subsidies and Countervailing Measures.

Source: European Commission and WTO.

1 WTO. AD_MeasuresByRepMem.xls (live.com)
2 WTO. CV_MeasuresByRepMem.xlsx (live.com)

2. Trade effects of the EU's trade defence instruments

The analysis proceeds in three steps, starting with a descriptive examination of the trade flows, followed by an examination of the impact on prices and quantities, and ending with a calculation of the economic effects on consumers, producers, and tariff revenue.

The analysis covers cases for which trade flows could be followed for at least four years before and two years after the measures were imposed and for which the trade flows were at least 1 MEUR.[3][4] Of the anti-dumping and anti-subsidy cases, China was the most frequently targeted country, followed by India, Russia, and the United States. Nine of fifteen cases were in the steel and aluminium sector. Additionally, 80 per cent of the targeted goods were intermediary input goods potentially leading to harmful effects on downstream producers. Moreover, two of the cases involved climate-related products.[5] Lastly, the average duty for the targeted goods was 30 per cent. For more information on each case, see Appendix Table 6.

Box 2

Consumer definition

We use the term 'consumers' for both private consumers of the imported goods and downstream firms using the goods as an intermediate input in their production.

3 Due to reviews of the HS nomenclature by the World Customs Organization as well as changes in the EU CN nomenclature, we may lose track of one or more products for certain anti-dumping and anti-subsidy cases. This makes it difficult to follow entire trade flows over the aforementioned time period of six years. A possible solution would be to trace the revised codes. However, this practice is associated with a relatively large degree of uncertainty.

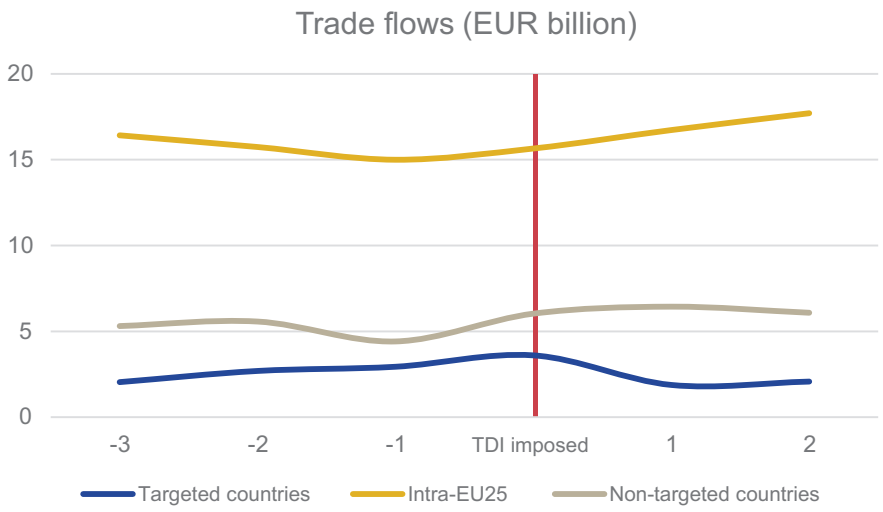
4 We apply the same limitations as used by the National Board of Trade (2012); i.e., we do not analyse the effect of these measures on the sales of targeted products within individual EU countries. This choice is partly motivated by a lack of detailed production data. Using more aggregated production-level data increases the distance between the introduced measures and the observed trade flows, which is detrimental to the quality of the analysis.

5 In this study, 'climate-related goods/products' means products that have been considered as environmental goods by different actors within the international trade policy community.

2.1 Descriptive analysis of trade effects

Starting with the descriptive analysis, Figure 1 presents the total trade values for goods targeted by the anti-dumping and anti-subsidy measures implemented by the EU between 2008 and 2015.[66] Specifically, the figure displays the value of trade in targeted goods before and after an anti-dumping and/or anti-subsidy measure was imposed for intra-EU trade, EU imports from non-targeted third countries, and EU imports from targeted countries.

Figure 1. Aggregate trade values for targeted products



Source: Eurostat, European Commission and own calculations.

Note: The depicted trade values refer to trade goods covered by thirteen anti-dumping and two anti-subsidy cases implemented by the EU during the period 2008–2015.

From Figure 1, we make three descriptive observations. First, there is a positive trend in intra-EU trade, and there seems not to be a trend break at the time of the imposition of the measures. Hence, there is no clear indication of a treatment effect on intra-EU trade at the time of the intervention. This observation is somewhat at odds with the European Commission (2020), which found increasing market shares for EU firms after the imposition of TDIs and associated the observed changes in market shares with the effect of the imposed measures. Specifically, the European Commission (2020) report is based on descriptive data on observed trade flows, covering six cases that were subject to a first expiry review that was concluded in 2019 with a prolongation. For causal inference, however, among other things, it is important to take potential trends and seasonal variation into account. A descriptive analysis does not consider the underlying trends and other influential factors affecting trade that are likely to be prevalent.

The second observation from Figure 1 is that the import values from targeted countries fall one year after the measures are imposed. However, after two years, imports from targeted countries are on roughly the same level as two years prior to the interventions. Hence, before the imposition of the EU's anti-dumping and anti-subsidy measures, targeted countries were increasing their sales on the EU market and, after the measures were imposed, this trend reversed. The third and minor observation is that non-targeted third countries' imports tended to increase by about three-quarters before the anti-dumping and anti-subsidy measures were imposed.

6 From the list of 15 cases (see Table 6 in the Appendix). AD591 and AS592 are a double treatment of the same goods, from the same country, and at same time, and therefore they are econometrically modelled as one 'treatment'. AD608 lacks sufficient trade with non-targeted third countries; hence, the impact on non-targeted third countries could not be determined from this case.

2.2 Estimated effects on prices and traded quantities

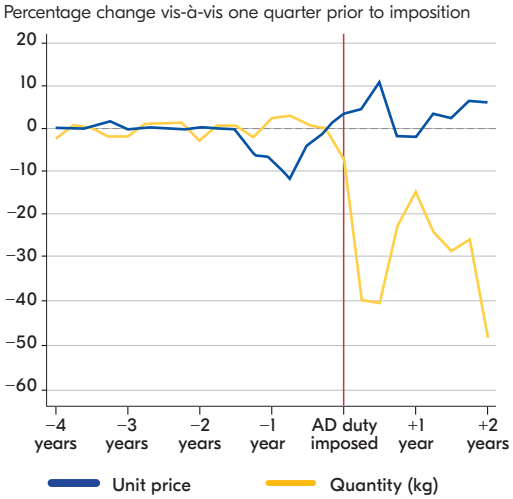
In this section, we briefly reiterate the estimated effects of the EU's anti-dumping and anti-subsidy measures on prices and traded quantities. The estimated effects can be thought of as contrafactual results. That is, the numbers represent the extent to which trade and prices have been altered due to the imposed measures.[7]

Figure 2 displays the impact of anti-dumping and anti-subsidy measures on import prices and traded quantities. The analysed trade flows are EU imports from non-targeted third countries, EU imports from targeted third countries, and intra-EU trade.

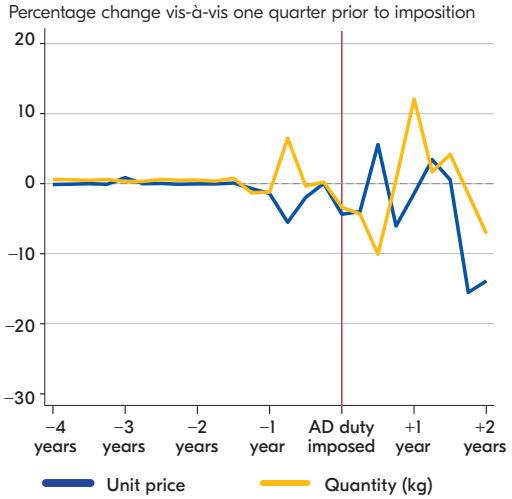
Panel 4 in Figure 2 summarises the average effects over two years, while panels 1–3 display the dynamics over time. Figure 2 represents the estimated effects of imposed measures on prices and traded quantities. The size of the change is compared with the prices and trade flows one period (quarter) before the measure was imposed. Hence, a reduction of imports of, say, 30 per cent is interpreted as if the tariff led to a reduction of 30 per cent compared with imports one period prior to the measure being imposed.

Figure 2. Average price and quantity effects of the 15 cases

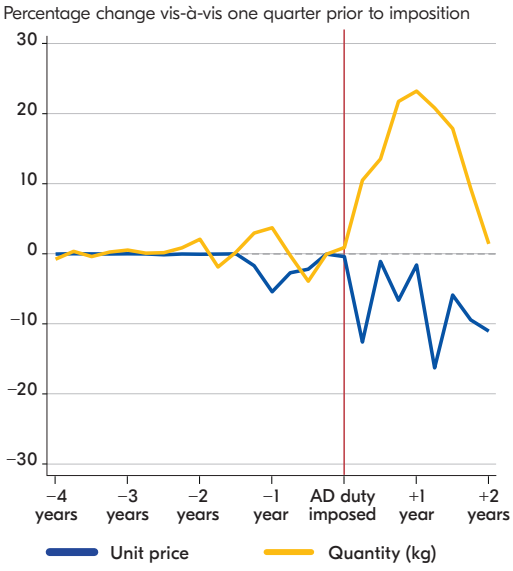
Panel 1. Average impact on imports from targeted countries on price and quantity



Panel 2. Average impact on Intra-EU25 trade on price and quantity in targeted products



Panel 3. Average impact on import from non-targeted third countries on price and quantity



Panel 4. Average effects over two years

Effect on	Targeted third countries	Intra-EU-trade	Non-targeted third country
Quantity	-28%	-1%	13%
Price	4%	-4%	-7%
Average duty	30%	.	.
Consumer price	35%	-4%	-7%

Source: Eurostat, EU Commission and own calculations.
Note: SCM estimations based on cases listed in Table 1.

7 These estimates were achieved by using the synthetic control group method, described by the National Board of Trade Sweden (2021).

The estimated effects of anti-dumping and anti-subsidy measures on prices and quantities can be summarised as follows. Seen over two years after the measures were imposed, the imported quantities from targeted countries decreased by an average of 28 per cent while the import prices from targeted countries increased by 4 per cent.

We also note that the impact on intra-EU trade is marginal: a 1 per cent decrease in quantities and a 4 per cent price fall. The absence of a positive effect on sales from shielded producers is in line with the descriptive statistics displayed in Figure 1, suggesting that no trend break occurred in intra-EU trade at the time of the imposition of the measures. Finally, it is shown that the imported quantity from non-targeted third-country suppliers increased by on average 13 per cent over two years, accompanied by a fall in import prices of 7 per cent.

From theory, one would expect competition to fall when an anti-dumping measure is imposed and prices from non-targeted suppliers therefore to rise. The absence of increased prices from non-targeted suppliers can be taken as an indication that sufficient competition is maintained among intra-EU and non-targeted third-country suppliers to avoid significantly higher prices. This line of reasoning is supported by the observation that the average market share held by targeted suppliers is 20 per cent, suggesting a limited scope of market power for targeted producers. In addition, increased sales to the EU market enable non-targeted third-country producers to benefit from scale effects, which potentially allow for a price-reducing effect.

Taken together, the results suggest that EU consumers are hurt by increased prices on goods from targeted countries. On the other hand, the negative impact on consumers due to increased prices from targeted countries is mitigated by some-what lower import prices on goods from non-targeted third countries and intra-EU suppliers.

Box 3

On the lack of a significance test

The SCM method does not provide us with a statistical test of significance. This suggests that a restrained interpretation of the results is necessary. A careful interpretation is especially warranted if the treatment effect fluctuates over time between positive and negative values. From Figure 2, it is plausible to say that the impact on prices is often less clear than the impact on quantities.

2.3 Losses and gains of the EU's trade defence instruments

With knowledge on how the traded quantities and prices were affected by the implemented anti-dumping and anti-subsidy measures, this section translates these effects into monetary values. That is, in terms of euros, how were EU consumers, EU producers, and EU tariff revenue affected?

Before performing a closer examination of the results in Table 2, we use the results in Figure 2 to discuss the potential uncertainty of the results in Table 2. A clear result is that imports from targeted countries have fallen and that EU consumers have been hurt by increased prices (the anti-dumping or countervailing duty is added to the import price). For imports from non-targeted third countries, the results are also rather clear. On average, imports have increased, and prices have fallen slightly. These lines never jump between positive and negative values. The least clear results concern intra-EU trade and intra-EU prices. The impact on both the import price and the import quantity moves between positive and negative values. Hence, a careful interpretation of the results for intra-EU trade is advocated. It is also worth noting that what intra-EU firms lose from lower prices in their intra-EU transactions at the same time is a gain for EU consumers.

Table 2. Economic welfare effects of EU anti-dumping and anti-subsidy measures for consumers and producers

Effect on	Price change	Quantity change	Trade value year (0)	Economic effect
EU producers Intra-EU trade	-4%	-1%	16 407 MEUR	**-653 MEUR**
EU consumers Intra-EU trade	-4%	-1%	16 407 MEUR	650 MEUR
EU consumers Imports from targeted countries	35%	-28%	3 825 MEUR	-1 151 MEUR
EU consumers Imports from non-targeted third-countries	-7%	13%	6 148 MEUR	458 MEUR
EU consumers' total				**-43 MEUR**

Note: Based on estimates from the National Board of Trade Sweden (2021).

Economic effects on producers

According to the European Commission (2020), the purpose of the imposed measures is to restore fair conditions for trade between imports and goods produced in the EU. However, as shown in Table 2, the imposed anti-dumping and anti-subsidy measures analysed here did not lead to increased intra-EU trade. Instead, the results suggest a slightly negative impact on intra-EU trade of minus 1 per cent combined with a lowering of intra-EU prices by 4 per cent. The combination of falling sales and prices hurt intra-EU producers, leading to an estimated producer loss of 653 MEUR.

Economic effects on consumers

As pointed out above, the term 'consumer' is used for both individual consumers of the imported goods and downstream firms using the goods as an input. According to the Broad Economic Categories (BEC) classification, about 80 per cent of targeted goods are classified as intermediary input goods and hence used by downstream producers.

The economic effect for EU consumers suggests that the price of products from targeted third countries increased by 35 per cent.[8] This effect was caused mainly by the additional tariffs imposed (30 per cent on average) and to a lesser extent by the increase in import prices (4 per cent). It is also found that, as a response to increased consumer prices, imports from targeted countries decreased by 28 per cent and consumer prices rose more than imports fell. When imports are less affected than prices, the demand is classified as 'inelastic'. An inelastic demand is an indication that close substitutes for targeted products are not easily available and that shifting the demand towards alternative suppliers is not frictionless. The damage imposed on EU consumers due to increased prices from targeted countries has been dampened by a decrease in intra-EU prices of 4 per cent and lower import prices for goods from non-targeted third-country suppliers by an estimated 7 per cent.

Translating the price and quantity effects into value terms, the impact on consumers is a cost of 1,151 MEUR due to the increased prices for targeted goods stemming from targeted suppliers. EU consumers then benefit from 4 per cent lower prices in intra-EU trade, resulting in a gain of an estimated 650 MEUR. Lastly, falling prices from non-targeted suppliers benefit EU consumers by an additional 458 MEUR. The net effect is a consumer loss of 43 MEUR. As pointed out above, probably the most uncertain results are those related to intra-EU trade and prices. This means that the consumer gain (and producer loss) connected to intra-EU trade should be interpreted carefully.

Effects on tariff revenue

When tariff levels are altered, so is the tariff revenue. The tariff revenue can shift due to a change in imports either from targeted countries or from non-targeted third countries. While the former is a direct effect of the imposed measures, the economic effect on the tariff revenue from non-targeted third countries is a secondary effect. Hence, it is reasonable to assume that the largest impact on tariff revenue will stem from imports from targeted countries.

8 The change in consumer prices is calculated as $\hat{P} = [(1 + \widehat{P^*})(1 + \tau^{AS,AD}) - 1] = 1.04 * 1.30 - 1 = 1.35$.

Table 3. Effects on the tariff revenue (MEUR)

Trading partner	Price change	Quantity change	Trade value year (0)	Change in tariff revenue
Target countries	35% [A]	-28%	3 825	**799**
Non-targeted third countries	-7%	13%	6 148	10
Total effects on tariff revenue				**809**

Notes: [A] Import price change of 4% and average additional duty of 30%.

Table 3 shows that the imposed measures increase the tariff revenue and that most of this increase can be attributed to an increased tariff revenue for imports from targeted countries. A closer look at the numbers suggests that the additional tariff revenue from targeted countries is 80 times larger than that from non-targeted third countries.

To sum up, we conclude that the total loss for consumers is 43 MEUR, whereas the tariff revenue increases by 809 MEUR and shielded EU producers lose 653 MEUR. Overall, the net effect on welfare is slightly positive (113 MEUR).

How should we interpret these results? A key to this question is to think about the import price. Lower import prices are beneficial while increased import prices are detrimental to welfare. These points suggest that a key factor behind the mild impact on welfare is the reduced import prices from non-targeted third-country suppliers.

Falling prices from non-targeted suppliers are a response that defies economic theory and expectations. When competition is reduced, a price increase is the expected out-come. A partial explanation for the reverse effect may be that the competition among non-targeted suppliers is strong enough to mitigate the increased prices. Along these lines, we note that the average market share among targeted countries is roughly 20 per cent; hence, it is reasonable to assume limited effects on competition. It is also possible that the increased sales from non-targeted suppliers allows them to take greater advantage of scale effects, which further supports the price-reducing effect.

Table 3 shows that the effect on tariff revenue is relatively large. Increased tariff revenue is to some extent a double-edged sword. On the one hand, increased tariff revenue mitigates the negative welfare effect due to the costs imposed on EU consumers. On the other hand, increased tariff revenue is mainly a consequence of maintained imports from targeted countries. If the demand had shifted from targeted countries to intra-EU suppliers to a greater extent, the tariff revenue would have fallen at the same time as intra-EU suppliers would have gained market shares. This type of alternative pattern is more in line with the intended purpose of imposed remedies: increased intra-EU trade.

As a final remark, when studying the monetary effects, one can, as a guiding principle, think of intra-EU trade as a reallocation of producer and consumer gains and losses. What EU producers lose or win in their intra-EU operations has largely the opposite effect on the EU's consumers. For overall welfare, the key components are the changing import price (and imported quantities) from targeted and non-targeted extra-EU suppliers and tariff revenue. The inclusion of non-targeted third-country suppliers is a feature that is not always accounted for when analysing the costs and benefits of anti-dumping measures.

3. Conclusions and recommendations

The European Commission (2020) articulates the purpose and intended effects of the imposed TDI measures as follows:

> *The purpose of EU TDI measures is to remedy the injurious effect caused by the unfairly traded imports /.../ As a result, such imports normally decrease, as they are no longer competitive — not benefitting on the EU market from dumping and/or subsidisation.*

The above statement suggests that economic gains and increased market shares among intra-EU firms are the primary outcomes of anti-dumping and anti-subsidy measures. The statement can also be interpreted as showing that consumer interests have less weight than producer interests.

Our analysis of a series of anti-subsidy and anti-dumping measures imposed by the EU during the period 2008–2015 reveals several interesting findings. This report shows that the EU's imposed measures have led to a reallocation of imports across targeted countries, intra-EU trade, and non-targeted third-country suppliers.

An important result is that, while the quantities imported from targeted countries fell by 28 per cent, this gap was filled by non-targeted third-country suppliers, who increased their exports to the EU market by 13 per cent, while there was a modest 1 per cent decline in intra-EU trade. This result suggests that, as a response to the imposed remedies, third-country suppliers gained market shares on the EU market to a larger extent than intra-EU firms.

Attempts to explain this kind of pattern with a weak response from shielded producers point at the observations that the demand for protection often stems from less competitive firms and declining industries and that productivity-enhancing incentives become hampered by protection (Aghion and Durlauf, 2005; Grossman and Helpman, 1992; Gustafsson et al., 2019).

A feature discussed in our previous report is that climate-related goods are not excluded from being targeted by anti-dumping or anti-subsidy measures. Trade remedies targeting this type of products can delay the diffusion of climate-related technologies. A possible way to handle this challenge would be to take climate objectives into consideration to a greater extent. This can be achieved by improving the way in which the so-called Union interest test (i.e., the overall public interest test) is applied. Such a proposal was discussed during the modernisation of the trade defence instrument in 2013 but was dismissed.[9] [10]

A key goal of this report is to evaluate the monetary effects on different parts of the economy. The analysis suggests that the economic effect on EU consumers due to increased consumer prices from targeted countries is an estimated loss of 1,151 MEUR. EU consumers are, however, also affected by changes in intra-EU prices and prices from non-targeted third-country suppliers. The results do not suggest any upward pressure on intra-EU prices and imports from non-targeted third countries. Instead, the import prices of these suppliers fell by 4 and 7 per cent, respectively, which in turn benefitted EU consumers by 650 MEUR from cheaper intra-EU trade and 458 MEUR from falling prices from non-targeted third countries. Taken together, the net effect on EU consumers is a loss of 43 MEUR.

9 EU Commission (2013a). *DG Trade Working Document: Draft Guidelines on Union Interest.* https://trade.ec.europa.eu/doclib/docs/2013/april/tradoc_150839.pdf

10 EU Commission (2013b). *Replies of Interested Parties on Commission Draft Guidelines.* https://trade.ec.europa.eu/doclib/docs/2013/december/tradoc_151968.pdf

The consumer benefit from falling intra-EU prices is a direct loss for EU firms. Hence, while EU consumers gained 650 MEUR, EU suppliers lost 653 MEUR.[11] The loss for EU producers is partly due to decreased intra-EU sales (-1 per cent) and falling intra-EU prices (-4 per cent). This means that the intention to increase intra-EU trade has not been fulfilled.

Summing up the economic welfare effects, we find that the largest effect is the damage inflicted on consumers by the increased prices from targeted countries, with an estimated cost of 1,151 MEUR. Next, the tariff revenues increase by 809 MEUR. The third result is that the loss for EU producers amounts to 653 MEUR. The net effect on consumers is limited to a marginal loss of 43 MEUR. In total, the net effect on welfare is a small positive gain of 113 MEUR.

Before proceeding to the policy recommendations, we list seven issues to consider regarding the interpretation and understanding of the results.

First, without the positive effects from falling prices from non-targeted third-country suppliers, the net outcome would have been a negative impact on EU welfare. The theoretical expectation is that the decreased level of competition would lead to increased prices. Falling prices may be explained by the competition among non-targeted suppliers being strong enough to mitigate the increased prices and the increased sales from non-targeted suppliers allowing them to benefit from scale effects, supporting the price-reducing effect. The bottom line is that the limited net effect on welfare is explained to a large extent by the absence of increased prices from non-targeted third-country suppliers.

Second, given that the average market share among targeted suppliers is about 20 per cent, the impact on competition is not dramatic. Hence, falling prices from non-targeted suppliers (outside and inside the EU) may be driven partly by scale effects but also by factors outside the model. The impact on intra-EU prices is also rather uncertain.

Third, regarding the expected impact on prices, an unambiguous result is that the consumer prices for targeted goods from targeted countries increase.

Fourth, turning to imports from targeted countries, we note that the consumer prices of imports from targeted countries increased more than imports fell. This can be an indication of inelastic demand; that is, alternative suppliers are not always easy to find.

11 The marginal difference between EU consumers' gain and producers' loss is due to the second-order welfare effect.

Fifth, our main results are largely in line with the main body of the scientific literature analysing the effects of TDIs. That is, imports from targeted countries fall while the impact on output from shielded producers is limited. Another central result (found here and in other studies on anti-dumping) is that non-targeted third-country suppliers gain more from imposed measures than domestic producers (Brenton, 2001; National Board of Trade Sweden, 2012a, 2012b, 2021; Sandkamp, 2020).

Sixth, considering the imposed measures' failure to achieve increased intra-EU trade and the inherent uncertainty about what the real outcome from a specific intervention will be, it becomes relevant to discuss other aspects of these measures. Specifically, what other effects can one expect from these measures? It is well known that the impact of TDIs is not limited to direct effects; they are also associated with a series of external effects. These external effects were discussed in National Board of Trade Sweden (2021), which included observations such as:

- Anti-dumping duties affect trade in a wider set of goods than the targeted products only
- The threat of anti-dumping duties can have almost as severe effects on trade as the duties themselves
- If the instrument is frequently used, third-country exporters tend to increase their export price to reduce the risk of being the target of allegations of price dumping
- After a case has been settled, export prices tend to stay at a level high enough to avoid future allegations
- Countries that are subject to anti-dumping allegations often tend to increase their use of these measures themselves
- Potential climate-related goods are often subject to TDI measures, and these can hamper the diffusion of green technologies (Houde and Wang, 2021; National Board of Trade Sweden, 2013, 2020, 2021)

Seventh, it is important to emphasise that, in our analysis, we focus on the *average* effects of anti-dumping and anti-subsidy measures. As pointed out by the National Board of Trade (2021), there is a substantial variation of effects across cases. With a great level of uncertainty about the effects, decision making regarding these measures becomes more challenging.

Based on the findings in this report and current knowledge on the effect of TDIs, we propose three principal recommendations regarding anti-dumping and anti-subsidy policies.

Recommendation 1

Anti-dumping and anti-subsidy measures have profound effects on the economy that extend beyond those on EU producers. The wide set of effects suggests that a comprehensive analysis of the effects of TDIs is required to support well-informed policy decisions. We therefore call for a renewed discussion in the EU on the impact assessment of anti-dumping measures and assert that such assessments should include a thorough analysis of the welfare effects as well as a risk assessment of the external effects highlighted above.

Recommendation 2

Trade defence instruments, such as anti-dumping and anti-subsidy measures against climate-related products, are especially sensitive since restricting the trade in such goods can conflict with sustainability goals. We therefore propose that climate objectives should be taken into consideration to a greater extent before implementing trade remedies against climate-related products. This can be achieved through better utilisation of the so-called Union interest test.

Recommendation 3

It has been shown that there is no guarantee that anti-dumping and anti-subsidy measures lead to increased intra-EU trade. There is also substantial uncertainty about the effects. The instruments should therefore be used in a restrictive manner. To this end, we note that there are higher requirements in the EU competition legislation regarding market shares than in the EU anti-dumping legislation. A shift of the EU anti-dumping legislation towards the EU competition legislation both limits the use of anti-dumping measures and increases the likelihood that the imposed measures are targeting trade flows in which the potential risk of a dominant position is present.

References

Aghion, P., and Durlauf, S. N. (2005). *Handbook of Economic Growth*. Elsevier, North-Holland, Amsterdam.

Brenton, P. (2001). Anti-dumping policies in the EU and trade diversion. *European Journal of Political Economy*, 17(3), 593–607.

Dixit, A., and Norman, V. (1980). *Theory of International Trade: A Dual, General Equilibrium Approach* (Cambridge Economic Handbooks). Cambridge University Press, Cambridge. doi:10.1017/CBO9780511628627.

European Commission (2020). *Report from the Commission to the European Parliament and the Council: 38th Annual Report from the Commission to the Council and the European Parliament on the EU's Anti-dumping, Anti-subsidy and Safeguard Activities and the Use of Trade Defence Instruments by Third Countries Targeting the EU in 2019*. SWD (2020) 71 final. Brussels, 30.4.2020 COM (2020) 164 final.

Fajgelbaum, P., and Khandelwal, A. (2021). *The Economic Effects of the US–China Trade War*. NBER Working Paper Series, No. 29315. National Bureau of Economic Research, Massachusetts, US.

Grossman, G., and Helpman E. (1994). Protection for sale. *American Economic Review*, 84(4), 833–850.

Gustafsson, A., Halvarsson, D., and Tingvall, P. (2020). Subsidy entrepreneurs: An inquiry into firms seeking public grants. *Journal of Industry Competition and Trade*, 20, 439–478. doi.org/10.1007/s10842-019-00317-0.

Houde, S., and Wang, W. (2021). *The incidence of the U.S.–China Solar Trade War*. Mimeo. solar_trade_war_houde_wang_v14112020.pdf (harvard.edu).

National Board of Trade (2012a). *Do EU Producers and the EU Economy Really Benefit from Anti-dumping Policy?* Kommerskollegium, Stockholm, Sweden.

National Board of Trade (2012b). *Effects on Trade and Competition on Abolishing Anti-dumping Measures: The European Union Experience*. Kommerskollegium, Stockholm, Sweden.

National Board of Trade (2013). *Targeting the Environment. Exploring a New Trend in the EU's Trade Defence Investigations*. Kommerskollegium, Stockholm, Sweden.

National Board of Trade (2020). *Trade Barriers to Goods and Services Important for Climate Action – and Opportunities for Reform*. Kommerskollegium, Stockholm, Sweden.

National Board of Trade (2021). *EU Trade Defence – The Unintended Effects of Anti-dumping Measures*. Kommerskollegium, Stockholm, Sweden.

Sandkamp, A. (2020). The trade effects of antidumping duties: Evidence from the 2004 EU enlargement. *Journal of International Economics*, 123, 103307.

Other sources

European Commission (2013a). *DG Trade Working Document: Draft Guidelines on Union Interest.* tradoc_150839.pdf (europa.eu).

European Commission (2013b). *Replies of Interested Parties on Commission Draft Guidelines. Summary* (europa.eu).

REGULATION (EU) 2016/ 1036 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL - of 8 June 2016 - on protection against dumped imports from countries not members of the European Union (europa.eu)

REGULATION (EU) 2016/ 1037 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL - of 8 June 2016 - on protection against subsidised imports from countries not members of the European Union (europa.eu)

WTO. AD_MeasuresByRepMem.xls (live.com).

WTO. CV_MeasuresByRepMem.xlsx (live.com).

WTO | legal texts - Marrakesh Agreement – Anti-dumping

WTO | legal texts – Marrakesh agreement – Subsidies and Countervailing Measures

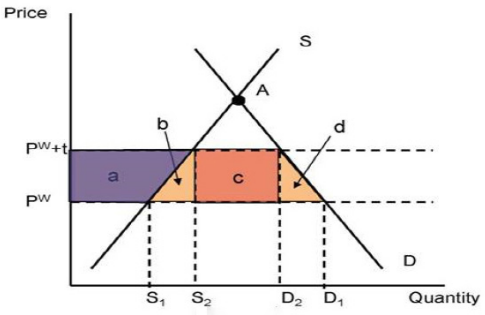
Appendix

Calculation of economic effects

The small country partial equilibrium effect of a tariff is depicted in Table 4 together with the distribution of welfare effects. As seen in Table 4, the standard results suggest a net negative welfare effect of imposed tariffs. The welfare loss consists of a consumption and production distortion whereby the loss for consumers exceeds the benefits for domestic producers from increased consumer prices and domestic sales, and the government gains from increased tariff incomes.

Table 4. Welfare effects of a tariff in a small open economy

Consumer surplus	-a -b -c -d
Producer surplus	+a
Government	+c
Welfare	-b -d



The welfare calculations follow the neoclassical model (Dixit and Norman ,1980; Fajgelbaum and Khandelwal, 2021; National Board of Trade, 2012a). Data on the initial trade values ($V_{t(0)}$) in the period before the anti-dumping and anti-subsidy measures were imposed, the change in traded quantities ($\widehat{M}$), import prices ($\hat{P}^{*}$), and tariffs $\tau^{mfn}, \tau^{ad,as}$ are used in the calculations. Benchmarking against $V_{t(0)}$, the costs and benefits are presented in Table 5. The changes in prices and quantities are based on the (perfect) Fisher index; for details, see National Board of Trade (2021).

Table 5. Calculation of costs and benefits

Consumer surplus for targeted third-country imports			
$C^T = V^T_{t(0)}\left[-\widehat{P}\left(1+\widehat{M}_T\right)+\widehat{P}\widehat{M}/2\right]$			-1,151 MEUR
Consumer surplus for non-targeted third-country imports			
$CS^{NT} = V^T_{t(0)}\left[-\widehat{P^*}-\widehat{P}\widehat{M}/2\right]$			458 MEUR
Consumer surplus for intra-EU imports			
$CS^{EU} = V^{EU}_{t(0)}\left[-\widehat{P}-\widehat{P}\widehat{M}\right]$			650 MEUR
EU producer surplus for intra-EU trade			
$PS^{EU} = V^T_{t(0)}(1+\widehat{M})/1-\left[\widehat{P^*}+\widehat{P^*}\widehat{M}/2\right]$			-653 MEUR
Tariff income for imports from targeted third countries			
$\Delta T^T = V^T_0\left[(1+\widehat{M})(1+\widehat{P^*})(\tau^{mfn}+\tau^{ad,as})-\tau^{ad,as}\right]$			799 MEUR
Tariff income for imports from non-targeted third countries			
$\Delta T^{NT} = V^T_0\left[(1+\widehat{P^*})(1+\widehat{M})-1\right]\tau^{mfn}$			10 MEUR
Underlying parameters			
	Targeted third countries	**Intra-EU trade**	**Non-targeted third countries**
$V_{t(0)}$ **(MEUR)**	3 825	16 407	6 148
$\widehat{P} = \widehat{P}^*\left(1+\tau^{ad,as}\right)$	0.35	-0.04	-0.07
$\widehat{M}$	-0.28	-0.01	0.13
$\widehat{P}^*$	0.04	0.02	-0.07
$\tau^{ad,as}, \tau^{mfn}$	0.30; 0.032	.	.

Note: The second-order effect on consumer surplus, due to changes in intra-EU trade, is not divided by two since the cost is based on the initial demand and both the price and the quantity rise. Hat-algebra denotes the relative change.

Table 6. Cases included in aggregate analysis

Case	Product	Provisional Duty	Definitive Duty	Country
AD522	Citric acid	49.3 %	42.7 %	CHN
AD524	Citrus fruits (mandarins)	482.2€/ton	531.2€/ton	CHN
AD525	Steel fasteners	.	85 %	CHN
AD541	Aluminium road wheels	20.6 %	22.3 %	CHN
AD547	Polyester yarn	9.3 %	9.8 %	CHN
AS556	Stainless steel bars	4.3 %	4.3 %	IND
AD558	Glass fibre products	62.9 %	62.9 %	CHN
AD585	Malleable tube fittings	67.8 %	57.8 %	CHN
AD586	Tableware and kitchenware	58.8 %	36.1 %	CHN
AD591	Stainless steel wires	27.8 %	12.5 %	IND
AS592	Stainless steel wires	4.3 %	3.7 %	IND
AD607	Stainless steel cold-rolled flat products	25.2 %	25.2 %	CHN
AD608	Grain-oriented flat-rolled products of electrical steel	21.6 %	21.6 %	RUS
AD608	Grain-oriented flat-rolled products of electrical steel	22.0 %	22.0 %	USA
AD611	Acesulfame Potassium	3.19€/kg	4.58€/kg	CHN
AD616	Ductile pipes	31.2 %	14.1 %	IND

Note: The unweighted average provisional duty is 31 per cent, and the average definitive duty is 30 per cent.* Cases AD558 and AD608 include products that we regard in this study as climate-related goods.

* Cases with specific duties are not included in the calculation of the average tariff.

Sammanfattning
Summary in Swedish

I denna studie analyseras om EU:s handelspolitiska skyddsåtgärder främjar EU:s företag och deras försäljning på EU:s inre marknad. Även ekonomiska effekter för konsumenter och tullintäkter analyseras. Vi har analyserat i huvudsak antidumpningstullar men också utjämningstullar. Studien är ett uppdrag som följer av regeringens regleringsbrev till Kommerskollegium för 2021.

Ett viktigt resultat från analysen är att EU:s producenter inte tycks gynnas av införda åtgärder. Tvärtom pekar resultaten snarare på en marginellt minskad försäljning och vikande priser, vilket sammantaget leder till en förlust motsvarande 653 miljoner euro för EU:s producenter.

Medan EU:s producenter missgynnas av fallande priser inom EU tycks den sammantagna effekten för EU som helhet såväl som för konsumenterna inom EU vara marginell. Den begränsade effekten på total välfärd förklaras till stor del av ökade tullintäkter. Medan konsumenterna missgynnas av högre priser på produkter från länder mot vilka åtgärderna riktats, lindras denna effekt av fallande priser från övriga leverantörer.

Resultaten visar dock på en stor variation i effekter. Detta betyder att det råder stor osäkerhet kring vad man kan förvänta sig för effekter när man inför en åtgärd.

Tre centrala resultat i denna studie är:

- Det skydd som antidumpnings- och antisubventionsåtgärder ger leder inte till ökad handel inom EU. Ett grundläggande motiv bakom införandet av dessa åtgärder är att de ska leda till att konkurrensen jämnas ut och att EU:s producenter tillåts återta marknadsandelar. Att skyddade producenter inte alltid lyckas dra fördel av antidumpningstullar har även påvisats i tidigare studier. Frånvaron av positiva effekter på EU:s producenter är problematisk och ger skäl till ifrågasättande av lämpligheten i att använda dessa policyinstrument.
- EU:s konsumenter drabbas ekonomiskt av ökade priser på de varor som utsätts för antidumpnings- och antisubventionsåtgärder. Den negativa effekten av ökade priser begränsas dock något av att priset från alternativa tredjelandsleverantörer inte tycks höjas utan istället sänkas. Det vill säga, konkurrensen tycks inte påverkas negativt. Den bibehållna konkurrensen kan vara ett tecken på att åtgärderna inte riktas mot aktörer med en dominant marknadsposition. I genomsnitt hade exportörer från länder som var föremål för åtgärderna en marknadsandel på 20 procent. EU:s konkurrenslagstiftning pekar på en marknadsandel på 40 procent eller mer för en dominant position. I korthet indikerar detta att antidumpnings- och antisubventionsåtgärder införs mot leverantörer där faran för missbruk av dominant position kan ses som liten.
- Resultaten visar att de negativa ekonomiska effekterna av antidumpnings- och antisubventionsåtgärder mildras av en relativt stor ökning av EU:s tullintäkter. Den relativt stora ökningen av tullintäkter kan delvis förklaras av att konsumenterna tycks ha svårt att finna alternativa leverantörer. Den tekniska beskrivningen av detta är att efterfrågan verkar vara oelastisk – konsumenterna fortsätter köpa varan trots prisökningen. Att efterfrågan på produkter som beläggs med antidumpnings- och antisubventionsåtgärder hålls uppe är ett tecken på att de varor som alternativa tredjelandsproducenter har att leverera inte alltid direkt kan ersätta de varor som utsätts för nämnda åtgärder.

Baserat på erhållna resultat ges tre policyrekommendationer:

(i) För att underlätta välgrundade policybeslut föreslås att varje konsekvensbedömning bör innehålla både en välfärdsanalys och en riskbedömning av andra så kallade externa effekter som kan följa av de handelspolitiska åtgärderna.

(ii) Åtgärder riktade mot klimatrelaterade varor kan komplicera och/eller förhindra spridning av utsläppsreducerande teknik. Vi föreslår därför att ökad klimathänsyn bör tas innan en åtgärd riktas mot klimatrelaterade varor. Detta kan göras genom att på ett bättre se till det så kallade unionsintresset.

(iii) Eftersom effekten från en enskild åtgärd är osäker bör antidumpnings- och antisubventionsåtgärder tillämpas restriktivt. Detta kan uppnås genom att låta EU:s antidumpinglagstiftning närma sig EU:s konkurrenslagstiftning.

The National Board of Trade Sweden is the government agency for international trade, the EU internal market and trade policy. Our mission is to facilitate free and open trade with transparent rules as well as free movement in the EU internal market.

Our goal is a well-functioning internal market, an external EU trade policy based on free trade and an open and strong multilateral trading system.

We provide the Swedish Government with analysis, reports and policy recommendations. We also participate in international meetings and negotiations.

The National Board of Trade, via SOLVIT, helps businesses and citizens encountering obstacles to free movement. We also host several networks with business organisations and authorities which aims to facilitate trade.

As an expert agency in trade policy issues, we also provide assistance to developing countries through trade-related development cooperation. One example is Open Trade Gate Sweden, a one-stop information centre assisting exporters from developing countries in their trade with Sweden and the EU.

Our analysis and reports aim to increase the knowledge on the importance of trade for the international economy and for the global sustainable development. Publications issued by the National Board of Trade only reflects the views of the Board.

The National Board of Trade Sweden, May 2022. ISBN: 978-91-88201-96-6

Kommerskollegium
National Board of Trade Sweden

Box 6803, S-113 86 Stockholm, Sweden
Phone +46 8 690 48 00
E-mail registrator@kommerskollegium.se
www.kommerskollegium.se