

Europe Fettered

The impact of crisis-era trade distortions on exports from the European Union

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CEPR PRESS

Kommerskollegium
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GLOBAL TRADE ALERT

CEPR Press

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TABLE OF CONTENTS

List of Acronyms 4

Preface 5

Executive Summary 6

Acknowledgements 7

CHAPTER 1
Introduction 8

CHAPTER 2
The evolution of extra-EU exports since 2000: growth then stagnation 11

CHAPTER 3
Crisis-era discrimination facing exporters from the European Union 15

CHAPTER 4
What share of EU exports face crisis-era foreign trade distortions? 19

CHAPTER 5
Empirical strategy 23

CHAPTER 6
Econometric findings 35

CHAPTER 7
How much has EU export growth been held back by crisis-era foreign trade distortions? 39

CHAPTER 8
Implications for EU trade policy 46

CHAPTER 9
Concluding remarks 48

References 50

ANNEX TABLES 51

TECHNICAL ANNEX 54

DATA ON EACH MEMBER STATE

Austria 59
Belgium 63
Bulgaria 67
Croatia 71
Cyprus 75
Czech Republic 79
Denmark 83
Estonia 87
Finland 91
France 95
Germany 99
Greece 103
Hungary 107
Ireland 111
Italy 115
Latvia 119
Lithuania 123
Luxembourg 127
Malta 131
The Netherlands 135
Poland 139
Portugal 143
Romania 147
Slovakia 151
Slovenia 155
Spain 159
Sweden 163
United kingdom 167

LIST OF ACRONYMS

ATP	Affected trading partner
COMTRADE	United Nations International Trade Statistics Database
CPB	Netherlands Bureau for Economic Analysis
EU	European Union
EUX	Refers to the first X nations that joined the European Union
FDI	Foreign direct investment
G20	Group of Twenty
IMP	Implementing jurisdiction
MAST	Multi-Agency Support Team
NACE	Nomenclature of Economic Activities
nes	Not otherwise specified
TL	Tariff line
US	United States of America
USD	United States Dollar
WTO	World Trade Organization

PREFACE

Ever since the global financial crisis, many efforts have been made to monitor new trade restrictive measures globally. In a broad survey of these efforts, the National Board of Trade recently concluded that there are worrying indications that protectionism is on the rise again. The G20 pledge to refrain from new trade barriers has not been honoured. In another recent study – based on a survey of Swedish firms – we concluded that current trends are particularly harmful for small and medium-sized enterprises and that the EU single market is a "safe haven" for many firms.

The question that has so far eluded us, however, is the extent to which trade restrictive measures impact our own trade. With this new study, *Europe Fettered: the Impact of Crisis-Era Trade Distortions on Exports from the European Union*, commissioned by the National Board of Trade, that issue is addressed by Professor Simon Evenett and Dr. Johannes Fritz of the University of St. Gallen. The impact of trade-related measures (discriminatory or liberalising) imposed since the 2008 global financial crisis on the exports of all 28 EU member states is estimated quantitatively. To our knowledge, it is the first time that this is done in a systematic, theory-consistent way.

Our overall purpose with this project is to put the spotlight on the negative effects of trade-restrictive measures for EU exports. In our view, the results underscore the need to renew efforts to curb particularly trade-distorting measures in the context of multilateral trade negotiations. From this perspective, the publication of the study is timely in view of the upcoming WTO ministerial conference in Buenos Aires, Argentina in December 2017.

In the longer term, however, we hope that the study will provoke a renewed debate on the costs of protectionism as well as issues related to how we best estimate these costs with state-of-the-art econometric methodology.

Anna Stellinger,
Director General, National Board of Trade

Stockholm, 19 October 2017

EXECUTIVE SUMMARY

Having grown in real terms by 60% between 2000 to 2008, extra-EU exports have since stagnated. In terms of export volumes, the bounce back since 2009 was weaker for European exporters than for major trading partners. Average export prices stopped rising after 2012. This study examines what is holding back EU exports. Stripping out other determinants of EU export growth, the focus here is on the impact of trade distortions imposed by foreign governments since the global economic crisis began.

Since the first crisis-era G20 Leaders' Summit in November 2008, foreign governments have imposed 3,287 policy instruments that harmed the commercial interests of the EU. Import tariff increases, bailouts and subsidies to foreign manufacturers and farmers, and steps to boost exports account for nearly 60% of that total.

By 2015 the spread of foreign protectionism was so extensive that over 70% of extra-EU exports faced at least one crisis-era trade distortion when competing in foreign markets. Only three Member States saw less than half of their extra-EU exports exposed to foreign protectionism. Over 60% of extra-EU exports compete in destination markets where foreign rivals are eligible for some form of state-provided export support. Over a quarter of extra-EU exports face other types of crisis-era trade distortion. These calculations were made using fine-grained data on policy interventions and trade flows, limiting aggregation bias if not eliminating it outright. By and large, governments have eschewed 1930s-style across-the-board import restrictions; instead, many have resorted to export-led mercantilism.

To take account of the impact of government policies of a third party on the bilateral exports between a EU Member State and a destination market, the classic workhorse of empirical international trade research was adapted in a theory-consistent manner. The determinants were estimated of the growth from 2008 to 2014 of each EU Member State's exports to destination markets inside and outside of the EU, relative to American, Chinese, and Japanese rivals. Differential exposure to trade distortions and trade reforms was used to identify the impact of policy changes on relative export performance.

Our econometric analysis implies that crisis-era trade distortions held back EU Member State export growth to destinations outside of the EU by between 10-20 percentage points between 2008 and 2014. We estimate that the EU export growth deficit compared to China (amounting to, on average, 35 percentage points from 2008 to 2014) would have been halved in the absence of foreign trade distortions. Separately, the growth of EU Member States' exports to destinations within the EU were found to be statistically significantly reduced by state aid awarded in the destination country and by export incentives given by non-EU governments.

Our results indicate the zero-sum nature of contemporary protectionism where governments use policies to shift sales in home and foreign markets towards their firms. Crisis-era trade distortions have reshuffled world trade, although our results imply to a lesser degree for intra-EU trade than for extra-EU trade. The systemic findings of this study on the exposure to crisis-era protectionism as well as the impact on American, Chinese and Japanese export performance ought to be of interest to policymakers and analysts outside of the EU as well.

The key policy implications that follow from this detailed empirical analysis are:

1. Priortise enforcement action, including possible resort to the WTO Dispute Settlement, against foreign incentives to boost exports, including misuses of trade finance.
2. Resist the temptation to copy trading partners' export incentives; instead, build a coalition among WTO members in favour of tougher rules on export incentives, especially those delivered through national tax systems. Export incentives on this scale must cost significant amounts of money, so cultivate national finance ministries and the IMF as allies in this campaign.
3. Redesign and ramp up the European Commission's trade policy monitoring efforts as well as take a more aggressive line tackling foreign trade distortions.
4. Review the application of EU state aid rules so as to minimise the disruption to intra-EU trade.

ACKNOWLEDGEMENTS

The quality of this report was enhanced considerably by constructive feedback from Anna Stellinger, Director-General, National Board of Trade, Sweden, and her staff. We are particularly grateful to advice received from Per Altenberg, Erik Dahlberg, Olle Grünewald, Magnus Rydén, and Petter Stålenheim.

We are also grateful to Professors James Anderson, Jonathan Eaton, Peter Egger, Wolfgang Keller, Dennis Novy, Marcelo Olarreaga, and Thierry Mayer for their comments on the link between the theoretical predictions and the econometric approach taken in this report. Of course, remaining errors are our own.

Comments and questions received from seminar participants in Stockholm and at the Organisation for Economic Co-operation and Development, Paris, helped to better frame various findings of the study.

We would also like to take this opportunity to thank the members of the Global Trade Alert team, in particular Piotr Lukaszuk, for the support they provided during this project and for their ongoing efforts in documenting crisis-era policy interventions that have a bearing on cross-border commerce.

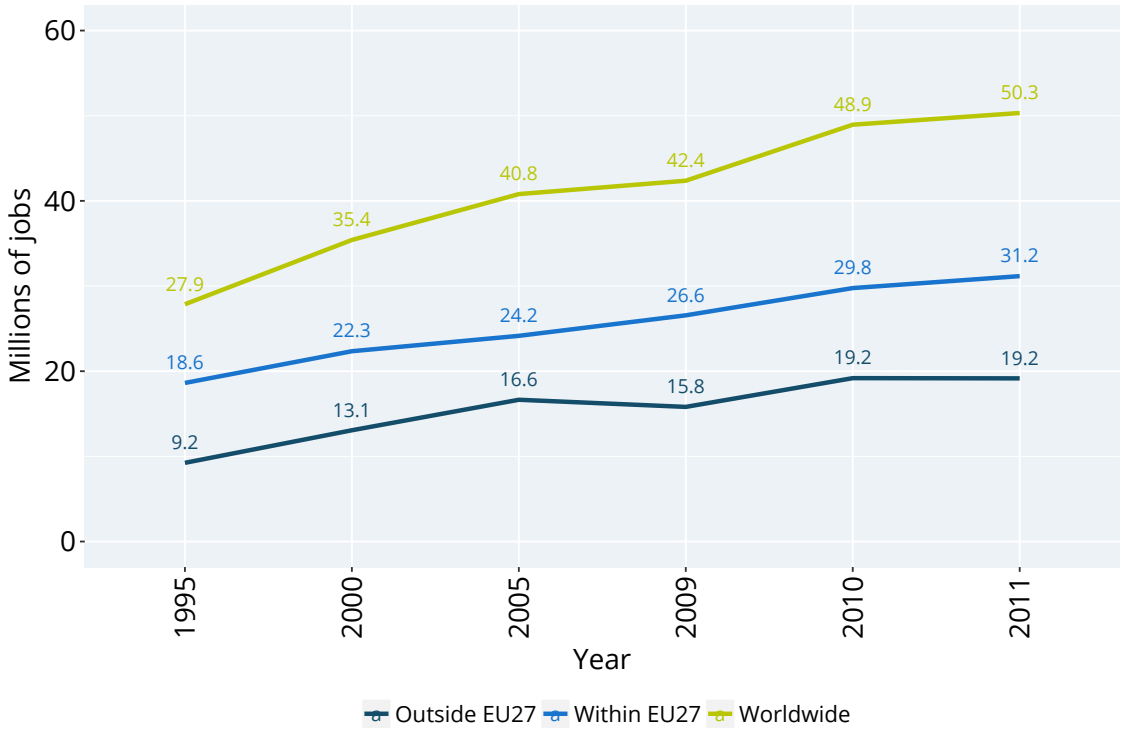
CHAPTER 1
INTRODUCTION

That the European Union (EU) is one of the world's trading powers is without doubt. Even excluding trade within the Union, the total value of EU trade with the rest of the world is such that it is the second largest exporter and importer globally. Global engagement via international commerce is a potent source of economic growth for the European Union with profound consequences for the living standards of citizens in the European Union and abroad. Growing sales abroad, for example, translate into employment expansion and support wage premiums over jobs at firms that only supply domestic markets.

Moreover, in a world of international outsourcing and regional and global supply chains, the effects of export expansion are not confined to the exporting nation. Should Swedish firms source parts and components from Germany, then export success for the former may well translate into greater employment in the latter. Furthermore, to the extent that EU exporters source raw materials and intermediate goods from outside the EU, then export and employment in the latter are tied in part to the commercial success of the former. Detailed analysis by the European Commission of such linkages found that by 2011 (the latest year for which such calculations are available) over 50 million jobs worldwide were dependent extra-EU exports (see Figure 1 below assembled from the data in Rueda-Cantuche et al. 2013). In just 16 years, the number of jobs worldwide dependent on extra-EU exports almost doubled, an indication of the positive impact that exports can have on labour markets at a time when there are serious concerns about unemployment and job market insecurity.

FIGURE 1

The number of jobs worldwide supported by extra-EU exports nearly doubled from 1995 to 2011



Source: Assembled from data reported in Rueda-Cantuche et al. (2013). 2011 is the latest year for which these data are available in that study. We were unable to locate estimates for subsequent years.

Given the differences in the size of their labour forces, not surprisingly there is considerable variation across the EU Member States in the number of jobs dependent on extra-EU exports (see Table 1). By 2011, for example, over seven million jobs in Germany were supported by extra-EU trade. In seven other EU Member States over one million jobs were supported by such exports (France, Italy, the Netherlands, Poland, Romania, Spain, and the United Kingdom). In a further six Member States, between half a million and a million jobs were so dependent. Moreover, between 1995 and 2011 only Latvia saw a fall in the number of jobs dependent on extra-EU exports. In contrast, the EU27 group saw the total number of jobs dependent on extra-EU exports rise 67%. Table 1 also reports substantial variation across EU Member States in the share of jobs dependent on extra-EU exports that are directly involved in exporting to buyers outside the EU and in the share of such jobs that are low skill (see columns five and six of Table 1). The effects of extra-EU exports ricochet around the European Union and are not confined to elite or high-skilled workers. Much, then, is at stake.

Were extra-EU trade growing a fast clip there might be little to be concerned about. However, like global trade patterns in general, in the aftermath of the global economic crisis extra-EU exports have lost considerable momentum. Worse, as we document in the next chapter of this report, there is evidence that the growth of extra-EU exports is falling behind that of other leading trading powers and regions of the world economy and that prices EU firms are charging for their extra-EU exports are stagnating. For sure, extra-EU exports bounced back from 2009 lows, but since then the absolute and relative performance of extra-EU exports has been unimpressive.

What ails EU exports? Quite remarkably, this important question has not been studied extensively. For sure, there is much commentary on European competitiveness, but what of econometric analysis? This lacunae is all the more glaring given that the policy mix employed by many governments since the onset of the global economic crisis has involved some degree of (and in several cases, considerable) discrimination against foreign firms. Thus, the question arises: to what extent have European exporters been fettered by crisis-era foreign protectionism? This is not to suggest that European governments are blameless as regards beggar-thy-neighbour activity during the crisis era. Rather, it is to ask whether foreign protectionism is an economically significant brake on one source of European growth.

The purpose of this report is to document the form, frequency, extent and estimated impact of beggar-thy-neighbour policies undertaken by foreign governments that implicate exporters from the European Union in the years since the onset of the global financial crisis. Our empirical investigation will take account of the possibility that some foreign governments have resorted more to beggar-thy-neighbour policies than others and that measures to promote foreign exports can harm EU commercial interests as well as market access restrictions. As a result, our approach considers not just whether the growth of EU exports has been affected by foreign trade distortions, but also whether global trade flows have been reshuffled by such distortions in a manner detrimental to EU exporters.

Should foreign protectionism be found to have retarded European exports significantly, then the implications for European Common Commercial Policy could be profound. Questions of a substantive and tactical nature would arise. Should the European Union resort more frequently to dispute settlement at the World Trade Organization, if indeed a discriminatory foreign policy intervention fell under a covered agreement? Rather than wait for judgements from Geneva, some might be tempted to argue for retaliation against the offending foreign government. Others may call for cooler heads to prevail and to seek a negotiated solution, at least bilaterally in the short run and over the longer term in the form of new disciplines in regional trading agreements and multilateral accords. Either way, a more proactive stance towards the European Union's offensive commercial interests could follow.

Should evidence of significant effects of foreign protectionism on EU exports be found, then this would cast further doubt on the proposition that crisis-era protectionism was a flash in the pan that was brought quickly under control in 2009 before it caused major economic damage. Moreover, to the extent that we find that EU exports have been harmed by attempts by foreign governments to steal market shares in third markets, then it calls into question the focus of many analysts and policymakers on trade restrictions, a common feature of the reporting on crisis-era protectionism by official institutions (National Board of Trade 2016). For all of these reasons then, understanding the factors holding back European exports is of potential policy significance.

The remainder of this report is organised as follows. A short overview of the development of extra-EU exports since 2000 is presented in the next chapter. Where possible, we distinguish between the development of export volumes and export prices. In the third chapter of the report, evidence of the frequency with which foreign governments have discriminated against EU commercial interests since the onset of the global economic crisis is presented. That is followed in Chapter 4 by a discussion of estimates of the amount of EU exports that face trade distortions in third markets.

These earlier chapters of the report provide the motivation for the empirical strategy and econometric approach taken to estimating the impact of foreign protectionism that are described in Chapters 5 and 6 respectively. Estimates of the reductions in EU export growth accounted for by foreign trade distortions implemented during the crisis era and the likely impact of several other counterfactual policy changes follow in Chapter 7. Implications for EU commercial policy are spelt out in Chapter 8. Concluding remarks are offered in the last chapter of this report.

This report also includes a technical annex as well as an appendix for each EU Member State. In the latter, statistics are presented on export growth performance and on the exposure to foreign trade distortions implemented since November 2008 (taken here to be the beginning of the crisis era when the leaders of the Group of Twenty nations first announced their intention to eschew protectionism), and counterfactual estimates of the impact of foreign trade distortions on the EU Member State's export performance relative to China, Japan, and the United States are presented. As such, our report seeks to highlight the overall impact of foreign trade distortions on the export growth of each EU Member State. Such evidence can facilitate evidence-based discussions of the form and consequences of contemporary protectionism for the European Union and beyond.

TABLE 1

Characteristics of jobs supported by extra-EU trade, by EU Member State

EU Member State	Total employment supported in this Member State by extra-EU exports			% direct employment, 2011	% low skill, 2009	Employment supported outside of EU, 2011
	1995	2011	% change, 1995-2011			
Austria	345	761	121	82	16	478
Belgium	404	767	90	74	21	899
Bulgaria	564	643	14	87	75	78
Cyprus	32	44	39	93	25	15
Czech Republic	578	886	53	70	6	403
Denmark	318	445	40	88	30	722
Estonia	97	102	5	74	10	33
Finland	279	427	53	86	17	438
France	2003	2583	29	86	23	1732
Germany	3325	7060	112	86	15	4759
Greece	154	347	126	95	36	134
Hungary	495	852	72	80	12	246
Ireland	172	494	187	92	19	781
Italy	2070	3134	51	87	40	1893
Latvia	165	140	-15	87	11	22
Lithuania	241	254	5	90	6	57
Luxembourg	29	115	296	86	20	218
Malta	15	37	147	87	63	19
Netherlands	904	1375	52	78	28	1956
Poland	956	1970	106	75	9	469
Portugal	242	413	70	81	70	112
Romania	866	1415	63	87	74	93
Slovakia	185	309	68	78	19	113
Slovenia	124	151	22	63	16	65
Spain	707	1597	126	81	43	959
Sweden	582	872	50	87	19	788
United Kingdom	2768	3970	43	82	22	1675
Total EU-27	*18620*	*31163*	*67*	*83*	*25*	*19157*

Source: Rueda-Cantuche et al. (2013).

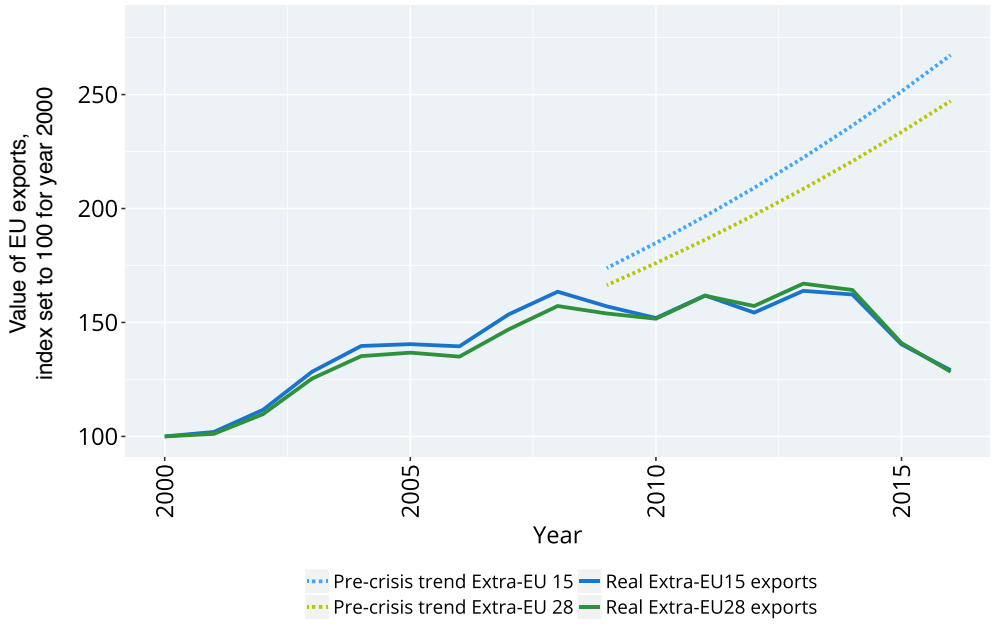
CHAPTER 2
THE EVOLUTION OF EXTRA-EU EXPORTS SINCE 2000: GROWTH THEN STAGNATION

For the European Union exports to the rest of the world boomed in the years after the turn of the century. In just eight years, from 2000 to 2008 to be precise, such EU exports rose more than 130% in nominal US Dollar terms. In real terms, however, once changes in the world price of exports are taken into account,[1] extra-EU export growth was still up an impressive 60% (see Figure 2). Such momentum was not to last. The initial impact of the global economic crisis was to reduce in 2009 extra-EU exports by the EU28 group by 21.1% in nominal terms.[2] Since world export prices fell 19.4% in 2009 (compared to 2008), the real fall in EU exports was much smaller.

For sure, nominal extra-EU exports quickly recovered from their 2009 slump but, in real terms, since 2010 there has been little by way of growth. When compared to what extra-EU exports would have been had pre-crisis rates of growth resumed, the deterioration in extra-EU export growth dynamics becomes apparent (see Figure 2). The falling real value of extra-EU exports in 2015 and 2016 is partly driven by changes in the United States Dollar-Euro exchange rate. When measured in Euro terms, according to Eurostat statistics extra-EU exports have stagnated from 2013 to 2016.[3]

FIGURE 2

A sharp break in extra-EU export dynamics occurred after the crisis hit



Source: UN COMTRADE and Statistics Netherlands. Trade flows recorded in US Dollars.

1 The source we used for world export prices is Statistics Netherlands, see http://statline.cbs.nl/Statweb/publication/?DM=SLEN&PA=82605eng&D1=a&D2=a&D3=84,101,118,135,152,169,186,203,220,237,254,271,288,305,322,339,356,366-382&HDR=T&STB=G1,G2&VW=T

2 As shown in Figures 2 and 3 there is little difference between the export growth dynamics of the EU28 and EU15 groups of Member States. For this reason, our account focuses on the broader, more inclusive EU28 group.

3 See http://ec.europa.eu/eurostat/tgm/refreshTableAction.do?tab=table&plugin=1&pcode=tet00018&language=en

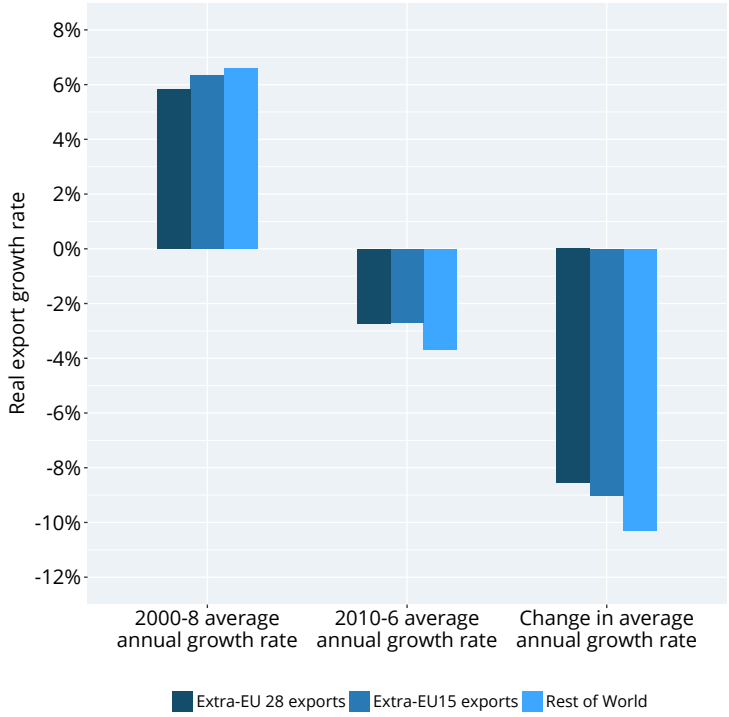
Further perspective is found by benchmarking the changes in extra-EU growth performance before and after the onset of the global economic crisis with that of the rest of the world's exports. In particular, we compared the annual average rate of growth during the boom years of 2000 to 2008 with the years following the slump in global trade (in nominal terms) in 2009, specifically, the years 2010 to 2016 (see Figure 3). Before the crisis hit, extra-EU exports grew in real terms at around 6% per annum, in line with the growth rate for the rest of the world. After the initial shock of 2009, the rest of the world's exports fell on average by 3.6% per annum, one percentage point more than for extra-EU exports. While the reversal of fortune for the rest of the world's exports was slightly sharper, as the last three columns in Figure 3 show the changing fortunes of extra-EU exports were roughly comparable.

In addition to computing our own estimates of real export growth, we consulted a well-regarded source of export volume and price data – that provided by the Netherlands Bureau for Economic Analysis (CPB). The CPB publishes the *World Trade Monitor*, which reports trade volume and price data for selected groups of nations. Unfortunately, the European Union is not one such group, however, the Eurozone group is. Consequently, so as to examine the extent to which European exports bounced back after the onset of the global economic crisis, we computed for the Eurozone, the countries the CPB designated "emerging markets", for Japan, for the United States and for the world export volume indices that took the value of 100 at their lowest point during 2008 and 2009. The resulting calculations are plotted in Figure 4. From its nadir, Eurozone export volumes have risen just over 30%. However, as is evident from this graph, export volumes of other leading trading nations or groups have grown by more. This is evidence of the relative underperformance of export growth by 19 of the 28 members of the European Union.

The *World Trade Monitor* database allows for an assessment of Eurozone export price dynamics as well. In Figure 5 we plot the Eurozone export volume performance and average export prices for the same countries, this time setting the benchmark value of each index (at 100) for the maximum recorded value. This chart confirms that Eurozone export volumes are finally above levels seen before the crisis hit. However, no such claim can be made for Eurozone export prices. While such prices appear to have recovered a little in 2017, they are still 15% below the pre-crisis peak. Eurozone export prices were essentially flat from 2011 to 2014 and then fell sharply in 2015 and 2016. Given the Eurozone is not a big exporter of oil or related energy products, the falls in the latter years are unlikely to be directly related to the oil price collapse of 2014. Overall, on the assumption that the CPB export price indices properly measure the underlying commercial reality, it would seem that something is holding Eurozone exporters back from raising their prices to foreign customers.

FIGURE 3

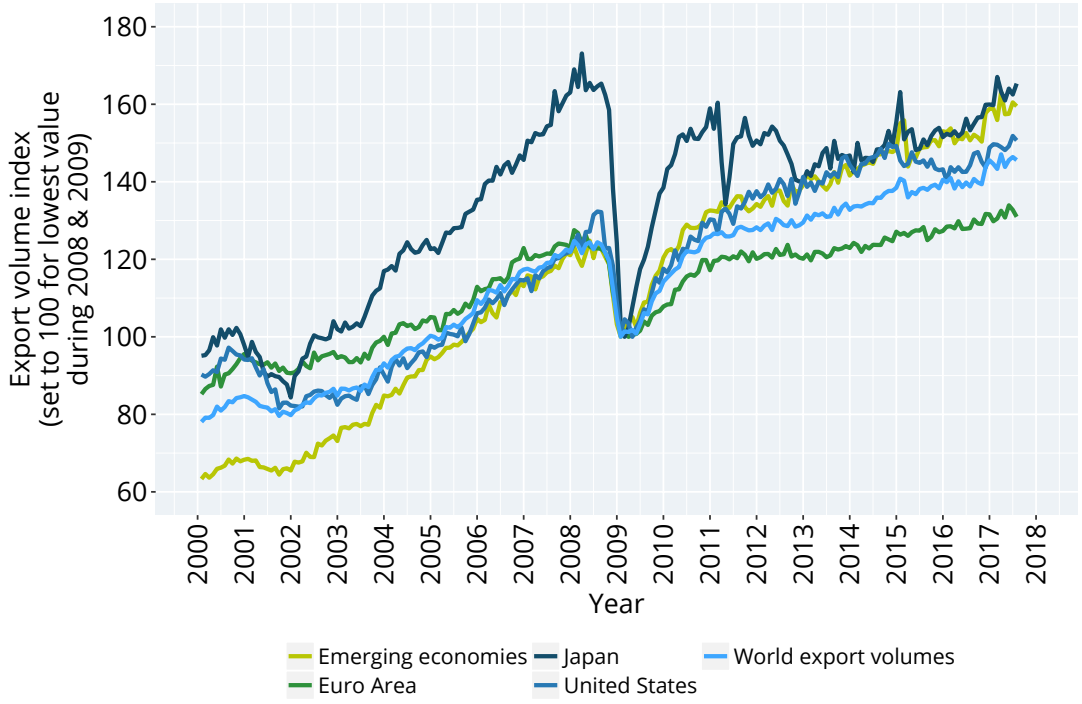
The deceleration of the rest of the world's real export growth was slightly faster than experienced by extra-EU exports



Source: UN COMTRADE and Statistics Netherlands.

FIGURE 4

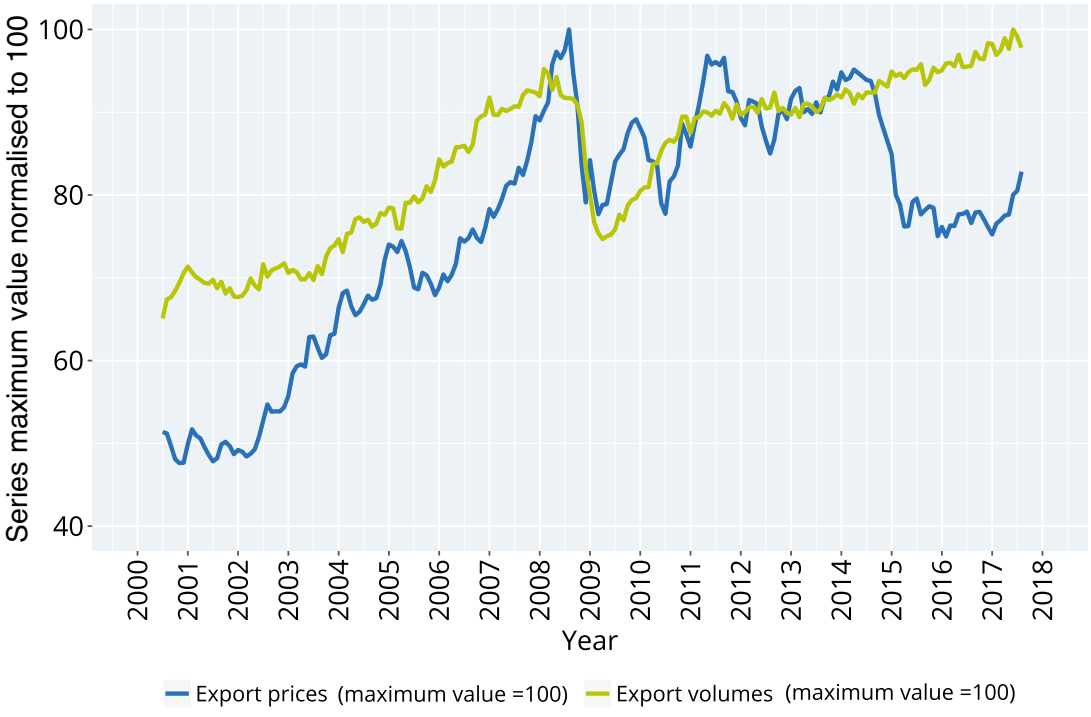
Eurozone export volumes bounced back slower than other major trading nations and regions



Source: World Trade Monitor, Netherlands Bureau for Economic Analysis. July 2017

FIGURE 5

While Eurozone export volumes recovered, in recent years export prices have slumped



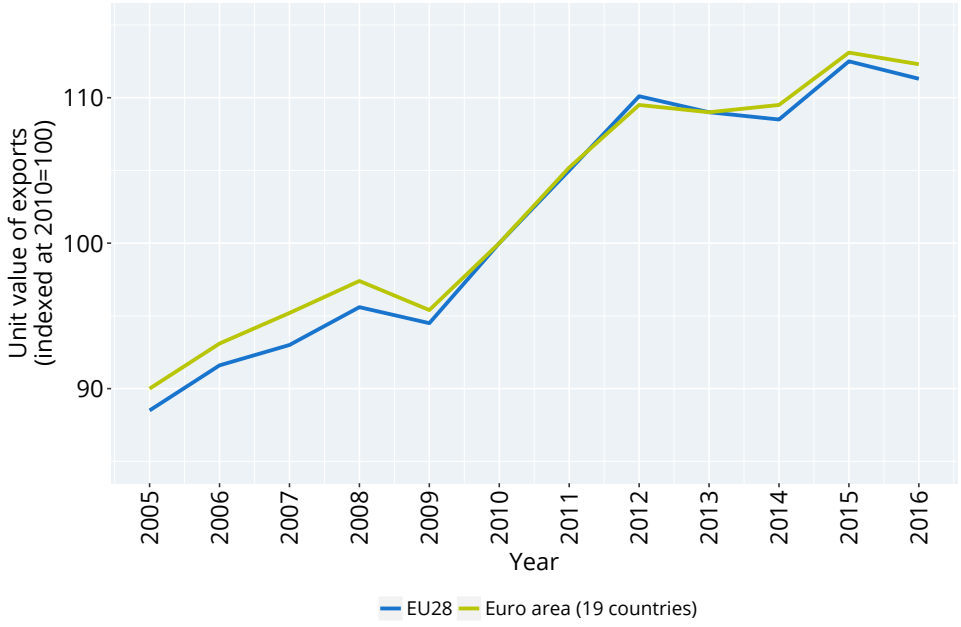
Source: World Trade Monitor, Netherlands Bureau for Economic Analysis. July 2017

Eurostat also reports price indices for extra-EU exports, and this source was consulted. Figure 6 plots such export price indices for the Eurozone alone (which in principle ought to be comparable to the data found in the *World Trade Monitor*) and for the EU28 group of nations. Given the former group of EU Member States represent a large share of EU28 exports, it is not that surprisingly that both export price indices move closely together. However, clear differences with Figure 5 emerge – the Eurostat data imply no fall in export prices for the Eurozone in 2015 and 2016. Even so, it is noteworthy that the Eurostat data imply that the average price of extra-EU exports has essentially stagnated since 2012. Something has undermined the ability of European exporters on average to extract higher prices from foreign customers. Given that exporters, in particular manufacturers, in competitive global markets tend to upgrade their products over time, this diminished pricing power is a source of concern.

In sum, there has been a clear break in extra-EU export dynamics with the onset of the global economic crisis. For sure, as the literature on the global trade slowdown attests (a critical assessment of which can be found in Evenett and Fritz 2016), other regions of the world economy witnessed changes in their export dynamics too. Still, there is evidence that, as far as export volumes are concerned, EU export performance worsened relative to its peers. Moreover, stagnant or falling prices for extra-EU exports raise concerns that the relative reward to supplying customers abroad rather than at home has deteriorated, with adverse potential consequences for the incentive of European firms to further engage in global markets. Understanding why these export dynamics worsened and, in particular, the role played by public policy is a major goal of this study. We now turn to evidence of the extent to which European exporters faced discriminatory public policies implemented by foreign governments since the global economic crisis began.

FIGURE 6

Eurostat data provide a different perspective on extra-EU export prices – even so, they have stagnated since 2012



Source: Eurostat.

CHAPTER 3
CRISIS-ERA DISCRIMINATION FACING EXPORTERS FROM THE EUROPEAN UNION

The purpose of this chapter is to document the frequency with which the commercial interests of the EU Member States have been harmed since November 2008[4] by policy interventions of foreign governments that favoured domestic commercial interests over their foreign rivals. Data are presented in the next chapter on the percentage of each Member State's extra-EU exports that compete in foreign markets against one or more trade distortion, giving a sense of the scale of crisis-era protectionism facing EU exporters. Furthermore, the policy instruments that affect the most EU exports are identified, allowing for contrasts between the most pervasive forms of contemporary trade distortions with those from earlier eras, such as the 1930s and the sharp global economic downturn in the early 1980s (which saw considerable resort to measures to restrict exports as opposed to raise import tariffs). Together, this chapter and the next provide an overview of the prevalence, form, and extent of foreign trade distortions that might have held back – or fettered – EU exporters since the onset of the global economic crisis.

The Global Trade Alert (GTA) database includes information on policy changes implemented by governments since November 2008 that alter the relative treatment of domestic firms vis-à-vis their foreign rivals[5] and this is the principal data source on crisis-era policy intervention employed here.[6] That database also includes information on measures that favour foreign firms, although the focus in this section is on the harmful or discriminatory policy interventions.[7] When a measure is recorded in the GTA database, conservative techniques are employed to identify which trading partners are very likely to have been affected. For example, if Switzerland raises the tariff on imported butter, then trade data can be used to identify which trading partners have shipped more than a *de minimis* amount of butter to Switzerland. The GTA database, therefore, contains information on the nations almost certainly affected by recorded policy interventions.[8]

Information in the GTA database has been widely used by analysts, industry associations, governments, and international organisations. In its October 2016 *World Economic Outlook*, the International Monetary Fund stated "[t]he Global Trade Alert database has the most comprehensive coverage of all types of trade-discriminatory and trade-liberalizing measures, although it only begins in 2008" (IMF 2016, p. 79). A report on the different sources of contemporary protectionism by the National Board of Trade included an assessment of the Global Trade Alert, reasoning as follows: "In the case of the Global Trade Alert, it is the largest database available recording measures that affect trade. Consequently, it has become a frequent point of reference in discussions on protectionism. We also considered it important to include the Global Trade Alert because it is not bound by political constraints to the same extent as some of the member-driven international organizations" (National Board of

4 In this month the leaders of the Group of Twenty (G20) nations met in Washington DC for the first time. At that meeting, these government leaders pledged not to engage in certain types of protectionism. For our purposes, this pledge represents a potential break in G20 government behaviour associated with the crisis. In their summit Declaration on 15 November 2008 the G20 leaders pledged: "We underscore the critical importance of rejecting protectionism and not turning inward in times of financial uncertainty. In this regard, within the next 12 months, we will refrain from raising new barriers to investment or to trade in goods and services, imposing new export restrictions, or implementing World Trade Organization (WTO) inconsistent measures to stimulate exports." This pledge has been repeatedly extended through to this time of writing.

5 The Global Trade Alert classifies a measure as harmful if the implementation of a government policy instrument likely or almost certainly worsens the treatment of one or more foreign commercial interests relative to domestic rivals. Following the Global Trade Alert, we refer here to harmful government measures as protectionist measures or as trade distortions (even though the database in question considers policies that affect cross-border commerce other than trade, such as foreign direct investment.)

6 In the interests of transparency, the authors of this study have been heavily involved in the design, execution, and evolution of the Global Trade Alert data collection project.

7 The Global Trade Alert does not duplicate the World Trade Organization's databases of technical barriers to trade and sanitary and phytosanitary measures on imports. Moreover, since the focus of the Global Trade Alert is on unilateral policy changes it does not include information on the signing by two or more customs territories of regional trade agreements. Nor does it include trade policy measures taken for foreign policy reasons, such as sanctions against the Russian Federation for the invasion of Crimea.

8 Further information on the data collection and review procedures of the Global Trade Alert can be found on pages 17-19 of Evenett and Fritz (2015).

Trade 2016, p. 7). Finally, as of this writing, a total of 1,260 entries in the Google Scholar database make reference to the Global Trade Alert database. These statements and statistic attest to the extent to which this database has established itself as one of the useful sources of information on government policy change affecting international commerce since the start of the global economic crisis.

The GTA database was searched for implemented policy interventions (as opposed to announcements of the intention to implement public policies) that involve discrimination and harm one or more EU Member State's commercial interests. The total number of times each Member State's commercial interests have been harmed since November 2008 is reported in Table 2. As some measures taken by EU Member States harm other EU Member States, such as state aid awarded to local firms that compete against foreign firms located within the European Union, a breakdown is provided of the hits to commercial interests due to EU and non-EU government interventions.

In total, the European Union's commercial interests have been harmed 3,819 times by crisis-era protectionism. Since November 2008, governments outside of the Union have taken 3,287 policy interventions that harmed EU exporters, foreign investors, workers stationed abroad, and owners of intellectual property. On average, then, *each day since the onset of the global economic crisis* an EU commercial interest is hit by the implementation of an *additional* foreign protectionist measure.

TABLE 2

Incidence of harm to the commercial interests of EU Member States, November 2008–September 2017

EU Member State	Number of times harm done by EU members	Number of times harm done by non-EU members	Total incidences of harm	Share of total incidences of harm from outside EU
Austria	319	1548	1867	0.830
Belgium	370	1833	2203	0.832
Bulgaria	217	786	1003	0.784
Croatia	170	495	665	0.744
Cyprus	154	313	467	0.670
Czech Republic	343	1331	1674	0.796
Denmark	324	1328	1652	0.805
Estonia	152	674	826	0.817
Finland	237	1390	1627	0.855
France	336	2317	2653	0.874
Germany	376	2600	2976	0.874
Greece	223	939	1162	0.809
Hungary	310	1249	1559	0.802
Ireland	271	1133	1404	0.808
Italy	357	2347	2704	0.868
Latvia	171	704	875	0.805
Lithuania	186	727	913	0.797
Luxembourg	221	656	877	0.748
Malta	114	268	382	0.702
Netherlands	323	1955	2278	0.859
Poland	311	1567	1878	0.835
Portugal	260	1152	1412	0.816
Romania	289	1065	1354	0.787
Slovakia	231	1024	1255	0.817
Slovenia	190	778	968	0.804
Spain	322	1997	2319	0.862
Sweden	376	1675	2051	0.817
United Kingdom	379	2182	2561	0.852

Source: Global Trade Alert, 21 September 2017.

Perhaps unsurprisingly given their differences in economic size, there is considerable variation across the EU Member States in the frequency with which they have been hit by protectionism undertaken by governments outside of the EU: from 268 hits on Malta's interests to 2,600 hits on German's sizeable export machine (see Table 2).

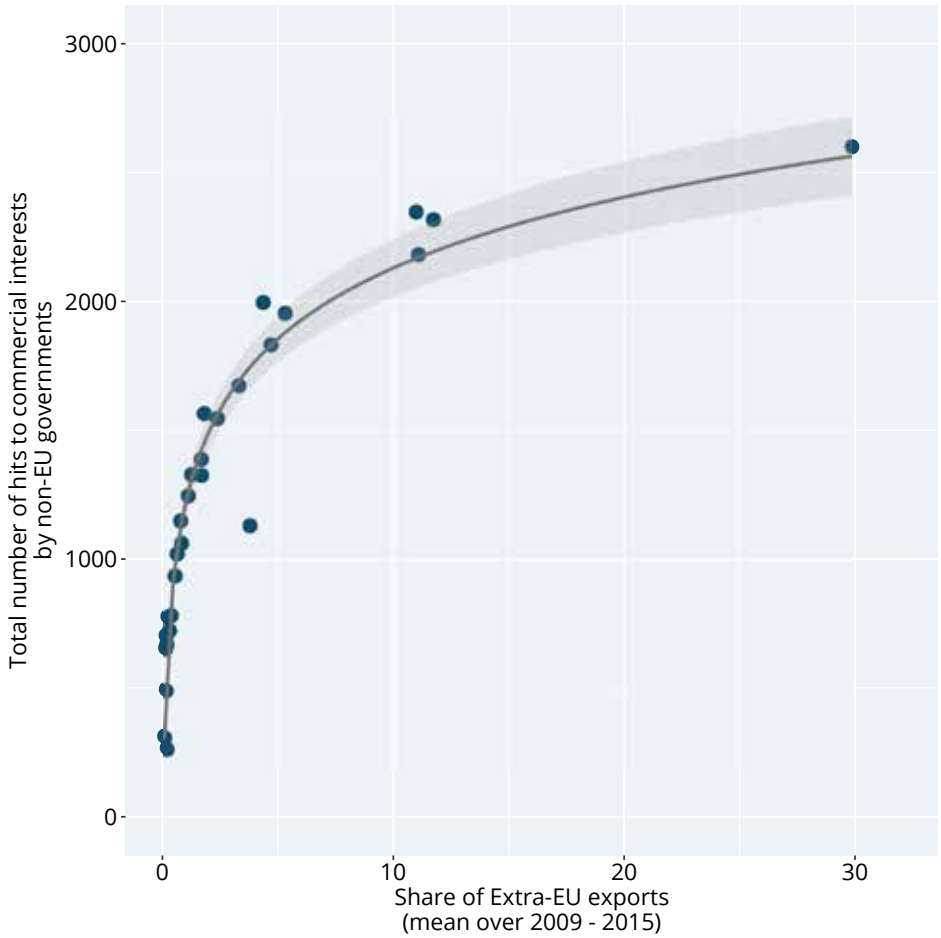
Relative economic size also appears to affect the share of all hits to a EU Member State's commercial interests that are due to the policy interventions of another EU Member State. For the smallest Member States up to a third of the hits to their commercial interests originated from within the EU. Meanwhile, for the larger Member States less than a sixth of the total incidences of harm to their commercial interests originated from within the European Union. Still, no account of crisis-era protectionism would be complete without acknowledging the harm that EU Member States have done to each other's commercial interests.

To examine the degree to which export exposure to non-EU markets correlates with the number of hits originating outside of the EU, data on the average share of each Member State's exports in total extra-EU exports during the years 2009 to 2015 were collected. Those shares are plotted against the total number of hits in Figure 7 and a concave, positive relationship emerges. As this figure makes clear, numerous EU Member States that ship relatively small percentages of their total exports outside of the EU have still faced over 1,000 hits to their commercial interests as a result of actions taken by foreign governments since November 2008.

We also collected data on the number of times non-EU governments have implemented different types of policies that discriminate against a commercial interest of the European Union. Bearing in mind that foreign state intervention can involve the use of more than one policy instrument, a total of 3,323 of the latter have been

FIGURE 7

Hits from abroad reflect extra-EU export shares, but not one-for-one



Source: Eurostat for Extra EU-28 export shares; Global Trade Alert for total number of hits to commercial interests (data downloaded 21 September 2017).

implemented by foreign governments since November 2008 in a way that is harmful to European exporters, investors, owners of intellectual property, or citizens working abroad.[9] Table 3 classifies the non-EU policy instruments harming EU commercial interests according the United Nations' classification of non-tariff measures put together by the Multi-Agency Support Team (the so-called MAST classification) as well as other relevant classes of policy instrument.[10] The more traditional forms of protectionism – tariff increases and trade defence and safeguard duties – are certainly represented in that list and together they account for 30% of the total number of foreign policy interventions harmful to EU commercial interests. Subsidies and state incentives to boost exports account for 40% of the trade distortions facing EU firms. Government procurement measures – such as Buy American provisions – are the fourth most commonly faced trade distortion. Protectionism in the current era is more varied than in yesteryear, a point worth bearing in mind when listening to those who keep comparing the current era to the 1930s.

TABLE 3

Three policy instruments alone account for nearly 60% of the foreign state intervention detrimental to EU commercial interests

MAST chapter (where applicable)	Discriminatory policy instrument by UN MAST chapter	Number of times used against EU commercial interests since November 2008	Percentage share
	Import tariff measures	718	21.61
L	Subsidies (except export subsidies)	709	21.34
P	Export measures	608	18.30
M	Government procurement	417	12.55
D	Contingent trade protection	276	8.31
E	Non-automatic licensing, quotas	171	5.15
I	Trade-related investment measures	126	3.79
	Migration measures	94	2.83
	Instrument unclassified	88	2.65
	FDI measures	58	1.75
F	Price control measures	29	0.87
G	Finance measures	9	0.27
B	Technical barriers to trade	8	0.24
A	Sanitary and phytosanitary measure	7	0.21
	Capital control measures	3	0.09
N	Intellectual Property	2	0.06

Source: Global Trade Alert, 21 September 2017.

9 As a foreign public policy intervention can in principle harm more than one EU Member State, the total number of hits on EU commercial interests (reported in Table 2) can exceed the total number of harmful policy interventions.

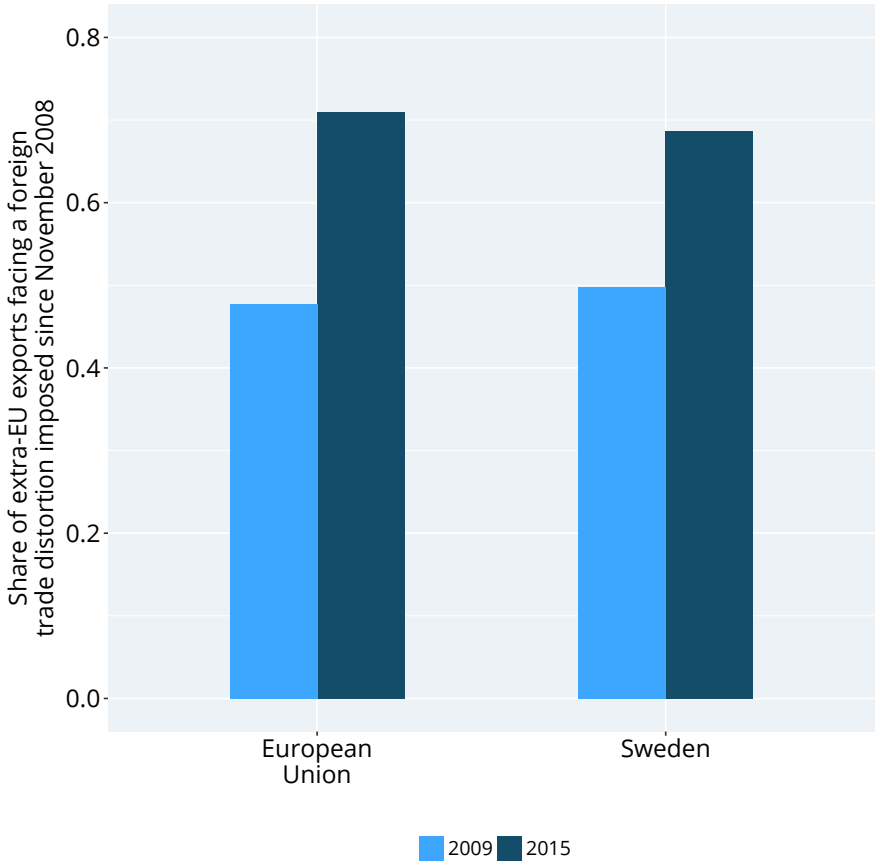
10 The GTA collects more fine-grained data on different types of policy instrument than found in the MAST categories listed in Table 3. In Appendix Table 1 of this report a more detailed breakdown of the 3,323 policy instruments harming EU commercial interests can be found. The conclusion of this section relating to the varied nature of contemporary protectionism is further reinforced by the data presented in Appendix Table 1.

CHAPTER 4
WHAT SHARE OF EU EXPORTS FACE CRISIS-ERA FOREIGN TRADE DISTORTIONS?

One concern with counts of protectionist measures is that measures may differ in the amount of EU exports affected. To address this matter directly, we used detailed (six-digit product level) data from the UN COMTRADE database to calculate the amount of trade that is potentially covered by each discriminatory policy intervention that implicates exports from EU Member States. Doing so enables us to calculate the share of a Member State's exports that faced a trade distortion when shipped to a third market outside of the European Union. Thus, the scale of any protectionist problem will be revealed by such trade coverage ratios. (That being said, it is still another matter to show that exposure to foreign protectionism has caused EU exports to be lower than they would otherwise be – a task we take up later in this report.)

FIGURE 8

By 2015 over 70% of the EU's exports to destinations outside of the European Union faced at least one trade distortion imposed since the crisis began and that was still in force



Source: Global Trade Alert, UN COMTRADE, 21 September 2017.

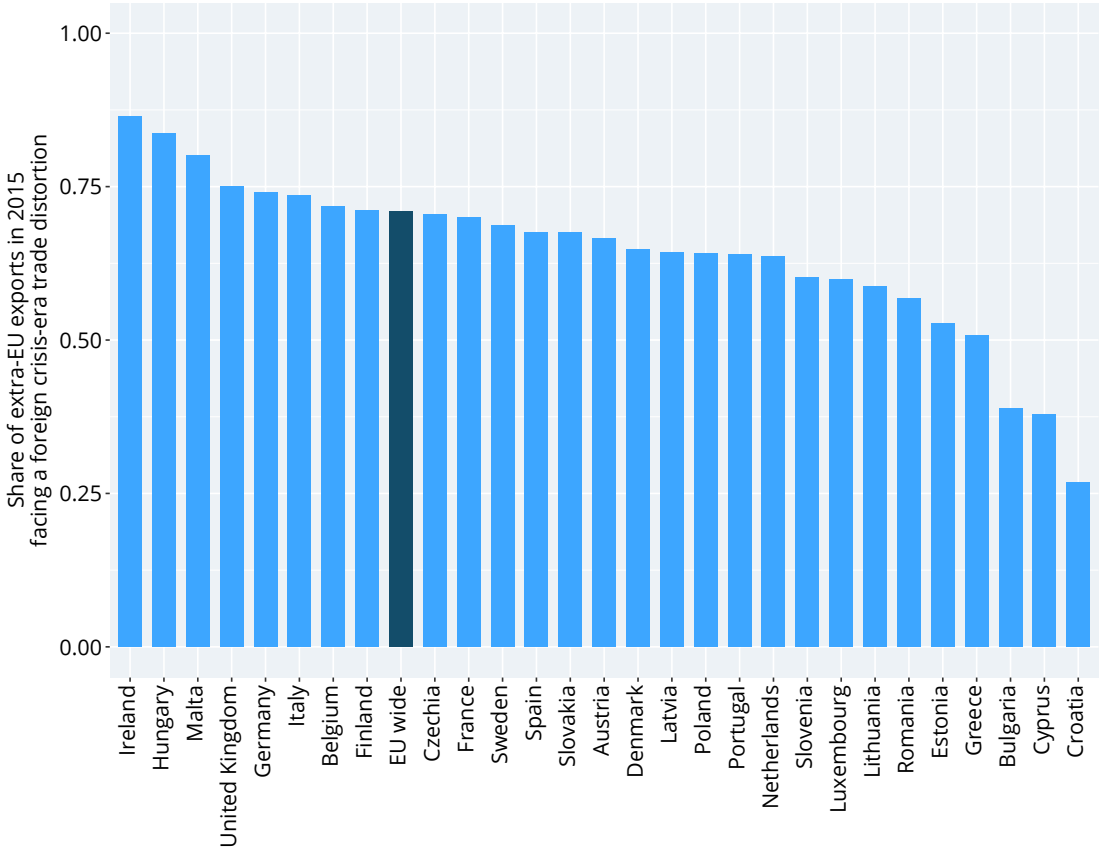
We calculated the exposure of each EU Member State's exports to foreign protectionism in 2009 and 2015 and broke down the results according to types of discriminatory policy instrument implemented by non-EU governments. These calculations are reported in Appendix Table 2 of this report. For summary statistics, however, consult Figure 8. During 2009, 47.7% of extra-EU exports faced at least one trade distortion in third markets that had been implemented since the crisis began and was still in force, suggesting a deterioration in trading conditions since November 2008. That percentage was to rise to just over 70% by 2015, an even worse result. The findings for Sweden are similarly discouraging (where the percentage of exports facing one or more trade distortion in a foreign market rose from 49.7% in 2009 to 68.7% in 2015).

As Figure 9 shows, there is considerable variation across EU Member States in the exposure of their exports to protectionism imposed by governments outside of the EU. In all but three Member States, by 2015 over half of national exports to outside the EU faced when, competing in third markets, at least one trade distortion imposed since November 2008 *that was still in effect in 2015*. In the case of Ireland, Hungary, Malta, the United Kingdom, Germany, Italy, Belgium, and Finland over 70% of their extra-EU exports faced foreign trade distortions imposed since November 2008 that were still in effect in 2015. On these figures, the scale of crisis-era protectionism harming EU commercial interests is an order of magnitude larger than that reported by international organisations to the G20.

The breakdown in extra-EU export exposure to foreign protectionism across classes of policy instruments is revealing (see Figure 10.) EU exporter exposure to foreign trade defence investigations is trivial, at just over half a percent. Buy national public procurement measures are present in products and overseas destinations covering over 4% of extra-EU exports. Nearly 9% of extra-EU exports have faced a crisis-era tariff increase that was still in effect in 2015. Competition with bailed out foreign firms in their home markets is an even bigger concern, at least in terms of the percentage of extra-EU exports at risk in 2015. A sixth of extra-EU exports compete in foreign markets against a local firm that has received some type of state aid (which is unrelated to exporting).

FIGURE 9

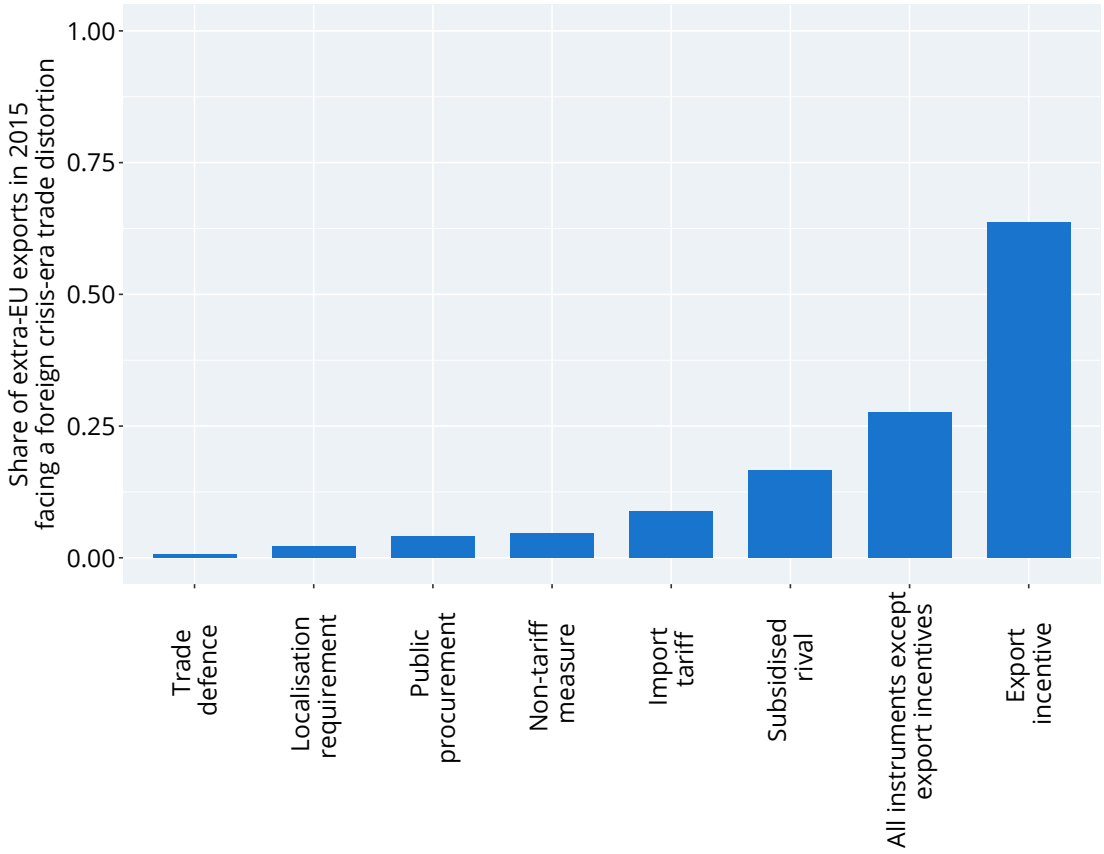
In all but three EU Member States, by 2015 over 50% of extra-EU exports faced crisis-era foreign trade distortions that were still in effect



Source: Computed using UN COMTRADE and Global Trade Alert data, 21 September 2017.

FIGURE 10

By 2015, foreign tariff increases, bailed out and subsidised foreign rivals, and export incentives each confronted more than 8% of extra-EU exports



Source: Global Trade Alert, UN COMTRADE, 21 September 2017.

By far the largest concern arises from inducements offered by foreign governments for the export of products to third markets where EU firms also compete. By 2015, 63.8% of extra-EU exports faced competition from a foreign rival that has received either a subsidy or tax break for exporting or where the financing for the buyer has been eased through state-provided concessionary finance.[11] This finding is important as it is a reminder that market access restrictions in third markets are not the only threat to the EU export revenues. Through the use of such financial incentives – many of which are supplied through national tax systems – foreign governments seek to shift third-market sales to exporters located in their jurisdictions potentially at the expense of firms based in the European Union.

It is worth considering the likely competitive response by EU exporters to foreign export incentives. If their bids and tenders are to remain competitive, such foreign subsidisation of exports forces EU-based competitors to lower prices and accept lower profit margins. In turn, this diminishes the incentive of EU firms to export in the first place. Moreover, this incentive is further reduced by uncertainty over the size of any foreign export incentive.

This overview of evidence on the foreign trade distortions faced by EU exporters prompts three other observations. First, since the conclusion of the Uruguay Round of multilateral trade negotiations, member governments of the World Trade Organization have sought to eliminate the remaining agricultural export subsidies. Indeed, much was made at the 10th WTO Ministerial Conference in Nairobi, Kenya, of the ban on such export subsidies. Yet, if the data collected by the Global Trade Alert team are correct, then since November 2008 on nearly 800 occasions foreign governments have taken steps to incent

11 Recent examples of such export incentives include Canadian export incentives for its forestry sector, Argentine tax rebates for the export of agricultural goods, and Pakistani incentives to promote textile exports.

national exporters.[12] For sure, not all of these incentives were for agricultural exports. Furthermore, some of these incentives may not have broken WTO rules, such as they are. As far the EU exporters competing against such export incentives are concerned, their WTO legality is hardly their primary concern – the impact on their business is. The scale of these export incentives – as represented by the share of extra-EU exports at risk – suggest that it may be premature to celebrate the demise of export subsidies.[13]

Second, that foreign governments have taken so many steps to promote exports suggests that since the onset of the global economic crisis mercantilist instincts may have had the upper hand in many trade ministers' thinking. Rather than restrict imports aggressively or devalue national currencies in a beggar-thy-neighbour manner – the strategies taken by numerous governments in the 1930s – in the present era the focus appears to have been on boosting the contribution of exports to national economic recoveries. That is a relatively benign way of putting the matter – resort to export incentives could be seen as attempting to grab or steal market share from trading partners. While exports *per se* are not bad, fiscal incentives to promote exports distort trade and are a legitimate public policy concern for those interested in the health of the world trading system.

The third observation is that the economics of promoting exports are different from the economics of tariff increases and other import restrictions, and this needs to taken into account when analysing and interpreting the present era. The latter typically raise prices for buyers and reduce the variety of goods available. The former may have the opposite effect, muddying any welfare analysis.

Moreover, in cases where some *but not all* governments promote exports using fiscal incentives, then bilateral trade flows can be *reshuffled* away from the unsubsidised towards the subsidised. Unlike the tariff increases of the 1930s, the widespread resort to export incentives need not result in a collapse in global trade – rather than in its redistribution among exporters. Alternative ways of examining what some have referred to as the global trade slowdown of recent years – looking for parallels to the 1930s, or looking at current developments through a lens shaped solely by the protectionism in the 1930s, may not be that informative. Lastly, foreign export incentives are likely to depress the prices received by exporting firms and might have contributed to the inability of EU exporters to keep raising prices over time as they did in the pre-crisis era.[14]

12 Of those measures, 294 were directed towards products and foreign markets that EU exporters compete in. This is not to imply that each of the 294 measures harming EU exporters has the same adverse trade effect. Still, the fact that there are 294 of them suggests that resort to export mercantilism is neither rare nor an isolated matter.

13 These findings are all the more troubling given that many WTO members have taken on legal obligations that, in principle, preclude the use of export subsidies for manufactured goods.

14 Recall the findings in Figures 5 and 6 of this report.

CHAPTER 5
EMPIRICAL STRATEGY

Our overview of crisis-era policy intervention showed that EU exporters have been confronted by several thousand new trade distortions in foreign markets. For sure, some are traditional border barriers and both trade theory and empirics have long been used to analyse their impact. However, our overview also found that certain behind-the-border measures (localisation requirements, public procurement requirements, etc.), subsidised firms competing in their home markets, and export incentives (both tax-related and concessional export financing) potentially affect non-trivial amounts of extra-EU exports. In particular, the scale of trade potentially covered by crisis-era export incentives requires considering the possibility that the amount of trade between any two nations is affected by the policies undertaken by third nations. Our empirical strategy was designed with these considerations in mind and with our ultimate goal, namely, to estimate the impact of crisis-era commercial policy choice on EU exports. We proceeded in stages.

First, we chose an empirical strategy based on a well-known economic model of trade that permits the inclusion of multiple policy interventions. Splitting bilateral trade barriers into border barriers and behind-the-border policy instruments offers no deep challenge to either theory or empirics (so long as one is prepared to assume these barriers are multiplicative.)

The potential impact of subsidies on the unit cost of supplying home or foreign markets calls for a theoretical approach that puts such outlays at the core. Eaton and Kortum's (2002) reinterpretation of the gravity equation fits the bill. Like Anderson and van Wincoop (2001), the theoretical predictions of Eaton and Kortum for the value of bilateral trade flows include so-called multilateral resistance terms. These terms imply that it is the relative size of bilateral trade barriers that matters for the level of bilateral trade, not the absolute size of those barriers. In cross-sectional samples controlling for these multilateral resistance terms is straightforward. However, in samples with an intertemporal dimension – as ours has – straightforward structural methods that control for multilateral resistance terms have yet to be developed.

All is not lost, however. Employing this approach also has the advantage of being able to draw upon an existing literature on empirical implementation of the gravity equation, the empirical workhorse of international trade. In their survey, Head and Reis (2013) point out that many of the modern theoretical formulations of the gravity equation predict that the ratio of the value of two exporters' shipments to a common third market do not depend on these multilateral resistance terms.

Moreover, using a trilateral as opposed to a bilateral variant of the gravity equation allows us – through the careful choice of non-EU exporter – to study the impact of the policies of non-EU governments on the exports of a EU Member State to a third market. For example, a Chinese production subsidy may allow a Chinese exporter to undercut a Swedish exporter in a third market, say, Tanzania. We seek to estimate the direct effects of the policies of third countries on the bilateral trade between an EU Member State and a trading partner. As will be evident, doing so does not come at the cost of ignoring traditional bilateral trade costs.

Denote the share of country *n*'s market supplied by an exporter *k* (*k*=*i*,*j*) in year *t* by x_{nk}^t. Using equation (10) of Eaton and Kortum, as Head and Reis (2013) note, one can readily show that

$$\frac{X_{ni}^t}{X_{nj}^t} = \left(\frac{a_{ni}^t}{a_{nj}^t}\right) \; where \; a_{nk}^t = T_k^t (c_k^t d_{nk}^t)^{-\theta} \qquad (1)$$

where *T* is a nation-specific productivity parameter, *c* is the traditional unit cost term in a Ricardian model, and *d* represents bilateral transport costs[15] between exporter *k* and importer *n* (expressed in traditional iceberg form). Theta captures the elasticity of substitution between products. Written in this form, the ratio of exports to a common third market will depend on the policies of all three countries involved in so far as they affect the variables *c* and *d*. Such bilateral export ratios come very close to capturing the everyday notion of competitiveness

15 More generally, trade frictions.

(being based on wage costs, productivity, and prices). In addition, it may be useful to think of this ratio as capturing the factors that divert purchases abroad from or towards EU suppliers.

As we are interested in the impact of changing circumstances over time and given the multiplicative nature of the a^t_{nk} terms, it will be helpful to write out the determinants in bilateral export ratios in intertemporal form for a year *t* and (*t*+*r*) as follows:

$$ln\left(\frac{X^{t+r}_{ni}}{X^{t+r}_{nj}}\right) - ln\left(\frac{X^{t}_{ni}}{X^{t}_{nj}}\right) = \ln\left(\frac{a^{t+r}_{ni}}{a^{t+r}_{nj}}\right) - \ln\left(\frac{a^{t}_{ni}}{a^{t}_{nj}}\right) = \ln\left(\frac{a^{t+r}_{ni}}{a^{t}_{ni}}\right) - \ln\left(\frac{a^{t+r}_{nj}}{a^{t}_{nj}}\right) \quad (2)$$

Thus, changes in the relative export ratio are driven by the intertemporal changes in the determinants of the effective supply price from each exporter. Those effective supply prices can be influenced by productivity growth differences, differences in wage growth, and changes in policies in the importing and exporting nations.

5.1 Estimation equation

Specifying a functional form for the a^t_{nk} terms is the next step. Specifically, we assume:

$$a^t_{nk} = T^t_k \times w^{t\,-\theta\beta}_k \times p^{t\,-\theta(1-\beta)}_k \times \left[e^{-barrier^t_{nk}} \times e^{reform^t_{nk}} \times e^{promotion^t_{nk}}\right]^{\theta}$$

where *w* is exporter's manufacturing wage, *p* is the producer price level in the exporting nation, *barrier* is the share of exports affected by a trade distortion in destination *n*, *reform* is the share of exports benefitting from a trade reform in destination *n*, and *promotion* is the share of exports to destination *n* promoted by an export incentive granted by the exporting nation's government.

Note that only the first of the trade policy terms has a negative sign. The intuition behind this functional form is that one would expect trade distortions to decrease exports to destination market *n*, while their removal and an exporter's own fiscal incentives to sell goods abroad should increase such exports.

As we are interested in the factors affecting EU exporters over time, we seek to explain the change in the bilateral exports of each EU Member State since 2008, the year before world trade fell sharply towards the beginning of the crisis-era. Focusing on intertemporal variation has two advantages. A number of commercially important but time-invariant determinants of bilateral trade (common borders, languages, etc.) need not be controlled for. A second advantage is that the data source we employ for commercial policy stance, namely, the Global Trade Alert database, is best thought of as capturing the change in relative treatment of domestic and foreign firms *over time* rather than measuring absolute levels of protectionism and trade reform at a *point in time*.

In our econometric estimation, we use the odds-ratio form of the gravity equation and difference each variable from value in year 2008. To derive our estimation equation, define for any variable Y:

$$\Delta Y^t_{\cdot} \equiv {Y^t_{\cdot}}\Big/{Y^{2008}_{\cdot}} \quad (3)$$

After differencing and taking ratios, the final functional form in levels is given by equation (4):

$$\frac{\Delta X^t_{in}}{\Delta X^t_{jn}} = \frac{\Delta T^t_i}{\Delta T^t_j} \times \left(\frac{\Delta w^t_i}{\Delta w^t_j}\right)^{-\theta\beta} \times \left(\frac{\Delta p^t_i}{\Delta p^t_j}\right)^{-\theta(1-\beta)} \times \left[\left(\frac{e^{-\Delta barrier^t_{in}}}{e^{-\Delta barrier^t_{jn}}}\right) \times \left(\frac{e^{\Delta reform^t_{in}}}{e^{\Delta reform^t_{jn}}}\right) \times \left(\frac{e^{\Delta promotion^t_{in}}}{e^{\Delta promotion^t_{jn}}}\right)\right]^{\theta}$$

Logarithms of (4) are taken and the resulting equation is estimated using standard ordinary least squares. The expected signs of the coefficients thus are:

- Relative productivity growth: positive sign.
- Relative wage growth: negative sign.
- Relative producer price growth: negative sign.
- Relative exposure to a trade distortion: positive sign.
- Relative benefit from trade reform: positive sign.
- Relative benefit from own export incentives: positive sign.

Note that the independent variables for the policy determinants of bilateral trade have been deliberately constructed so that the predicted sign of the regression coefficients are positive. This will be useful to keep in mind when interpreting the data plots that are presented later in this chapter.

5.2 Data set assembled

To take this theoretical prediction to data we need to specify the sets of exporting nations and the importing nations. Using the notation above, our set of exporting nations *i* are the 28 EU Member States. For non-EU exporters, we took the three biggest national economies on Earth, the United States, China, and Japan. Throughout we will refer to the latter three countries as the comparator exporters or comparator countries. We then identified all of the third party importers where an EU Member State exports and one of the three non-EU Member States shipped goods worth more than one million US dollars during each of the years 2008 to 2014. We split this set of bilateral trade relations into those relating to extra-EU trade and those referring to intra-EU trade.

TABLE 4

Data sources used in this study

Variable	Source	Last updated
Labour productivity per person employed in 2015 US$ (converted to 2015 price levels with updated 2011 data on purchasing power parity)	Conference Board, Total Economy Database	20 July 2016
Manufacturing wages: EU members	Eurostat, Labour cost index by NACE Rev. 2 activity - nominal value, quarterly data [lc_lci_r2_q]	20 July 2016
Manufacturing wages: China, Japan, United States	National statistics offices (accessed via the subscription service "Trading Economics")	20 July 2016
Producer price Index	National statistics offices (accessed via the subscription service "Trading Economics")	20 July 2016
Total annual imports of the trading partners of all EU members, China, Japan, and United States	Global Trade Alert balanced trade data set based on UN Comtrade	15 April 2017
Policy stance	Global Trade Alert	21 September 2017

Data on the total value of bilateral trade, productivity levels, wages, producer prices, and relevant policy changes were collected. Table 4 summarises the sources of data used for this report. The data on labour productivity produced by the Conference Board were used without adjustment and need not be discussed further.

5.2.1 Manufacturing wages

The following changes were made to the wages in manufacturing series assembled from Trading Economics and Eurostat. First, for series that are reported with high frequency, only the last value of the year was used. For monthly series, the last value used here was December; for quarterly series the last value taken was from the fourth quarter.

Second, all wage values were adjusted by the nominal exchange rate between the local currency and the US dollar. This adjustment is implied by the underlying theory where each variable is described in terms of a common currency. Changes in national manufacturing wages were thus converted into the common currency. As it is standard practice to rely on US dollar-denominated trade values, we used the US dollar also as our common currency here as well.

5.2.2 Producer price indices

The following changes to the producer price index series assembled by Trading Economics were made. First, most series have monthly frequency. As our panel datasets are constructed with annual trade figures, only the index value for December of each year was included in the dataset constructed here.

Second, all index values were adjusted for the local nominal exchange rate with the US dollar. This adjustment is implied by the underlying theory. (Our argument here is the same as it was above when discussing the construction of the manufacturing wage variable.) Third, Trading Economics does not provide the full US producer price index series for the sample period. The US series provided by Trading Economics was thus replaced in full by the official statistics published by the US Bureau of Labor Statistics (Series ID: PCUOMFG--OMFG--).

5.2.3 Export value data

We downloaded all bilateral annual data reported by UN COMTRADE for the years 2008-2014. As is common practice, our estimates of the exports of one country to another are based on the total value reported by the importing country. We applied two adjustments to this data. First, we exclude all trade flows where a country reports importing from itself. Such observations exist in UN COMTRADE, for instance, in the cases of China and France.

Second, we restricted the sample to only include export destinations that have reported their trade statistics throughout the entire sample period 2008–2014. Third, taking odds-ratios removes Afghanistan, Aruba, Bahamas, the Gambia, as well as Sao Tome and Principe from the data set. Their removal is due to zero imports from one or more of the non-EU exporters that we have chosen for this study (China, Japan, and the United States.)

5.2.4 Commercial policy stance

The data collected by the Global Trade Alert (GTA) is used to construct the policy variables that might affect trade flows. Our analysis includes all measures implemented between 2009 and 2014 which affect the exports of at least one EU member or the other three exporters studied here (China, Japan, and the United States).

The GTA classifies state measures into more than 50 types of policy instrument, relating to trade in goods, trade in services, cross border investment, and labour force migration. As the focus of this study is on trade in goods, we restrict our analysis to policy instruments that could influence such trade. In our econometric estimation we aggregated information on changes in policy instruments into the following categories:

- "Export incentives" include policy instruments classified by the GTA as a tax-based export incentive, other export incentive, or trade finance measure.
- "All non-export measures" includes all policy instruments except those designated as "export incentives" above. Consequently, this category includes both traditional border measures (tariffs, import quotas, trade defence actions) as well as behind-the-border policies that may affect trade (such as public procurement measures, localisation measures, and subsidies to domestic firms).[16]
- "Subsidised firms in their home market" include policy instruments classified by the GTA as state loan, tax or social insurance relief, financial grant, loan guarantee, interest payment subsidy, bailout (capital injection or equity participation), state aid (not elsewhere specified) or in-kind grant.[17]
- "EU-level barriers" include measures implemented by the European Commission across the entire EU that are classified by the GTA as import tariffs, anti-dumping, safeguard, import-related non-tariff measure (not elsewhere specified), import licensing requirement, import ban, import quota, import tariff quota, anti-subsidy (countervailing duty), anti-circumvention (trade defense measure), or import monitoring.[18]

For each observation (that recall involves an importing nation, an EU Member State as an exporter, and China, Japan, or the United States as another exporting nation), we further differentiate between the export incentives offered by one of exporting nations under study and those offered by third parties.

The following calculations were made to transform the counts of the number of measures into potential trade covered by crisis-era trade distortions bearing upon a given bilateral trading relationship. To economise we abbreviate "tariff line" with TL, "affected trading partner" with ATP and "implementing jurisdiction" with IMP. We proceeded as follows:

1. The dataset is restricted to policy instruments that were implemented between 2009 and 2014 and include at least one tariff line (TL) (at the six-digit level of the relevant UN classification of products).
2. The trade shares are assigned to every IMP-TL-ATP combination are based on the average trade share of that combination observed during the years 2005 to 2007, that is, before the global economic crisis struck.[19]
3. The calculated trade coverage for each IMP-TL-ATP-year combination is adjusted for the months that at least one policy instrument was affecting it. For this correction, the trade share is multiplied by the fraction of the year the last implemented instrument was in force. For example, if the only policy instrument affecting such a combination lapsed on 31 March 2014, then the duration adjustment implies using only 3/12 of the trade share included in this combination for the year 2014.
4. For each of the categories of policy identified above, the share of bilateral trade potentially covered by each of the policy instruments in that category is calculated avoiding double counting and, as noted directly above, taking into account the month of implementation and potential expiry of a state measure.

These trade coverage calculations indicate the degree to which an exporter to a given import destination is *exposed* to trade distortions and trade reforms undertaken during the crisis era. Those distortions may arise because of decisions taken by the government of the importing nation or the governments of either the exporter under study or of a third party exporter. One goal of our econometric analysis is to estimate the extent to which changes in such exposure can account for the growth in an EU Member State's total bilateral exports *relative* to that of a significant third-party exporter (taken here to be either China, Japan or the United States.) In this manner we want to establish which, if any, crisis-era policy changes have reshuffled overseas market share towards or away from EU producers. The fact that we control for other determinants of bilateral exports allows us to gauge the relative importance of policy change as compared to other supply side factors, such as labour productivity growth.

16 Given the evidence presented in Chapter 4 on the significant exposure of EU exporters to foreign rivals benefiting from export incentives we designed our econometric approach so as to separate out the effects of export incentives from other trade distortions.

17 As will become clear, in our intra-EU sample we will distinguish between the impact of export incentives and of EU state aid measures. This required creating a separate category for government acts that subsidise domestic firms.

18 As explained later, in our intra-EU sample we control for import barriers erected by the European Commission against shipments from China, Japan, and the United States. This required the creation of this category.

19 Arguably once the crisis hits weights constructed with contemporary data might have been influenced by the very policy changes that we are seeking to identify the effect of.

5.2.5 The extra-EU panel dataset

Table 5 provides summary statistics on the bilateral trading relationships that were used to construct our extra-EU dataset. In this dataset the *mean* observation for EU bilateral export growth is considerably larger than for China, Japan, and the United States.[20] In contrast, the mean productivity and manufacturing wage growth in the latter three countries is considerably higher than found in the European Union. Indeed, manufacturing wage growth and producer price inflation are on average negative during the sample period for the EU exporters in this dataset. With respect to export exposure to crisis-era trade distortions, EU Member States and the three comparator exporters face approximately the same exposure to third party export incentives (the unweighted mean levels being around 30%). The share of exports benefiting from own export incentives is an order of magnitude larger for the comparator nations (reflecting China's extensive use of such policies) than for the EU Member States (18.72% as compared to 0.93%). On average nearly 7% of the comparator countries' exports faced a trade distortion other than export incentives, slightly higher than the 5.52% average for the EU Member States. Both types of exporter saw on average approximately 8% of their exports benefit from foreign reforms to policies other than export incentives. The substantial coefficients of variation

TABLE 5

Summary statistics of data used to construct the extra-EU trade sample

Countries	Variable	No. of observations	Mean	Standard deviation	Coefficient of variation	Minimum value	Maximum value
EU Member States	Export growth since 2008 (calculated as log difference)	10'966	0.0992	0.8944	9.0161	-5.1419	4.8469
	Productivity growth since 2008 (calculated as log difference)	10'966	0.0090	0.0505	5.6111	-0.1039	0.1716
	Manufacturing wage growth since 2008 (calculated as log difference)	10'966	-0.0234	0.0739	3.1581	-0.2177	0.2625
	Producer price growth since 2008 (calculated as log difference)	10'966	-0.0429	0.0811	1.8904	-0.3537	0.1946
	Export share affected by export incentive of a third country	10'966	0.3154	0.2922	0.9264	0	1
	Export share benefitting from removed export incentive of third country	10'966	0.0120	0.0539	4.4917	0	1
	Export share promoted by own export incentive	10'966	0.0093	0.0548	5.8925	0	1
	Export share affected by all non-export-incentive barriers	10'966	0.0552	0.1484	2.6884	0	1
	Export share benefitting from all non-export-incentive reforms	10'966	0.0782	0.182	2.3274	0	1
China, Japan, and the United States	Export growth since 2008 (calculated as log difference)	2'369	0.0106	0.6588	62.2305	-3.5372	3.0602
	Productivity growth since 2008 (calculated as log difference)	2'369	0.1132	0.1467	1.2955	-0.0414	0.4759
	Manufacturing wage growth since 2008 (calculated as log difference)	2'369	0.2217	0.2659	1.1992	-0.0093	0.8734
	Producer price growth since 2008 (calculated as log difference)	2'369	0.0640	0.0675	1.0546	-0.037	0.1632
	Export share affected by export incentive of a third country	2'369	0.2966	0.2609	0.8797	0	1
	Export share benefitting from removed export incentive of third country	2'369	0.0106	0.0287	2.7153	0	0.2350
	Export share promoted by own export incentive	2'369	0.1872	0.3118	1.6655	0	1
	Export share affected by all non-export-incentive barriers	2'369	0.0690	0.1607	2.327	0	0.9705
	Export share benefitting from all non-export-incentive reforms	2'369	0.0640	0.1459	2.2796	0	0.9372

20 Further investigation revealed that this was due to sizeable Japanese export contraction during 2008 to 2014.

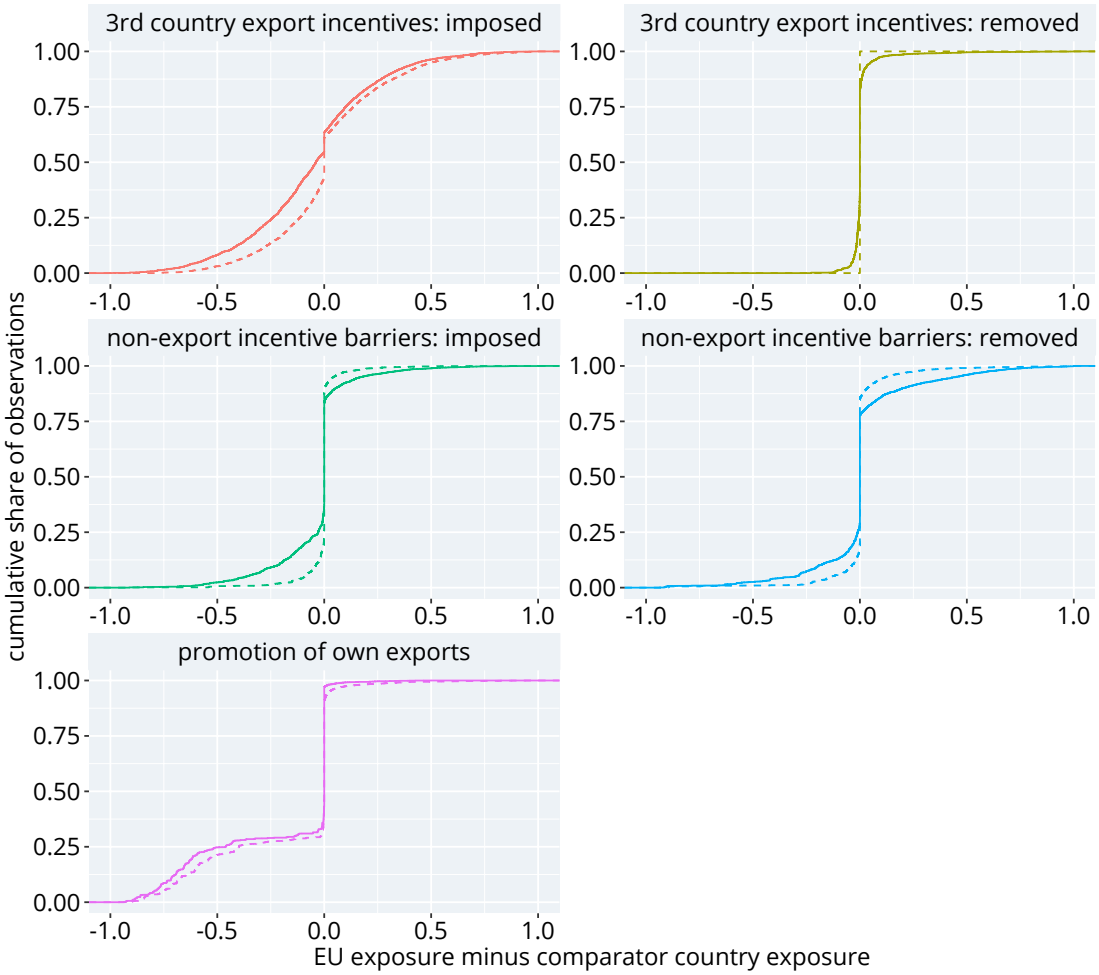
reported in Table 5 for the independent variables relating to policy changes indicate the considerable variation across this sample in exposure to crisis-era policy change.

We complement these summary statistics with information about the relative exposure of EU Member States' exports and the comparator exporters' to different changes in policy. Figure 11 has been constructed with this in mind, where the horizontal axis measures the difference between the export exposure of an EU Member State in the extra-EU export sample and a comparator country. For the five classes of policy change – three trade distorting and two involving trade reforms – the cumulative distribution of the relevant independent variable in the extra-EU sample was plotted for the years 2009 and 2014. In these charts the mass of observations at zero on the horizontal axis indicates how many observations in the sample are such that the EU Member States and comparator countries have the same degree of export exposure to the policy instrument in question. Departures from zero on the horizontal axis indicate excess exposure of the EU Member States or comparator countries to the policy instrument in question during the year in question.

As shown by the panel in the top right of Figure 11, the distribution of the independent variable that picks up the removal of third-party export incentives suggests that in 2009 there was little difference in exposure between EU exporters and the three comparator countries. The cumulative distributions in the right column of Figure 11 – relating to the exposure to the removal of export incentives and to the removal of other trade distortions – are symmetric, implying comparable variation in differential exposure by EU member states, China, Japan, and the United States.

FIGURE 11

In exports to destinations outside the EU, China, Japan, and the United States were more frequently exposed to third-country export incentives and other trade distortions than rival exporters from the European Union



Note: Dotted lines represent data for 2009; sold lines represent data for 2014.
Source: Global Trade Alert, UN COMTRADE, 21 September 2017.

With respect to the three trade distortions to be estimated in the extra-EU sample, the patterns of relative exposure differ. In over a quarter of observations, the share of comparator nation's exports that benefit from their own country's export incentives exceeds that of EU Member States. This largely reflects the impact of the substantial range of export incentives granted by the Chinese government to firms based in that country towards the beginning of the crisis era. With respect to exposure to trade distortions other than export incentives, the relevant panel in Figure 11 suggests that by 2014 in the extra-EU sample Chinese, Japanese, and US exporters faced fewer of these distortions than their counterparts in the EU Member States.

As regards competition with third party firms that have benefited from export incentives, the top-left panel in Figure 11 implies that by 2014 half of the observations in the extra-EU sample are such that the exposure of EU Member States' exporters was less than that of the comparator nations. Whereas the same panel reveals that approximately three-eighths of the extra-EU dataset involve observations where the comparator countries are less exposed to third-party export incentives than their EU rivals.

Given the precision with which (ordinary least squares) regression parameters are estimated tends to increase with the square root of the sample size, we constructed the largest possible sample of extra-EU bilateral trade relations for the EU Member States and our three comparator countries. This inadvertently created a problem that we will now discuss using Figures 12 and 13. Recall our econometric strategy identifies the impact of crisis-era policy intervention off differential export exposure. We now present evidence on the correlation between such exposure measures and the dependent variable.

Maximising the size of the extra-EU panel dataset meant including in the sample bilateral trading relations where there were small amounts of trade. As explained in the Technical Annex, the variance of the dependent variable tends to rise considerably in subsamples involving bilateral trade relations where there is less trade. Including such bilateral trade relations into our sample results in more noise. Put alternatively, including such bilateral trade relations reduced the signal-to-noise ratio, making it harder to spot the contribution of the policy change to relative bilateral export growth.

In Figure 12 the dependent variable is plotted against each policy-related independent variable for the entire extra-EU sample. As noted earlier, each independent variable was constructed so that its hypothesised relationship with the dependent variable is positive. Such positive relationships are barely discernible in the panels in Figure 12, especially in the panels relating to exposure to policies other than export incentives.

However, when we restrict the sample to those bilateral trade relationships where more than a billion US dollars are exported (by both the EU Member State and the comparator country to the destination market) then, as Figure 13 shows, positive relationships between the dependent and policy-related independent variables are discernible (but even then the imposition of non-export incentives appears uncorrelated with the dependent variable).

Comparing the vertical axes of the panels in Figures 12 and 13 reveals the extent to which the bilateral trade relations with less than a billion US dollars of trade add significant noise. Considerations such as these led us to develop weights for each observation in the extra-EU panel dataset, a matter to which we return in the next chapter of this report (and which is discussed in greater detail in the Technical Annex.)

5.2.6 The intra-EU panel dataset

The intra-EU sample is significantly smaller in size and is constructed from the observations whose summary statistics are found in Table 6. For these observations, average exports to EU destinations tended to fall since 2008. On average 3.69% of EU Member State exports competed in the markets of EU Member States against a firm that had been bailed out or subsidised. The comparable average percentage for the comparator countries is 3.80%. Where there is a significant difference is in the maximum export shares: for the comparator countries in no instance does the share of exports competing with a bailed-out EU firm exceed 63%, whereas for exporters from the EU Member States the maximum percentage is just under 75%. It will be interesting to see, therefore, whether the regression results support the hypothesis that intra-EU exports have been distorted by EU state aid.

Similar to the extra-EU sample, by far the greatest export exposure in the intra-EU sample is to subsidised rivals from third countries (in this case, from countries outside of the EU). On average in this sample, over a third of EU Member State and comparator country exports to within the EU compete against rivals that are eligible for export incentives from third parties. This is an important reminder that trade within the EU may well be distorted by policy measures taken by exporting nations located outside of the EU.

FIGURE 12

With the full extra-EU sample, there is considerable noise in the dependent variable (relative export growth rates) that obscures the effect of trade policy intervention

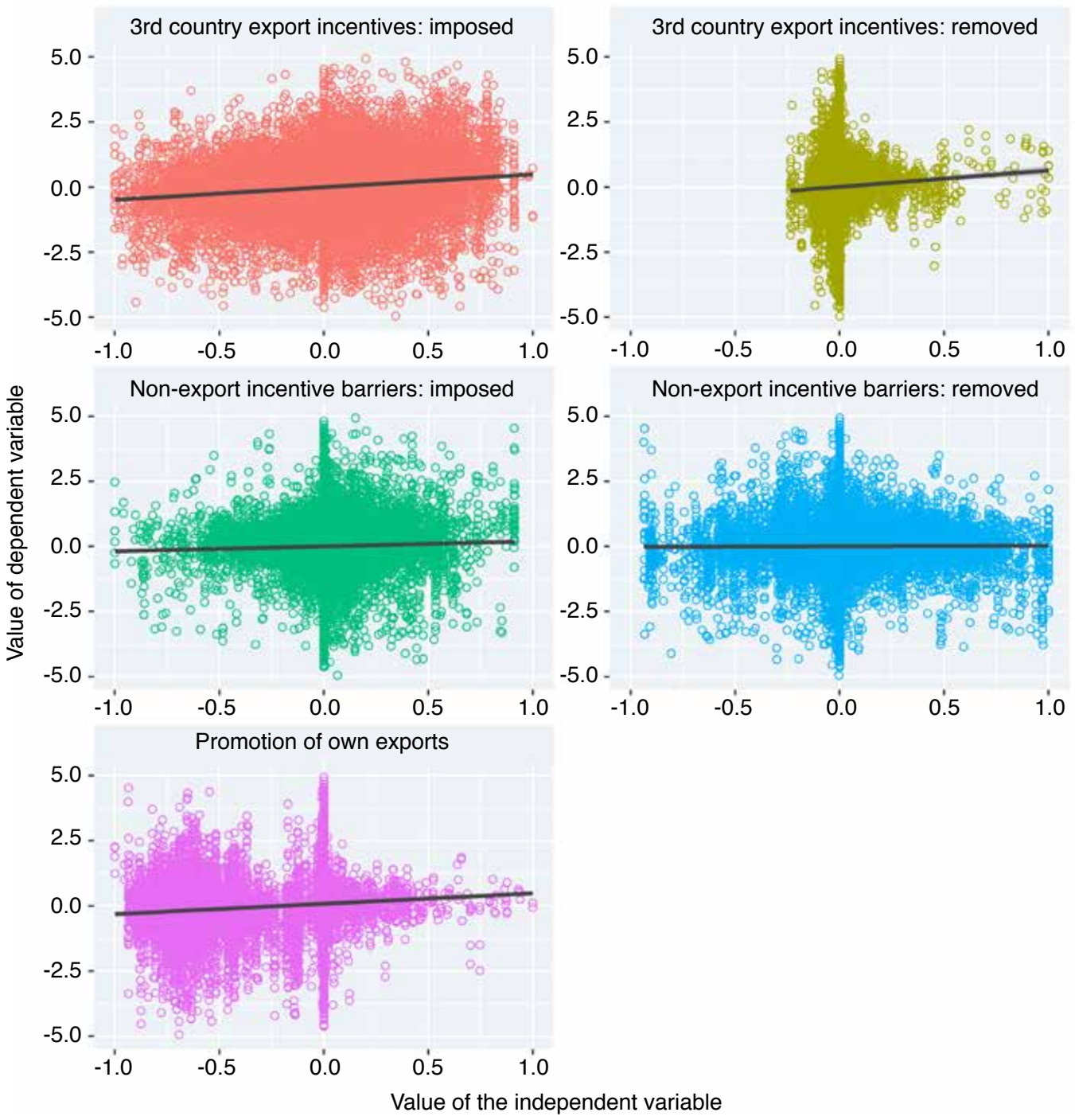


FIGURE 13

The signal-to-noise ratio improves considerably once bilateral trade relations with less than one billion US dollars of exports are dropped

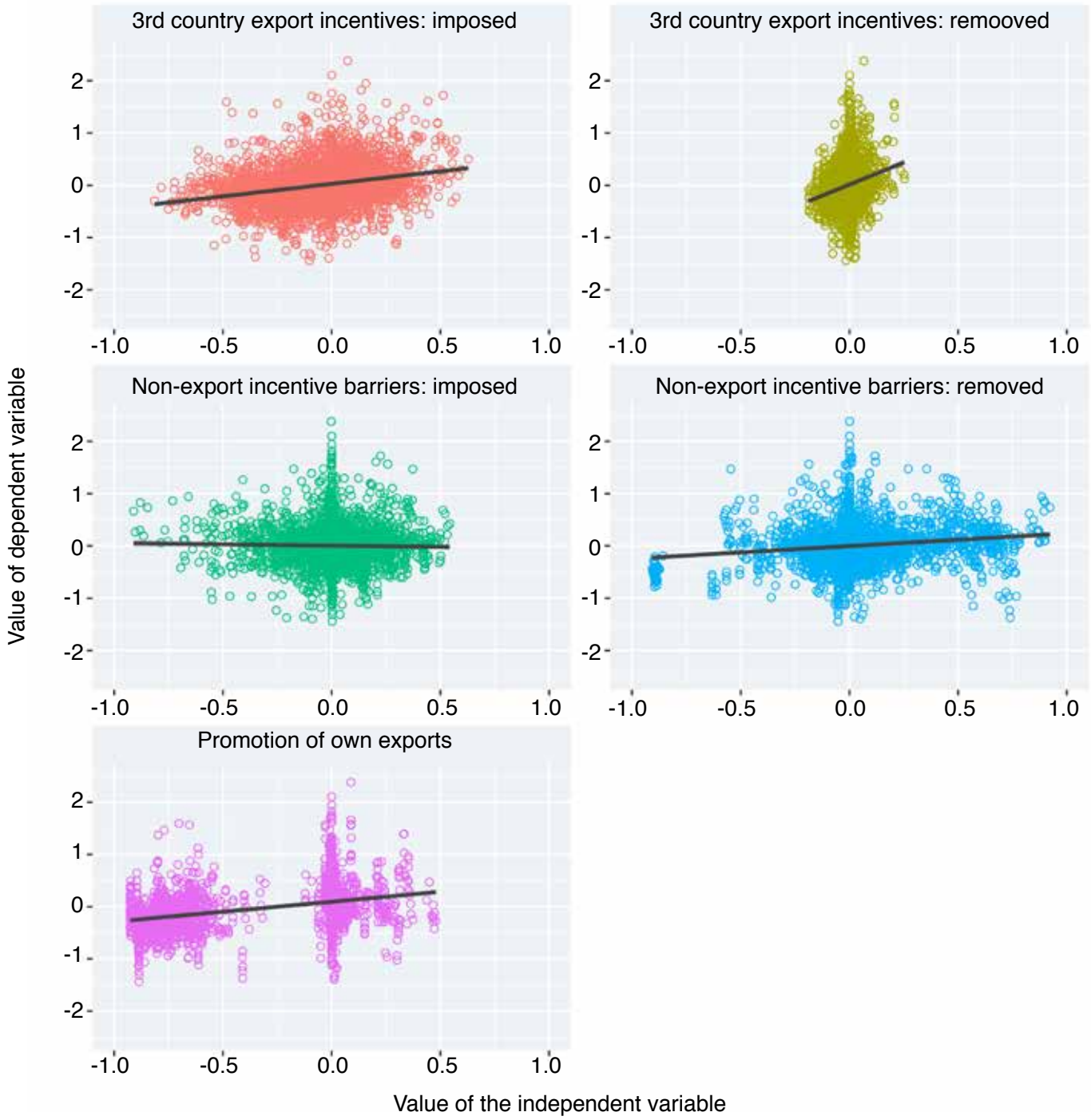


TABLE 6

Summary statistics of data used to construct the intra-EU trade sample

Countries	Variable	Number of observations	Mean	Standard deviation	Coefficient of variation	Minimum value	Maximum value
EU Member States	Export growth since 2008 (calculated as log difference)	4'355	-0.1143	0.6082	5.3233	-5.2343	4.4423
	Productivity growth since 2008 (calculated as log difference)	4'355	0.0092	0.0531	5.7594	-0.1039	0.1716
	Manufacturing wage growth since 2008 (calculated as log difference)	4'355	-0.0264	0.0772	2.9183	-0.2177	0.2625
	Producer price growth since 2008 (calculated as log difference)	4'355	-0.0471	0.0839	1.7794	-0.3537	0.1946
	Export share affected by export incentive of a third country	4'355	0.3790	0.2316	0.6112	0	1
	Export share benefitting from removed export incentive of third country	4'355	0.0148	0.0377	2.5503	0	0.388
	Export share promoted by own export incentive	4'355	0.0018	0.0111	6.0046	0	0.1546
	Export share competing with subsidised destination firm	4'355	0.0369	0.0809	2.1940	0	0.7446
	Export share affected by EU-level barrier	4'355	0	0.0005	14.9524	0	0.0118
	Export share benefitting from removed EU-level barrier	4'355	0.0014	0.0123	9.0655	0	0.2153
China, Japan, and the United States	Export growth since 2008 (calculated as log difference)	504	-0.3065	0.5689	1.8560	-3.5372	2.3763
	Productivity growth since 2008 (calculated as log difference)	504	0.1162	0.1485	1.2778	-0.0414	0.4759
	Manufacturing wage growth since 2008 (calculated as log difference)	504	0.2262	0.2697	1.1921	-0.0093	0.8734
	Producer price growth since 2008 (calculated as log difference)	504	0.0653	0.0673	1.0312	-0.037	0.1632
	Export share affected by export incentive of a third country	504	0.3663	0.2302	0.6283	0	0.8902
	Export share benefitting from removed export incentive of third country	504	0.0162	0.0342	2.1047	0	0.2012
	Export share promoted by own export incentive	504	0.2713	0.3838	1.4148	0	0.9471
	Export share competing with subsidised destination firm	504	0.0380	0.0822	2.1602	0	0.6289
	Export share affected by EU-level barrier	504	0.0781	0.1908	2.4425	0	0.9705
	Export share benefitting from removed EU-level barrier	504	0.1011	0.092	0.9104	0	0.4602

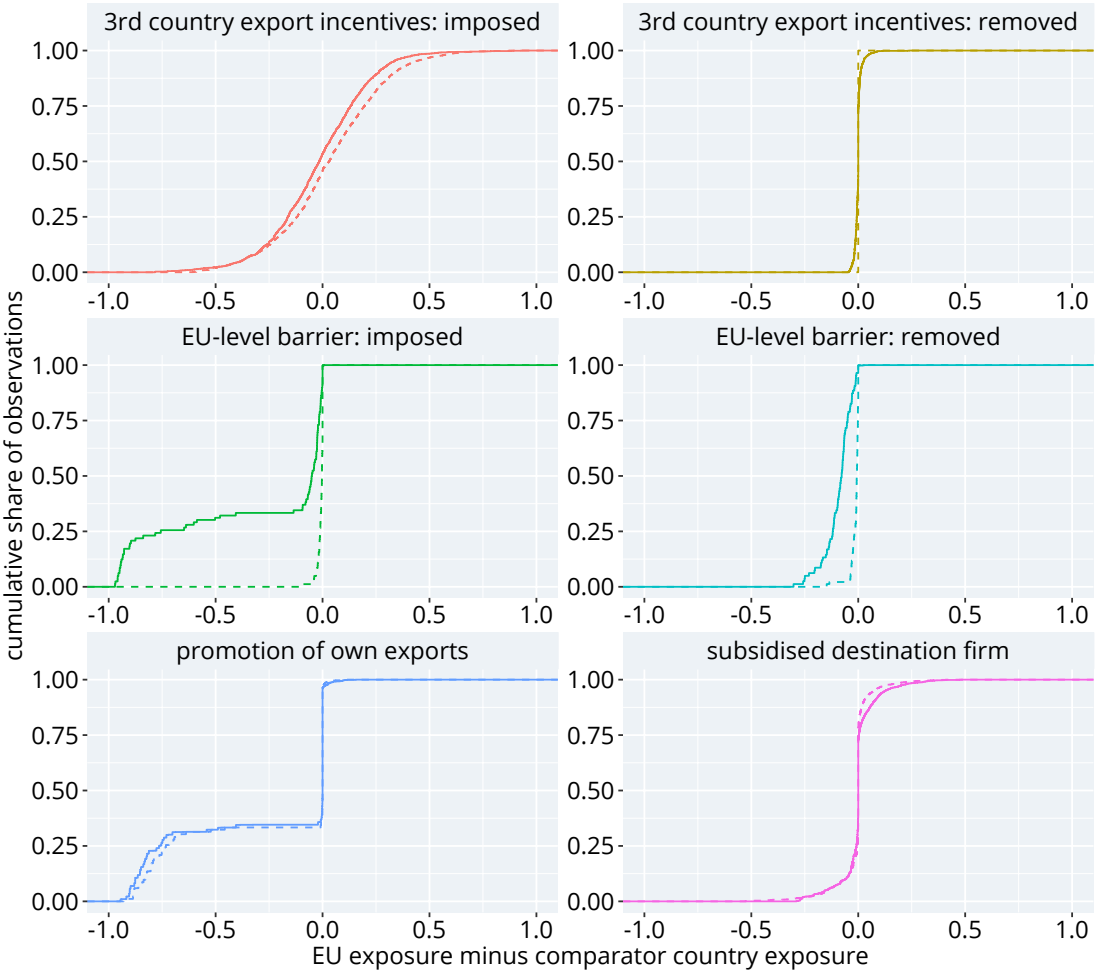
Figure 14 shows that the EU Member States and the comparator countries were exposed to similar degrees to changes in policies towards export incentives and to competition with subsidised firms in destination markets. In the intra-EU sample, there is little evidence of EU exporters benefiting from export incentives provided by their own governments. Similar to the extra-EU sample, as shown in the bottom left panel of Figure 14, around a third of the intra-EU sample involves observations where the comparator nations – in particular China – have significant exposure to their own export incentives implemented early in the crisis. It will be interesting to see which, if any, of the export incentives (own or third party) have altered trade flows within the European Union.

The middle two panels refer to the exposure of the comparator exporters to EU-wide imposition and removal of trade barriers. By 2014 almost every observation involves some exposure to EU trade barrier reform. However, by the same year a significant proportion of the comparator countries faced higher EU trade barriers as well – a finding that might divert exports from those nations to EU Member States. Intra-EU exports may have increased because of trade distortions imposed on imports from nations outside of the European Union.

Figure 15 reports the plots of the dependent variable against the six policy-related independent variables when bilateral trade relations involving less than one billion US Dollars of trade are dropped from the intra-EU sample. Dropping these observations again markedly improves the signal-to-noise ratio and discernible positive correlations between the dependent variable and the independent variables relating to third party export incentives and EU state aids ("subsidised destination firm" in the parlance of Figure 15) can be detected. The other plots are still

FIGURE 14

Exports from EU Member States are more frequently exposed to third country export incentives and initiatives by comparator countries to promote their own exports

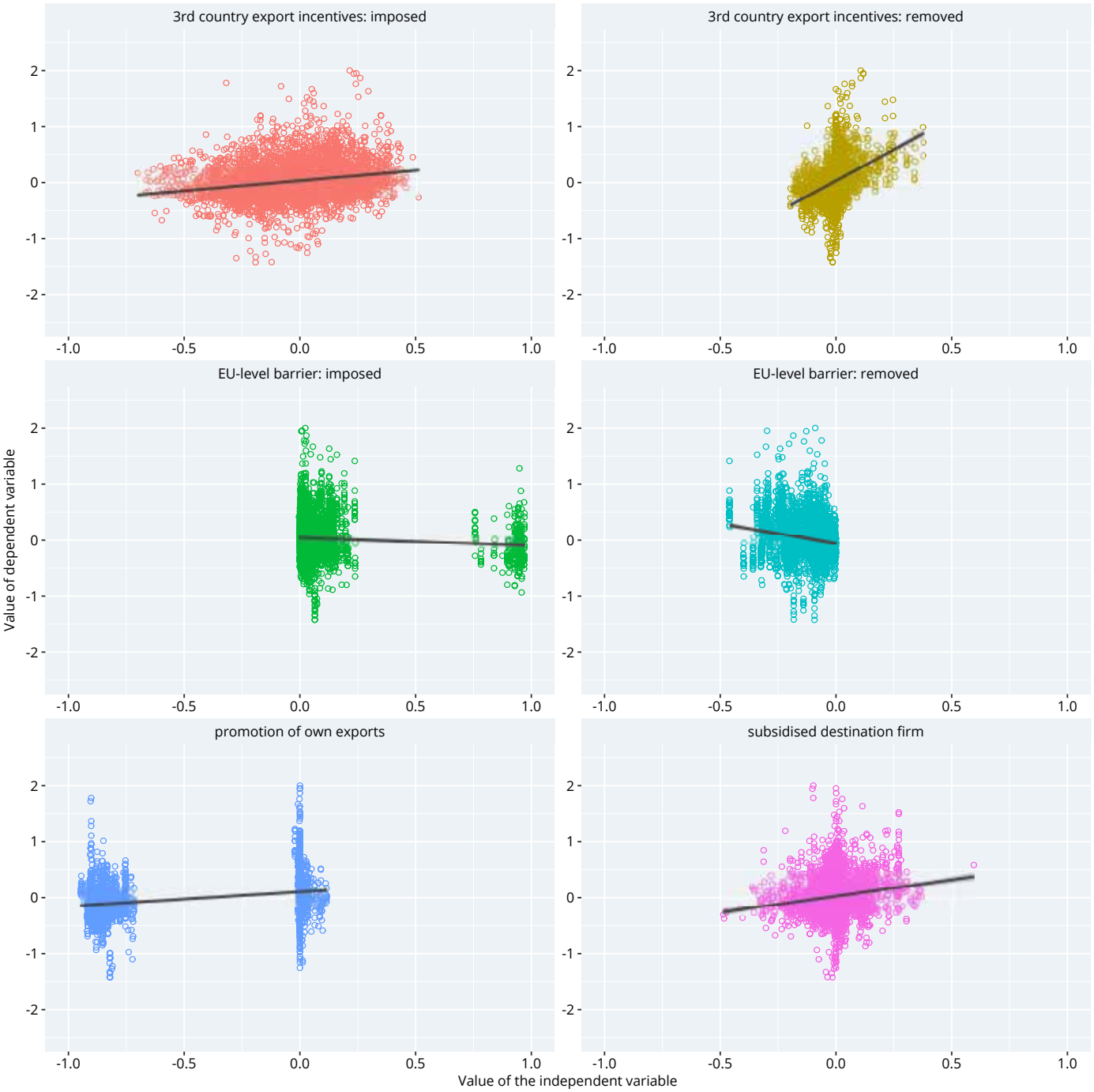


Note: Dotted lines represent data for 2009; sold lines represent data for 2014.
Source: Global Trade Alert, UN COMTRADE, 21 September 2017.

sufficiently noisy that the dependent and independent variables appear uncorrelated. Of course, whether a robust partial correlation exists will be determined later with regression tools. Still, it is interesting that the export incentive and state aid independent variables generate the hypothesised positive correlations in the raw data.

FIGURE 15

Relative exposure to third-country export incentives and to products where EU state aid has been given correlate in the predicted manner with relative export growth



Source: Global Trade Alert, UN COMTRADE, 21 September 2017.

CHAPTER 6
ECONOMETRIC FINDINGS

Standard ordinary least squares regression techniques were applied to both the extra-EU and intra-EU samples to estimate the parameters in our log-log econometric specification of equation (4).[21] As will become clear, we examined the degree to which the estimated parameters and associated inferences were robust to outliers (by systematically trimming the samples) and to the manner in which the standard errors were estimated. Our econometric approach amounts, then, to estimating the determinants of relative export growth of each EU Member State to a given importing nation compared to three trading powers in the world economy, namely, China, Japan, and the United States. Cross-sectional and intertemporal variation in the relative exposure of these exporters to crisis-era policy interventions that could affect international trade is used to identify the effect of policy change.

As noted in the last chapter, and detailed in the Technical Annex, we discovered evidence of heteroskedacity. Specifically, the variance of the unexplained error term tended to *increase* as the underlying amount of bilateral trade associated with an observation *declined*. There was also evidence that observations where there were fewer relevant entries in the GTA database on the destination market tended to be associated with more noise. To correct for this, we weighted each observation by the product of a measure of the number of entries on policy changes in the GTA database about the destination market and the pre-crisis share of world trade accounted for by the two exporting nations and the destination market. Employing such weighting schemes in international trade research is not uncommon, Trefler (1995) being a prominent example.

In both the extra-EU and intra-EU samples specifications were estimated with and without the independent variables capturing policy change so as to obtain a sense of the quantitative significance of the latter. Strictly speaking, concerns could arise about the potential endogeneity of the controls (productivity, wage, and producer price growth since 2008) to changes in policy, which could complicate the assessments of the effect of the latter.[22]

As is well known, the parameter estimates in studies of bilateral trade flows can be sensitive to the inclusion of outliers. As we are interested in the drivers of typical – as opposed to exceptional – bilateral trade flows, we systematically trimmed each sample of 1%, 2.5%, and 5% of the outliers from both tails and checked when the parameters tended to stabilise. In the results presented in this chapter, the specifications for samples where up to 5% of the sample were removed are reported in addition to the parameter estimates for the full sample.

With respect the techniques used to estimate the standard errors of the regression estimates, it is worth recalling that the dependent variable is the relative export growth performance of a EU Member State compared a major trading power. Given that these exports are to a common importing nation, therefore, there are three nations implicated in any observation. Consequently, in addition to estimating the traditional White-corrected standard errors, we also report standard estimates based on trilateral clusters of the two exporting nations and the importing nation. As will become evident, the standard errors from the latter tend to be larger than for the former, implying that inferences drawn concerning the statistical significance of a parameter estimate are more conservative with the latter.

The parameter estimates and measures of regression performance for the base specifications of these samples are reported in Tables 7 and 8. First we discuss the findings from the extra-EU sample and then the intra-EU sample.

6.1 The extra-EU export sample

Our adaption of the Eaton-Kortum model performs well, but not perfectly, in the sample involving importing nations from outside of the EU. With the exception of the relative manufacturing wages, every other parameter estimate has the right sign and is statistically significant in the trimmed samples. Up to 64.3% of the variation in relative export performance between 2008 and 2014 is explained as well, which is substantial. What follows is a more detailed discussion of the parameter estimates.

Relative export performance is found to be affected by traditional determinants of what is often referred to as competitiveness, namely, relative productivity growth, relative wage growth, and changes in relative prices. However, the inclusion of the policy variables

21 Year-specific fixed effects were included as well.

22 We thank James Anderson for reminding us of this matter.

renders relative manufacturing wage growth statistically insignificant. Moreover, the parameter estimate on productivity growth falls in size while the magnitude of the parameter on producer price growth rises in absolute value. EU Member States that experienced faster producer price deflation and higher productivity growth rates saw their export performance improve relative to China, Japan, and the United States.

Irrespective of how much the samples are trimmed, the five parameter estimates capturing crisis-era commercial policy have the right sign and are statistically significant. Interestingly, if the magnitude of the estimated parameters are anything to go by, the impact at the margin of trade reforms on exports is larger than the impact of new trade distortions.

Further evidence that crisis-era policy matters is found by comparing each specification where the policy-related independent variables are included with the corresponding specification when they are not. In each case, the explanatory power rises considerably. In the untrimmed sample the percentage of relative export growth explained by the model rises 13 percentage points. Meanwhile, in the trimmed samples the percentage explained rises at least 25 points. These results stand in contrast to numerous traditional formulations of the gravity equation where the inclusion of policy variables has little impact on overall explanatory power.

In sum, on the basis of these econometric findings, the proposition that policy had no impact on extra-EU export growth can be rejected. Unlike most analyses of bilateral trade flows, which focus on the policies of the exporter and importer, we found that policies by the governments of other nations have played a role, especially measures to boost exports. The impact of third-party policy choice specifically in the area of export incentives imply that global trade has been reshuffled since the onset of the global economic crisis.

6.2 The intra-EU export sample

Most of the findings from the extra-EU sample carry over to the intra-EU sample of export destinations notwithstanding the smaller size of the latter sample. Still, as the regression results in Table 8 show, it must be acknowledged that our adapted model performs less well when the importing destinations are the EU Member States themselves.

Recall that, in the so-called intra-EU sample, the performance of each EU Member State in selling goods in other Member States relative to that of Chinese, Japanese, and US rivals is estimated. As each EU Member State cannot legally raise trade barriers against other EU Member States, the independent variable capturing the impact of non-export-related trade distortions amounts in this instance to the exposure of China, Japan, and the United States to European policy measures taken against imports from outside of the Union. Likewise, the independent variable is designed to capture EU trade barrier reforms.[23] While EU Member States may not operate independent trade policies, under certain conditions EU Member States can bail out or subsidise firms operating within their jurisdiction. A control for exposure to such bailouts was introduced as well. As a result, the set of independent variables employed in the intra-EU sample differs from that in the extra-EU sample and this may well account for some of the observed differences in estimated results between Tables 7 and 8.

With respect to the traditional controls for competitiveness, in the trimmed samples in particular, the predictions of the model are confirmed for the productivity and manufacturing wage growth variables. The data in the intra-EU sample reject the model's predictions for relative producer price growth, in fact the estimated coefficient has the wrong sign. Still, two important drivers of traditional export competitiveness appear to shape relative export growth to EU destination markets.

Like the extra-EU sample, the predictions for the impact of expanding or scaling back third-party export incentives are not rejected by the data on relative export performance within the EU. However, the extent to which an exporting nation uses fiscal incentives to boost sales is unrelated to subsequent export growth.

Our regression estimates imply that resort to state aid by EU Member States has in fact altered relative export performance to EU destination markets. The relevant parameter estimate has the right sign and is statistically significant. Greater exposure in EU destination markets to firms that have received state aid tends to depress relative export growth.

With respect to the impact of the EU's own trade policies on the exports of China, Japan, and the United States, the proposition that higher crisis-era EU trade barriers deflected sales towards suppliers inside the Union cannot be rejected when 5% of our sample is trimmed. Comparing the magnitude of the estimated coefficient on EU trade barriers against non-EU nations with the one picking up exposure to EU state aids, interestingly, the latter is a multiple of the former. In the light of this finding, no one should be surprised if the EU's major trading partners pay closer attention to the operation and design of the EU state aid regime. Lastly, the model's prediction concerning the impact of EU trade reforms is rejected by the data, which further underscores the mixed performance of our adapted model in the intra-EU sample.

23 The parameter estimates of the last two mentioned independent variables can be found in 10th and 11th rows of Table 8.

TABLE 7

Regression results for extra-EU sample

Sample Size	Full	2 % trimmed	2 % trimmed	5% trimmed	5% trimmed	Full	2 % trimmed	2 % trimmed	5% trimmed	5% trimmed
Standard errors	Robust	Robust	Trilateral cluster	Robust	Trilateral cluster	Robust	Robust	Trilateral cluster	Robust	Trilateral cluster
Independent variable										
Relative productivity growth since 2008	0.823*** (0.208)	0.795*** (0.0596)	0.795*** (0.0700)	0.891*** (0.0431)	0.891*** (0.0507)	0.207 (0.190)	0.301*** (0.0488)	0.301*** (0.0521)	0.318*** (0.0361)	0.318*** (0.0431)
Relative manufacturing wage growth since 2008	-0.259** (0.102)	-0.249*** (0.0311)	-0.249*** (0.0363)	-0.297*** (0.0205)	-0.297*** (0.0248)	-0.00478 (0.105)	-0.0389 (0.0253)	-0.0389 (0.0275)	-0.00535 (0.0184)	-0.00535 (0.0208)
Relative producer price growth since 2008	0.299 (0.231)	0.151*** (0.0380)	0.151*** (0.0407)	0.205*** (0.0426)	0.205*** (0.0439)	-0.472*** (0.177)	-0.436*** (0.0305)	-0.436*** (0.0346)	-0.469*** (0.0170)	-0.469*** (0.0205)
Difference of export share affected by export incentive of third countries						0.138 (0.0968)	0.144*** (0.0226)	0.144*** (0.0268)	0.138*** (0.0128)	0.138*** (0.0152)
Difference of export share benefitting from removed export incentive of third countries						0.0937 (0.185)	0.272*** (0.0648)	0.272*** (0.0660)	0.270*** (0.0344)	0.270*** (0.0402)
Difference of export share promoted by own export incentive						0.184*** (0.0459)	0.151*** (0.0149)	0.151*** (0.0167)	0.132*** (0.0114)	0.132*** (0.0135)
Difference of export share affected by all non-export-incentive barriers						0.292** (0.127)	0.263*** (0.0216)	0.263*** (0.0270)	0.256*** (0.0144)	0.256*** (0.0166)
Difference of export share benefitting from all non-export-incentive reforms						0.175** (0.0781)	0.174*** (0.0135)	0.174*** (0.0159)	0.184*** (0.00726)	0.184*** (0.00962)
Regression performance										
Observations	32,076	31,436	31,436	30,474	30,474	32,076	31,436	31,436	30,474	30,474
R-squared	0.488	0.269	0.269	0.370	0.370	0.616	0.617	0.617	0.643	0.643
Degrees of freedom	32073	31433	31433	30471	30471	32068	31428	31428	30466	30466

*Robust standard errors in parentheses. *** p<0.01, ** p<0.05, * p<0.1*

TABLE 8

Regression results for intra-EU sample

Sample Size	Full	2 % trimmed	2 % trimmed	5% trimmed	5% trimmed	Full	2 % trimmed	2 % trimmed	5% trimmed	5% trimmed
Standard errors	Robust	Robust	Trilateral cluster	Robust	Trilateral cluster	Robust	Robust	Trilateral cluster	Robust	Trilateral cluster
Independent variable										
Relative productivity growth since 2008	0.660*** (0.141)	0.940*** (0.0555)	0.940*** (0.0761)	0.901*** (0.0437)	0.901*** (0.0633)	0.394*** (0.147)	0.629*** (0.0561)	0.629*** (0.0797)	0.674*** (0.0411)	0.674*** (0.0524)
Relative manufacturing wage growth since 2008	-0.212*** (0.0751)	-0.368*** (0.0300)	-0.368*** (0.0409)	-0.340*** (0.0229)	-0.340*** (0.0326)	-0.0543 (0.0846)	-0.223*** (0.0291)	-0.223*** (0.0400)	-0.210*** (0.0220)	-0.210*** (0.0276)
Relative producer price growth since 2008	0.288*** (0.0651)	0.248*** (0.0271)	0.248*** (0.0359)	0.216*** (0.0220)	0.216*** (0.0274)	0.443*** (0.0706)	0.391*** (0.0343)	0.391*** (0.0440)	0.395*** (0.0244)	0.395*** (0.0265)
Difference of export share affected by export incentive of third countries						0.161*** (0.0523)	0.0872*** (0.0211)	0.0872*** (0.0304)	0.0970*** (0.0145)	0.0970*** (0.0171)
Difference of export share benefitting from removed export incentive of third countries						0.417 (0.263)	0.564*** (0.0821)	0.564*** (0.107)	0.572*** (0.0531)	0.572*** (0.0704)
Difference of export share promoted by own export incentive						-0.0204 (0.0342)	0.0143 (0.0160)	0.0143 (0.0172)	-0.00372 (0.0108)	-0.00372 (0.0105)
Difference of export share competing with subsidized destination firm						0.176* (0.102)	0.176*** (0.0345)	0.176*** (0.0397)	0.177*** (0.0276)	0.177*** (0.0306)
Share of base country's exports affected by new EU-level barriers						0.0381 (0.0622)	0.0267 (0.0197)	0.0267 (0.0230)	0.0483*** (0.0136)	0.0483*** (0.0143)
Share of base country's exports benefitting from EU-level barrier reform						-0.504*** (0.137)	-0.477*** (0.0420)	-0.477*** (0.0506)	-0.529*** (0.0325)	-0.529*** (0.0335)
Regression performance										
Observations	13,065	12,805	12,805	12,413	12,413	13,065	12,805	12,805	12,413	12,413
R-squared	0.250	0.395	0.395	0.466	0.466	0.348	0.541	0.541	0.651	0.651
Degrees of freedom	13062	12802	12802	12410	12410	13056	12796	12796	12404	12404

*Robust standard errors in parentheses. *** p<0.01, ** p<0.05, * p<0.1*

CHAPTER 7
HOW MUCH HAS EU EXPORT GROWTH BEEN HELD BACK BY CRISIS-ERA FOREIGN TRADE DISTORTIONS?

To gauge how much EU export performance has been affected by foreign government policy, we use the estimated parameters[24] for the policy-relevant independent variables to forecast what extra-EU and intra-EU export growth would have been under a range of counterfactuals relating to crisis-era protectionism. While the last chapter demonstrated that a wide range of policy interventions had a statistically significant impact on EU export growth, now we examine whether such intervention had a meaningful economic effect.

Recall that the dependent variable in our regressions refers to relative export growth and the policy-related independent variables to the relative exposure to trade distortions or trade reforms. First, we considered the impact of crisis-era trade distortions on extra-EU export growth.

7.1 Impact on extra-EU export growth

We considered a counterfactual in which the European Union's exposure to trade distortions introduced by foreign governments did not change from November 2008 on. That is, the counterfactual involves setting to zero exposure to all foreign trade distortions for all EU exporters only and computing, for each bilateral trading relationship in the extra-EU trade samples involving China, Japan, and the United States, the forecasted increase in relative export growth by each EU Member State. With these forecasts we then computed the trade-weighted average percentage increase in EU exports that would have resulted if no discrimination against European exporters had taken place from 2008 to 2014. We used pre-crisis (taken to be 2005-7) trade data for each bilateral trading relationship as the weights. The results of this counterfactual, undertaken for each EU Member State and for the EU together, are reported in Table 9.

To provide a benchmark, the second to fourth columns of Table 9, refer to the actual observed difference in the rate of export growth between each EU Member State and China, Japan, and the United States, respectively. For example, over the years 2008 to 2014 Swedish exports grew on average 64.8%, 6.42%, and 33.35% less than their Chinese, Japanese, and US rivals, respectively, revealing a significant export performance gap in the first and third cases. For the European Union as a whole its export growth fell 35.12% behind that of China's, surged 26.03% ahead of Japan's and was roughly in line with US export growth.

Columns 5 through 7 of Table 9 reveal the extent to which discrimination against European firms have held back extra-EU export growth relative to the comparator countries. Only Malta and Croatia's export growth relative to China was held back by less than 10 percentage points. Crisis-era protectionism held back nine EU Member States export growth compared to China by more than 20 percentage points.[25] For the EU as a group, in the absence of crisis-era protectionism the export performance deficit compared to China would have fallen in half; the outperformance compared to Japanese exports would have risen from 26.03% to 46.40% and a small performance deficit compared to the United States would have been turned into a 9.96% positive performance gap. All in all, these counterfactual forecasts suggest that relative to peers crisis-era foreign trade distortions have held back EU exports to the rest of the world markedly.

24 Specifically, we used the parameter estimates from the regressions where in total 5% of the sample was trimmed and the policy-related independent variables were included.

25 These Member States are Belgium, Czech Republic, Greece, Hungary, Ireland, Lithuania, Portugal, Romania, and Spain.

TABLE 9

Crisis-era foreign trade distortions held back extra-EU export growth approximately 10–20% against major trading partners

EU Member State	Observed export growth rate difference in percentage points (average annual rate, 2008–2014)			Counterfactual with removal of all crisis-era foreign trade distortions facing EU exporters: percentage point change in difference in export growth rate		
	With China	With Japan	With USA	With China	With Japan	With USA
Austria	-29.98	30.74	-0.06	17.87	18.21	7.91
Belgium	-25.80	34.07	9.02	20.68	21.86	12.58
Bulgaria	6.94	72.83	44.69	16.39	17.12	11.36
Croatia	-54.07	-1.34	-36.19	7.10	5.73	1.65
Cyprus	4.68	63.84	26.67	10.86	9.47	5.87
Czech Republic	7.74	71.49	40.82	20.69	22.85	12.14
Denmark	-45.37	16.08	-17.77	16.73	15.70	7.69
Estonia	51.68	105.29	86.32	19.58	15.35	6.59
Finland	-71.46	-13.48	-43.20	11.31	12.57	7.08
France	-43.62	16.73	-10.12	16.66	19.37	9.17
Germany	-36.54	27.49	-2.93	18.10	22.14	11.19
Greece	38.60	93.43	79.74	23.30	23.16	13.02
Hungary	-37.33	25.34	-11.98	21.18	29.40	12.32
Ireland	-44.62	13.53	-15.05	27.66	28.09	5.55
Italy	-36.14	22.61	-6.54	17.66	18.54	9.70
Latvia	-11.69	40.05	11.07	18.99	17.03	23.84
Lithuania	10.62	64.25	38.61	36.37	50.22	43.79
Luxembourg	-20.95	24.65	0.97	14.6	12.25	4.89
Malta	-30.00	25.99	-0.29	9.80	14.45	9.74
Netherlands	-33.34	25.79	0.14	17.42	16.90	8.39
Poland	-9.73	45.96	12.76	18.92	22.46	18.10
Portugal	3.80	69.92	60.15	21.58	22.59	8.18
Romania	12.48	73.35	43.43	21.35	25.99	13.22
Slovakia	-26.44	51.96	19.07	15.26	16.06	7.28
Slovenia	-4.45	51.28	19.93	15.46	21.22	10.27
Spain	-5.54	45.58	19.58	20.75	21.94	11.29
Sweden	-64.80	-6.42	-33.35	14.13	14.46	7.07
United Kingdom	-33.98	29.81	16.04	18.80	19.45	8.14
European Union	*-35.12*	*26.03*	*-1.04*	*18.27*	*20.37*	*9.96*

Since our economic model contends that productivity growth rates are an important determinant of relative export performance, another way of interpreting this counterfactual concerning the impact of foreign protectionism is to ask how much faster each EU Member State's annual productivity growth rate would have had to been to entirely offset the impact of crisis-era foreign trade distortions. Some analysts might be tempted to argue that if only EU Member States fixed the supply side of their economies and productivity growth rates increased, then they would have been able to take in their stride the impact of crisis-era protectionism. But do our estimates bear this out? In short, the answer is no.

We report in columns 2 through 4 of Table 10 the percentage increase in each EU Member State's productivity necessary to exactly offset the impact of foreign protectionism on extra-EU export growth. To gauge the size of the required productivity increases with what as actually observed during 2008 to 2014, the relevant observations are reported for each EU Member State in the last column of Table 10. A comparison of this last column with the three that come before it reveal that only implausibly large increases in each EU Member States' productivity levels would have countered the impact of crisis-era protectionism. This is true even for those EU Member States – such as Bulgaria, Ireland, Latvia, Lithuania, Poland, and Spain – whose productivity levels rose 10% or more from 2008 to 2014. Overall, during the years 2008–14 productivity grew 1.44% in the European Union. To offset the impact of crisis-era protectionism that productivity growth rate would have had to be at least 32 percentage points larger. This casts doubt on any claims that implementing supply side

reforms would have enabled EU Member States to regain lost export market share due to crisis-era protectionism. Therefore, the choice for the EU is between acquiescing to the discrimination imposed by trading partners or taking steps to induce changes in those partners' behaviour.

Our econometric estimates for the extra-EU sample can be used to generate three additional counterfactuals. In each of the following counterfactuals the goal was to forecast the percentage change in export growth from each EU Member State to destinations outside of the Union relative to US, Chinese, and Japanese rivals:

1. Removal of China's export incentives.
2. Removal of all incentives to export (including those implemented by third parties).
3. Removal of all trade distortions faced by the EU Member State and by China, Japan, and the United States.

The results of these counterfactuals are reported in Table 11. Columns 2 through 4 of that table show the impact of removing China's extensive export incentives. On average, relative to Chinese rivals, extra-EU exports would have been 8.53% higher by 2014 in the absence of these Chinese incentives. Such is the exposure of their exporters that the Czech Republic, Estonia, Greece, Latvia, Lithuania, Poland, Portugal, Romania, and Spain's exports would have been 10% higher by 2014 if their exporters had not been exposed to these Chinese incentives. The relatively small forecasted percentage changes in exports in columns 3 and 4 of this table imply that, with the potential exception

TABLE 10

Faster rates of productivity growth could not plausibly have offset the impact of foreign protectionism

EU Member State	Implied increase in productivity necessary to overcome crisis-era trade distortions facing EU exporters, 2008 to 2014 in percentage points			Observed growth of EU Member State productivity, 2008 to 2014
	China	Japan	USA	
Austria	60.36	47.73	25.96	-2.01
Belgium	71.45	60.10	33.03	1.51
Bulgaria	39.17	24.21	18.87	11.48
Croatia	17.27	10.72	3.57	-1.06
Cyprus	29.92	19.52	18.21	-1.04
Czech Republic	51.76	40.88	24.80	1.63
Denmark	62.26	47.76	30.25	3.65
Estonia	56.99	41.58	16.32	9.59
Finland	53.70	49.53	32.94	-3.38
France	69.21	62.03	37.85	1.64
Germany	64.37	60.05	38.40	-0.32
Greece	44.05	31.51	18.91	-9.02
Hungary	62.35	61.7	37.43	-3.46
Ireland	135.38	119.6	27.68	15.52
Italy	61.35	49.85	32.91	-4.23
Latvia	71.16	56.10	40.82	15.54
Lithuania	84.34	71.73	41.67	10.07
Luxembourg	48.74	33.79	16.48	-2.49
Malta	28.29	41.85	36.53	-2.38
Netherlands	60.22	46.24	24.73	0.63
Poland	46.62	38.12	29.67	18.72
Portugal	66.07	49.37	20.39	4.61
Romania	59.33	43.88	32.16	8.37
Slovakia	47.03	35.98	19.83	8.99
Slovenia	37.01	30.58	20.29	0.33
Spain	66.07	56.14	36.67	10.00
Sweden	70.68	59.97	31.98	2.65
United Kingdom	76.59	62.01	27.73	1.71
European Union	*67.72*	*58.61*	*33.42*	*1.44*

of Lithuania, that the degree of exposure of Japanese and American exporters to Chinese export incentives was in line with most EU Member States. These findings imply that Chinese export incentives did indeed have the effect of shifting sales in destination markets towards Chinese exporters and away from European competitors.

Comparing the results in columns 2 through 4 and 5 through 7 of Table 11 reveals, in essence, that Chinese export incentives contribute the most to the trade distortions created by export incentives worldwide. As noted above, removing Chinese export incentives would have narrowed the export growth differential between EU and Chinese exports to markets outside of the EU by 8.53 percentage points. Removing all export incentives, some of whose imposition would have affected both Chinese and EU exporters, would result in a marginally different (7.93%) increase in extra-EU export growth performance. Looking Member State by Member State a similar qualitative finding arises. Our final counterfactual for the extra-EU sample concerns the removal of all trade distortions imposed since November 2008 and shows the extent to which global trade flows have been reshuffled during the crisis-era. In our set up nothing prevents Japanese or US firms being exposed, say, to more trade distortions in

TABLE 11

Forecasted increases in EU Member State exports under three more counterfactuals concerning crisis-era trade distortions

EU Member State	Estimated change in relative extra-EU export growth (%) under each of the following three counterfactuals								
	Removal of China's export incentives			Removal of all export incentives (including third party)			Removal of all trade distortions (including export incentives)		
	China	Japan	USA	China	Japan	USA	China	Japan	USA
Austria	8.82	-0.29	0.39	7.63	-2.76	-1.48	7.04	-4.47	-1.53
Belgium	8.42	-1.74	-0.61	8.35	-1.59	-1.46	8.11	-1.52	0.96
Bulgaria	9.75	-3.86	-0.6	8.97	-6.03	-2.74	5.73	-9.30	-3.44
Croatia	3.61	-1.24	-0.45	3.31	-2.21	-1.45	2.27	-4.69	-2.07
Cyprus	7.29	-4.51	-2.17	6.19	-8.02	-4.11	3.21	-12.59	-4.97
Czech Republic	11.34	0.54	1.66	10.59	-1.30	0.17	8.28	-5.81	-1.45
Denmark	8.40	-0.82	-0.16	7.30	-1.42	-1.56	6.83	-2.44	-0.84
Estonia	11.05	-3.48	-1.19	8.10	-6.48	-4.98	7.98	-8.54	-6.70
Finland	5.23	-0.72	-0.04	4.63	-1.05	-0.52	4.64	-1.23	-0.01
France	7.56	-0.87	0.01	6.99	-2.02	-0.90	6.22	-2.51	-0.37
Germany	8.40	-0.28	0.47	7.74	-1.14	-0.20	7.35	-0.71	0.46
Greece	13.05	-4.48	-0.63	14.15	-4.27	-1.77	9.00	-10.88	-3.07
Hungary	8.75	-1.40	0.51	9.56	1.49	1.45	9.77	-0.33	1.48
Ireland	8.85	-0.83	0.10	9.92	1.79	0.46	11.05	3.14	0.31
Italy	8.92	0.29	0.75	8.73	-0.52	0.16	7.26	-2.67	0.46
Latvia	10.64	-7.72	-3.52	9.88	-7.10	-4.62	9.58	-18.15	-13.87
Lithuania	19.11	-17.89	-2.07	17.69	-13.43	-7.25	22.63	-28.87	-26.14
Luxembourg	8.98	0.35	0.73	6.77	-4.10	-1.48	5.13	-7.37	-3.10
Malta	4.43	-1.38	-0.6	6.16	1.79	0.79	4.69	1.72	1.32
Netherlands	9.10	-0.31	0.22	7.77	-2.29	-1.44	6.46	-4.41	-1.48
Poland	11.08	-3.86	0.52	10.28	-4.15	-1.05	8.84	-13.15	-1.38
Portugal	11.28	-0.69	0.07	9.23	-5.71	-1.84	6.47	-11.11	-3.12
Romania	11.45	-1.5	1.45	10.25	-4.01	-2.15	9.45	-7.18	-0.76
Slovakia	7.53	-1.02	0.87	5.59	-5.63	-1.67	6.49	-8.28	-3.72
Slovenia	8.63	-0.2	0.43	7.93	-1.92	-0.28	7.05	-5.34	0.02
Spain	10.11	-1.21	0.15	10	-2.86	-0.54	8.60	-5.65	0.04
Sweden	6.84	-0.22	0.17	6.31	-0.50	-0.67	6.46	-0.80	-0.40
United Kingdom	8.54	-1.07	-0.24	7.24	-2.94	-1.54	6.76	-3.74	-1.37
European Union	*8.53*	*-0.71*	*0.23*	*7.93*	*-1.61*	*-0.66*	*7.30*	*-2.53*	*-0.31*

a destination market than a EU Member State. Indeed, the removal of all trade distortions would have, on the basis of our forecasts, shifted market share in destination markets away from Austrian, British, Bulgarian, Croatian, Cypriot, Czech, Danish, Dutch, Estonian, French, Greek, Latvian, Lithuanian, Luxembourgian, Polish, Portuguese, Romanian, and Slovakian exports towards Japanese and US rivals. Overall, reflecting the strength of Chinese export incentives, the removal of all crisis-era trade distortions would have enhanced EU export performance vis-à-vis China, worsened it a little (2.53%) against Japanese exporters, and had little impact of performance relative to US rivals.

In sum, demonstrating that crisis-era trade distortions had a statistically significant impact on EU exports is not the same as showing that such distortions held back EU traders a lot. The counterfactuals performed in this section provide evidence of how responsive EU exports were to foreign protectionism and to the reshuffling of world trade that ensued. Given that Chinese export growth outpaced EU rivals during 2008 to 2014, one way to interpret these results is to ask to what extent this performance gap was facilitated by trade distortions introduced outside of the EU. In Figure 16 we report what the performance gap was (35.12%) and what it would have been in the absence of trade distortions that only harmed the EU, in the absence of all crisis-era trade distortions, and in the absence of Chinese crisis-era export incentives. The latter alone accounted for a fifth of the performance gap. Had the EU's exporters alone come through the crisis unscathed by foreign trade distortions then the performance gap would have been halved. Such findings speak to the significant economic impact of the trade distortions introduced by governments since the onset of the global economic crisis.

7.2 Impact on intra-EU export growth

The counterfactuals performed on the intra-EU sample reflect were adapted to take account of the Single Market. Once again, we forecast the impact of removing all export incentives and of removing Chinese export incentives. In addition, we forecast the effect of removing EU state aid measures and, then, of removing all trade distortions affecting shipments to EU destination markets. These four counterfactuals provide a sense of the extent to which imports to EU destination markets has been distorted

FIGURE 16

Eliminating crisis-era trade distortions markedly reduces the extra-EU export growth deficit with China

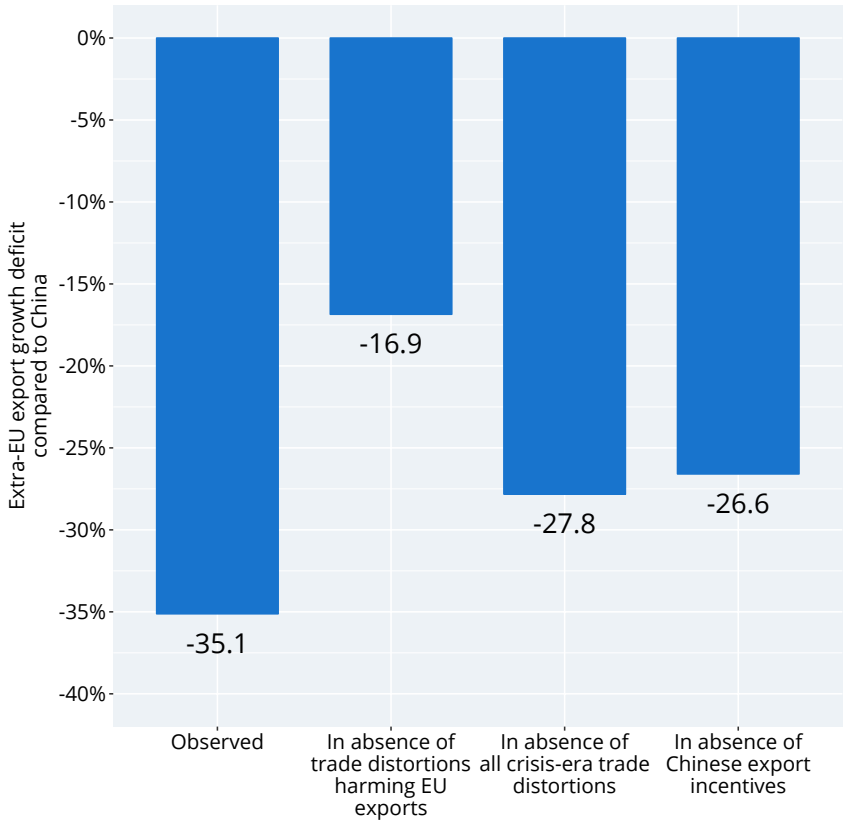


TABLE 12

Counterfactual estimates of impact of crisis-era trade distortions on exports to EU destination markets

EU Member State	Estimated change in relative intra-EU export growth of each Member State (in % terms) under each of the following four counterfactuals, 2008 to 2014											
	Removal of EU state aid measures			Removal of all export incentives			Removal of China's export incentives			Removal of all trade distortions		
	China	Japan	USA	China	Japan	USA	China	Japan	USA	China	Japan	USA
Austria	0.96	0.10	0.71	-0.13	-2.58	-0.85	0.79	-1.36	0.13	-2.21	-2.73	-0.30
Belgium	1.35	0.77	1.43	-0.55	-2.40	-1.46	0.41	-1.34	-0.28	-2.17	-1.85	-0.25
Bulgaria	0.23	-1.48	-0.10	0.01	-4.32	-0.85	1.04	-3.26	0.33	-3.88	-5.99	-1.28
Croatia	-0.01	-1.32	-0.22	-0.26	-2.67	-0.93	0.58	-1.50	-0.13	-2.99	-4.13	-1.32
Cyprus	0.00	-0.35	0.16	-0.30	-4.19	-0.76	0.26	-3.94	-0.08	-2.58	-4.60	-0.83
Czech Republic	1.11	-0.19	0.77	1.12	-0.25	0.35	1.56	-0.15	0.75	-1.79	-0.73	0.90
Denmark	0.30	-1.33	0.14	-0.50	-2.30	-1.23	0.46	-1.05	-0.14	-2.56	-3.74	-1.22
Estonia	-0.03	-3.75	-0.04	1.47	1.03	0.72	1.74	-0.35	0.80	-3.01	-2.89	0.29
Finland	0.52	-0.36	0.52	-0.03	-0.97	-0.51	0.36	-0.46	0.01	-1.15	-1.42	-0.10
France	0.74	0.04	0.65	0.15	-0.93	-0.32	0.43	-1.00	-0.13	-1.61	-1.05	0.17
Germany	0.43	-0.16	0.51	0.13	-1.11	-0.52	0.66	-0.78	0.03	-1.83	-1.41	-0.16
Greece	0.29	-0.44	0.20	0.58	-1.90	-0.14	0.61	-1.19	-0.13	-2.13	-2.47	-0.08
Hungary	0.39	-1.21	-0.03	1.36	-0.24	0.73	1.12	-1.19	0.44	-1.56	-1.66	0.53
Ireland	0.03	-0.63	-0.02	0.89	0.95	0.39	0.57	-0.22	0.16	-1.12	0.18	0.25
Italy	0.40	-0.68	0.30	0.44	-0.46	-0.09	0.77	-0.46	0.37	-1.35	-1.28	0.08
Latvia	0.42	-1.31	0.40	0.05	-1.95	-0.83	0.23	-2.28	-0.36	-2.70	-3.38	-0.65
Lithuania	0.19	-0.26	0.55	0.11	0.00	0.08	0.45	-0.85	0.03	-2.43	-0.37	0.32
Luxembourg	0.68	0.00	0.58	-0.07	-1.04	-0.76	1.47	0.89	0.95	-2.10	-1.23	-0.35
Malta	0.15	-0.11	0.13	0.30	-0.09	0.08	0.34	-0.22	0.18	-0.42	-0.25	0.16
Netherlands	1.14	0.49	1.09	-0.49	-2.01	-1.22	0.81	-0.93	0.10	-3.04	-1.80	-0.36
Poland	1.12	-0.12	0.74	0.43	-1.52	-0.48	1.28	-0.58	0.54	-2.54	-1.97	0.03
Portugal	0.52	-2.95	0.21	0.52	-1.31	-0.46	0.79	-1.54	-0.11	-2.82	-4.47	-0.54
Romania	0.10	-1.62	-0.34	1.95	0.09	1.03	1.64	-1.31	0.59	-2.73	-1.89	0.41
Slovakia	1.84	1.74	1.86	0.18	-2.45	-0.68	1.69	0.03	0.81	-1.93	-1.11	0.96
Slovenia	1.35	1.08	1.03	1.08	-2.38	-0.10	1.83	-4.05	0.51	-2.32	-1.60	0.68
Spain	1.61	1.61	1.66	-0.01	-1.00	-0.79	0.51	-0.95	-0.02	-1.30	0.42	0.66
Sweden	0.63	0.39	0.64	-0.21	-1.17	-0.82	0.48	-0.76	-0.04	-1.89	-0.93	-0.33
United Kingdom	0.49	-0.20	0.40	-0.29	-1.04	-0.74	0.34	-0.70	-0.16	-1.88	-1.35	-0.47
European Union	*0.70*	*-0.04*	*0.65*	*0.09*	*-1.17*	*-0.55*	*0.67*	*-0.83*	*0.07*	*-1.90*	*-1.39*	*-0.07*

due to crisis-era policy intervention. The forecasted effect on each Member State's intra-EU export growth vis-à-vis Chinese, Japanese, and US rivals is reported in Table 12.

When compared to the forecasts for the extra-EU export sample, the most striking finding in Table 12 is how much smaller the forecasted effects on relative export growth are. For example, in the absence of all crisis-era trade distortions shipments by EU exporters to within the EU would by 2014 have been 1.9% lower than their 2008 levels vis-à-vis Chinese rivals, 1.39% lower compared to Japanese rivals, and practically unchanged against US rivals. Moreover, had no state aid been granted to EU firms, then EU shipments within the Single Market would have been 0.65-0.70% higher than Chinese and US rivals and little changed against Japanese rivals. Similar patterns arise examining the forecasts for each EU Member State.

Such findings do not necessarily imply that there are few distortions to imports into the Single Market. Rather, they imply that the exposure of EU Member States to EU state aid measures, foreign export incentives, and other trade distortions affecting imports into the EU was roughly the same as those facing Chinese, Japanese, and US rivals. However, these forecasts imply that imports to EU destinations were not reshuffled to the same degree as imports to destinations outside of the European Union.

CHAPTER 8
IMPLICATIONS FOR EU TRADE POLICY

When considering the implications of this study for commercial policy readers might bear in mind that the policy-relevant econometric findings were identified off state intervention that took place between November 2008 and December 2014. Two points immediately follow. First, there could be significant policy decisions not to intervene that weren't evaluated in our empirical approach – and just because the impact of those decisions was not directly estimated here doesn't mean they are unimportant. The best example here is the decision by EU Member States during the crisis era not to brazenly fracture the Single Market by raising tariffs or other border barriers on intra-EU trade in goods. Intra-EU export exposure to such barriers was found here to be tiny but that does not mean the implied restraint by EU governments was unimportant.[26]

Second, there are trade distortions that existed before the global economic crisis that may not have changed much during recent years.[27] Our analysis focuses on the flow of new, as opposed to the stock of existing pre-crisis, government interventions. Just because here we discuss the policy implications of the former does not mean that the latter are necessarily unimportant. Indeed, the reduction and eventual elimination of longstanding foreign barriers to EU exports should remain a priority for EU commercial policy. With these points in mind, we turn to the policy implications of our empirical analysis of the determinants of the export performance of EU Member States.

The consistent finding that relative productivity growth rates matter is significant as it serves as a reminder that policy measures to promote enhanced efficiency, to cut waste, and to encourage innovation could play roles in boosting European export performance. According to our results for exports to EU destinations, national wage-setting institutions have affected relative export performance as well – whereas differential producer price inflation has an impact on relative export growth to the destinations outside the Single Market. Our study confirms the traditional drivers of export competitiveness were at work since the onset of the global economic crisis. Nothing in this study should be taken to demote the importance of sensibly designed policies to enhance EU supply side performance.

Another consistent set of findings concern export incentives provided by governments. We demonstrated earlier in the report that the share of EU exports that compete against one or more non-EU rival which has received state assistance to export has grown sharply during the crisis. Our econometric estimates for both the intra-EU and extra-EU samples shows that changes in relative exposure to such subsidised competition affects the relative growth of EU exports in the manner that one might expect – greater exposure forces EU firms to shave profit margins to win contracts or discourage EU firms from bidding for foreign contracts in the first place. Both result in lower reported levels of EU export growth.

On the basis of the evidence presented in this study, the phasing out of foreign incentives to export is a priority for the European Union. These incentives are often supplied through national tax systems as opposed to being direct subventions to exporters. As a result, such incentives are often much more opaque and this may account for the fact that they have not received that much attention from EU trade policymakers.[28] As the US reaction to the state aid decision by the European Commission concerning Apple's tax arrangements in Ireland has shown, tax-related matters can be particularly sensitive and this may have accounted for some reluctance to address these matters in the past.[29]

26 Indeed our econometric results for the intra-EU sample suggest that changes in EU border barriers faced by non-EU exporters did have an effect. So we are not implying that border barriers do not matter either.

27 Subsidy regimes that were implemented before the global economic crisis began are a case in point. For example, the generosity of the Domestic Production Activities Deduction offered by the United States government was scaled up before the onset of the crisis. Had our analysis started earlier, this domestic production incentive would have been included. The exclusion of this across-the-board subsidy from our analysis does not make it unimportant or irrelevant for European Union trade policymaking.

28 Having said this, the European Commission has instituted a WTO dispute settlement case against Brazil for, amongst other matters, the latter's export-related tax rebates. See https://www.wto.org/english/tratop_e/dispu_e/cases_e/ds472_e.htm

29 In this regard it is telling that the first footnote of the WTO's Agreement on Subsidies and Countervailing Measures is far from clear as to whether and which export-related tax matters fall under the disciplines of that accord.

The relevant agreement to revise here is, of course, the WTO's Agreement on Subsidies and Countervailing Measures. Given the worldwide impact of national export incentives, as is the case in deliberations on matters relating to agricultural export competition, it makes little sense to curb such trade distortions on a bilateral basis in the context of regional trade agreements. Far better to take a multilateral approach. Given the global impact of such export incentives, the European Commission and Member States should be able to build a coalition of other affected nations and advance proposals on this matter in international fora.

The temptation to copy foreign attempts to boost exports through murky tax incentives and "innovations" to trade finance should be resisted. In addition to risking a global export subsidy war – which ultimately no one is likely to win – these subsidies can have important implications for public finances at a time when governments have been taking steps to cut budget deficits. Moreover, as the case of Brazil has demonstrated, once introduced these export incentives are hard to abolish unilaterally, precisely because exporters come to like such state largesse. There are good reasons why governments progressively reduced their agricultural export subsidies, locking in some of those reforms in global trade accords. Having celebrated at the 2015 Nairobi WTO Ministerial Conference the phasing out of agricultural export subsidies it would be particularly perverse to essentially acquiesce to the reintroduction of export incentives for manufactured goods through the back door.

By 2015, 522 billion US dollars (489 billion euros) of extra-EU exports faced trade distortions other than export incentives.[30] Consequently, it would be unwise to overlook these trade distortions just because the scale of the distortion associated with export incentives is much larger. There are two practical implications here for DG Trade. First, the monitoring of foreign government policy choice needs to be both broadened (to reflect the wide range of tools foreign state have available to distort markets) as well as prioritised (both in terms of resources devoted to this activity and as an input to strategy making). Second, that so many foreign governments have taken actions that harm EU commercial interests does not suggest they particularly fear trade enforcement actions, including possible resort to WTO Dispute Settlement, by DG Trade. Serious consideration should be given as to whether current EU trade enforcement strategy has the right balance between carrots and sticks.

Discouraging EU governments from giving subsidies to firms in tradable sectors is another implication of this study. The results in our intra-EU sample showed that greater exposure to markets where local firms are bailed out slowed down export growth within the European Union. While the EU may take pride in the fact that Member State governments did not raise overt trade barriers against shipments originating within the Union, its crisis-era record is blemished by the extensive resort to state aid. This serves as an important reminder that open borders do not guarantee a level commercial playing field. A dispassionate review of the performance of the European Union's state aid regime since the onset of the global economic crisis is in order. Still, it is worth recalling that the degree of reshuffling of intra-EU trade caused by EU state aids is found here to be smaller than the effect of state-financed export incentives.

Summary of policy recommendations for the European Commission and EU member states

1. Priortise enforcement action, including possible resort to WTO Dispute Settlement, against foreign fiscal incentives to boost exports, including misuses of trade finance.
2. Resist temptation to copy trading partners' export incentives – instead build a coalition among WTO Members in favour of tougher rules on export incentives, especially those delivered through national tax systems. Export incentives on this scale must cost substantial amounts of money so cultivate national finance ministries and the IMF as allies in this campaign.
3. Upgrade monitoring of foreign government policies that implicate EU commercial interests, developing an adaptable approach that takes account of the fact that foreign governments may start using new forms of protectionism.
4. Review the application of EU state aid rules so as to minimise the disruption to intra-EU trade. By 2015, 8.7% of intra-EU exports competed against local farmers and manufacturers that had been bailed out by an EU government since November 2008.

30 This amount is calculated by taking the extra-EU export exposure to all trade distortions except export incentives (reported in Figure 10 as being 0.2753) and applying it to the total value of extra-EU exports in 2015 of 1.896 trillion US dollars (the nominal value reported in the UN COMTRADE database).

CHAPTER 9
CONCLUDING REMARKS

European Union exports – in particular extra-EU exports – are stuck in a rut. Pre-crisis export growth rates are far from being restored. Given the millions of Europeans whose livelihoods depend on international trade, this cannot be good news. The question is what is holding EU exports back? Is it internal factors (such as low productivity growth) or have crisis-era trade distortions imposed by foreign governments taken their toll? The goal of this report was to answer these questions.

We did so by breaking new ground in a number of important respects. First, we used a very detailed data set of foreign and EU policy intervention – both discriminatory and liberalising – to ascertain the most important types of state measure imposed by foreign governments that any serious empirical analysis must address. Unlike numerous other studies, we do not confine our analysis to a limited set of relatively transparent trade barriers, such as import tariff increases and antidumping actions. This is not to imply that the latter barriers are unimportant, rather that they are only part of the arsenal that governments have to tilt the commercial playing field in favour of national firms at home and, importantly as it turns out, in foreign markets.

Second, using fine-grained international trade data, for each EU Member State we calculated how much of their exports face trade distortions in overseas markets and the findings are reported in the country annexes to this report. To the best of our knowledge, such trade coverage ratios for EU exporters have not been published before. The scale of EU Member State export exposure to foreign trade distortions is much larger than the global averages reported by international organisations. In addition, our findings of the extent to which shipments within the European Union face trade distortions implemented by third countries may challenge the assumptions of some concerning the operation of the Single Market.

Third, having established that third party policies – most notably policies that subsidise exports – could be an important factor in shaping EU export patterns,[31] we adapted a well-known theoretical model of bilateral trade flows so as to directly estimate the impact of these third party policies. The structure of cutting-edge gravity equations is such that it is possible to evaluate the impact of importer, exporter, and other country policies by estimating the growth of an EU Member State's exports to a destination market relative to that of a third country. This approach also controls for traditional determinants of what is often referred to as national competitiveness – namely, productivity, wages, and so on.

Moreover, our focus on bilateral exports allows for the possibility that crisis-era trade distortions *reshuffle* global trade flows. This contrasts from much of the existing literature on the impact of crisis-era trade policies that tends to focus on the impact on the *level* of global trade. Demonstrating that crisis-era trade policies have a trivial effect on the overall level of global trade does not rule out the possibility that such policies have significantly reshuffled trade between nations.

A by-product of focusing on the export growth of EU Member States relative to that of US, Chinese, and Japanese rivals is that some light is shed here on the extent to which the latter three countries' exporters were exposed to crisis-era protectionism as well. This, plus the counterfactual forecasts for relative export growth under different policy alternatives, may broaden the audience for this study beyond European policymakers and analysts interested in EU trade flows.

That there have been innovations does not imply that our approach is without shortcomings, which should be acknowledged. Like most analysts, we take policy interventions as given and did not consider whether changes in trade flows might have triggered policy intervention. Those with a general equilibrium bent might also like to allow policy intervention to affect relative wage growth across countries. Second, for databases of crisis-era policy intervention any differences in reporting intensity across countries, policy instruments, or time might skew the results (although the weight we gave to

31 It being understood that third party export incentives could affect intra-EU trade as well as extra-EU trade to the extent that beneficiaries of the former incentives seek to secure customers inside the European Union.

each observation in the regressions was dependent in part on the number of policy interventions undertaken that affect the destination market).

Despite these drawbacks, this study has produced a number of important findings which have policy implications. One is that, although the focus of this paper is on commercial policies, it should not be forgotten that European export performance can be enhanced by measures taken to improve labour productivity growth and to control costs and price increases. Despite the disruption of the crisis era, these factors – so critical for European living standards in general – remain important.

That we found over 3,000 instances when foreign governments implemented policy instruments that have harmed EU commercial interests and given the large estimates of the extra-EU exposure to these policy interventions highlights the importance of being open to possibility that the *cumulative* effect of many trade distortions can be commercially significant. The fact that in recent years the world did not witness another "Smoot Hawley" moment is good news, but its absence does not imply that EU exports have not been fettered by foreign trade distortions. The monitoring of foreign government policy choice needs to take account of the fact that the harm done by protectionism can accumulate over time. Just as silt can clog up rivers over time, so trade distortions can narrow the arteries of global commerce.

Public policy intervention was found to influence the relative export growth of EU Member States both within and outside the European Union, although not consistent in every respect with the predictions of a standard economic model that we adapted from this study. Still, introducing indicators of policy stance into the analysis substantially improved the explanatory power of the regressions. Our empirical analysis suggests that crisis-era policy interventions were both a statistically and economically significant determinant of recent EU export performance.

With respect to state-provided incentives to export offered by third countries, we found robust evidence of adverse effects on European export performance. Such state assistance accounts for the lion share of the crisis-era trade distortions faced by European exporters. Like agricultural export subsidies of old, the impact of such export incentives can in principle be felt worldwide, shifting market shares in foreign markets towards the subsidised firms and away – in our case – from European rivals. We found the same pattern of results in the intra-EU sample, suggesting that the operation of the Single Market is being distorted by foreign attempts to gain market share in this fashion.

Indeed, our findings also imply that global trade flows were reshuffled extensively by trade distortions introduced by governments since the onset of the global economic crisis. By focusing on the impact of trade distortions on the level of world trade, many analysts may have overlooked an important consequence of contemporary protectionism. Governments care about the zero-sum nature of many trade distortions, even if those distortions lower prices to customers as export incentives and related subsidies likely do.

In sum, on the basis of the results presented here, we discount attempts to account for Europe's poor export performance entirely based on bad luck, pessimism, and the like. More systematic factors are at work. Another whipping boy – the much lamented European business environment and all that goes with it – alone cannot explain crisis-era EU export performance either. For sure, our study confirms the importance of productivity and other traditional drivers of EU export performance. However, our study shows that it would be a mistake to overlook the role that policy has played in holding back European export growth, especially policies by other governments to offer wide-ranging export incentives that potentially affect significant amounts of world trade. In this sense, the European Union, its exports, and therefore the living standards of its people are fettered. It is the job of European trade policymakers to throw these fetters aside.

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ANNEX TABLES

TABLE A1

Detailed breakdown of types of discriminatory policy instrument harming EU commercial interests, in descending order of use

Discriminatory policy instrument	Number of times used against EU commercial interests since November 2008	Percentage share
Import tariff	718	21.63
Public procurement localisation	376	11.33
State loan	185	5.57
Tax or social insurance relief	175	5.27
Anti-dumping	165	4.97
Export tax	154	4.64
Trade finance	124	3.74
Tax-based export incentive	100	3.01
Safeguard	89	2.68
Financial grant	88	2.65
Labour market access	87	2.62
Export ban	83	2.5
Import-related non-tariff measure, nes	66	1.99
Import licensing requirement	61	1.84
Local sourcing	59	1.78
Production subsidy	59	1.78
Loan guarantee	57	1.72
Interest payment subsidy	55	1.66
Import ban	51	1.54
Export subsidy	42	1.27
Bailout (capital injection or equity participation)	40	1.21
Import quota	38	1.14
FDI: Treatment and operations, nes	37	1.11
Export quota	35	1.05
Local operations	35	1.05
Export licensing requirement	34	1.02
Financial assistance in foreign market	31	0.93
Internal taxation of imports	29	0.87
Public procurement preference margin	28	0.84
Import tariff quota	24	0.72
Localisation incentive	23	0.69
Instrument unclear	21	0.63
Export-related non-tariff measure, nes	19	0.57
FDI: Entry and ownership rule	17	0.51
Anti-subsidy	16	0.48
Other export incentive	16	0.48
Public procurement access	12	0.36
Technical barrier to trade	8	0.24
Post-migration treatment	7	0.21
Sanitary and phytosanitary measure	7	0.21
State aid, nes	7	0.21
Competitive devaluation	5	0.15
Local labour	5	0.15
Anti-circumvention	4	0.12
FDI: Financial incentive	4	0.12
In-kind grant	4	0.12
Trade balancing measure	4	0.12
Trade payment measure	4	0.12
Price stabilisation	3	0.09
Intellectual property protection	2	0.06
Repatriation & surrender requirements	2	0.06
Consumption subsidy	1	0.03
Controls on commercial transactions and investment instruments	1	0.03
Import monitoring	1	0.03
Public procurement, nes	1	0.03

Source: Global Trade Alert, 21 September 2017.

TABLE A2

Share of Extra-EU exports facing foreign trade distortions in 2009 and 2015, by Member State and by MAST chapter

EU member	All forms of foreign discrimination		Contingent trade protection		Non-automatic licensing, quotas		Price control measures		Investment measures		Subsidies (except export subsidies)		Government procurement		Export measures		Import tariff measures		Instrument unclassified	
	2009	2015	2009	2015	2009	2015	2009	2015	2009	2015	2009	2015	2009	2015	2009	2015	2009	2015	2009	2015
European Union	48.5%	72.0%	0.1%	0.6%	0.8%	1.4%	0.0%	1.0%	0.5%	2.2%	5.4%	17.6%	1.1%	4.0%	43.4%	64.8%	1.9%	8.4%	0.1%	3.5%
Austria	47.4%	66.6%	0.1%	0.5%	1.0%	1.2%	0.0%	0.4%	0.4%	2.5%	9.0%	16.9%	1.6%	4.6%	41.8%	58.6%	1.5%	6.6%	0.0%	7.3%
Belgium	47.8%	71.9%	0.1%	0.6%	0.4%	1.1%	0.0%	0.4%	0.8%	2.2%	4.0%	15.7%	0.9%	3.2%	41.8%	60.7%	4.8%	12.9%	0.0%	8.9%
Bulgaria	18.0%	39.0%	0.0%	0.4%	0.1%	0.8%	0.2%	0.5%	0.0%	0.3%	0.9%	7.4%	1.0%	1.1%	16.7%	34.9%	0.1%	2.3%	0.0%	0.3%
Croatia	16.6%	26.9%	0.0%	0.0%	0.0%	0.2%	0.0%	0.0%	0.0%	0.2%	0.8%	8.4%	0.0%	0.3%	16.2%	25.0%	0.0%	0.6%	0.0%	0.0%
Cyprus	7.4%	37.8%	0.0%	0.0%	0.0%	0.4%	0.0%	0.4%	0.0%	0.0%	1.0%	3.4%	0.0%	0.6%	6.8%	34.5%	0.0%	0.5%	0.0%	2.1%
Czech Republic	56.2%	70.4%	0.0%	0.2%	0.3%	0.2%	0.0%	0.6%	1.7%	5.8%	5.0%	11.5%	2.8%	8.3%	53.0%	66.7%	2.8%	7.1%	0.0%	0.1%
Denmark	37.3%	64.8%	0.1%	0.1%	1.6%	2.3%	0.0%	0.7%	0.1%	1.0%	2.1%	12.4%	0.9%	3.7%	33.7%	53.7%	1.2%	10.1%	0.0%	0.2%
Estonia	22.9%	52.8%	0.0%	0.0%	0.0%	1.9%	0.0%	0.0%	0.0%	2.0%	5.0%	27.3%	1.1%	0.6%	17.7%	47.4%	0.4%	4.7%	0.0%	0.0%
Finland	47.4%	71.1%	0.0%	0.3%	1.6%	1.8%	0.0%	0.5%	0.3%	1.0%	5.5%	13.4%	1.7%	4.1%	40.4%	60.6%	2.0%	15.3%	0.7%	0.7%
France	40.4%	70.0%	0.0%	0.5%	0.6%	1.3%	0.0%	2.9%	0.3%	1.8%	3.3%	15.8%	1.0%	2.6%	36.5%	65.4%	1.0%	7.8%	0.2%	0.8%
Germany	53.7%	74.1%	0.1%	0.8%	1.4%	1.4%	0.0%	1.1%	0.7%	2.4%	8.9%	18.4%	0.9%	4.3%	46.2%	64.6%	2.5%	10.2%	0.1%	5.8%
Greece	27.4%	50.8%	0.1%	0.2%	0.0%	0.6%	0.2%	1.0%	0.0%	0.9%	0.8%	5.6%	3.1%	3.4%	25.2%	48.1%	0.1%	3.9%	0.0%	0.3%
Hungary	70.9%	83.7%	0.0%	0.4%	0.1%	0.2%	0.0%	0.2%	0.3%	1.3%	4.2%	19.3%	0.4%	8.2%	67.9%	80.8%	3.1%	10.5%	0.0%	0.6%
Ireland	64.1%	86.5%	0.0%	0.0%	0.2%	0.3%	0.0%	0.2%	0.0%	0.2%	0.3%	38.7%	0.3%	2.9%	63.4%	84.7%	0.4%	3.1%	0.0%	0.3%
Italy	54.5%	73.6%	0.1%	0.6%	1.0%	1.5%	0.0%	0.7%	0.1%	1.8%	2.7%	11.2%	1.0%	4.4%	51.2%	69.3%	1.3%	6.9%	0.1%	1.0%
Latvia	19.9%	64.3%	0.0%	0.0%	0.0%	4.2%	0.0%	0.1%	0.0%	0.2%	2.6%	25.2%	1.0%	7.1%	17.5%	57.6%	2.6%	3.2%	0.0%	0.2%
Lithuania	26.9%	58.8%	0.0%	0.0%	1.0%	4.7%	0.0%	0.1%	0.2%	0.3%	4.6%	22.5%	2.5%	0.5%	22.5%	48.2%	2.1%	11.3%	0.0%	0.1%
Luxembourg	41.3%	59.8%	0.0%	0.0%	0.1%	0.2%	0.0%	0.1%	0.0%	9.8%	1.2%	7.7%	8.7%	12.6%	32.1%	47.8%	0.5%	2.1%	0.0%	0.1%
Malta	48.0%	80.2%	0.0%	0.0%	0.0%	0.0%	0.0%	0.1%	0.0%	0.1%	0.5%	20.1%	0.0%	0.1%	48.0%	80.1%	0.0%	2.0%	0.0%	0.0%
Netherlands	34.0%	63.7%	0.1%	0.3%	0.4%	2.7%	0.0%	0.5%	0.3%	1.4%	2.0%	14.2%	1.4%	2.5%	31.2%	58.4%	0.7%	6.8%	0.0%	0.4%
Poland	44.0%	64.1%	0.0%	1.2%	0.2%	1.7%	0.1%	0.4%	0.6%	1.5%	4.3%	9.4%	3.2%	2.6%	39.5%	58.0%	2.0%	10.1%	0.0%	0.1%
Portugal	41.3%	64.0%	0.0%	0.2%	0.1%	0.6%	0.0%	0.1%	0.0%	1.1%	2.8%	17.6%	0.4%	1.2%	39.7%	59.7%	0.2%	5.8%	0.3%	3.3%
Romania	35.3%	56.7%	0.7%	2.8%	0.0%	0.6%	0.2%	0.7%	0.0%	3.1%	1.6%	9.3%	2.0%	4.4%	33.7%	51.4%	0.6%	5.4%	0.0%	0.2%
Slovakia	55.4%	67.5%	0.0%	0.8%	0.0%	0.2%	0.0%	0.3%	5.2%	8.2%	23.1%	30.3%	0.6%	8.8%	34.4%	41.5%	7.3%	5.1%	0.0%	17.1%
Slovenia	45.2%	60.1%	0.1%	4.5%	0.6%	0.0%	0.0%	0.3%	0.1%	1.3%	3.4%	15.2%	2.5%	2.7%	42.3%	57.3%	1.6%	6.0%	0.0%	0.0%
Spain	39.5%	67.5%	0.1%	0.8%	0.9%	2.4%	0.2%	1.0%	1.0%	3.8%	2.6%	13.0%	1.1%	3.9%	36.1%	62.0%	1.5%	7.6%	0.1%	0.8%
Sweden	49.7%	68.7%	0.0%	0.3%	1.1%	1.1%	0.0%	0.7%	0.9%	3.2%	6.9%	21.0%	1.5%	6.4%	44.6%	62.7%	1.6%	7.4%	0.6%	5.1%
United Kingdom	45.4%	75.1%	0.0%	0.4%	0.4%	1.0%	0.0%	0.3%	0.8%	2.4%	5.7%	22.4%	0.9%	4.2%	40.1%	66.2%	2.4%	6.7%	0.0%	4.8%

Source: Global Trade Alert, computed on basis of data in that database on 21 September 2017. Data on finance-related trade distortions has been omitted because there was no discernible export coverage found.

TABLE A3

Share of intra-EU exports facing foreign trade distortions in 2009 and 2015, by Member State and by MAST chapter

EU member	All forms of foreign discrimination		Contingent trade protection		Non-automatic licensing, quotas		Investment measures		Subsidies (except export subsidies)		Government procurement		Export measures		Instrument unclassified	
	2009	2015	2009	2015	2009	2015	2009	2015	2009	2015	2009	2015	2009	2015	2009	2015
European Union	42.9%	61.6%	0.0%	0.0%	0.0%	0.0%	0.0%	1.4%	6.1%	9.4%	0.0%	0.0%	39.8%	56.7%	0.0%	0.1%
Austria	43.1%	64.6%	0.0%	0.0%	0.0%	0.0%	0.0%	0.4%	3.7%	14.3%	0.0%	0.0%	41.1%	56.7%	0.0%	0.0%
Belgium	34.2%	56.5%	0.0%	0.0%	0.0%	0.0%	0.0%	0.8%	6.6%	12.8%	0.0%	0.1%	29.8%	50.0%	0.0%	0.0%
Bulgaria	42.0%	54.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	1.4%	4.9%	0.0%	0.0%	41.1%	52.1%	0.0%	0.0%
Croatia	37.7%	48.4%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.9%	3.3%	0.0%	0.0%	37.0%	46.6%	0.0%	0.0%
Cyprus	52.6%	60.8%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	28.2%	9.4%	0.0%	0.0%	46.9%	59.2%	0.0%	0.0%
Czech Republic	61.9%	74.4%	0.0%	0.0%	0.0%	0.0%	0.0%	1.5%	6.2%	12.2%	0.0%	0.0%	59.8%	68.9%	0.0%	0.0%
Denmark	36.4%	50.7%	0.0%	0.0%	0.0%	0.0%	0.0%	0.1%	4.5%	7.4%	0.0%	0.0%	35.2%	45.2%	0.0%	0.1%
Estonia	38.8%	59.2%	0.0%	0.0%	0.0%	0.0%	0.0%	0.2%	8.6%	3.0%	0.0%	0.0%	35.4%	57.0%	0.0%	0.0%
Finland	39.1%	58.9%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	3.5%	11.8%	0.0%	0.1%	38.3%	53.2%	0.0%	0.4%
France	41.3%	64.2%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	6.7%	10.0%	0.0%	0.0%	37.6%	59.4%	0.0%	0.0%
Germany	43.3%	57.7%	0.0%	0.0%	0.0%	0.0%	0.0%	2.2%	8.1%	5.5%	0.0%	0.0%	38.6%	53.9%	0.0%	0.1%
Greece	30.8%	55.2%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	1.7%	7.5%	0.0%	0.0%	29.9%	51.1%	0.0%	0.0%
Hungary	63.7%	76.8%	0.0%	0.0%	0.0%	0.0%	0.0%	0.7%	6.4%	7.7%	0.0%	0.0%	62.7%	74.8%	0.0%	0.0%
Ireland	55.1%	76.9%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	5.5%	5.6%	0.0%	0.0%	54.4%	74.7%	0.0%	0.0%
Italy	50.2%	66.8%	0.0%	0.0%	0.0%	0.0%	0.0%	1.2%	4.4%	8.0%	0.0%	0.0%	48.3%	63.5%	0.0%	0.0%
Latvia	13.4%	50.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	1.0%	6.2%	0.0%	0.0%	12.6%	45.9%	0.0%	1.3%
Lithuania	32.8%	53.6%	0.0%	0.0%	0.0%	0.0%	0.0%	0.1%	3.4%	8.1%	0.0%	0.0%	29.6%	48.3%	0.0%	2.5%
Luxembourg	49.6%	64.8%	0.0%	0.0%	0.0%	0.0%	0.0%	0.8%	9.1%	10.2%	0.0%	0.1%	48.8%	59.1%	0.0%	0.0%
Malta	48.8%	69.9%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	5.4%	8.4%	0.0%	0.0%	44.2%	69.9%	0.0%	0.0%
Netherlands	35.1%	59.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.1%	5.3%	12.1%	0.0%	0.0%	33.0%	52.8%	0.0%	0.0%
Poland	52.3%	67.2%	0.0%	0.0%	0.0%	0.0%	0.0%	0.9%	6.2%	10.2%	0.0%	0.0%	49.7%	61.6%	0.0%	0.0%
Portugal	52.6%	66.2%	0.0%	0.0%	0.0%	0.0%	0.0%	1.3%	6.6%	6.1%	0.0%	0.0%	49.9%	63.1%	0.0%	0.0%
Romania	65.6%	75.3%	0.0%	0.0%	0.0%	0.0%	0.0%	0.8%	0.8%	4.9%	0.0%	0.0%	65.3%	74.5%	0.0%	0.0%
Slovakia	49.6%	65.8%	0.0%	0.0%	0.0%	0.0%	0.0%	1.8%	5.2%	17.3%	0.0%	0.0%	47.5%	56.7%	0.0%	1.1%
Slovenia	52.2%	68.2%	0.0%	0.0%	0.0%	0.0%	0.0%	5.6%	6.8%	13.1%	0.0%	0.0%	48.2%	62.6%	0.0%	0.0%
Spain	40.9%	64.8%	0.0%	0.0%	0.0%	0.0%	0.0%	6.9%	8.2%	18.3%	0.0%	0.1%	36.6%	54.8%	0.0%	0.0%
Sweden	36.4%	56.8%	0.0%	0.0%	0.0%	0.0%	0.0%	0.7%	6.0%	9.9%	0.0%	0.1%	32.6%	51.6%	0.0%	0.2%
United Kingdom	37.1%	56.5%	0.0%	0.0%	0.0%	0.0%	0.0%	1.2%	2.5%	8.7%	0.0%	0.0%	35.4%	52.8%	0.0%	0.1%

Source: Global Trade Alert, computed on basis of data in that database on 21 September 2017. Data on finance-related trade distortions, import tariff, and price control measures have been omitted because there was no discernible export coverage found.

TECHNICAL ANNEX

Weight choice for heteroscedastic correction

The econometric approach described in the main text referred to the weighting of each observation to correct for likely heteroscedasticity. The weight employed here was the product of a "GTA information weight" and the trilateral product of the world trade shares of the export destination, the EU member and the base or comparator country in 2008 (that is, in a year before world trade flows were significantly disrupted by the global economic crisis.)

This technical annex develops the argument for this choice of weighting scheme in three steps. First, we explain our concern about the construction of the policy-related independent variables. Second, we discuss the noise (variance) in the dependent variable. Finally, we explain how a Glejser test was used to choose the weighting scheme.

Construction of the policy-related independent variables

The variant of the gravity equation employed here refers to the relationship between a country's exports to a given destination and various competitiveness-related and policy variables. The GTA database, in turn, includes interventions affecting access to the destination market as well as export subsidies. To allow for a straightforward application of GTA database entries in a gravity equation study, the affected market identifies the export destination where commerce is distorted by a given policy intervention. In the case of an import restriction, the distorted market is the economy of the implementing jurisdiction. However, in the case of an export subsidy for a particular product, the distorted markets are the export destinations for that good supplied by firms from the implementing jurisdiction. It is in those markets where other countries' exporters compete against a subsidised rival.

The data set used in this paper includes information on more than 140 export destinations. Our policy-related independent variables are constructed from GTA dataset on policy interventions affecting exporters to each of these destinations. While the GTA database aspires to comprehensive coverage, resources are finite and varying degrees of government transparency imply potential monitoring heterogeneity across export destinations.

To address this concern, we construct a "GTA information weight" for each export destination. This weight is the total number of policy interventions documented in the GTA database where the export destination is the affected market. Note that policy interventions are counted regardless of their implementation status and whether the intervention classified as liberalising or harmful—true, therefore, to the spirit of assessing the amount of information about policy intervention affecting a given destination market. Note further that the affected market need not be the jurisdiction that implemented a policy intervention in question.

Heteroscedasticity of the regression errors

A second source of concern we addressed was unexpected patterns in the variance of the dependent variable. Recall that our dependent variable is the ratio of EU member export growth over base country export growth. As explained below, the expected variance of this dependent variable is subject to a significant base effect that is outside the standard model. Our conjecture is to include this information by weighting with the product of the shares in world trade.

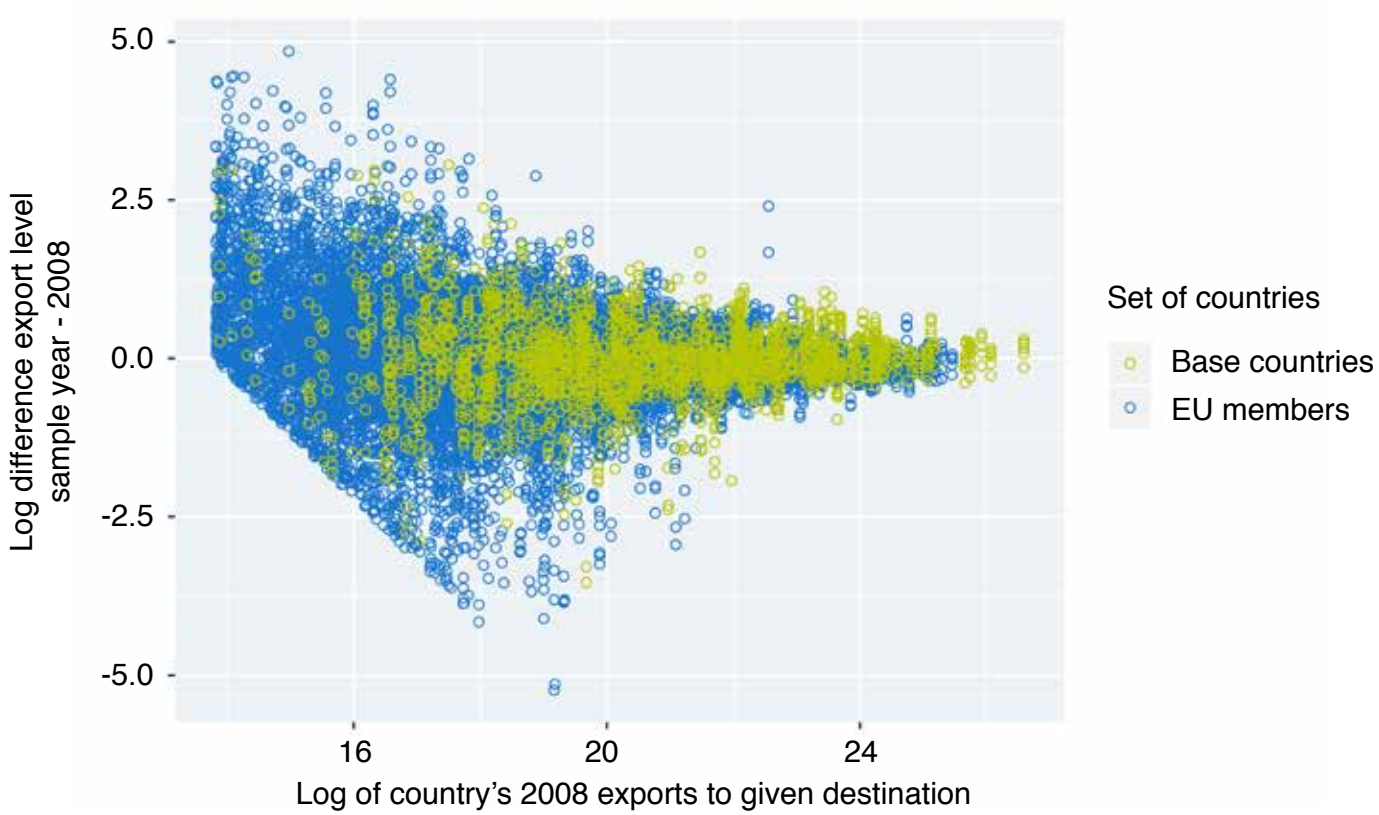
Our concern can be illustrated as follows. Consider a severely supply-constrained German exporter who can sell the last car on his lot to either a Cambodian or a French buyer. Assume for the sake of argument that both buyers offer the same price net of taxes and transportation costs. The sale of this extra car has a different effect on the observed bilateral export growth rate if it goes to France rather than to Cambodia. While the absolute export value of that car is the same, the total value of German exports to France is substantially higher than the total German exports to Cambodia. Put differently, for bilateral trade relationships that start from a high initial value of exports, the range of likely export growth rates over a short time frame (say, a few years) tends to be smaller than for bilateral trade relationships with smaller levels of initial bilateral exports.

Using data from our samples, Figure 17 illustrates this concern. The export value in our base year, 2008, is plotted on the horizontal axis with larger values further to the right. We plot the observed bilateral export growth rates across our sample on the vertical axis. Note that these growth rates are not identical to the dependent variable used in our estimation. For our estimation, we will take the difference between the EU member's and the base country's observed growth rate to the same export destination. In Figure 17, we plot each term of that difference separately. The change in the variance of the export growth rates going from smaller to larger starting values is striking.

To illustrate how this concern carries over from the decomposed growth rates into our dependent variable, Figure 18 plots values of the dependent variable against the minimum bilateral export value observed in 2008. To interpret this, recall that our dependent variable includes not only German exports to, say France, but also the exports of a base country to the same destination. To observe a large change in the export growth differential, only one of the two exporters needs to start from a low value of bilateral exports. We thus plot the minimum of the EU member's or the base country's observed 2008 export value on the horizontal axis and our dependent variable on the vertical axis. Again, the variance of the dependent variable is significantly larger for smaller values of the minimum exports in 2008.

FIGURE 17

The range of observed growth rates varies with initial trade volume



Unfortunately, this source of fluctuation in the dependent variable is outside our empirical model. We thus resort the inclusion of an additional variable weight to address the implied heteroscedasticity. The variable we propose is the trilateral product of shares in world trade. That is, we compute the product of the share of world trade accounted for by the total exports of each exporting country as well as the share of world trade attributable to the total imports of the importing country. In the example used above, we would multiply the share of total German exports in world trade with the share of base country total exports in world trade and the share of French total imports in world trade. Given we construct observations of differential bilateral growth from year 2008, we use the that year to calculate the relevant shares of world trade. The fit of this weight is shown in Figure 19. As expected, the extreme values of the dependent variable are concentrated on the left end of the horizontal axis.

One might argue that the GTA information weight is a sufficient means to address both the measurement uncertainty in the policy variables and the heteroscedasticity in the dependent variable. Arguably, part of this heteroscedasticity is addressed through the inclusion of the GTA information weight. This is true as long as the degree of GTA monitoring comprehensiveness is a monotonic function of a country's share in world imports.

FIGURE 18

The variance of the dependent variable varies with the initial trade volume

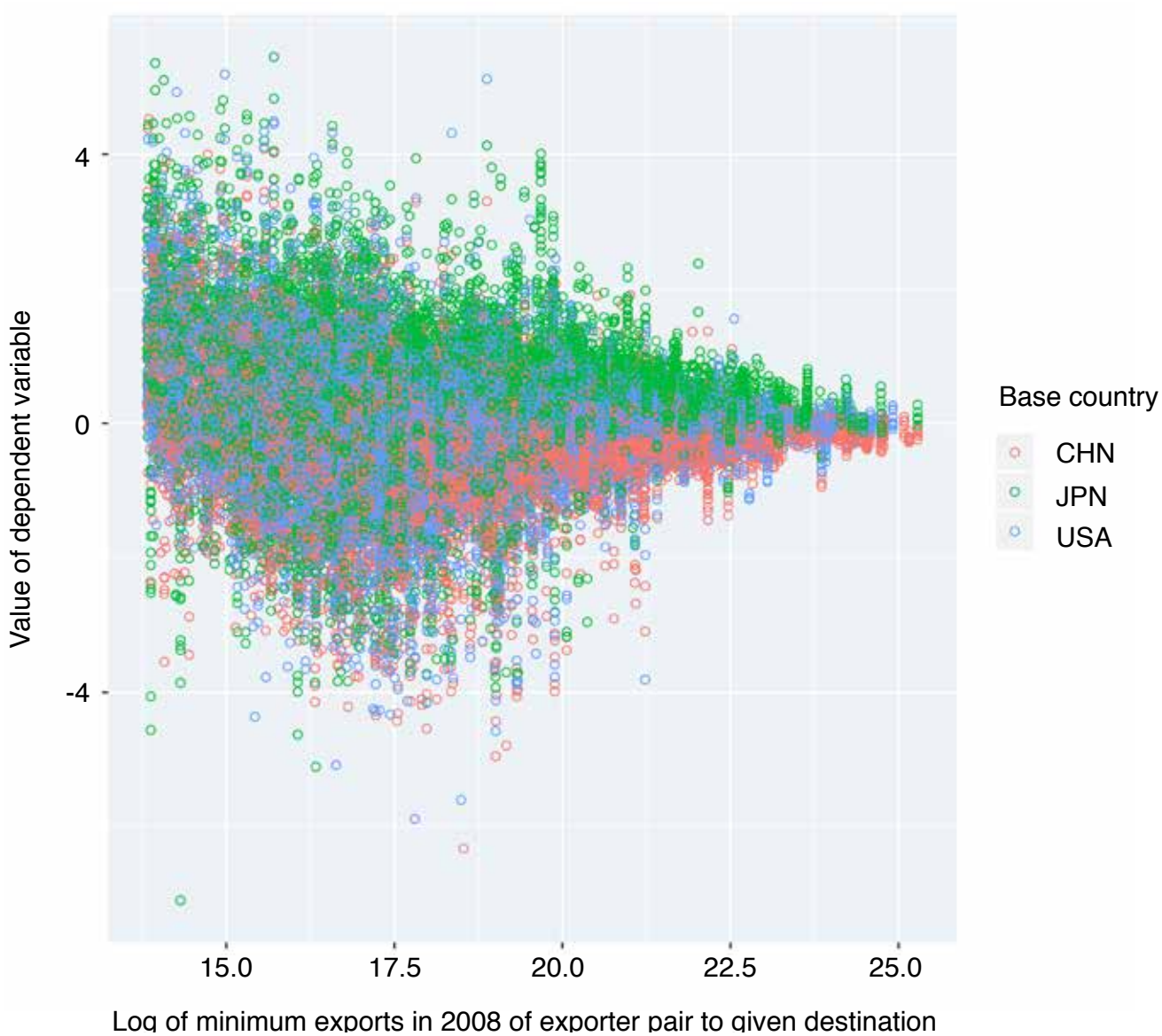
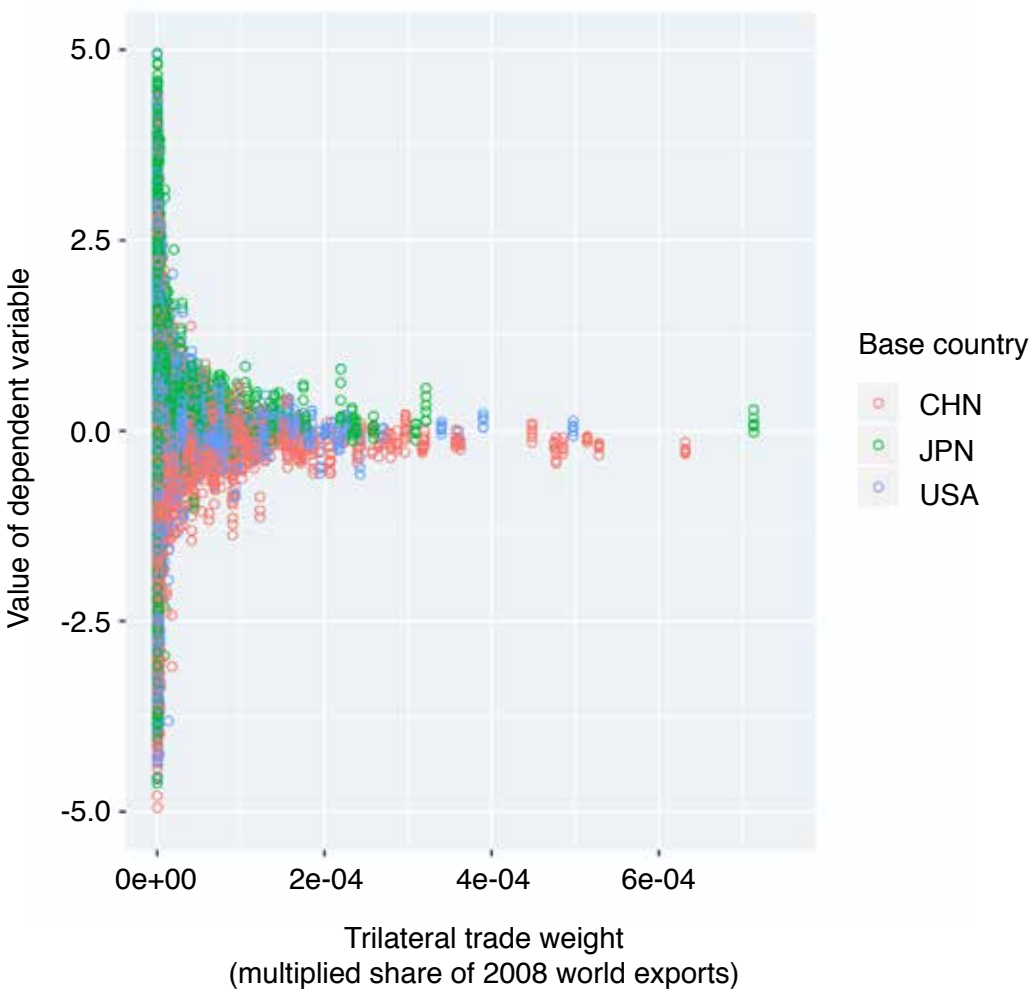


FIGURE 19

The trilateral trade weight is inversely proportional to the absolute value of the dependent variable



As is evident from Figure 20, the GTA information weight alone does not suffice in addressing the heteroscedasticity concern. The problem is that the GTA information weight defined above is destination-country specific and does not vary across different exporters. Figure 20 suggests there is considerable heterogeneity across bilateral trade relationships for the same destination market.

Testing for heteroscedasticity and the form of the weight

We use the Glejser test to assess the performance of different possible weights (Glejser 1969). For both the intra- and the extra-EU sample, we estimate a specification with no trimming and all policy-relevant independent variables. We then recover the absolute values of the error terms and regress their natural log on the natural log of different possible weights. The results of this exercise are displayed in Appendix Table 4 below.

According to the Glejser test, both our proposed weights can account for part of the heteroskedasticity in the error term. All estimated coefficients are highly significant and thus reject the null hypothesis of homoscedasticity. The almost identical R^2 for the equations using only the trade weight or the combined variable weight leaves us indifferent between which weighting variable to include. However, since the primary role of the GTA information weight is to address measurement uncertainty, we opt for the inclusion of the combined weight when estimating the regressions presented in the main text.

Finally, the estimated coefficient for the combined weight informs our choice about the power with which to include it into the estimation. Given that these coefficients are negative, in our regressions we include the weight in levels rather than the square root of the weight.

FIGURE 20

The GTA information weight does not capture all relevant heteroscedasticity

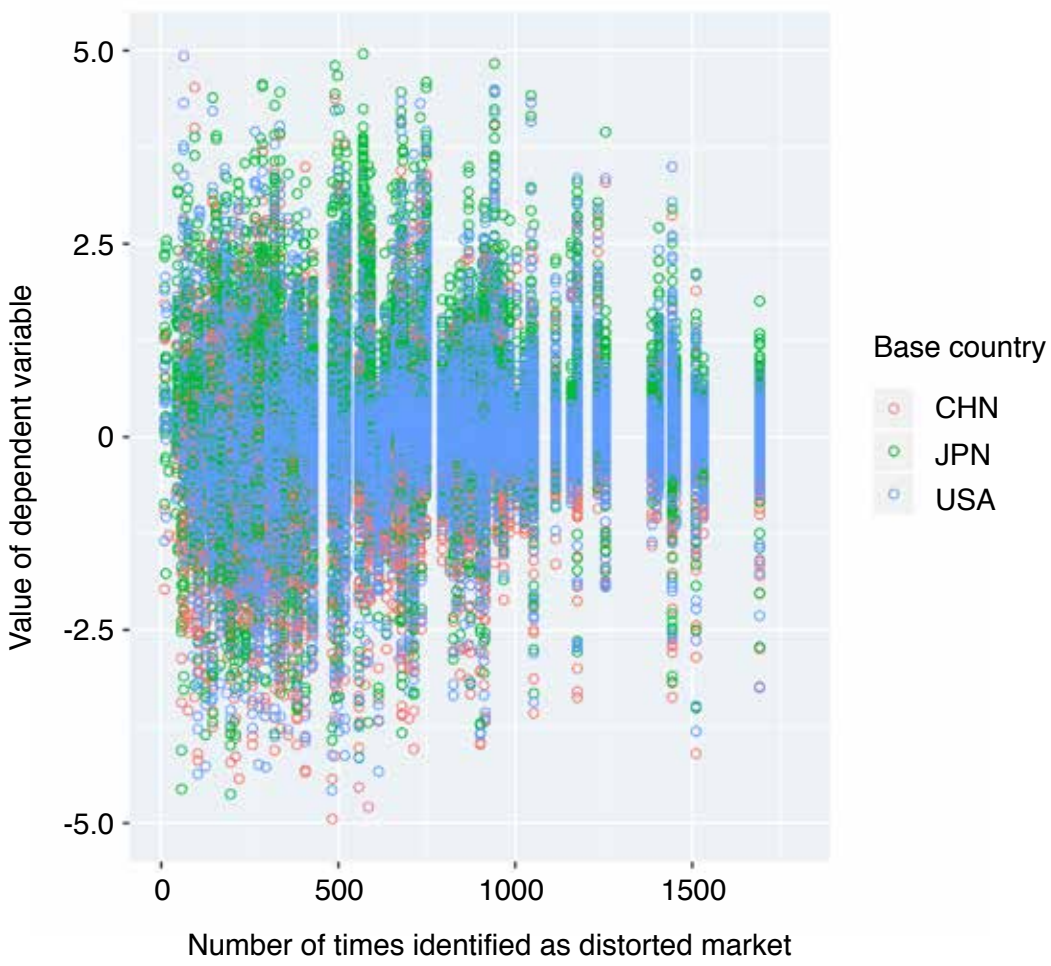


TABLE A4

Detailed breakdown of types of discriminatory policy instrument harming EU commercial interests, in descending order of use

Sample	Intra-EU	Intra-EU	Intra-EU	Extra-EU	Extra-EU	Extra-EU
ln-\Dependent variable	ln(abs(ei))	ln(abs(ei))	ln(abs(ei))	ln(abs(ei))	ln(abs(ei))	ln(abs(ei))
Trilateral trade weight in logs	-0.237*** (0.00534)			-0.210*** (0.00337)		
GTA information statistic in logs		-1.225*** (0.0355)			-0.339*** (0.00930)	
Product of GTA statistic and trilateral trade weight			-0.219*** (0.00483)			-0.159*** (0.00266)
Constant	-4.381*** (0.0696)	6.990*** (0.241)	-2.664*** (0.0312)	-3.920*** (0.0467)	1.045*** (0.0574)	-2.247*** (0.0213)
Observations	13,065	13,065	13,065	32,076	32,076	32,076
R-squared	0.131	0.084	0.136	0.108	0.040	0.101
Degrees of freedom	13063	13063	13063	32074	32074	32074

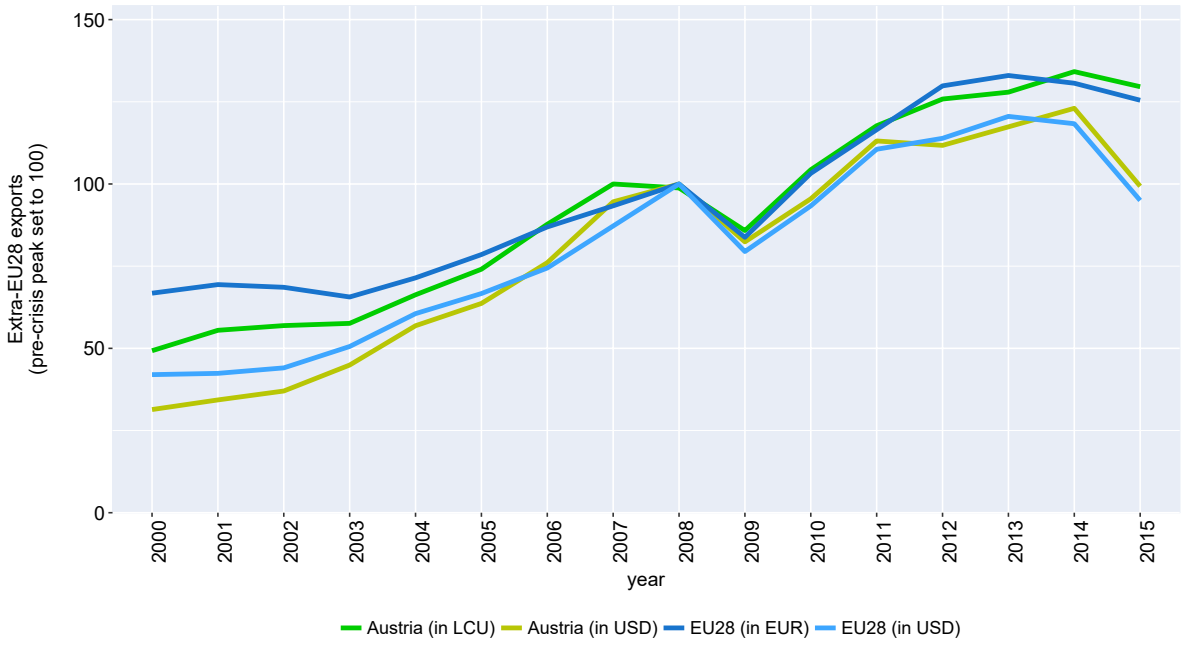
DATA ON EACH MEMBER STATE

AUSTRIA

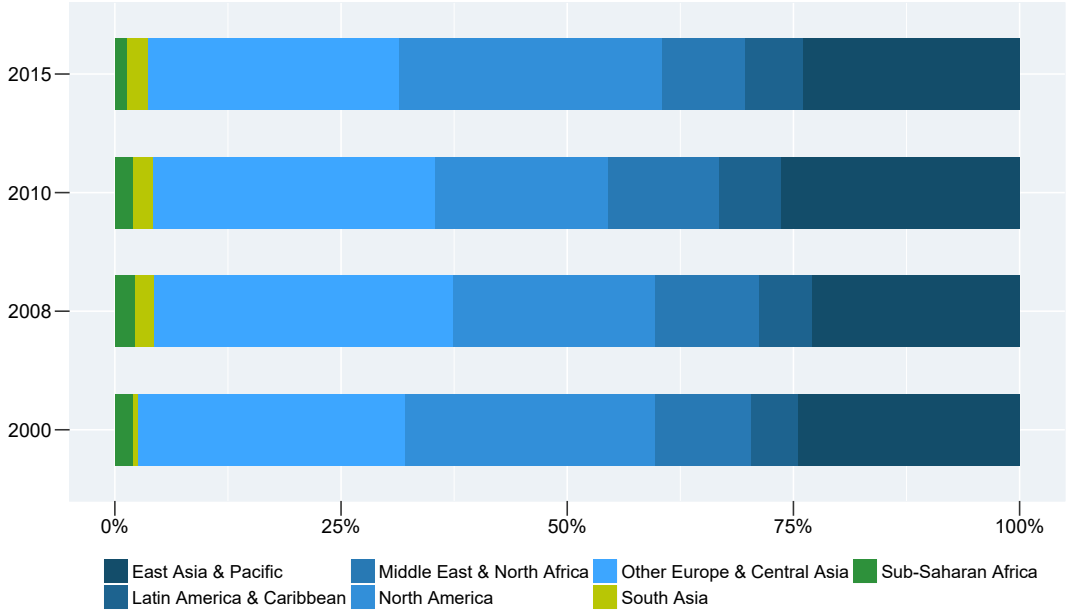
Total amount of exta-EU exports in 2014 (in billion USD): 47.55

Extra-EU exports as a percentage of total exports in 2014: 32.21%

Exports of Austria and EU in current US dollars and euros



Distribution of extra-EU28 exports across regions



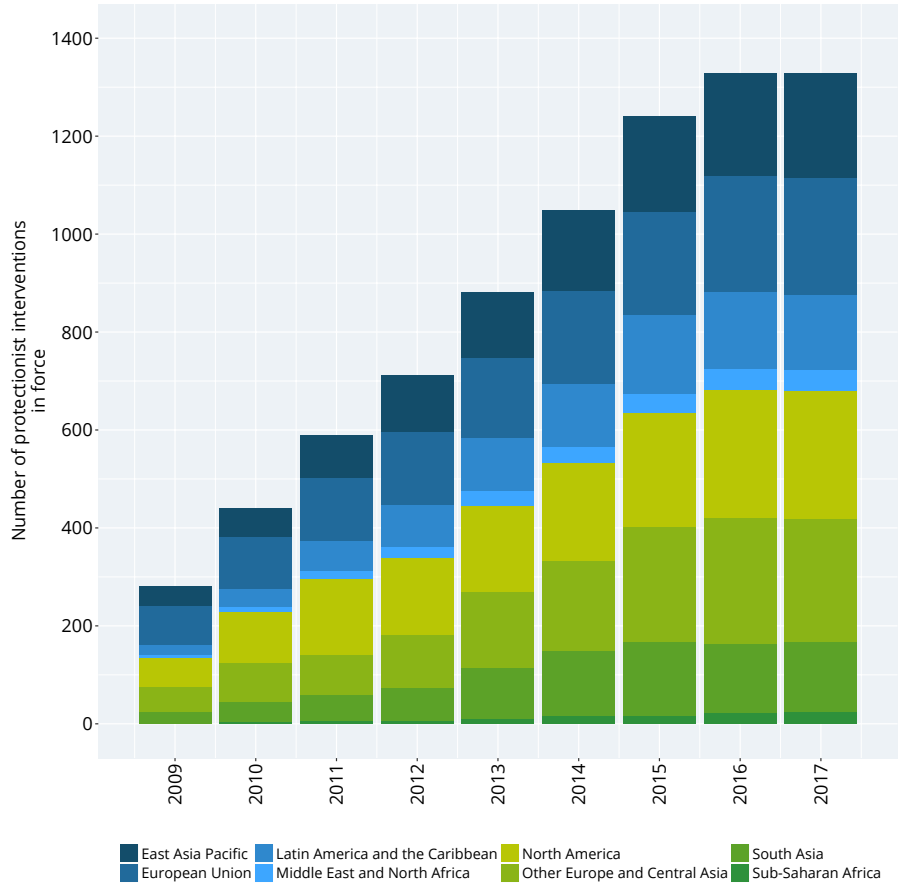
Percentage of extra-EU exports at risk

Foreign descriminatory trade instrument	2009	2010	2011	2012	2013	2014	2015
All forms of foreign discrimination	47.4%	57.5%	60.5%	63.4%	65.2%	66.2%	66.6%
Contingent trade protection	0.1%	0.3%	0.4%	0.4%	0.5%	0.5%	0.5%
Non-automatic licensing, quotas	1.0%	0.3%	0.6%	0.7%	1.1%	1.2%	1.2%
Price control measures	0.0%	0.0%	0.1%	0.1%	0.1%	0.2%	0.4%
Investment measures	0.4%	0.5%	0.7%	0.7%	0.8%	1.6%	2.5%
Subsidies (except export subsidies)	9.0%	12.3%	12.4%	13.9%	15.8%	16.3%	16.9%
Government procurement	1.6%	2.7%	2.8%	3.3%	3.4%	3.7%	4.6%
Export measures	41.8%	50.0%	53.7%	58.3%	59.6%	58.5%	58.6%
Import tariff measures	1.5%	3.6%	3.5%	4.0%	4.8%	6.2%	6.6%
Instrument unclassified	0.0%	0.0%	0.0%	0.2%	0.5%	1.5%	7.3%

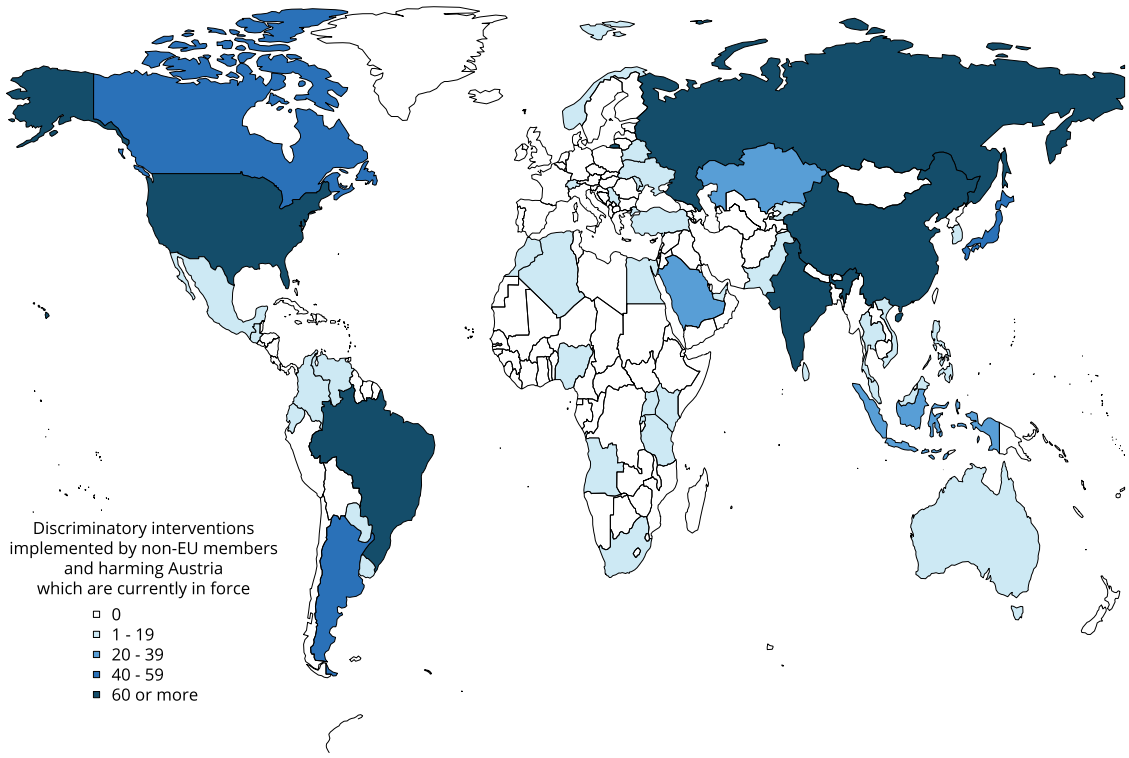
Percentage of intra-EU exports at risk

Foreign descriminatory trade instrument	2009	2010	2011	2012	2013	2014	2015
All forms of foreign discrimination	43.1%	52.3%	55.4%	59.4%	60.8%	65.3%	64.6%
Contingent trade protection	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Non-automatic licensing, quotas	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Investment measures	0.0%	0.3%	0.4%	0.4%	0.4%	0.4%	0.4%
Subsidies (except export subsidies)	3.7%	9.0%	9.4%	10.4%	8.6%	13.8%	14.3%
Government procurement	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Export measures	41.1%	46.7%	49.3%	53.9%	56.6%	57.6%	56.7%
Instrument unclassified	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Exports benefitting from export incentives	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%

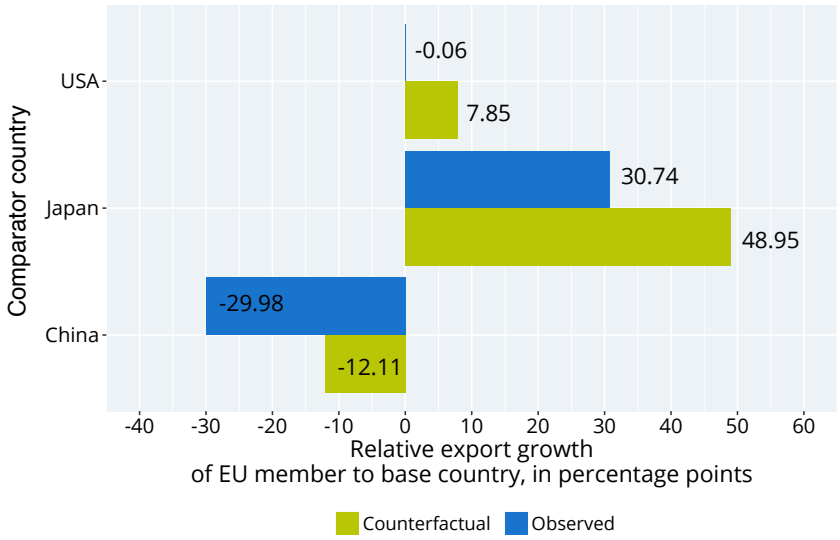
Regional distribution of protectionist interventions harming Austria's exports, 2009-2017



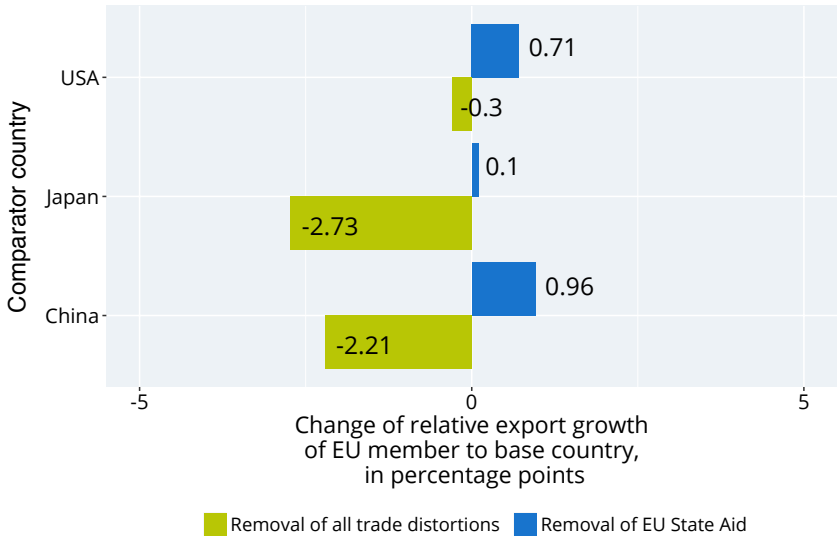
Discriminatory interventions harming Austria's extra-EU exports currently in force



Austria's extra-EU export growth without crisis-era trade barriers relative to each country comparator, 2008-2014



Austria's intra-EU export growth without crisis-era trade barriers relative to each country comparator, 2008-2014

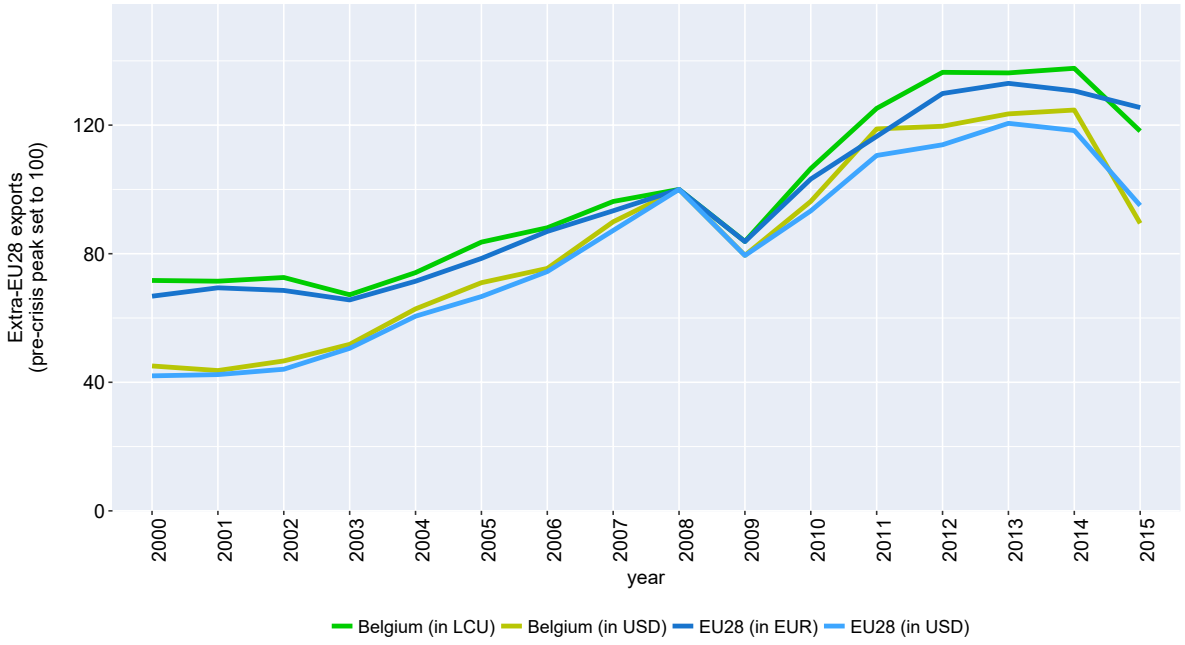


BELGIUM

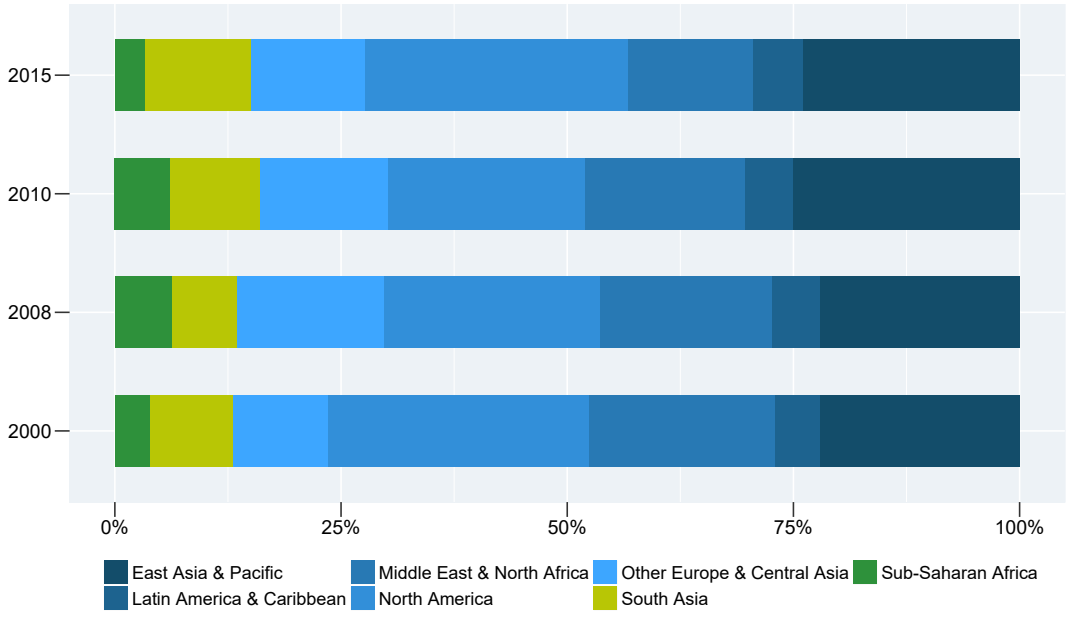
Total amount of exta-EU exports in 2014 (in billion USD): 93.56

Extra-EU exports as a percentage of total exports in 2014: 27.67%

Exports of Belgium and EU in current US dollars and euros



Distribution of extra-EU28 exports across regions



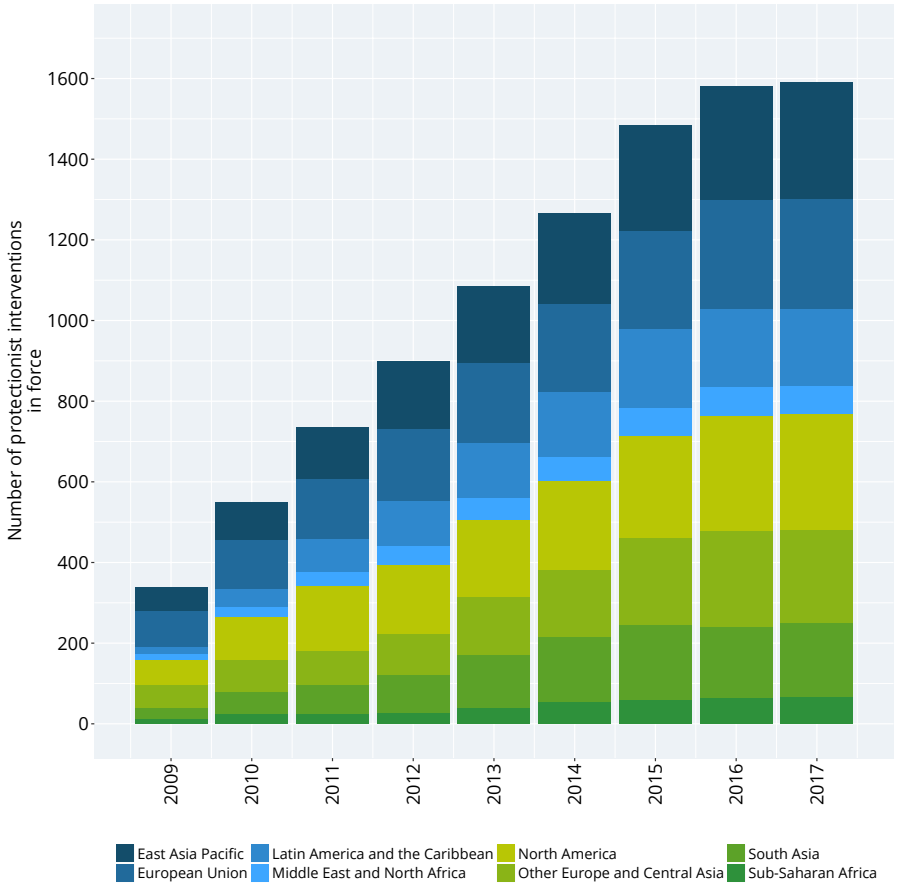
Percentage of extra-EU exports at risk

Foreign descriminatory trade instrument	2009	2010	2011	2012	2013	2014	2015
All forms of foreign discrimination	47.8%	60.4%	66.3%	69.7%	72.6%	72.2%	71.9%
Contingent trade protection	0.1%	0.2%	0.2%	0.4%	0.4%	0.5%	0.6%
Non-automatic licensing, quotas	0.4%	0.3%	0.4%	0.7%	0.8%	1.1%	1.1%
Price control measures	0.0%	0.0%	0.1%	0.1%	0.1%	0.2%	0.4%
Investment measures	0.8%	1.2%	1.1%	1.2%	1.2%	1.6%	2.2%
Subsidies (except export subsidies)	4.0%	5.1%	7.5%	12.6%	14.6%	15.2%	15.7%
Government procurement	0.9%	1.6%	1.6%	2.1%	2.3%	2.6%	3.2%
Export measures	41.8%	50.9%	56.8%	59.6%	61.1%	61.1%	60.7%
Import tariff measures	4.8%	9.7%	9.9%	10.7%	12.9%	12.4%	12.9%
Instrument unclassified	0.0%	0.1%	0.1%	0.4%	0.9%	3.9%	8.9%

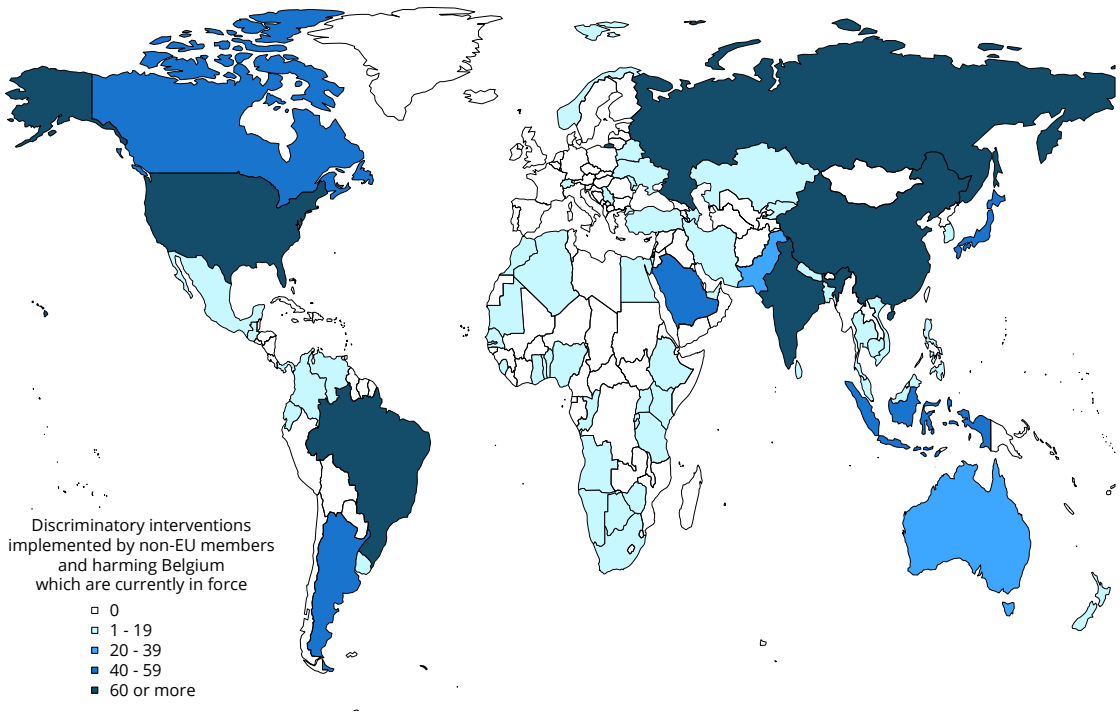
Percentage of intra-EU exports at risk

Foreign descriminatory trade instrument	2009	2010	2011	2012	2013	2014	2015
All forms of foreign discrimination	34.2%	45.8%	49.7%	53.0%	54.4%	58.5%	56.5%
Contingent trade protection	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Non-automatic licensing, quotas	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Investment measures	0.0%	0.7%	0.8%	0.8%	0.8%	0.8%	0.8%
Subsidies (except export subsidies)	6.6%	11.2%	7.4%	7.9%	7.5%	14.6%	12.8%
Government procurement	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.1%
Export measures	29.8%	39.8%	45.8%	50.0%	51.2%	51.1%	50.0%
Instrument unclassified	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Exports benefitting from export incentives	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%

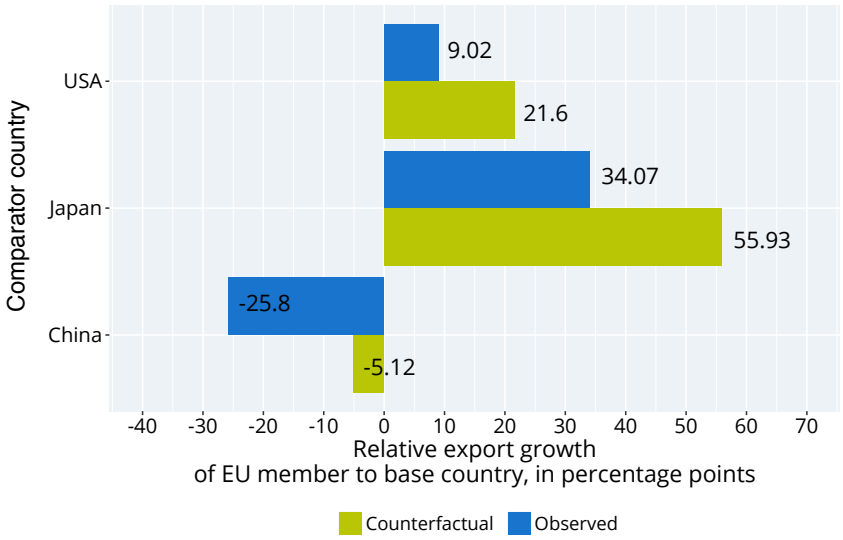
Regional distribution of protectionist interventions harming Belgium's exports, 2009-2017



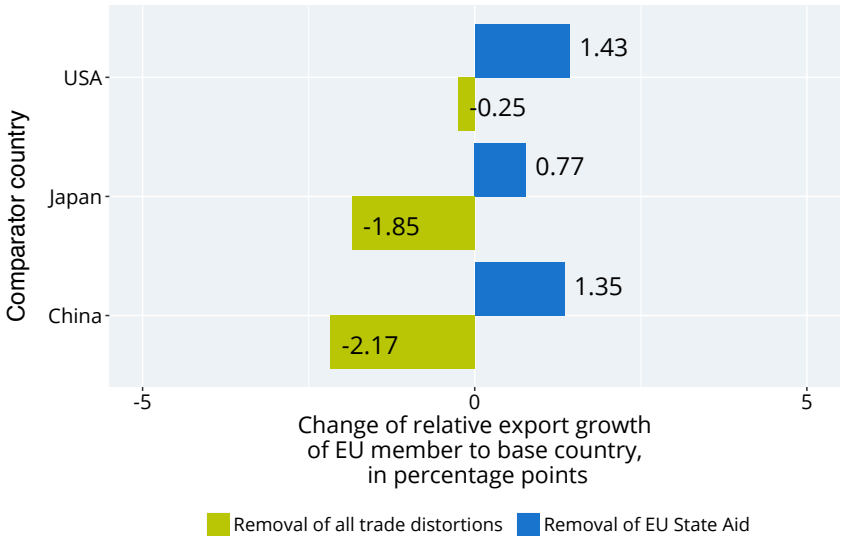
Discriminatory interventions harming Belgium's extra-EU exports currently in force



Belgium's extra-EU export growth without crisis-era trade barriers relative to each country comparator, 2008-2014



Belgium's intra-EU export growth without crisis-era trade barriers relative to each country comparator, 2008-2014

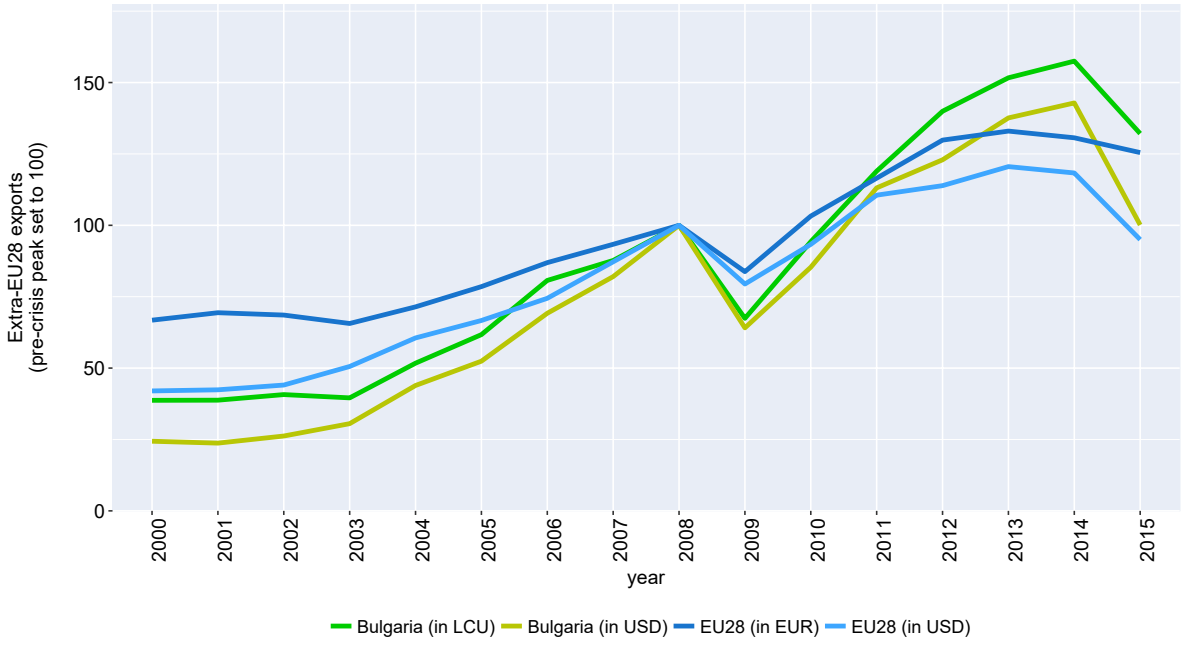


BULGARIA

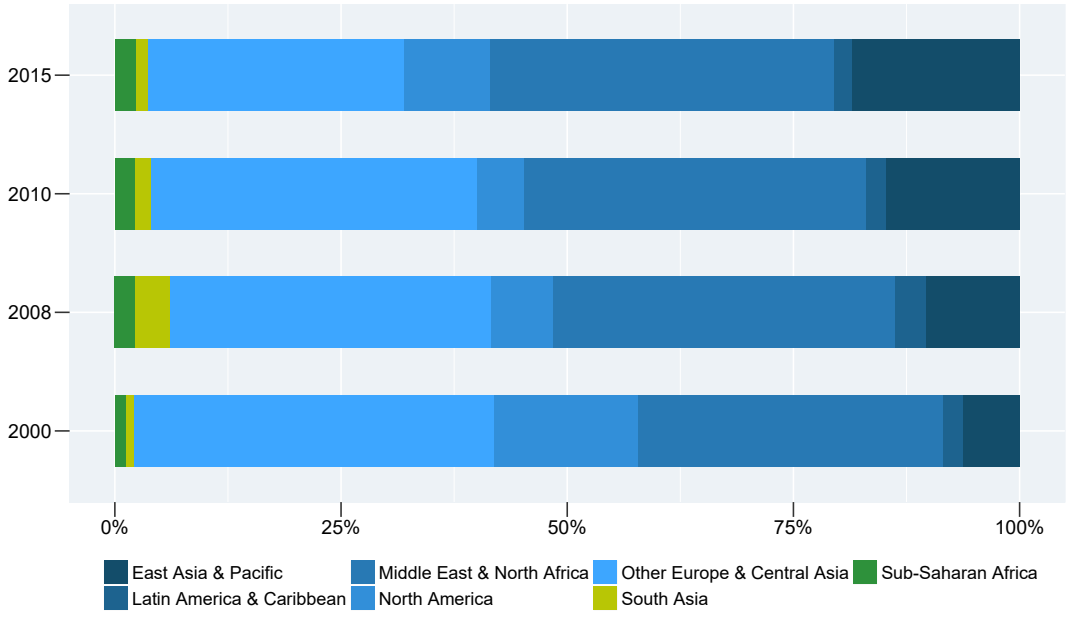
Total amount of exta-EU exports in 2014 (in billion USD): 9

Extra-EU exports as a percentage of total exports in 2014: 37.03%

Exports of Bulgaria and EU in current US dollars and euros



Distribution of extra-EU28 exports across regions



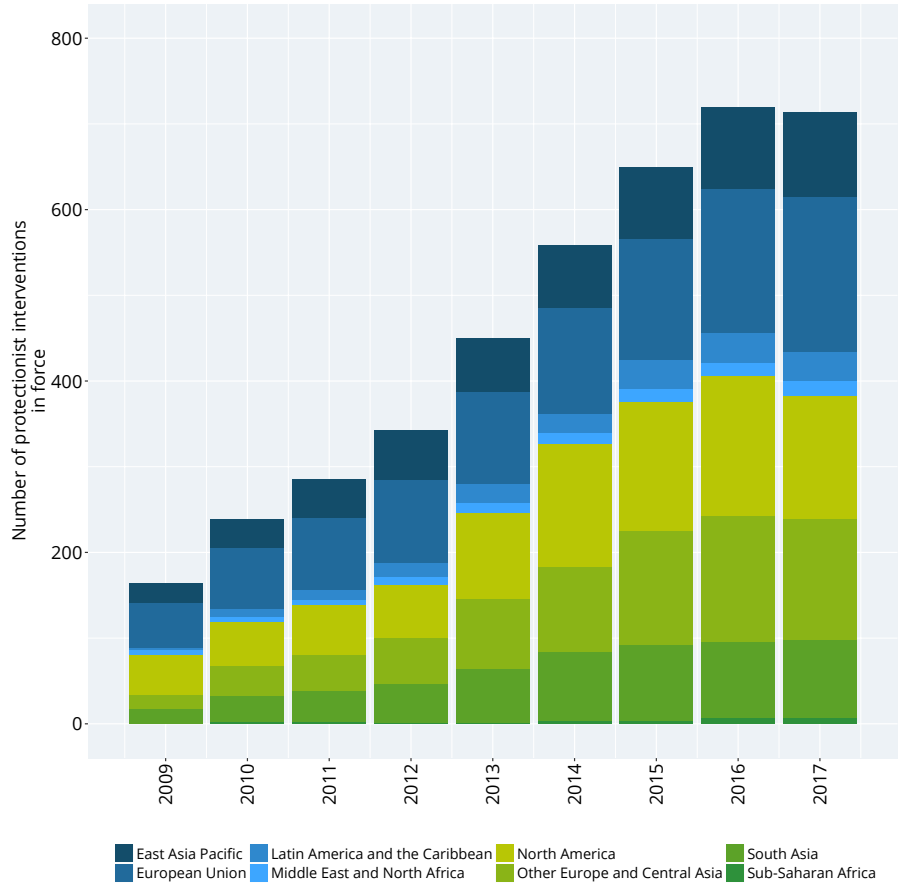
Percentage of extra-EU exports at risk

Foreign descriminatory trade instrument	2009	2010	2011	2012	2013	2014	2015
All forms of foreign discrimination	18.0%	27.1%	33.6%	36.4%	40.7%	41.9%	39.0%
Contingent trade protection	0.0%	0.3%	0.5%	0.6%	0.7%	0.7%	0.4%
Non-automatic licensing, quotas	0.1%	0.4%	0.2%	0.3%	0.4%	0.6%	0.8%
Price control measures	0.2%	0.2%	0.5%	0.5%	0.5%	0.5%	0.5%
Investment measures	0.0%	0.0%	0.2%	0.3%	0.3%	0.3%	0.3%
Subsidies (except export subsidies)	0.9%	2.8%	2.9%	3.0%	5.5%	7.3%	7.4%
Government procurement	1.0%	1.4%	0.6%	0.9%	0.8%	0.9%	1.1%
Export measures	16.7%	25.1%	32.1%	34.5%	37.5%	38.0%	34.9%
Import tariff measures	0.1%	0.6%	0.8%	1.0%	2.1%	2.2%	2.3%
Instrument unclassified	0.0%	0.0%	0.0%	0.3%	0.3%	0.2%	0.3%

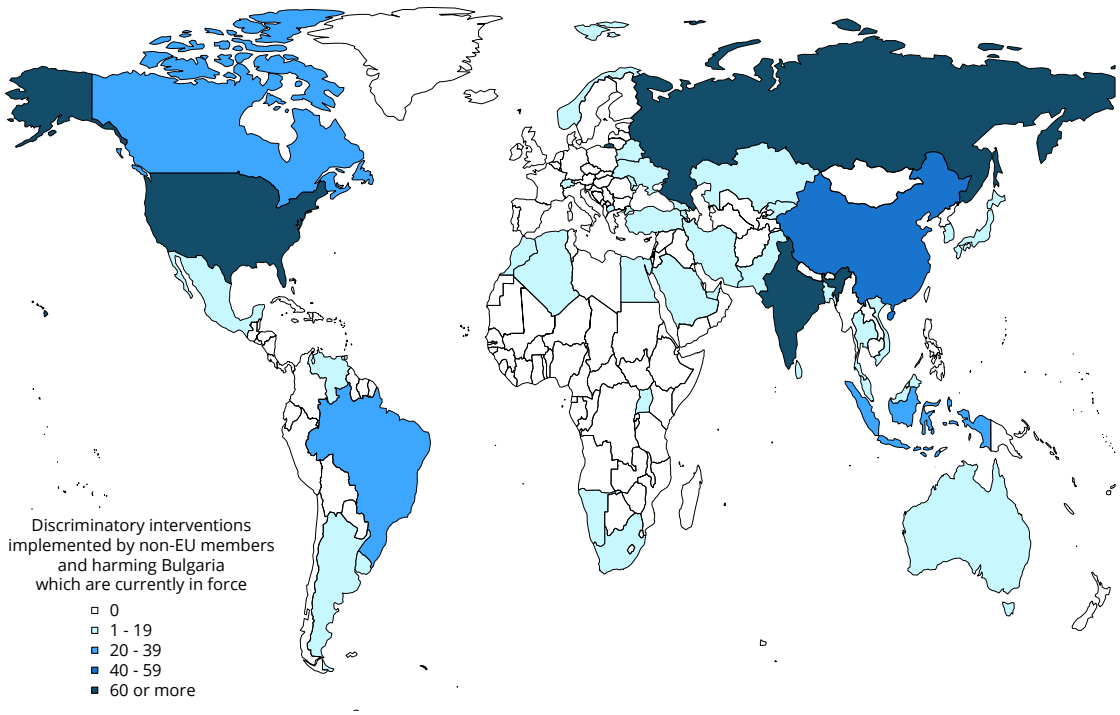
Percentage of intra-EU exports at risk

Foreign descriminatory trade instrument	2009	2010	2011	2012	2013	2014	2015
All forms of foreign discrimination	42.0%	49.4%	51.0%	51.9%	52.3%	53.9%	54.1%
Contingent trade protection	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Non-automatic licensing, quotas	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Investment measures	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Subsidies (except export subsidies)	1.4%	4.2%	4.0%	3.8%	3.2%	5.1%	4.9%
Government procurement	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Export measures	41.1%	46.9%	48.8%	49.7%	50.8%	51.4%	52.1%
Instrument unclassified	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Exports benefitting from export incentives	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%

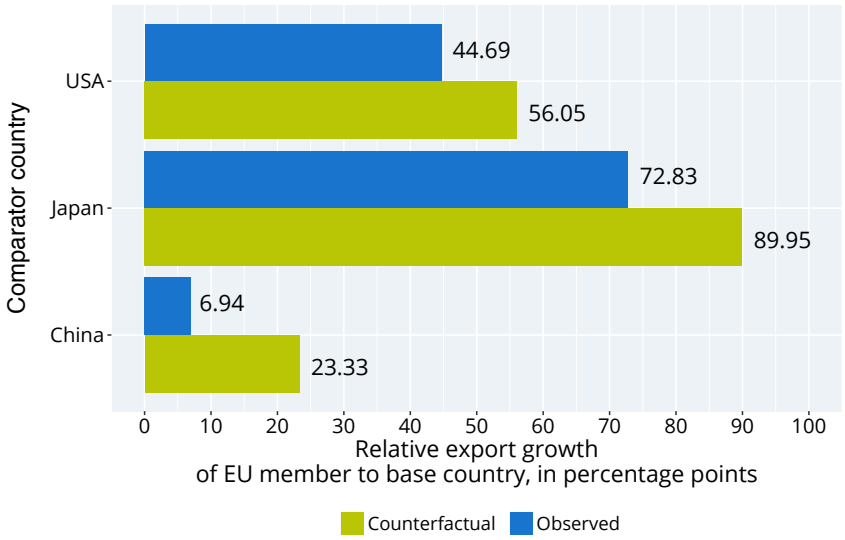
Regional distribution of protectionist interventions harming Bulgaria's exports, 2009-2017



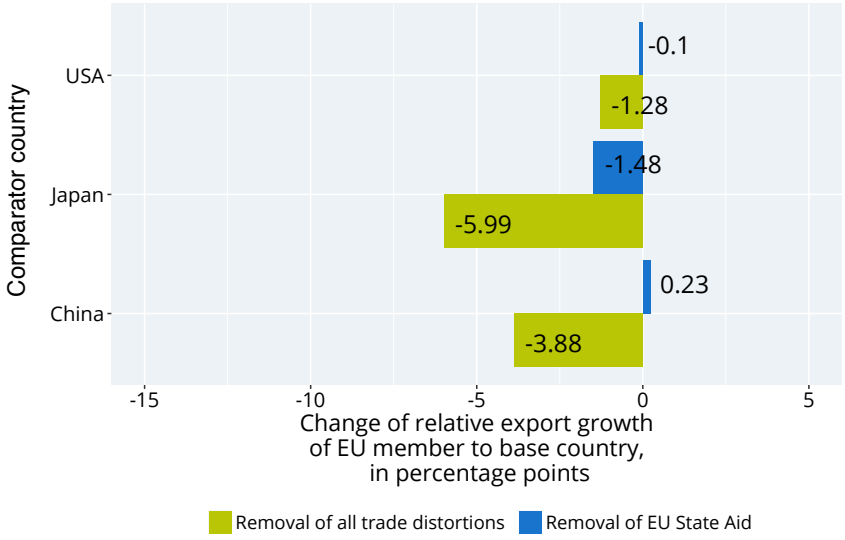
Discriminatory interventions harming Bulgaria's extra-EU exports currently in force



Bulgaria's extra-EU export growth without crisis-era trade barriers relative to each country comparator, 2008-2014



Bulgaria's intra-EU export growth without crisis-era trade barriers relative to each country comparator, 2008-2014

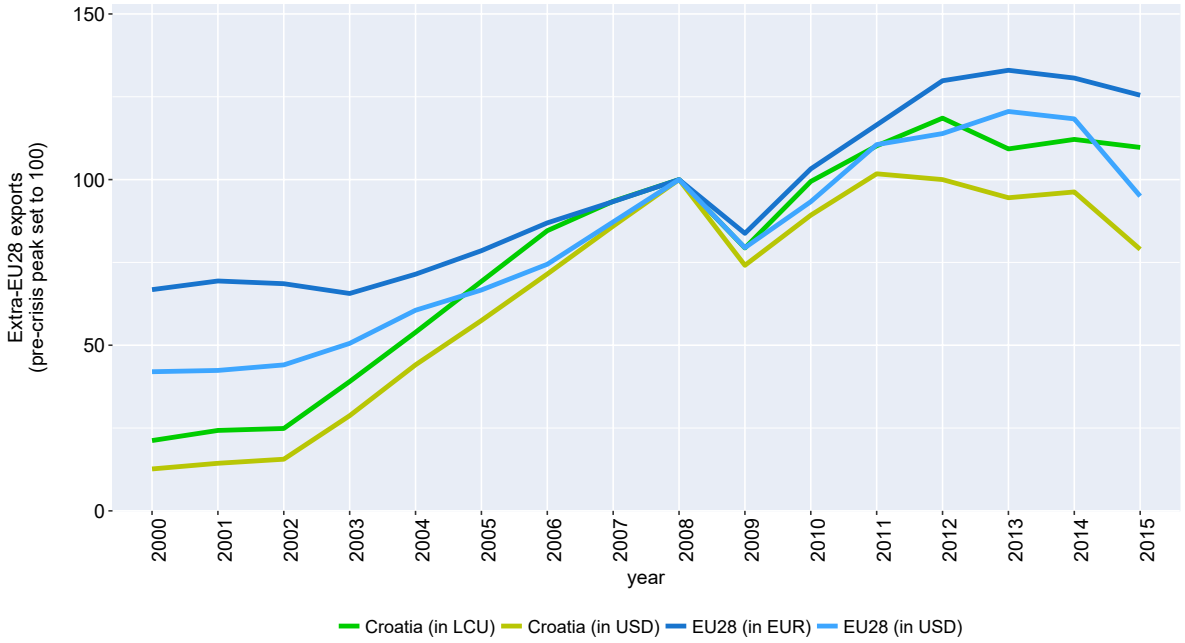


CROATIA

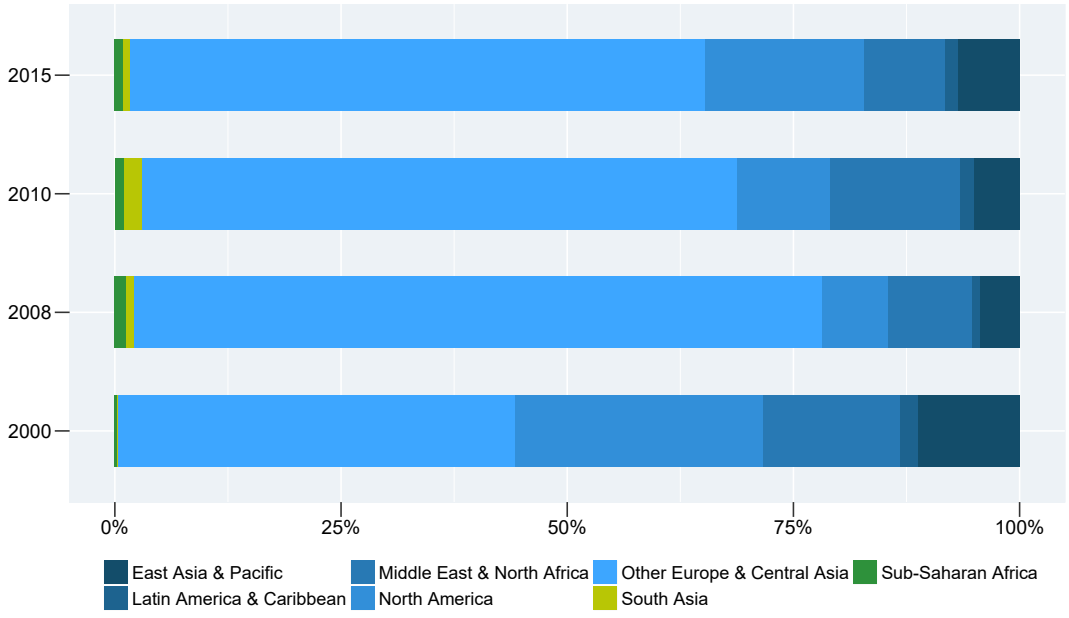
Total amount of exta-EU exports in 2014 (in billion USD): 3.01

Extra-EU exports as a percentage of total exports in 2014: 32.75%

Exports of Croatia and EU in current US dollars and euros



Distribution of extra-EU28 exports across regions



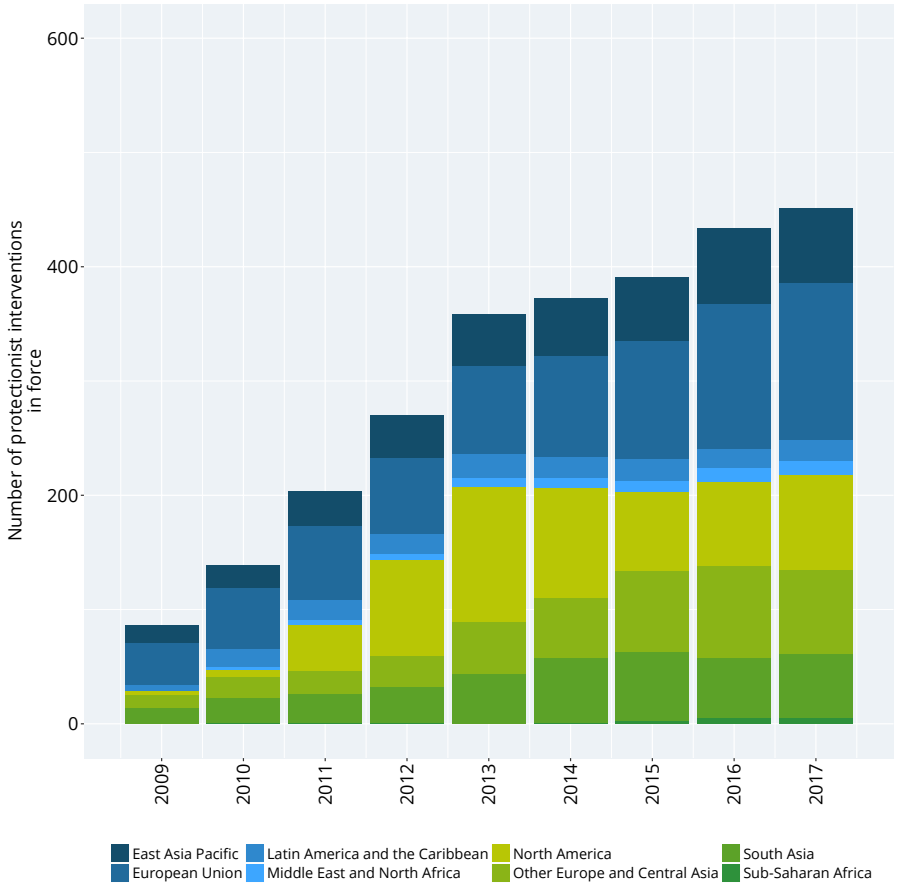
Percentage of extra-EU exports at risk

Foreign descriminatory trade instrument	2009	2010	2011	2012	2013	2014	2015
All forms of foreign discrimination	16.6%	22.3%	23.7%	26.3%	26.7%	25.3%	26.9%
Contingent trade protection	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Non-automatic licensing, quotas	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.2%
Price control measures	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Investment measures	0.0%	0.0%	0.1%	0.1%	0.1%	0.1%	0.2%
Subsidies (except export subsidies)	0.8%	3.5%	3.7%	6.5%	8.3%	8.4%	8.4%
Government procurement	0.0%	0.2%	0.1%	0.1%	0.1%	0.1%	0.3%
Export measures	16.2%	20.5%	22.2%	24.8%	25.0%	23.6%	25.0%
Import tariff measures	0.0%	0.2%	0.1%	0.1%	0.6%	0.7%	0.6%
Instrument unclassified	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%

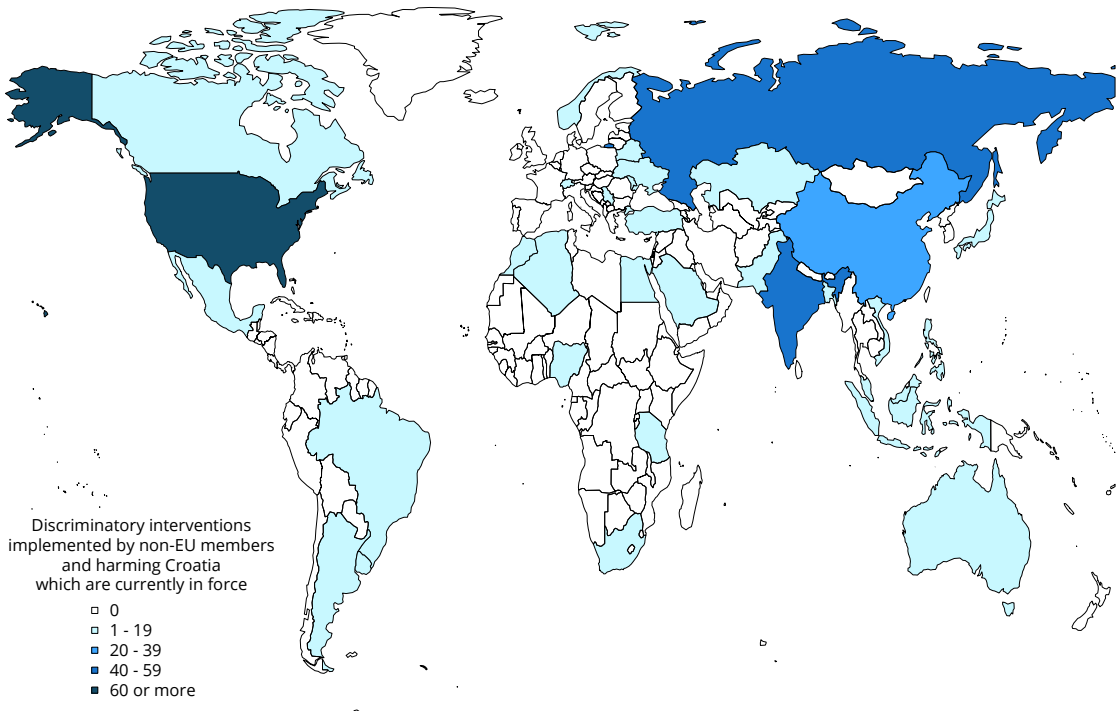
Percentage of intra-EU exports at risk

Foreign descriminatory trade instrument	2009	2010	2011	2012	2013	2014	2015
All forms of foreign discrimination	37.7%	43.3%	46.0%	47.5%	48.2%	48.8%	48.4%
Contingent trade protection	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Non-automatic licensing, quotas	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Investment measures	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Subsidies (except export subsidies)	0.9%	2.3%	2.3%	1.9%	2.2%	3.2%	3.3%
Government procurement	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Export measures	37.0%	42.2%	45.1%	46.7%	47.1%	47.2%	46.6%
Instrument unclassified	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Exports benefitting from export incentives	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%

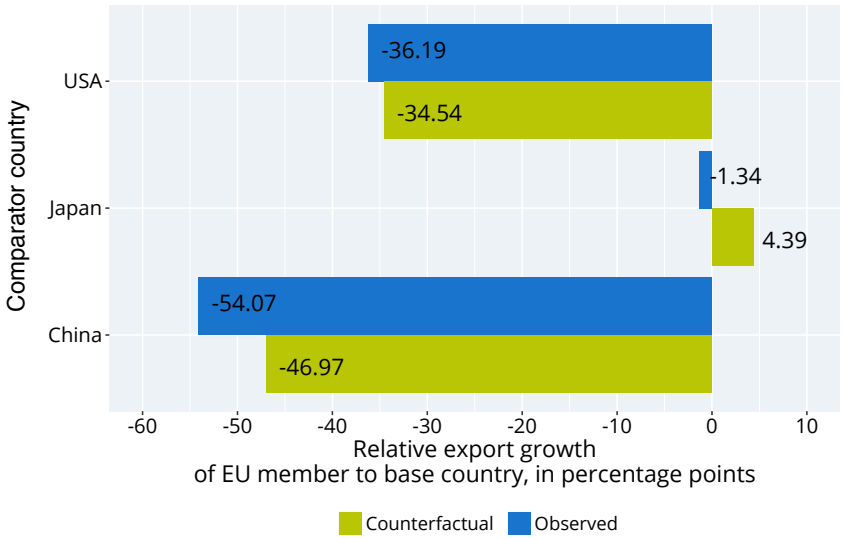
Regional distribution of protectionist interventions harming Croatia's exports, 2009-2017



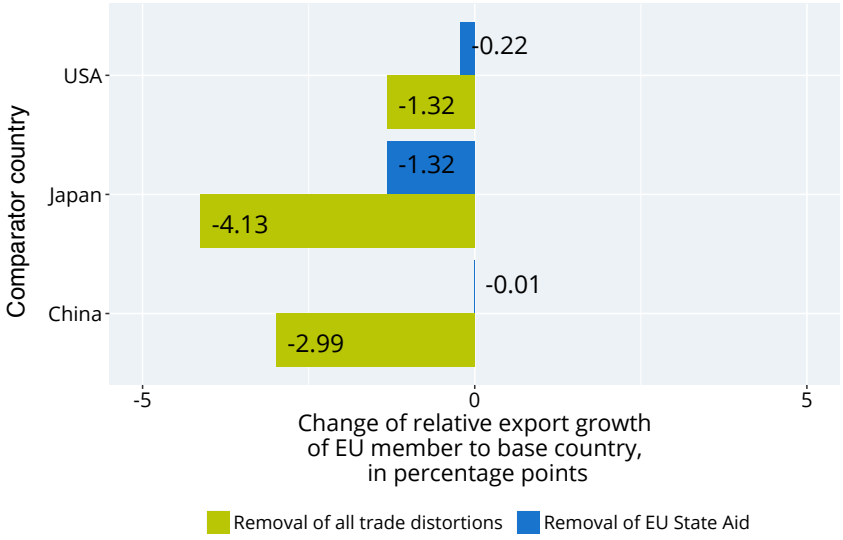
Discriminatory interventions harming Croatia's extra-EU exports currently in force



Croatia's extra-EU export growth without crisis-era trade barriers relative to each country comparator, 2008-2014



Croatia's intra-EU export growth without crisis-era trade barriers relative to each country comparator, 2008-2014

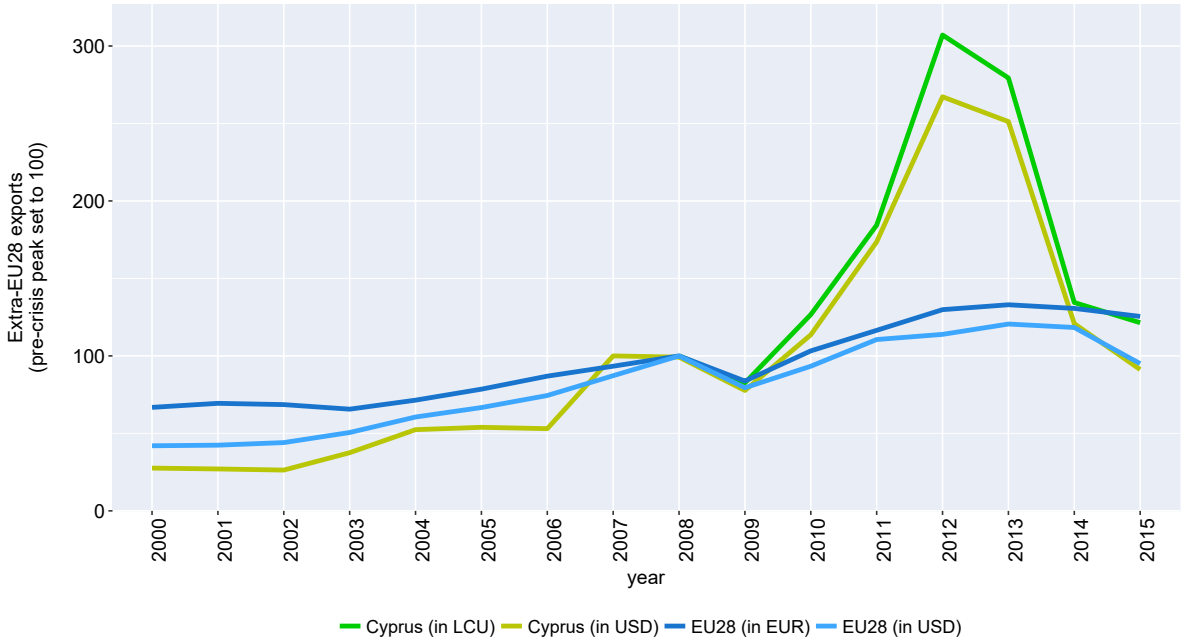


CYPRUS

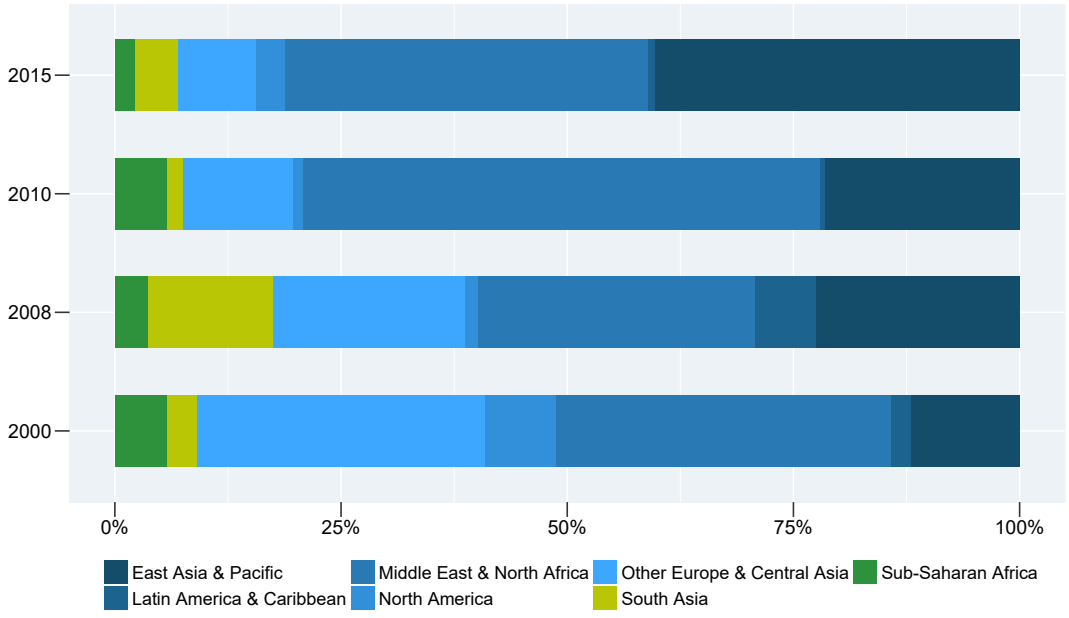
Total amount of exta-EU exports in 2014 (in billion USD): 1.25

Extra-EU exports as a percentage of total exports in 2014: 44%

Exports of Cyrpus and EU in current US dollars and euros



Distribution of extra-EU28 exports across regions



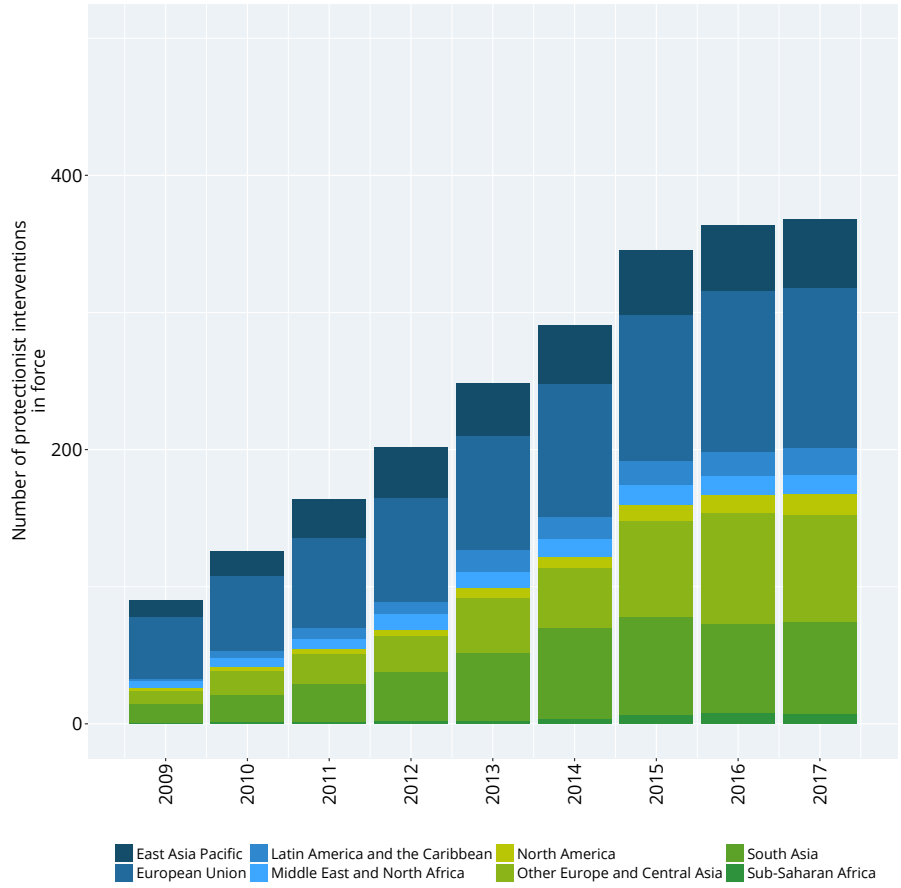
Percentage of extra-EU exports at risk

Foreign descriminatory trade instrument	2009	2010	2011	2012	2013	2014	2015
All forms of foreign discrimination	7.37%	18.8%	32.3%	36.1%	39.3%	39.3%	37.8%
Contingent trade protection	0.00%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Non-automatic licensing, quotas	0.00%	0.4%	0.4%	0.4%	0.4%	0.4%	0.4%
Price control measures	0.00%	0.0%	0.3%	0.4%	0.4%	0.4%	0.4%
Investment measures	0.00%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Subsidies (except export subsidies)	0.96%	3.0%	3.2%	3.2%	3.2%	3.2%	3.4%
Government procurement	0.00%	0.0%	0.0%	0.4%	0.4%	0.4%	0.6%
Export measures	6.76%	17.9%	30.8%	32.5%	35.9%	35.9%	34.5%
Import tariff measures	0.05%	0.2%	0.2%	0.3%	0.5%	0.5%	0.5%
Instrument unclassified	0.00%	0.0%	0.0%	2.2%	2.1%	2.1%	2.1%

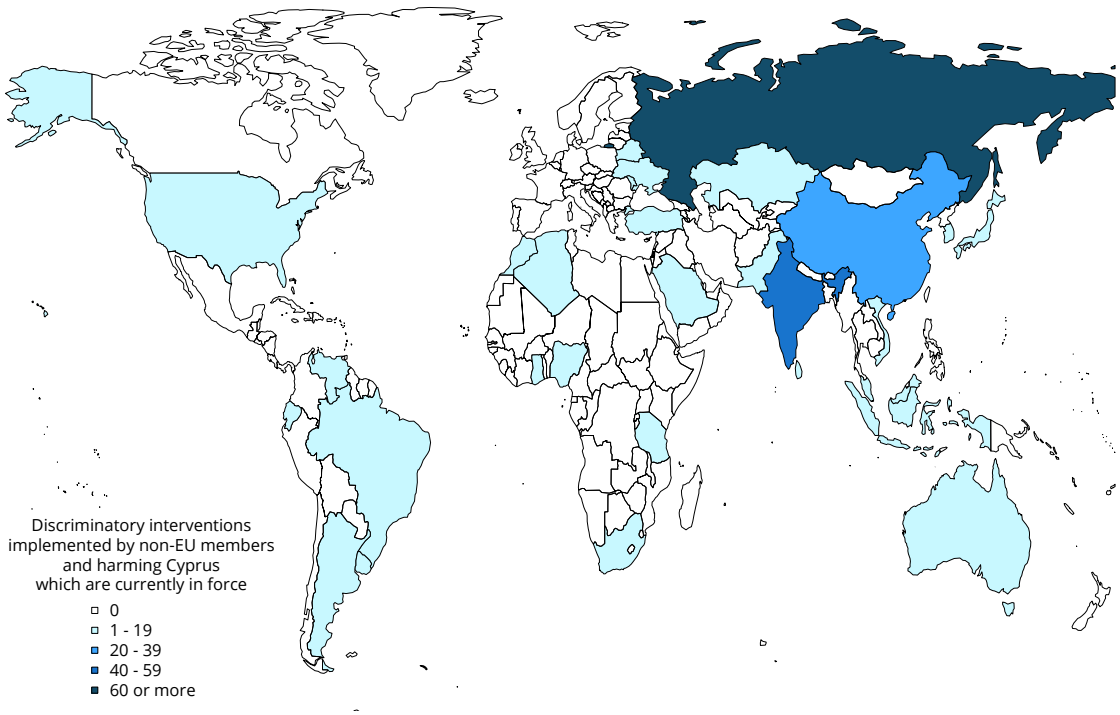
Percentage of intra-EU exports at risk

Foreign descriminatory trade instrument	2009	2010	2011	2012	2013	2014	2015
All forms of foreign discrimination	52.6%	58.7%	58.8%	60.2%	61.7%	62.2%	60.8%
Contingent trade protection	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Non-automatic licensing, quotas	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Investment measures	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Subsidies (except export subsidies)	28.2%	34.6%	1.3%	8.2%	8.2%	9.0%	9.4%
Government procurement	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Export measures	46.9%	53.8%	57.6%	59.2%	60.7%	60.8%	59.2%
Instrument unclassified	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Exports benefitting from export incentives	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%

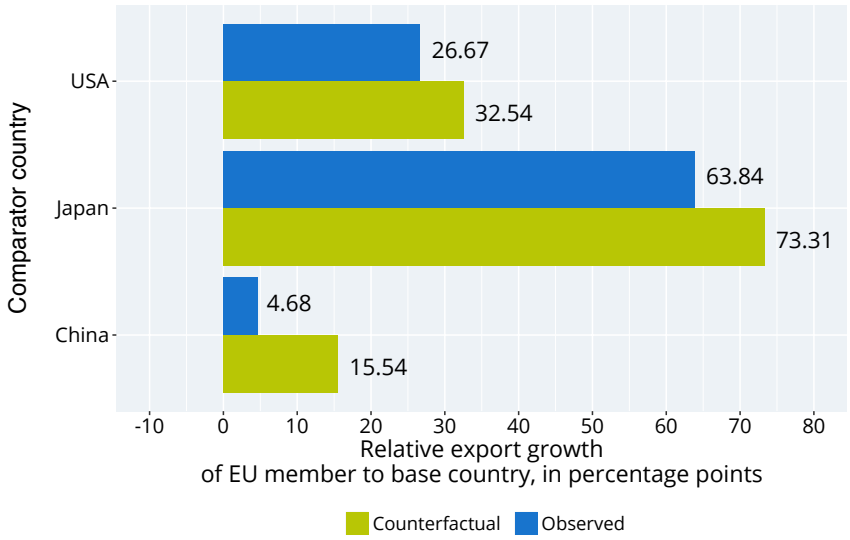
Regional distribution of protectionist interventions harming Cyprus' exports



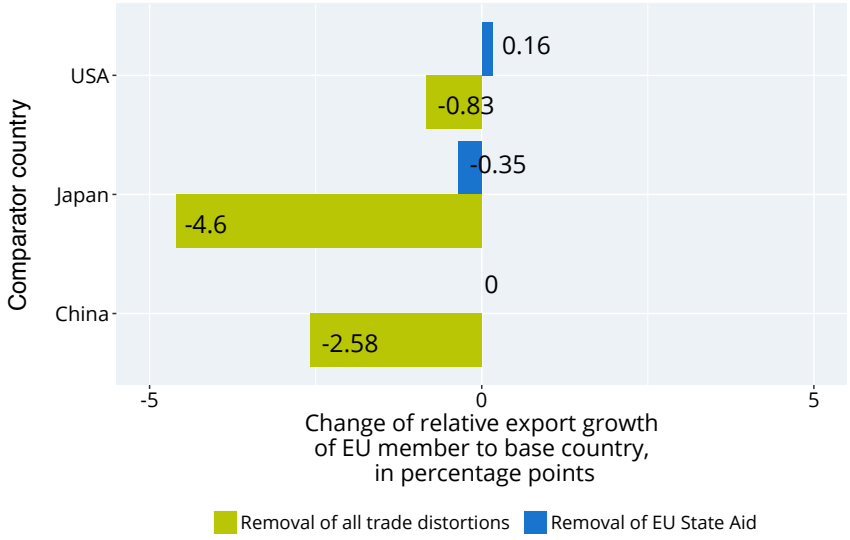
Discriminatory interventions harming Cyprus' extra-EU exports currently in force



Cyprus' extra-EU export growth without crisis-era trade barriers relative to each country comparator, 2008-2014



Cyprus' intra-EU export growth without crisis-era trade barriers relative to each country comparator, 2008-2014

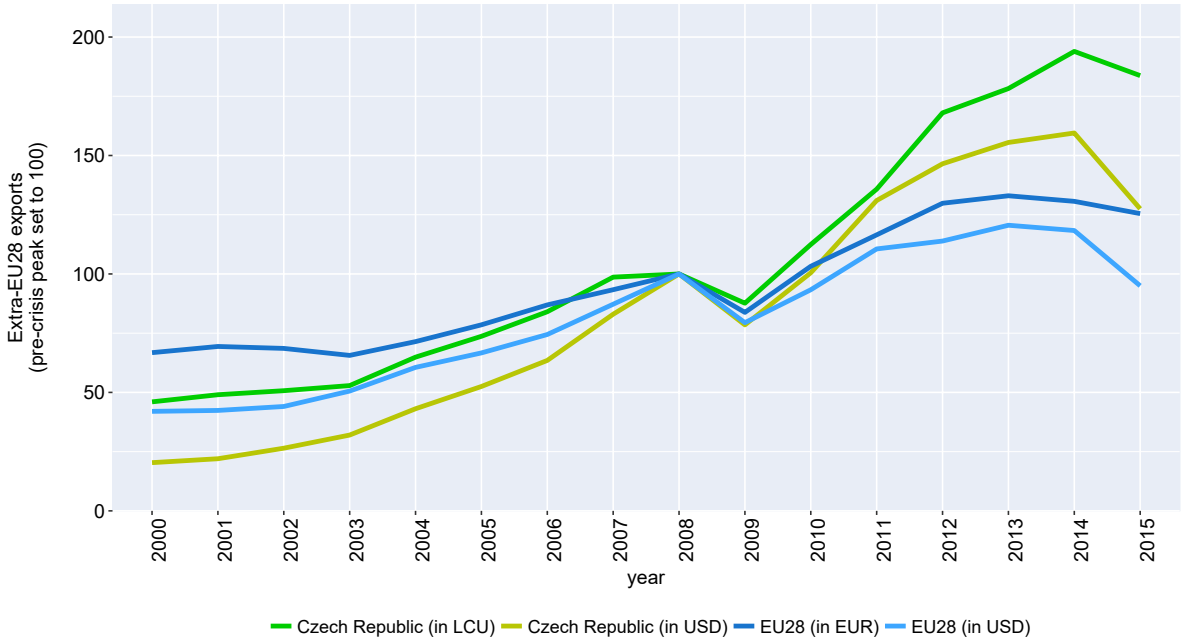


CZECH REPUBLIC

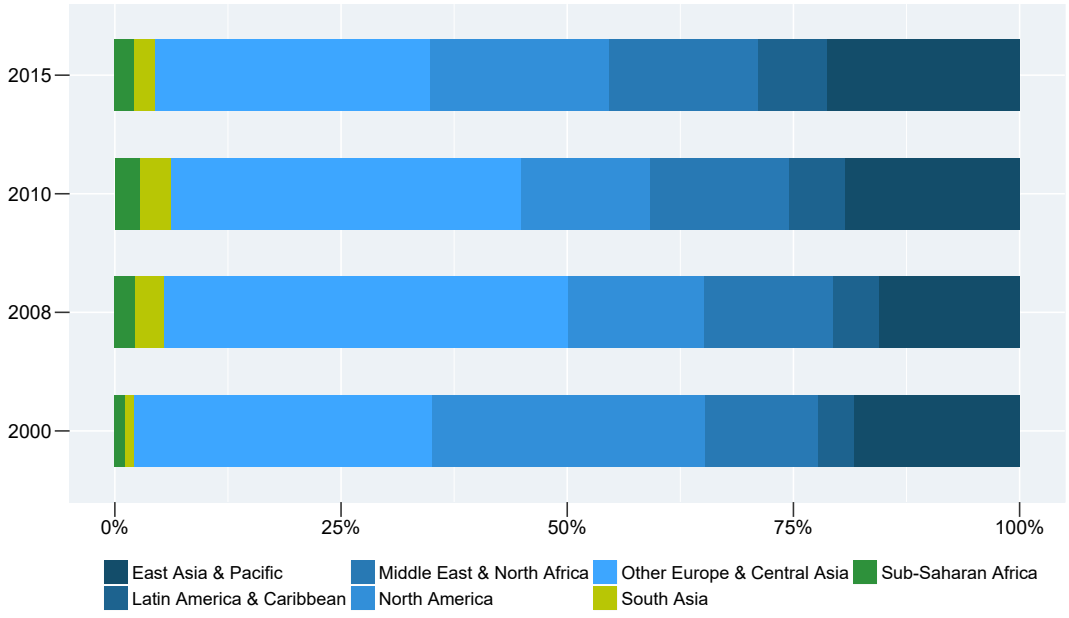
Total amount of exta-EU exports in 2014 (in billion USD): 27.04

Extra-EU exports as a percentage of total exports in 2014: 18.83%

Exports of the Czech Republic and EU in current US dollars and euros



Distribution of extra-EU28 exports across regions



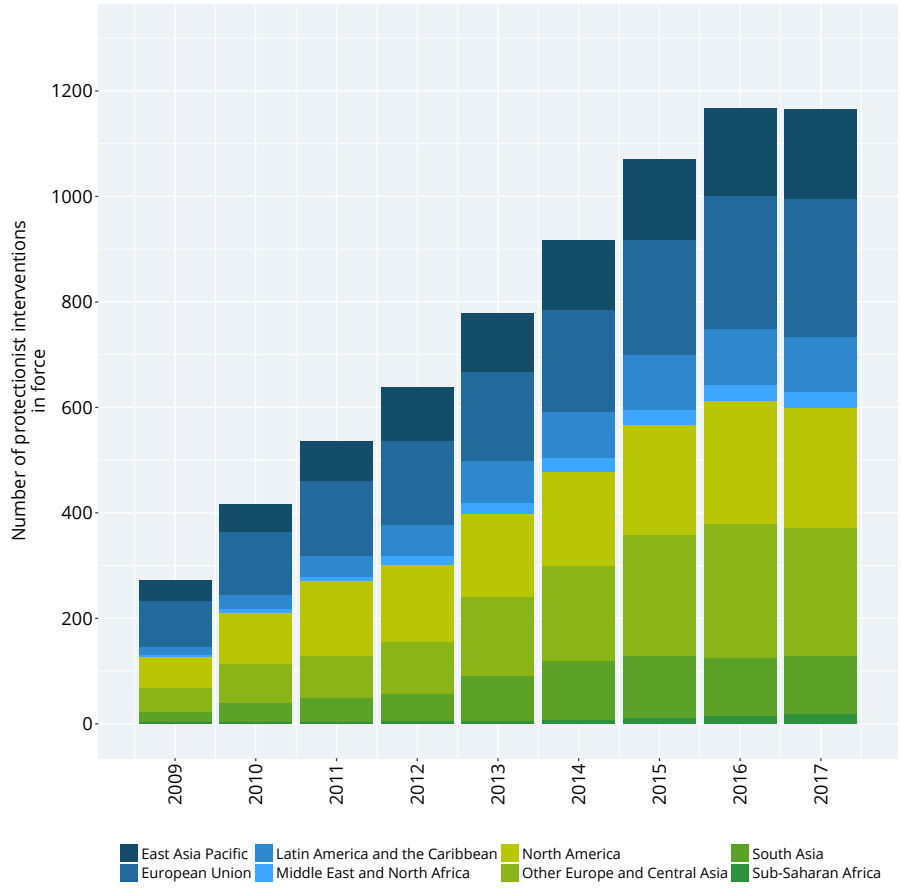
Percentage of extra-EU exports at risk

Foreign descriminatory trade instrument	2009	2010	2011	2012	2013	2014	2015
All forms of foreign discrimination	56.2%	63.8%	65.0%	67.2%	69.2%	70.3%	70.4%
Contingent trade protection	0.0%	0.0%	0.0%	0.1%	0.1%	0.2%	0.2%
Non-automatic licensing, quotas	0.3%	0.2%	0.2%	0.2%	0.2%	0.3%	0.2%
Price control measures	0.0%	0.0%	0.0%	0.2%	0.2%	0.3%	0.6%
Investment measures	1.7%	2.3%	2.7%	2.8%	2.8%	4.3%	5.8%
Subsidies (except export subsidies)	5.0%	7.2%	7.5%	7.9%	9.6%	11.0%	11.5%
Government procurement	2.8%	4.9%	5.0%	6.2%	6.4%	7.2%	8.3%
Export measures	53.0%	60.0%	61.7%	64.3%	66.1%	67.0%	66.7%
Import tariff measures	2.8%	3.5%	2.6%	3.2%	4.8%	5.2%	7.1%
Instrument unclassified	0.0%	0.1%	0.1%	0.8%	2.0%	0.1%	0.1%

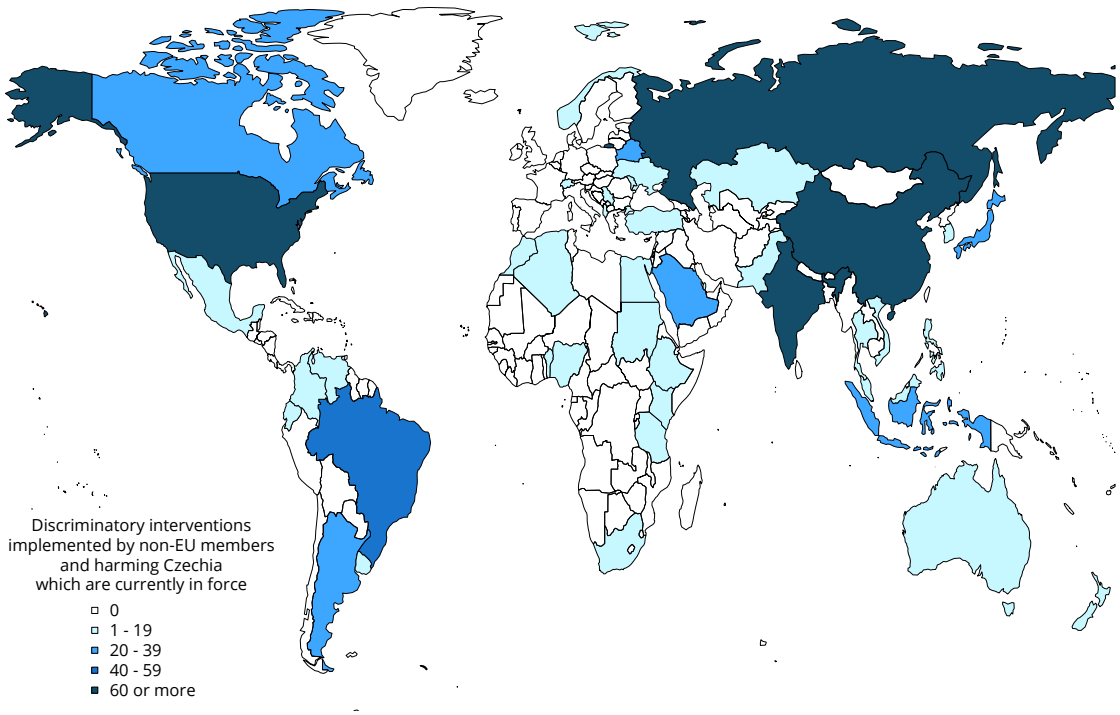
Percentage of intra-EU exports at risk

Foreign descriminatory trade instrument	2009	2010	2011	2012	2013	2014	2015
All forms of foreign discrimination	61.9%	68.6%	69.8%	71.8%	73.0%	75.2%	74.4%
Contingent trade protection	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Non-automatic licensing, quotas	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Investment measures	0.0%	1.3%	1.5%	1.5%	1.5%	1.5%	1.5%
Subsidies (except export subsidies)	6.2%	10.2%	7.8%	9.8%	9.1%	12.4%	12.2%
Government procurement	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Export measures	59.8%	65.0%	66.8%	69.2%	70.5%	70.0%	68.9%
Instrument unclassified	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Exports benefitting from export incentives	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%

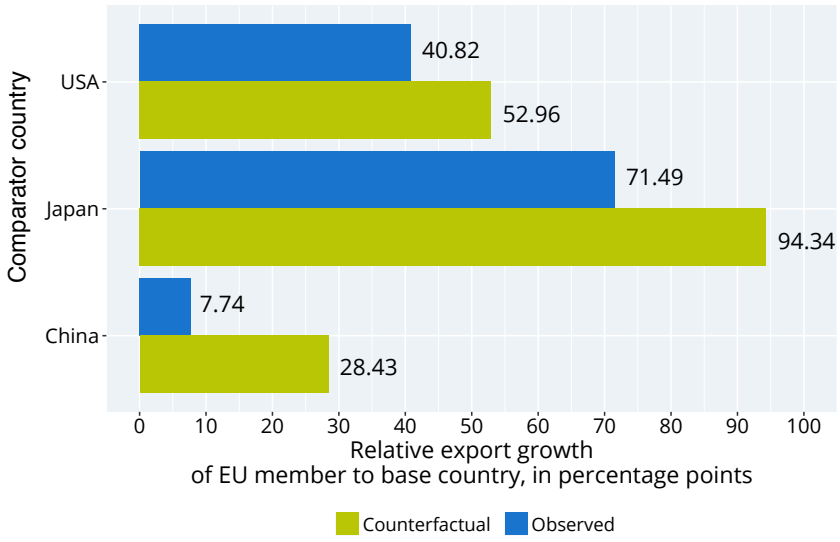
Regional distribution of protectionist interventions harming the Czech Republic's exports, 2009-2017



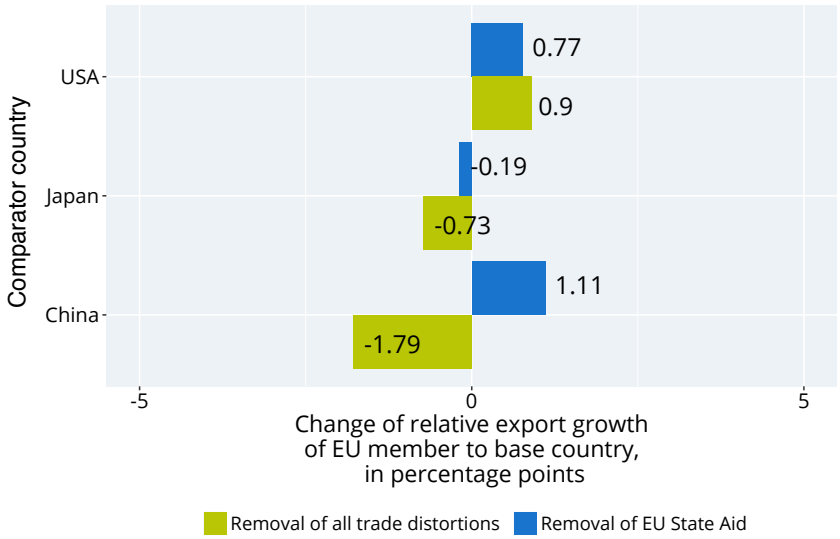
Discriminatory interventions harming the Czech Republic's extra-EU exports currently in force



The Czech Republic's extra-EU export growth without crisis-era trade barriers relative to each country comparator, 2008-2014



The Czech Republic's intra-EU export growth without crisis-era trade barriers relative to each country comparator, 2008-2014

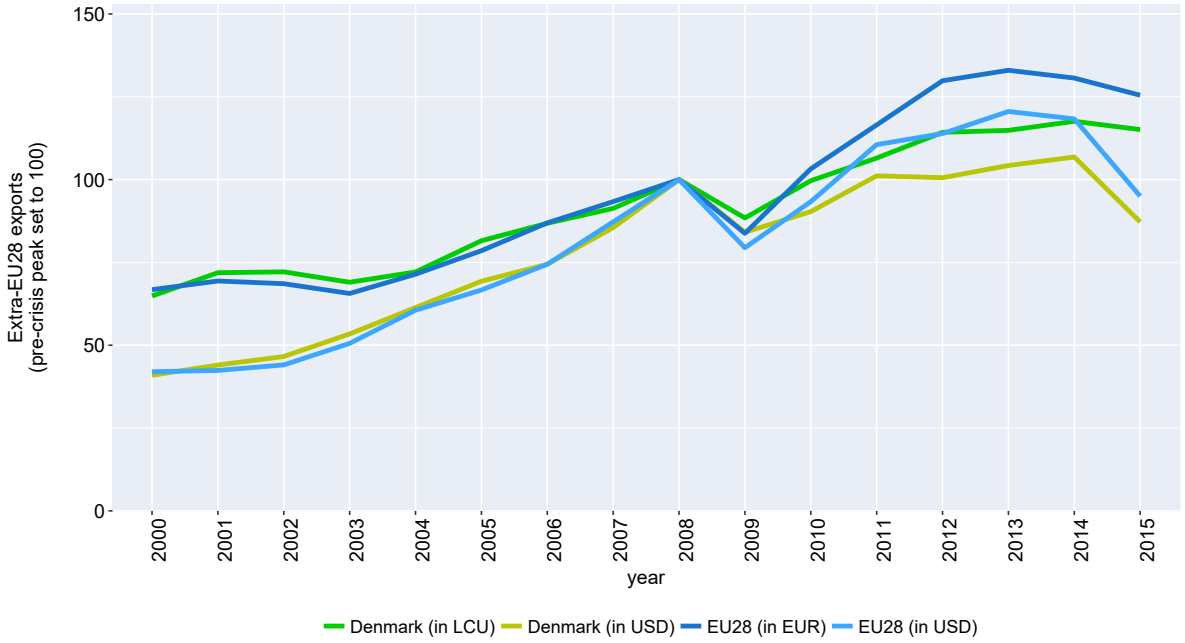


DENMARK

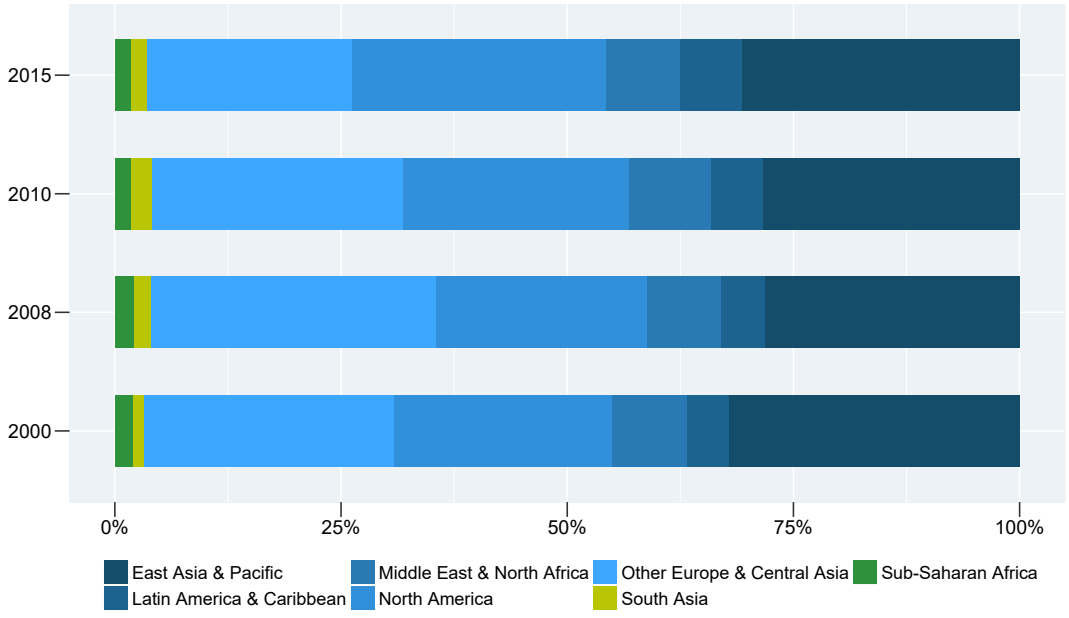
Total amount of exta-EU exports in 2014 (in billion USD): 32.19

Extra-EU exports as a percentage of total exports in 2014: 37.72%

Exports of Denmark and EU in current US dollars and euros



Distribution of extra-EU28 exports across regions



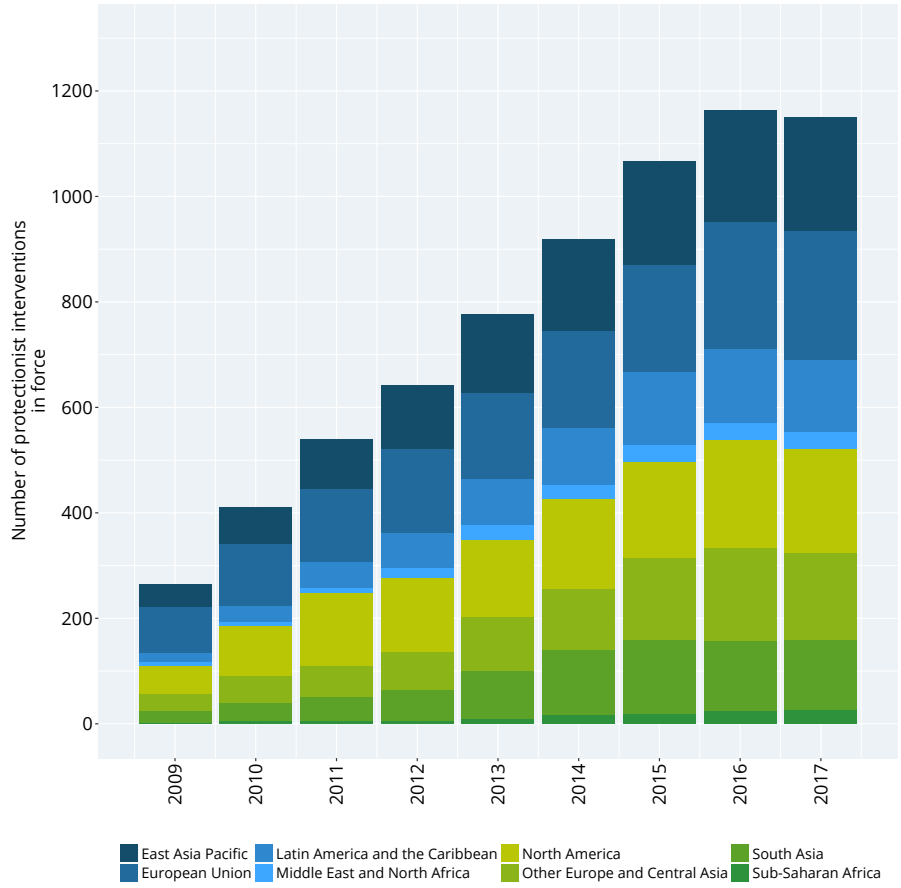
Percentage of extra-EU exports at risk

Foreign descriminatory trade instrument	2009	2010	2011	2012	2013	2014	2015
All forms of foreign discrimination	37.3%	47.4%	52.7%	62.1%	64.4%	64.7%	64.8%
Contingent trade protection	0.1%	0.0%	0.1%	0.1%	0.1%	0.1%	0.1%
Non-automatic licensing, quotas	1.6%	1.5%	1.8%	2.3%	2.4%	2.4%	2.3%
Price control measures	0.0%	0.0%	0.3%	0.5%	0.5%	0.5%	0.7%
Investment measures	0.1%	0.5%	0.6%	0.7%	0.8%	0.9%	1.0%
Subsidies (except export subsidies)	2.1%	2.6%	3.5%	8.8%	11.4%	12.0%	12.4%
Government procurement	0.9%	1.0%	0.9%	2.5%	2.6%	2.9%	3.7%
Export measures	33.7%	43.5%	48.1%	52.2%	53.6%	54.2%	53.7%
Import tariff measures	1.2%	3.8%	4.0%	8.6%	9.6%	9.8%	10.1%
Instrument unclassified	0.0%	0.0%	0.0%	0.1%	0.1%	0.1%	0.2%

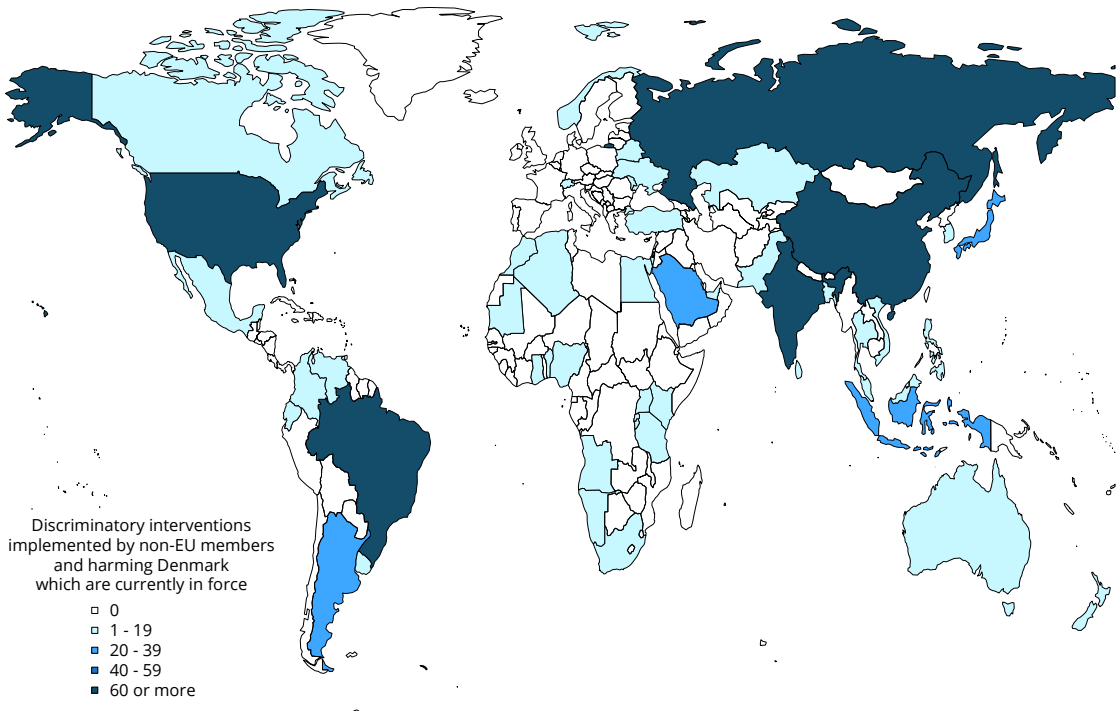
Percentage of intra-EU exports at risk

Foreign descriminatory trade instrument	2009	2010	2011	2012	2013	2014	2015
All forms of foreign discrimination	36.4%	42.9%	45.3%	46.6%	47.6%	51.2%	50.7%
Contingent trade protection	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Non-automatic licensing, quotas	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Investment measures	0.0%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%
Subsidies (except export subsidies)	4.5%	7.8%	3.5%	2.8%	2.7%	6.7%	7.4%
Government procurement	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Export measures	35.2%	39.9%	42.8%	45.3%	46.5%	46.4%	45.2%
Instrument unclassified	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.1%
Exports benefitting from export incentives	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%

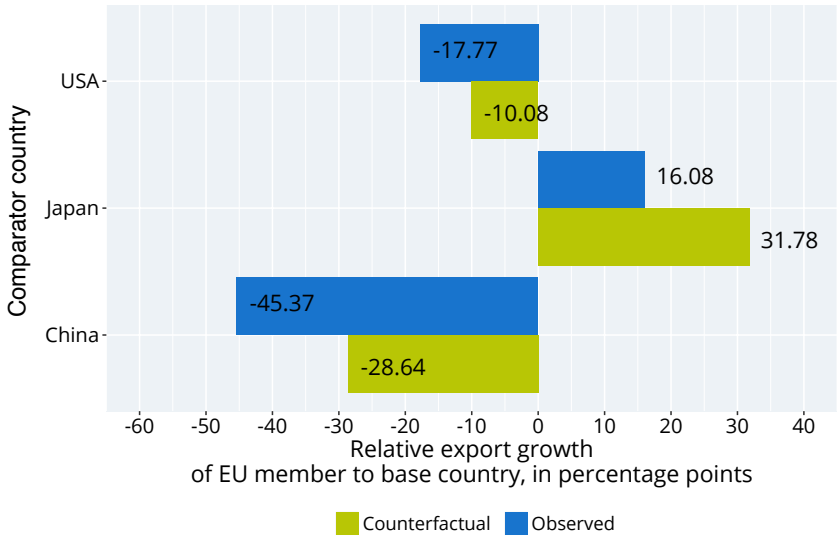
Regional distribution of protectionist interventions harming Denmark's exports, 2009-2017



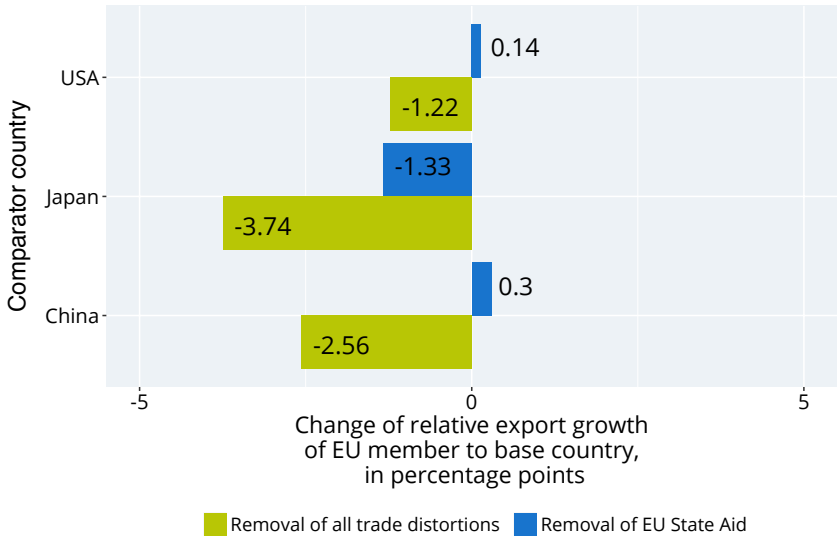
Discriminatory interventions harming Denmark's extra-EU exports currently in force



Denmark's extra-EU export growth without crisis-era trade barriers relative to each country comparator, 2008-2014



Denmark's intra-EU export growth without crisis-era trade barriers relative to each country comparator, 2008-2014

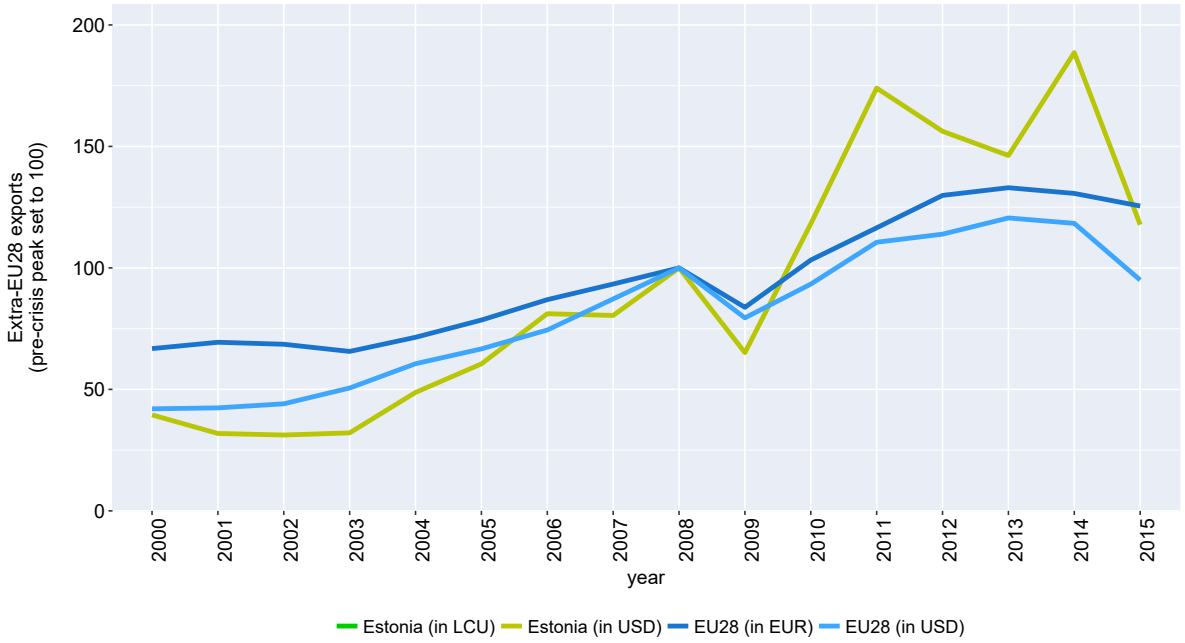


ESTONIA

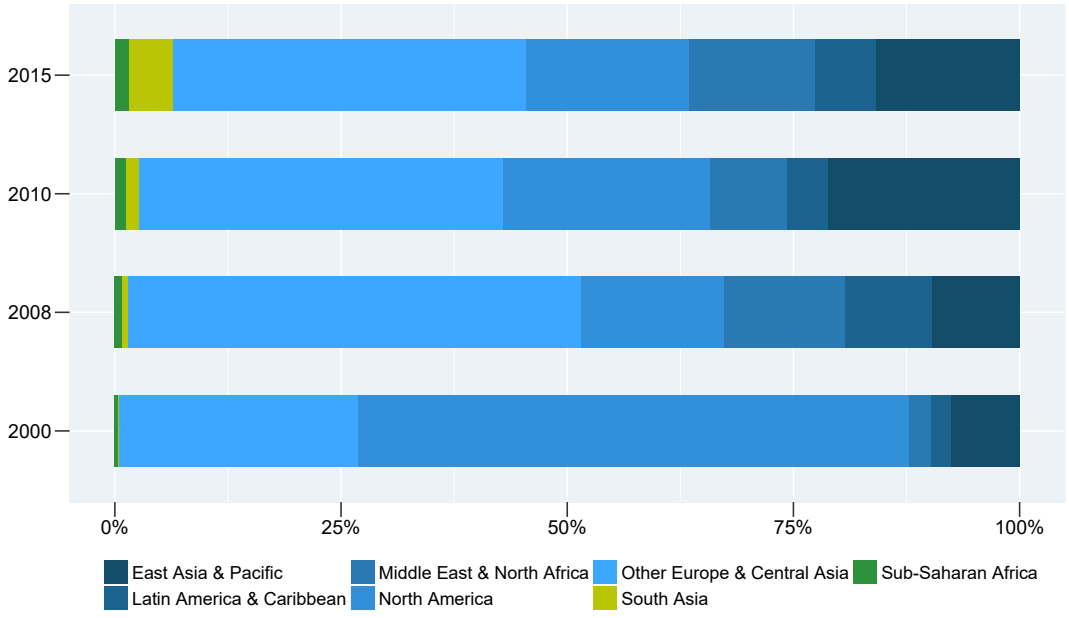
Total amount of exta-EU exports in 2014 (in billion USD): 4.59

Extra-EU exports as a percentage of total exports in 2014: 33.06%

Exports of Estonia and EU in current US dollars and euros



Distribution of extra-EU28 exports across regions



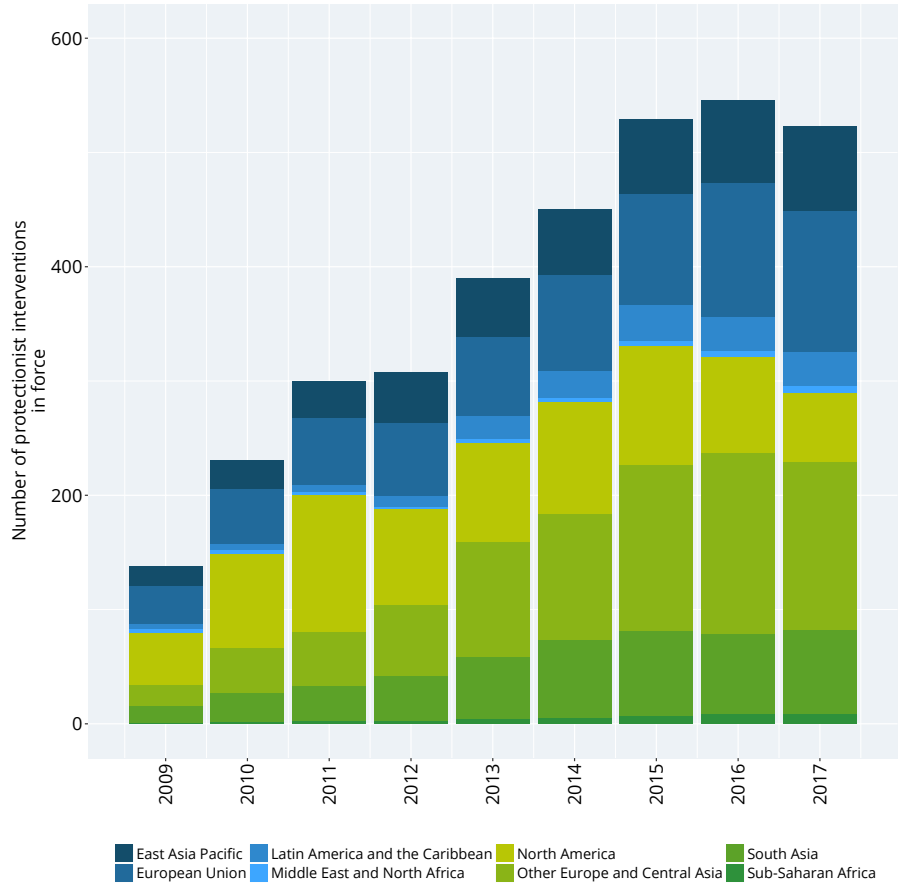
Percentage of extra-EU exports at risk

Foreign descriminatory trade instrument	2009	2010	2011	2012	2013	2014	2015
All forms of foreign discrimination	22.9%	38.0%	49.0%	50.1%	50.5%	50.8%	52.8%
Contingent trade protection	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Non-automatic licensing, quotas	0.0%	1.6%	1.8%	1.9%	1.9%	1.9%	1.9%
Price control measures	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Investment measures	0.0%	0.0%	1.8%	1.9%	1.9%	1.9%	2.0%
Subsidies (except export subsidies)	5.0%	7.6%	10.3%	13.4%	20.2%	26.8%	27.3%
Government procurement	1.1%	1.5%	0.6%	0.6%	0.6%	0.6%	0.6%
Export measures	17.7%	28.2%	42.4%	44.2%	44.4%	44.6%	47.4%
Import tariff measures	0.4%	1.9%	2.4%	2.9%	3.5%	4.5%	4.7%
Instrument unclassified	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%

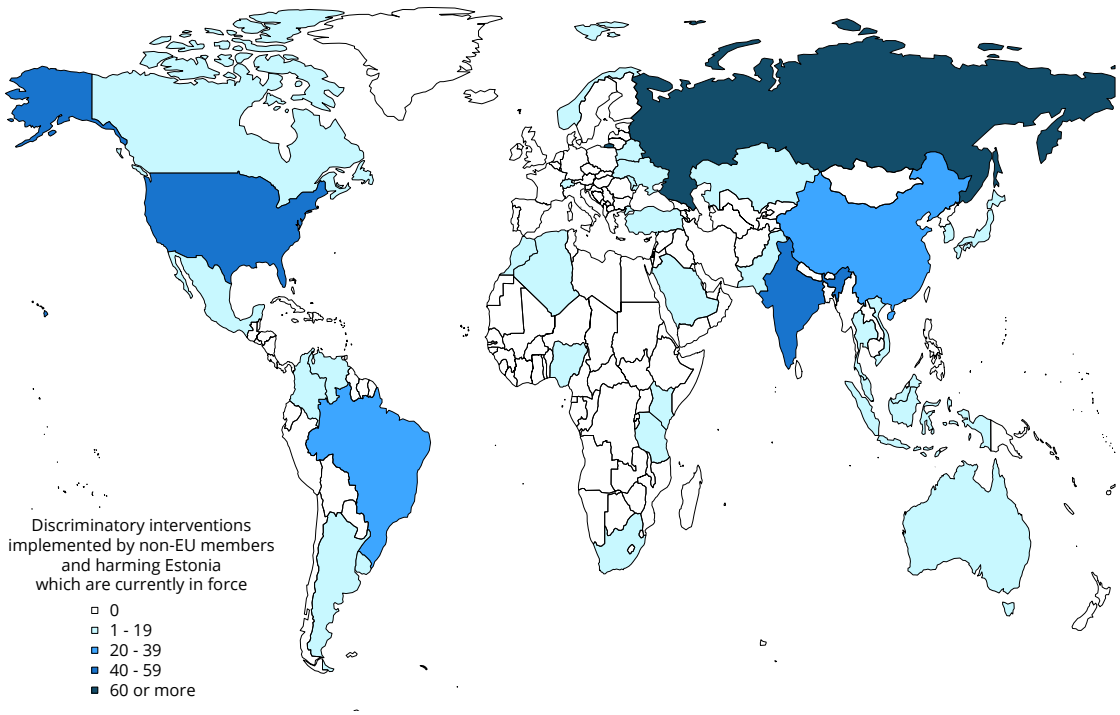
Percentage of intra-EU exports at risk

Foreign descriminatory trade instrument	2009	2010	2011	2012	2013	2014	2015
All forms of foreign discrimination	38.8%	48.0%	56.2%	56.8%	57.7%	58.2%	59.2%
Contingent trade protection	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Non-automatic licensing, quotas	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Investment measures	0.0%	0.2%	0.2%	0.2%	0.2%	0.2%	0.2%
Subsidies (except export subsidies)	8.6%	10.7%	4.0%	3.8%	3.5%	2.9%	3.0%
Government procurement	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Export measures	35.4%	44.4%	52.4%	53.4%	54.6%	55.9%	57.0%
Instrument unclassified	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Exports benefitting from export incentives	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%

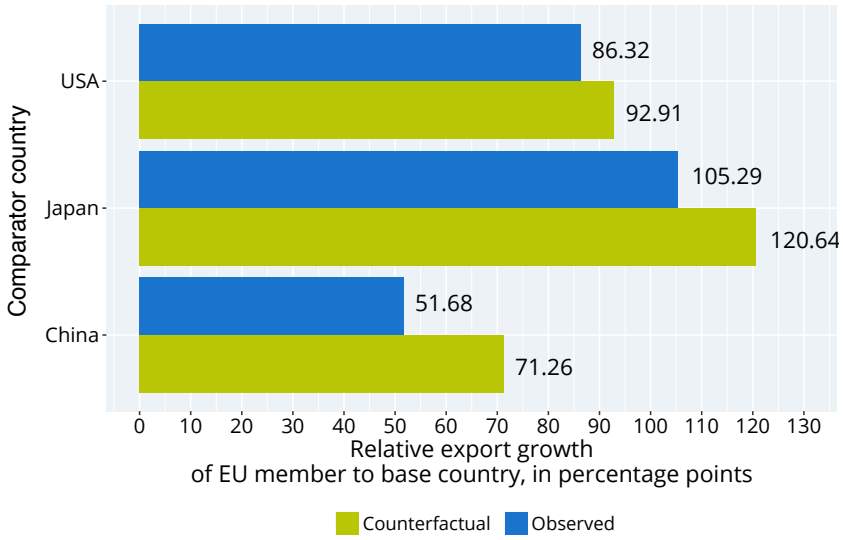
Regional distribution of protectionist interventions harming Estonia's exports, 2009-2017



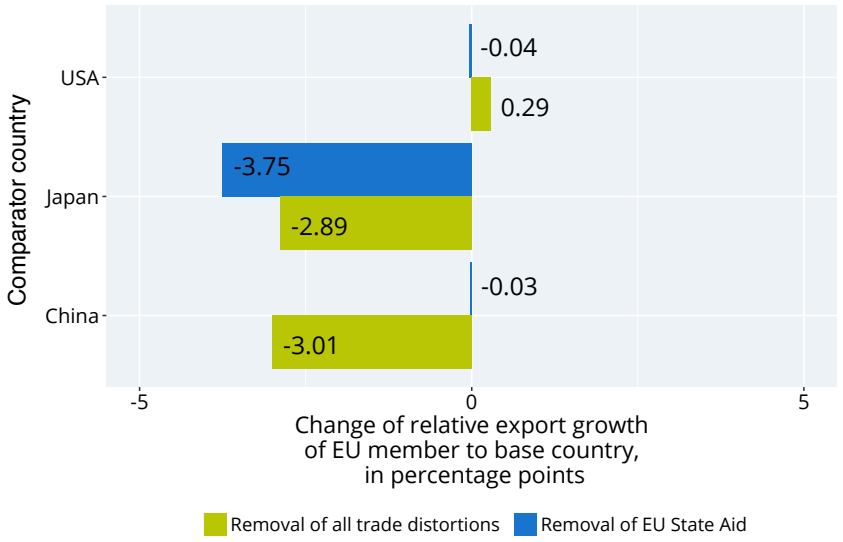
Discriminatory interventions harming Estonia's extra-EU exports currently in force



Estonia's extra-EU export growth without crisis-era trade barriers relative to each country comparator, 2008-2014



Estonia's intra-EU export growth without crisis-era trade barriers relative to each country comparator, 2008-2014

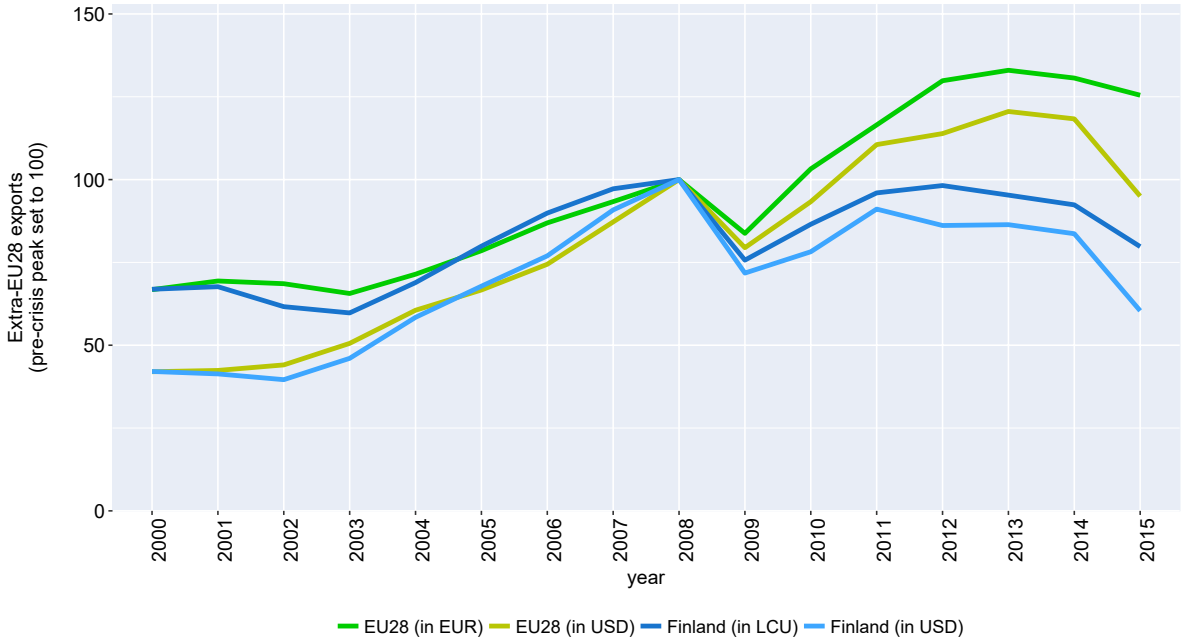


FINLAND

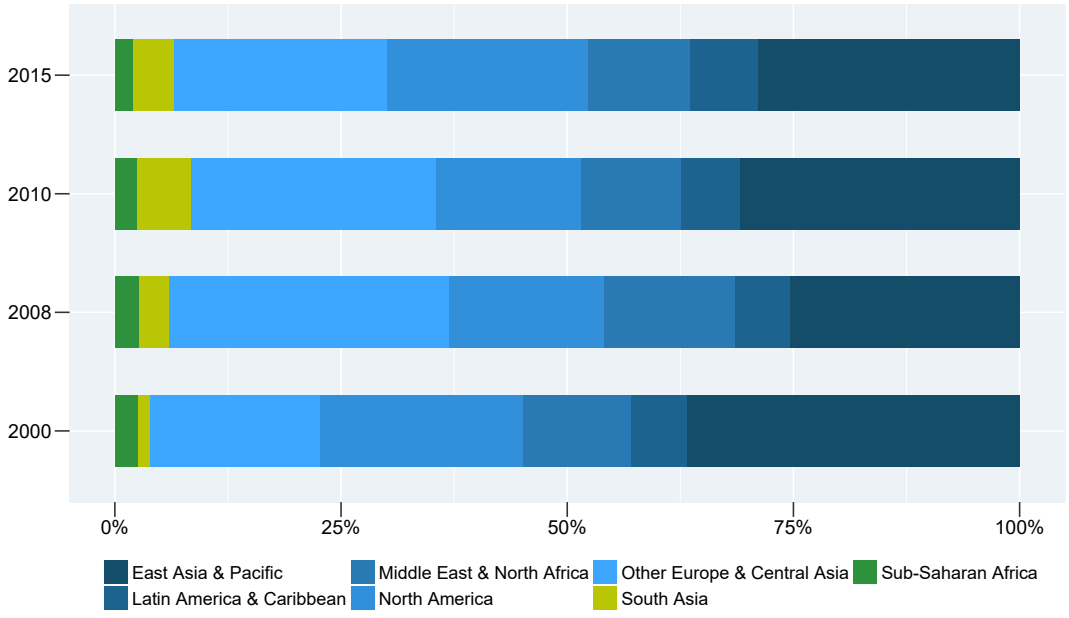
Total amount of exta-EU exports in 2014 (in billion USD): 30.08

Extra-EU exports as a percentage of total exports in 2014: 43.05%

Exports of Finland and EU in current US dollars and euros



Distribution of extra-EU28 exports across regions



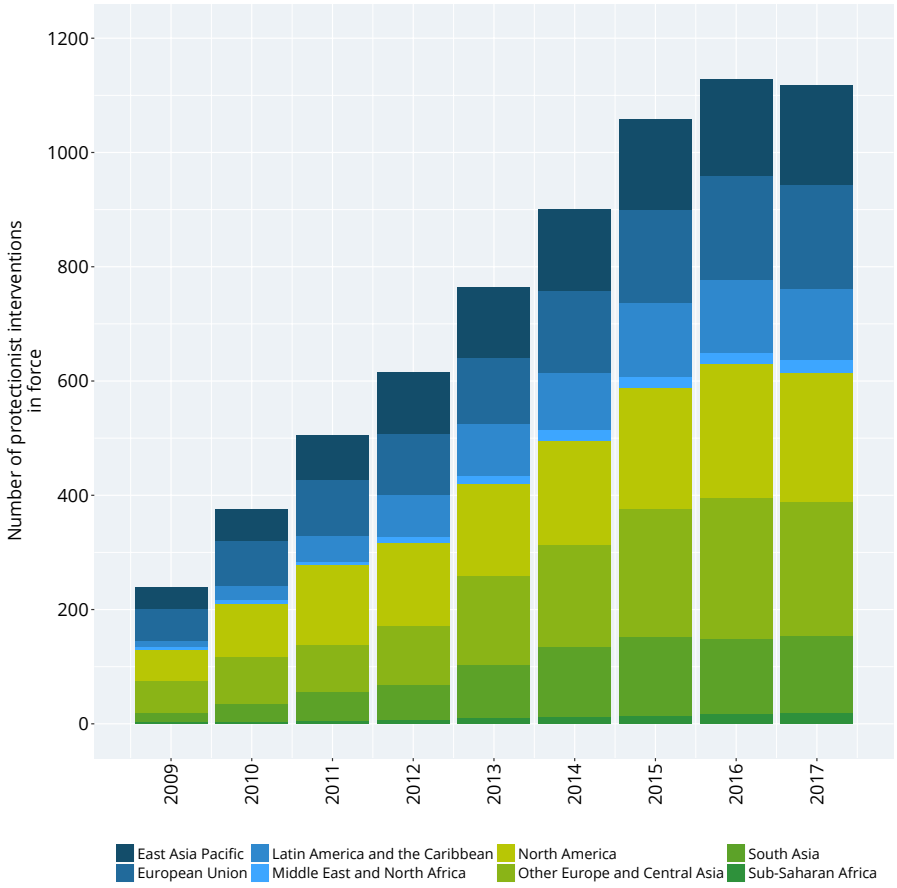
Percentage of extra-EU exports at risk

Foreign descriminatory trade instrument	2009	2010	2011	2012	2013	2014	2015
All forms of foreign discrimination	47.4%	56.8%	60.4%	65.3%	68.3%	70.8%	71.1%
Contingent trade protection	0.0%	0.0%	0.1%	0.2%	0.2%	0.2%	0.3%
Non-automatic licensing, quotas	1.6%	0.7%	0.8%	1.2%	1.1%	1.8%	1.8%
Price control measures	0.0%	0.0%	0.1%	0.2%	0.2%	0.3%	0.5%
Investment measures	0.3%	0.4%	0.5%	0.5%	0.5%	0.8%	1.0%
Subsidies (except export subsidies)	5.5%	8.3%	9.8%	12.0%	12.9%	13.2%	13.4%
Government procurement	1.7%	3.0%	1.8%	2.6%	3.1%	3.4%	4.1%
Export measures	40.4%	49.3%	53.5%	58.6%	60.6%	60.6%	60.6%
Import tariff measures	2.0%	6.4%	7.3%	8.5%	10.8%	15.0%	15.3%
Instrument unclassified	0.7%	0.7%	0.7%	0.8%	0.8%	0.7%	0.7%

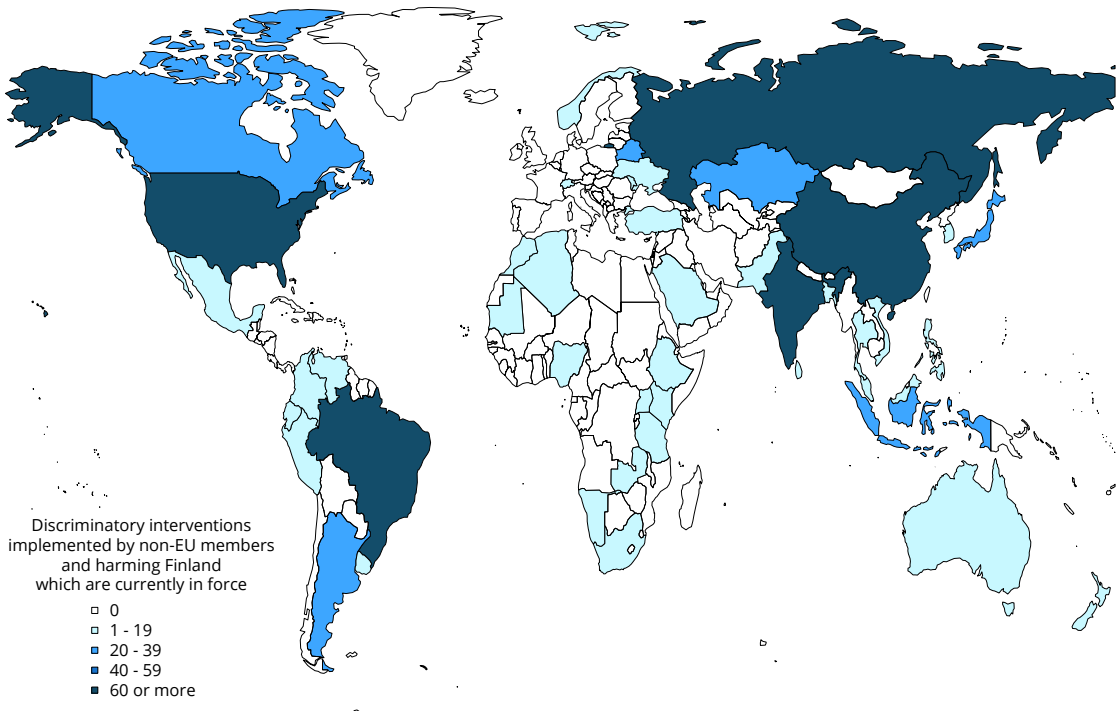
Percentage of intra-EU exports at risk

Foreign descriminatory trade instrument	2009	2010	2011	2012	2013	2014	2015
All forms of foreign discrimination	39.1%	44.7%	48.5%	51.9%	53.1%	59.7%	58.9%
Contingent trade protection	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Non-automatic licensing, quotas	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Investment measures	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Subsidies (except export subsidies)	3.5%	6.6%	4.9%	5.8%	5.3%	11.5%	11.8%
Government procurement	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.1%
Export measures	38.3%	42.2%	46.0%	49.7%	51.8%	54.2%	53.2%
Instrument unclassified	0.0%	0.0%	0.0%	0.0%	0.0%	0.2%	0.4%
Exports benefitting from export incentives	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%

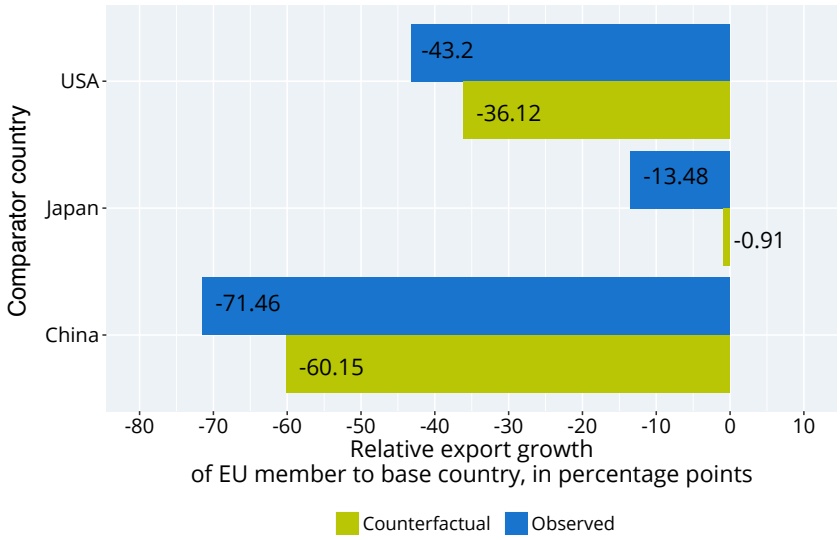
Regional distribution of protectionist interventions harming Finland's exports, 2009-2017



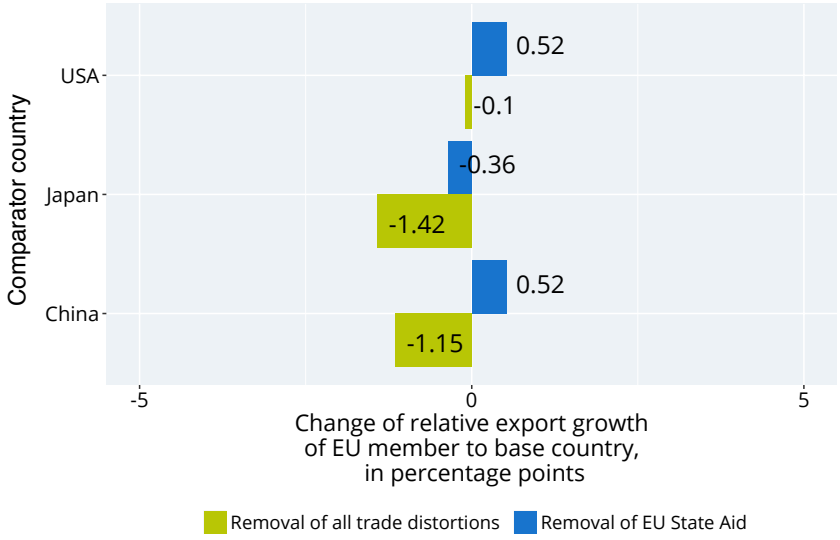
Discriminatory interventions harming Finland's extra-EU exports currently in force



Finland's extra-EU export growth without crisis-era trade barriers relative to each country comparator, 2008-2014



Finland's intra-EU export growth without crisis-era trade barriers relative to each country comparator, 2008-2014

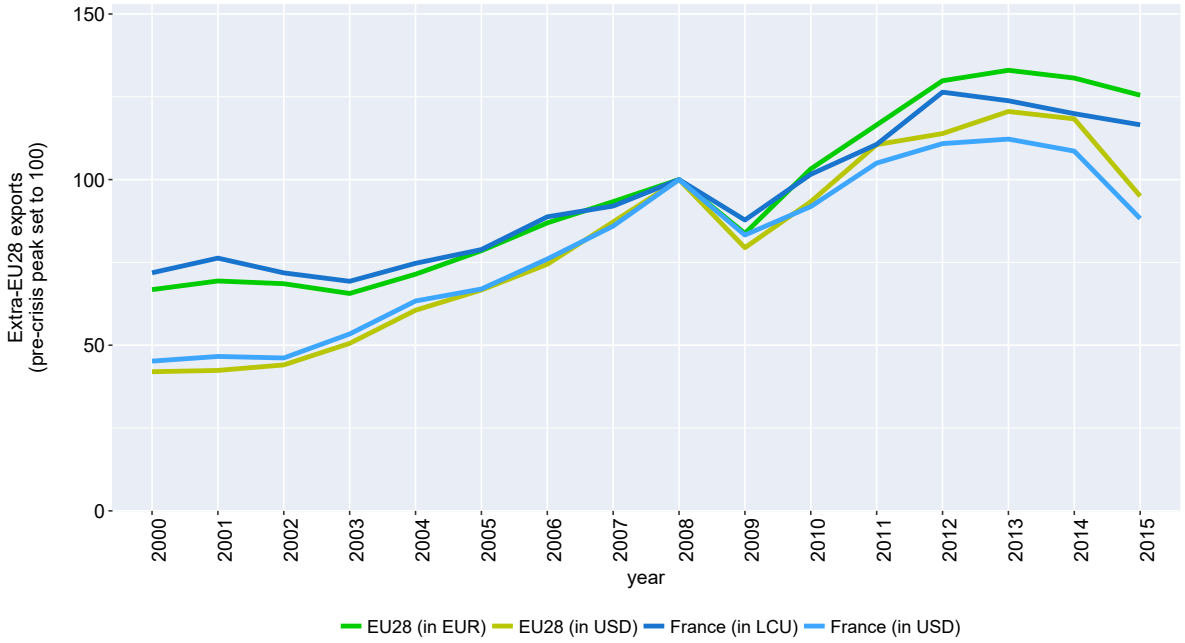


FRANCE

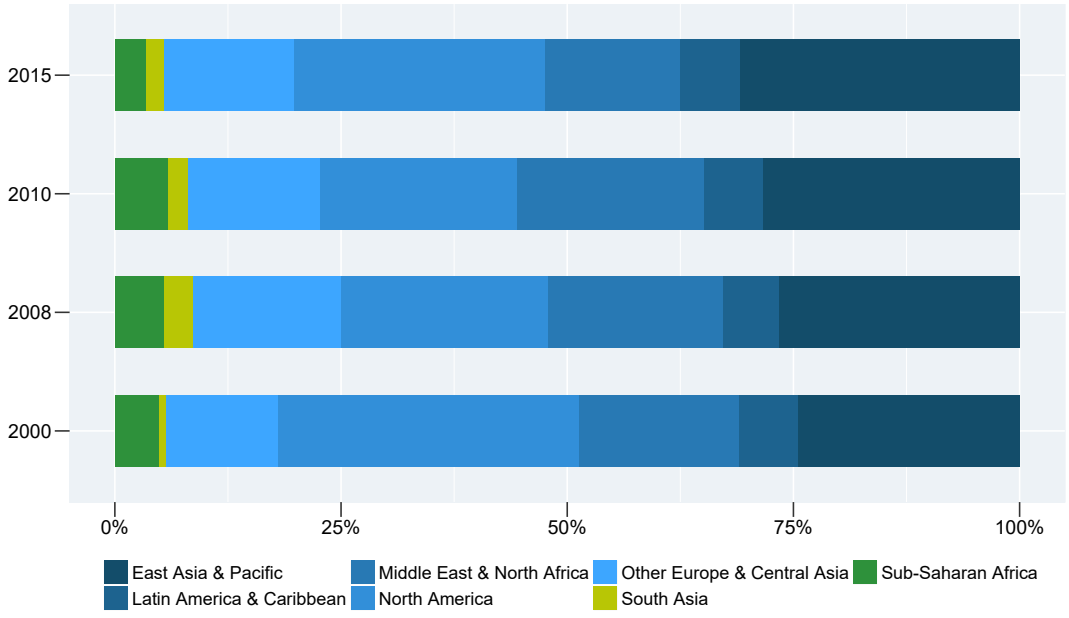
Total amount of exta-EU exports in 2014 (in billion USD): 220.5

Extra-EU exports as a percentage of total exports in 2014: 40.41%

Exports of France and EU in current US dollars and euros



Distribution of extra-EU28 exports across regions



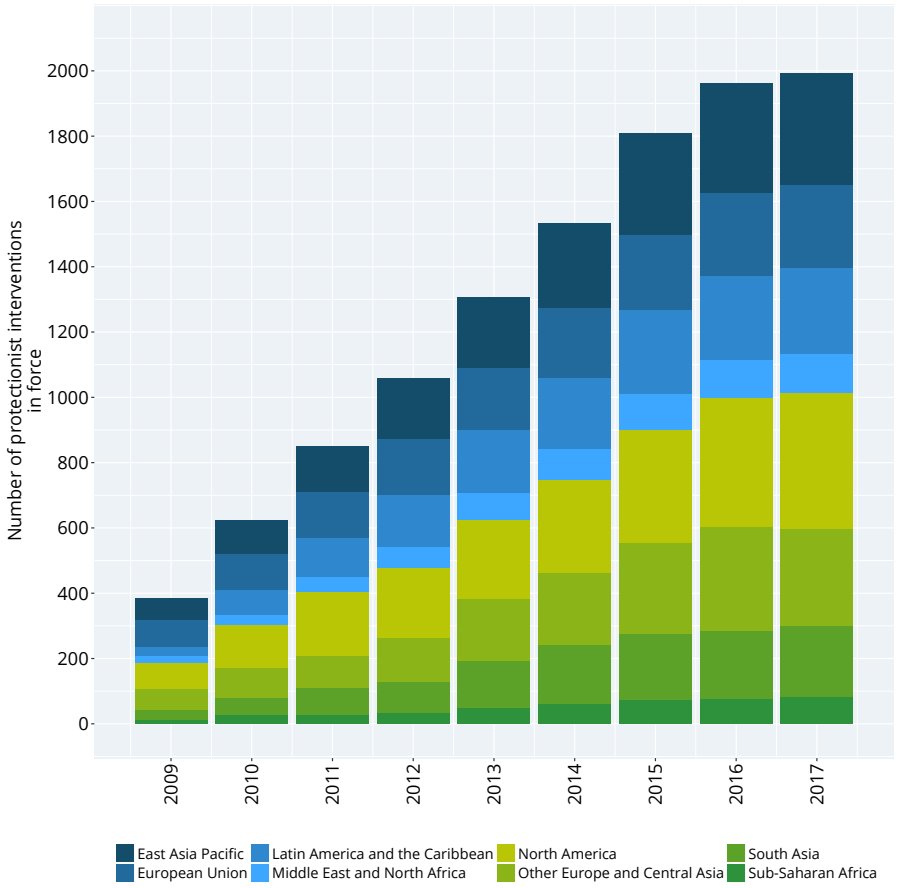
Percentage of extra-EU exports at risk

Foreign descriminatory trade instrument	2009	2010	2011	2012	2013	2014	2015
All forms of foreign discrimination	40.4%	51.7%	59.6%	65.0%	67.9%	70.1%	70.0%
Contingent trade protection	0.0%	0.1%	0.1%	0.2%	0.2%	0.5%	0.5%
Non-automatic licensing, quotas	0.6%	0.4%	0.7%	1.0%	1.2%	1.2%	1.3%
Price control measures	0.0%	0.0%	0.1%	0.2%	0.8%	2.4%	2.9%
Investment measures	0.3%	0.5%	0.6%	0.6%	0.6%	1.2%	1.8%
Subsidies (except export subsidies)	3.3%	5.2%	7.0%	11.4%	13.8%	14.9%	15.8%
Government procurement	1.0%	1.4%	1.1%	1.6%	1.9%	2.1%	2.6%
Export measures	36.5%	44.6%	54.9%	61.7%	63.8%	65.7%	65.4%
Import tariff measures	1.0%	4.3%	4.9%	5.9%	7.0%	7.4%	7.8%
Instrument unclassified	0.2%	0.4%	0.4%	0.8%	1.0%	0.8%	0.8%

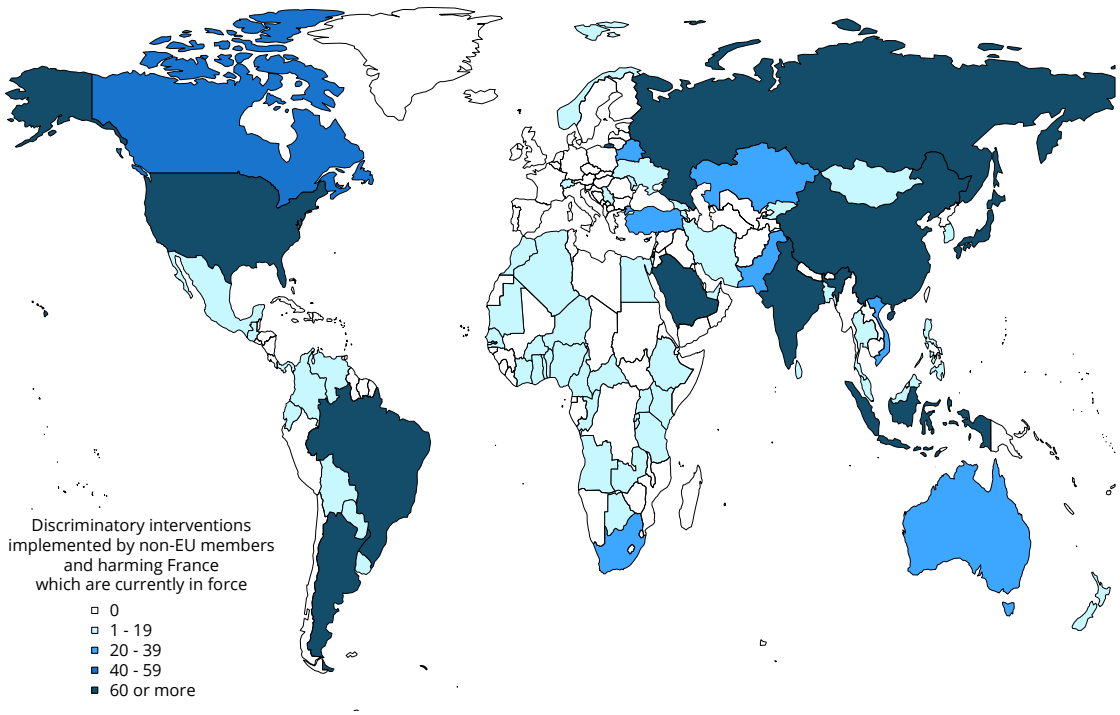
Percentage of intra-EU exports at risk

Foreign descriminatory trade instrument	2009	2010	2011	2012	2013	2014	2015
All forms of foreign discrimination	41.3%	52.2%	56.2%	61.1%	62.4%	65.8%	64.2%
Contingent trade protection	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Non-automatic licensing, quotas	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Investment measures	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Subsidies (except export subsidies)	6.7%	11.7%	7.5%	8.1%	7.8%	11.6%	10.0%
Government procurement	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Export measures	37.6%	46.0%	52.9%	58.7%	59.6%	60.2%	59.4%
Instrument unclassified	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Exports benefitting from export incentives	3.0%	3.3%	3.3%	3.3%	3.3%	3.3%	3.3%

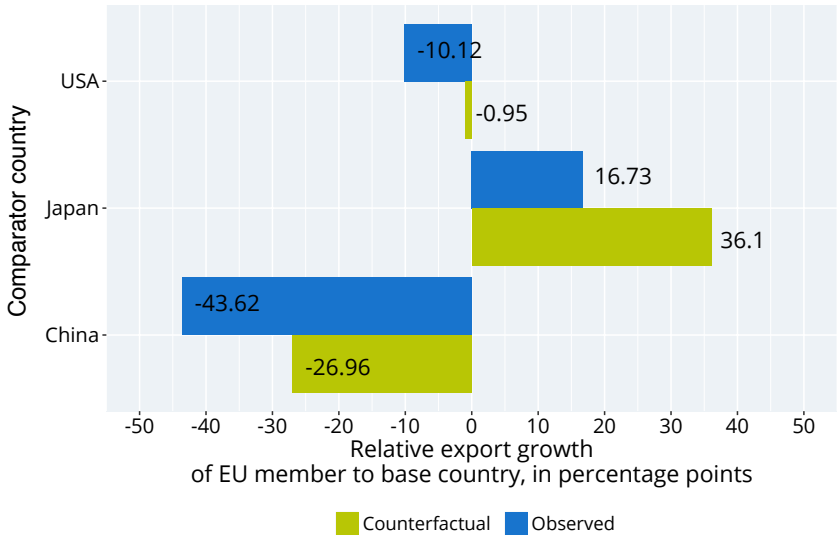
Regional distribution of protectionist interventions harming France's exports, 2009-2017



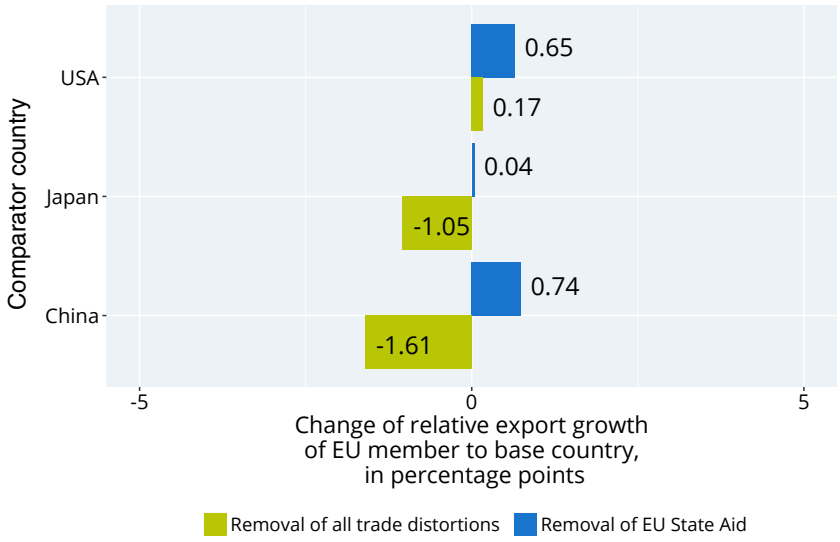
Discriminatory interventions harming France's extra-EU exports currently in force



France's extra-EU export growth without crisis-era trade barriers relative to each country comparator, 2008-2014



France's intra-EU export growth without crisis-era trade barriers relative to each country comparator, 2008-2014

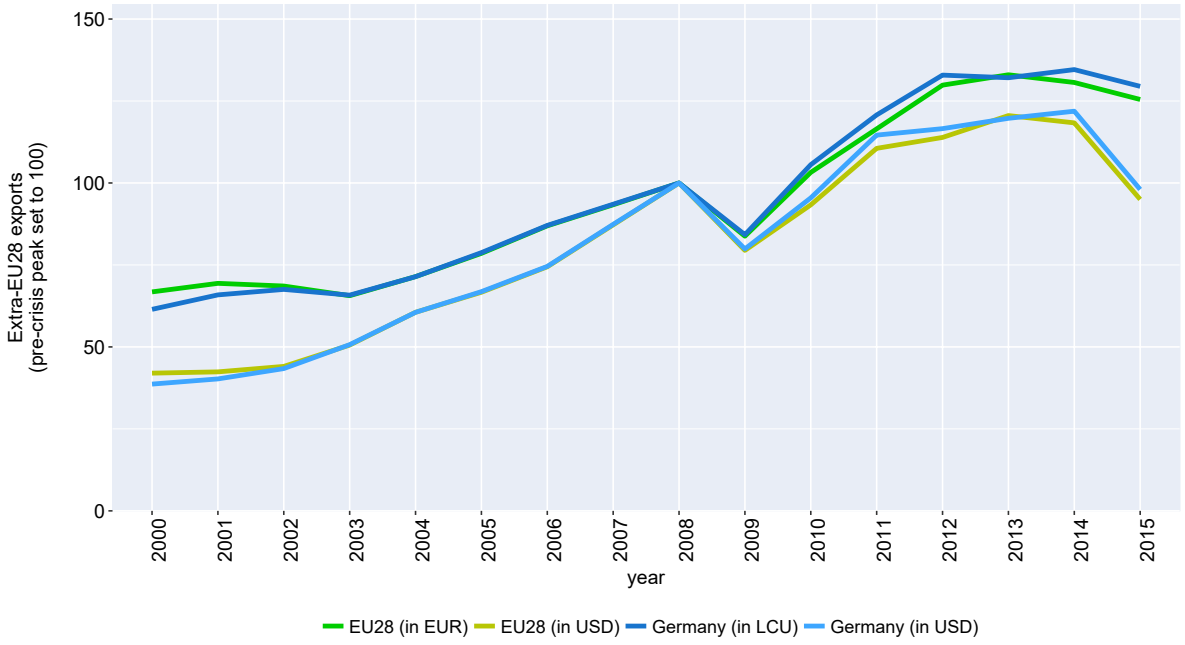


GERMANY

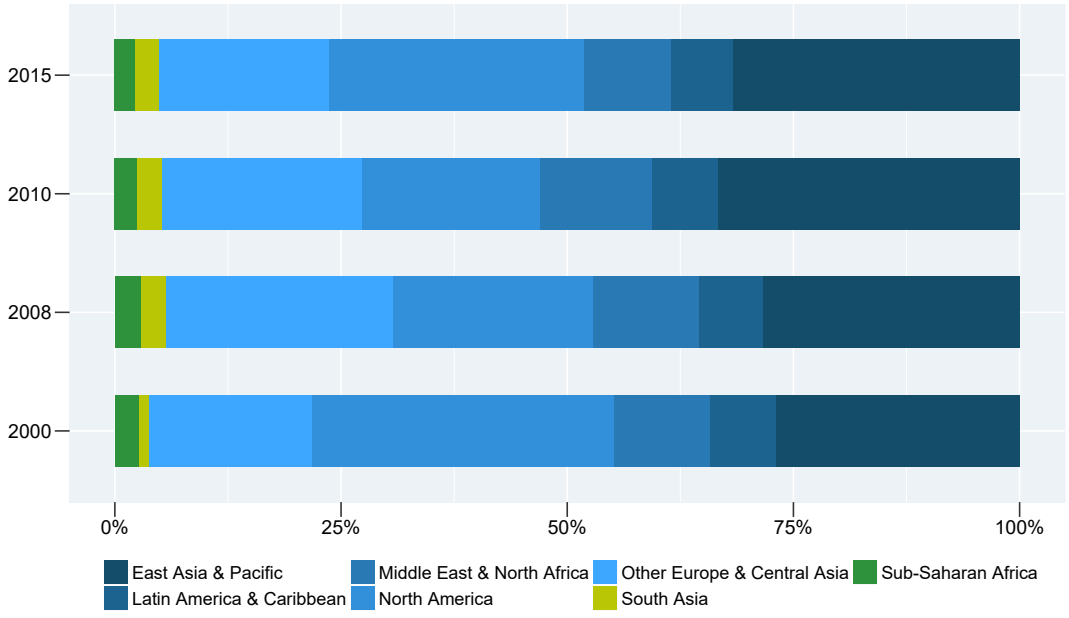
Total amount of exta-EU exports in 2014 (in billion USD): 579.55

Extra-EU exports as a percentage of total exports in 2014: 43.28%

Exports of Germany and EU in current US dollars and euros



Distribution of extra-EU28 exports across regions



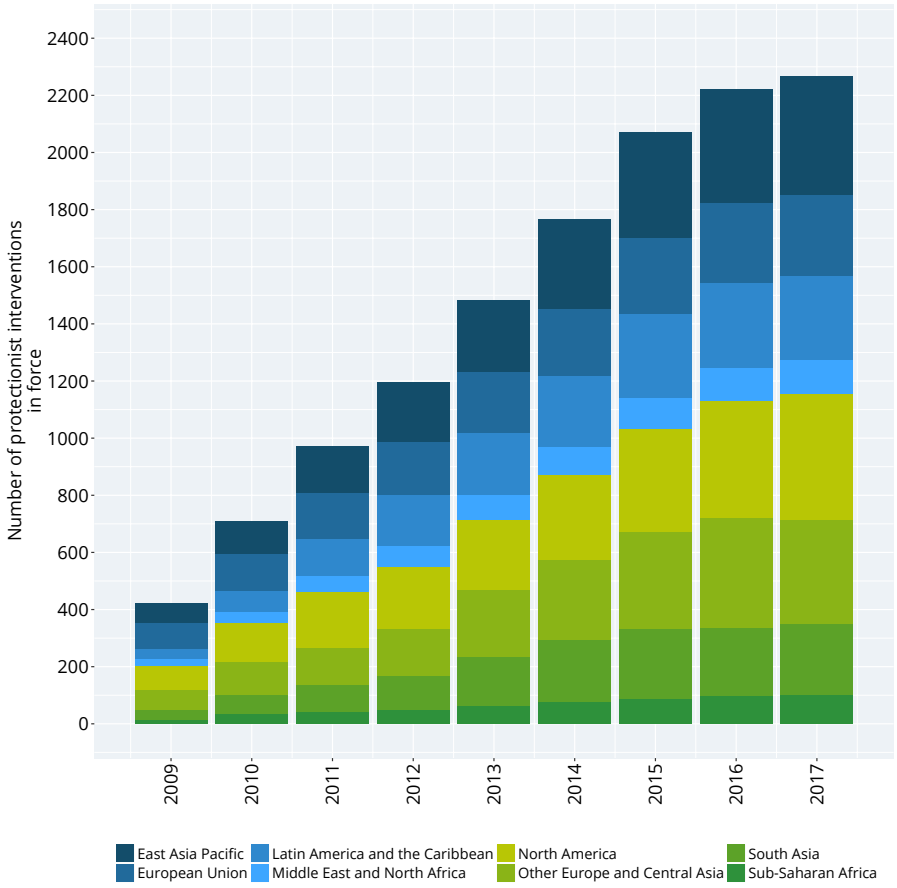
Percentage of extra-EU exports at risk

Foreign descriminatory trade instrument	2009	2010	2011	2012	2013	2014	2015
All forms of foreign discrimination	53.7%	64.2%	67.4%	71.3%	73.3%	74.1%	74.1%
Contingent trade protection	0.1%	0.3%	0.3%	0.5%	0.6%	0.7%	0.8%
Non-automatic licensing, quotas	1.4%	0.6%	0.7%	0.9%	1.2%	1.4%	1.4%
Price control measures	0.0%	0.0%	0.1%	0.2%	0.3%	0.7%	1.1%
Investment measures	0.7%	1.1%	1.1%	1.2%	1.2%	1.6%	2.4%
Subsidies (except export subsidies)	8.9%	11.6%	12.7%	14.9%	16.7%	17.4%	18.4%
Government procurement	0.9%	1.5%	1.5%	2.4%	2.7%	3.2%	4.3%
Export measures	46.2%	54.7%	59.2%	65.4%	67.2%	64.9%	64.6%
Import tariff measures	2.5%	6.4%	6.8%	7.7%	9.2%	9.8%	10.2%
Instrument unclassified	0.1%	0.2%	0.2%	0.5%	0.9%	1.4%	5.8%

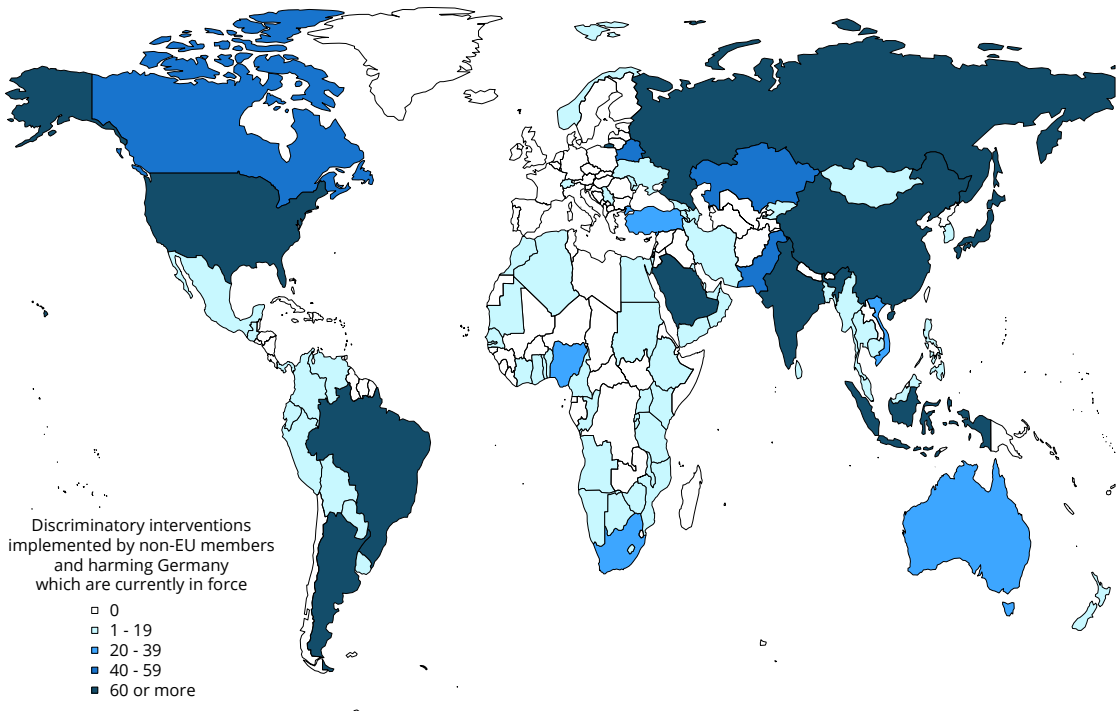
Percentage of intra-EU exports at risk

Foreign descriminatory trade instrument	2009	2010	2011	2012	2013	2014	2015
All forms of foreign discrimination	43.3%	52.8%	54.5%	56.7%	57.9%	59.3%	57.7%
Contingent trade protection	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Non-automatic licensing, quotas	0.0%	0.0%	0.0%	0.0%	0.4%	0.0%	0.0%
Investment measures	0.0%	1.9%	2.2%	2.2%	2.2%	2.2%	2.2%
Subsidies (except export subsidies)	8.1%	11.1%	5.2%	5.8%	5.8%	7.4%	5.5%
Government procurement	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Export measures	38.6%	47.1%	50.5%	53.1%	54.2%	54.6%	53.9%
Instrument unclassified	0.0%	0.0%	0.0%	0.0%	0.0%	0.1%	0.1%
Exports benefitting from export incentives	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%

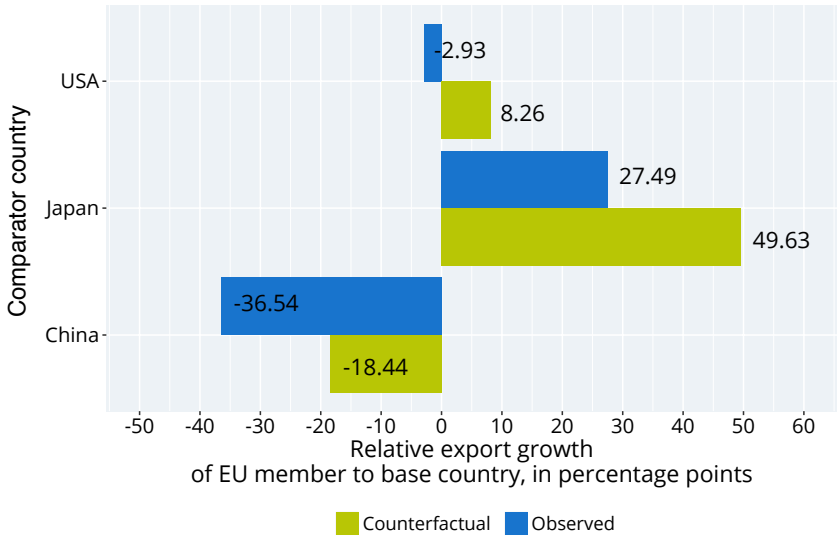
Regional distribution of protectionist interventions harming Germany's exports, 2009-2017



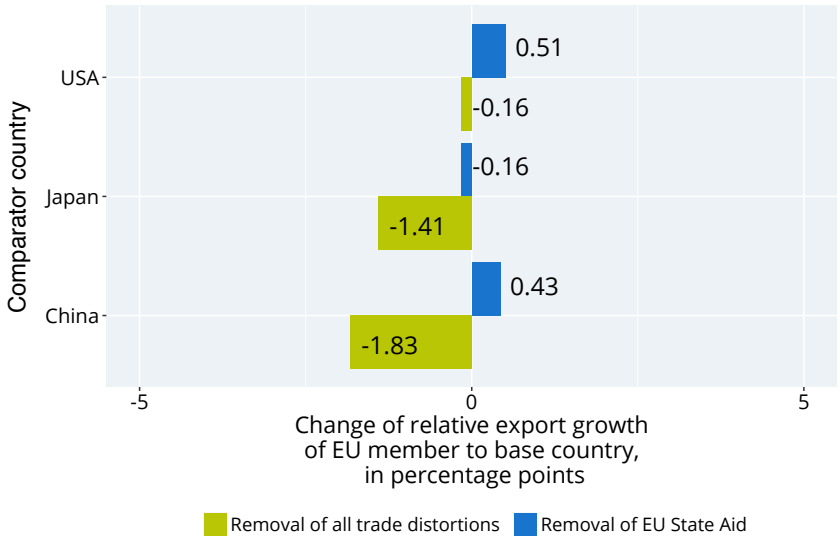
Discriminatory interventions harming Germany's extra-EU exports currently in force



Germany's extra-EU export growth without crisis-era trade barriers relative to each country comparator, 2008-2014



Germany's intra-EU export growth without crisis-era trade barriers relative to each country comparator, 2008-2014

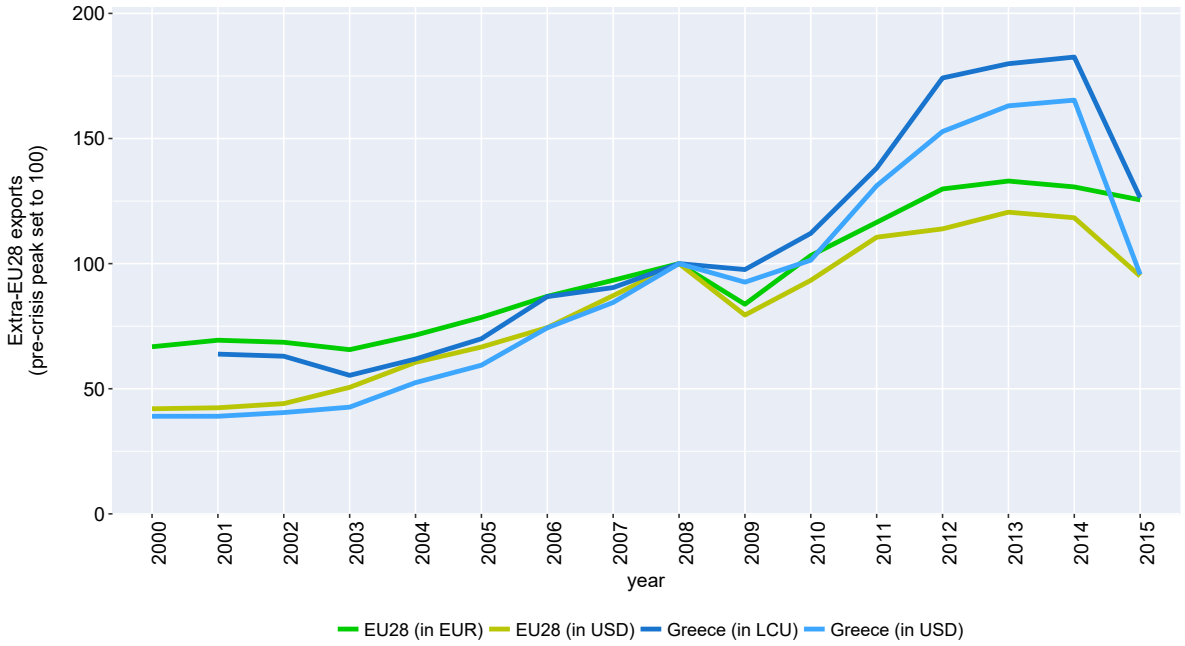


GREECE

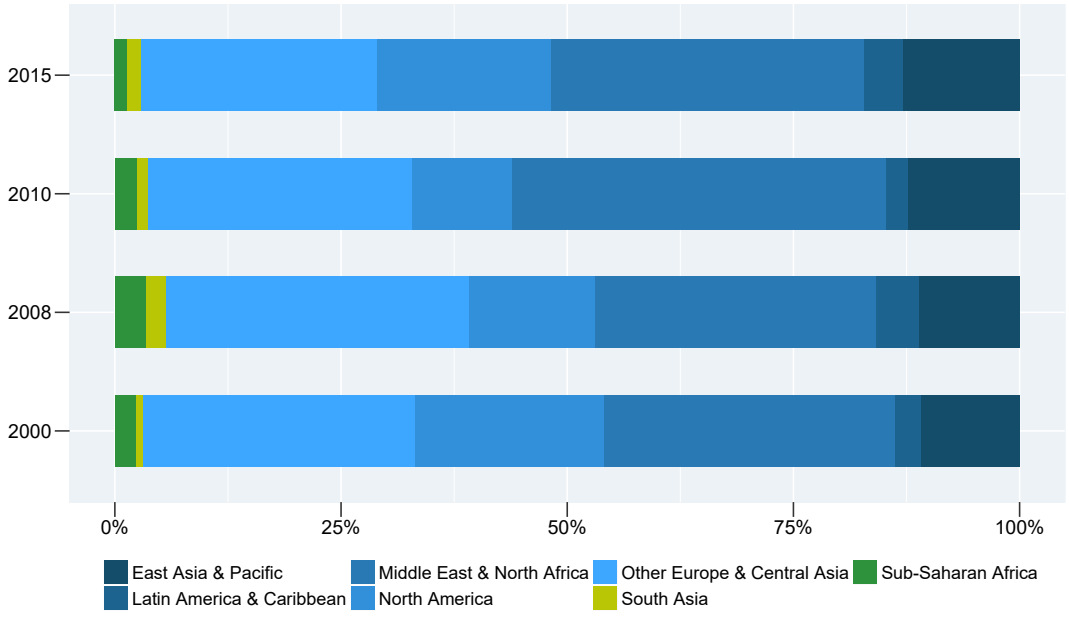
Total amount of exta-EU exports in 2014 (in billion USD): 12.38

Extra-EU exports as a percentage of total exports in 2014: 48.46%

Exports of Greece and EU in current US dollars and euros



Distribution of extra-EU28 exports across regions



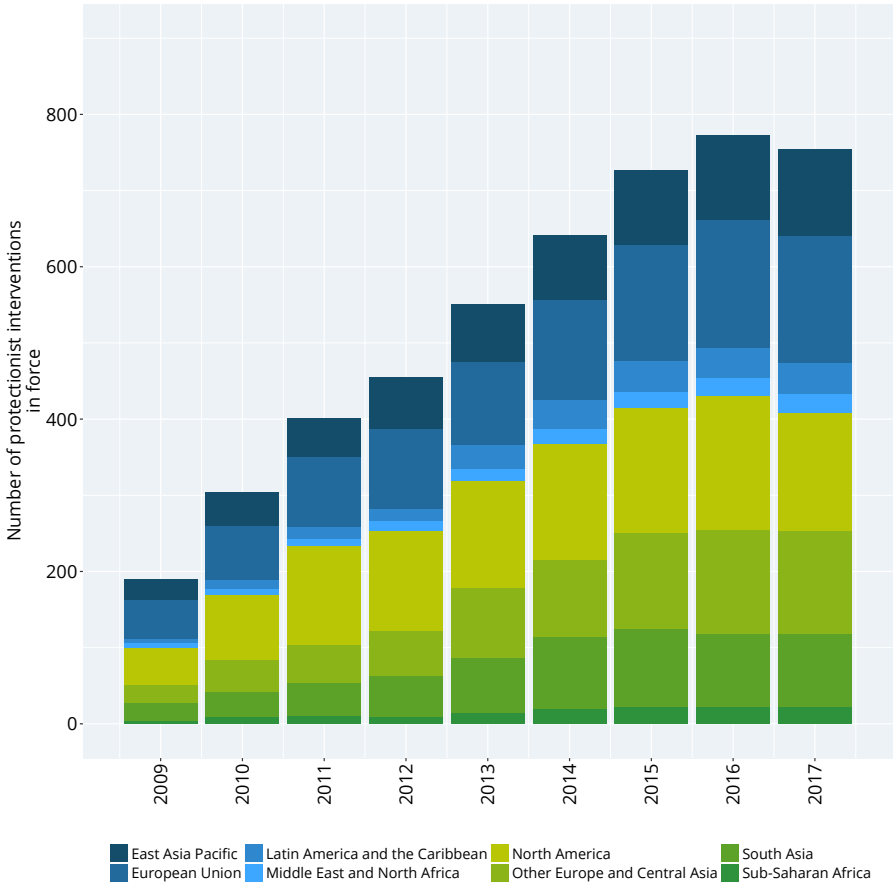
Percentage of extra-EU exports at risk

Foreign descriminatory trade instrument	2009	2010	2011	2012	2013	2014	2015
All forms of foreign discrimination	27.4%	38.7%	44.4%	46.3%	52.4%	53.5%	50.8%
Contingent trade protection	0.1%	0.2%	0.2%	0.2%	0.2%	0.2%	0.2%
Non-automatic licensing, quotas	0.0%	0.0%	0.1%	0.6%	0.5%	0.6%	0.6%
Price control measures	0.2%	0.6%	0.9%	1.0%	1.0%	1.0%	1.0%
Investment measures	0.0%	0.1%	0.2%	0.2%	0.2%	0.5%	0.9%
Subsidies (except export subsidies)	0.8%	1.0%	1.8%	2.5%	3.3%	5.0%	5.6%
Government procurement	3.1%	3.3%	2.5%	3.2%	3.2%	3.2%	3.4%
Export measures	25.2%	37.1%	43.0%	44.7%	50.7%	51.9%	48.1%
Import tariff measures	0.1%	0.7%	0.9%	2.3%	3.4%	3.5%	3.9%
Instrument unclassified	0.0%	0.1%	0.1%	0.1%	0.2%	0.3%	0.3%

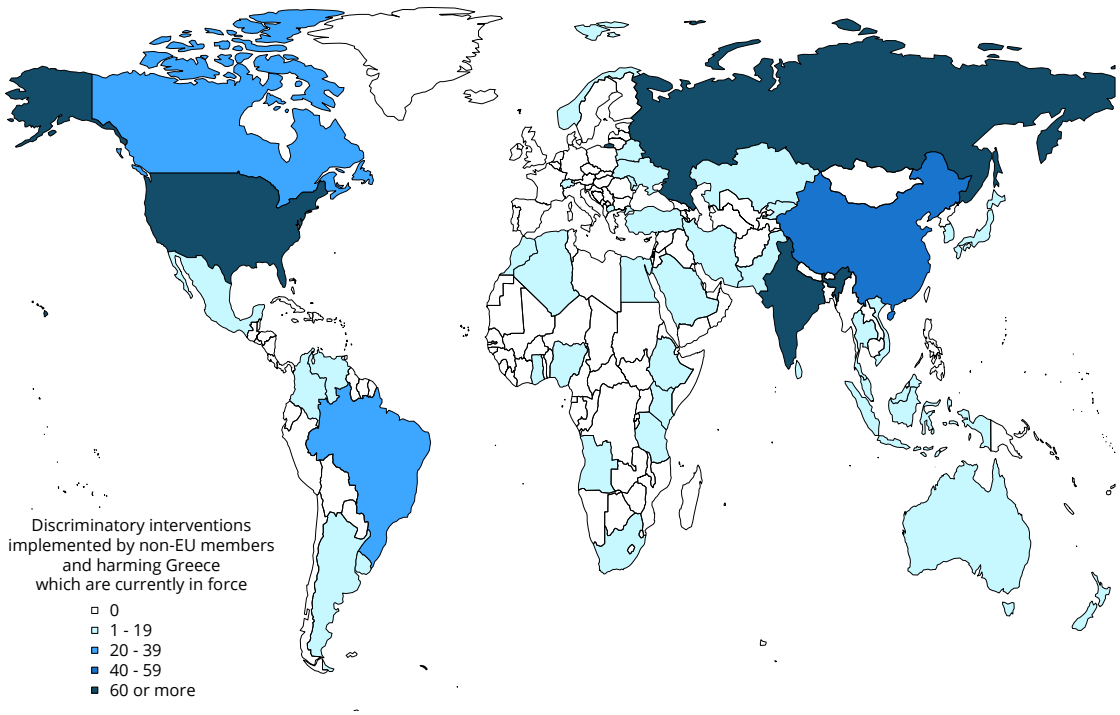
Percentage of intra-EU exports at risk

Foreign descriminatory trade instrument	2009	2010	2011	2012	2013	2014	2015
All forms of foreign discrimination	30.8%	42.3%	48.5%	50.2%	51.2%	54.5%	55.2%
Contingent trade protection	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Non-automatic licensing, quotas	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Investment measures	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Subsidies (except export subsidies)	1.7%	4.7%	4.3%	3.7%	3.4%	7.0%	7.5%
Government procurement	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Export measures	29.9%	40.1%	46.0%	48.3%	49.3%	50.5%	51.1%
Instrument unclassified	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Exports benefitting from export incentives	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%

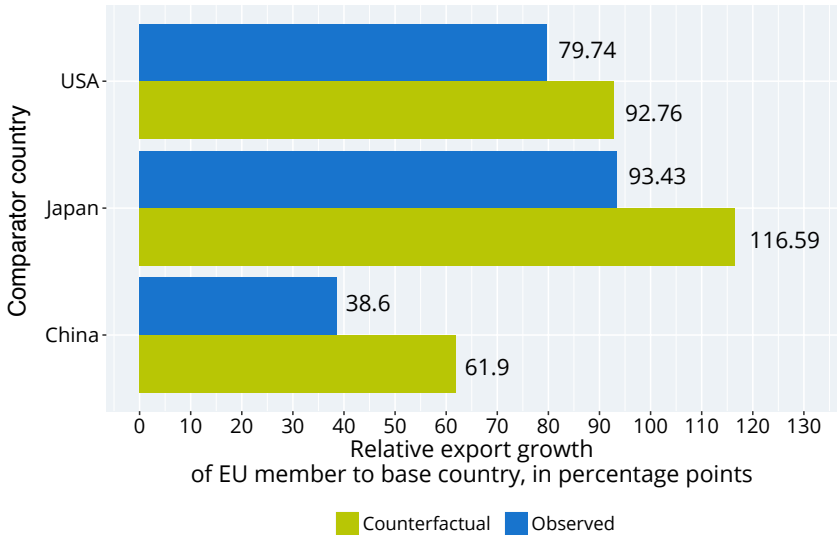
Regional distribution of protectionist interventions harming Greece's exports, 2009-2017



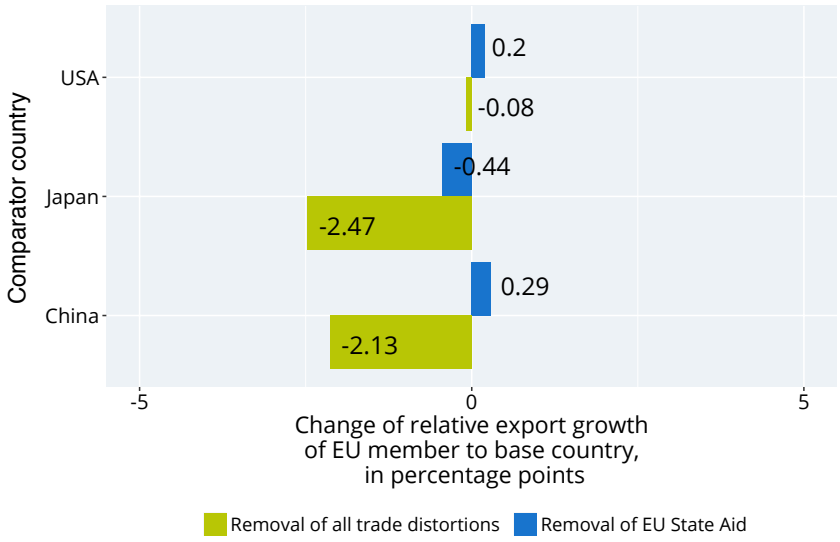
Discriminatory interventions harming Greece's extra-EU exports currently in force



Greece's extra-EU export growth without crisis-era trade barriers relative to each country comparator, 2008-2014



Greece's intra-EU export growth without crisis-era trade barriers relative to each country comparator, 2008-2014

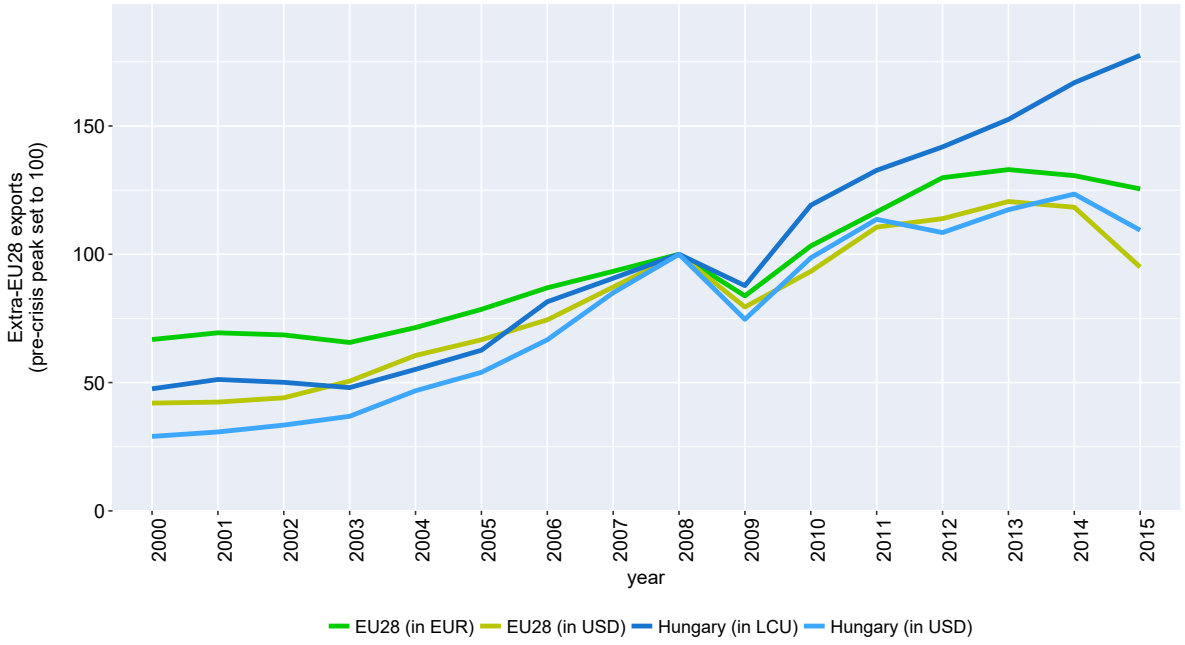


HUNGARY

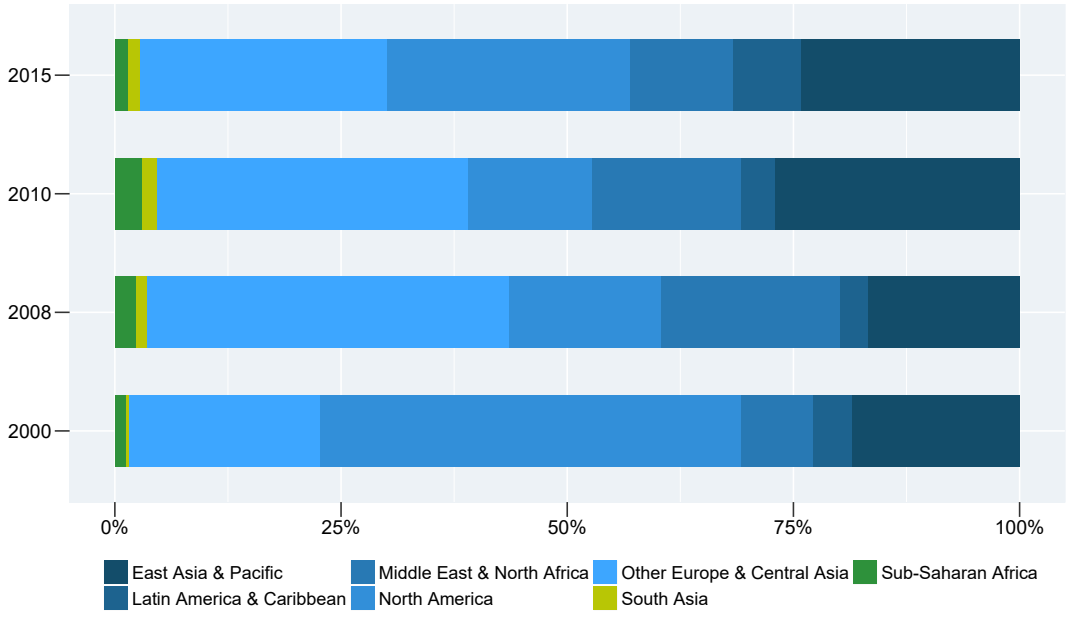
Total amount of exta-EU exports in 2014 (in billion USD): 22.32

Extra-EU exports as a percentage of total exports in 2014: 23.3%

Exports of Hungary and EU in current US dollars and euros



Distribution of extra-EU28 exports across regions



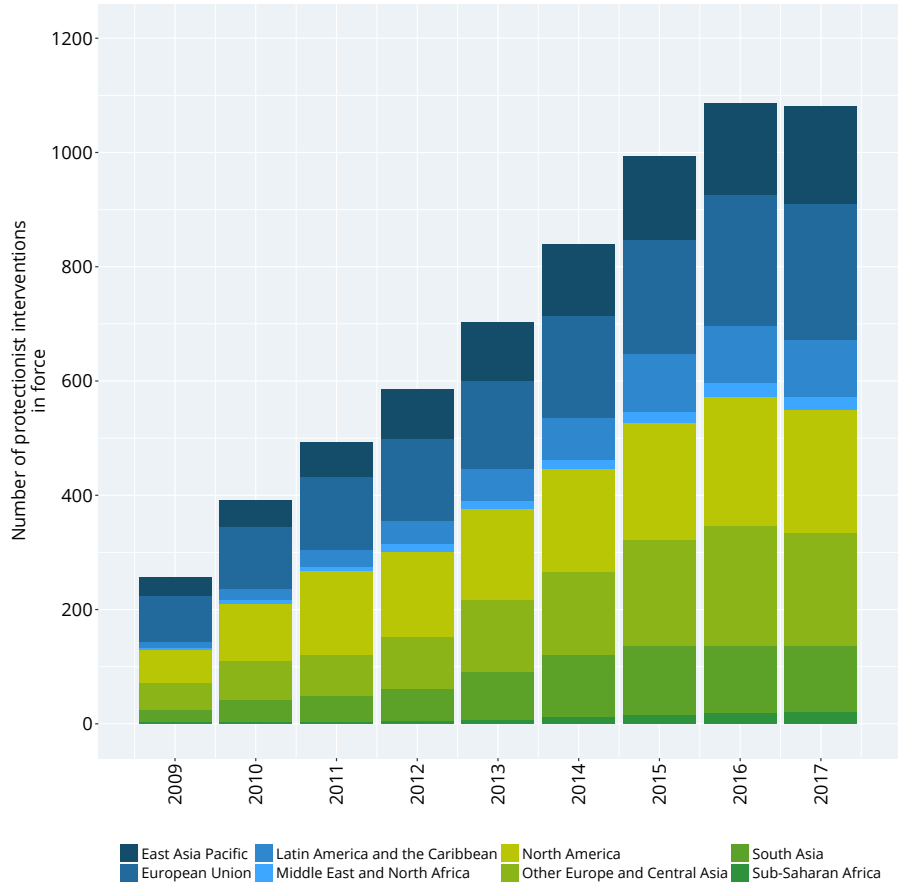
Percentage of extra-EU exports at risk

Foreign descriminatory trade instrument	2009	2010	2011	2012	2013	2014	2015
All forms of foreign discrimination	70.9%	77.4%	78.5%	81.0%	83.1%	83.4%	83.7%
Contingent trade protection	0.0%	0.0%	0.0%	0.0%	0.4%	0.6%	0.4%
Non-automatic licensing, quotas	0.1%	0.2%	0.2%	0.3%	0.5%	0.2%	0.2%
Price control measures	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.2%
Investment measures	0.3%	0.7%	0.8%	0.8%	0.8%	0.8%	1.3%
Subsidies (except export subsidies)	4.2%	7.2%	10.0%	16.7%	18.8%	18.9%	19.3%
Government procurement	0.4%	1.0%	0.8%	1.2%	1.5%	2.2%	8.2%
Export measures	67.9%	72.9%	74.2%	77.4%	80.3%	80.8%	80.8%
Import tariff measures	3.1%	6.4%	6.0%	6.6%	8.8%	9.5%	10.5%
Instrument unclassified	0.0%	0.0%	0.0%	0.3%	0.6%	0.3%	0.6%

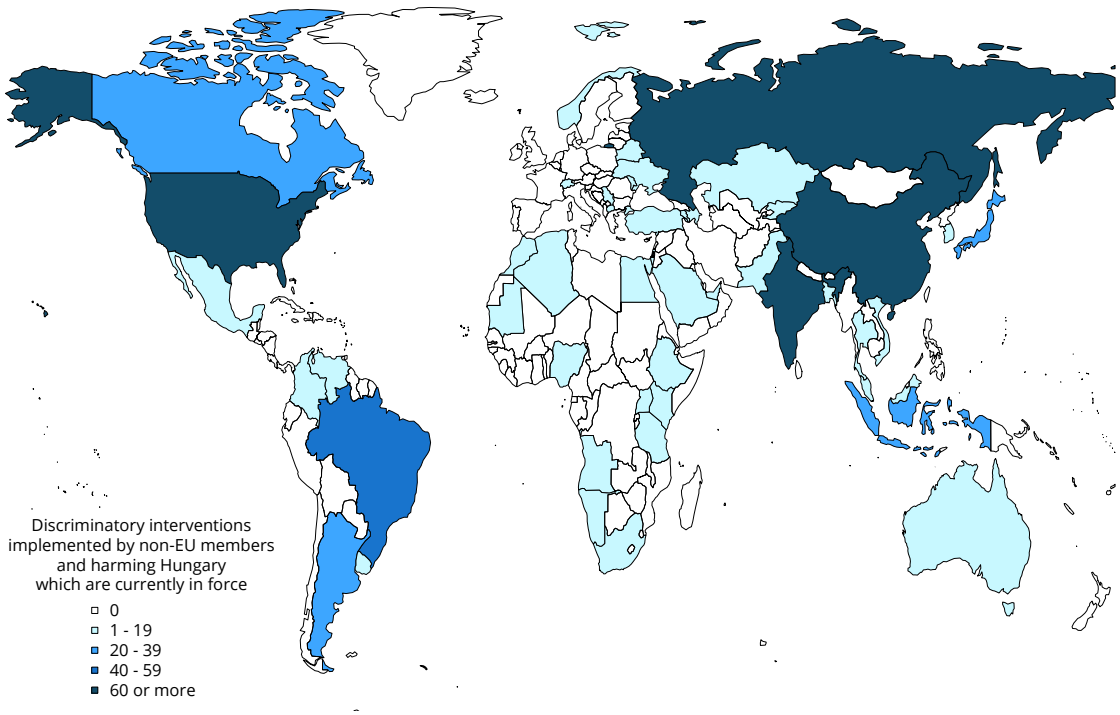
Percentage of intra-EU exports at risk

Foreign descriminatory trade instrument	2009	2010	2011	2012	2013	2014	2015
All forms of foreign discrimination	63.7%	68.6%	69.9%	73.4%	75.8%	76.8%	76.8%
Contingent trade protection	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Non-automatic licensing, quotas	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Investment measures	0.0%	0.6%	0.7%	0.7%	0.7%	0.7%	0.7%
Subsidies (except export subsidies)	6.4%	9.3%	4.9%	6.2%	5.6%	7.8%	7.7%
Government procurement	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Export measures	62.7%	66.7%	68.4%	72.2%	74.8%	75.0%	74.8%
Instrument unclassified	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Exports benefitting from export incentives	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%

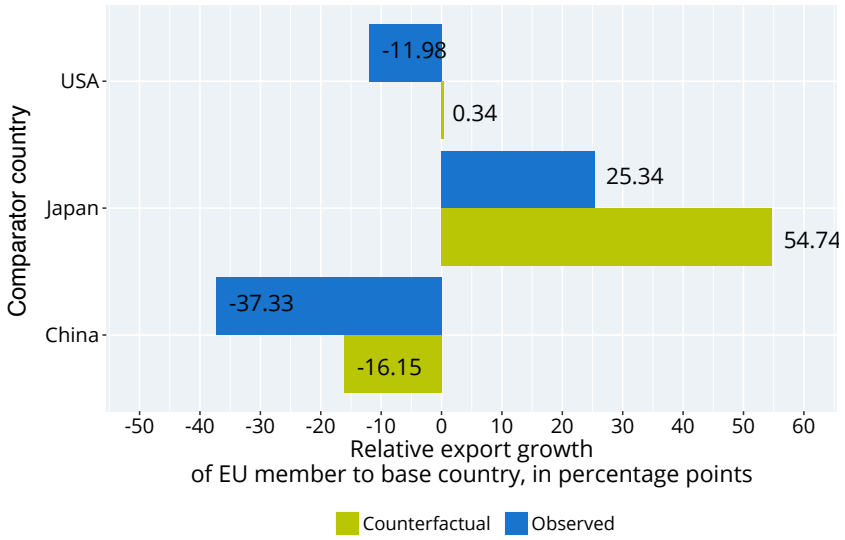
Regional distribution of protectionist interventions harming Hungary's exports, 2009-2017



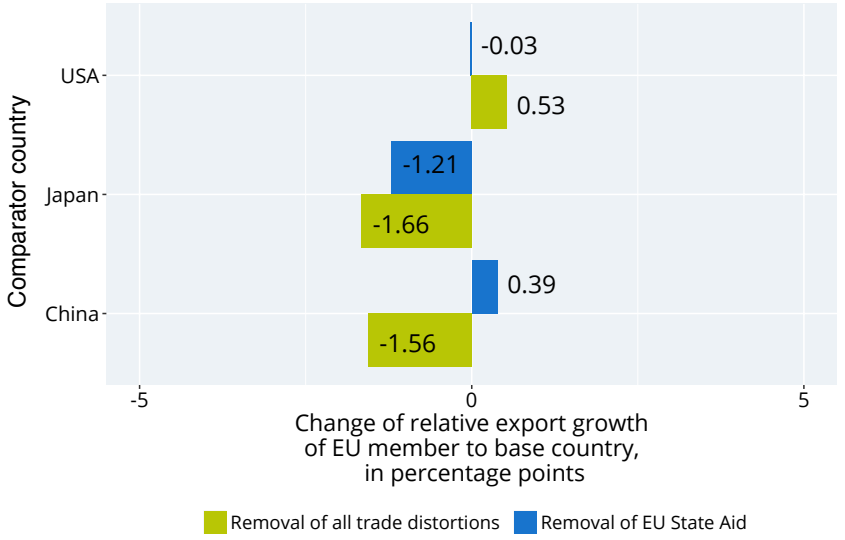
Discriminatory interventions harming Hungary's extra-EU exports currently in force



Hungary's extra-EU export growth without crisis-era trade barriers relative to each country comparator, 2008-2014



Hungary's intra-EU export growth without crisis-era trade barriers relative to each country comparator, 2008-2014

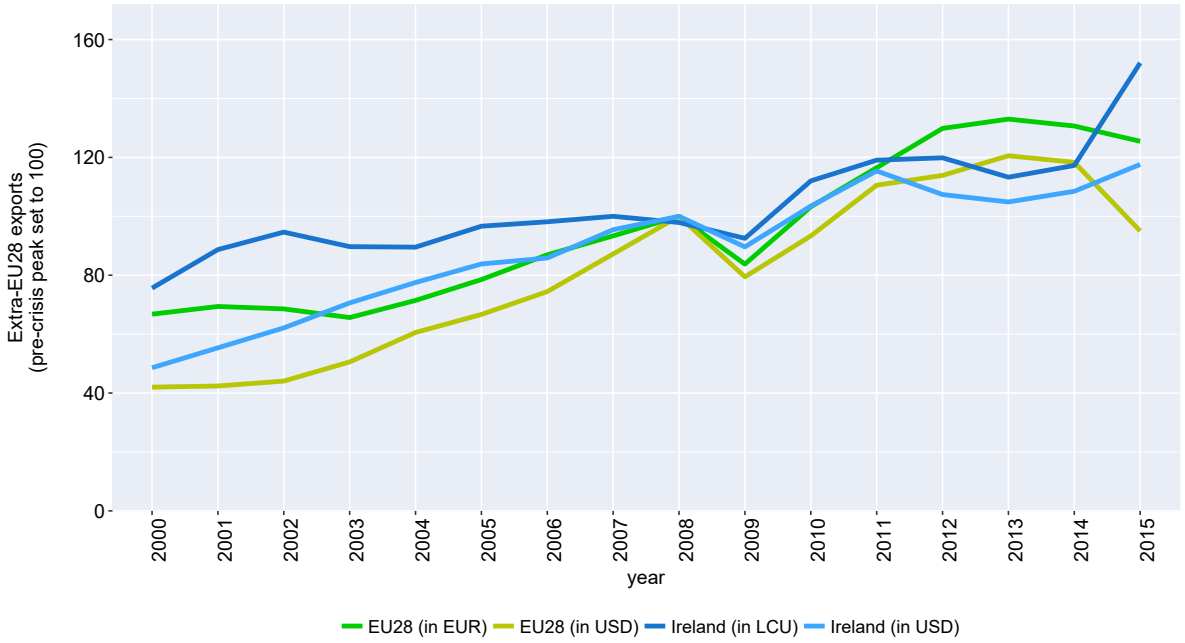


IRELAND

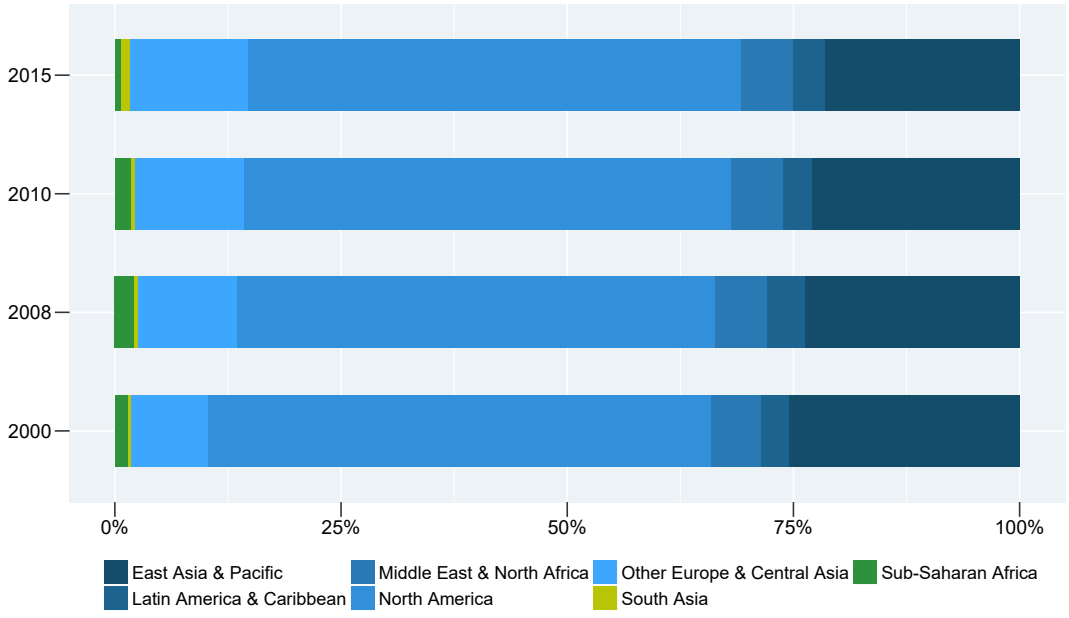
Total amount of exta-EU exports in 2014 (in billion USD): 65.38

Extra-EU exports as a percentage of total exports in 2014: 46.16%

Exports of Ireland and EU in current US dollars and euros



Distribution of extra-EU28 exports across regions



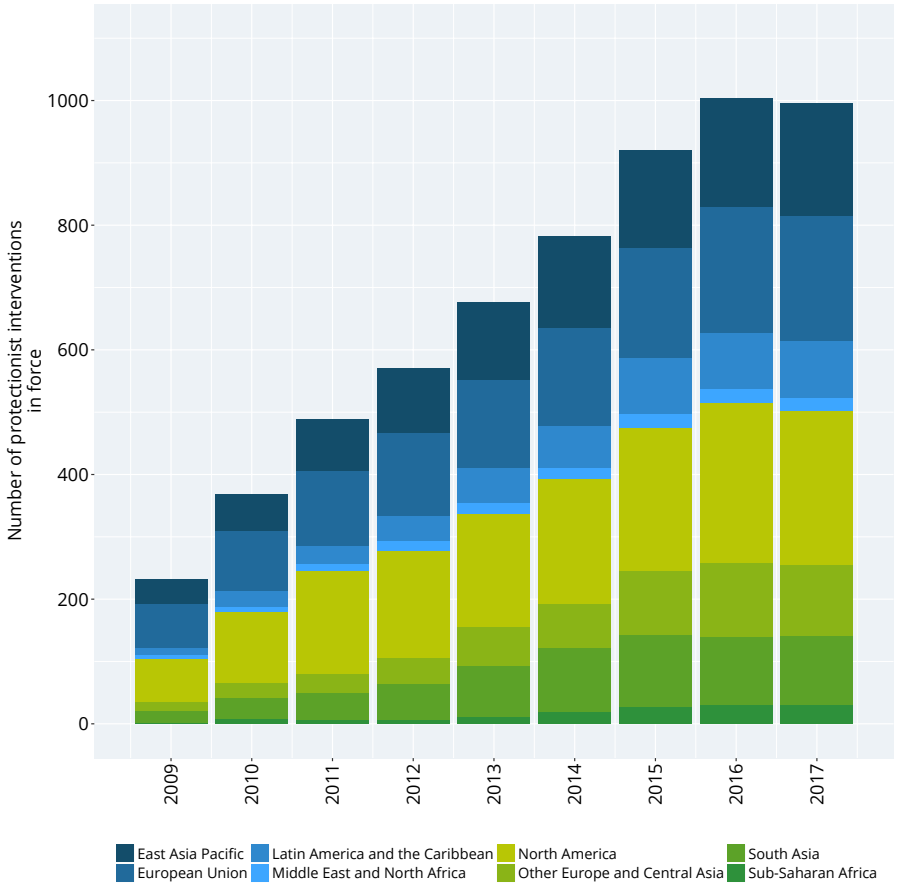
Percentage of extra-EU exports at risk

Foreign descriminatory trade instrument	2009	2010	2011	2012	2013	2014	2015
All forms of foreign discrimination	64.1%	75.6%	81.6%	85.6%	86.6%	86.5%	86.5%
Contingent trade protection	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Non-automatic licensing, quotas	0.2%	0.1%	0.2%	0.2%	0.3%	0.3%	0.3%
Price control measures	0.0%	0.0%	0.1%	0.1%	0.1%	0.1%	0.2%
Investment measures	0.0%	0.0%	0.0%	0.0%	0.1%	0.1%	0.2%
Subsidies (except export subsidies)	0.3%	0.5%	1.5%	26.9%	38.4%	38.6%	38.7%
Government procurement	0.3%	1.1%	1.0%	1.5%	1.7%	1.8%	2.9%
Export measures	63.4%	74.2%	80.0%	84.1%	85.6%	85.5%	84.7%
Import tariff measures	0.4%	1.3%	1.4%	1.9%	2.3%	2.3%	3.1%
Instrument unclassified	0.0%	0.0%	0.1%	0.2%	0.2%	0.3%	0.3%

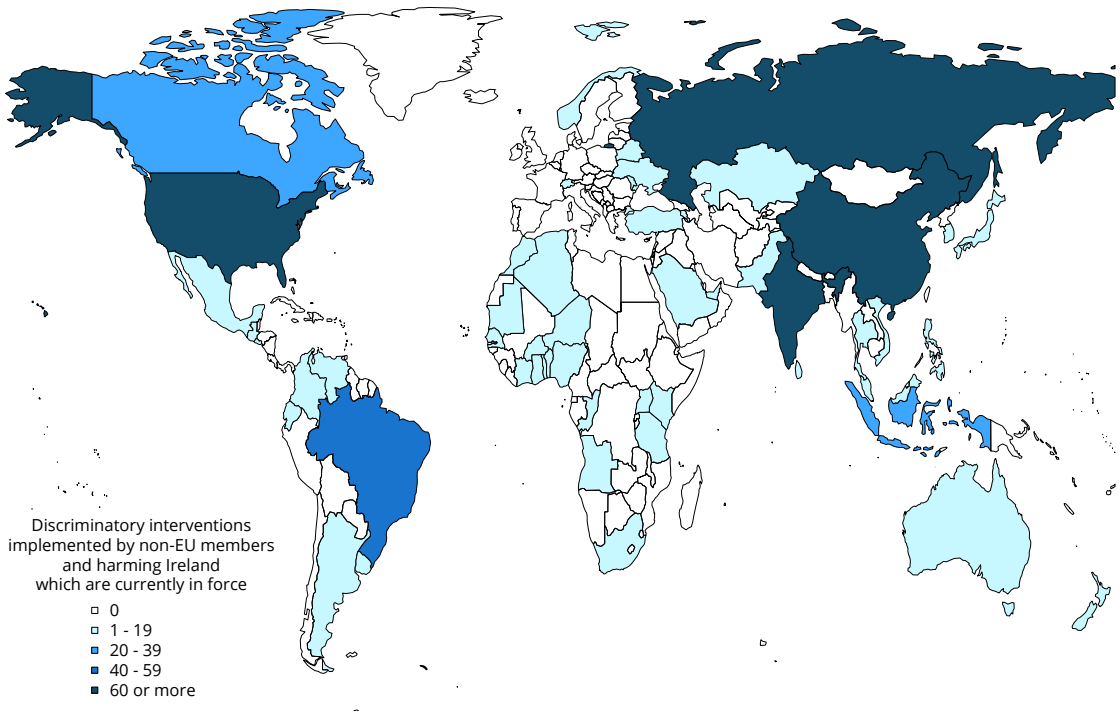
Percentage of intra-EU exports at risk

Foreign descriminatory trade instrument	2009	2010	2011	2012	2013	2014	2015
All forms of foreign discrimination	55.1%	65.3%	76.2%	80.7%	81.6%	82.1%	76.9%
Contingent trade protection	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Non-automatic licensing, quotas	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Investment measures	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Subsidies (except export subsidies)	5.5%	8.0%	1.8%	1.2%	1.2%	4.7%	5.6%
Government procurement	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Export measures	54.4%	63.3%	74.8%	79.9%	80.8%	80.8%	74.7%
Instrument unclassified	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Exports benefitting from export incentives	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%

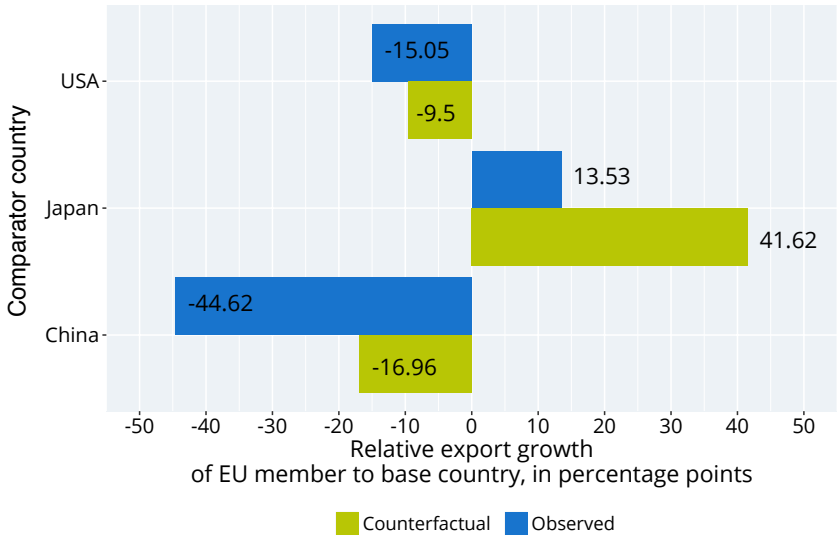
Regional distribution of protectionist interventions harming Ireland's exports, 2009-2017



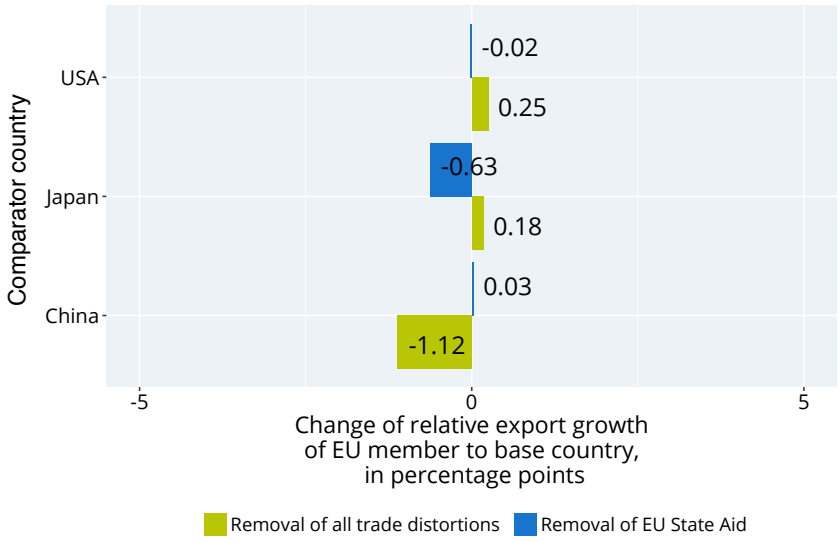
Discriminatory interventions harming Ireland's extra-EU exports currently in force



Ireland's extra-EU export growth without crisis-era trade barriers relative to each country comparator, 2008-2014



Ireland's intra-EU export growth without crisis-era trade barriers relative to each country comparator, 2008-2014

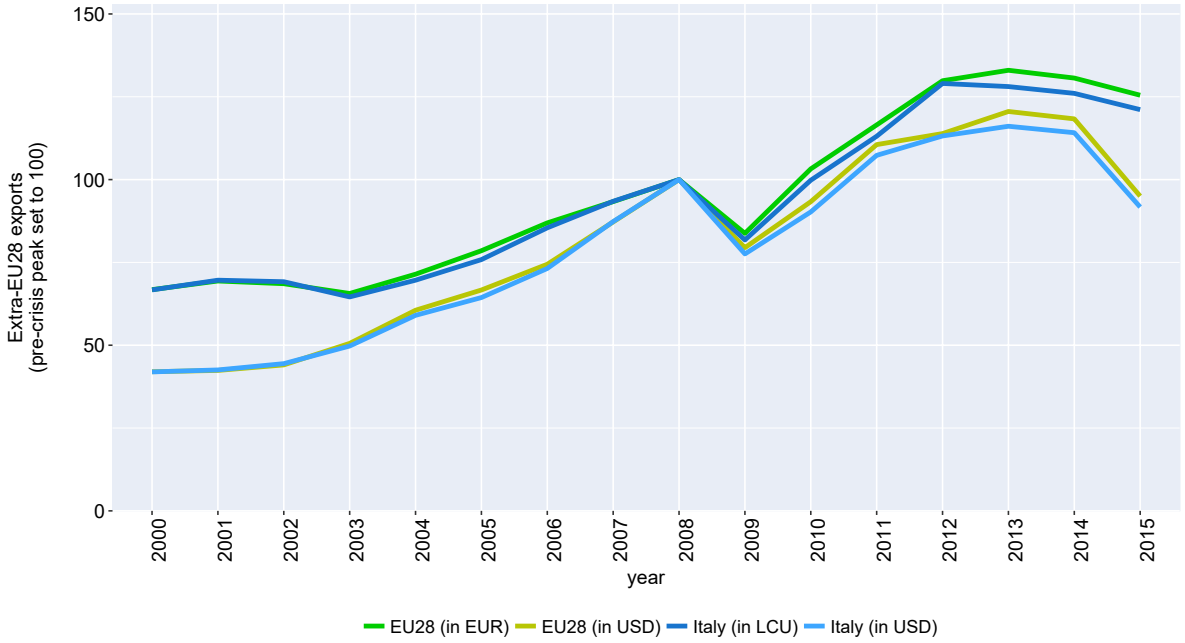


ITALY

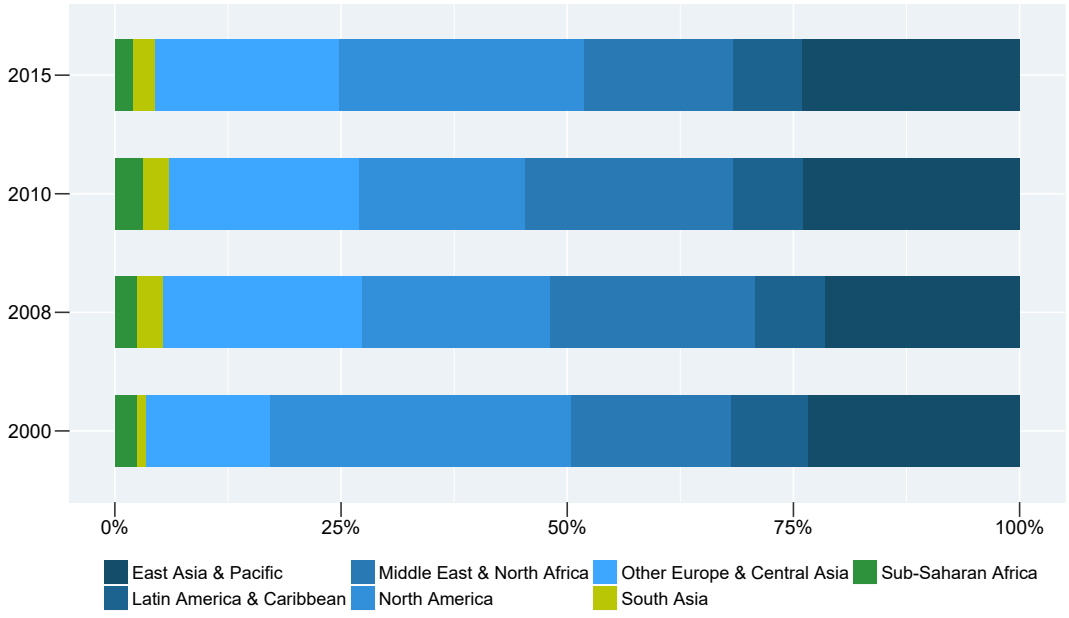
Total amount of exta-EU exports in 2014 (in billion USD): 212.79

Extra-EU exports as a percentage of total exports in 2014: 46.11%

Exports of Italy and EU in current US dollars and euros



Distribution of extra-EU28 exports across regions



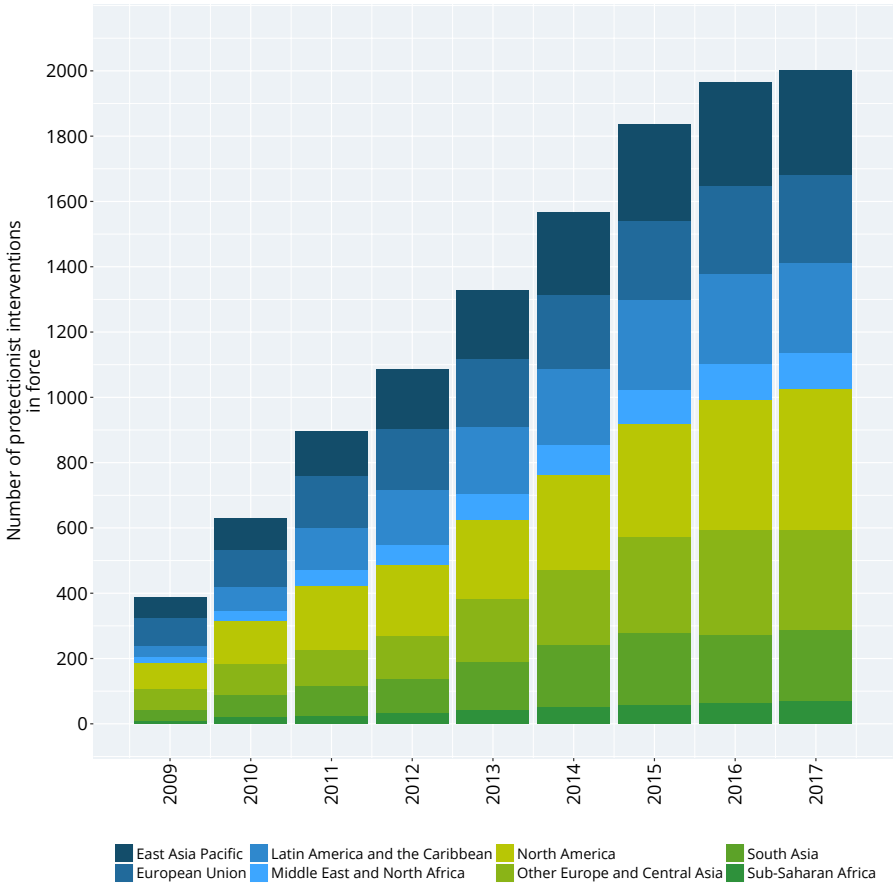
Percentage of extra-EU exports at risk

Foreign descriminatory trade instrument	2009	2010	2011	2012	2013	2014	2015
All forms of foreign discrimination	54.5%	64.6%	68.2%	71.2%	73.0%	73.7%	73.6%
Contingent trade protection	0.1%	0.2%	0.2%	0.3%	0.4%	0.6%	0.6%
Non-automatic licensing, quotas	1.0%	0.2%	0.3%	0.6%	0.6%	1.0%	1.5%
Price control measures	0.0%	0.0%	0.2%	0.3%	0.3%	0.3%	0.7%
Investment measures	0.1%	0.2%	0.4%	0.5%	0.5%	1.2%	1.8%
Subsidies (except export subsidies)	2.7%	3.9%	4.4%	6.4%	9.2%	10.1%	11.2%
Government procurement	1.0%	2.0%	1.8%	2.8%	3.0%	3.6%	4.4%
Export measures	51.2%	60.6%	64.3%	67.9%	69.6%	69.8%	69.3%
Import tariff measures	1.3%	3.8%	4.3%	5.0%	6.3%	6.7%	6.9%
Instrument unclassified	0.1%	0.3%	0.3%	0.4%	0.4%	0.5%	1.0%

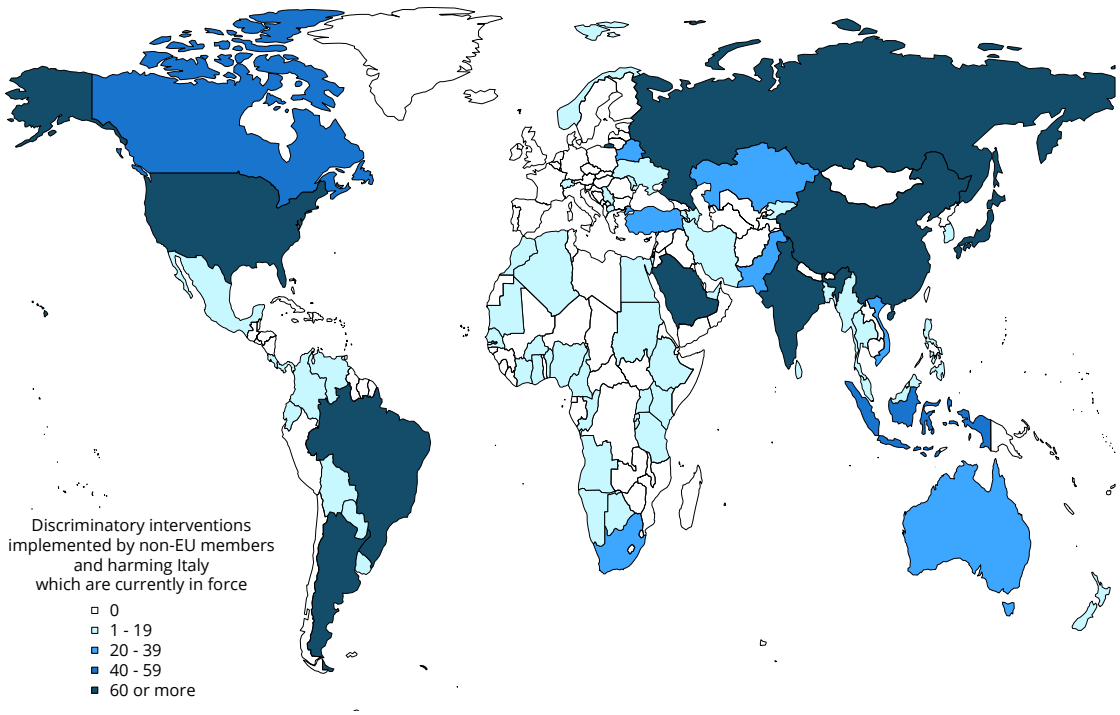
Percentage of intra-EU exports at risk

Foreign descriminatory trade instrument	2009	2010	2011	2012	2013	2014	2015
All forms of foreign discrimination	50.2%	60.0%	62.3%	64.8%	66.1%	67.6%	66.8%
Contingent trade protection	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Non-automatic licensing, quotas	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Investment measures	0.0%	1.1%	1.2%	1.3%	1.2%	1.2%	1.2%
Subsidies (except export subsidies)	4.4%	6.9%	3.9%	4.5%	5.0%	8.3%	8.0%
Government procurement	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Export measures	48.3%	56.7%	60.0%	62.8%	64.3%	64.5%	63.5%
Instrument unclassified	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Exports benefitting from export incentives	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%

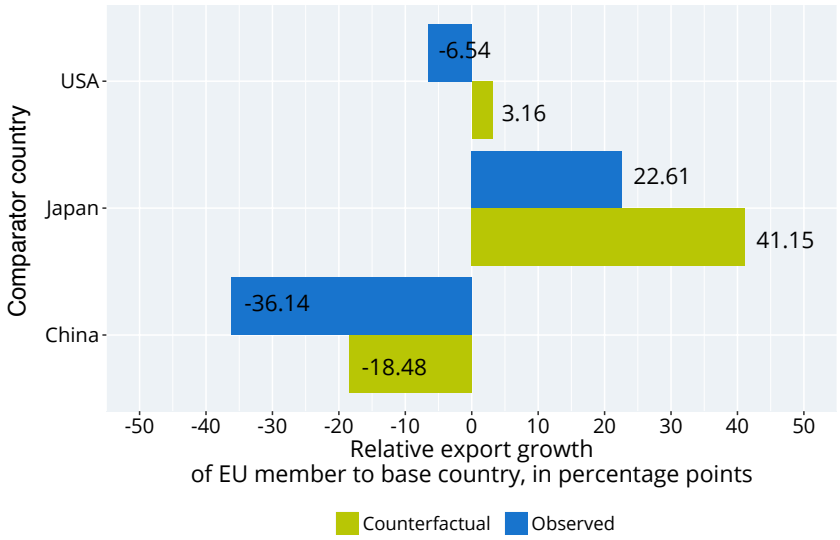
Regional distribution of protectionist interventions harming Italy's exports, 2009-2017



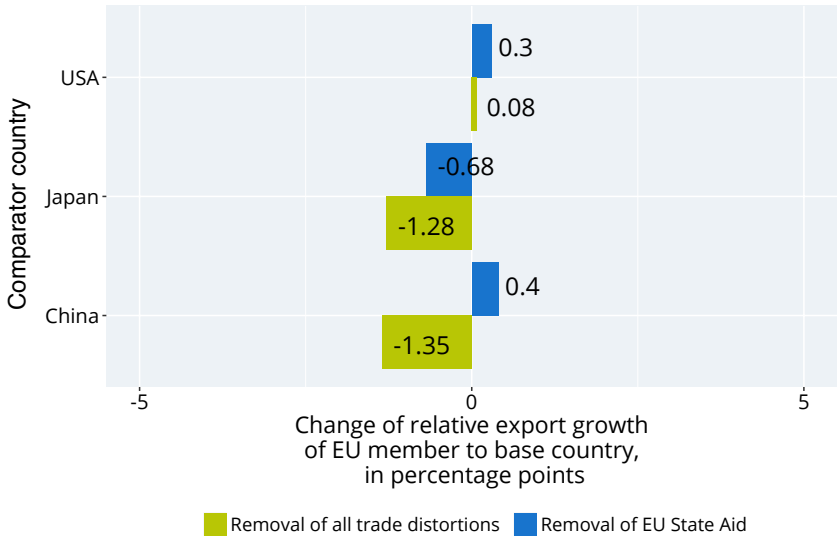
Discriminatory interventions harming Italy's extra-EU exports currently in force



Italy's extra-EU export growth without crisis-era trade barriers relative to each country comparator, 2008-2014



Italy's intra-EU export growth without crisis-era trade barriers relative to each country comparator, 2008-2014

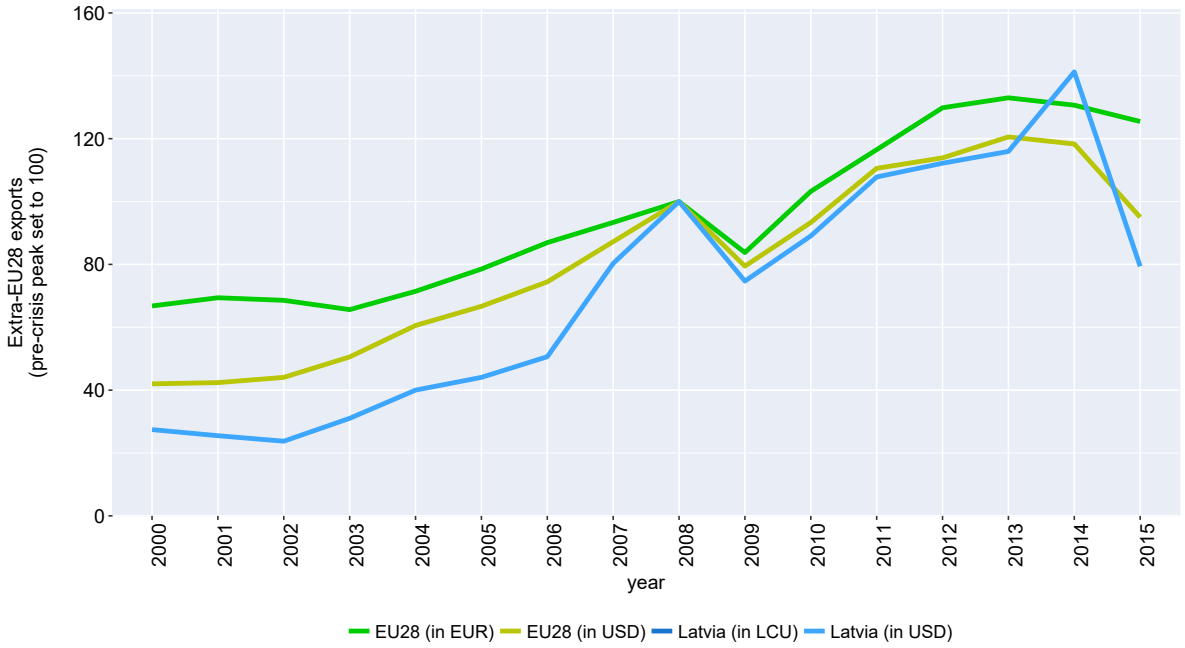


LATVIA

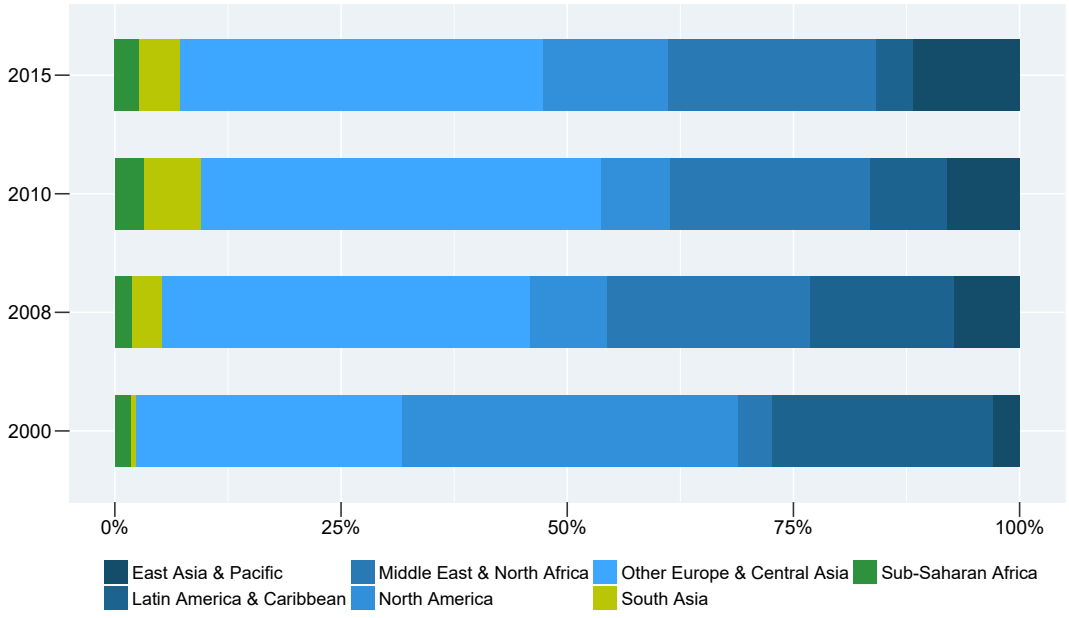
Total amount of exta-EU exports in 2014 (in billion USD): 3.77

Extra-EU exports as a percentage of total exports in 2014: 33.34%

Exports of Latvia and EU in current US dollars and euros



Distribution of extra-EU28 exports across regions



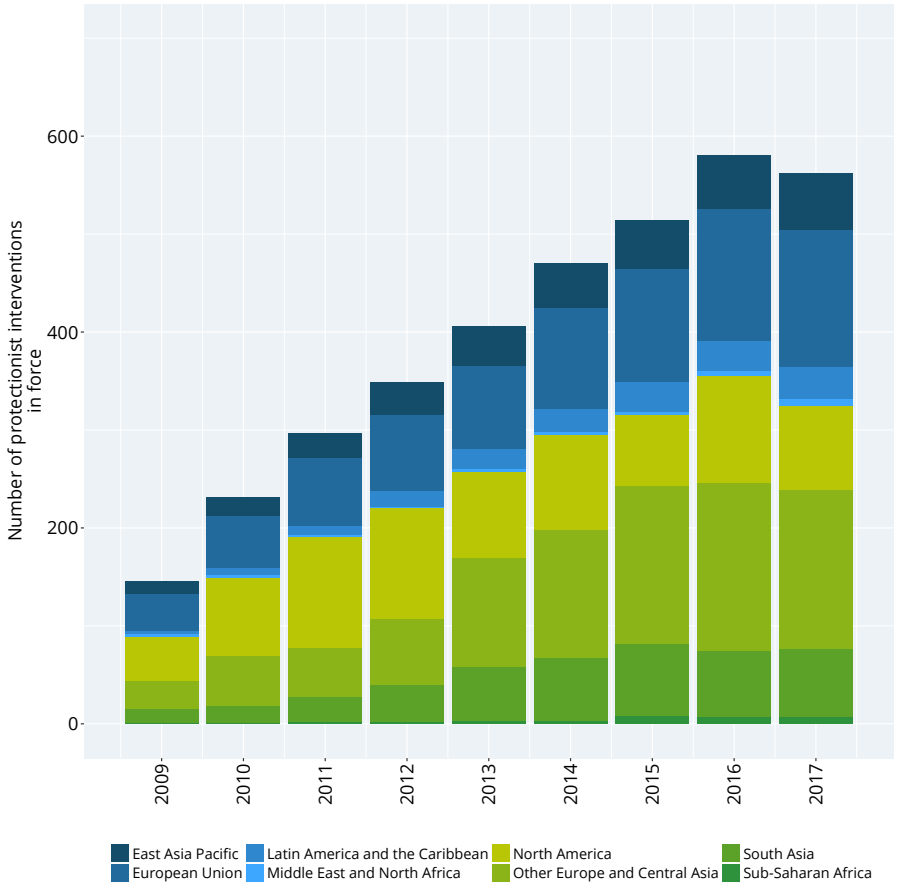
Percentage of extra-EU exports at risk

Foreign descriminatory trade instrument	2009	2010	2011	2012	2013	2014	2015
All forms of foreign discrimination	19.9%	34.9%	53.3%	60.0%	61.9%	62.1%	64.3%
Contingent trade protection	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Non-automatic licensing, quotas	0.0%	0.3%	0.4%	3.9%	4.2%	4.2%	4.2%
Price control measures	0.0%	0.0%	0.1%	0.1%	0.1%	0.1%	0.1%
Investment measures	0.0%	0.0%	0.0%	0.0%	0.1%	0.2%	0.2%
Subsidies (except export subsidies)	2.6%	5.5%	12.0%	20.2%	21.0%	21.1%	25.2%
Government procurement	1.0%	3.2%	2.8%	4.6%	6.6%	6.7%	7.1%
Export measures	17.5%	29.8%	44.0%	49.5%	56.4%	56.3%	57.6%
Import tariff measures	2.6%	3.6%	1.9%	2.1%	2.5%	2.9%	3.2%
Instrument unclassified	0.0%	0.0%	0.0%	0.0%	0.2%	0.2%	0.2%

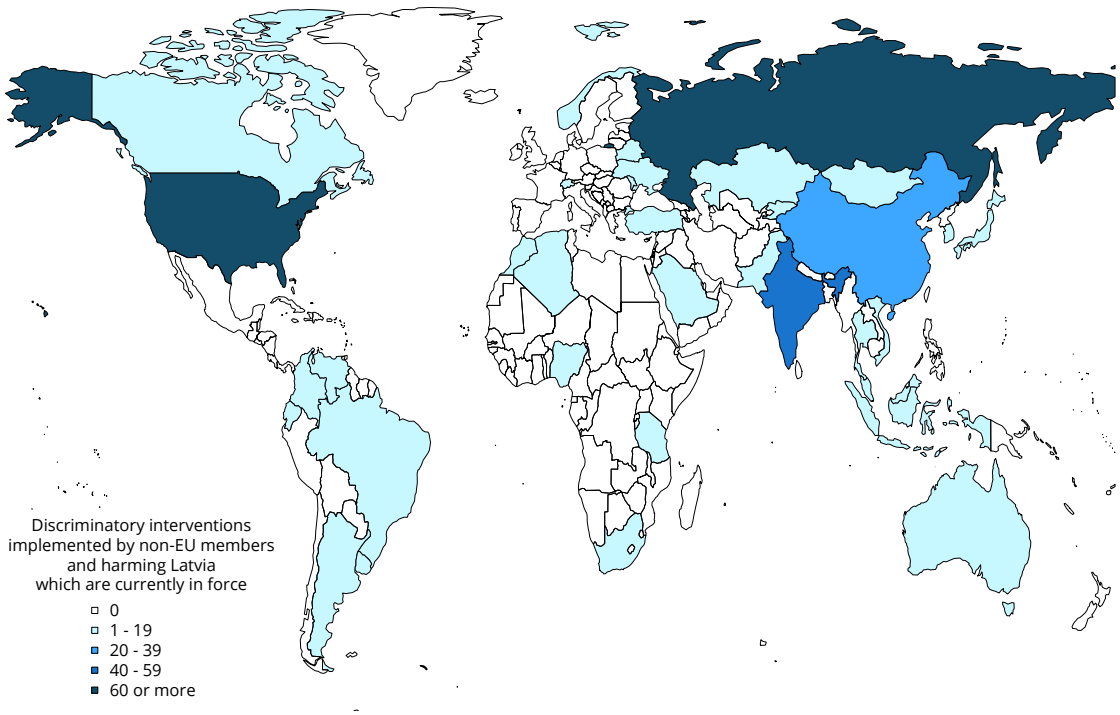
Percentage of intra-EU exports at risk

Foreign descriminatory trade instrument	2009	2010	2011	2012	2013	2014	2015
All forms of foreign discrimination	13.4%	28.3%	44.9%	45.5%	48.0%	49.4%	50.1%
Contingent trade protection	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Non-automatic licensing, quotas	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Investment measures	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Subsidies (except export subsidies)	1.0%	4.1%	5.0%	4.5%	4.0%	5.9%	6.2%
Government procurement	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Export measures	12.6%	24.6%	40.5%	42.1%	46.3%	46.9%	45.9%
Instrument unclassified	0.0%	0.0%	0.0%	0.0%	0.0%	0.6%	1.3%
Exports benefitting from export incentives	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%

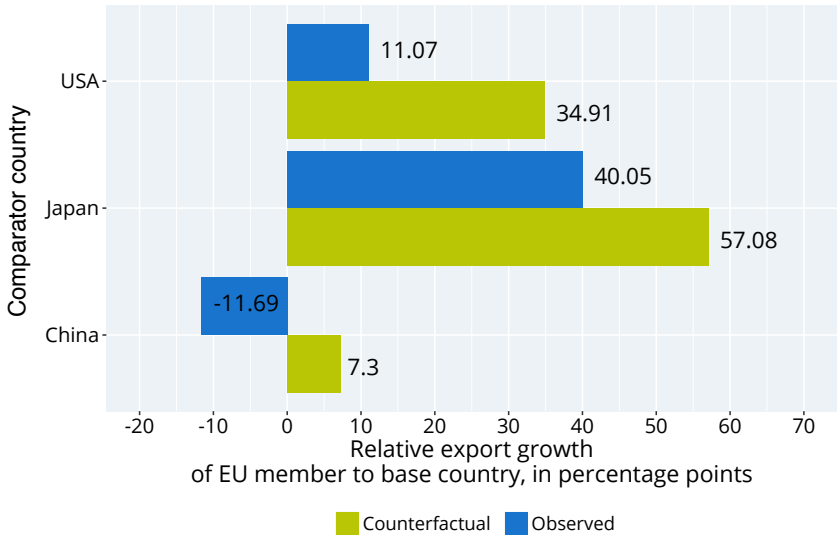
Regional distribution of protectionist interventions harming Latvia's exports, 2009-2017



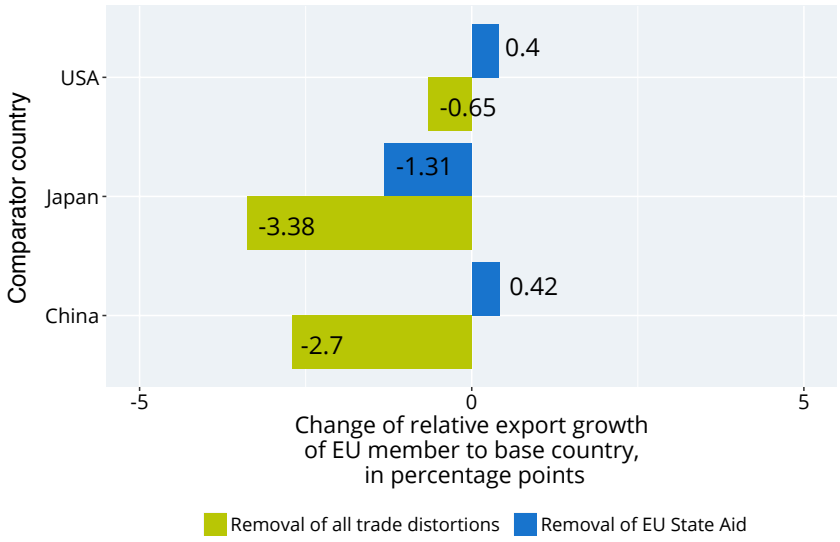
Discriminatory interventions harming Latvia's extra-EU exports currently in force



Latvia's extra-EU export growth without crisis-era trade barriers relative to each country comparator, 2008-2014



Latvia's intra-EU export growth without crisis-era trade barriers relative to each country comparator, 2008-2014

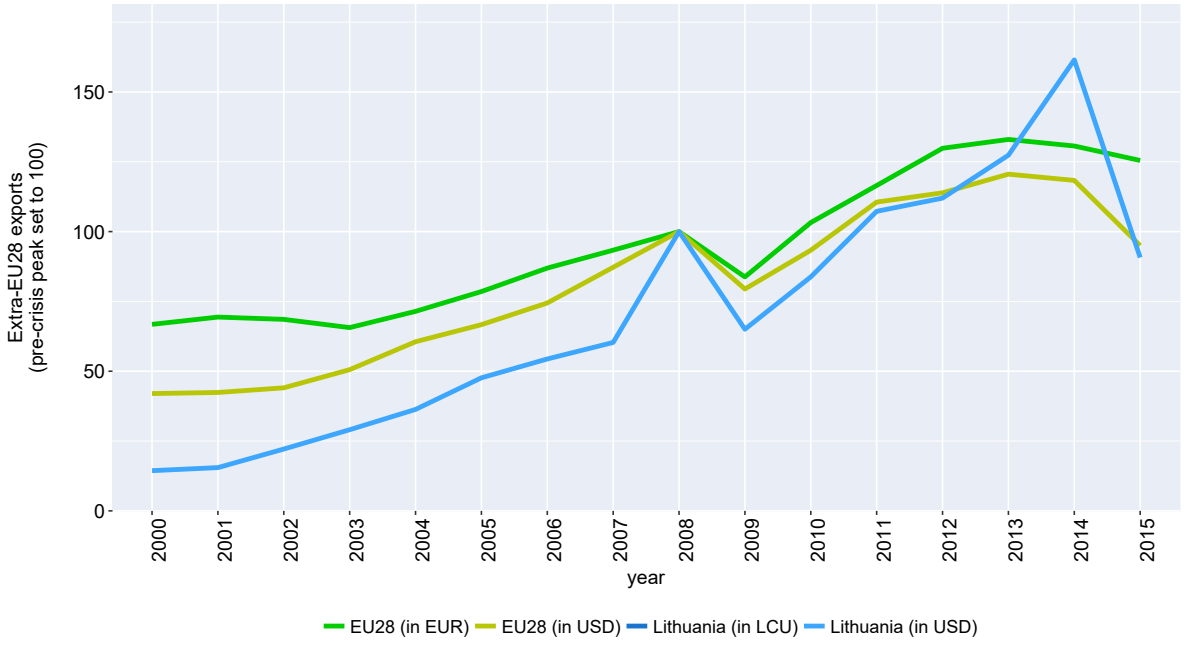


LITHUANIA

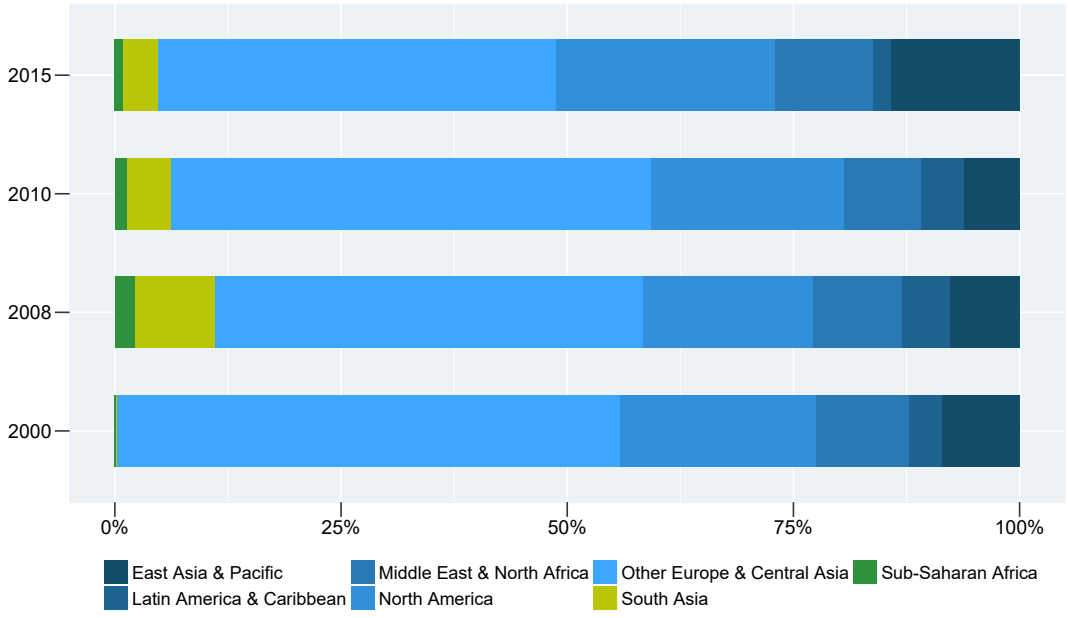
Total amount of exta-EU exports in 2014 (in billion USD): 8.2

Extra-EU exports as a percentage of total exports in 2014: 39.97%

Exports of Lithuania and EU in current US dollars and euros



Distribution of extra-EU28 exports across regions



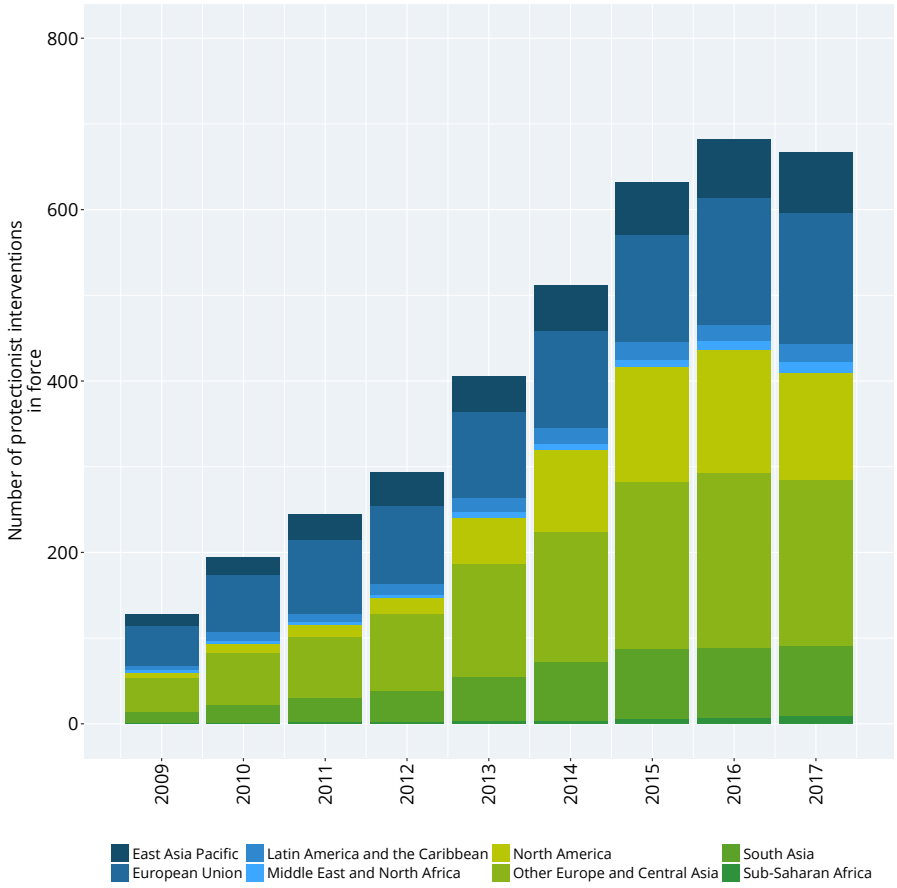
Percentage of extra-EU exports at risk

Foreign descriminatory trade instrument	2009	2010	2011	2012	2013	2014	2015
All forms of foreign discrimination	26.9%	42.3%	50.9%	52.8%	66.0%	57.1%	58.8%
Contingent trade protection	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Non-automatic licensing, quotas	1.0%	4.2%	4.6%	4.5%	4.6%	4.5%	4.7%
Price control measures	0.0%	0.0%	0.1%	0.1%	0.1%	0.1%	0.1%
Investment measures	0.2%	0.4%	0.4%	0.4%	0.3%	0.2%	0.3%
Subsidies (except export subsidies)	4.6%	3.6%	10.3%	18.9%	21.4%	21.8%	22.5%
Government procurement	2.5%	2.5%	0.2%	0.3%	0.3%	0.3%	0.5%
Export measures	22.5%	31.0%	38.9%	41.3%	44.0%	46.4%	48.2%
Import tariff measures	2.1%	9.5%	9.4%	10.1%	21.0%	10.7%	11.3%
Instrument unclassified	0.0%	0.0%	0.0%	0.0%	0.1%	0.1%	0.1%

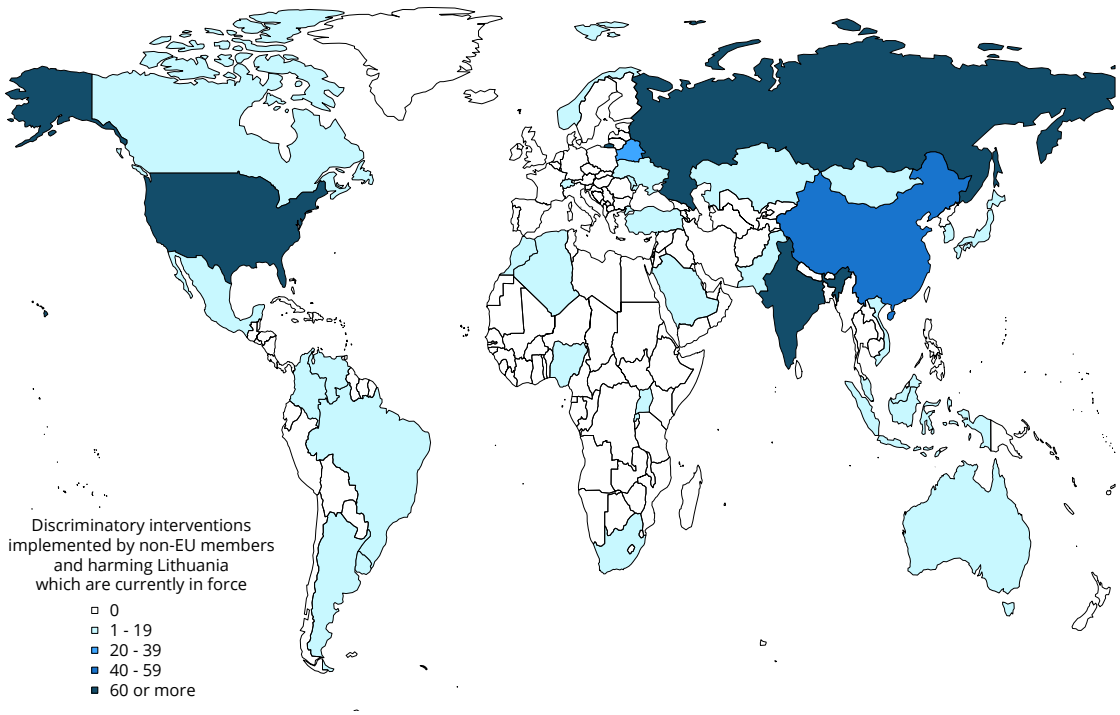
Percentage of intra-EU exports at risk

Foreign descriminatory trade instrument	2009	2010	2011	2012	2013	2014	2015
All forms of foreign discrimination	32.8%	42.1%	46.8%	49.2%	52.6%	53.2%	53.6%
Contingent trade protection	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Non-automatic licensing, quotas	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Investment measures	0.0%	0.0%	0.1%	0.1%	0.1%	0.1%	0.1%
Subsidies (except export subsidies)	3.4%	8.9%	8.7%	7.7%	7.2%	8.1%	8.1%
Government procurement	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Export measures	29.6%	34.3%	39.2%	42.5%	48.8%	49.6%	48.3%
Instrument unclassified	0.0%	0.0%	0.0%	0.0%	0.0%	1.1%	2.5%
Exports benefitting from export incentives	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%

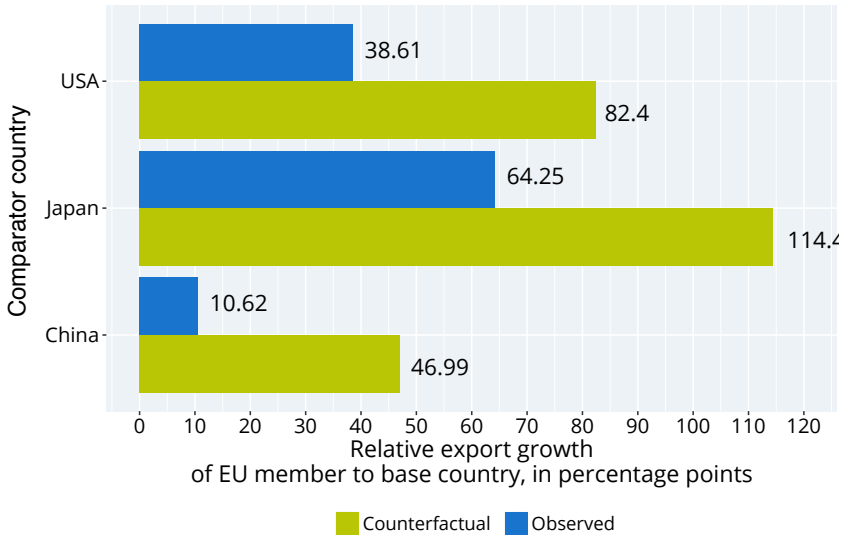
Regional distribution of protectionist interventions harming Lithuania's exports, 2009-2017



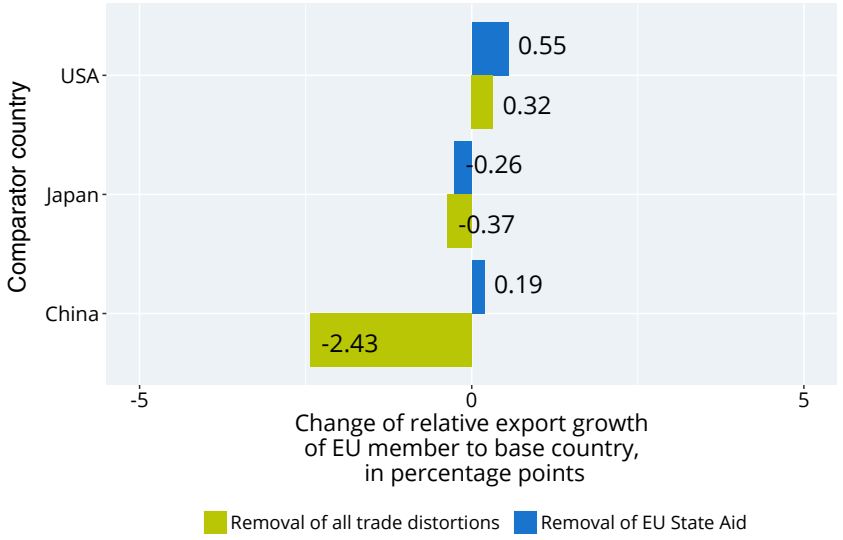
Discriminatory interventions harming Lithuania's extra-EU exports currently in force



Lithuania's extra-EU export growth without crisis-era trade barriers relative to each country comparator, 2008-2014



Lithuania's intra-EU export growth without crisis-era trade barriers relative to each country comparator, 2008-2014

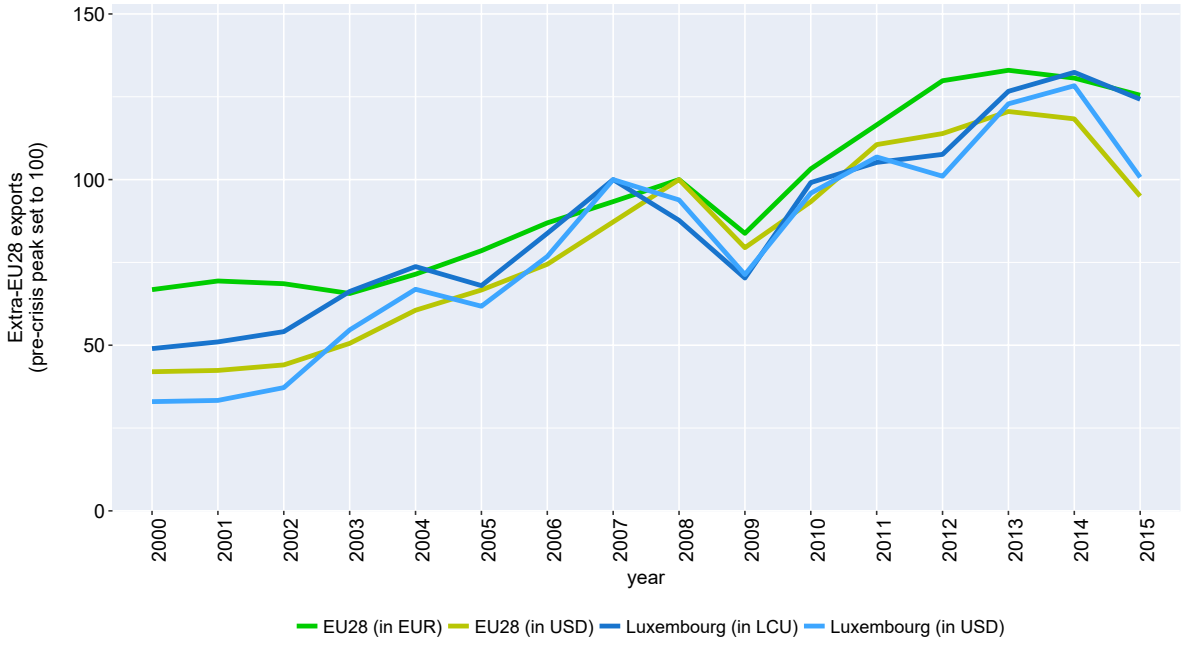


LUXEMBOURG

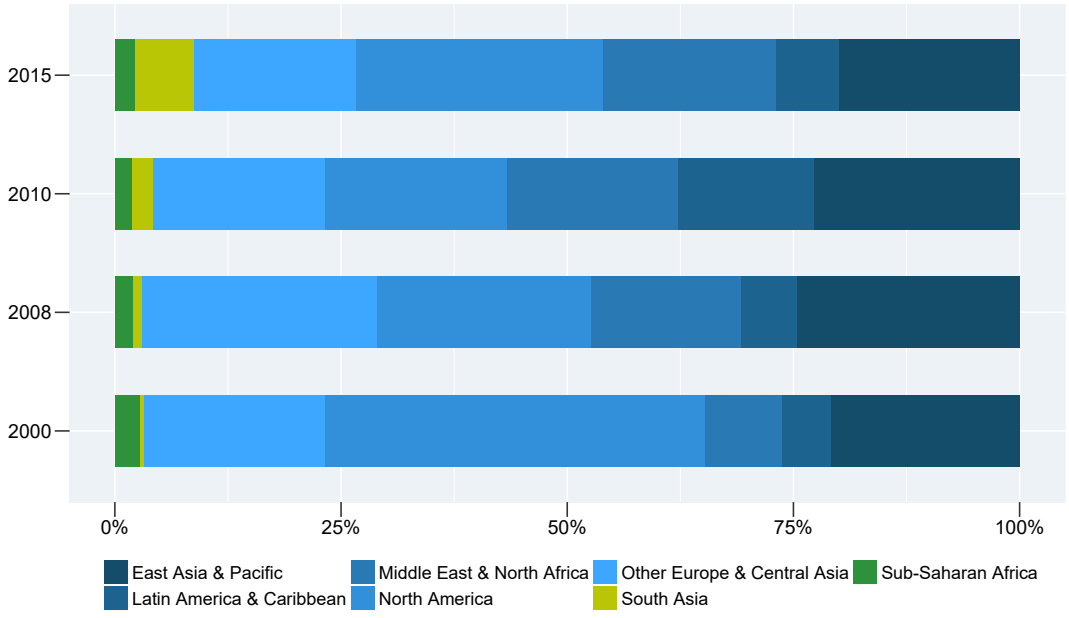
Total amount of exta-EU exports in 2014 (in billion USD): 2.86

Extra-EU exports as a percentage of total exports in 2014: 17.47%

Exports of Luxembourg and EU in current US dollars and euros



Distribution of extra-EU28 exports across regions



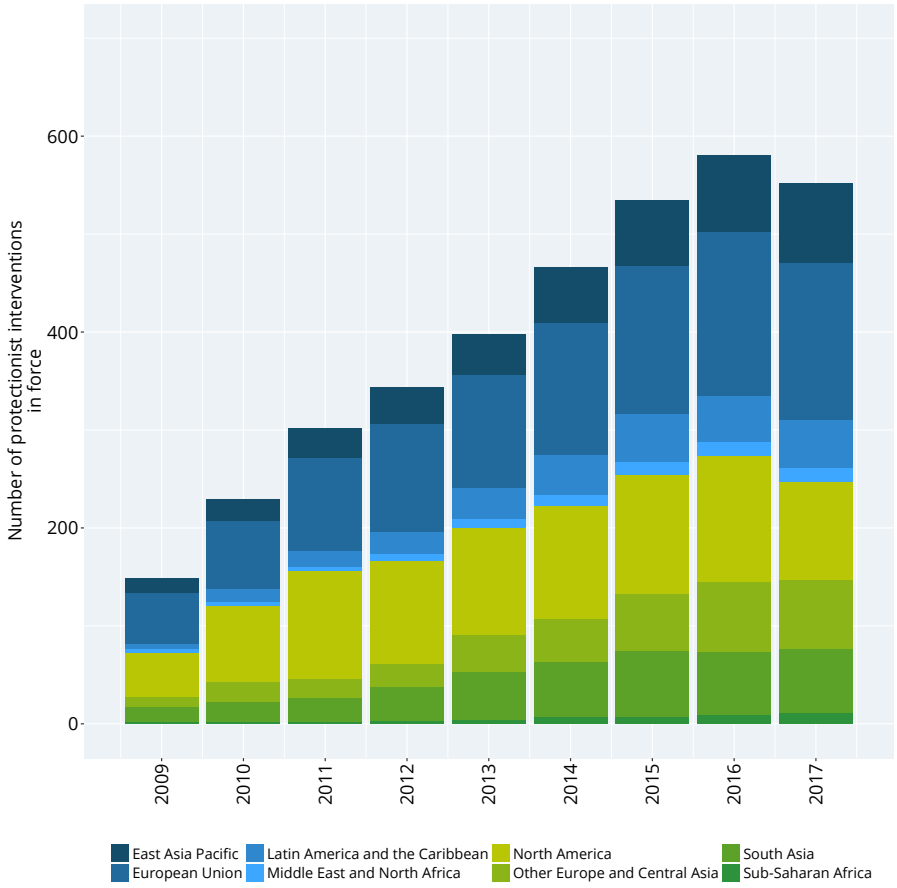
Percentage of extra-EU exports at risk

Foreign descriminatory trade instrument	2009	2010	2011	2012	2013	2014	2015
All forms of foreign discrimination	41.3%	48.4%	54.5%	56.4%	57.9%	58.3%	59.8%
Contingent trade protection	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Non-automatic licensing, quotas	0.1%	0.0%	0.4%	0.1%	0.2%	0.2%	0.2%
Price control measures	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.1%
Investment measures	0.0%	0.0%	0.0%	0.0%	0.0%	5.5%	9.8%
Subsidies (except export subsidies)	1.2%	1.8%	2.2%	2.4%	5.7%	6.7%	7.7%
Government procurement	8.7%	10.0%	10.0%	10.1%	10.0%	10.8%	12.6%
Export measures	32.1%	38.5%	44.5%	46.6%	48.1%	48.2%	47.8%
Import tariff measures	0.5%	1.1%	1.8%	1.9%	1.7%	1.5%	2.1%
Instrument unclassified	0.0%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%

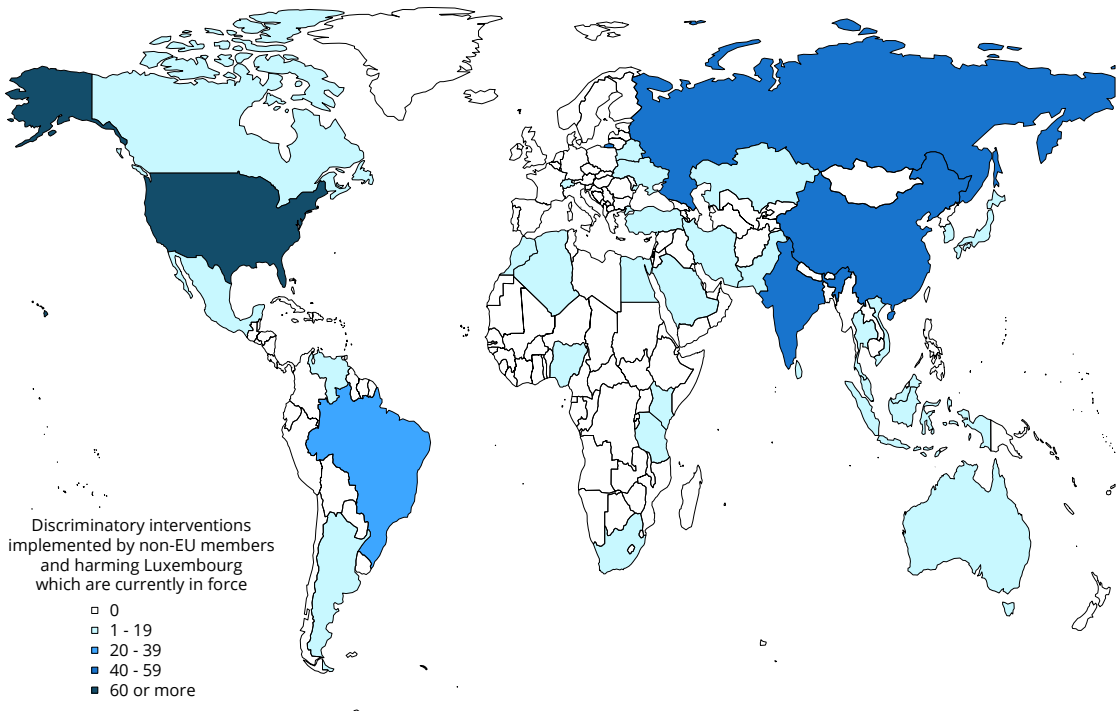
Percentage of intra-EU exports at risk

Foreign descriminatory trade instrument	2009	2010	2011	2012	2013	2014	2015
All forms of foreign discrimination	49.6%	60.2%	61.9%	61.6%	61.6%	64.4%	64.8%
Contingent trade protection	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Non-automatic licensing, quotas	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Investment measures	0.0%	0.7%	0.8%	0.8%	0.8%	0.8%	0.8%
Subsidies (except export subsidies)	9.1%	16.7%	7.5%	6.4%	6.2%	9.5%	10.2%
Government procurement	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.1%
Export measures	48.8%	55.3%	57.0%	58.8%	59.1%	59.4%	59.1%
Instrument unclassified	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Exports benefitting from export incentives	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%

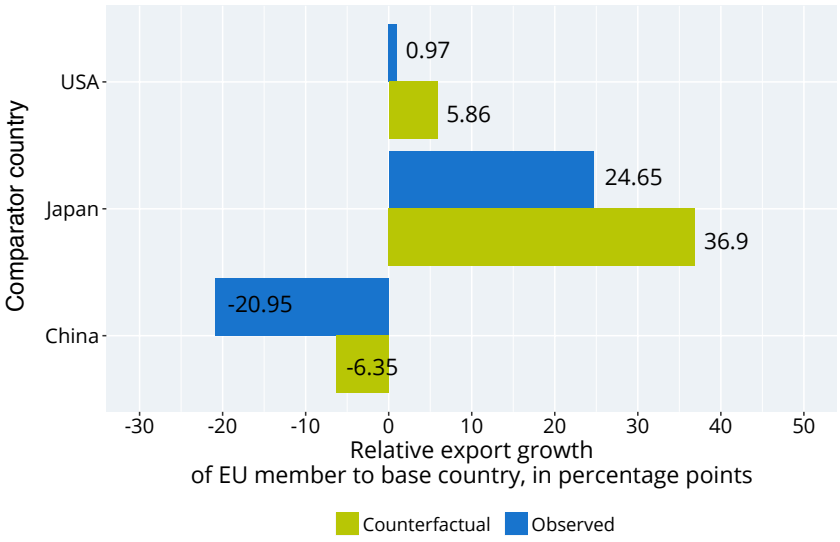
Regional distribution of protectionist interventions harming Luxembourg's exports, 2009-2017



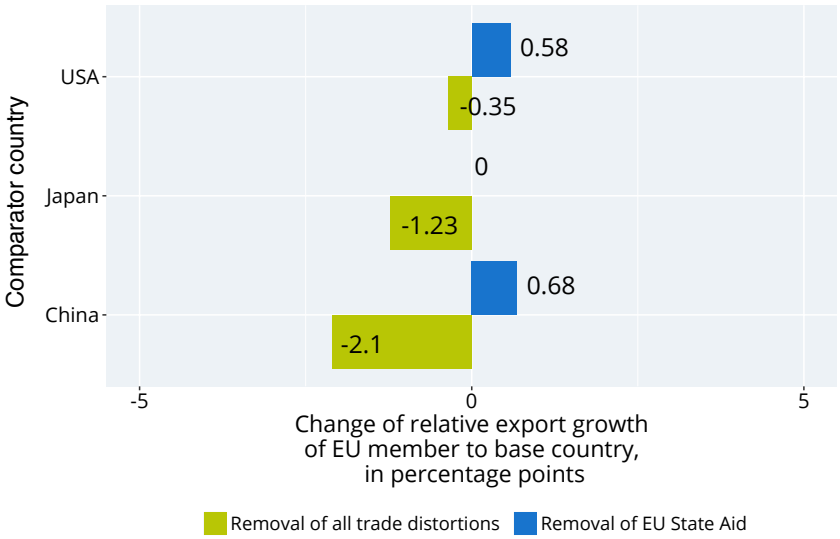
Discriminatory interventions harming Luxembourg's extra-EU exports currently in force



Luxembourg's extra-EU export growth without crisis-era trade barriers relative to each country comparator, 2008-2014



Luxembourg's intra-EU export growth without crisis-era trade barriers relative to each country comparator, 2008-2014

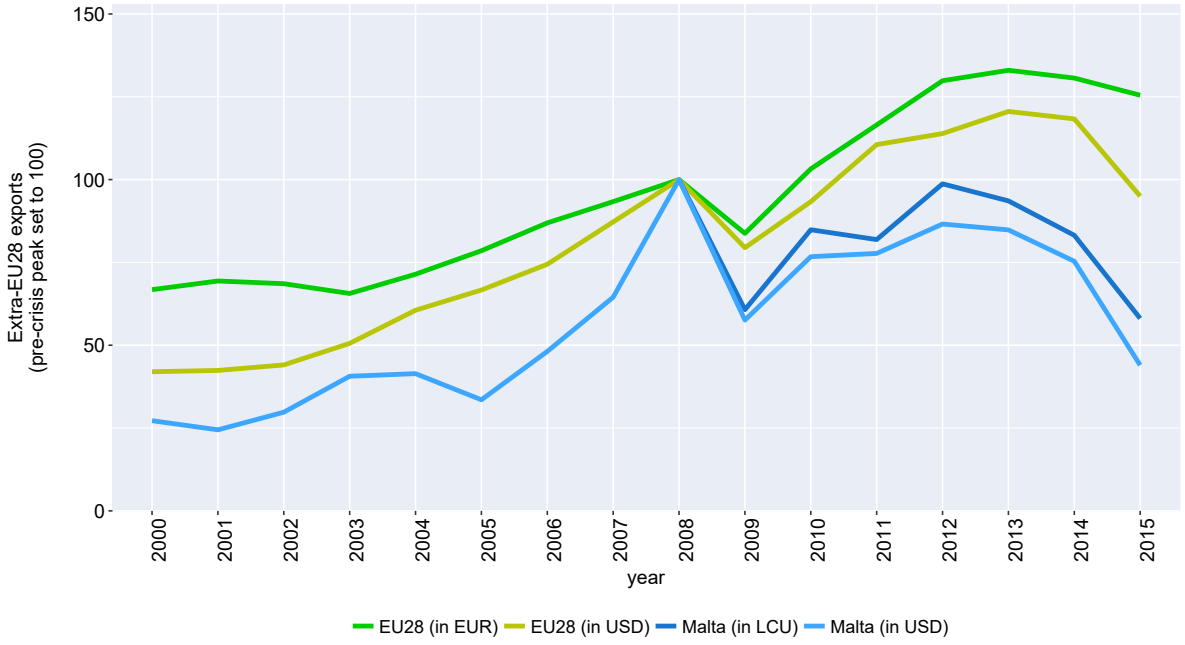


MALTA

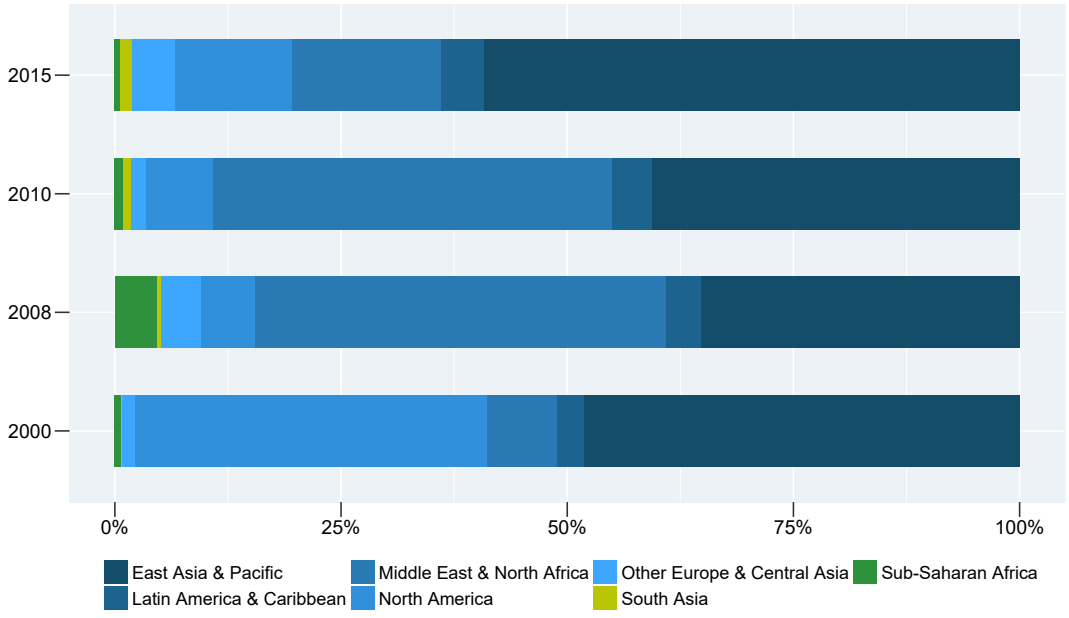
Total amount of exta-EU exports in 2014 (in billion USD): 3.77

Extra-EU exports as a percentage of total exports in 2014: 71.33%

Exports of Malta and EU in current US dollars and euros



Distribution of extra-EU28 exports across regions



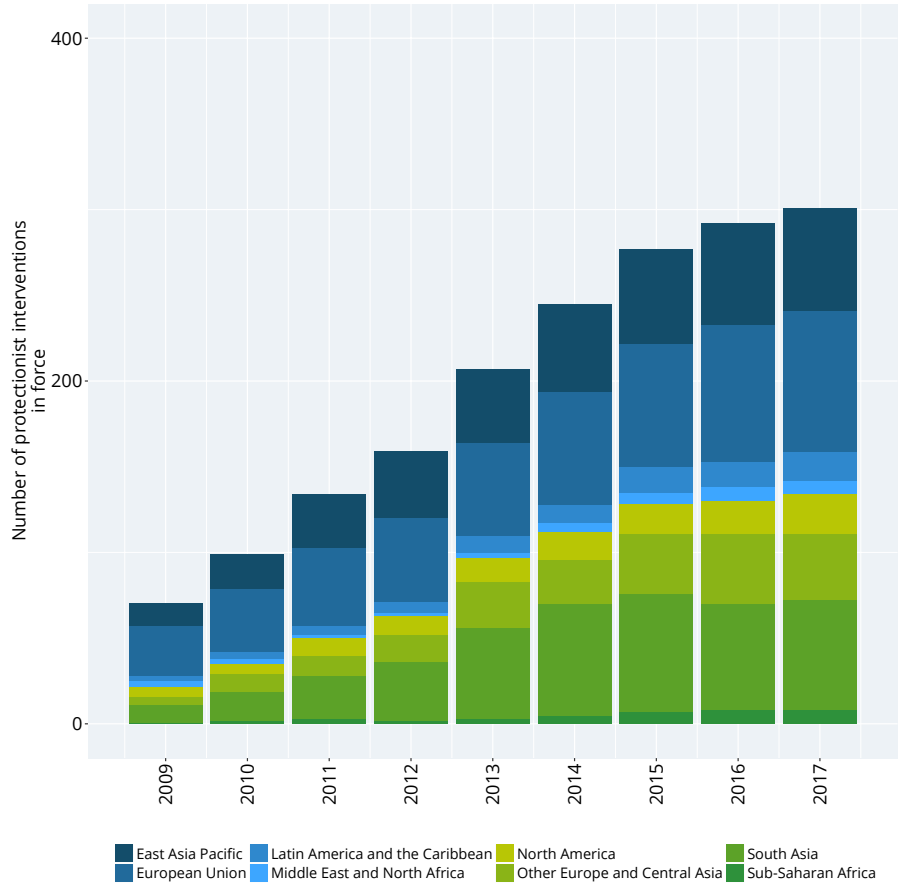
Percentage of extra-EU exports at risk

Foreign descriminatory trade instrument	2009	2010	2011	2012	2013	2014	2015
All forms of foreign discrimination	48.0%	66.1%	77.6%	81.8%	80.3%	80.2%	80.2%
Contingent trade protection	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Non-automatic licensing, quotas	0.0%	0.0%	0.0%	0.9%	0.0%	0.0%	0.0%
Price control measures	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.1%
Investment measures	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.1%
Subsidies (except export subsidies)	0.5%	1.7%	15.5%	16.0%	16.9%	17.4%	20.1%
Government procurement	0.0%	0.0%	0.0%	0.0%	0.1%	0.1%	0.1%
Export measures	48.0%	66.1%	77.6%	81.6%	80.3%	80.2%	80.1%
Import tariff measures	0.0%	0.0%	0.0%	1.7%	1.7%	1.8%	2.0%
Instrument unclassified	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%

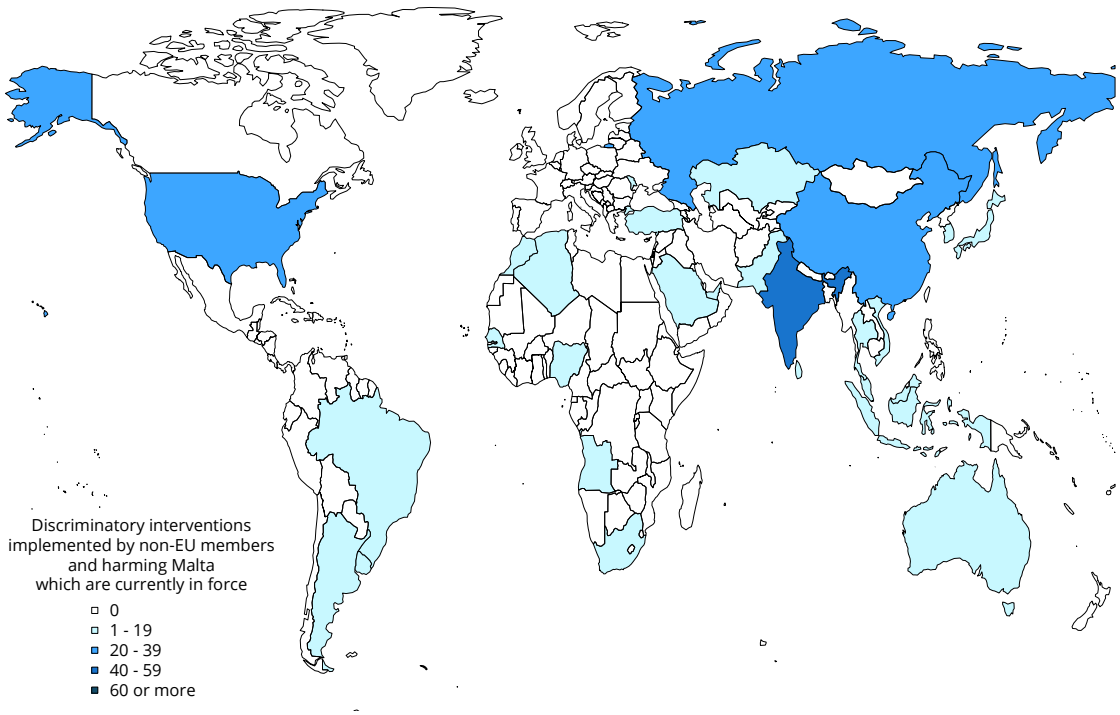
Percentage of intra-EU exports at risk

Foreign descriminatory trade instrument	2009	2010	2011	2012	2013	2014	2015
All forms of foreign discrimination	48.8%	55.4%	54.6%	61.9%	66.0%	70.2%	69.9%
Contingent trade protection	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Non-automatic licensing, quotas	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Investment measures	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Subsidies (except export subsidies)	5.4%	12.0%	7.8%	8.4%	8.3%	8.1%	8.4%
Government procurement	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Export measures	44.2%	49.9%	54.5%	61.9%	66.0%	70.2%	69.9%
Instrument unclassified	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Exports benefitting from export incentives	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%

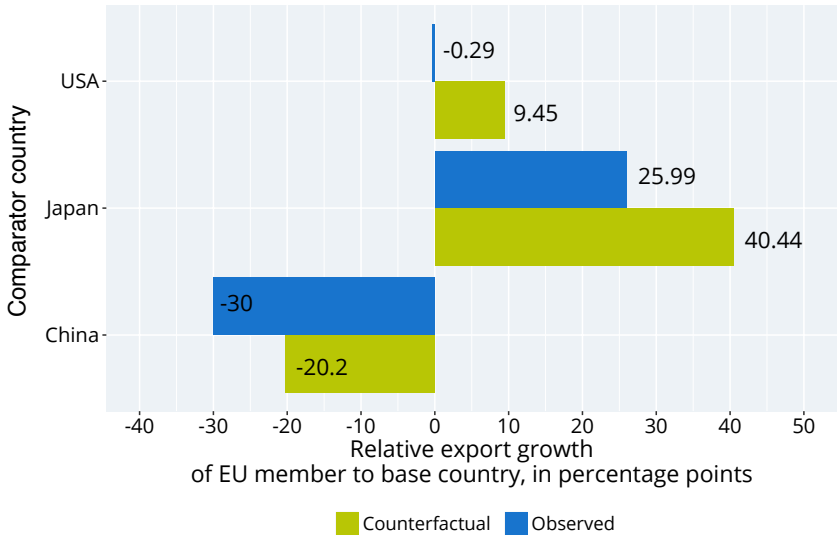
Regional distribution of protectionist interventions harming Malta's exports, 2009-2017



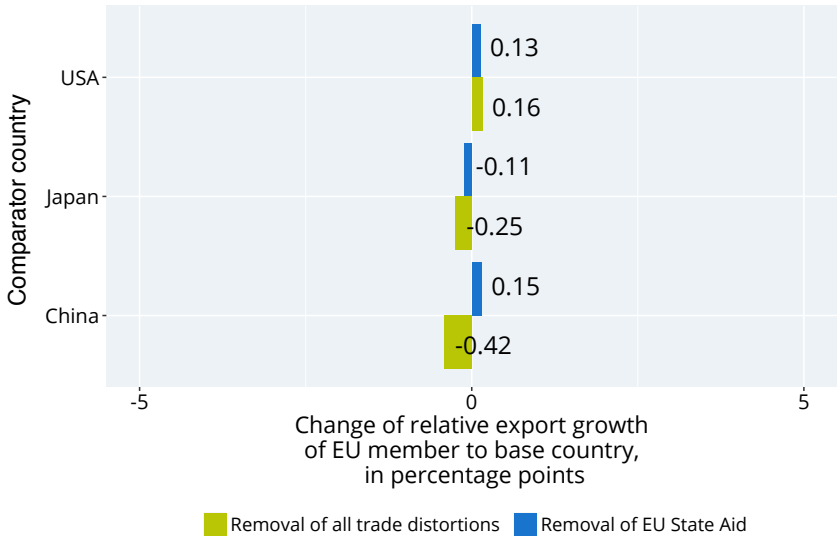
Discriminatory interventions harming Malta's extra-EU exports currently in force



Malta's extra-EU export growth without crisis-era trade barriers relative to each country comparator, 2008-2014



Malta's intra-EU export growth without crisis-era trade barriers relative to each country comparator, 2008-2014

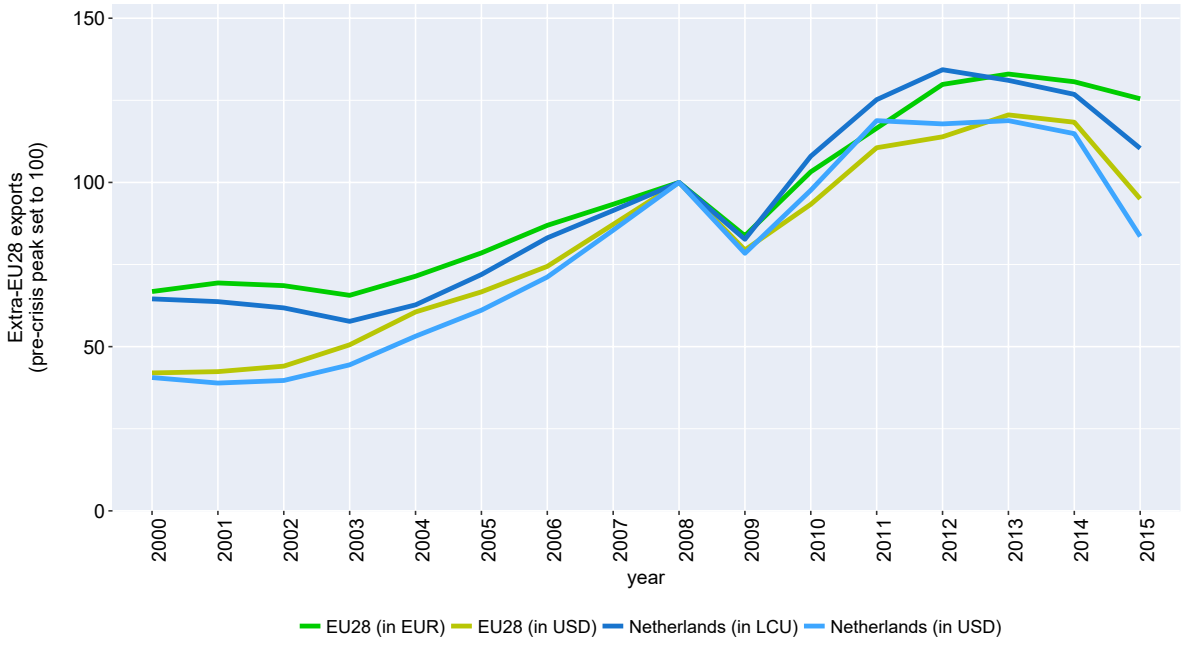


THE NETHERLANDS

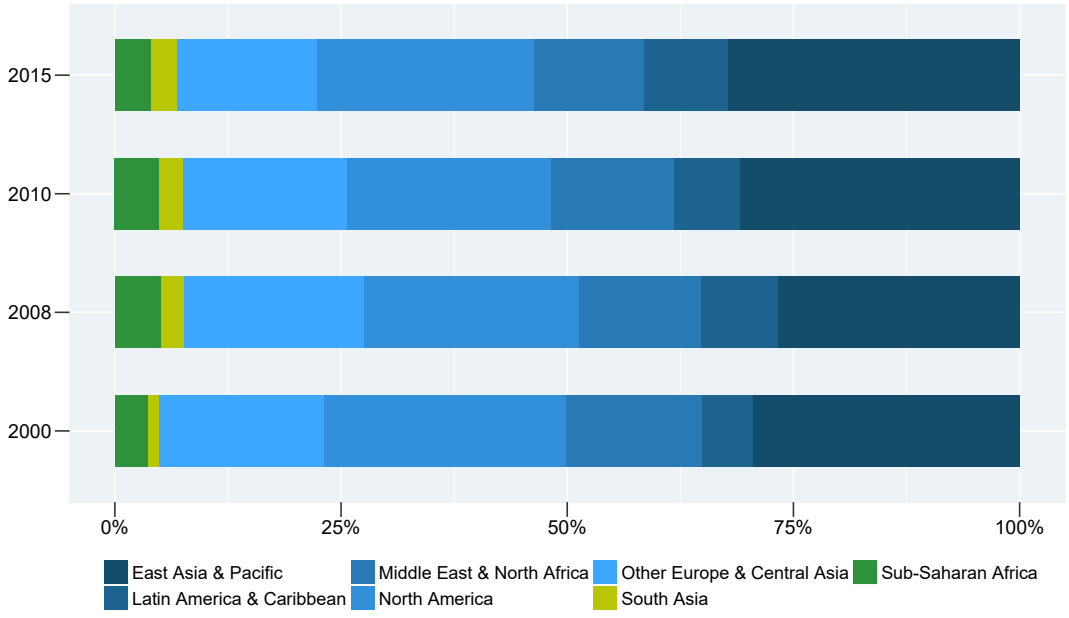
Total amount of exta-EU exports in 2014 (in billion USD): 101.08

Extra-EU exports as a percentage of total exports in 2014: 21.41%

Exports of the Netherlands and EU in current US dollars and euros



Distribution of extra-EU28 exports across regions



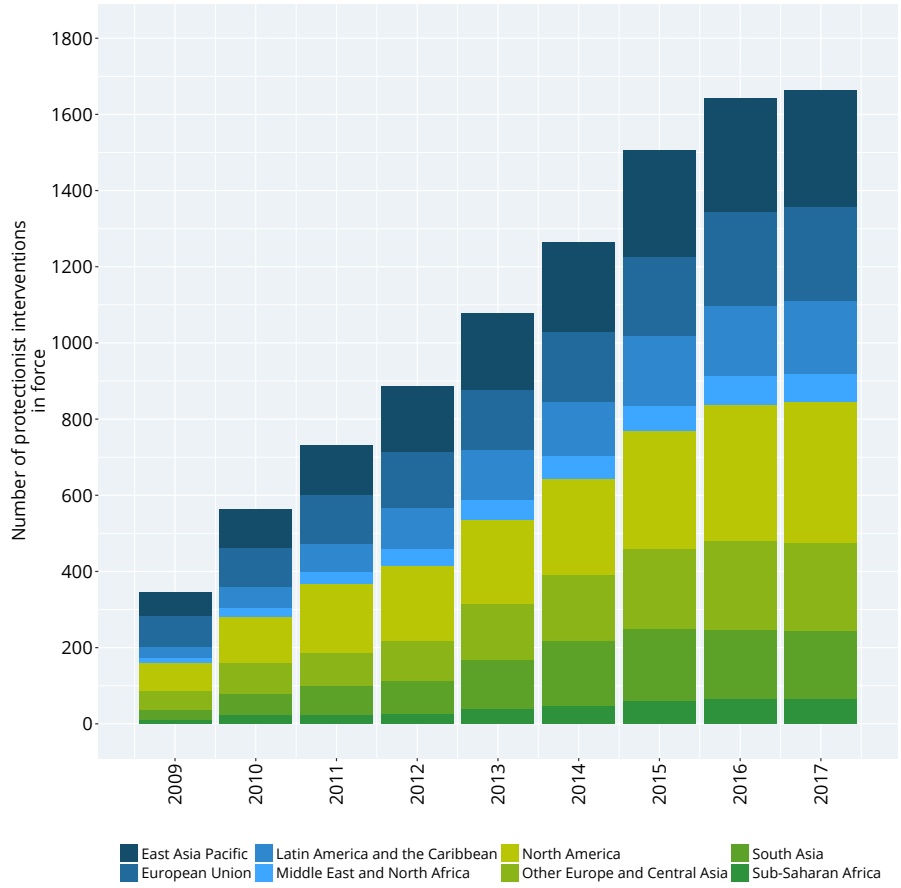
Percentage of extra-EU exports at risk

Foreign descriminatory trade instrument	2009	2010	2011	2012	2013	2014	2015
All forms of foreign discrimination	34.0%	47.0%	55.5%	59.3%	62.5%	62.9%	63.7%
Contingent trade protection	0.1%	0.1%	0.2%	0.2%	0.3%	0.2%	0.3%
Non-automatic licensing, quotas	0.4%	0.4%	0.5%	0.7%	2.1%	1.1%	2.7%
Price control measures	0.0%	0.0%	0.2%	0.3%	0.3%	0.3%	0.5%
Investment measures	0.3%	0.4%	0.4%	0.5%	0.5%	1.0%	1.4%
Subsidies (except export subsidies)	2.0%	2.4%	6.3%	11.4%	12.8%	13.7%	14.2%
Government procurement	1.4%	1.5%	1.0%	1.5%	1.7%	1.8%	2.5%
Export measures	31.2%	43.0%	51.3%	55.0%	57.2%	58.0%	58.4%
Import tariff measures	0.7%	4.0%	3.7%	4.1%	6.3%	6.3%	6.8%
Instrument unclassified	0.0%	0.0%	0.1%	0.2%	0.3%	0.4%	0.4%

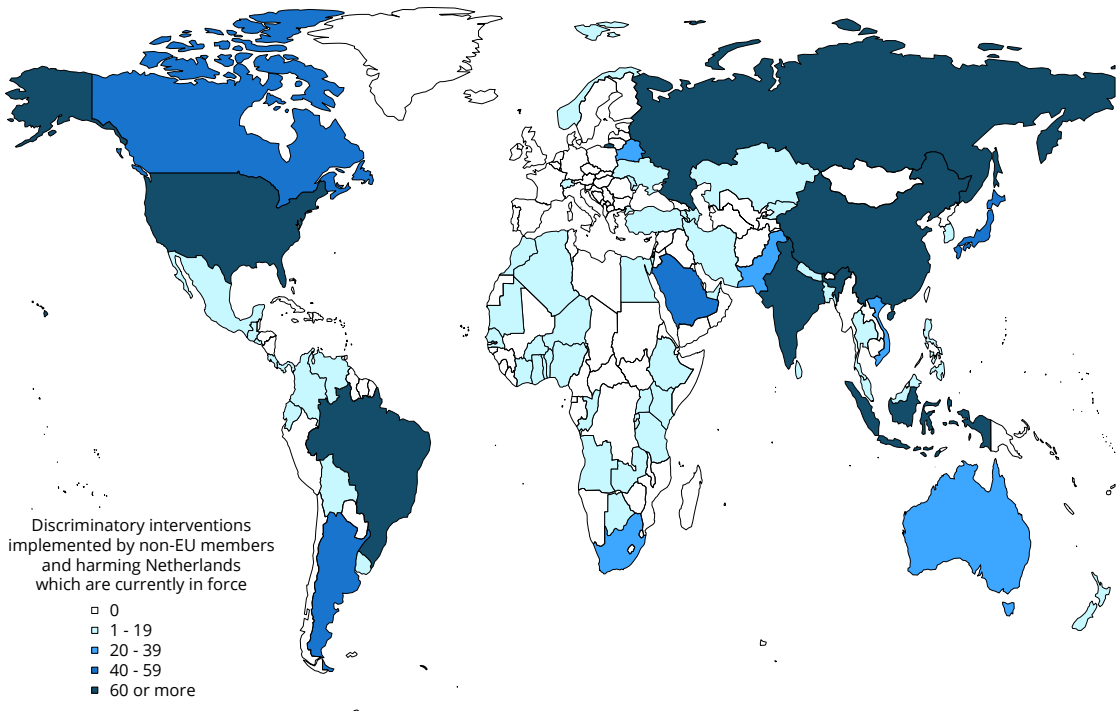
Percentage of intra-EU exports at risk

Foreign descriminatory trade instrument	2009	2010	2011	2012	2013	2014	2015
All forms of foreign discrimination	35.1%	46.6%	51.3%	53.6%	55.0%	59.2%	59.1%
Contingent trade protection	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Non-automatic licensing, quotas	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Investment measures	0.0%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%
Subsidies (except export subsidies)	5.3%	11.0%	4.5%	3.9%	4.2%	11.6%	12.1%
Government procurement	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Export measures	33.0%	40.9%	48.0%	51.4%	52.5%	53.1%	52.8%
Instrument unclassified	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Exports benefitting from export incentives	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%

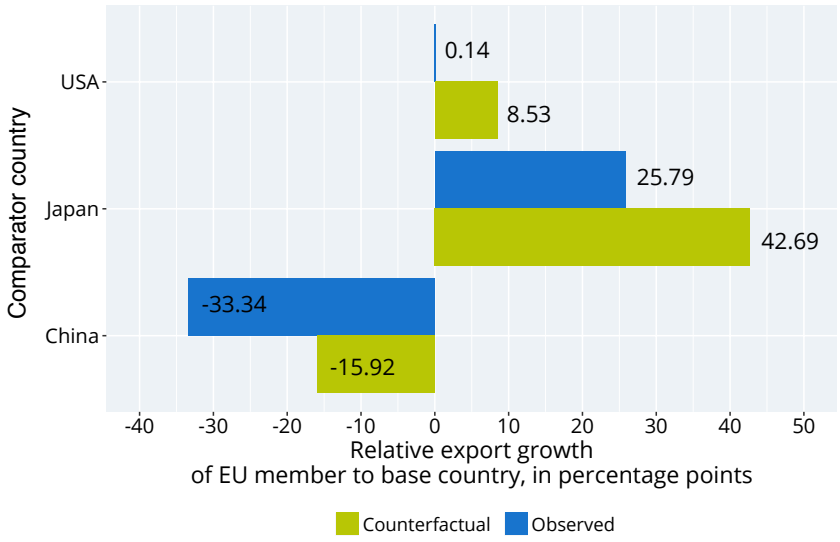
Regional distribution of protectionist interventions harming the Netherlands' exports, 2009-2017



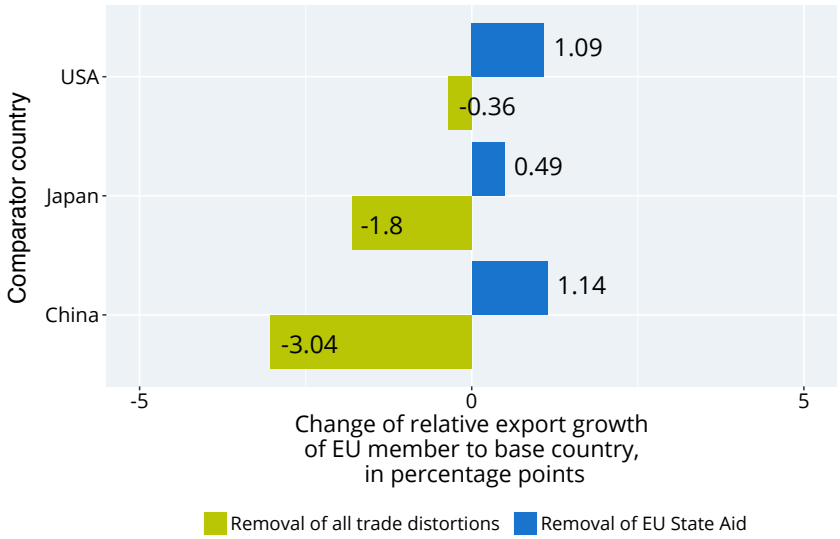
Discriminatory interventions harming the Netherlands' extra-EU exports currently in force



The Netherlands' extra-EU export growth without crisis-era trade barriers relative to each country comparator, 2008-2014



The Netherlands' intra-EU export growth without crisis-era trade barriers relative to each country comparator, 2008-2014

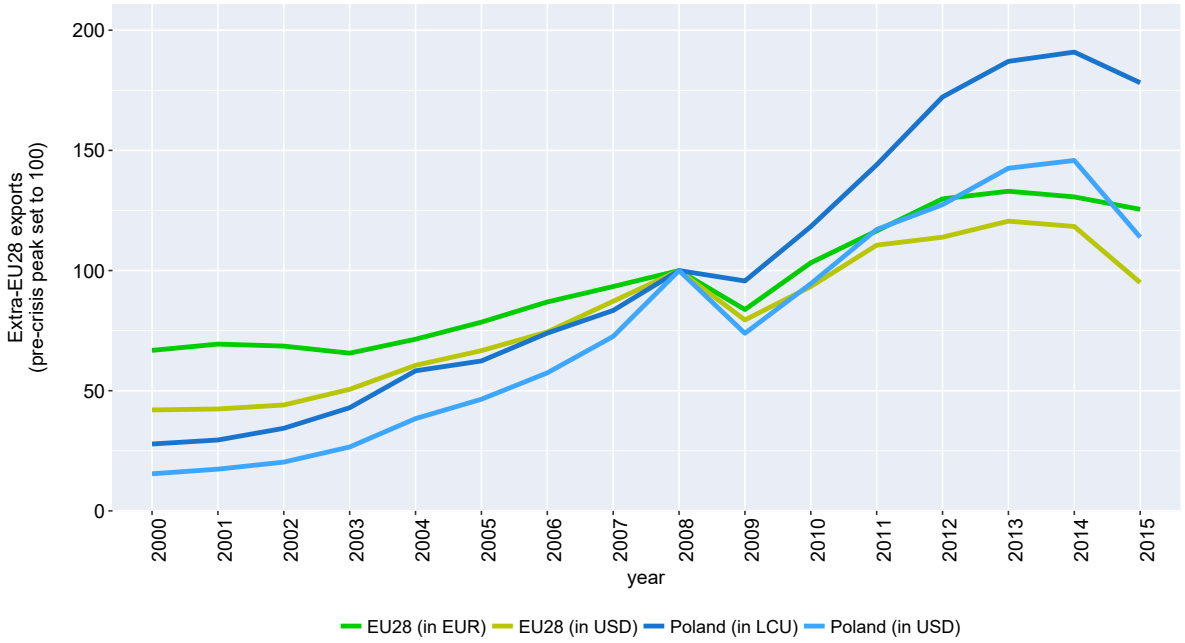


POLAND

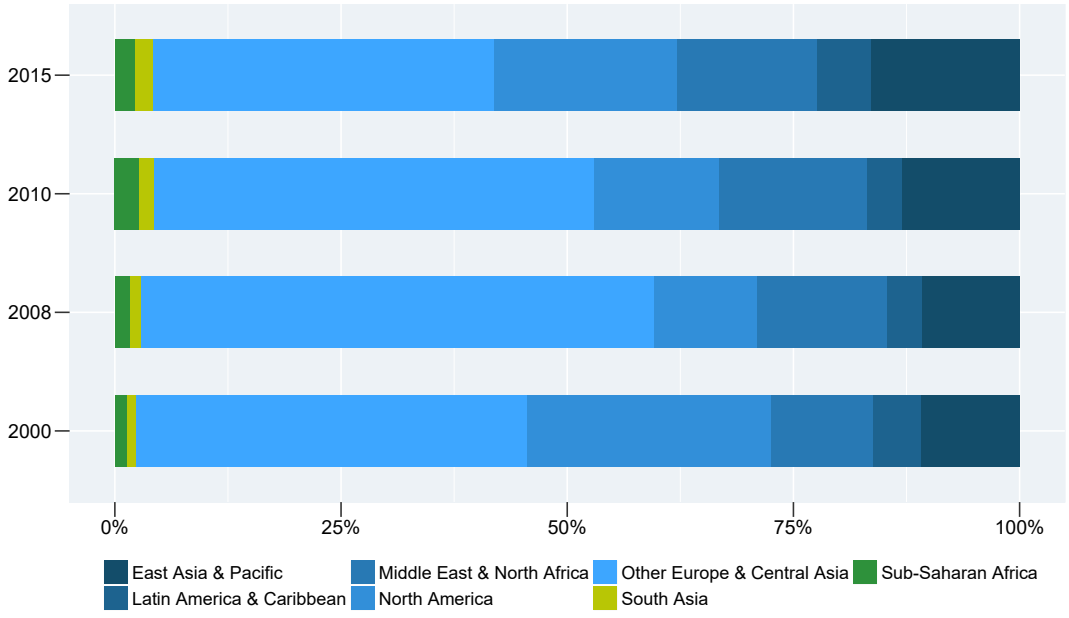
Total amount of exta-EU exports in 2014 (in billion USD): 38.5

Extra-EU exports as a percentage of total exports in 2014: 21.39%

Exports of Poland and EU in current US dollars and euros



Distribution of extra-EU28 exports across regions



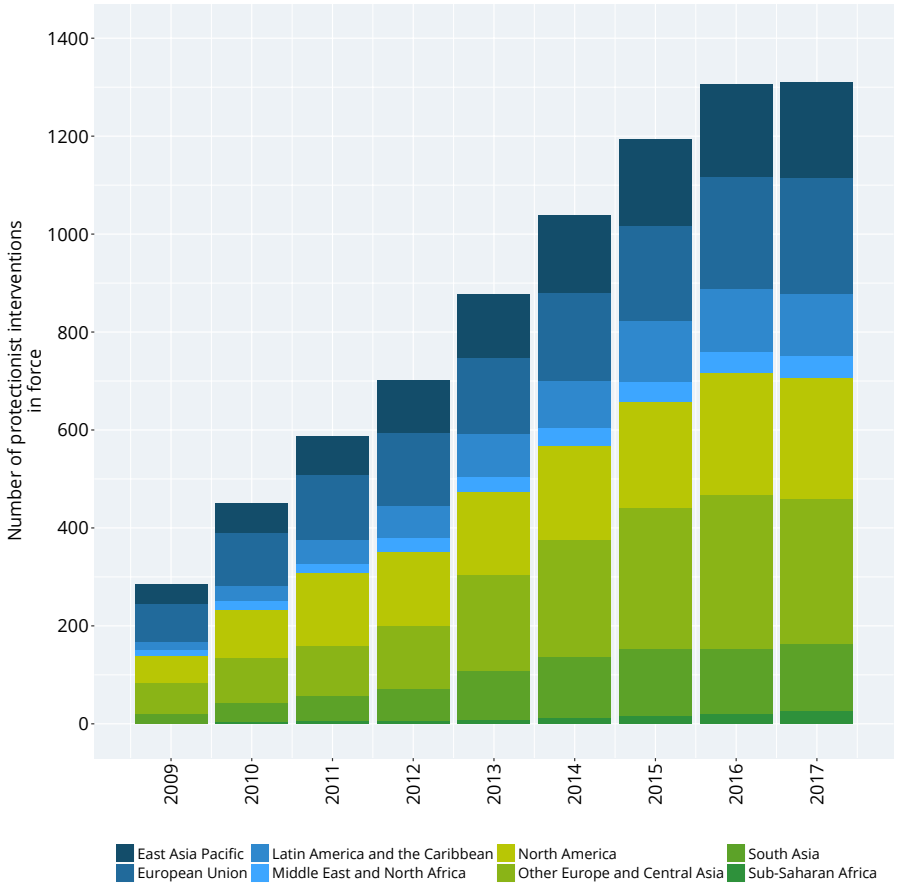
Percentage of extra-EU exports at risk

Foreign descriminatory trade instrument	2009	2010	2011	2012	2013	2014	2015
All forms of foreign discrimination	44.0%	51.3%	53.9%	57.2%	60.9%	62.4%	64.1%
Contingent trade protection	0.0%	0.1%	0.7%	1.3%	1.6%	1.3%	1.2%
Non-automatic licensing, quotas	0.2%	0.7%	1.1%	1.4%	2.0%	1.4%	1.7%
Price control measures	0.1%	0.1%	0.2%	0.2%	0.2%	0.2%	0.4%
Investment measures	0.6%	0.8%	0.9%	1.0%	1.0%	1.3%	1.5%
Subsidies (except export subsidies)	4.3%	5.5%	5.3%	5.8%	8.4%	8.2%	9.4%
Government procurement	3.2%	3.6%	1.3%	1.6%	1.6%	1.9%	2.6%
Export measures	39.5%	47.6%	50.7%	53.8%	56.0%	58.0%	58.0%
Import tariff measures	2.0%	2.3%	2.4%	3.5%	7.1%	8.0%	10.1%
Instrument unclassified	0.0%	0.0%	0.0%	0.2%	0.6%	0.1%	0.1%

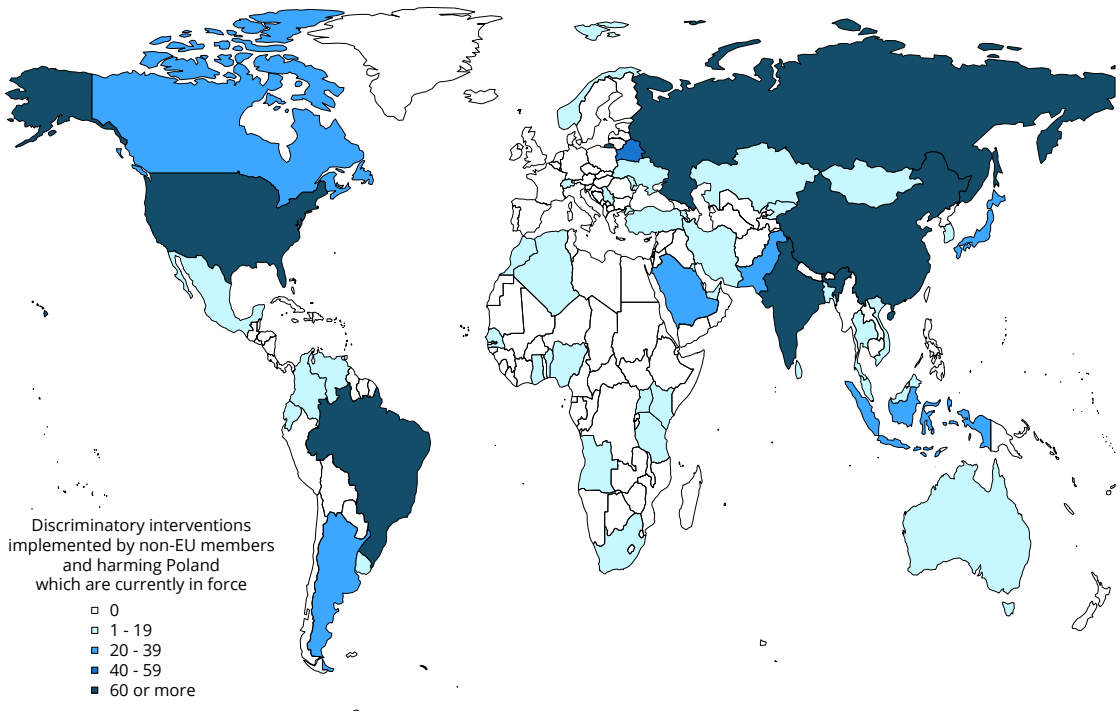
Percentage of intra-EU exports at risk

Foreign descriminatory trade instrument	2009	2010	2011	2012	2013	2014	2015
All forms of foreign discrimination	52.3%	61.4%	62.2%	63.7%	64.5%	67.6%	67.2%
Contingent trade protection	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Non-automatic licensing, quotas	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Investment measures	0.0%	0.8%	0.9%	0.9%	0.9%	0.9%	0.9%
Subsidies (except export subsidies)	6.2%	11.9%	9.3%	8.7%	5.7%	10.4%	10.2%
Government procurement	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Export measures	49.7%	55.8%	57.7%	60.1%	61.5%	61.6%	61.6%
Instrument unclassified	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Exports benefitting from export incentives	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%

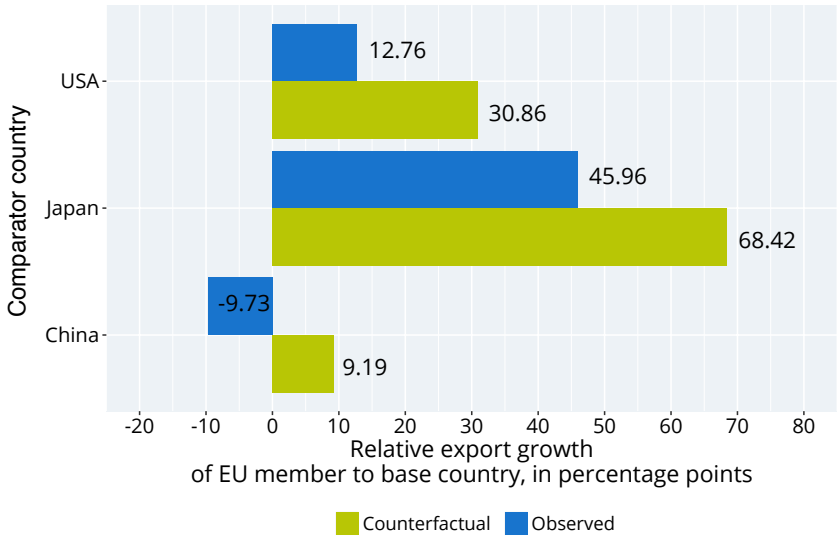
Regional distribution of protectionist interventions harming Poland's exports, 2009-2017



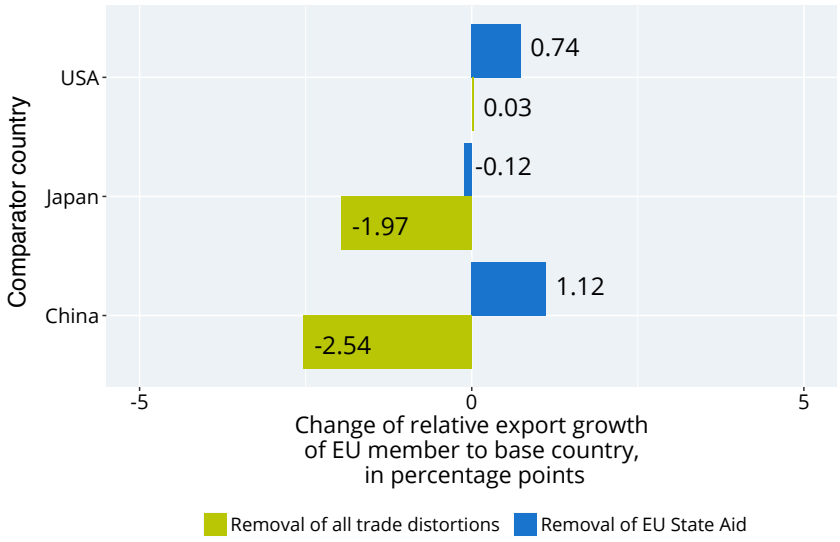
Discriminatory interventions harming Poland's extra-EU exports currently in force



Poland's extra-EU export growth without crisis-era trade barriers relative to each country comparator, 2008-2014



Poland's intra-EU export growth without crisis-era trade barriers relative to each country comparator, 2008-2014

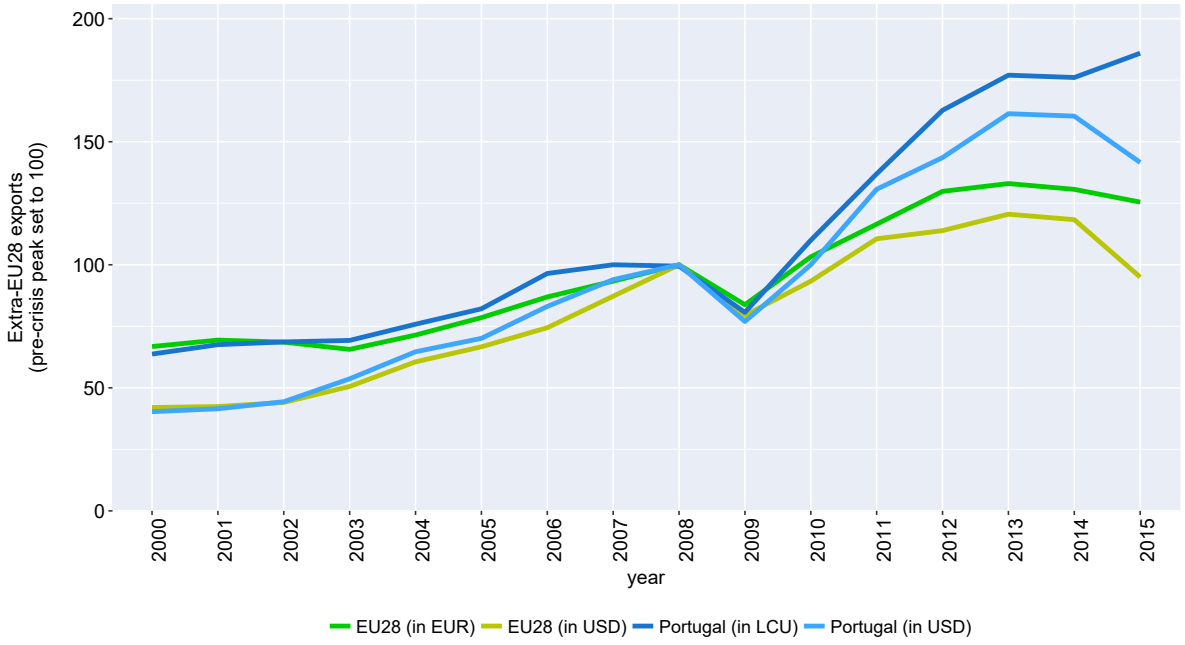


PORTUGAL

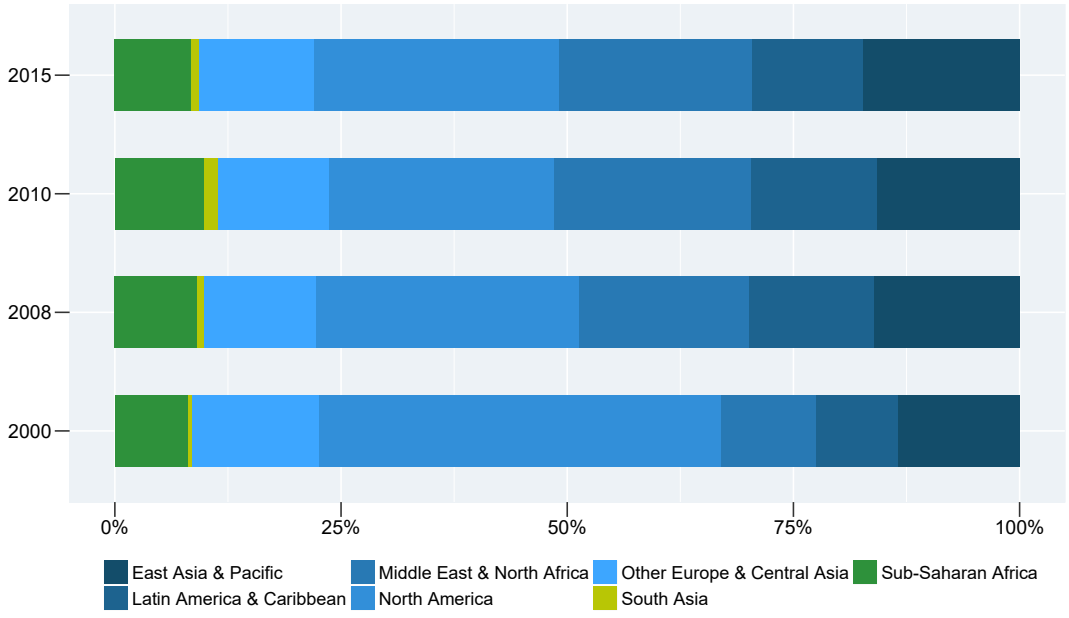
Total amount of exta-EU exports in 2014 (in billion USD): 16.92

Extra-EU exports as a percentage of total exports in 2014: 30.83%

Exports of Portugal and EU in current US dollars and euros



Distribution of extra-EU28 exports across regions



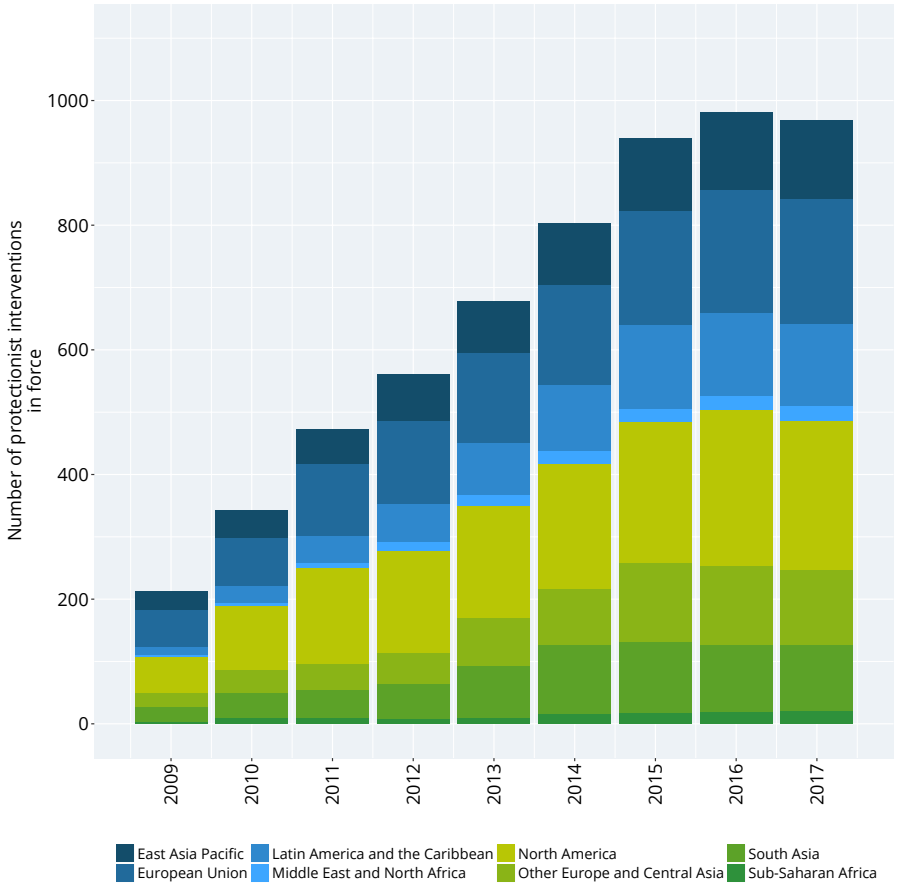
Percentage of extra-EU exports at risk

Foreign descriminatory trade instrument	2009	2010	2011	2012	2013	2014	2015
All forms of foreign discrimination	41.3%	48.6%	56.9%	60.3%	62.7%	63.5%	64.0%
Contingent trade protection	0.0%	0.1%	0.1%	0.1%	0.1%	0.1%	0.2%
Non-automatic licensing, quotas	0.1%	0.0%	0.2%	0.5%	0.5%	0.5%	0.6%
Price control measures	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.1%
Investment measures	0.0%	0.1%	0.1%	0.1%	0.1%	0.8%	1.1%
Subsidies (except export subsidies)	2.8%	3.8%	9.6%	14.6%	16.0%	16.3%	17.6%
Government procurement	0.4%	0.8%	0.7%	0.9%	0.9%	1.0%	1.2%
Export measures	39.7%	46.7%	54.9%	58.2%	60.2%	61.1%	59.7%
Import tariff measures	0.2%	0.3%	0.8%	1.0%	2.1%	3.0%	5.8%
Instrument unclassified	0.3%	0.6%	0.6%	0.6%	0.6%	1.0%	3.3%

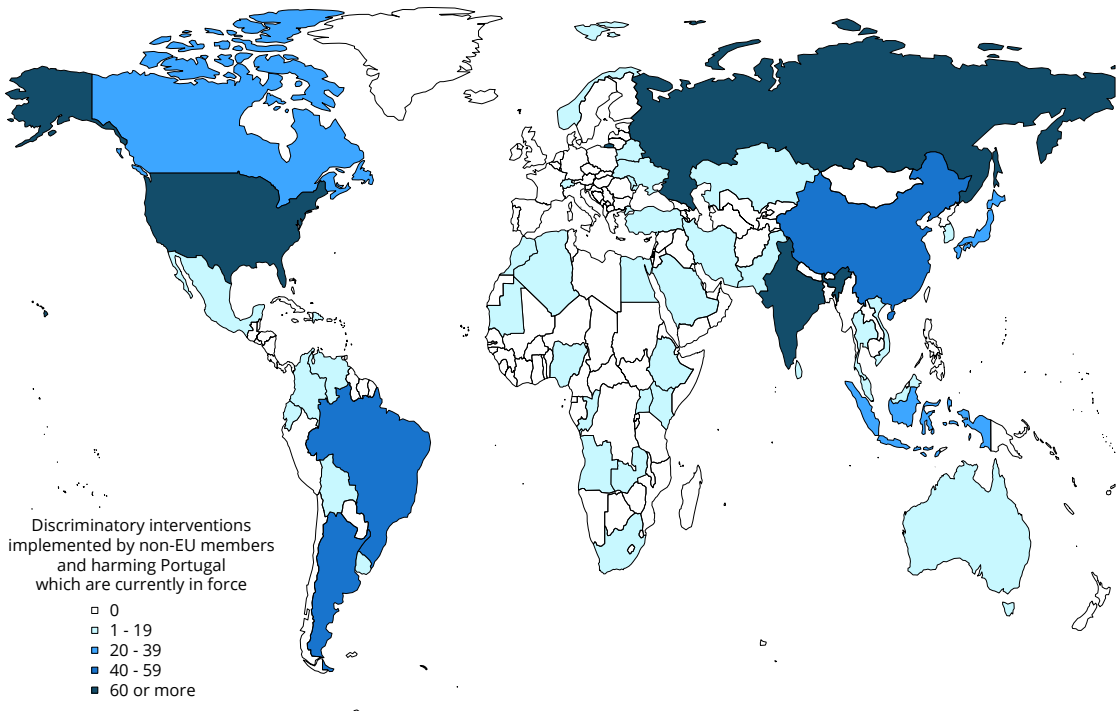
Percentage of intra-EU exports at risk

Foreign descriminatory trade instrument	2009	2010	2011	2012	2013	2014	2015
All forms of foreign discrimination	52.6%	58.6%	61.1%	63.9%	65.0%	67.0%	66.2%
Contingent trade protection	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Non-automatic licensing, quotas	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Investment measures	0.0%	1.1%	1.3%	1.3%	1.3%	1.3%	1.3%
Subsidies (except export subsidies)	6.6%	7.5%	3.6%	4.3%	5.2%	6.9%	6.1%
Government procurement	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Export measures	49.9%	55.8%	59.0%	61.8%	62.6%	63.7%	63.1%
Instrument unclassified	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Exports benefitting from export incentives	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%

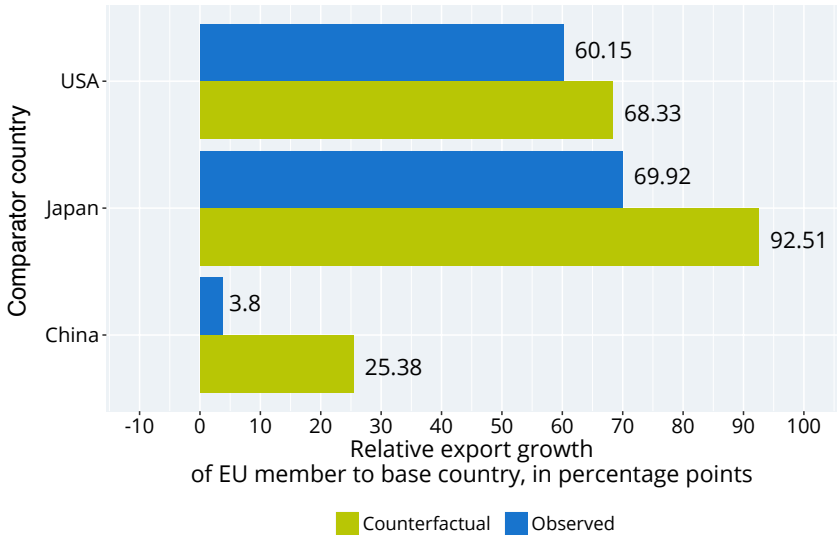
Regional distribution of protectionist interventions harming Portugal's exports, 2009-2017



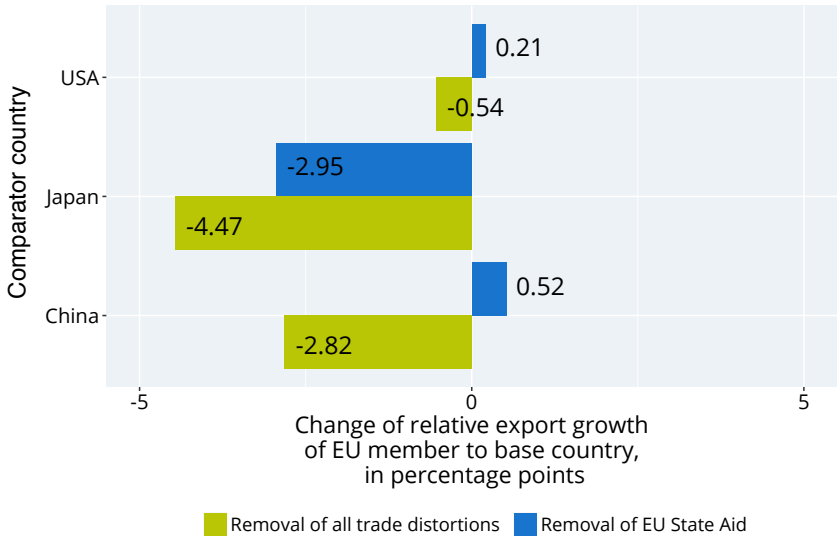
Discriminatory interventions harming Portugal's extra-EU exports currently in force



Portugal's extra-EU export growth without crisis-era trade barriers relative to each country comparator, 2008-2014



Portugal's intra-EU export growth without crisis-era trade barriers relative to each country comparator, 2008-2014

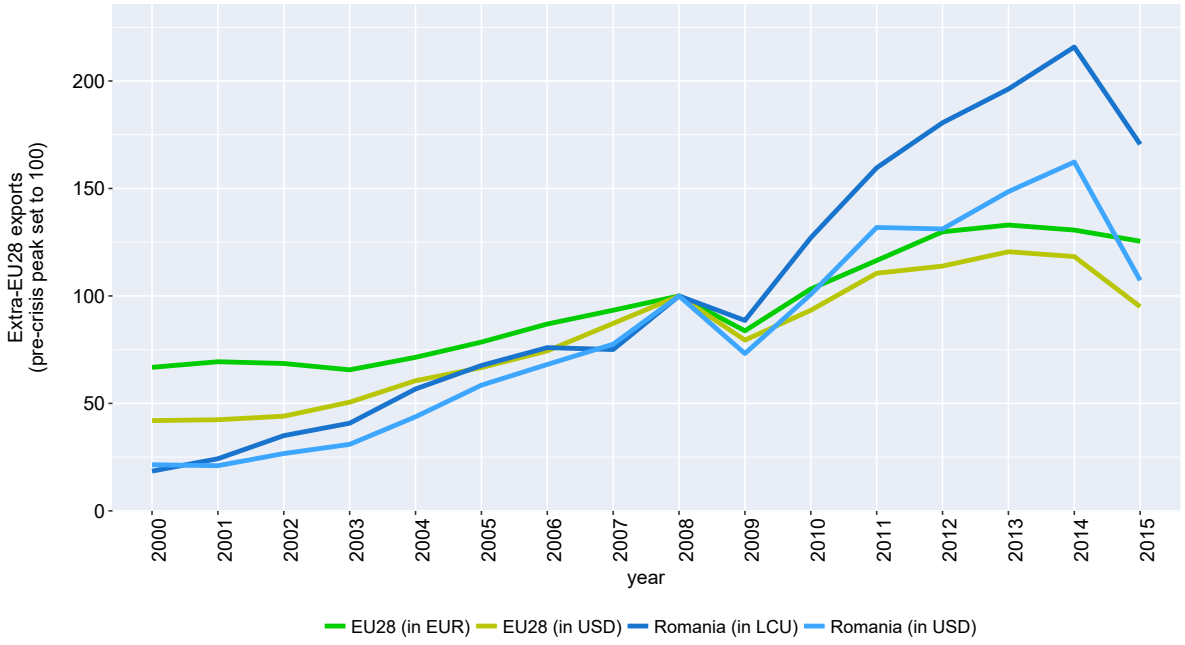


ROMANIA

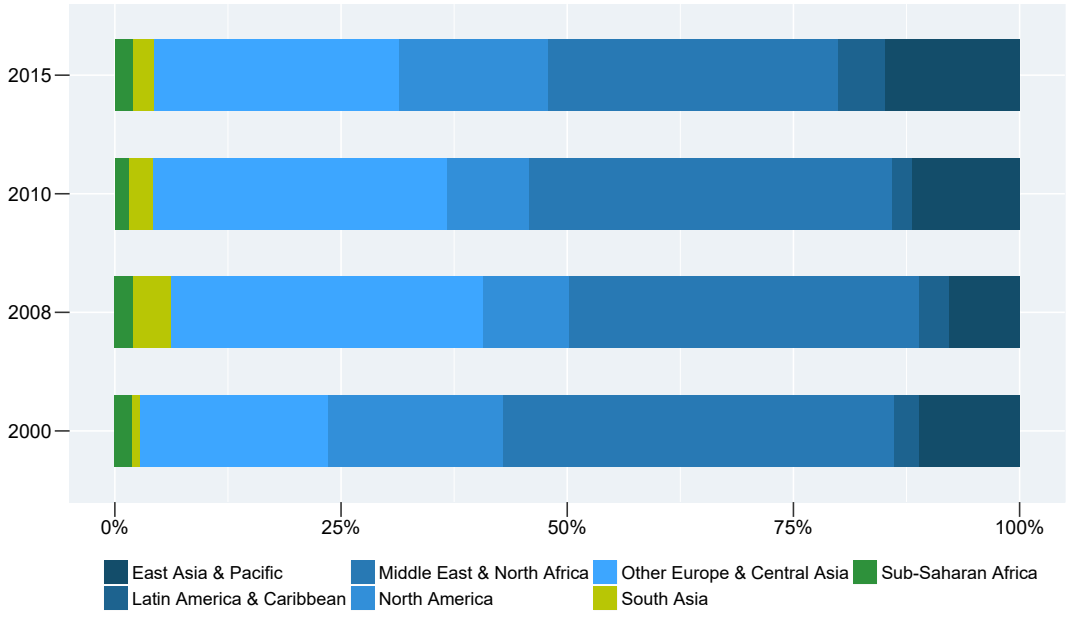
Total amount of exta-EU exports in 2014 (in billion USD): 19.42

Extra-EU exports as a percentage of total exports in 2014: 30.7%

Exports of Romania and EU in current US dollars and euros



Distribution of extra-EU28 exports across regions



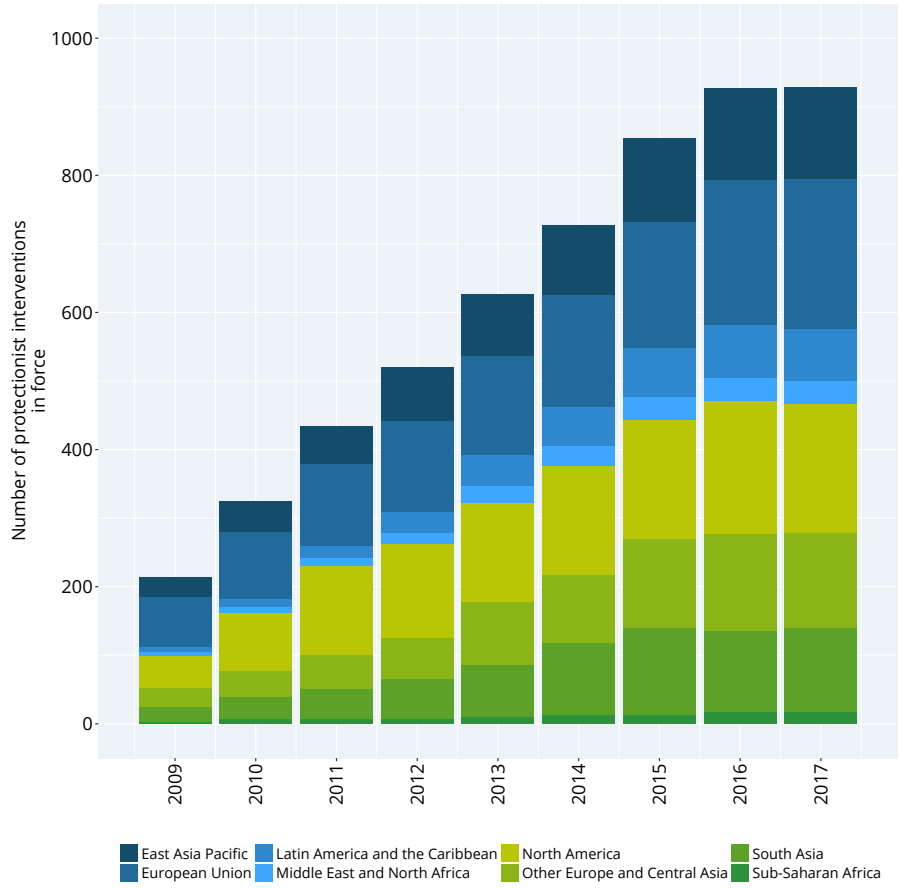
Percentage of extra-EU exports at risk

Foreign descriminatory trade instrument	2009	2010	2011	2012	2013	2014	2015
All forms of foreign discrimination	35.3%	45.7%	48.4%	52.1%	56.6%	57.7%	56.7%
Contingent trade protection	0.7%	1.6%	1.7%	2.3%	2.8%	2.9%	2.8%
Non-automatic licensing, quotas	0.0%	0.0%	0.0%	0.4%	0.4%	0.4%	0.6%
Price control measures	0.2%	0.2%	0.2%	0.2%	0.2%	0.7%	0.7%
Investment measures	0.0%	0.1%	1.9%	2.0%	2.0%	2.6%	3.1%
Subsidies (except export subsidies)	1.6%	3.2%	3.4%	4.4%	7.4%	8.0%	9.3%
Government procurement	2.0%	3.9%	3.7%	3.8%	3.8%	4.1%	4.4%
Export measures	33.7%	42.3%	45.2%	48.4%	52.2%	53.0%	51.4%
Import tariff measures	0.6%	3.1%	3.1%	3.5%	4.6%	5.0%	5.4%
Instrument unclassified	0.0%	0.0%	0.0%	0.1%	0.1%	0.1%	0.2%

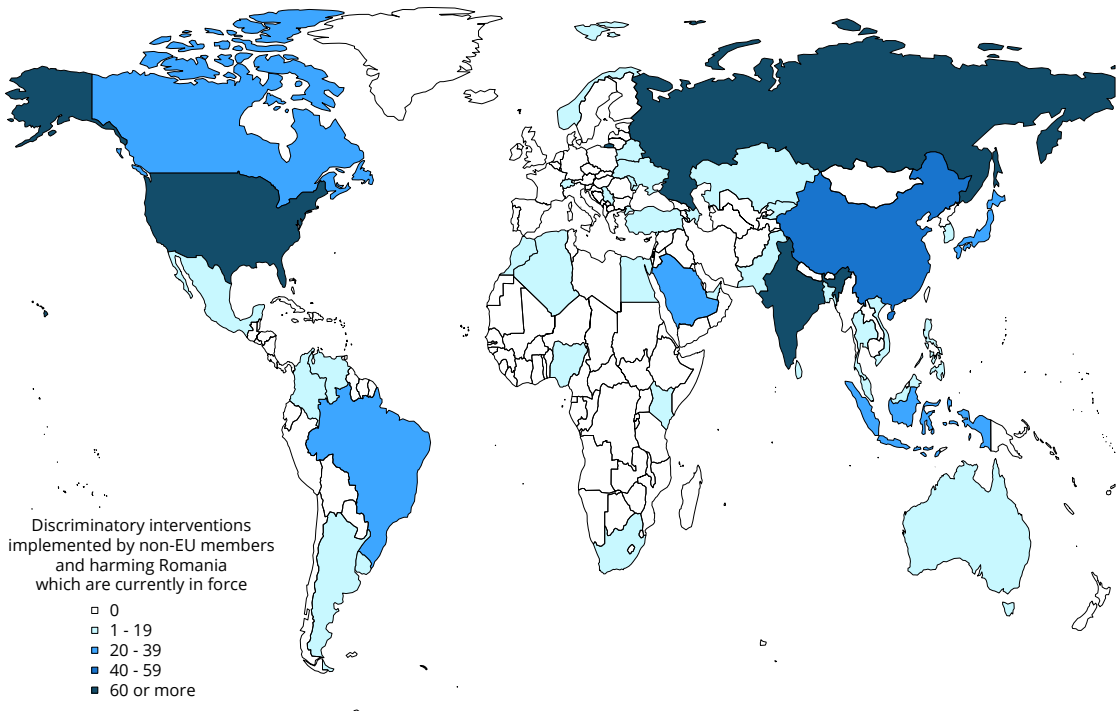
Percentage of intra-EU exports at risk

Foreign descriminatory trade instrument	2009	2010	2011	2012	2013	2014	2015
All forms of foreign discrimination	65.6%	71.0%	73.5%	74.5%	74.9%	75.4%	75.3%
Contingent trade protection	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Non-automatic licensing, quotas	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Investment measures	0.0%	0.7%	0.8%	0.8%	0.8%	0.8%	0.8%
Subsidies (except export subsidies)	0.8%	2.3%	2.1%	2.5%	3.2%	4.6%	4.9%
Government procurement	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Export measures	65.3%	70.3%	72.9%	74.0%	74.4%	74.6%	74.5%
Instrument unclassified	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Exports benefitting from export incentives	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%

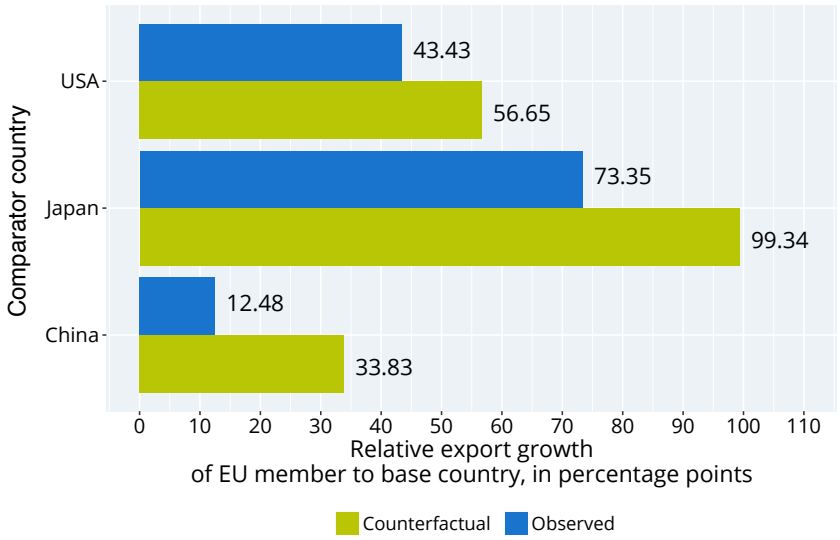
Regional distribution of protectionist interventions harming Romania's exports, 2009-2017



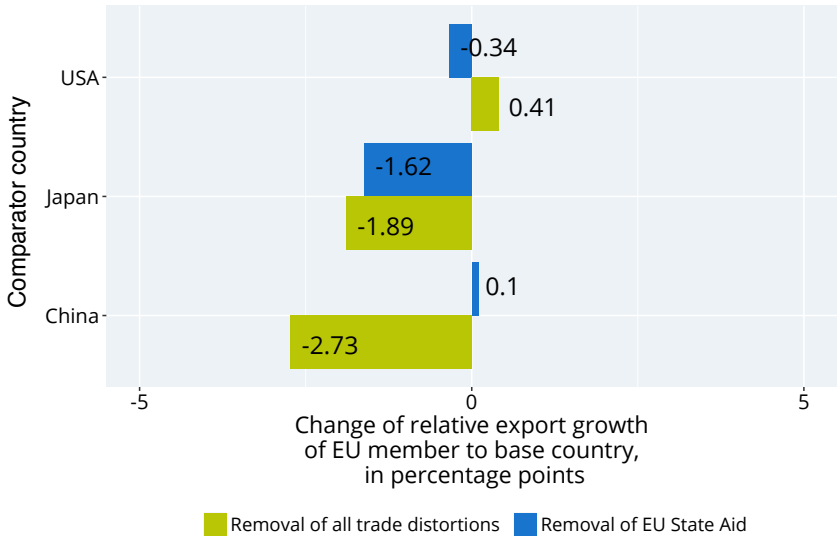
Discriminatory interventions harming Romania's extra-EU exports currently in force



Romania's extra-EU export growth without crisis-era trade barriers relative to each country comparator, 2008-2014



Romania's intra-EU export growth without crisis-era trade barriers relative to each country comparator, 2008-2014

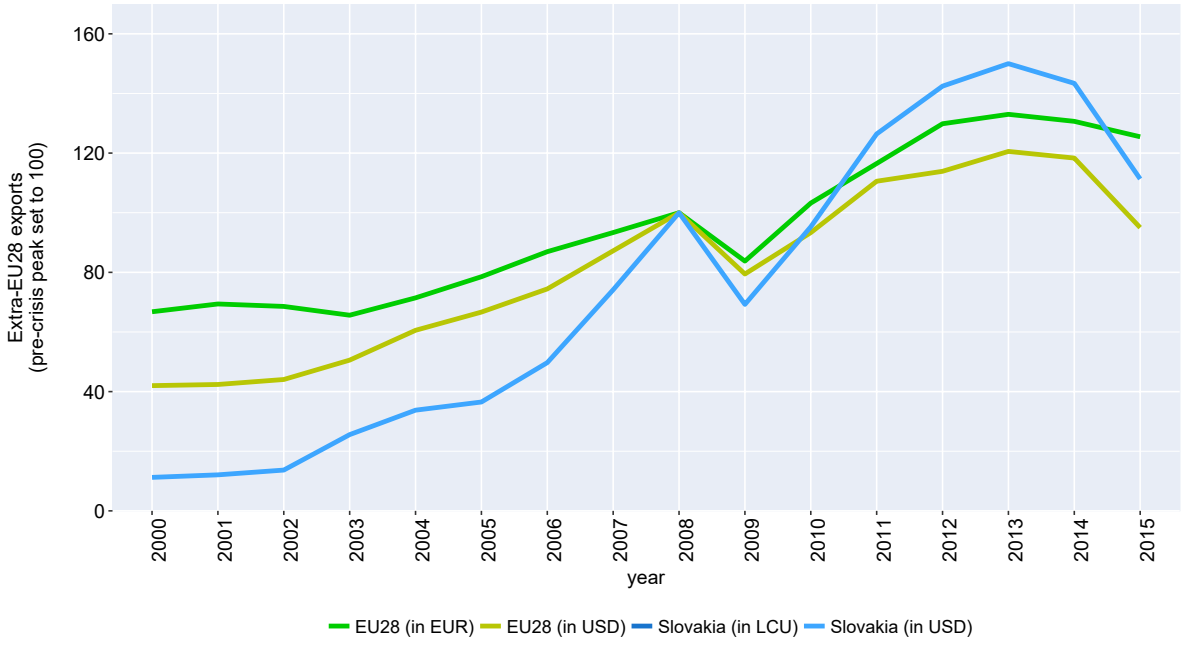


SLOVAKIA

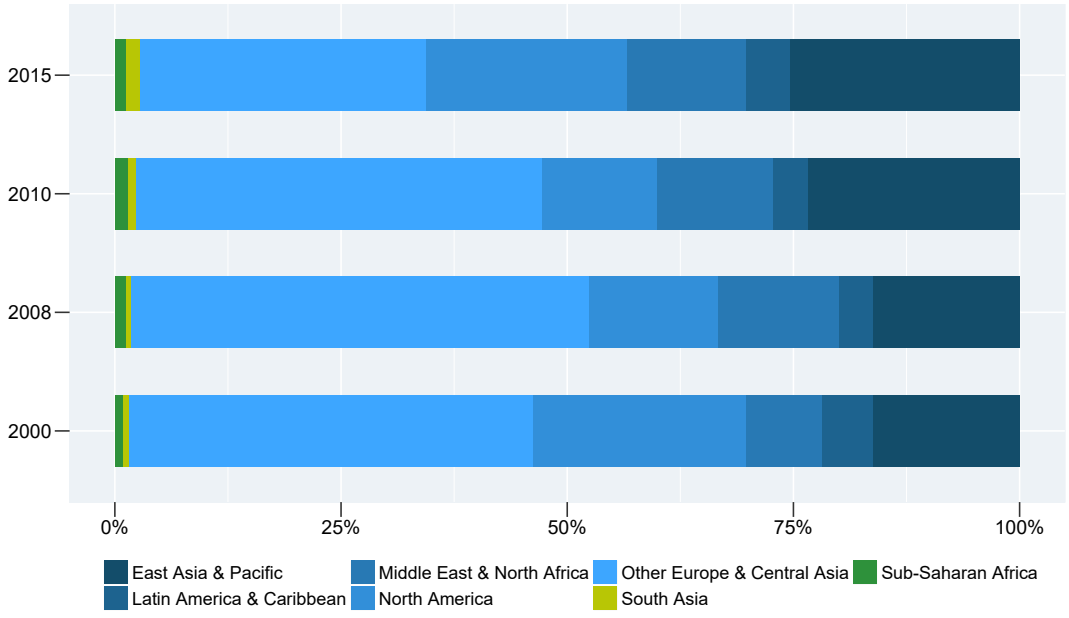
Total amount of exta-EU exports in 2014 (in billion USD): 13.26

Extra-EU exports as a percentage of total exports in 2014: 19.29%

Exports of Slovakia and EU in current US dollars and euros



Distribution of extra-EU28 exports across regions



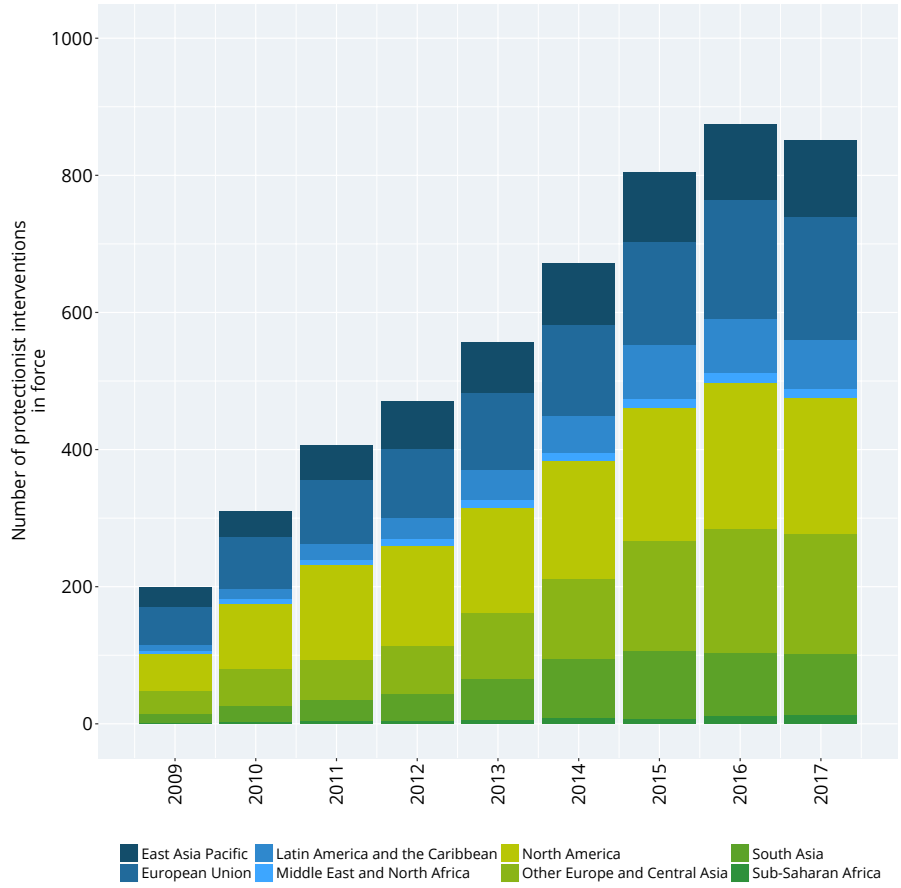
Percentage of extra-EU exports at risk

Foreign descriminatory trade instrument	2009	2010	2011	2012	2013	2014	2015
All forms of foreign discrimination	55.4%	65.4%	65.0%	66.3%	67.1%	67.6%	67.5%
Contingent trade protection	0.0%	0.0%	0.0%	0.0%	0.3%	0.4%	0.8%
Non-automatic licensing, quotas	0.0%	0.1%	0.2%	0.2%	0.2%	0.2%	0.2%
Price control measures	0.0%	0.0%	0.0%	0.0%	0.0%	0.1%	0.3%
Investment measures	5.2%	6.9%	7.2%	7.3%	7.3%	7.5%	8.2%
Subsidies (except export subsidies)	23.1%	30.2%	29.4%	29.3%	30.1%	30.2%	30.3%
Government procurement	0.6%	5.2%	6.8%	7.5%	7.6%	7.8%	8.8%
Export measures	34.4%	39.4%	46.5%	57.5%	55.7%	42.4%	41.5%
Import tariff measures	7.3%	4.8%	1.4%	1.5%	3.7%	4.6%	5.1%
Instrument unclassified	0.0%	0.0%	0.0%	1.0%	3.0%	3.4%	17.1%

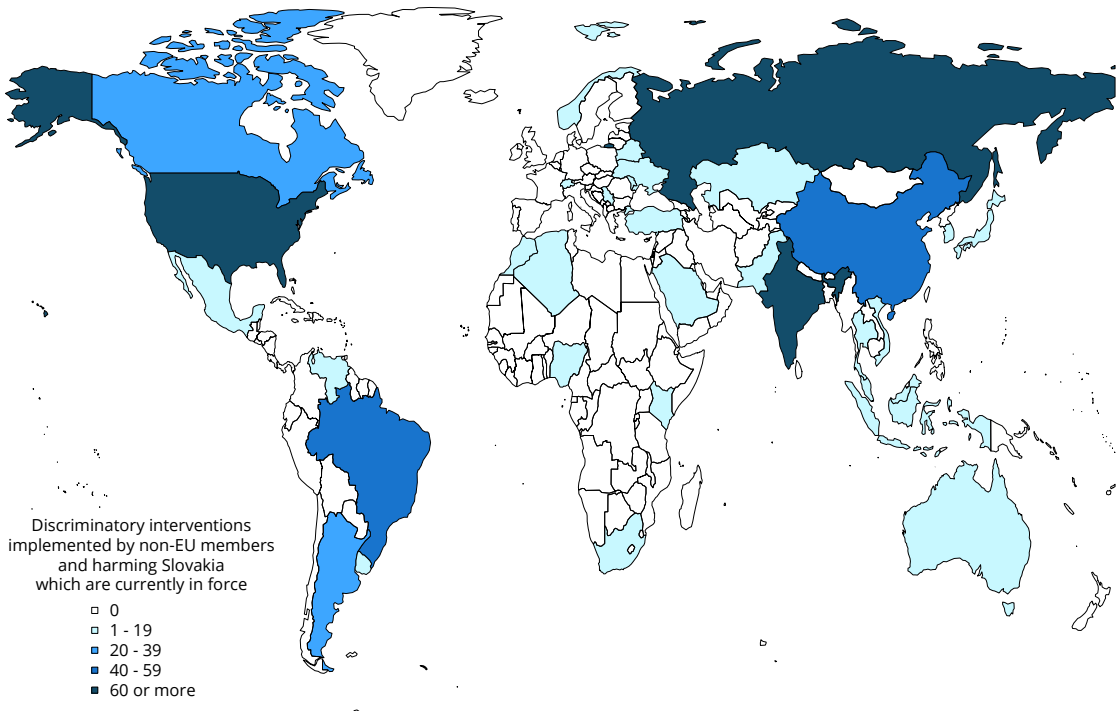
Percentage of intra-EU exports at risk

Foreign descriminatory trade instrument	2009	2010	2011	2012	2013	2014	2015
All forms of foreign discrimination	49.6%	59.3%	62.0%	65.0%	65.3%	66.3%	65.8%
Contingent trade protection	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Non-automatic licensing, quotas	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Investment measures	0.0%	1.6%	1.8%	1.8%	1.8%	1.8%	1.8%
Subsidies (except export subsidies)	5.2%	11.6%	11.7%	15.7%	15.1%	17.8%	17.3%
Government procurement	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Export measures	47.5%	52.0%	54.5%	57.5%	57.8%	56.5%	56.7%
Instrument unclassified	0.0%	0.0%	0.0%	0.0%	0.0%	0.5%	1.1%
Exports benefitting from export incentives	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%

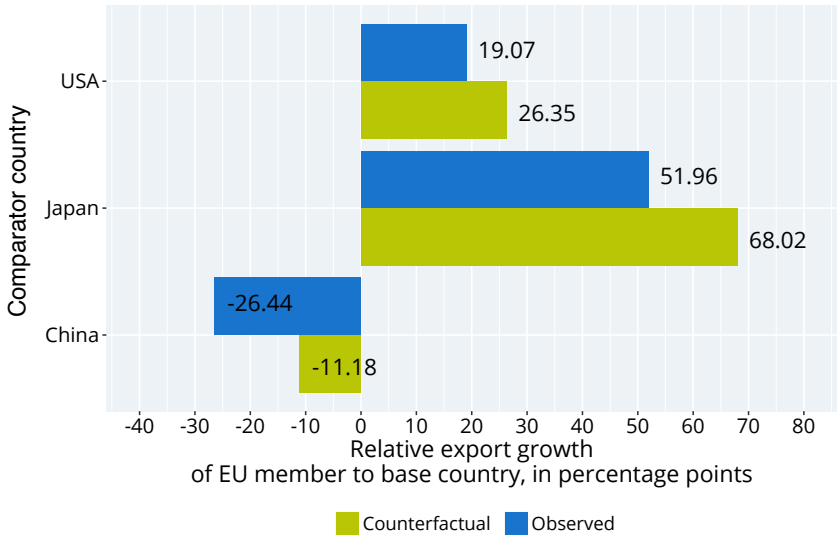
Regional distribution of protectionist interventions harming Slovakia's exports, 2009-2017



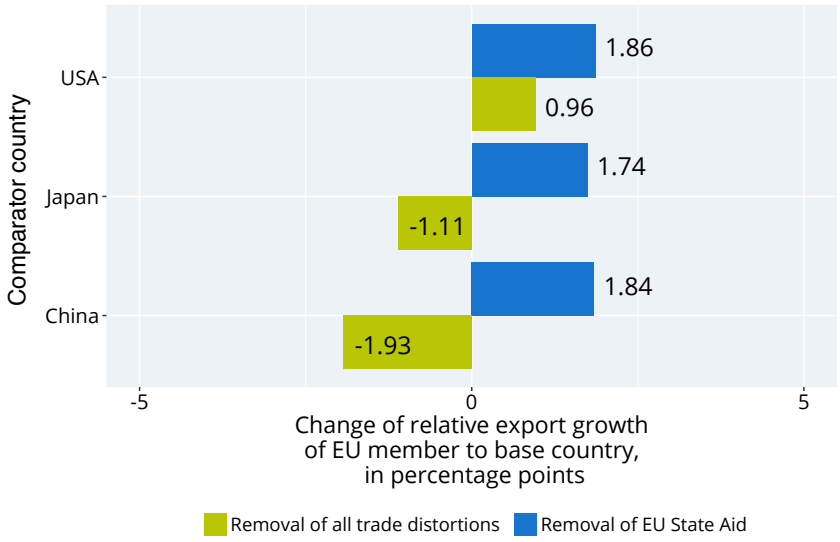
Discriminatory interventions harming Slovakia's extra-EU exports currently in force



Slovakia's extra-EU export growth without crisis-era trade barriers relative to each country comparator, 2008-2014



Slovakia's intra-EU export growth without crisis-era trade barriers relative to each country comparator, 2008-2014

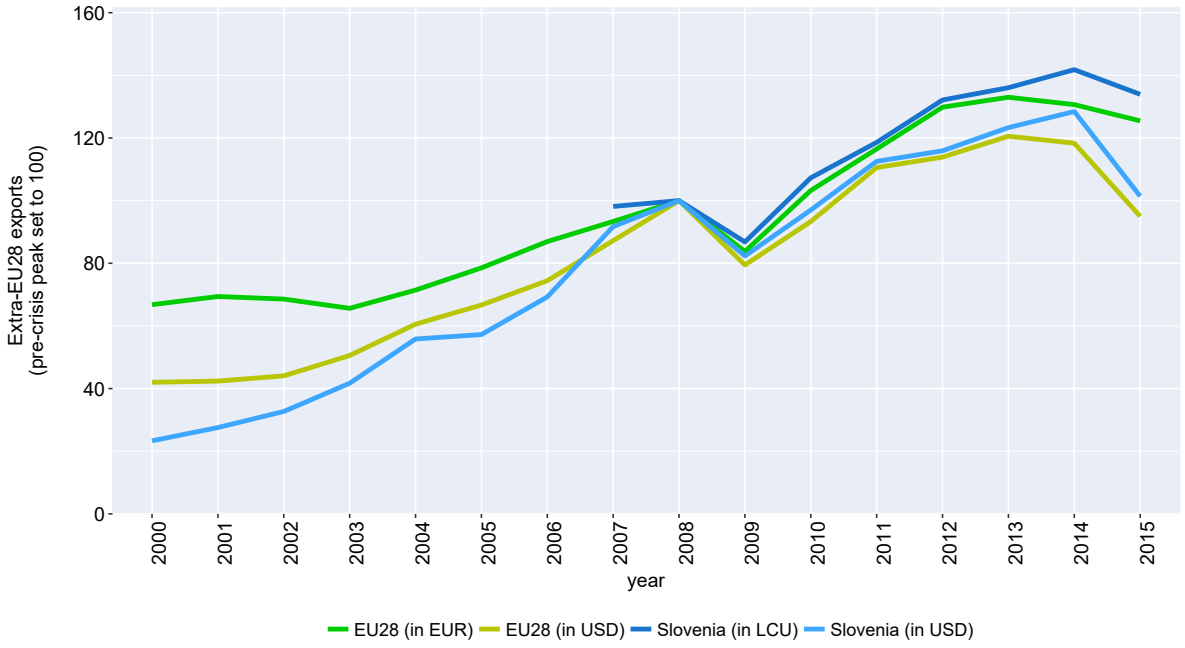


SLOVENIA

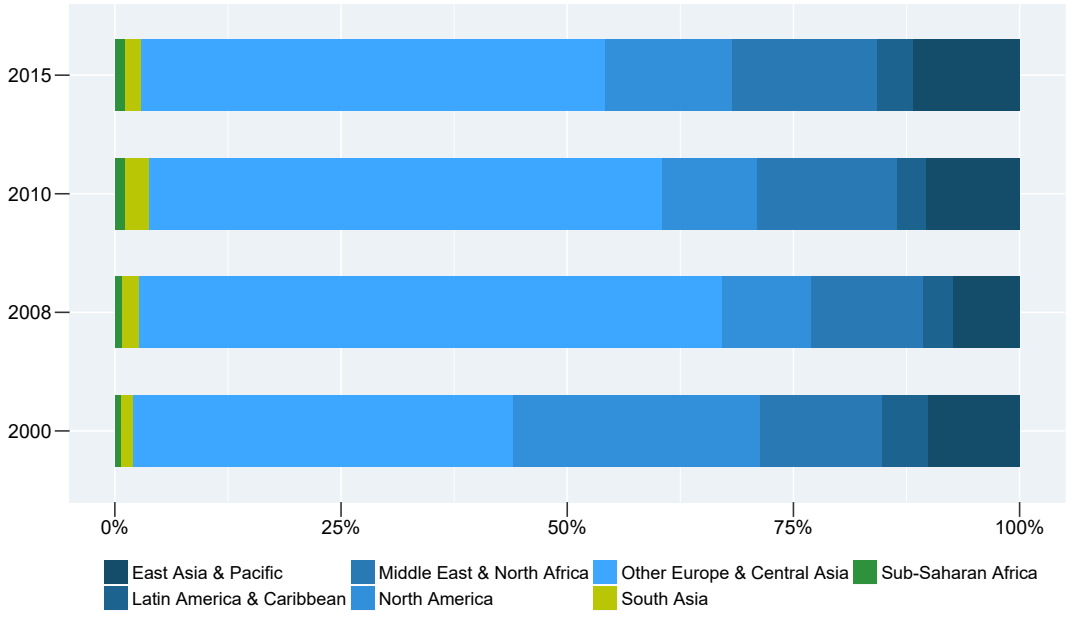
Total amount of exta-EU exports in 2014 (in billion USD): 5.07

Extra-EU exports as a percentage of total exports in 2014: 20.32%

Exports of Slovenia and EU in current US dollars and euros



Distribution of extra-EU28 exports across regions



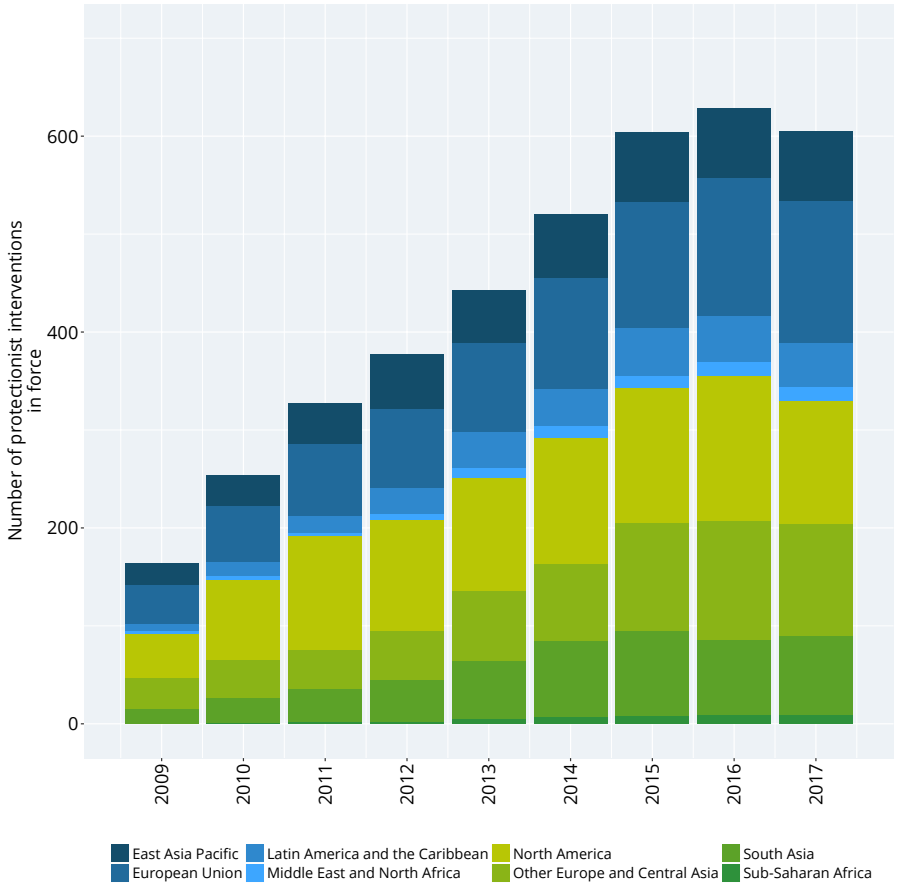
Percentage of extra-EU exports at risk

Foreign descriminatory trade instrument	2009	2010	2011	2012	2013	2014	2015
All forms of foreign discrimination	45.2%	55.4%	56.6%	58.7%	59.8%	60.5%	60.1%
Contingent trade protection	0.1%	0.2%	0.2%	0.2%	4.6%	5.7%	4.5%
Non-automatic licensing, quotas	0.6%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Price control measures	0.0%	0.0%	0.1%	0.2%	0.2%	0.2%	0.3%
Investment measures	0.1%	0.1%	0.2%	0.2%	0.2%	0.7%	1.3%
Subsidies (except export subsidies)	3.4%	12.5%	12.0%	12.9%	14.6%	14.8%	15.2%
Government procurement	2.5%	2.9%	1.6%	1.7%	1.7%	1.7%	2.7%
Export measures	42.3%	50.0%	53.7%	56.4%	57.3%	57.8%	57.3%
Import tariff measures	1.6%	2.7%	2.7%	3.6%	5.2%	5.9%	6.0%
Instrument unclassified	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%

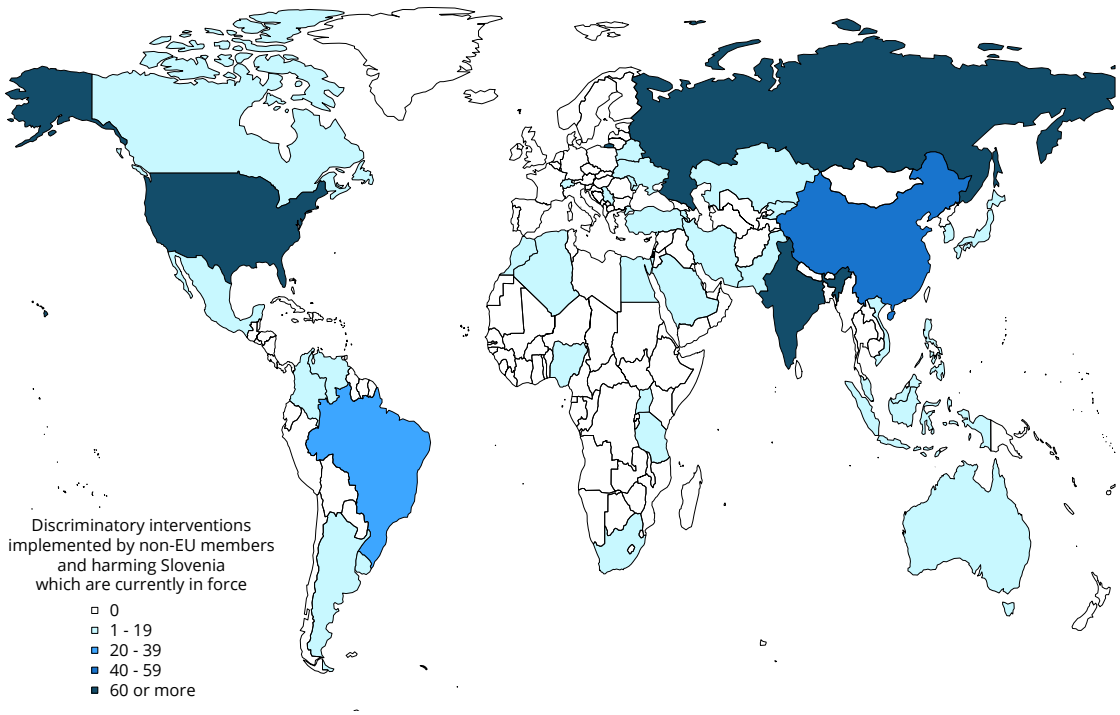
Percentage of intra-EU exports at risk

Foreign descriminatory trade instrument	2009	2010	2011	2012	2013	2014	2015
All forms of foreign discrimination	52.2%	62.4%	65.2%	68.5%	69.6%	69.1%	68.2%
Contingent trade protection	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Non-automatic licensing, quotas	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Investment measures	0.0%	4.9%	5.6%	5.6%	5.6%	5.6%	5.6%
Subsidies (except export subsidies)	6.8%	10.6%	9.3%	11.7%	12.6%	13.5%	13.1%
Government procurement	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Export measures	48.2%	55.1%	59.0%	63.0%	64.1%	63.0%	62.6%
Instrument unclassified	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Exports benefitting from export incentives	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%

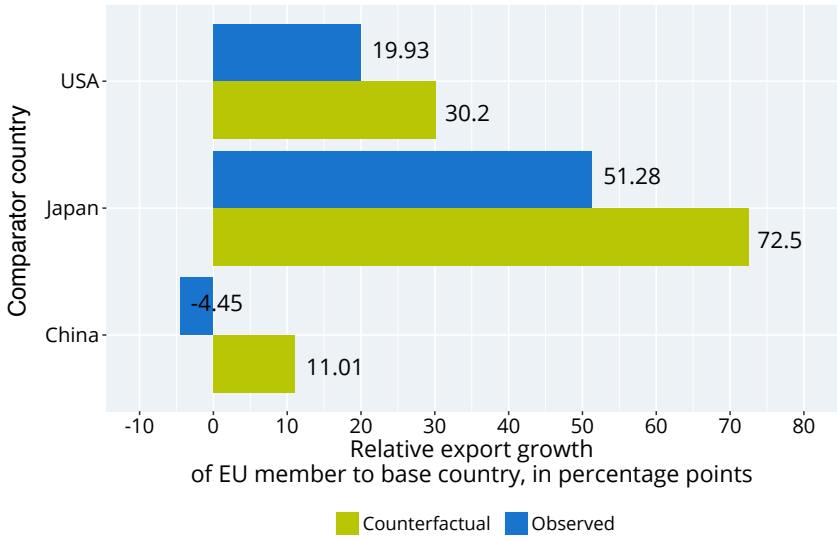
Regional distribution of protectionist interventions harming Slovenia's exports, 2009-2017



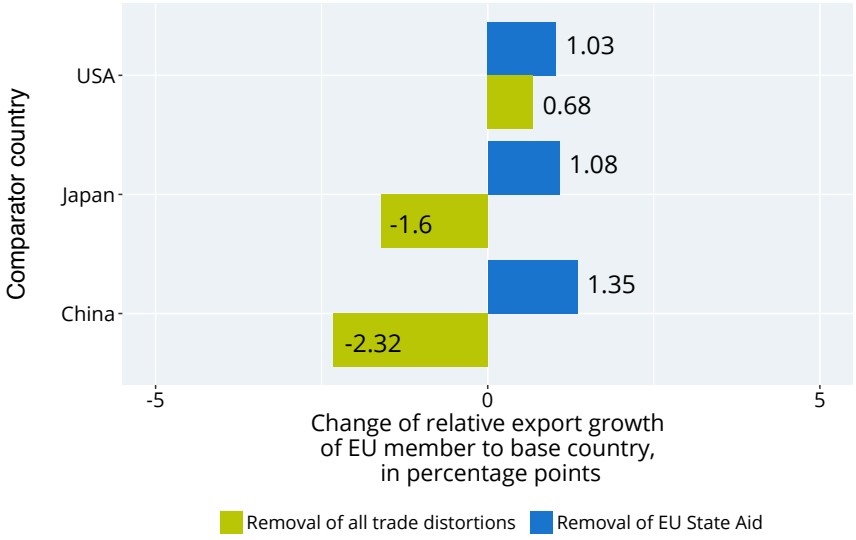
Discriminatory interventions harming Slovenia's extra-EU exports currently in force



Slovenia's extra-EU export growth without crisis-era trade barriers relative to each country comparator, 2008-2014



Slovenia's intra-EU export growth without crisis-era trade barriers relative to each country comparator, 2008-2014

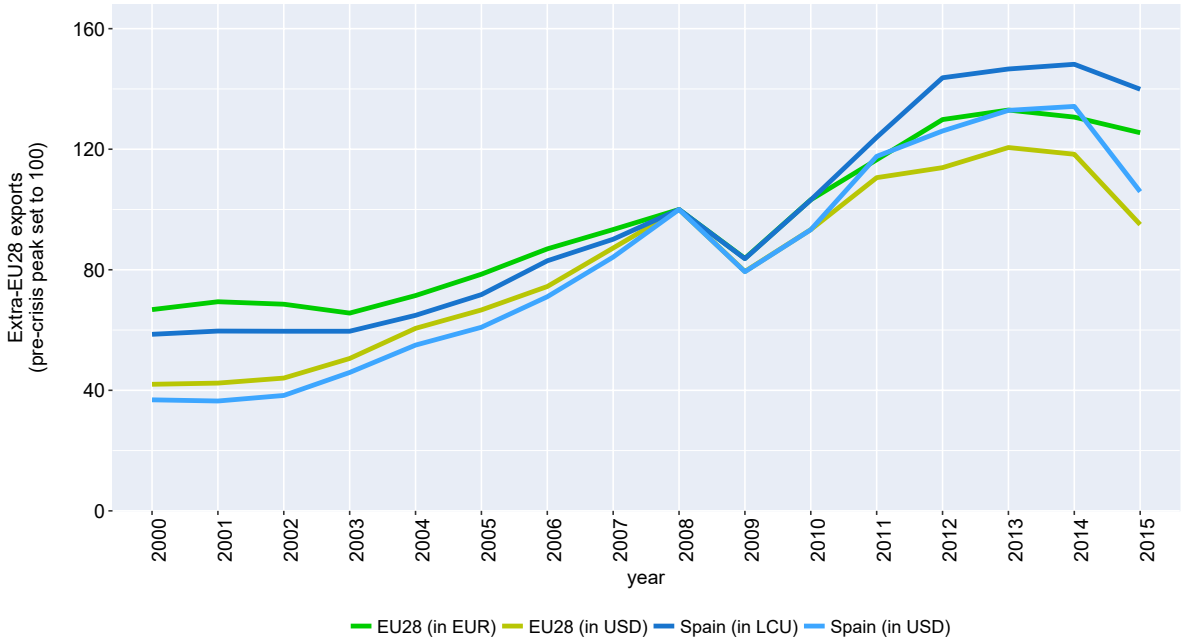


SPAIN

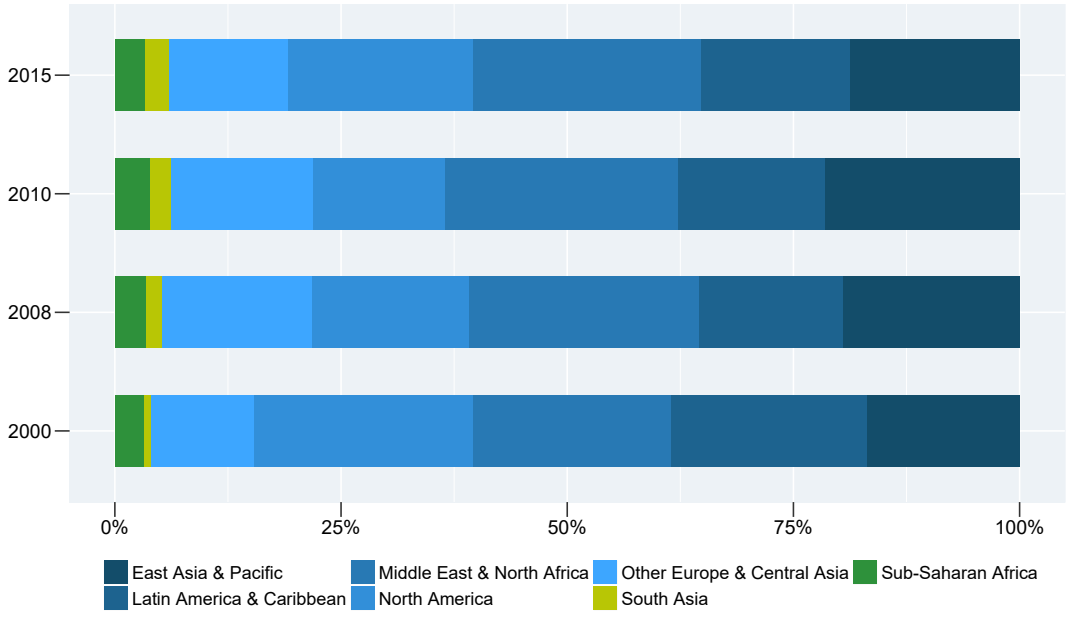
Total amount of exta-EU exports in 2014 (in billion USD): 89.53

Extra-EU exports as a percentage of total exports in 2014: 33.68%

Exports of Spain and EU in current US dollars and euros



Distribution of extra-EU28 exports across regions



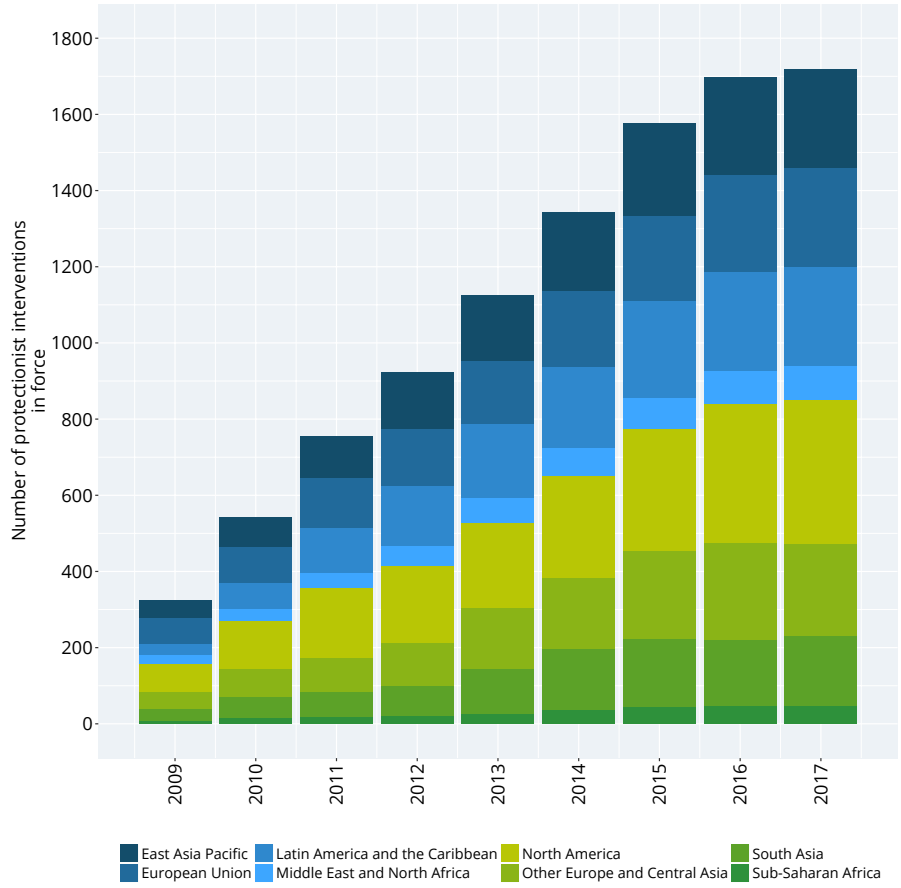
Percentage of extra-EU exports at risk

Foreign descriminatory trade instrument	2009	2010	2011	2012	2013	2014	2015
All forms of foreign discrimination	39.5%	52.9%	58.6%	62.8%	65.9%	67.7%	67.5%
Contingent trade protection	0.1%	0.2%	0.3%	0.4%	0.5%	0.6%	0.8%
Non-automatic licensing, quotas	0.9%	0.6%	0.9%	1.3%	1.6%	1.5%	2.4%
Price control measures	0.2%	0.2%	0.4%	0.5%	0.5%	0.6%	1.0%
Investment measures	1.0%	1.6%	1.4%	1.4%	1.4%	2.2%	3.8%
Subsidies (except export subsidies)	2.6%	3.8%	5.8%	9.2%	11.1%	11.7%	13.0%
Government procurement	1.1%	1.8%	2.0%	2.5%	2.8%	3.2%	3.9%
Export measures	36.1%	49.3%	54.7%	59.0%	61.4%	63.1%	62.0%
Import tariff measures	1.5%	2.6%	2.9%	4.2%	6.8%	7.0%	7.6%
Instrument unclassified	0.1%	0.3%	0.4%	0.6%	1.2%	0.6%	0.8%

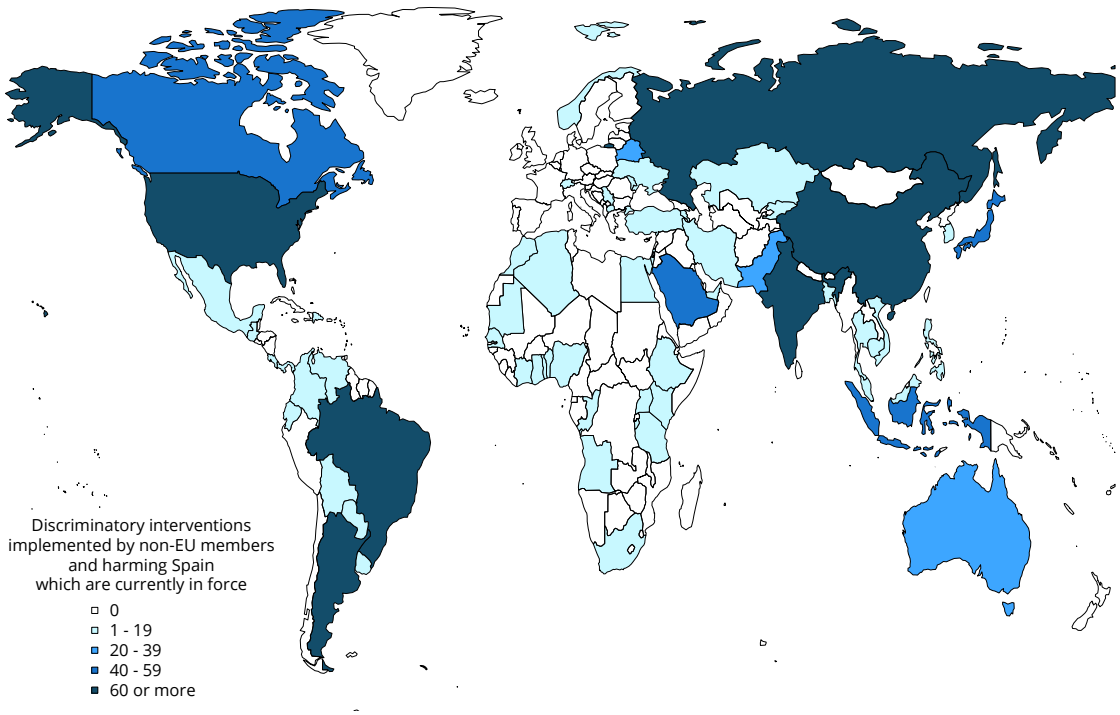
Percentage of intra-EU exports at risk

Foreign descriminatory trade instrument	2009	2010	2011	2012	2013	2014	2015
All forms of foreign discrimination	40.9%	55.4%	58.8%	62.4%	63.6%	65.6%	64.8%
Contingent trade protection	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Non-automatic licensing, quotas	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Investment measures	0.0%	6.0%	6.9%	6.9%	6.9%	6.9%	6.9%
Subsidies (except export subsidies)	8.2%	14.3%	9.8%	13.5%	14.6%	17.9%	18.3%
Government procurement	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.1%
Export measures	36.6%	45.6%	50.2%	54.4%	55.1%	54.6%	54.8%
Instrument unclassified	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Exports benefitting from export incentives	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%

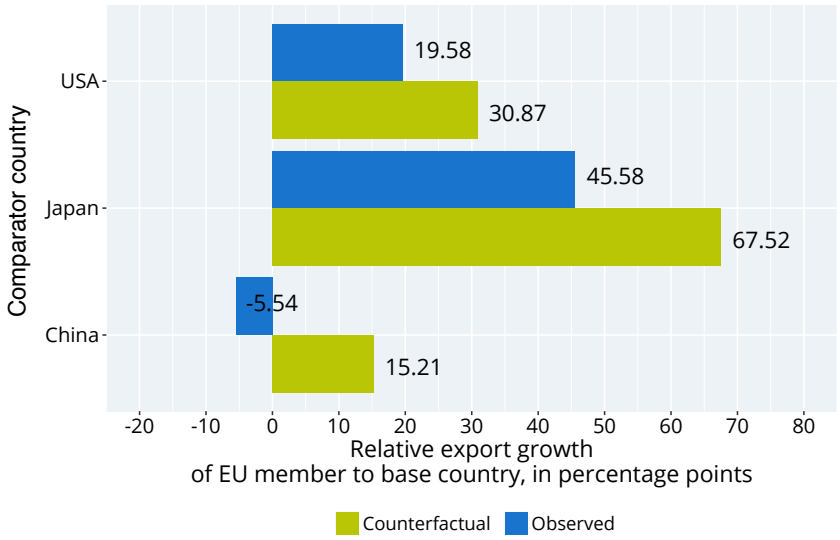
Regional distribution of protectionist interventions harming Spain's exports, 2009-2017



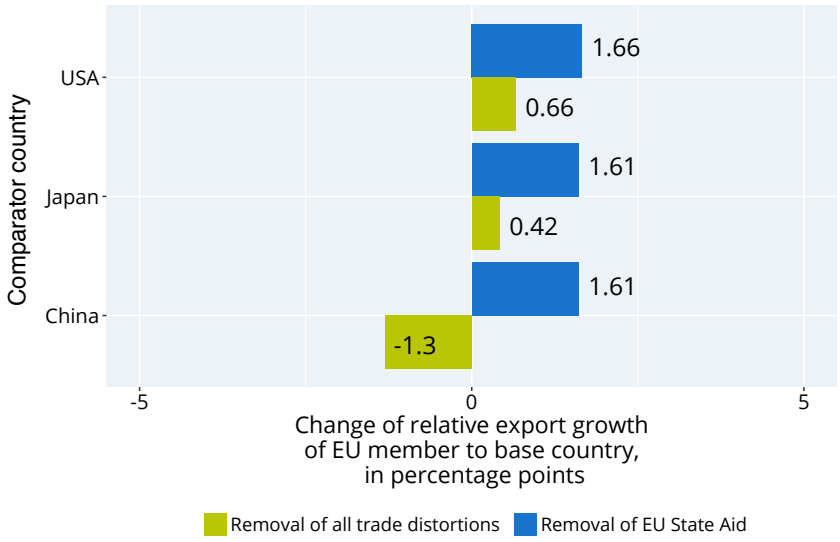
Discriminatory interventions harming Spain's extra-EU exports currently in force



Spain's extra-EU export growth without crisis-era trade barriers relative to each country comparator, 2008-2014



Spain's intra-EU export growth without crisis-era trade barriers relative to each country comparator, 2008-2014

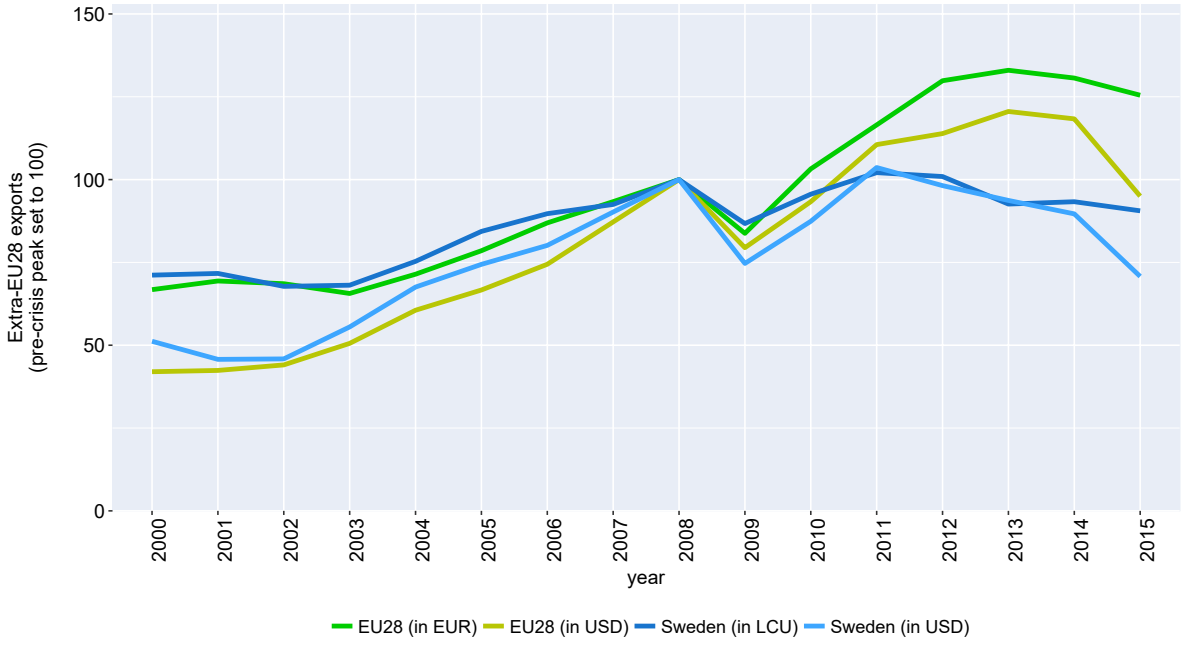


SWEDEN

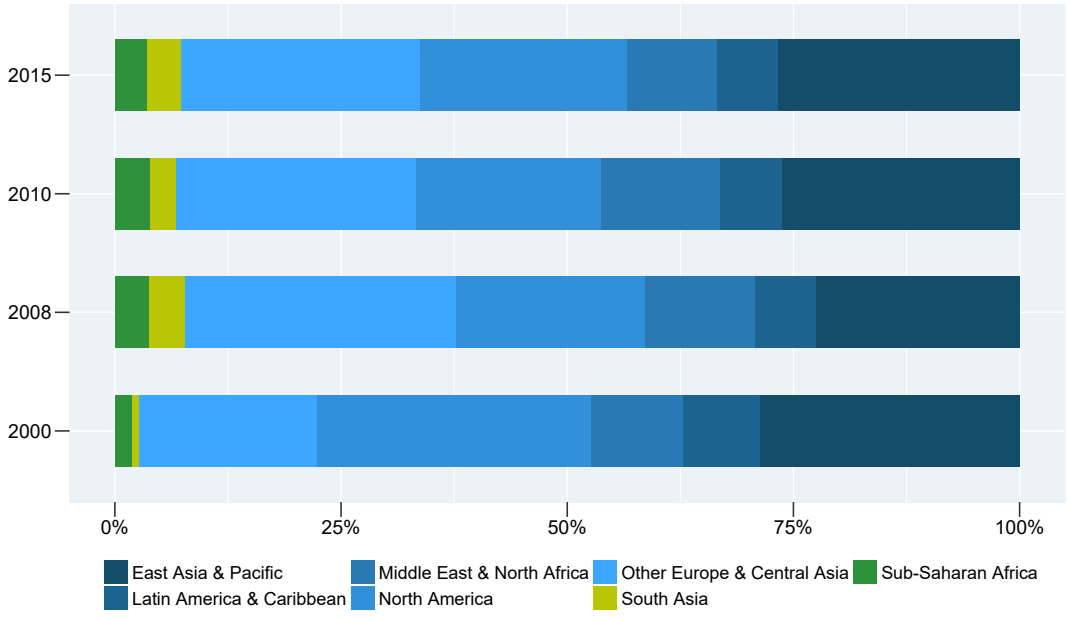
Total amount of exta-EU exports in 2014 (in billion USD): 56.89

Extra-EU exports as a percentage of total exports in 2014: 38.53%

Exports of Sweden and EU in current US dollars and euros



Distribution of extra-EU28 exports across regions



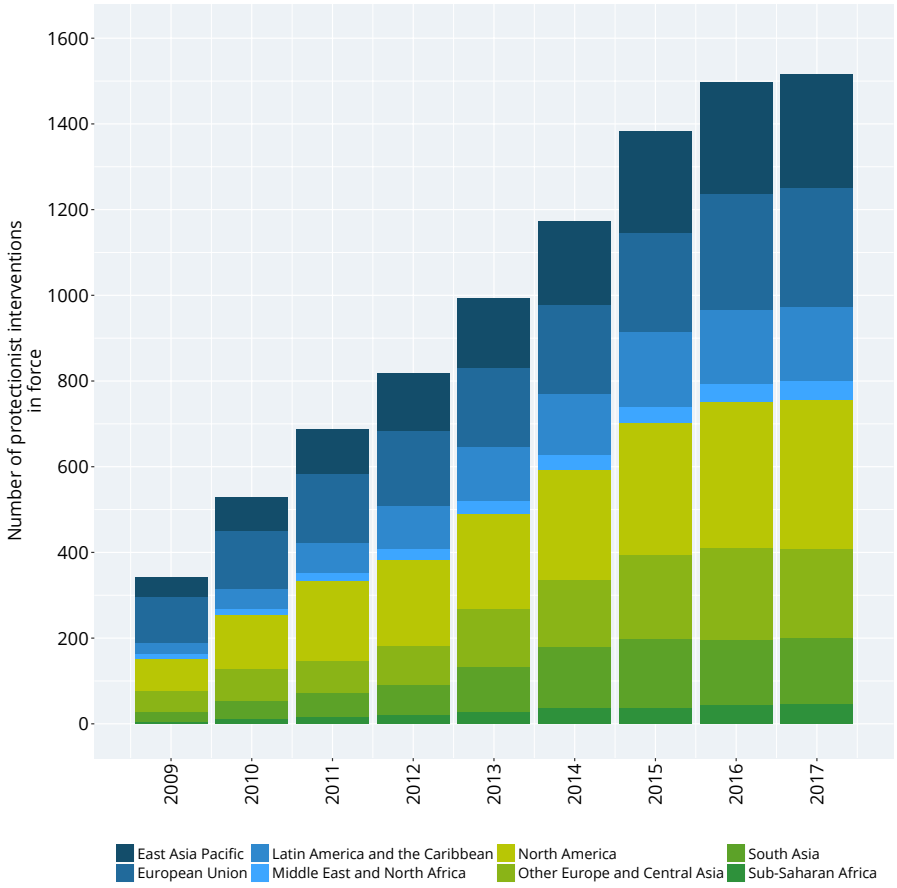
Percentage of extra-EU exports at risk

Foreign descriminatory trade instrument	2009	2010	2011	2012	2013	2014	2015
All forms of foreign discrimination	49.7%	58.8%	63.0%	66.3%	67.4%	68.3%	68.7%
Contingent trade protection	0.0%	0.0%	0.0%	0.1%	0.1%	0.2%	0.3%
Non-automatic licensing, quotas	1.1%	0.3%	0.3%	0.4%	0.5%	0.9%	1.1%
Price control measures	0.0%	0.0%	0.0%	0.1%	0.1%	0.2%	0.7%
Investment measures	0.9%	1.2%	1.2%	1.2%	1.2%	2.2%	3.2%
Subsidies (except export subsidies)	6.9%	9.2%	11.8%	16.7%	19.7%	20.6%	21.0%
Government procurement	1.5%	2.6%	2.7%	4.0%	5.0%	5.4%	6.4%
Export measures	44.6%	52.5%	57.2%	61.7%	63.0%	62.8%	62.7%
Import tariff measures	1.6%	4.2%	4.9%	5.7%	6.3%	6.9%	7.4%
Instrument unclassified	0.6%	0.6%	0.6%	0.8%	1.2%	1.6%	5.1%

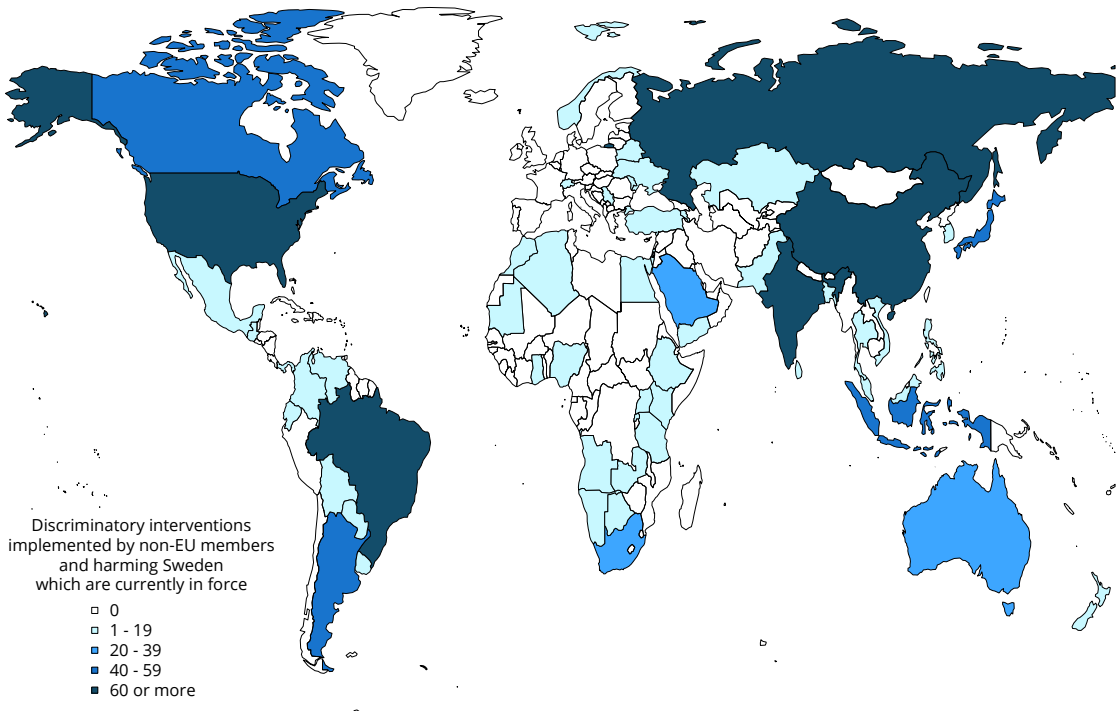
Percentage of intra-EU exports at risk

Foreign descriminatory trade instrument	2009	2010	2011	2012	2013	2014	2015
All forms of foreign discrimination	36.4%	43.4%	47.4%	51.5%	53.0%	57.8%	56.8%
Contingent trade protection	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Non-automatic licensing, quotas	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Investment measures	0.0%	0.6%	0.7%	0.7%	0.7%	0.7%	0.7%
Subsidies (except export subsidies)	6.0%	8.3%	4.6%	5.4%	5.4%	10.6%	9.9%
Government procurement	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.1%
Export measures	32.6%	39.1%	44.5%	48.8%	50.8%	51.9%	51.6%
Instrument unclassified	0.0%	0.0%	0.0%	0.0%	0.0%	0.1%	0.2%
Exports benefitting from export incentives	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%

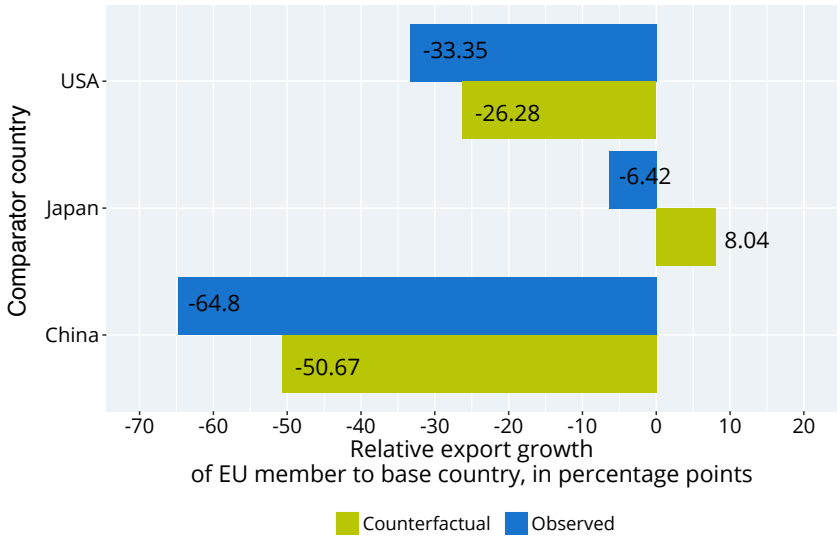
Regional distribution of protectionist interventions harming Sweden's exports, 2009-2017



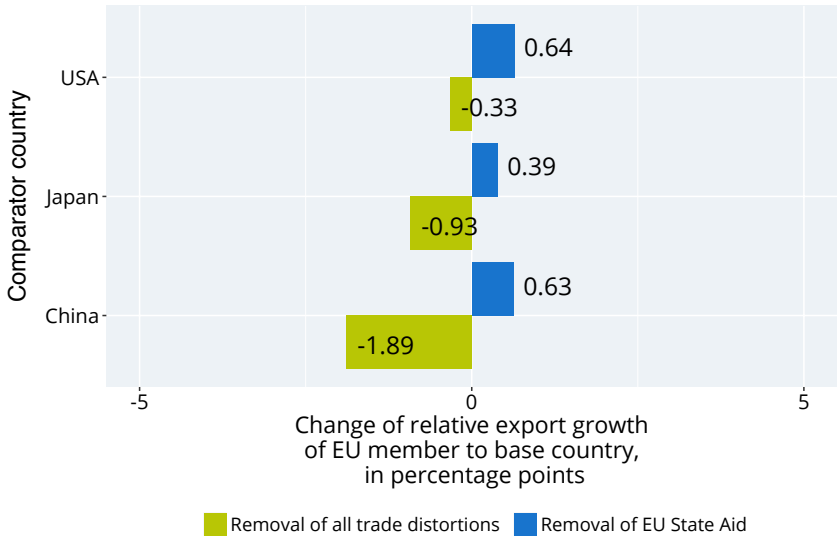
Discriminatory interventions harming Sweden's extra-EU exports currently in force



Sweden's extra-EU export growth without crisis-era trade barriers relative to each country comparator, 2008-2014



Sweden's intra-EU export growth without crisis-era trade barriers relative to each country comparator, 2008-2014

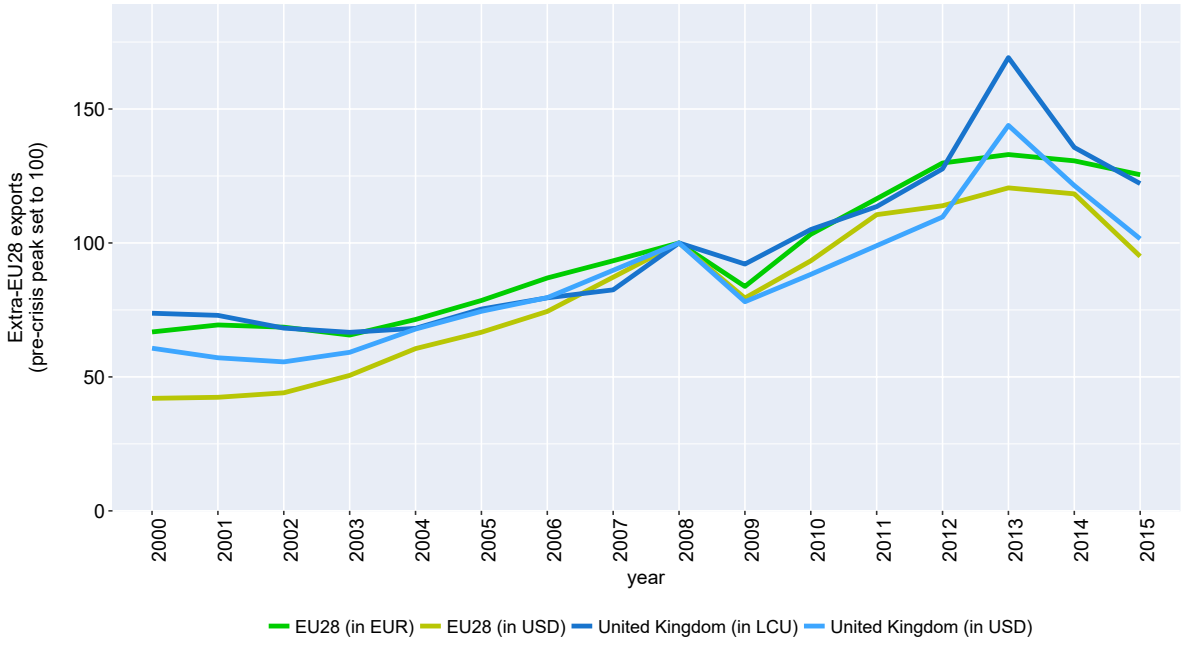


UNITED KINGDOM

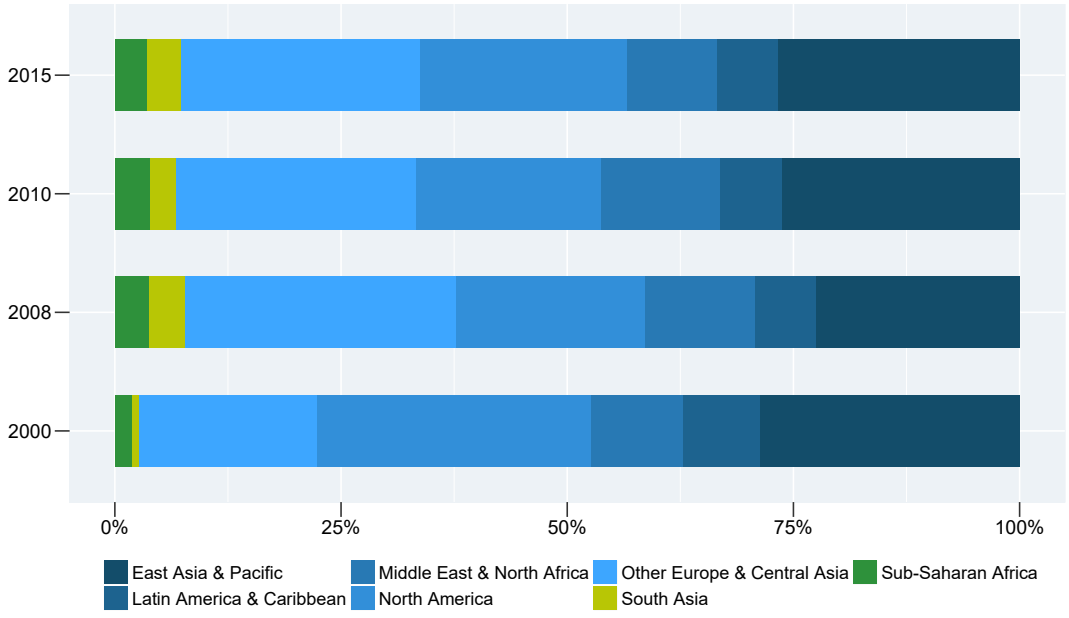
Total amount of exta-EU exports in 2014 (in billion USD): 217.95

Extra-EU exports as a percentage of total exports in 2014: 51.05%

Exports of the United Kingdom and EU in current US dollars and euros



Distribution of extra-EU28 exports across regions



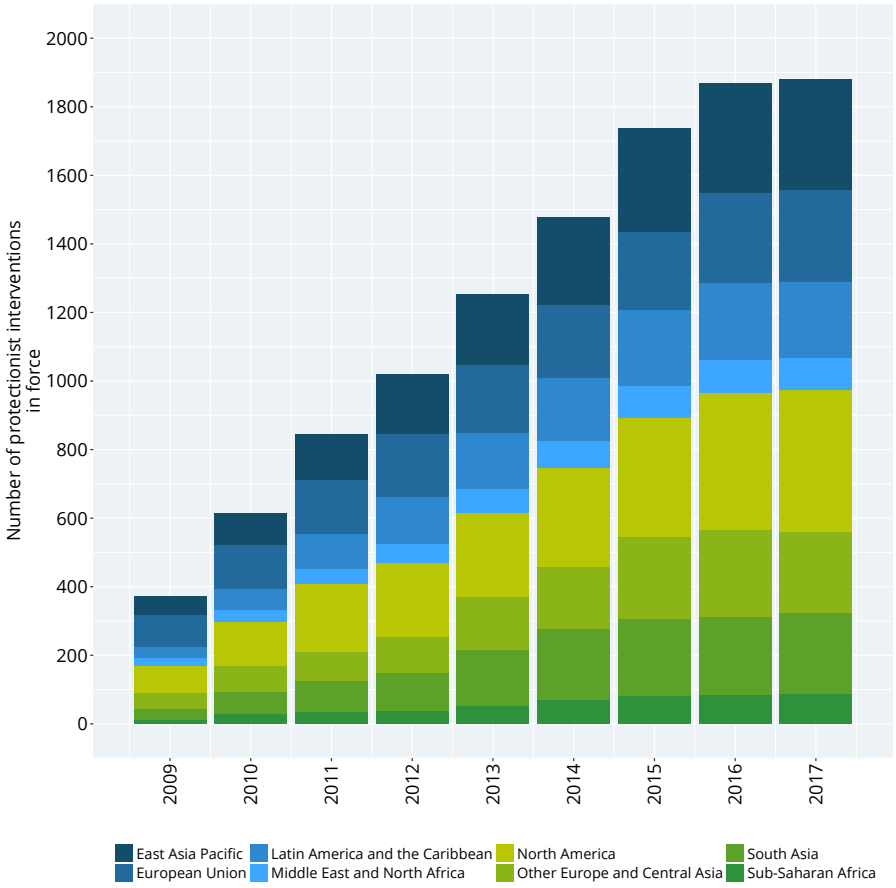
Percentage of extra-EU exports at risk

Foreign descriminatory trade instrument	2009	2010	2011	2012	2013	2014	2015
All forms of foreign discrimination	45.4%	55.4%	61.2%	67.2%	70.7%	71.5%	75.1%
Contingent trade protection	0.0%	0.1%	0.2%	0.3%	0.4%	0.4%	0.4%
Non-automatic licensing, quotas	0.4%	0.2%	0.3%	0.4%	0.6%	0.8%	1.0%
Price control measures	0.0%	0.0%	0.1%	0.1%	0.1%	0.2%	0.3%
Investment measures	0.8%	1.3%	1.3%	1.3%	1.4%	1.8%	2.4%
Subsidies (except export subsidies)	5.7%	7.3%	10.1%	17.2%	20.4%	22.0%	22.4%
Government procurement	0.9%	1.8%	2.0%	2.9%	3.1%	3.4%	4.2%
Export measures	40.1%	47.9%	54.6%	61.9%	64.0%	62.9%	66.2%
Import tariff measures	2.4%	4.4%	4.5%	5.0%	6.2%	6.1%	6.7%
Instrument unclassified	0.0%	0.0%	0.0%	0.4%	1.2%	1.5%	4.8%

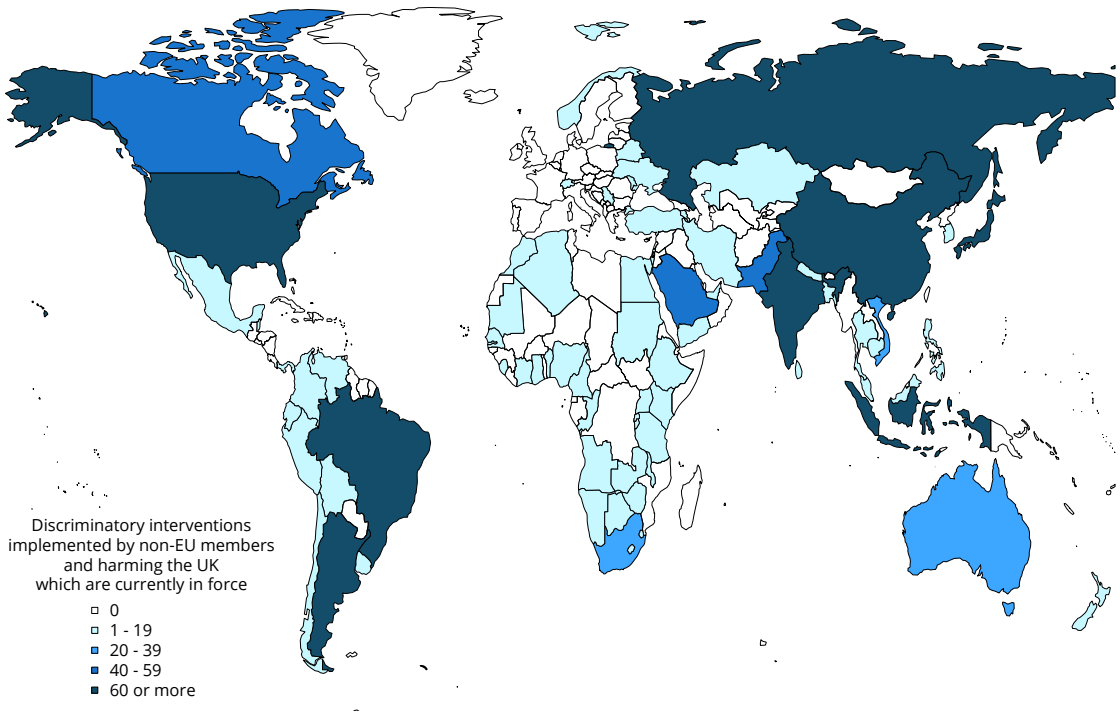
Percentage of intra-EU exports at risk

Foreign descriminatory trade instrument	2009	2010	2011	2012	2013	2014	2015
All forms of foreign discrimination	37.1%	44.9%	50.3%	55.2%	56.2%	57.3%	56.5%
Contingent trade protection	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Non-automatic licensing, quotas	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Investment measures	0.0%	1.1%	1.2%	1.2%	1.2%	1.2%	1.2%
Subsidies (except export subsidies)	2.5%	4.6%	5.1%	6.4%	6.2%	9.8%	8.7%
Government procurement	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Export measures	35.4%	41.6%	47.4%	52.7%	53.7%	53.1%	52.8%
Instrument unclassified	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.1%
Exports benefitting from export incentives	1.1%	1.1%	5.0%	6.3%	6.3%	6.3%	6.3%

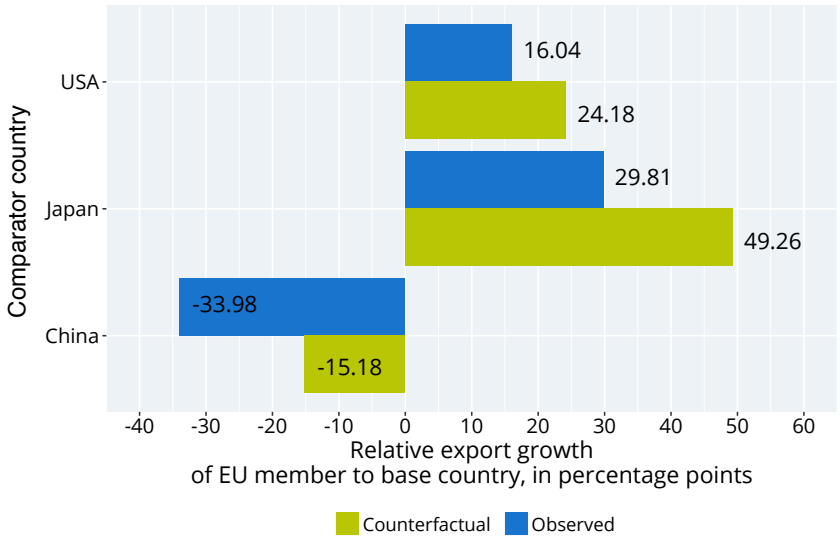
Regional distribution of protectionist interventions harming the United Kingdom's exports, 2009-2017



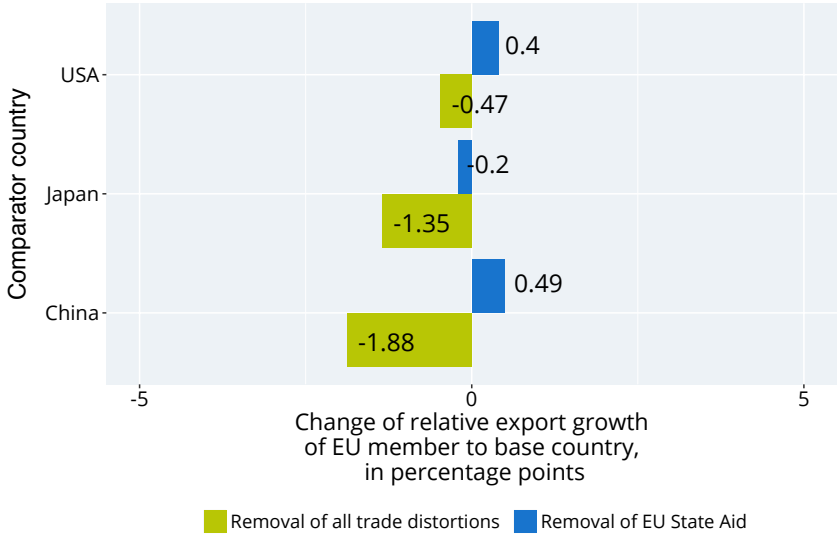
Discriminatory interventions harming the United Kingdom's extra-EU exports currently in force



The United Kingdom's extra-EU export growth without crisis-era trade barriers relative to each country comparator, 2008-2014



The United Kingdom's intra-EU export growth without crisis-era trade barriers relative to each country comparator, 2008-2014



Having grown in real terms by 60% between 2000 to 2008, extra-EU exports have since stagnated. In terms of export volumes, the bounce back since 2009 was weaker for European exporters than for major trading partners. Average export prices stopped rising in 2012. This study examines what is holding back EU exports. Stripping out other determinants of EU export growth, the focus here is on the impact of trade distortions imposed by foreign governments since the global economic crisis began.

Our econometric analysis implies that crisis-era trade distortions held back EU Member State export growth to destinations outside of the EU by between 10-20 percentage points between 2008 and 2014. We estimate that the EU export growth deficit compared to China (amounting to on average 35 percentage points from 2008 to 2014) would have been halved in the absence of foreign trade distortions.

Our results demonstrate the zero-sum nature of contemporary protectionism where governments use policies to shift sales in home and foreign markets towards their firms. Crisis-era trade distortions have reshuffled world trade, although our results imply to a lesser degree for intra-EU trade than for extra-EU trade. Recommendations for action by the European Commission to better safeguard European commercial interests are also presented.

The systemic findings of this study on the exposure to crisis-era protectionism as well as on the impact on American, Chinese and Japanese export performance ought to be of interest to policymakers and analysts outside of the EU as well.

CEPR Press

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