European Union: No protectionist surprises so far

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Abstract[*] This paper evaluates the European Union's trade policy during the recent global recession with a special focus on AD (AD) protection. Our findings suggest that the EU continues on pre-crisis policy trends. We fail to find clear signs of a major trade policy change since the outbreak of the crisis. Pre-policy trends in AD policy include an increase in product coverage, a small decrease in target country coverage, an increase in industry coverage, a focus on China as a target, an increasing coverage of consumer goods and more differentiated goods. Findings suggest that the EU is more likely to impose protection against countries and country-industries that are similar in their product mix. Country-product combinations subject to a preferential tariff are also more likely to be targeted. The patterns we reveal do not appear to be driven by a few outlying countries but are also similar when considering individual EU member states.

JEL classification: F13, F14, F53

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3.1   Introduction

On 3 October 2008, the European Union (EU) launched a review of AD (AD) duties on leather shoes from China and Vietnam.[1] In December 2009, the EU decided to extend duties on the imports of leather shoes from China and Vietnam for another 15 months. This affirmative decision was taken, despite heavy protests from consumers, importers and outsourcing firms, and overruled the negative advice that had been formulated by the AD committee of the European Commission earlier.[2] The review procedure was launched just a few days after the collapse of Lehman Brothers which marked the outbreak of the 'great recession' and fueled the fear that the EU would engage in a 'protectionist spiral'. In such a spiral, some countries would raise protection in order to counter the negative spillovers from the financial sector on the real economy and other countries, adversely affected by this protection, would then start to retaliate. The question that can be raised is whether this case marked the beginning of a more protectionist attitude of the EU in the face of the global recession.

Though the impact of the crisis varied considerably across EU member states, the EU as a whole has been strongly hit by the crisis, indicating that protectionist pressure was likely to be high after the outbreak of the crisis in the end of 2008. The macro-economic indicators in figure 3-1 show that, for the EU27 as a whole, GDP growth plunged from 3.0% in 2007 to 0.5% in 2008 and turned into a negative growth of -4.2% in 2009. Export and import growth slowed down dramatically in 2008, before becoming negative and around -12.5% in 2009. The unemployment rate, shown in panel b of figure 3-1, jumped up from 7% in 2008 to 9% in 2009, after having decreased continuously since 2004.

[FIGURE 3-1]

The deviation from free trade is tempting for any country in times of economic downturn and protection is perceived as an easy and quick way to safeguard jobs and to replace imports by domestic production. Protection is often perceived as being a far less painful remedy than fiscal austerity and budget cuts since protection raises tariff revenue for the protecting country. However, as soon as all countries start applying protectionist measures, trade between countries will dry up. With no more benefits to reap unilaterally, individual country welfare will be much lower than in the case of free trade and countries will revert to a state of relative autarky and forego the benefits from trade. For members of the WTO like the EU, there are generally three ways to raise import protection.

First, countries can pull up their applied MFN rates up to the level of the bound rates which are the rates that countries are not allowed to exceed within WTO commitments. In figure 3-2, we show the tariff overhang i.e. the difference between bound and applied MFN rates for the EU. We observe that average MFN applied rates have remained roughly constant suggesting that the EU has not used this channel to raise protection during the crisis. Tariff overhang was in fact close to zero during the crisis and a more detailed look at the underlying data

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[1] See Council Implementing Regulation No. 1294/2009 of 22 December 2009, available from EUR-Lex webpage, and press release from European Commission of 2 October 2008, available on the webpage of the Directorate General for Trade of the European Commission.
[2] Newspaper article in 'De Standaard', Tuesday 24 November 2009, p. E7.

reveals to us that it equaled zero for more than 97% of all products, implying that the scope for using this channel has been quite limited in the case of the EU.

[FIGURE 3-2]

Second, countries may increase protection through the imposition of technical trade barriers[3] such as an increase of administrative obligations related to a shipment or the technical clearance time at the border. Table 3-1 illustrates that EU member states generally seem to have refrained from doing so. The 'Doing Business' indicators from the World Bank measure business regulations for local firms around the world and also include information on the procedural requirements related to importing.[4] It is apparent from table 3-1 that the EU average of both the number of documents that are required to fill out and the number of days needed to import a standardized cargo of goods has largely remaining unchanged in recent years, not pointing at an increase of technical trade barriers during the crisis.[5]

[TABLE 3-1]

Third, countries can use temporary trade barriers (TTBs) which are exceptions to the WTO's overall goal to promote free trade and to abstain from imposing unilateral tariffs.

The purpose of this paper is to identify major trends in the application of TTBs for the EU and verify whether there has been any sign of a change in the use of TTBs before versus during the crisis. There are three TTBs available to countries: safeguards (SG), countervailing (CV) and AD (AD) measures. Since for the EU, like in many other countries, the use of TTBs mainly coincides with the use of AD measures with almost 90% of TTB cases consisting of AD cases, we predominantly focus on the EU's use of AD policy. We use UN Comtrade data which details product level trade at the HS 6-digit (HS-06) level by country of origin.[6] Our period of analysis runs from 1995 till 2009. To facilitate the comparison over time, we construct a set of 'count' and 'value' indicators. These indicators will be used to examine AD policy with respect to product coverage, country coverage, product-country coverage and import value coverage. Hereby we distinguish between AD case initiations and AD measures in force. The methodology used primarily consists of a graphical examination of these indicators over time.

Our analysis will not only be carried out for aggregate imports identifying overall trends in the use of AD policy. We will also separately consider targeted countries in specific income groups and engage in a breakdown of the analysis by industry. In an attempt to dig deeper, we investigate the link between AD policy and more 'traditional' forms of protection such as MFN applied and preferential tariffs. In addition, some new insights regarding the link between product mix similarity of a country to the EU and EU AD policy are revealed.

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[3] The extent to which this is legal is determined by the WTO Agreement on Technical Barriers to Trade.
[4] See www.doingbusiness.org for methodological details. A third indicator related to importing measures the fees levied on a 20-foot container in $. However, since this indicator has to be deflated and converted into € to make a comparison and is therefore largely dependent on the inflation and exchange rate that is used to do so, we exclude this indicator from our analysis.
[5] The only EU member state for which we observe an increase of any of these indicators in 2008 or 2009 is Czech Republic, where it took 17 days in 2008 instead of 16 days in 2007 to import a standardized cargo of goods.
[6] We thank the World Bank for sharing the data with us which facilitated this project.

Another novelty that we introduce is the link between AD policy and product characteristics using the well-known Rauch (1999) classification of homogeneous versus differentiated goods and a distinction between industrial, consumer and capital goods based on the Broad Economic Categories (BEC) classification. And finally, by engaging in an analysis at the individual EU member state level, we examine in how far results for the EU as a whole are driven by a few outlying member states or truly reflect a more general pattern.

The remainder of the paper is organized as follows. In section 3.2 we briefly discuss AD law and its features specific to the EU. Section 3.3 introduces the methodology that we apply. In section 3.4 the main results on product, country, product-country and import value coverage are presented. Section 3.5 digs deeper by examining the link between 'traditional' forms of protection, product mix similarity and product characteristics, respectively, with AD policy. Section 3.6 presents results for individual EU member states and, finally, section 3.7 concludes.

3.2   AD Policy: The Rules in the EU

The WTO regulates the use of AD policy in GATT Article VI and the AD Agreement which are implemented in the EU by Council Regulation 1225/2009. By and large, the EU's AD law specifies three conditions that must be met before import protection can be installed in the form of AD measures on imported products.

A first condition is the presence of *dumping* by a foreign firm into the EU market. Interestingly, there appears to be somewhat of a divide between the legal definition of dumping and a more economic one. From a legal point of view, any form of price-discrimination by a foreign firm, where the ex-factory price in the foreign firm's own home market is higher than the price for export markets, is regarded as international dumping. From an economic point of view, however, there are very few instances where dumping also implies 'unfair' behavior. Mainstream economics suggests that predatory dumping is an instance where there is room for government intervention. But a predatory pricing strategy only works under very specific circumstances. First, predation can only be successful in industries with high entry barriers to prevent easy entry after exit from a market. Second, the foreign trade partner must have very deep pockets to wait for domestic competitors to exit the market and, third, predatory pricing only works in concentrated markets with few domestic firms. When it comes to the establishment of dumping, it is important to note that none of these issues is considered according to the AD legislation.

A second condition specified in Article VI of GATT, is that only dumping that *causes domestic injury* is a reason for protection. What is meant by 'injury' is not so clearly defined in the WTO rules. The AD Agreement mentions a list of 18 injury factors including the evolution of domestic sales, profits, output, employment, stocks and others. However, in the EU's practical application of this agreement, injury is very often regarded to be present whenever the foreign good is sold at a price that is lower than that of a similar domestic product on the EU market. Put differently, this simple price comparison often decides about a positive or negative injury ruling (Vandenbussche, 1996; Vermulst and Waer, 1991).

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A third condition embedded in the EU's AD regulations is that AD measures imposed have to be in the EU's *community interest*. The existence of this so-called 'community interest clause' marks an important difference with, for example, the AD law in the US and many other countries. This clause implies that protection should be in the interest of the EU as a whole and not just in the interest of EU producers only. This requires EU officials to at least make sure that prices on the EU market do not rise drastically after the imposition of a duty which would be against the interest of consumers. The AD case on leather shoes imported from Vietnam and China which we refer to in the beginning of this paper can serve as a good example to illustrate this. In this case, the European Commission justified the imposition of AD duties by claiming that the price of European shoes would at most go up by 1.50 € a pair. This is in contrast to the US, where it is sufficient to show that the imposition of AD duties benefits the US domestic producers and consumer interests need not be taken into account in the evaluation of whether to impose protection or not.

On the whole, many economists have expressed doubts on whether the AD rules are well equipped to discriminate between 'fair' and 'unfair' foreign imports. However, some economists have started to argue whether their existence generates an equilibrium that is more desirable in terms of worldwide welfare than pure free trade (Martin and Vergote, 2008; Hartigan and Vandenbussche, 2010). If governments act welfare-maximizing, only this could explain the WTO members' apparent reluctance to change AD rules fundamentally or even get rid of them.

In this paper our purpose is not to resolve this debate but merely to point out that the use of AD duties driven by industrial policy motives cannot be ruled out. The current AD rules cannot discriminate well between domestic injury from import competition due to 'unfair' imports or due to an 'uncompetitive' domestic industry suffering from tough but fair competition from a more efficient foreign supplier. This implies that a rise in AD measures need not necessarily reflect an increase in 'unfair' behavior but could simply stem from an increasing use of AD policy to shelter domestic firms from tough import competition, in which case AD policy would be nothing more than a 'beggar-thy-neighbor policy'. It is important to make that distinction to interpret any changes in AD policy in the course of the global crisis.

3.3 Data and Methodology

In order to compare the EU's use of Temporary Trade Barriers (TTBs) before and during the crisis, we construct a broad set of indicators that will enable us to analyze the coverage of TTBs over time in several dimensions. These indicators will then be used to examine the main trends in the use of TTBs by the EU and will enable us to detect whether any major policy changes occurred during the 'great recession'.

We use information from the 'Temporary Trade Barriers Database' of the World Bank containing detailed data on antidumping (AD), countervailing (CV) and safeguard (SG) cases initiated by the EU. We overcome the problem of changes in the HS product classification over time by using concordance tables from the United

Nations Statistics Division.[7] From this database we extract data on initiations and measures in force.[8] We will refer to the former also as the *flow* of TTBs while the latter will be referred to as the *stock* of TTBs. Since we are interested in the crisis, It is important to not only consider the stock of TTBs as it can usually take up to one year or even more from the initiation of a case to the actual imposition of a measure. Changes in the use of AD policy during the crisis would therefore be observed 'in real time' only when looking at the flow of TTBs.

[TABLE 3-2]

Table 3-2 gives an overview of the number of case initiations for these three types of TTBs used by the EU in the period before and during the crisis. For AD policy and CV duties, which are country-specific policies, we use two distinct case definitions. One is to consider a case by targeted country, another is to consider a case by country and product. For SG measures which do not discriminate between trade partners, we measure a case by product. Whatever definition we use and whichever way we count cases, table 3-2 does not suggest a major change in the EU's use of TTBs during the crisis. Based on the numbers provided in table 3-2 we find that EU's TTB policy largely coincides with AD policy. Since, in addition, only relatively few CV cases and no SG cases were initiated by the EU in 2008 and 2009 i.e. during the crisis, we do our subsequent analysis on AD policy. Since the number of cases does not provide any information on the number of products and countries affected nor do they provide any information on the extent to which the import value is affected, we will define a finer set of indicators.

For this purpose we match data on EU AD policy to UN Comtrade data on import values for each EU member state over a period from 1995 to 2009[9], provided at the HS 6-digit (HS-06) product level and by EU trade partner.[10] One issue we face is the changing EU composition over time[11] which has some implications for our methodological approach. First, since previously targeted countries have become members of EU customs union and cannot be targeted any more with AD measures, we only consider extra-EU27 imports.[12] Second, the results reported for the EU as a whole are based on imports of ten EU member states that have always been EU members between 1995 and 2009 and for which data coverage is typically best: Austria, Denmark, Finland, France, Germany, Great Britain, Ireland, Italy, Portugal and Sweden.[13] These ten member states represented around 64% of all extra-EU27 imports in 2008. However, for robustness we also verify our results for

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[7] Results are based on the 1992 revision of HS-06.

[8] The TTB database was complemented with additional information from original EU notifications, taken from the EUR-Lex webpage. For few AD measures, information on the revocation date is missing in the TTB database. In these cases, we assume that AD measures were in place for five years as foreseen by EU AD law. We do a robustness check in which we exclude these AD measures from our whole analysis and find that results are generally very similar.

[9] Especially before 1995, for many EU member states import data are missing which is why we opted for our period of analysis to start in 1995.

[10] For more detailed information on the data sources described in this section, please see the Introduction (Bown, this volume).

[11] In 2004, Cyprus, Czech Republic, Estonia, Hungary, Latvia, Lithuania, Malta, Poland, Slovakia and Slovenia joined the EU15. In 2007, Romania and Bulgaria became EU member states.

[12] Extra-EU27 imports do not comprise imports from Réunion, French Guiana, Martinique, Guadeloupe, Isle of Man, Jersey, Guernsey and Åland Island that are current members of the EU customs area and, thus, cannot be targeted with AD measures. We also exclude imports of commodities 'not elsewhere specified' in the data.

[13] As these ten countries all belong to EU15, we call this aggregate 'EU15 less 5' in the figures.

alternative EU definitions[14]. Results are always very similar and all our main findings are equally valid across other EU definitions.

With the final database at hand, we construct four indicators to which we will extensively refer in the following sections. In the baseline specification we use actual import values in order to compute these indicators.

A first indicator (1) assesses the *product* coverage of AD. This indicator counts the number of products under AD protection that are imported into the EU from at least one country targeted with AD measures. In order to control for variations in the product scope of the EU's imports, we divide the resulting number by the total number of products imported.

Our second indicator (2) measures *country* coverage of AD. It counts countries targeted with AD measures that import into the EU at least one product under AD protection. We divide this number by the total number of countries importing into the EU.

A third indicator (3) combines (1) and (2) and looks into *product-country combinations* covered by AD. This *product-country coverage* counts the number of product-country combinations for which imports are positive and AD measures are imposed as a share of all combinations for which imports are observed.

The above three indicators are all 'count' measures but do not reflect the importance of AD protection in terms of import values. For this purpose we introduce a fourth indicator (4). This is a 'value' measure corresponding to the *import value* covered by AD as a share of total import value in the EU.

One limitation of the above approach is that it does not take into account the impact of AD measures on imports. For example, Vandenbussche and Zanardi (2010) in a recent study find strong evidence for a substantial decrease of imports in response to AD policy. For this reason, indicator (4) is likely to underestimate the 'true' impact of AD policy on imports. For indicators (1)-(3) such an underestimation can equally occur, but only in the extreme case where AD measures are prohibitive i.e. cause a disruption of imports for some product-country combinations under AD.

We therefore do several robustness checks and recalculate our indicators using import counterfactuals instead of actual import values for those imports that are under AD protection. First, we follow a rather simple approach assuming that import values do not change when AD protection is set in place, i.e. we assume that the import values in the year before an AD measure is imposed are the ones that prevail in the years under AD protection. Second, we construct the import counterfactual for products under AD on the basis of industry import growth rates for products that are never subject to AD throughout our sample period.[15] Due to import

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[14] This includes an analysis for EU15, EU27 and a 'current' EU that follows the changes in EU composition over time.

[15] Note that this methodology is directly related to equation (2) in the Introduction (Bown, this volume). Equation (2) in the Introduction is the formal description of the application of our second counterfactual to indicator (4), except for two differences. First, we calculate the counterfactual on the basis of industry-specific import growth rates for non-AD products rather than economy-wide import growth rates for non-AD products. Second, only final AD measures are taken into account. According to EU AD law, preliminary duties can only be imposed for a maximum period of nine months and, since we use annual data, are therefore likely to be negligible.

data restrictions, we restrict the use of counterfactuals to AD cases for which measures were imposed after 1995 and stick to actual import values otherwise.

For indicators (1)-(3), the two robustness checks are in fact methodologically identical and yield results that are very similar to those in our baseline specification which allows us to conclude that AD measures are generally of non-prohibitive nature. For indicator (4), results from the robustness analysis also support our findings from the baseline specification. Though we find that coverage shares are indeed frequently higher when using counterfactuals instead of actual import values, the difference is relatively small. Additionally, trends in coverage are very similar to the baseline specification. Therefore we decided to report our results only for the baseline specification.

Though our findings are robust to using import counterfactuals, a couple of other caveats related to their use need to be born in mind. First, the indicators defined above only capture the 'direct effects' of AD while there may also be some 'indirect effects' such as import diversion, downstream effects, tariff-jumping FDI, domestic market entry, retaliation or strategic behavior that we are not capturing, but are shown to exist in the literature.[16] Second, we do not consider the size of measures and the kind of measures applied. Third, in the absence of firm-level data on an EU wide basis it was not possible to engage in an evaluation of the impact of AD on EU firm performance. And finally, while EU AD measures are imposed at the 8-digit product level, we performed our analysis at the 6-digit product level in UN Comtrade data due to restrictions for import data that were only available to us at the 6-digit level.[17]

One final remark is in order before turning to the results. The four different indicators defined above in terms of stocks, will also be computed for the flows of AD, i.e. for case initiations and their coverage[18], and for subsamples of products, countries, product-country combinations and imports. All results are reported in the following results sections.

3.4   General trends in the use of AD policy in the EU

3.4.1   Overall trends

We start by showing the trends in EU AD initiations in the period 1995-2009 in figure 3-3, with panel a showing the flows and panel b showing the stock of cases i.e. the number of AD measures in force in a particular year.[19]

[FIGURE 3-3]

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[16] See Vandenbussche and Zanardi (2010) for a comprehensive overview of these 'indirect effects'.

[17] The EU imposes AD measures at the 8-digit Combined Nomenclature (CN) level. The first 6 digits of the CN code correspond in fact with the first 6 digits of HS allowing us to base our study on HS-06.

[18] Note that the use of counterfactuals is redundant for the calculation of coverage shares for flows of AD policy assuming that the mere initiation of an AD case does not have an impact on imports.

[19] Note that for some cases initiated in 2009 the outcome of the case is not yet known or at least not included into the TTB database. The number of affirmative case initiations therefore ends in 2008 for panel a of figure 3-3.

Two alternative definitions of a 'case' are applied in figure 3-3. A first one is 'by target country'[20], a second one is 'by target country and HS-06 product'. To illustrate the difference consider the following example. On 8 May 2008, the EU initiated an AD case against China, Moldova and Turkey each involving seven HS-06 products. Using the first definition, we count 3 AD cases. Using the second definition, we count 21 cases being involved in the investigation.[21] As an AD measure is only imposed against China for the seven HS-06 products on 5 August 2009, we count this as one AD measure in force against China according to the first definition. Using the second definition, we count this as seven AD measures in force against China.

Whatever definition we apply, it appears that the period during the crisis does not look unusual. In terms of AD initiations in panel a, we observe about five peaks ever since 1995. There is also one in 2008, but it seems a stretch to attribute this peak to increased protectionism at the outbreak of the financial crisis. Firstly, the magnitude of the peak suggests that this can still be regarded in the range of 'normal' fluctuations. Secondly, only 44% of cases initiated in 2008 resulted in protection due to a considerable share of cases withdrawn by the firms or terminated by the EU, compared to 58% for1995-2007.

The stock of AD measures in force, shown in panel b, shows a clear downward trend in recent years according to the 'traditional' count of AD cases by target country. However, we observe a clear upward trend since 2004 when we define an AD case by target country and HS-06 product. This suggests that the average number of products involved in an AD investigation against a certain trade partner must have gone up over time. Indeed, aggregating AD case initiations over time we find in average 1.9 products per case for 1995-2003, while for 2004-2009 this number has increased to 2.5.

Due to the sunset clause in EU AD law, the usual duration of an AD measure is five years. However, duration can be shorter or longer if accompanied by a justified decision of the trade authority. Figure 3-4 provides some descriptive statistics on the duration of EU AD measures defined by target country and HS-06 product. Panel a counts the number of AD measures, expired before the end of 2009, by their duration.[22] We see that duration varies between 1 and 18 years. The most frequent duration is 5 years, accounting for 62.9% of all measures. The duration exceeds 5 years for 23.7% of all measures and is smaller than five years for 13.4%. In panel b in which we consider those AD measures that are still in force in the end of 2009, we observe that around 74.2% of measures were imposed less than five years before the end of 2009, while 25.8% were imposed more than five years before.

In panel c, we verify if the EU has increased protection during the crisis through a prolongation of existing measures in force. For this purpose, we calculate the share of those AD measures that should actually have been revoked due to the sunset clause but are still in force after a sunset review that resulted in continued protection. To state precisely, we calculate the share of measures that are still in place despite being imposed already more than five and less than six years ago. We observe in panel c that this share varies a lot over time being at its peak in 1995 when none of the AD measures imposed five to six years before were removed. Since

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[20] See, for example, Prusa (2001) or Zanardi (2004) for a similar definition of a case.
[21] Note that if the EU had initiated another AD investigation in the same year against one of the same countries and on one of the same HS-06 products, this AD investigation would have been counted as separate case.
[22] We exclude few cases for which information on HS code or revocation date is missing in the TTB database.

2007, this share is on a decreasing trend, not pointing to any increase in protection during the crisis through a prolongation of existing measures in force.

[FIGURE 3-4]

Next, we compute indicators (1)-(4) on product coverage, target country coverage, product-country coverage and import value coverage of both AD initiations and measures in each year. For the count indicators (1)-(3), in addition to calculating AD coverage for all products, countries and product-country combinations, we also separately show the coverage in the respective top quantile by import value. To get at the top quantile of products, we aggregate imports by product over 1995-2009 and then keep the top 25% of products with the highest import value. An equivalent approach is taken to get the top 25% trade partners and the top 25% product-country combinations. For indicator (3), we additionally calculate the AD coverage after excluding 'de minimis' trade partners that are defined as being those countries that account for less than 1% of EU imports of a certain product in a certain year. Results are shown in figure 3-5.

[FIGURE 3-5]

The first observation that stands out from all panels of figure 3-5 is that products, countries and product-country combinations that are 'important' in terms of import value are more frequently subject to AD protection.

In panel a we see that product coverage of AD measures has clearly increased since 2004 with many products covered by AD initiations between 2004 and 2006. In panel b we find that target country coverage did not change much over time. If anything we observe a weak inverse-U-shape suggesting a slight decrease in country coverage of AD measures after 2004. For the share of product-country combinations that fall under AD protection, shown in panel c, we expect to see the combined effect of product and country coverage. Indeed, we observe an upward trend since 2004, which is likely to be driven by the increase of the share of products covered by AD measures. All three 'count' indicators for the stock and the flow of AD policy in panels a, b and c indicate that the EU seems to continue on pre-crisis paths without much sign of a different policy during the crisis.

In panel d, we turn to the 'value' indicator i.e. the import share covered by AD initiations and measures for which no clear patterns stand out. The only noticeable fact is the strong decrease of the import share covered by AD measures in the early periods of our sample up to 1998 and the relatively large import share covered in 2006 and 2007. During the crisis, however, coverage shares of both stock and flow of protection remain at a relatively modest level.

Though results are not reported, we also calculate indicators (1)-(4) with information on the coverage shares of newly imposed AD measures being in place in year t, but not in year t-1 and expired AD measures being in place in year t-1, but not any more in year t. Put differently, we split into entry and exit of AD measures. This allows us to investigate if, due to the expiration of past measures, figure 3-5 actually hides a substantial increase in new AD coverage during the crisis. Indeed we find an increase in the share of products, product-

country combinations and imports covered by AD measures newly imposed in 2009. However, to say that this pattern represents a major change in the application of AD policy would be a too strong conclusion since the increase is still in the range of pre-crisis fluctuations for all three indicators.

On the whole, we fail to observe any major shift in AD policy around the time of the outbreak of the global crisis. The EU appears to continue its policies during the crisis the way it did before.

3.4.2   By country income group

Next, we categorize countries according to broad income groups. A first observation is the increased importance of China as an AD target both in terms of initiations as in terms of affirmative rulings. Especially since 2004, the number of AD initiations against China as a share of the total has increased dramatically from around 15% in the years 1995-2003 to about 40% in the years afterwards.

When constructing different income categories of countries we follow the latest World Bank classification[23], but take into account the special status of China as main AD target of the EU. This results in four groups of countries: high income countries, upper middle income countries, lower middle income and low income countries excluding China and China. For each of these four groups, we compute indicator (1) measuring product coverage and indicator (4) measuring the import value coverage.

[FIGURE 3-6]

The share of products coming from China and falling under the EU's protection has been increasing rapidly since 2004, as illustrated in figure 3-6 where panel a reports the product coverage of the stock of protection by country income group. Other low and lower middle income countries have also been increasingly targeted.[24] This is not the case for countries in the high income group, for which the share of products affected by EU AD measures has remained roughly stable over time. The product coverage of flows of AD policy shown in panel b is largely consistent with our observations for the stock. The share of products imported from China and covered by AD case initiations is relatively high throughout 1995-2009, but also initiations against other low and lower middle income countries cover many products, especially shortly after 2004.

The import value indicator for the stock of protection, shown in panel c, reveals that while a large share of China's imports is subject to EU AD measures, this share has gone down recently during the crisis. Nevertheless China clearly remains the dominant target country also during the crisis, followed by other low and lower middle income countries. Panel d reports a peak in import value coverage of initiations against China and other low and lower middle income countries around 2005. The leather shoe case against China and Vietnam from the introductory section is likely to play an import role in explaining this pattern since this case was initiated in 2005.

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[23] This classification contains all World Bank member economies and all other economies with population of more than 30,000.
[24] In fact, positive AD coverage for the group of lower middle income and low income countries results exclusively from AD measures against lower middle income countries.

All in all the panels in figure 3-6 suggest that AD coverage has remained relatively low in all country income groups during the crisis, compared to pre-crisis levels of protection. Furthermore, we find some evidence for the increasing 'North-South' divide in AD policy, with the EU targeting the South more and more, at least with respect to product coverage. Given the recent proliferation of AD laws, particularly in the South, the question then becomes to what extent retaliatory power of the South may shift the targeting pattern in future. Recent academic research seems to suggest that, in a global world with multilateral trading relations, market size may be the key to understanding these patterns (Miyagiwa et al., 2010).

3.4.3   By industry

Here we engage in an industry analysis defining an industry according to the 21 sections of the Harmonized System (HS). AD policy is not equally applied across industries and, in fact, a simple count of case initiations between 1995 and 2009 tells us that AD policy seems to be very concentrated in a few sectors. 'Base metals', 'chemicals', 'textiles', 'machinery and electrical appliances' and 'plastics and rubber' accounted for around 82% of all AD initiations of the EU in our sample period. However, numbers like this may be misleading when not accounting for industry size or product scope per industry. A few cases could have a large impact in industries where the import value and the number of products produced are low. Hence to simply focus our analysis on the five industries listing highest in a count of AD cases over time is not sufficient.

[TABLE 3-3]

Aiming at a more balanced approach, we compute indicators (1) and (4) for the stock of protection across *all* industries. We provide an easy way to visualize the breadth and depth of AD policy at the industry level by constructing an industry-year matrix. Cells of the matrix are shadowed according to the degree of protection with darker cells indicating higher levels of protection. The matrices are shown in table 3-3 which provides an overview of the industries under AD protection for each year in our sample, both in terms of product coverage in panel a and import value coverage in panel b. It becomes apparent that AD does not only affect the 'usual suspect' industries listed above and that coverage attains high values also for other industries.

For example, the EU 'mineral products' industry has been intensively protected by AD especially between 1996 and 2001, attaining product coverage ratios of up to 8%. In more recent years, the 'animal products' industry obtained much protection with around 15-16% of the total import value covered by AD between 2006 and 2008. Within 'animal products', it appears that AD measures on rainbow trout and farmed salmon were the main underlying cause of the relatively high AD protection in this sector. The breakdown of protection by industry also reveals that the EU 'footwear' industry has recently enjoyed substantial AD protection with an annual import value coverage of 15-22% in this sector between 2006 and 2009, mainly due to the case granting AD protection against certain footwear from China and Vietnam which we refer to in the introductory section.

An important observation on coverage *across* industries is that the number of industries protected under AD has gone up, a trend that started around 2004 and that may partially explain the increased product coverage

over time that was identified as an overall trend. Only industries like 'arms and ammunition', 'art' or 'precious stones' are not covered by AD. New user industries of AD policy are 'animal products', 'vegetable products', 'fats and oils' and 'foods and beverages'. As only 'fat and oils' started to be a user industry in 2009 i.e. during the crisis, the evidence seems too weak to speak of an increased coverage across industries that can be related to the crisis.

Regarding changes in coverage *within* industries during the crisis, the pre-crisis levels of AD protection prevailed for most industries with few exceptions. The 'base metals' industry is the most apparent one, where AD protection has increased tremendously in recent years and attained an unprecedented high in 2009 both in terms of product and import value coverage.

To sum up section 3.4, the evidence presented showed no real sign of a recent change in the EU's use of AD policy. While product and industry coverage of AD has increased since 2004, country coverage remains at a roughly constant level over the period of analysis, with a slight decrease in the set of targeted countries in recent years. AD measures are increasingly imposed on products coming from low and lower middle income countries, especially from China, which is also an ongoing trend since 2004.

3.5   Digging deeper: What makes products and trade partners prone to AD protection?

3.5.1   'Traditional' trade protection

According to the 'substitution hypothesis', trade liberalisation efforts have gone hand in hand with other forms of protection substituting the more traditional forms of tariff protection. The existing evidence that examines to which extent this is true has not resulted in uniform patterns across countries.[25] For the EU, the average applied MFN tariff plotted in figure 3-2 and our data on MFN and preferential tariffs suggests that tariffs have not changed much in recent years. Therefore, it is difficult to examine the 'substitution hypothesis' and relate the use of EU AD policy to *changes* in 'traditional' trade protection. What we can do, however, is to explore the relationship between EU AD policy and the *level* of 'traditional' protection. If the EU grants import preferences to some countries or sets a low MFN applied tariff on a certain product, the level of 'traditional' protection is rather low. The interesting question arising is if these products and trade partners are more prone to EU AD protection.

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[25] See for example Feinberg and Reynolds (2007), Moore and Zanardi (2009) and Bown and Tovar (forthcoming).

We start by investigating the relationship between AD policy and preference margins i.e. the differences between MFN applied tariffs and preferential rates of the EU vis-à-vis its preferential trade partners in the WTO.[26] With numerous multilateral and bilateral preferential trade agreements in place, the question for the EU is how AD policy has been used versus products and countries for which preference margins are positive.

For this purpose, we calculate preference margins, i.e. the difference between applied MFN tariffs and preferential tariffs, using data on the EU's applied MFN tariffs and preferential tariffs from UN Comtrade. Then we divide country-product pairs into two categories distinguishing between those for which preference margins are zero and those for which they are positive. We refrain from a further division of the latter category, since 'positive' means for more than 90% of product-country combinations that the preferential rate is at 0% i.e. that imports are not subject to any 'traditional' tariff. Then we calculate indicator (3) and (4) on product-country and import value coverage, respectively, for each of the two groups, basing indicators for year t on the preference margins granted in t-1. The results are shown in figure 3-7.

[FIGURE 3-7]

Both panels a and c show that the share of product-country pairs and imports subject to AD measures are considerable higher among the ones with a preference margin greater than zero. Equally, the coverage shares of AD case initiations reported in panels b and d appear to especially involve products and countries subject to a preferential EU regime. This suggests that AD policy largely falls on countries subject to preferential tariffs and tends to be a substitute for the lower import tariffs granted under preferential regimes.

Next, we investigate the link between applied MFN tariff rates and AD policy. We are interested in knowing if AD measures are most frequently imposed on products with high or low applied MFN tariffs. For this purpose we calculate indicators (1) on product coverage and indicator (4) on import coverage for subsets of products that differ in the size of the MFN applied duty in place. However, no clear pattern stands out from the data. If anything the EU is imposing AD measures more on products with intermediary levels of MFN tariffs, but less on products subject to very high or low tariff levels. We cannot find strong evidence for a clear link between AD policy and applied MFN tariffs.[27]

3.5.2   Product mix similarity

An interesting question, not explored in earlier literature, is to what extent countries that are more similar in their product mix to the EU occur more often in its AD policy. Exporting countries that overlap in their product mix with the EU are expected to be more in direct competition with EU firms and more likely to be targeted by protection (Facchini et al. 2007). For this purpose we use a 'similarity index' first introduced by Finger and Kreinin (1979) and recently used by Schott (2008). To create the similarity index, we use detailed exports data for all exporting countries in the following way:

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[26] For each HS-06 product, we calculate the preference margin as the maximum of all preference margins at the more disaggregate tariff line level.
[27] Corresponding figures can be obtained from the authors.

$$\sum_{i \in \mathcal{J}} \min(sh_{ipt}, sh_{iEUt})$$

with sh_{ipt} being the exports of product i, which is element of the total set of products $\mathcal{J}$, from country p in year t as a share to total exports from country p in year t. sh_{iEUt} are the exports of product i from the EU in year t as a share of total exports from the EU in year t.

We first calculate the index for each exporting country by comparing its shares with respect to total exports to those of the EU across all products. This will eventually give us an indicator of product similarity by *country*. Second, we calculate the index by *industry-country* and compare the shares with respect to total exports of the specific industry to those of the EU across products in the industry. In this case, the indicator assesses the similarity of say China's textile industry to EU's textile industry and yields an industry-country specific measure. In both cases the indicator lies between 0 and 1. The closer to 1, the more similar the product mix of the country or the industry-country with the EU.[28] Ideally, we would use product-level production data rather than export data to assess the product mix of countries. However, this data is not available to us and we approximate product mix with exports where the export data are at the HS-06 level and stem from UN Comtrade.

To assess whether country product mix similarity and industry-country product mix similarity result in greater AD incidence, we assign observations into four quantiles depending on their index value.[29] For country observations in the same quantile in year t-1 we determine the country and import value coverage ratios of AD policy in year t, i.e. indicators (2) and (4). For industry-country observations we do the same determining product-country and import value coverage ratios i.e. indicators (3) and (4).

[FIGURE 3-8]

The coverage ratios, indicators (2) and (4), for the country-specific quantiles of product mix similarity calculated in this way are shown in figure 3-8. It can be clearly noted in panels a and b that for both, stock and flow measures of AD policy, countries most similar to the EU are relatively more frequently targeted with AD than other less similar countries. One explanation for this could be that the trade volume between similar trade partners is also larger which may be driving the higher incidence of AD cases in that group. Hence we are not able to distinguish between product mix similarity and volume of imports as driving AD incidence. To overcome this we check in panels c and d the relative import value covered by AD policy i.e. indicator (4) which should account for the larger trade between similar partners. This is shown in panels c and d, where we still find that similar trade partners appear more often in AD policy than others.[30]

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[28] In case the exports of a country to the world are 0 in an industry for a certain year, we set product mix similarity index by industry-country equal to 0.

[29] In order to avoid any dependency of results on changing data availability over time, we only include those countries into our analysis for which export data are available for all years between 2000 and 2009. This drops mostly small developing economies that have never been subject to EU AD measures. We end up with a balanced panel of 77 countries containing the main EU AD targets.

[30] Doing so generates an unexpected outcome in the quantile of trade partners least similar to EU. Panel d shows a somewhat unexpected spike in 2002 of the import value covered by AD initiations against the trade partners least similar to

While not shown in this paper, results for indicators (3) and (4) calculated for industry-country-specific quantiles of the similarity index point at the same direction of results. Also here we come to the conclusion that foreign industries that are similar to the EU are targeted relatively more by AD policy.

3.5.3   Product characteristics

We introduce a further novelty to the literature by linking AD policy to certain product characteristics. To see if AD policy is more oriented to targeting homogeneous versus differentiated products, we apply the Rauch (1999) indicator of product differentiation. Also, we analyze if AD focuses primarily on products for industrial purposes referred to as industrial goods, products for household consumption referred to as consumer goods or capital goods for which we use the BEC classification.[31]

The Rauch (1999) indicator classifies products into three categories: differentiated goods, homogeneous goods quoted on an organized exchange, and homogeneous goods whose reference prices are quoted in trade publications. For our purposes we merge the latter two categories into one broad category of homogeneous products. Imports are then split into homogeneous versus differentiated goods. Our methodology consists in assessing indicators (1) and (4) involving the share of products and imports covered by AD and computing them for each class of products. This is illustrated in figure 3-9.

[FIGURE 3-9]

In terms of Rauch (1999) product types, AD policy is used both on homogeneous and differentiated products. The main difference appears to be that indicator (1), the 'count' measure, always takes on higher values for homogenous products than for differentiated products which is shown in panel a, while it is the reverse for indicator (4), the 'value' measure, reported in panel c. This suggests that the number of differentiated products under AD appears to be relatively low, while their import value is relatively large.

The number of differentiated products covered by AD measures has been on the rise between 2004 and 2007 as shown in panel a. This suggests that the increase in product coverage reported earlier in this paper is mainly driven by differentiated products. Also the coverage share of AD initiations, depicted in panels b and d points at such a conclusion as we find, especially for 2004 and shortly after, that case initiations cover a large share of differentiated products and imports.[32] Looking closer at the data, we find that not only one industry accounts for this peak, but various including 'footwear', 'base metals' and 'machinery and electronic equipment'. The share of homogeneous products under AD protection also rises, but starts a few years later than 2004.

EU, contributing to considerable coverage shares of AD measures as visible in panel c. A closer look at the data suggests that this is mainly due to one outlier case, large rainbow trout imported from Faroe Islands, initiated in 2002, such that our general results remain valid.

[31] In order to match Rauch (1999) and BEC classification to HS-06 we use concordance tables provided by the United Nations Statistics Division.

[32] Rauch (1999) defines a 'liberal' and a 'conservative' classification, the latter one defining some products as 'differentiated' that are 'homogeneous' according to the former one. Our results are reported for the 'conservative' classification, but a robustness check shows that they are very similar when using the 'liberal' classification.

Another product classification for which we verify the link to AD policy is the BEC[33] which we aggregate to three broad categories: capital goods, industrial goods and consumer goods. For each group of products, we then again compute indicators (1) and (4) on product and import value coverage, respectively. The indicators are plotted in figure 3-10.

[FIGURE 3-10]

Of all the three types of goods considered in the BEC classification, it is consumer product coverage of AD measures that seems to increase from 2004 onwards as illustrated in panel a. Not only the share of consumer goods, but also the import share of consumer goods subject to AD measures has increased tremendously resulting in higher coverage shares of AD measures throughout the remaining period as shown in panel c. This jump not just appears to be driven by a few peculiar cases but is a quite general tendency. It is also in line with the increase in the number of industries covered by AD documented earlier, where the new industries arising in AD policy include 'animal products', 'food and beverages' and 'vegetables', are all final consumer goods industries.[34]

One potential explanation for a shift in relative importance in AD cases from industrial products to consumer products could be related to the fragmentation of production of the type that occurs within the boundaries of firms but across countries. EU firms engaging in overseas FDI or firms that offshore the production of intermediates they used to produce at home, will be less prone to formulate dumping complaints against imported intermediates when these intermediates are shipped back to the EU. The reason for this to be unlikely is that TTBs would then have a negative impact on their own trade flows as shown by Konings and Vandenbussche (2009).

3.6   Is there EU member state heterogeneity?

In this section, we inspect more closely the imports in individual EU member states and verify the results obtained regarding the coverage of AD measures in terms of products, countries, product-country combinations and import values. For each individual member state country in the EU we calculate product and country coverage as well as import value ratios (1)-(4) using extra-EU27 imports only. Results could differ across EU member states as the import composition of each member state is different. This approach gives us a measure of the exposure to AD protection for each EU member state. Since results are quite similar for indicators (2)-(4), we focus on indicator (1) which measures product coverage and for which results are shown in table 3-4.

[TABLE 3-4]

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[33] The BEC classification is available on the webpage of the United Nations Statistics Division. The link between BEC and the categorisation into consumer, capital and industrial products is available from the authors upon request.

[34] A closer look at the data shows indeed that the newly covered products which led to this jump include farmed salmon, preserved sweet corn and frozen strawberries. Also refrigerators, leather footwear, ironing boards and bike saddles are consumer products on which AD measures were imposed.

With respect to product coverage of AD measures by and large the results for most individual EU member states are congruent with the results obtained for the EU as a whole. Product coverage is on the rise in all countries and it appears to be at a similar level across countries. There are relatively few member states that are outliers. Luxembourg can be regarded as an outlier as it is somewhat different from other member states which may be due to its small country size with a heavy specialisation in banking and finance. However, an alternative explanation could be that Luxembourg imports those products that are under AD protection only indirectly via other EU member states, something which would not show up in our coverage ratios.

The relatively homogeneous response across member states is reassuring. Not only does it show that aggregate EU trends are not driven by a few outlying countries but reflects a similar pattern across most individual member states. Also it suggests that trade policy shocks in the EU affect member states in a similar manner. From the outset of the European integration and the creation of the eurozone, EU policies have been aimed at convergence since symmetric shocks in an optimum currency area constitute a necessary condition for eurozone survival.

3.7   Conclusion

One of the most important conclusions arising from this paper is that, until now, there is no evidence of a major change in the EU's trade policy since the outbreak of the crisis. After having failed to find any evidence that MFN applied tariff rates our technical trade barriers have increased, we focus on AD protection as the most frequently applied TTB. The detailed descriptive evidence on AD policy trends presented in this paper suggests there has been no major change in the EU's policy regime during the crisis so far. Our analysis points more in the direction of a continuation of a pre-crisis trend in the use of AD policy.

We constructed several indicators that we used throughout the analysis. In terms of a 'value' indicator, the analysis shows that the value of imports covered by EU AD measures as a share of total import value remained at a relatively modest level during the crisis. Results arising from 'count' indicators point at a turnaround of EU's trade policy from 2004 onwards. The interesting pattern arising from the analysis is that the share of products under EU AD protection has been on an upward trend since 2004. At the same time we detect a small decrease in the number of countries targeted by AD that started after 2004. Product-country coverage under AD as a share of total product-country combinations, with positive imports, has gone up. This confirms that the increase in product coverage is the stronger pattern. The higher product coverage does not seem to come from a higher number of AD investigations being initiated with a constant number of products, rather it reflects that the number of products per investigation that has gone up.

Another trend can also be observed from 2004 onwards is a strong focus on China as an EU target for AD cases, with cases against China representing around 40% of EU AD cases between 2004 and 2009. To a lesser extent other low and middle income countries have also become more frequent targets of EU AD measures, suggesting a clearer 'North-South' divide in trade policy with the EU targeting developing countries more

frequently over time. At the industry level, AD policy now affects nearly every industry, so industry coverage has gone up. Again this is not a crisis phenomenon but is a trend that started earlier. In terms of product characteristics, we observe that the share of consumer goods covered by EU AD measures has increased rapidly after 2004.

When analyzing the relationship between AD policy and preferential tariffs, evidence suggests that AD measures are imposed relatively more often on products and against countries subject to a preferential import regime. However, when analyzing the relationship between AD policy and the levels of applied MFN tariffs, we do not find any substitution patterns. In addition, we assess the relationship between product mix similarity of trade partners and the EU's use of AD policy. Findings show that AD measures are more often imposed against country and country-industry combinations that are similar to the EU. Finally, we also verify that the results we obtain for the EU as a whole are not driven by any outlying pattern in the import composition at the level of the individual EU member states. We find that this is not the case and that the general patterns surrounding AD policy mostly hold up even when results are considered at the level of the individual EU member states.

The EU's AD policy in recent years has been characterized by trends that started already around 2004. While there are a number of events that coincide with this date that could provide an explanation, it is hard to see the underlying reasons for this trend change. One possible explanation is that a new European Commission entered office in 2004 with the arrival of a new trade commissioner.[35] Another potential explanation is that in 2004, ten new EU member states entered into the EU, which may have altered the policy mix and the decision-making. Or, it could just be that European firms, the ultimate initiators of AD cases, have been more subject to globalisation forces which may have affected the demand for protection and some of its characteristics.

More importantly for this paper is that we have not found any evidence which points at a turnaround in trade policy during the crisis. Nevertheless it remains to be seen whether national governments like the EU can continue to resist the use of AD policy as a 'beggar-thy-neighbor policy' also in the aftermath of the crisis. Recent research by Reinhart and Rogoff (2009) suggests that negative effects of financial crises in terms of unemployment and other output related variables, tend to linger on for much longer, which could make trade protection a tempting option in the coming years. Perhaps the best guarantee to withhold governments from protectionism is to monitor them closely, as all the contributions in this volume do.
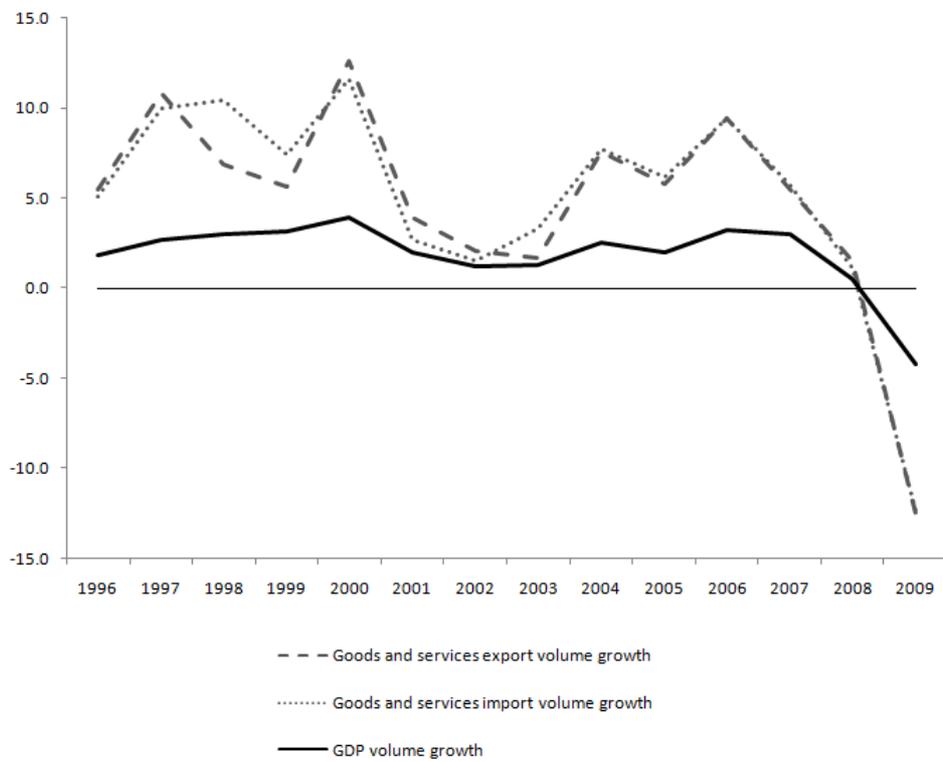

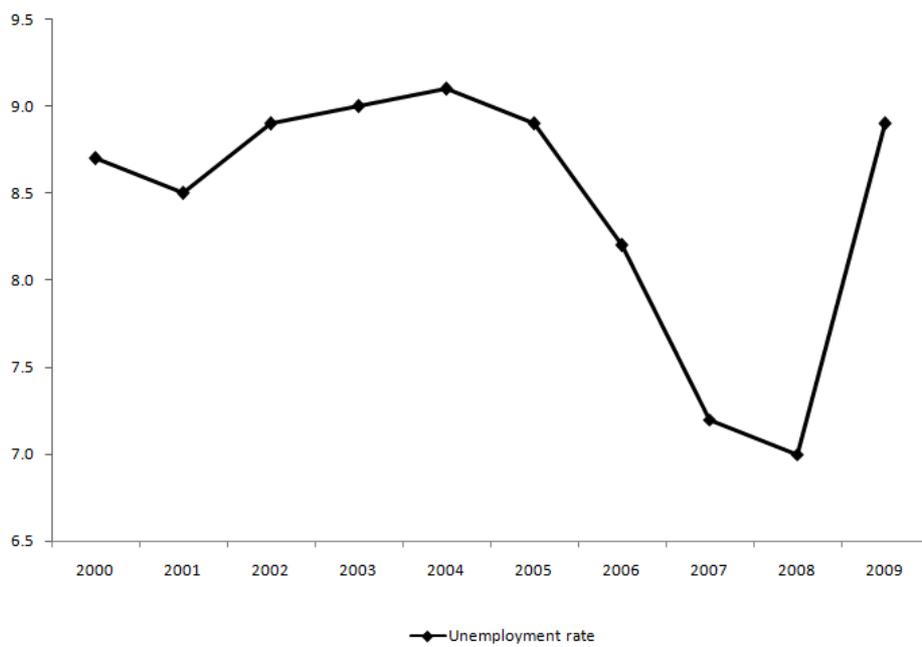[35] The trade commissioner taking office in 2004 was Peter Mandelson, a UK national.

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Figure 3-1: Macroeconomic conditions in the EU

a. Real export, import and GDP growth, EU27, in %

- - - Goods and services export volume growth

.... Goods and services import volume growth

——— GDP volume growth

b. Unemployment rate, EU27, in %

—◆— Unemployment rate

Source: Eurostat.

Figure 3-2: Average MFN tariff, bound and applied rates in the EU, in %
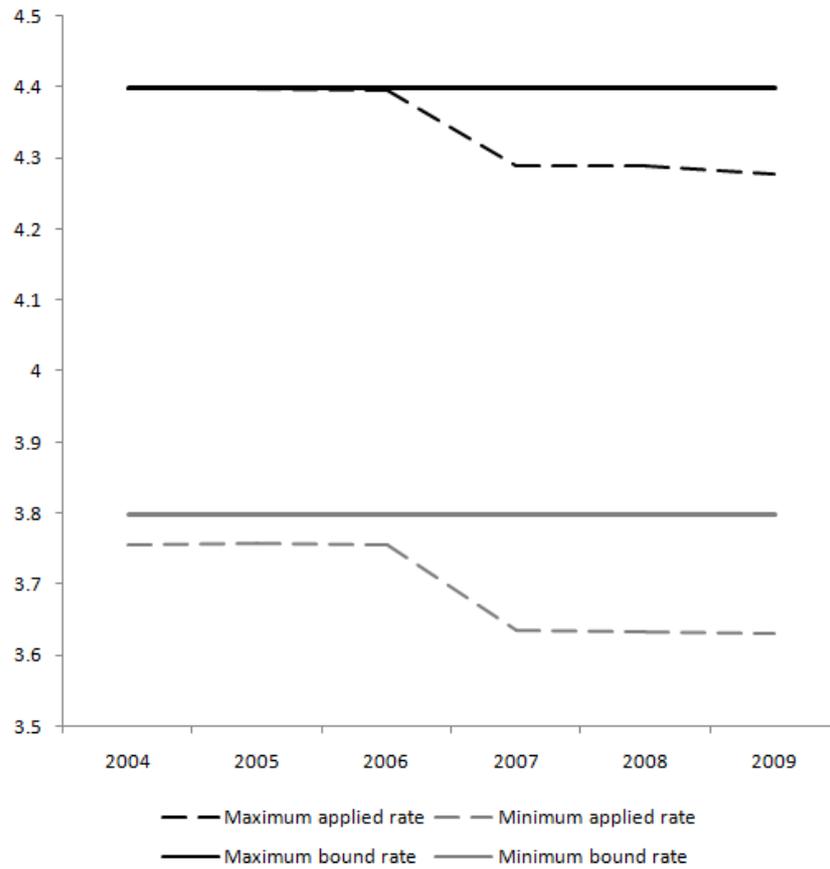
Notes: Maximum and minimum duty correspond to maximum and minimum tariff at the tariff line level for each HS-06 product (HS revision 1996). Average calculated as simple average over all HS-06 products. Only HS-06 products included for which applied and bound rates are ad valorem duties. Only HS-06 products included with 1:1 match between HS revisions 1996, 2002 and 2007.

Figure 3-3: EU AD policy

a. Flow: Total number of AD initiations and number of AD initiations that result in AD protection

— Total number of initiations, by target country
— Total number of initiations, by target country and HS-06 product
--- Number of AD initiations that result in AD protection, by target country
--- Number of AD initiations that result in AD protection, by target country and HS-06 product
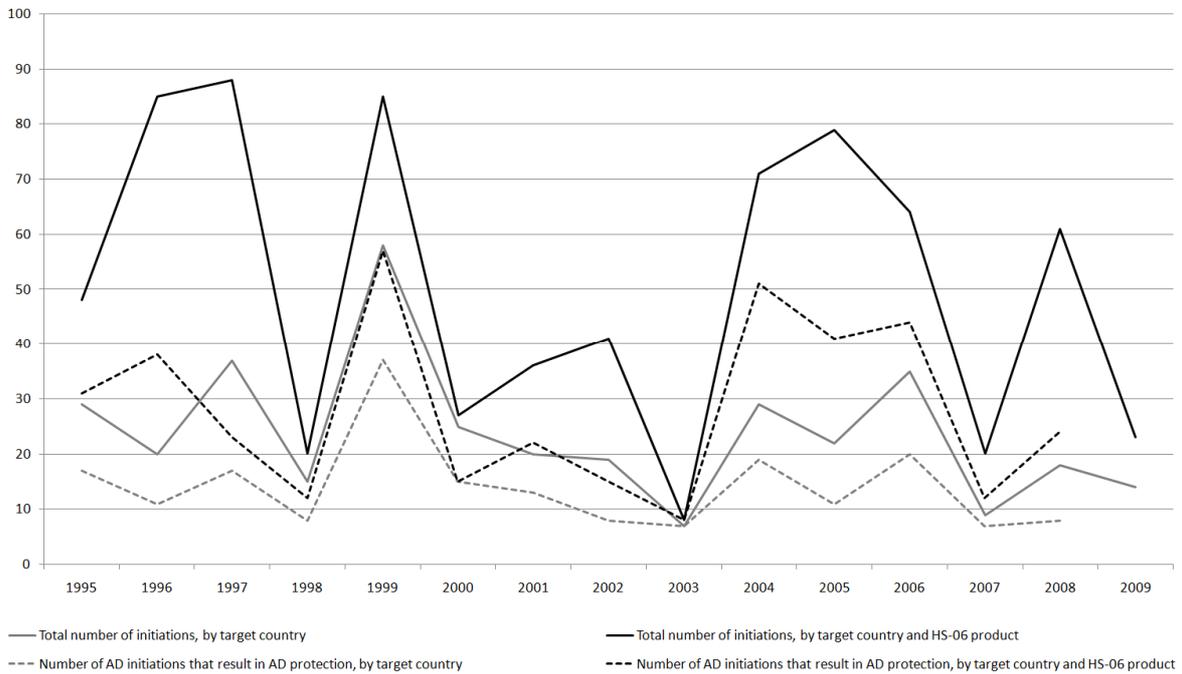
b. Stock: Number of AD measures in force

— Total number of AD measures in force, by target country
— Total number of AD measures in force, by target country and HS-06 product
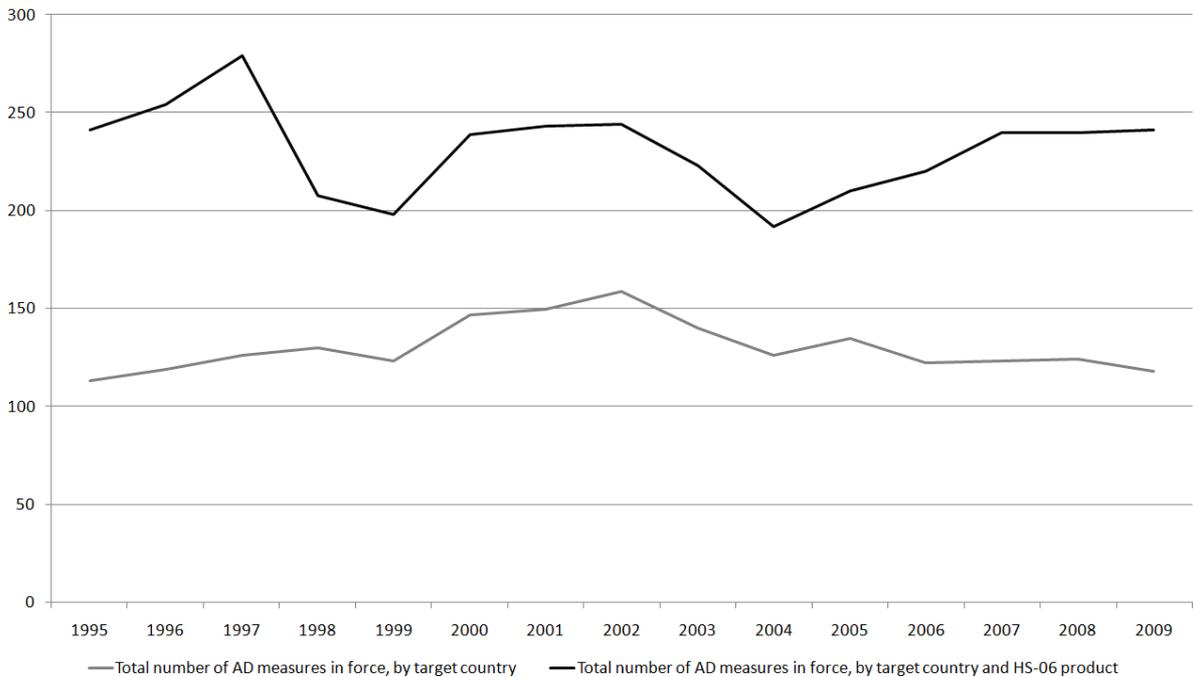
Notes: Own calculations based on TTB database. AD cases HS code missing TTB Database are excluded. AD cases against EU27 member states before their EU accession are excluded. Panel a: For number of AD initiations that result in protection, the 2009 value is not yet available. Panel b: For AD measures with missing revocation date, we assume that AD protection was in place for five years.

Figure 3-4: Duration of EU AD measures

a. Number of AD measures expired before 31 December 2009 by duration in years
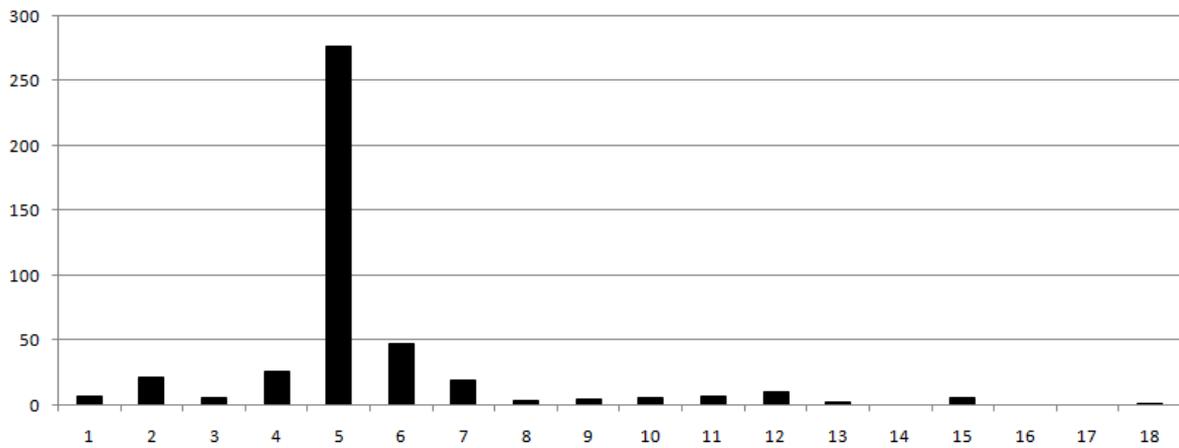
b. Number of AD measures in force on 31 December 2009 by duration in years

c. Percentage of AD measures imposed more than five and less than six years and still in force
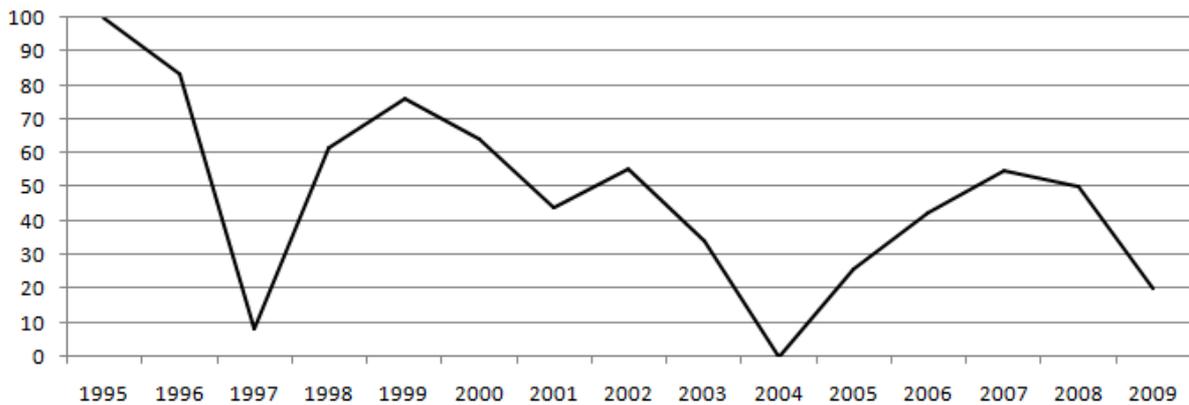
Notes: Own calculations based on TTB Database. Measures counted by target country and HS-06 product. AD measures with revocation date or HS code missing in TTB Database are excluded. Panel *a*: Duration of 'x years' on the x-axis implies a duration of between x-0.5 and x+0.5 years. Panel *b*: Duration calculated referring to 31 December 2009 . Panel *c*: Percent of total AD measures not removed by 30 June of the year on the x-axis despite being imposed more than 5 and less than 6 years ago.

Figure 3-5: Total coverage shares of EU AD policy

a. Stock and flow: Share of products covered, in %

b. Stock and flow: Share of countries covered, in %

Stock, All products, EU15 (Less 5) — — — Flow, All products, EU15 (Less 5)
Stock, Top quantile, EU15 (Less 5) — — — Flow, Top quantile, EU15 (Less 5)

Stock, All partners, EU15 (Less 5) — — — Flow, All partners, EU15 (Less 5)
Stock, Top quantile, EU15 (Less 5) — — — Flow, Top quantile, EU15 (Less 5)
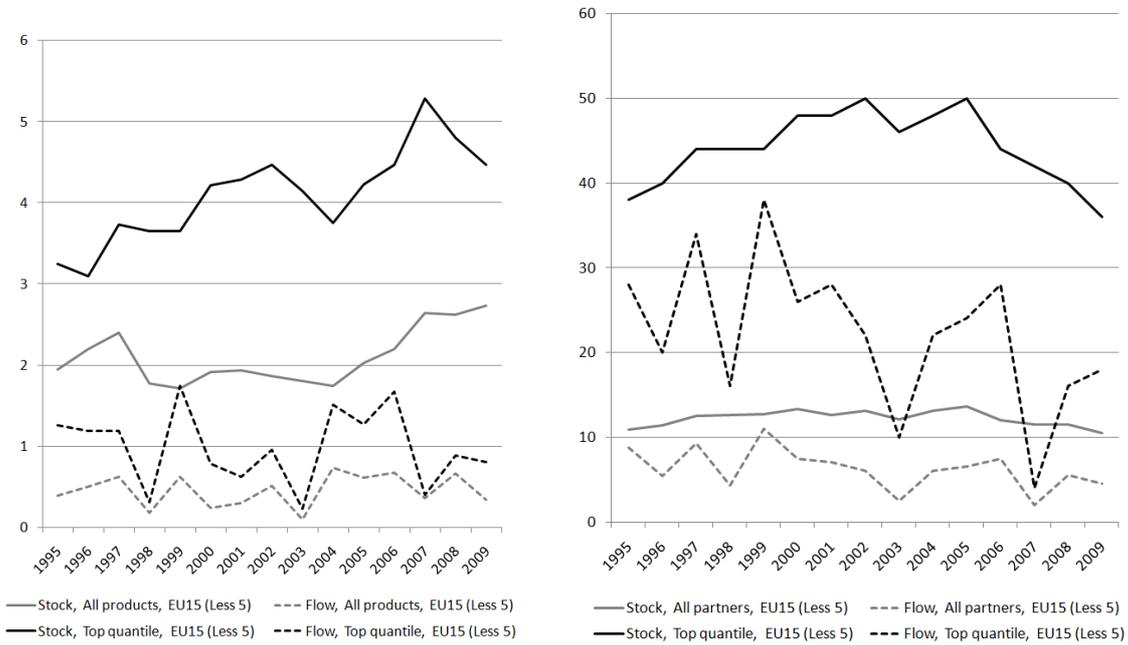
c. Stock and flow: Share of product-country combinations covered, in %

d. Stock and flow: Share of imports covered, in %

Stock, All partner-products, EU15 (Less 5) — — — Flow, All partner-products, EU15 (Less 5)
Stock, Top quantile, EU15 (Less 5) — — — Flow, Top quantile, EU15 (Less 5)
Stock, Excluding De Minimis, EU15 (Less 5) — — — Flow, Excluding De Minimis, EU15 (Less 5)

Stock, All imports, EU15 (Less 5) — — — Flow, All imports, EU15 (Less 5)
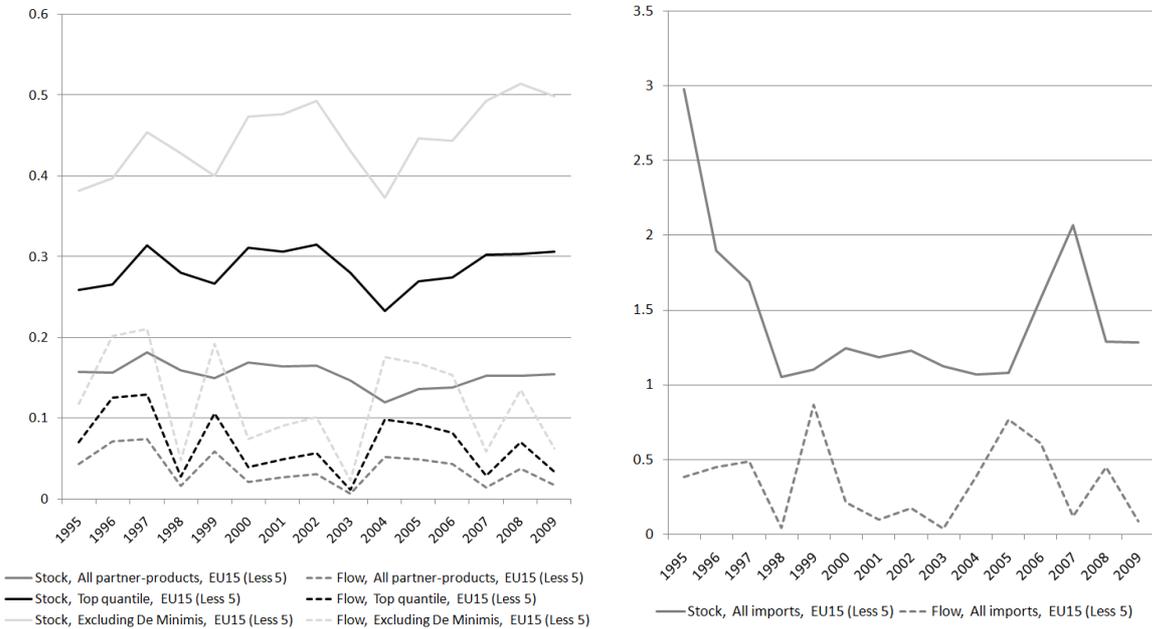
Notes: In panel *a* calculated using indicator (1), in panel *b* calculated using indicator (2), in panel *c* calculated using indicator (3) and in panel *d* calculated using indicator (4). Drawn with continuous lines for stock of AD (AD measures in force) and with dashed lines for flow of AD (AD initiations). EU 15 (Less 5) is composed of Austria, Denmark, Finland, France, Germany, Great Britain, Ireland, Italy, Portugal, Sweden. Definition of 'Top quantile' and 'De minimis', see section 3.4.1.

Figure 3-6: Coverage shares of EU AD policy by country income group

a. Stock: Share of products covered, in %

b. Flow: Share of products covered, in %
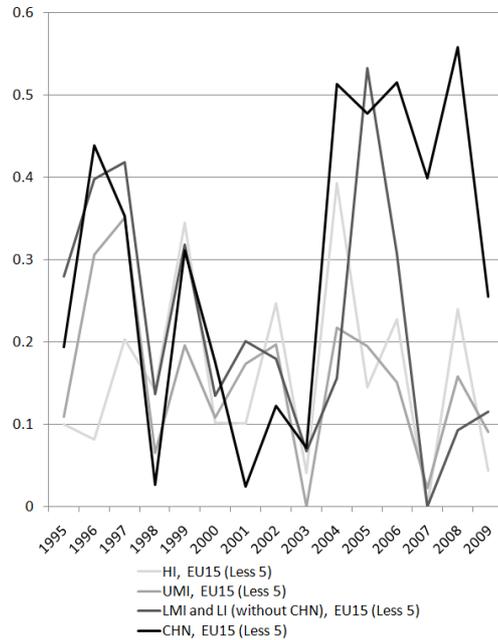
c. Stock: Share of imports covered, in %
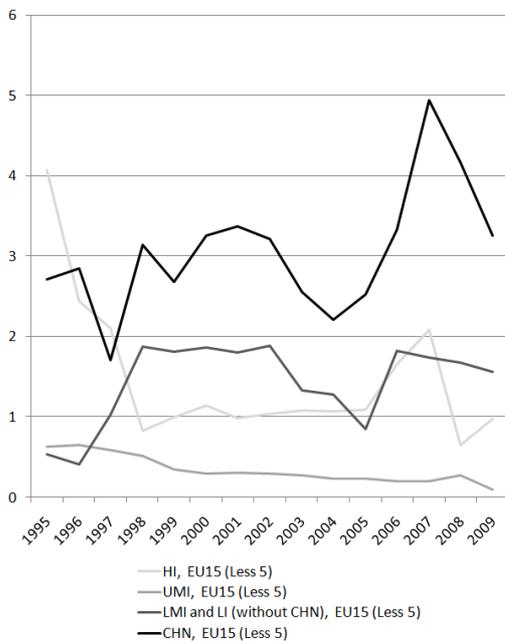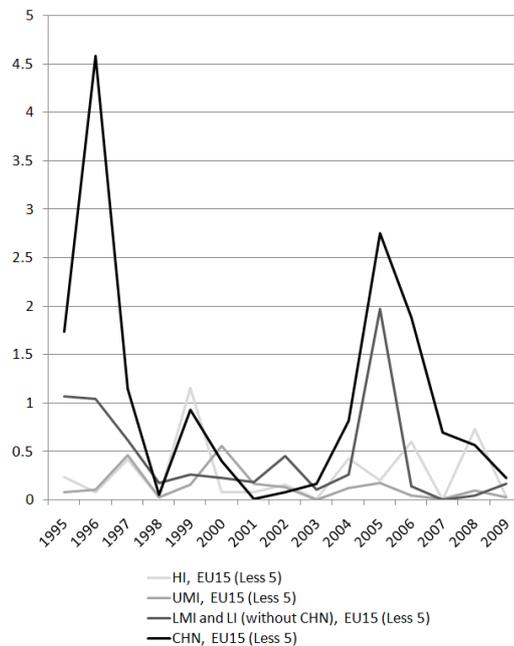
d. Flow: Share of imports covered, in %

Notes: In panels *a* and *b* calculated using indicator (1). In panels *c* and *d* calculated using indicator (4). In panels *a* and *c* calculated for the stock of AD (AD measures in force). In panels *b* and *d* calculated for the flow of AD (AD initiations). EU 15 (Less 5) is composed of Austria, Denmark, Finland, France, Germany, Great Britain, Ireland, Italy, Portugal, Sweden. HI= high income countries, UMI= upper middle income countries, LMI and LI without CHN = lower middle and lower income countries without China, CHN = China.

Figure 3-7: Coverage shares of EU AD policy by preference margin

a. Stock: Share of product-country combinations covered, in %

b. Flow: Share of product-country combinations covered, in %

c. Stock: Share of imports covered, in %
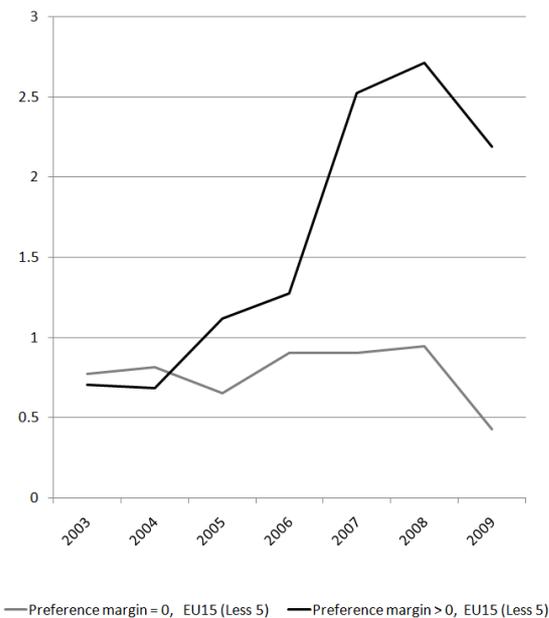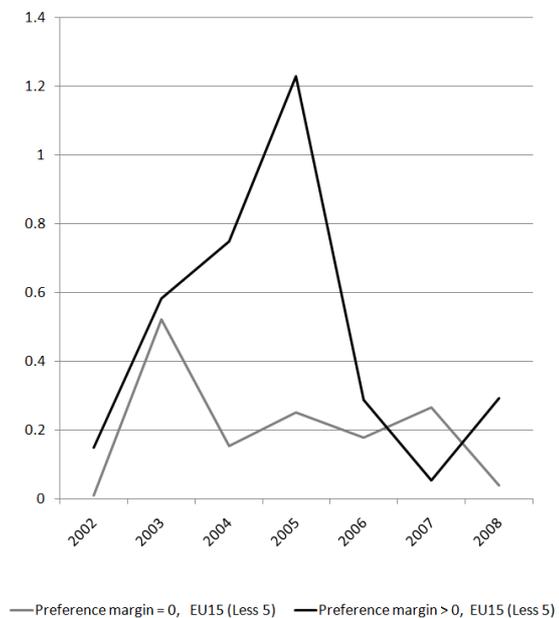
d. Flow: Share of imports covered, in %

Notes: In panels *a* and *b* calculated using indicator (3). In panels *c* and *d* calculated using indicator (4). In panels *a* and *c* calculated for the stock of AD (AD measures in force). In panels *b* and *d* calculated for the flow of AD (AD initiations). EU 15 (Less 5) is composed of Austria, Denmark, Finland, France, Germany, Great Britain, Ireland, Italy, Portugal, Sweden. Preference margin corresponds to the difference of MFN applied and preferential tariff as described in section 3.5.1.

Figure 3-8: Coverage shares of EU AD policy by product mix similarity at country level

a. Stock: Share of countries covered, in %

Legend:
- Low similarity, EU15 (Less 5)
- Moderately low similarity, EU15 (Less 5)
- Moderately high similarity, EU15 (Less 5)
- High similarity, EU15 (Less 5)

b. Flow: Share of countries covered, in %

Legend:
- Low similarity, EU15 (Less 5)
- Moderately low similarity, EU15 (Less 5)
- Moderately high similarity, EU15 (Less 5)
- High similarity, EU15 (Less 5)

c. Stock: Share of imports covered, in %

Legend:
- Low similarity, EU15 (Less 5)
- Moderately low similarity, EU15 (Less 5)
- Moderately high similarity, EU15 (Less 5)
- High similarity, EU15 (Less 5)

d. Flow: Share of imports covered, in %

Legend:
- Low similarity, EU15 (Less 5)
- Moderately low similarity, EU15 (Less 5)
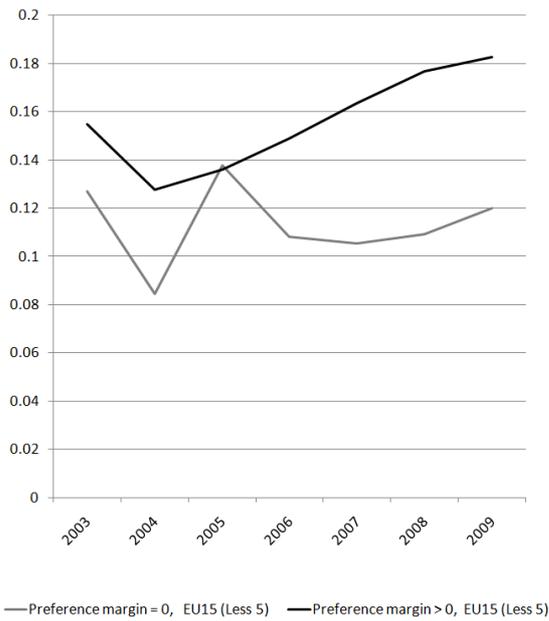- Moderately high similarity, EU15 (Less 5)
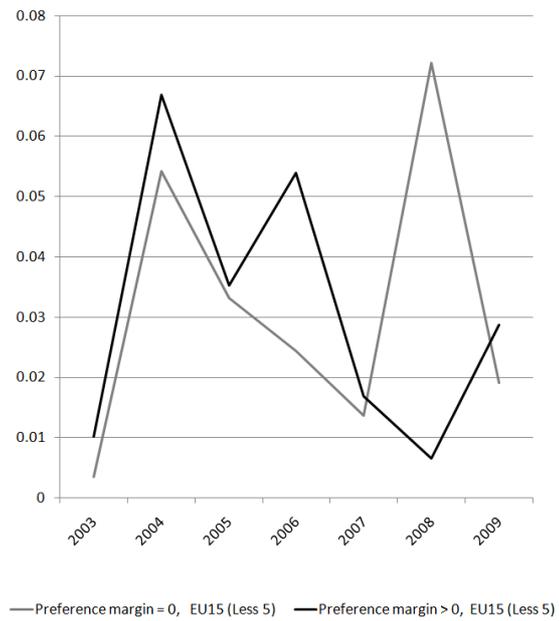- High similarity, EU15 (Less 5)

Notes: In panels *a* and *b* calculated using indicator (3). In panels *c* and *d* calculated using indicator (4). In panels *a* and *c* calculated for the stock of AD (AD measures in force). In panels *b* and *d* calculated for the flow of AD (AD initiations). "EU 15 (Less 5)" is composed of Austria, Denmark, Finland, France, Germany, Great Britain, Ireland, Italy, Portugal, Sweden. Index for country specific product mix similarity calculated following Finger and Kreinin (1979).Degree of product mix similarity is based on assignment of index value to corresponding quantile as described in section 3.5.2.

Figure 3-9: Coverage shares of EU AD policy for homogeneous and differentiated goods

a. Stock: Share of products covered, in %

Differentiated goods, EU15 (Less 5)
Homogeneous goods, EU15 (Less 5)

b. Flow: Share of products covered, in %

Differentiated goods, EU15 (Less 5)
Homogeneous goods, EU15 (Less 5)

c. Stock: Share of imports covered, in %

Differentiated goods, EU15 (Less 5)
Homogeneous goods, EU15 (Less 5)

d. Flow: Share of imports covered, in %

Differentiated goods, EU15 (Less 5)
Homogeneous goods, EU15 (Less 5)
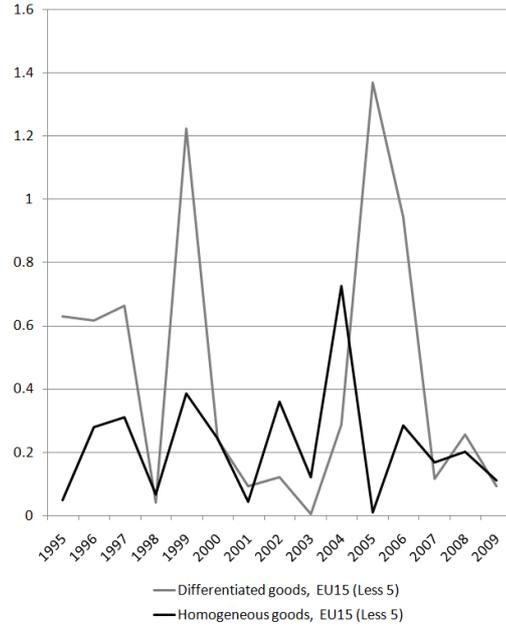
Notes: In panels *a* and *b* calculated using indicator (1). In panels *c* and *d* calculated using indicator (4). In panels *a* and *c* calculated for the stock of AD (AD measures in force). In panels *b* and *d* calculated for the flow of AD (AD initiations). EU 15 (Less 5) is composed of Austria, Denmark, Finland, France, Germany, Great Britain, Ireland, Italy, Portugal, Sweden. Definition of differentiated and homogeneous goods follows 'conservative' Rauch (1999) classification.

Figure 3-10: Coverage shares of EU AD policy for consumer, industrial and capital goods

a. Stock: Share of products covered, in %
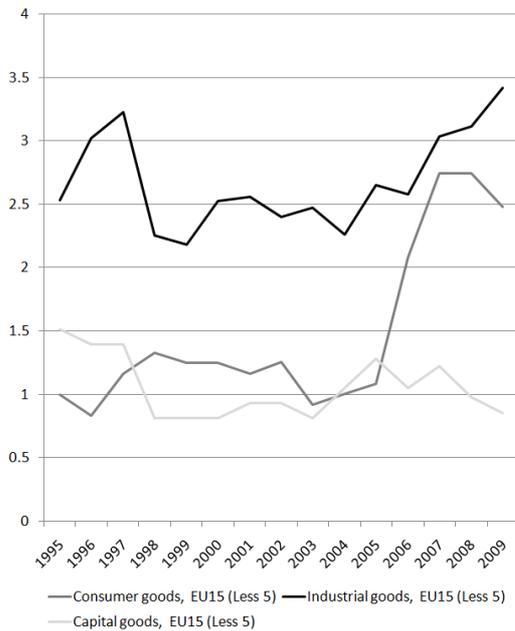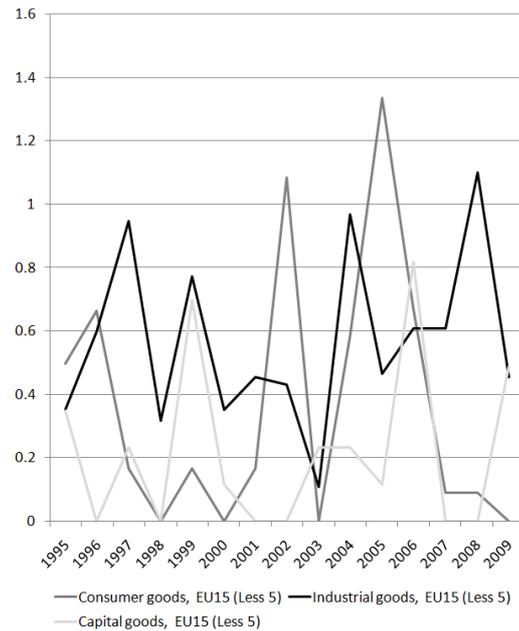
Legend: Consumer goods, EU15 (Less 5) — Industrial goods, EU15 (Less 5) — Capital goods, EU15 (Less 5)

b. Flow: Share of products covered, in %

Legend: Consumer goods, EU15 (Less 5) — Industrial goods, EU15 (Less 5) — Capital goods, EU15 (Less 5)

c. Stock: Share of imports covered, in %

Legend: Consumer goods, EU15 (Less 5) — Industrial goods, EU15 (Less 5) — Capital goods, EU15 (Less 5)

d. Flow: Share of imports covered, in %

Legend: Consumer goods, EU15 (Less 5) — Industrial goods, EU15 (Less 5) — Capital goods, EU15 (Less 5)
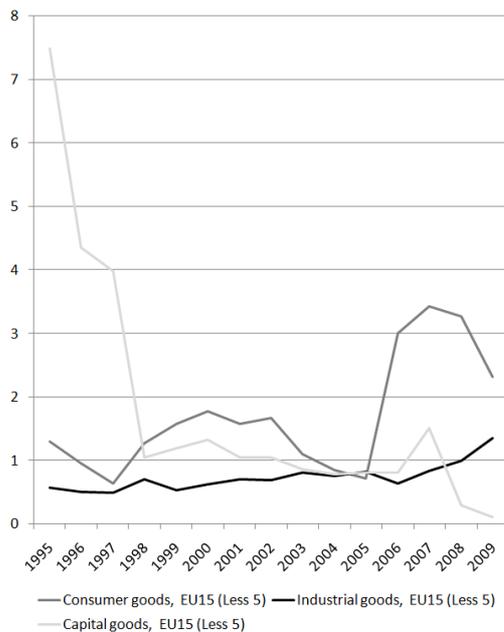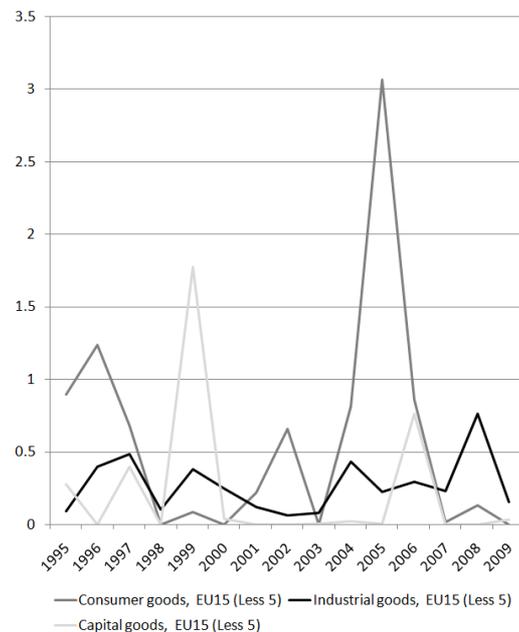
Notes: In panels *a* and *b* calculated using indicator (1). In panels *c* and *d* calculated using indicator (4). In panels *a* and *c* calculated for the stock of AD (AD measures in force). In panels *b* and *d* calculated for the flow of AD (AD initiations). "EU 15 (Less 5)" is composed of Austria, Denmark, Finland, France, Germany, Great Britain, Ireland, Italy, Portugal, Sweden. The exact link between the definition of consumer goods, industrial goods and capital goods and BEC is available from the authors of this chapter upon request.

Table 3-1: 'Doing Business' indicators on importing, EU27

Year	Mean 'Number of documents to import'	Mean 'Time to Import in days'
2005	6.25	14.75
2006	5.54	13.46
2007	5.46	13.25
2008	5.33	13.29
2009	5.33	13.25

Notes: Own calculations based on 'Doing Business' indicators from World Bank. All EU27 countries included except Malta, Cyprus and Luxembourg.

Table 3-2: Use of temporary trade barriers by the EU

a1. Number of case initiations for AD (AD), countervailing (CV) and China-specific safeguard measures (CSG), counted by trade partner

	'95	'96	'97	'98	'99	'00	'01	'02	'03	'04	'05	'06	'07	'08	'09	Total	Relative
AD	33	23	42	21	66	31	27	20	7	29	24	35	9	18	14	**399**	**87.89%**
CV	0	1	4	8	20	0	6	3	1	0	2	1	0	2	6	**54**	**11.89%**
CSG	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	**1**	**0.22%**

a2. Total number of case initiations for general safeguard (SG) measures

	95	96	97	98	99	00	01	02	03	04	05	06	07	08	09	Total	Relative
SG	0	0	0	0	0	0	0	1	1	1	1	0	0	0	0	**4**	**100%**

Note: a safeguard measure is non-discriminatory i.e. applies to all trade partners

b1. Number of case initiations for AD, countervailing and safeguard measures, counted by trade partner and by HS-06 product

	95	96	97	98	99	00	01	02	03	04	05	06	07	08	09	Total	Relative
AD	55	94	99	27	123	33	76	42	8	72	90	65	22	62	25	**892**	**89.03%**
CV	0	4	6	8	55	0	6	9	2	0	4	1	0	5	10	**110**	**10.97%**
CSG	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	**1**	**0.01%**

b2. Number of case initiations for general safeguard measures, by HS-06 product

	95	96	97	98	99	00	01	02	03	04	05	06	07	08	09	Total	Relative
SG	0	0	0	0	0	0	0	120	1	6	1	0	0	0	0	**128**	**100%**

Note: a safeguard measure is non-discriminatory i.e. applies to all trade partners

Notes: TTB=Temporary trade barrier, AD=AD, CV=Countervailing, CSG=China-specific safeguard, SG=Safeguard. AD case initiations with HS code missing in TTB Database are excluded.

Table 3-3: Coverage shares of EU AD measures in force across industries

a. Share of products covered

HS	Name of industry	Year														
		95	96	97	98	99	00	01	02	03	04	05	06	07	08	09
01	Animal products															
02	Vegetable products															
03	Fats and oils															
04	Food, beverages															
05	Mineral products															
06	Chemicals															
07	Plastics and rubber															
08	Leather															
09	Wood															
10	Pulp and paper															
11	Textiles															
12	Footwear															
13	Stones and glass															
14	Precious stones															
15	Base metals															
16	Machinery															
17	Transport															
18	Instruments															
19	Arms, ammunition															
20	Miscellaneous															
21	Art															

b. Share of imports covered

HS	Name of industry	Year														
		95	96	97	98	99	00	01	02	03	04	05	06	07	08	09
01	Animal products															
02	Vegetable products															
03	Fats and oils															
04	Food, beverages															
05	Mineral products															
06	Chemicals															
07	Plastics and rubber															
08	Leather															
09	Wood															
10	Pulp and paper															
11	Textiles															
12	Footwear															
13	Stones and glass															
14	Precious stones															
15	Base metals															
16	Machinery															
17	Transport															
18	Instruments															
19	Arms, ammunition															
20	Miscellaneous															
21	Art															

Coverage rate: 0%	Coverage rate: 0-2%	Coverage rate: 2-4%	Coverage rate: >4%

Notes: Panel *a* is based on calculation of indicator (1). Panel *b* is based on calculation of indicator (4) for EU 15 (Less 5).

Table 3-4: Coverage shares of EU AD measures in force across EU member states,
Share of products covered

Member state	Year														
	95	96	97	98	99	00	01	02	03	04	05	06	07	08	09
Austria															
Belgium															
Germany															
Denmark															
Spain															
Finland															
France															
Great Britain															
Greece															
Ireland															
Italy															
Luxemburg															
Netherlands															
Portugal															
Sweden															
Cyprus															
Czech Republic															
Estonia															
Hungary															
Lithuania															
Latvia															
Malta															
Poland															
Slovakia															
Slovenia															
Bulgaria															
Romania															

	Coverage share: missing		Coverage share: 0.0-1.2%		Coverage share: 1.2-1.6%		Coverage share: 1.6-2.0%		Coverage share: >2.0%

Note: Based on calculation of indicator (1).