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# **No Protectionist Surprises: EU Antidumping Policy Before and During the Great Recession**

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# No Protectionist Surprises: EU Antidumping Policy Before and During the Great Recession\*

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This paper evaluates the European Union's antidumping (AD) policy from 1995-2009 with a special focus on the 2008-9 crisis. Combining product-level data on AD cases with detailed import data, we fail to find clear signs of a major trade policy change since the outbreak of the crisis. Our findings suggest that the EU largely remained on its pre-crisis path of AD policy with an increasing share of products and more industries covered by AD measures. Moreover, EU AD policy has increasingly focused on China and other lower middle income countries as targets. Further 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. In terms of product characteristics, we observe that especially the shares of consumer goods and differentiated goods covered by EU AD measures have increased rapidly, remaining at a relatively high level also during the crisis. The patterns we reveal do not appear to be driven by a few outlying countries but are also similar when considering imports of individual EU member states.

Key words: Antidumping, Crisis, European Union, Great Recession, Product-level Data, Protectionism, Temporary Trade Barriers, Trade Policy, WTO

JEL classification: F13, F14, F52, G01

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## 1 Introduction

On 3 October 2008, the European Union (EU) launched a review of antidumping (AD) duties on leather shoes from China and Vietnam. In December 2009, the EU decided to extend duties on the imports of leather shoes from China and Vietnam for another 15 months.<sup>1</sup> This affirmative decision was taken despite heavy protests from consumers, importers and outsourcing firms, and it overruled the negative advice that had been formulated earlier by the EU AD Advisory Committee.<sup>2</sup> The review procedure was launched just a few days after the collapse of Lehman Brothers, which marked the outbreak of the Great Recession and fuelled 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. Other countries would become adversely affected by this protection and then start to retaliate. The question is whether this review marked the beginning of a more protectionist attitude in 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, indicating that protectionist pressure was likely to be high after the outbreak of the crisis at the end of 2008. The macroeconomic indicators in Figure 1 show that, for the EU-27 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 falling roughly by 12.5% in 2009. The unemployment rate, shown in Figure 1b, jumped from 7% in 2008 to 9% in 2009 after having decreased continuously since 2004.

Deviation from free trade is tempting for any country in times of economic downturn and trade protection is regarded as a quick and easy way of safeguarding jobs and replacing imports by domestic production. Trade protection is often perceived as being a far less painful remedy than fiscal austerity and budget cuts since it is likely to raise tariff revenue for the protecting country. However, if 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, thereby forgoing 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 their applied MFN tariff rates up to the level of their WTO-committed bound rates. In Figure 2, we show the tariff overhang, *ie* the difference between bound and applied MFN rates for the EU. Average applied MFN rates have remained roughly

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<sup>1</sup> See Council Implementing Regulation No. 1294/2009 of 22 December 2009, available from EUR-Lex website (<http://eur-lex.europa.eu/en/index.htm>), and press release from European Commission of 2 October 2008, available on the website of the Directorate General for Trade of the European Commission.

<sup>2</sup> See International Centre for Trade and Sustainable Development (2010).

constant, suggesting that the EU has not used this channel to raise protection during the crisis. Average tariff overhang was in fact close to zero throughout 2004-9 and a more detailed look at the underlying data reveals that tariff overhang equalled zero for 97% of all products or more, implying that the EU's scope for using this channel has been quite limited.

Second, countries may increase protection through the imposition of technical trade barriers such as an increase in administrative obligations related to a shipment or the technical clearance time at the border.<sup>3</sup> Table 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.<sup>4</sup> Table 1 indicates 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 standardised cargo of goods have largely remained unchanged in 2008-9, suggesting that there has not been an increase of technical trade barriers during the crisis.<sup>5</sup>

Third, countries can use temporary trade barriers (TTBs) that 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 EU's application of TTBs and to verify whether there has been any sign of a change in the use of TTBs during the 2008-9 crisis. There are three TTBs available to countries: safeguard (SG), countervailing (CV) and antidumping (AD) measures. Since, for the EU, as 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 match data on AD cases from the World Bank's Temporary Trade Barrier Database (Bown, 2010) with UN COMTRADE data, which detail product-level trade at the HS 6-digit (HS-06) level by country of origin. Our period of analysis runs from 1995 until 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. We will distinguish between AD case initiations and AD measures in force. The methodology we use primarily consists of a graphical examination of these indicators over time.

We carry out our analysis not only for aggregate imports, so as to identify overall trends in the use of AD policy, but also for targeted countries in specific income groups and analyse behaviour by industry. Furthermore, we investigate the link between AD policy and more

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<sup>3</sup> The extent to which this is legal is determined by the WTO Agreement on Technical Barriers to Trade.

<sup>4</sup> See Doing Business (2011) for methodological details. A third indicator related to importing measures the fees in dollars levied on a 20-foot container. However, since this indicator has to be deflated and converted into euros to make a comparison and is therefore largely dependent on the inflation and exchange rate, we exclude this indicator from our analysis.

<sup>5</sup> The only EU member state for which we observe an increase in 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 standardised cargo of goods.

'traditional' forms of protection such as applied MFN and preferential tariffs. We also reveal new insights regarding the link between product mix similarity of a country to the EU and EU AD policy. 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. Finally, by engaging in an analysis at the individual EU member state level, we examine the extent to which results for the EU as a whole are driven by a few outlying member states or whether they reflect an EU-wide pattern.

The remainder of the paper is organised as follows. In Section 2 we briefly discuss AD law and the features of it that are specific to the EU. Section 3 introduces the methodology that we apply. In Section 4 the main results on product, country, product-country combination and import value coverage are presented. Section 5 examines the link between 'traditional' forms of protection, product mix similarity and product characteristics, respectively, and AD policy. Section 6 presents results for individual EU member states and, finally, Section 7 concludes.

## **2 Antidumping policy: The rules in the EU**

The WTO regulates the use of AD policy in the General Agreement on Tariffs and Trade (GATT) Article VI and the AD Agreement, which are currently 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 the EU can impose import protection in the form of AD measures on imported products.

The first condition is the presence of *dumping* by a foreign firm into the EU market. Interestingly, there appears to be 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' behaviour. Mainstream economics suggests that predatory dumping is an instance where there is room for government intervention. However, 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 trading partner must have very deep pockets to wait for domestic competitors to exit the market. 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 are considered in the AD legislation.

The second condition specified in Article VI of the GATT is that only dumping that *causes domestic injury* is a reason for protection. The WTO rules do not clearly define what is meant by ‘injury’. The AD Agreement mentions a list of injury indicators including the decline of domestic sales, profits, output, employment and stocks, amongst 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 in the EU market. Put differently, this simple price comparison often decides a positive or negative injury ruling (Vandenbussche, 1996; Vermulst and Waer, 1991).

The third condition embedded in the EU’s AD regulations is that imposed AD measures have to be in the EU’s *community interest*. The existence of this ‘community interest clause’ marks an important difference from, 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. This requires EU officials to at least consider whether prices on the EU market are likely to rise dramatically after the imposition of a duty, as this would be against the interest of consumers. The EU’s AD case on leather shoes imported from Vietnam and China described earlier is an illustrative example. In this case, the European Commission justified the imposition of AD duties by claiming that the price of European shoes would increase by at most €1.50 a pair. This is in contrast to the US, where welfare issues need not be taken into account in the evaluation of whether or not to impose protection.

On the whole, many economists have expressed doubts as to whether AD rules are sufficiently well equipped to discriminate between ‘fair’ and ‘unfair’ foreign imports. However, some economists have recently argued that 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 as welfare-maximisers, this could explain the WTO members’ apparent reluctance to change AD rules fundamentally or even to get rid of them.

The purpose of this paper 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 whether domestic injury from import competition is due to ‘unfair’ imports or 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’ behaviour but could simply stem from an increasing use of AD policy to shelter domestic firms from import competition, in which case AD policy would be nothing more than a ‘beggar-thy-neighbour’ policy. It is important to make that distinction to interpret any changes in AD policy in the course of the 2008-9 crisis.

### 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 allow us to analyse the coverage of TTBs over time in several dimensions. We will then use these indicators to examine the main trends in the EU's use of TTBs, enabling us to detect whether any major policy changes occurred during the Great Recession.

We use information from the World Bank's Temporary Trade Barriers Database (Bown, 2010), which contains 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.<sup>6</sup> From this database we extract data on initiations and measures in force.<sup>7</sup> We will refer to the former as the *flow* of TTBs, while the latter will be referred to as the *stock* of TTBs. Since we are interested in the 2008-9 crisis period, it is important to consider more than just the stock of TTBs, as it can usually take up to a year or more from the initiation of a case to the imposition of a measure. Changes in the use of TTBs during the crisis would therefore be observed 'in real time' only when looking at the flow of TTBs.

Table 2 gives an overview of the number of case initiations for the three types of TTBs used by the EU in the period before and during the crisis. For AD policy and CV duties, which are trading partner specific, we use two distinct case definitions. One is to consider a case by targeted country (Panel a1), while the other is to consider a case by country and product (Panel b1). For global SG measures, which do not discriminate between trading partners, we count the total number of initiations (Panel a2) and measure a case by product (Panel b2). Whatever definition we use and whichever way we count cases, Table 2 does not suggest a major change in the EU's use of TTBs during the crisis. Based on the numbers provided in Table 2, we find that the EU's TTB policy largely coincides with AD policy. Since, in addition, the EU initiated relatively few CV cases and no SG cases in 2008 and 2009, we focus our subsequent analysis on AD policy only. Also, since the number of cases does not provide any information on the number of products and countries affected nor on the extent to which the EU's value of imports is affected, we will define a finer set of indicators.

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<sup>6</sup> Results are based on the 1992 revision of HS-06.

<sup>7</sup> The Temporary Trade Barriers Database was complemented with additional information from original EU notifications, taken from the EUR-Lex webpage. For a 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.

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, provided at the HS 6-digit (HS-06) product level and by EU trading partner.<sup>8</sup> One issue that we face is the changing EU composition over time, which has some implications for our methodological approach.<sup>9</sup> First, since previously targeted countries have become members of the EU customs union and can no longer be targeted with AD measures, we only consider extra-EU-27 imports.<sup>10</sup> 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 the best: Austria, Denmark, Finland, France, Germany, Ireland, Italy, Portugal, Sweden and the United Kingdom. These ten member states represented around 64% of all extra-EU-27 imports in 2008. However, for robustness, we also verify our results for alternative EU definitions.<sup>11</sup> Results are always very similar and all of our main findings are equally valid across other EU definitions.

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

The 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 by the EU.

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

The 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 three indicators described thus far are all 'count' measures but do not reflect the importance of AD protection in terms of import values. To address this issue we introduce a

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<sup>8</sup> Import data for some EU member states are missing, particularly before 1995, which is why we opt for our period of analysis to start in 1995. For more detailed information on the data sources described in this section, please see Bown (2011a).

<sup>9</sup> In 2004, Cyprus, Czech Republic, Estonia, Hungary, Latvia, Lithuania, Malta, Poland, Slovakia and Slovenia joined the EU-15. In 2007, Bulgaria and Romania became EU member states.

<sup>10</sup> Extra-EU-27 imports do not comprise imports from Réunion, French Guiana, Martinique, Guadeloupe, Isle of Man, Jersey, Guernsey and the Åland Islands 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.

<sup>11</sup> This includes an analysis for EU-15, EU-27, and a 'current' EU that follows the changes in EU composition over time.

fourth indicator (4). This is a ‘value’ measure corresponding to the *import value covered* by AD measures as a share of the EU’s total import value.

One limitation of the above approach is that it does not take into account the impact of AD measures on imports. For example, Vandebussche and Zanardi (2010) 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 cases in which AD measures are prohibitive, *ie* when the AD causes a disruption of imports for some product-country combinations.

We therefore carry out 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 relatively simple approach and assume that import values do not change when AD protection is set in place, *ie* 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 data period.<sup>12</sup> Due to import 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. This allows us to conclude that AD measures are generally non-prohibitive in 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. Thus, we report our results only for the baseline specification.

Though our findings are robust to using import counterfactuals, it is important to note a couple of other caveats. First, the indicators defined above only capture the ‘direct effects’ of AD. There may also be a number of ‘indirect effects’ such as import diversion, downstream effects, tariff-jumping foreign direct investment, domestic market entry, and retaliation or strategic behavior. We do not attempt to capture such effects, though research literature has

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<sup>12</sup> Note that this methodology is directly related to Equation (2) in Bown (2011a) and Bown (2011b). Equation (2) 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 likely to be negligible.

shown that they exist.<sup>13</sup> Second, we do not consider the size of measures or the type of measures applied. Third, in the absence of firm-level data, it was not possible to engage in an evaluation of the impact of AD on EU firm performance. Finally, while EU AD measures are imposed at the 8-digit product level, we performed our analysis at the 6-digit product level due to import data limitations.<sup>14</sup>

One final remark is in order before turning to the results. While we have defined the four different coverage indicators above in terms of stocks, we also compute them for the flows of AD (*ie* for case initiations), and for subsamples of products, countries, product-country combinations and imports.<sup>15</sup> All results are reported in the following results sections.

## 4 General trends in the use of EU antidumping policy

### 4.1 Overall trends

We start by showing the trends in EU AD initiations during 1995-2009 in Figure 3. Figure 3a shows the flow of new cases and Figure 3b shows the stock of cases, *ie* the number of AD measures in force in a particular year.<sup>16</sup>

Two alternative definitions of a ‘case’ are applied in Figure 3. The first one is ‘by target country’ and the second one is ‘by target country and HS-06 product’.<sup>17</sup> To illustrate the difference, consider the following example. In May 2008, the EU initiated an AD case against China, Moldova and Turkey, each involving 7 HS-06 products. Using the first definition, we count 3 AD cases. Using the second definition, we count 21 cases involved in the investigation.<sup>18</sup> Since an AD measure was imposed only against China for the 7 HS-06 products in 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 7 AD measures in force against China.

Whatever definition we apply, the crisis period does not look unusual. In terms of AD initiations in Panel a, we observe about five peaks between 1995 and 2009. 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. First, the magnitude of the peak suggests that this can still be regarded in the range of ‘normal’ fluctuations. Second, only 44% of cases initiated in 2008 resulted in protection

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<sup>13</sup> See Vandebussche and Zanardi (2010) for a comprehensive overview of these ‘indirect effects’.

<sup>14</sup> The EU usually imposes AD measures at the 8-digit Combined Nomenclature (CN) level. The first 6 digits of the CN code actually correspond with the first 6 digits of HS, allowing us to base our study on HS-06.

<sup>15</sup> 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.

<sup>16</sup> Note that, for some cases initiated in 2009, the outcomes were not yet known at the time of writing. The number of initiations that result in measures is therefore not reported for 2009 in Figure 3a.

<sup>17</sup> Previous literature has predominantly used the ‘by target country’ definition of a case. See, for example, Prusa (2001) and Zanardi (2004).

<sup>18</sup> 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 a separate case.

due to a considerable share of cases withdrawn by EU firms or terminated by the EU authority, compared with 58% for 1995-2007.

The stock of AD measures in force, shown in Panel b, shows a clear downward trend in the 2000s according to the ‘traditional’ count of AD cases by target country. However, when we define an AD case by target country and HS-06 product, we observe a clear upward trend beginning in 2004. This suggests that the average number of products involved in an AD investigation against a certain trading partner has increased over time. Indeed, aggregating AD case initiations over time, we find an average of 1.9 products per case for 1995-2003, while for 2004-9 this number is 2.5 products per case.

Due to the sunset clause in EU AD law, the usual duration of an AD measure is five years. However, the duration can be shorter or longer if accompanied by a justified decision from the trade authority. Figure 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.<sup>19</sup> The duration varies between 1 and 18 years, and 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%. Panel b considers those AD measures that are still in force by the end of 2009. Roughly 74.2% of measures were in force for less than 5 years before the end of 2009, while 25.8% were in force for more than 5 years.

Figure 4c examines whether the EU has increased protection during the crisis through a prolongation of existing AD measures in force. For this purpose, we calculate the share of those AD measures that were supposed to expire due to the sunset clause but were still in force after a sunset review. To state this more precisely, we calculate the share of measures that are still in place despite having being imposed more than five but less than six years ago. This share exhibits substantial variation over time and was at its peak in 1995, when none of the AD measures imposed five to six years before were removed. It has been decreasing since 2007, which suggests that there has not been an increase in protection during the crisis through the channel of prolonging the duration of existing measures.

Next, we compute indicators (1)-(4) on product coverage, target country coverage, product-country coverage, and import value coverage for 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 quartile by import value. To establish the top quartile of products, we

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<sup>19</sup> We exclude a few cases for which information on HS code or revocation date is missing in the Temporary Trade Barriers Database (Bown, 2010).

aggregate imports by product over 1995-2009 and then keep the highest 25% of products by import value. We take an equivalent approach to obtain the top 25% trading partners and the top 25% product-country combinations. For indicator (3), we additionally calculate the AD coverage after excluding ‘de minimis’ trading partners that are defined as those countries that account for less than 1% of EU imports of a certain product in a certain year. Results are shown in Figure 5.

The first observation that stands out from Figure 5 is that products, countries and product-country combinations that are ‘important’ in terms of import value are more frequently subject to AD protection.

Figure 5a illustrates that product coverage of AD measures has clearly increased since 2004, with many products covered by new AD initiations especially in 2004-6. Panel b suggests 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 driven by the increase in the share of products covered by AD measures. All three ‘count’ indicators for the stock and the flow of AD policy in Panels a-c indicate that the EU approximately followed its pre-crisis path during 2008-9.

Figure 5d illustrates our results for the ‘value’ indicator, *ie* the import share covered by AD initiations and measures. No clear patterns stand out. The only noticeable patterns are a sharp decrease in the import share covered by AD measures until 1998, and a relatively larger 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.

In unreported results, we have also calculated indicators (1)-(4) with information on 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 removed by year  $t$ . This allows us to investigate whether, due to expired measures, Figure 5 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 too strong a conclusion since the increase is still in the range of pre-crisis fluctuations for all three indicators.

In the aggregate, there is no evidence of any major shift in EU AD policy around the time of the global crisis in 2008-9. The EU appears to have applied its policies during the crisis the way it did before.

## 4.2 By country income group

We next categorise targeted countries according to broad income groups. Our data confirm earlier studies (Rovegno and Vandebussche, 2011) and show that China has increased its importance as an AD target both in terms of initiations and imposed measures. The number of AD initiations against China as a share of the total has increased dramatically from around 15% in 1995-2003 to about 40% in 2004-9.

When constructing different income categories of countries we follow the latest World Bank classification but take into account the special status of China as a main EU AD target.<sup>20</sup> This results in four groups of countries: high income countries, upper middle income countries, lower middle and low income countries (excluding China), and China. For each of these four groups, we compute indicator (1) to measure product coverage and indicator (4) to measure import value coverage.

The share of products coming from China and falling under EU protection has been increasing rapidly since 2004, as illustrated in Figure 6a, which reports the product coverage of the stock of protection by country income group. Products from other lower middle and low income countries have also been increasingly falling under AD protection.<sup>21</sup> 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 values. The share of products imported from China and covered by AD case initiations is relatively high throughout 1995-2009, but initiations against other lower middle and low income countries also cover many products, especially in 2005-6.

The import value indicator for the stock of protection, shown in Figure 6c, reveals that while a large share of China's imports is subject to EU AD measures, this share decreased during the 2008-9 crisis. Nevertheless, China clearly remains the dominant target country during the crisis, followed by other lower middle and low income countries. Panel d reports a peak in import value coverage of initiations against China and other lower middle and low income countries around 2005. The leather shoe case against China and Vietnam described earlier likely plays an important role in explaining this pattern since this case was initiated in 2005.

Figure 6 suggests that AD coverage has remained relatively low in all country income groups during the crisis, compared with pre-crisis levels of protection. Furthermore, we find some evidence for the increasing 'north-south' divide in AD policy, with the EU targeting the

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<sup>20</sup> This classification contains all World Bank member economies and all other economies with a population of more than 30,000.

<sup>21</sup> In fact, positive AD coverage for lower middle and low income countries results exclusively from AD measures against lower middle income countries.

'south' more and more, at least in terms of product coverage. Given the recent proliferation of AD laws, particularly in the 'south', an important question is to what extent the retaliatory power of the 'south' may shift the future targeting pattern. Miyagiwa *et al* (2010) suggest that, in a global world with multilateral trading relations, market size may be the key to understanding these patterns.

### 4.3 By industry

In this section we analyse AD coverage by industry, defined according to the 21 sections of the Harmonized System (HS). The EU's AD policy is not equally applied across industries and, in fact, a simple count of case initiations between 1995 and 2009 suggests that AD policy is concentrated in a few sectors. 'Base metals', 'chemicals', 'textiles', 'machinery and electrical appliances' and 'plastics and rubber' accounted for 82% of all EU AD initiations during the data period. However, these figures do not account 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 imported are low. Hence, to simply focus our analysis on the five industries that have the highest number of AD cases over time is not sufficient.

We compute indicators (1) and (4) for the stock of protection across *all* industries. One way to visualise the breadth and depth of AD policy at the industry level is to examine an industry-year matrix in which cells are shaded according to the degree of protection: darker cells indicate higher levels of protection. Table 3 illustrates the matrices and provides an overview of the industries under AD protection for each year in 1995-2009, both in terms of product coverage (Panel a) and import value coverage (Panel b). The table shows how AD does not only affect the 'usual suspect' industries listed above, as coverage reaches high values for other industries as well.

For example, the EU 'mineral products' industry was intensively protected by AD between 1996 and 2001, attaining product coverage ratios of up to 8%. The 'animal products' industry had 15-16% of the total import value covered by AD between 2006 and 2008. Within 'animal products', EU AD measures on rainbow trout and farmed salmon were the main underlying cause of the relatively high coverage. The breakdown of protection by industry also reveals that the EU 'footwear' industry had substantial AD protection with an annual import value coverage of 15-22% between 2006 and 2009, mainly due to the imposed AD measures on certain footwear from China and Vietnam.

An important observation on coverage *across* industries is that the number of industries protected under AD increased, a trend that began around 2004 and that may partially explain the increased product coverage over time. Only industries like 'arms and ammunition', 'art', and

'precious stones' are not covered by AD. The EU's new user industries of AD policy are 'animal products', 'vegetable products', 'fats and oils', and 'foods and beverages'. As only 'fats and oils' started to be a user industry in 2009 during the crisis, the evidence seems too weak to suggest an increased coverage across industries related to the crisis.

With few exceptions, the pre-crisis levels of AD protection *within* industries prevailed during the crisis. The 'base metals' industry is one exception, where AD protection increased tremendously and attained an unprecedented high in 2009 both in terms of product and import value coverage.

To summarise Section 4, we have not found any significant overall change in the EU's use of AD policy in 2008-9. While product and industry coverage of AD have 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 after 2004. AD measures are increasingly imposed on products coming from lower middle and low income countries, especially from China, which has been an ongoing trend since 2004.

## **5 What makes products and trading partners prone to antidumping protection?**

### **5.1 'Traditional' trade protection**

According to the 'substitution hypothesis', trade liberalisation efforts in the form of tariff reductions have gone hand in hand with increased trade protection through other means such as AD policy. The existing evidence that examines the extent to which AD substitutes for eliminated tariff protection has not resulted in uniform patterns across countries.<sup>22</sup> For the EU, the average applied MFN tariff plotted in Figure 2 and our data on MFN and preferential tariffs suggest that tariffs have not changed much in the 2000s. Therefore, it is difficult to examine the 'substitution hypothesis' and to relate the use of EU AD policy to *changes* in 'traditional' trade protection. We can, however, 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 applied MFN tariff on a certain product, the level of 'traditional' protection is rather low. One interesting question is whether these products and trading partners are more prone to EU AD protection.

We start by investigating the relationship between AD policy and preference margins, *ie* the differences between applied MFN tariffs and preferential rates of the EU vis-à-vis its preferential trading partners in the WTO. With numerous multilateral and bilateral preferential trade agreements in place, the question for the EU is whether AD policy has focused on product-country combinations subject to a preferential regime.

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<sup>22</sup> See, for example, Feinberg and Reynolds (2007), Moore and Zanardi (2009) and Bown and Tovar (2011).

We calculate preference margins as the difference between applied MFN tariffs and preferential tariffs, using data from UN TRAINS.<sup>23</sup> Then we divide product-country combinations into two categories distinguishing between those for which preference margins are zero and those for which they are positive. We calculate indicators (3) and (4) on product-country combinations 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 7.

Figures 7a and 7c show that the share of product-country combinations and imports subject to AD measures are considerably higher among those with a preference margin greater than zero. Similarly, the coverage shares of AD case initiations reported in Figures 7b and 7d predominantly involve product-country combinations subject to a preferential EU regime. This suggests that AD policy is largely used for product-country combinations 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 whether AD measures are most frequently imposed on products with high or low applied MFN tariffs. For this purpose, we calculate indicator (1) on product coverage and indicator (4) on import coverage for subsets of products that differ in the size of applied MFN duty. No clear pattern stands out from the data. If anything, the EU is imposing more AD on products with intermediate levels of MFN tariffs, but less on products subject to very high or low tariff levels. We conclude that there is no evidence for a clear link between AD policy and the level of applied MFN tariffs in the EU.<sup>24</sup>

## 5.2 Product mix similarity

An interesting question that has not been explored in the earlier literature is the extent to which countries with an export product mix that is similar to the EU are a focus of EU AD policy. For reasons related to direct competition, exporting countries that overlap in their product mix with the EU would be more likely to be targeted by protection (Facchini *et al*, 2010). For this purpose, we develop a ‘similarity index’ first introduced by Finger and Kreinin (1979) and used by Schott (2008). To create the similarity index, we use detailed data on exports for all exporting countries in the following way:

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

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

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<sup>23</sup> For each product-country combination, we calculate the preference margin as the maximum of all preference margins at the more disaggregated tariff line level.

<sup>24</sup> Corresponding figures can be obtained from the authors upon request.

defined as 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 mix similarity by *country*. Second, we calculate the index by *industry-country* combination 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 yields an industry-country specific measure by assessing the similarity of, say, China's textile industry to EU's textile industry. In both cases the indicator lies between 0 and 1. Values closer to 1 indicate a more similar product mix of the country or the industry-country combination with the EU.<sup>25</sup> Ideally, we would use product-level production data rather than export data to assess the product mix of countries. However, these data are not available and we approximate product mix with export data at the HS-06 level from UN COMTRADE.

To assess whether product mix similarity by country and by industry-country combination result in greater AD incidence, we assign observations into quartiles depending on their index value.<sup>26</sup> For country observations in the same quartile in year  $t-1$ , we determine the country and import value coverage ratios of AD policy in year  $t$ , *ie* indicators (2) and (4). For industry-country observations, we do the same to determine product-country and import value coverage ratios, *ie* indicators (3) and (4).

Figure 8 shows the coverage ratios, indicators (2) and (4), for the quartiles of country-specific product mix similarity calculated in this way. Figures 8a and 8b illustrate that, for both stock and flow measures of AD policy, countries most similar to the EU are targeted relatively more frequently with AD than less similar countries. One explanation could be that the trade volume between similar trading partners is also larger and that this 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 drivers of AD incidence. To overcome this, Figures 8c and 8d illustrate the relative import value covered by AD policy, *ie* indicator (4), which should account for the larger trade between similar partners. Here, we still find that similar trading partners appear more often in EU AD policy than others.<sup>27</sup>

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<sup>25</sup> In case the exports of a country to the world are zero in an industry for a certain year, we set product mix similarity index by industry-country combination equal to zero.

<sup>26</sup> 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.

<sup>27</sup> Doing so generates an unexpected outcome in the quartile of trading partners that are least similar to the EU. Panel d shows a somewhat unexpected spike in 2002 of the import value covered by AD initiations against the trading partners least similar to the EU, contributing to considerable coverage shares of AD measures, as can be seen

In unreported results, we have also calculated indicators (3) and (4) for quartiles of the industry-country-specific similarity index. Here, we also conclude that foreign industries that are similar to the EU are targeted relatively more by its AD policy.

### 5.3 Product characteristics

We introduce a further novelty to the literature by linking AD policy to certain product characteristics. To see whether AD policy is more oriented towards homogeneous or differentiated products, we apply the Rauch (1999) indicator of product differentiation. Also, we analyse whether EU 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.<sup>28</sup>

The Rauch (1999) indicator classifies products into three categories: differentiated goods, homogeneous goods quoted on an organised 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.<sup>29</sup> Our methodology consists of assessing indicators (1) and (4) involving the share of products and imports covered by AD and computing them for each class of products. Figure 9 illustrates our results.

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 homogeneous products than for differentiated products (Panel a), while the reverse is true for indicator (4), the ‘value’ measure (Panel c). This suggests that the number of differentiated products under AD appears to be relatively low, while their import value is relatively large.

Figure 9a illustrates that the share of differentiated products covered by AD measures increased between 2004 and 2007. This suggests that the onset of the increase in product coverage that we noted earlier is mainly driven by differentiated products. The coverage share of AD initiations, depicted in Panels b and d, points at such a conclusion as well. Case initiations cover a large share of differentiated products and imports, particularly after 2004. We find that not one, but several industries account for this peak, including ‘footwear’, ‘base metals’ and

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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.

<sup>28</sup> In order to match Rauch (1999) and BEC classification to HS-06, we use concordance tables provided by the United Nations Statistics Division.

<sup>29</sup> Rauch (1999) defines a ‘liberal’ and a ‘conservative’ classification, the latter defining some products as ‘differentiated’ that are ‘homogeneous’ according to the former classification. Our results are reported for the ‘conservative’ classification, but a robustness check shows that they are very similar when using the ‘liberal’ classification.

‘machinery and electronic equipment’. The share of homogeneous products under AD protection also rises, but a few years after 2004.

Another product classification for which we verify the link to AD policy is the BEC that we aggregate to three broad categories: capital goods, industrial goods and consumer goods.<sup>30</sup> For each group of products, we again compute indicators (1) and (4) on product and import value coverage, respectively. The indicators are plotted in Figure 10.

Figures 10a and 10c indicate that both the share of consumer goods and the import share of consumer goods subject to AD measures increased tremendously shortly after 2004. Although there is a weak reversal trend during the crisis with AD initiations focusing on industrial goods as shown in Panels b and d, consumer goods continue to play a more important role in AD policy than before. The increased importance of consumer goods is a general tendency, not driven by a few peculiar cases. It is also in line with the increase in the number of industries covered by AD documented earlier, where the new users of AD policy include ‘animal products’, ‘food and beverages’ and ‘vegetables’, *ie* all final consumer goods industries.<sup>31</sup> Capital goods played a minor role in EU AD policy in the first decade of the 2000s.

One potential explanation for a shift in the relative importance of AD policy from industrial products to consumer products could be related to the fragmentation of production across countries. EU firms that offshore the production of intermediates they used to produce domestically may be less prone to formulating dumping complaints against imported intermediates when these intermediates are shipped back to the EU. This is because AD measures may raise the prices of imported intermediates and are then likely to have a negative impact on firms’ sales, as shown by Konings and Vandenbussche (2009).

## 6 Is there EU member state heterogeneity?

This section inspects individual EU member states’ imports more closely in order to verify the results regarding the coverage of AD measures in terms of products, countries, product-country combinations and import values. For each individual member state in the EU, we calculate product and country coverage as well as import value ratios (1)-(4) using extra-EU-27 imports only. Results could differ across EU member states because 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. Results are shown in Table 4.

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<sup>30</sup> The BEC classification is available on the website 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.

<sup>31</sup> A closer look at the data indeed shows that the newly covered products that 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, the results for most individual EU member states are consistent with the results obtained for the EU as a whole. Product coverage has increased for all countries and is at a similar level across countries. There are relatively few member states that are outliers. Luxembourg is an outlier as product coverage is somewhat smaller than in other member states, which may be due to its small country size and 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 that 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 it also reflects a similar pattern across most individual member states. Moreover, 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.

## **7 Conclusion**

One of the most important conclusions arising from this paper is that there is no evidence of a major change in the EU's trade policy since the outbreak of the crisis. After failing to find evidence that applied MFN tariff rates or technical trade barriers have increased, we examine EU AD protection. The detailed descriptive evidence on EU AD policy patterns suggests that there was no major change in the EU's policy regime through 2008-9. The EU seems to have largely remained on its pre-crisis path of AD policy.

Our analysis is based on several newly constructed indicators. In terms of the '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 in EU's trade policy beginning in 2004. 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 the EU initiating a higher number of AD investigations with a constant number of products. Rather, it reflects that the number of products per investigation has increased.

Another trend is an increasing EU focus on China as a target for AD cases, with cases brought against China representing around 40% of EU AD initiations between 2004 and 2009. To a lesser extent, other lower middle and low 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 a trend that started earlier.

When analysing the relationship between EU AD policy and its 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 analysing the relationship between AD policy and the levels of applied MFN tariffs, we do not find any clear pattern of substitution. In addition, we assess the relationship between product mix similarity of trading partners and the EU’s use of AD policy. We find that AD measures are more often imposed against countries and country-industry combinations that are similar to the EU. In terms of product characteristics, we observe that, in particular, the shares of consumer goods and differentiated goods covered by EU AD measures have increased rapidly after 2004. Although there is a weak reversal trend during the crisis, consumer goods and differentiated goods continue to play an important role in AD policy. 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 general patterns surrounding AD policy mostly hold up, even when results are considered at the level of individual EU member states.

The EU’s AD policy through the late 2000s is mainly characterised by trends that had already started by 2004. While there are a number of events that coincide with this date and that could provide an explanation, it is hard to pinpoint a single one for the change in the trend. One possible explanation is that a new European Commission entered office in 2004 with the arrival of a new trade commissioner.<sup>32</sup> Another potential explanation is that, in 2004, ten new EU member states joined the EU, which may have altered the policy mix and the decision-making. Alternatively, it could just be that European firms, the ultimate initiators of AD cases, have been subject to new globalisation forces that may have affected the demand for protection and some of its characteristics.

More importantly for this paper is the fact that we have not found any evidence that points at a major turnaround in EU trade policy during the crisis. Nevertheless, it remains to be seen whether governments such as the EU can continue to resist the use of AD as a ‘beggar-thy-neighbour’ policy in the aftermath of the crisis. Research by Reinhart and Rogoff (2009) suggests

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<sup>32</sup> The trade commissioner taking office in 2004 was Peter Mandelson, a UK national.

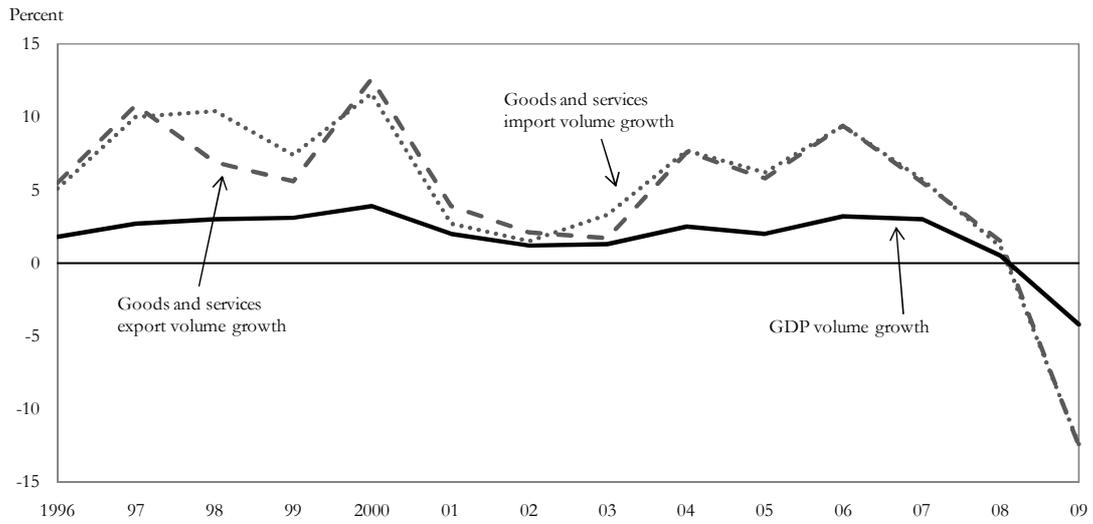
that negative effects of financial crises, in terms of unemployment and other output related variables, tend to linger much longer, which could make trade protection a tempting option in the coming years.

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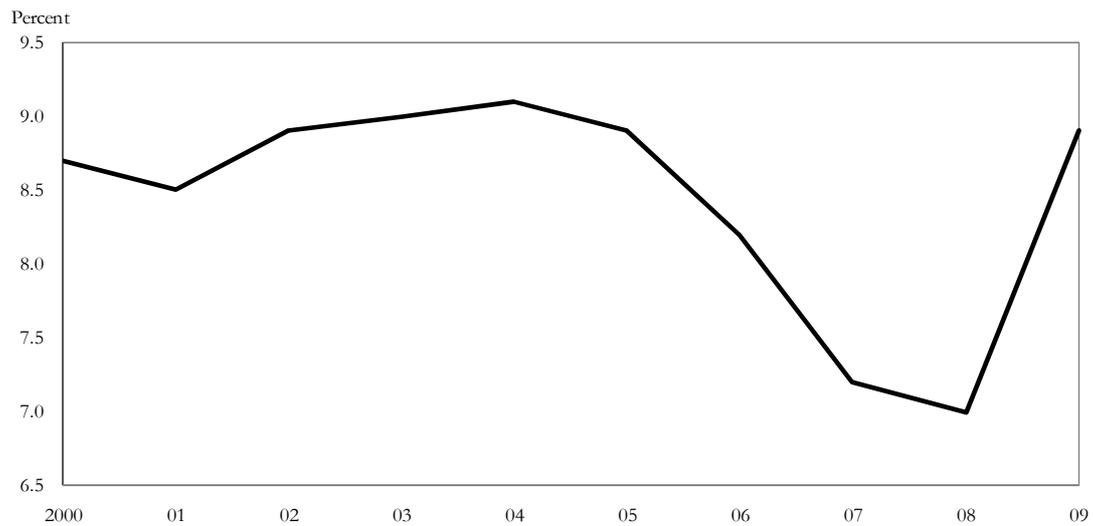
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a. Real export, import and GDP growth, EU-27

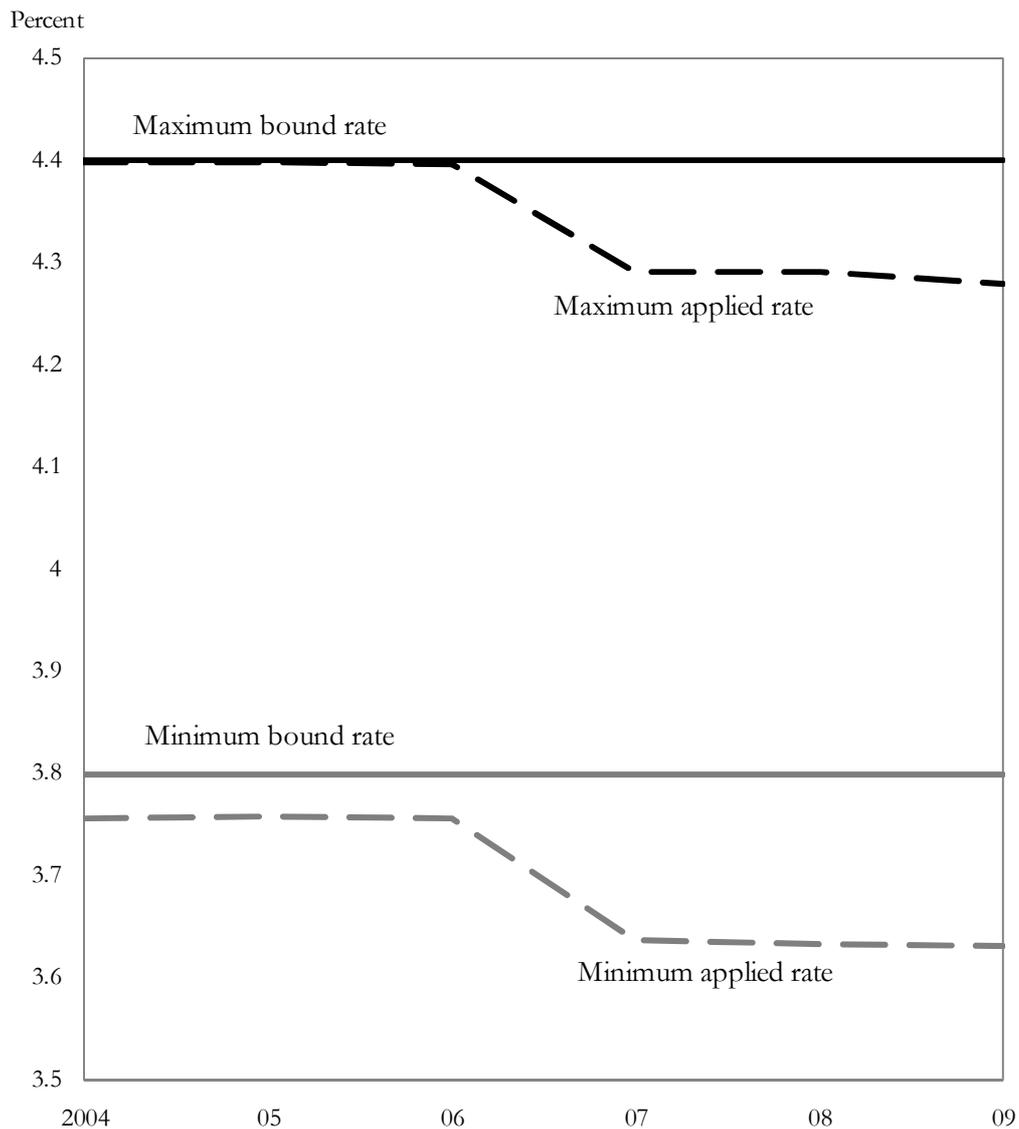


b. Unemployment rate, EU-27



Source: Eurostat.

**Figure 1: EU macroeconomic conditions**

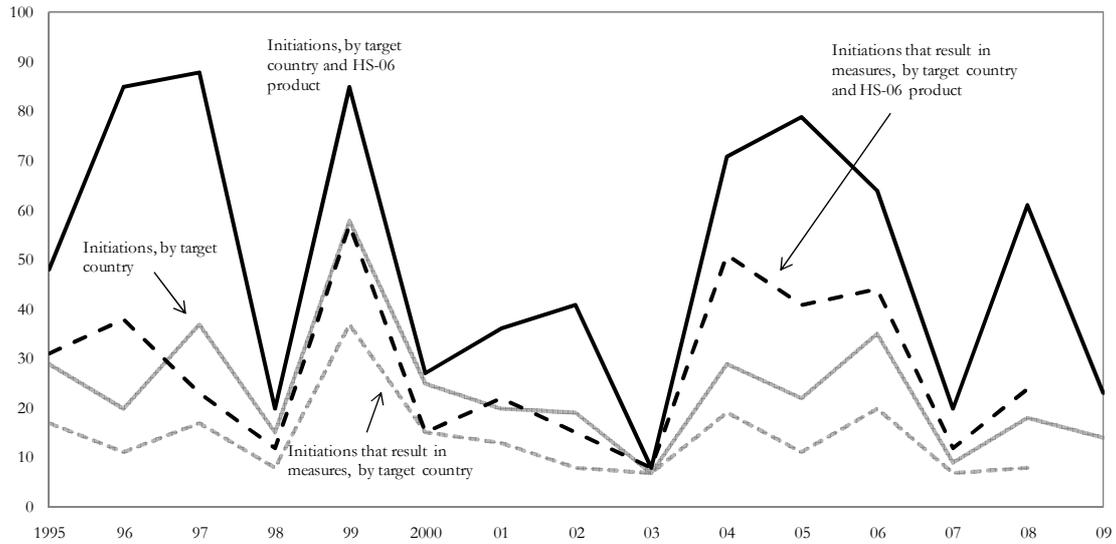


Notes: Maximum and minimum rate correspond to maximum and minimum tariff at the tariff line level for each HS 6-digit (HS-06) product (HS revision 1996). Average is calculated as simple average over all HS-06 products. Only HS-06 products for which applied and bound rates are ad valorem duties are included. Only HS-06 products with 1:1 match between HS revisions 1996, 2002 and 2007 are included.

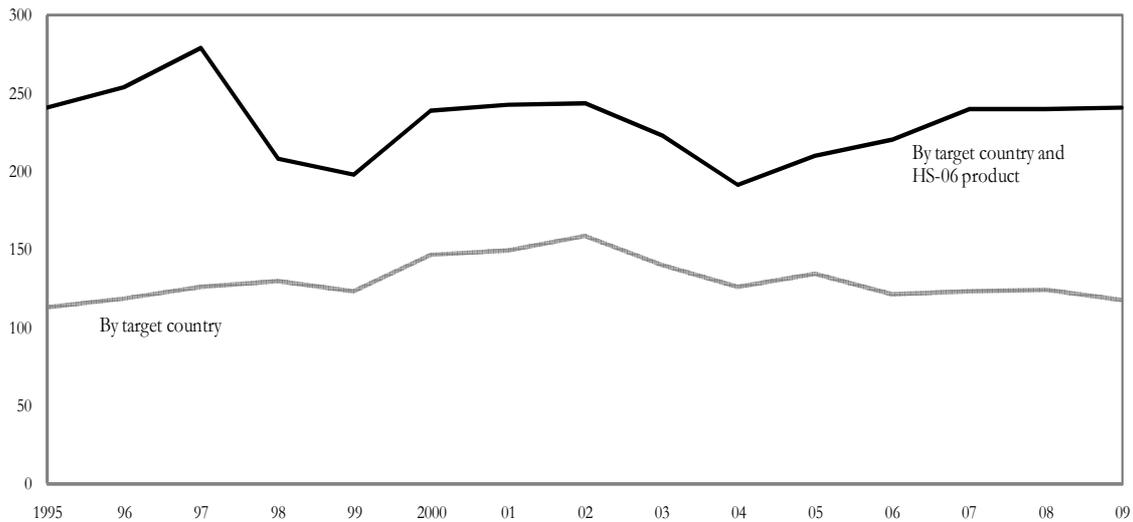
Source: Authors' calculations based on UN TRAINS and the WTO's Consolidated Tariff Schedule.

**Figure 2: EU average MFN tariff, bound and applied rates**

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



b. Stock: Number of AD measures in force

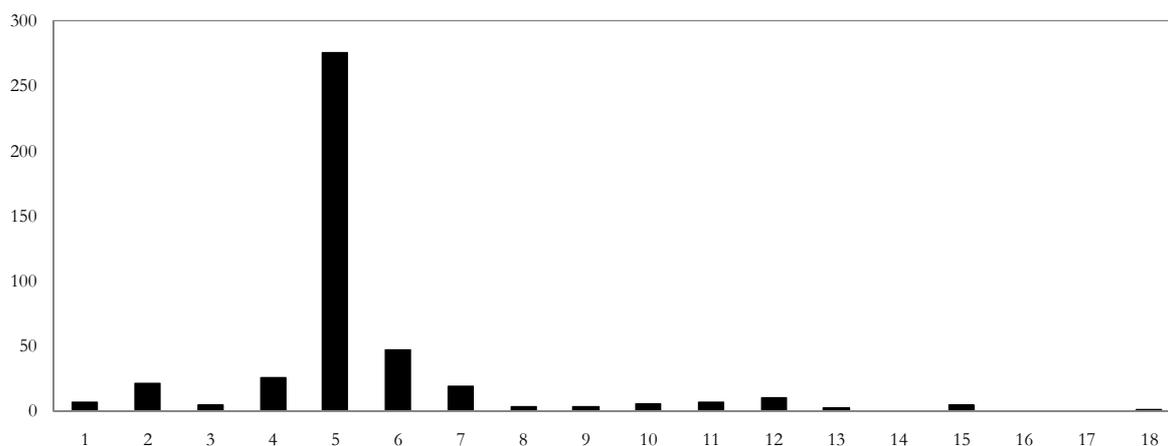


Notes: AD cases that have missing HS codes in the database are excluded. AD cases against EU-27 member states before their EU accession are excluded. Panel a: For the number of AD initiations that result in protection, the 2009 value was not yet available at the time of writing. Panel b: For AD measures with a missing revocation date, we assume that AD protection was in place for five years.

Source: Authors' calculations based on Temporary Trade Barriers Database (Bown, 2010).

**Figure 3: EU antidumping policy**

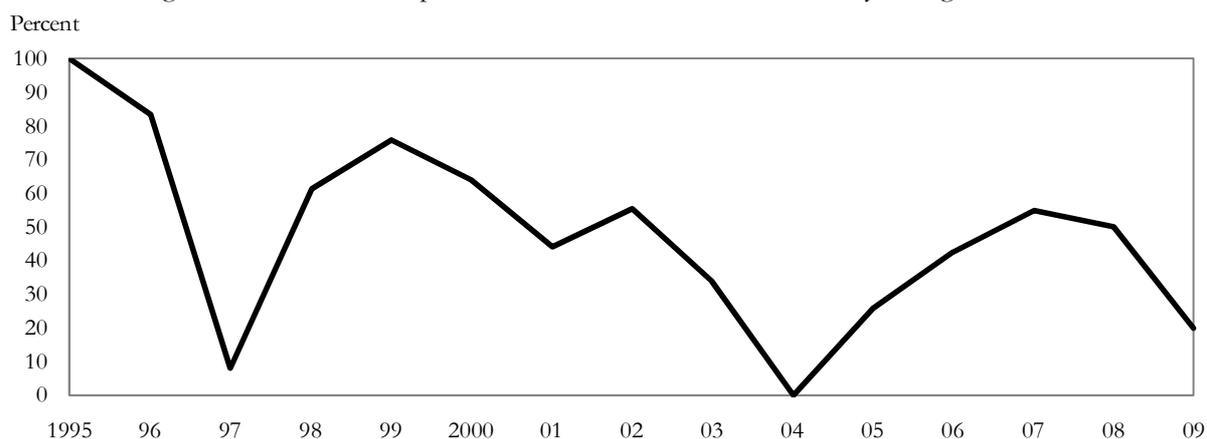
a. Number of AD measures expired before 31 December 2009 by duration in years



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 ago and still in force

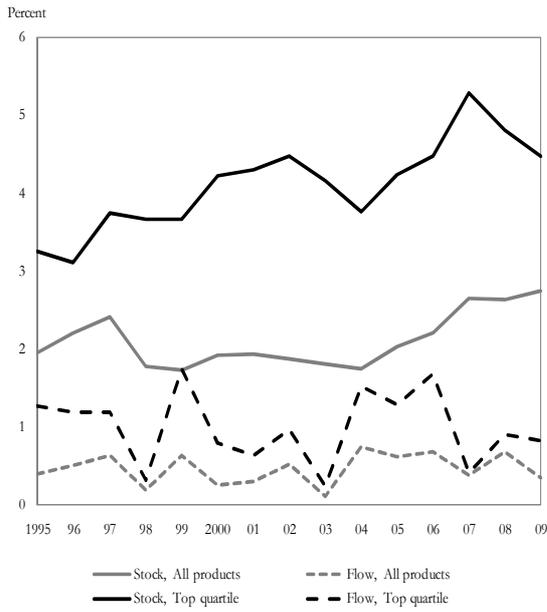


Notes: Measures are counted by target country and HS-06 product. AD measures with revocation date or HS code missing in the database are excluded. Panel a: Duration of x years on the horizontal axis implies a duration of between x-0.5 and x+0.5 years. Panel b: Duration calculated referring to 31 December 2009, the end of the data period. Panel c: Percentage of total AD measures not removed by 30 June of the year on the horizontal axis despite being imposed more than five and less than six years ago.

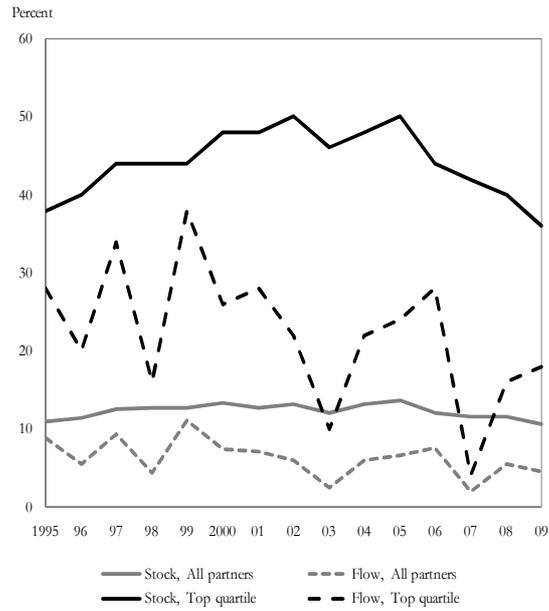
Source: Authors' calculations based on Temporary Trade Barriers Database (Bown, 2010).

**Figure 4: Duration of EU AD measures**

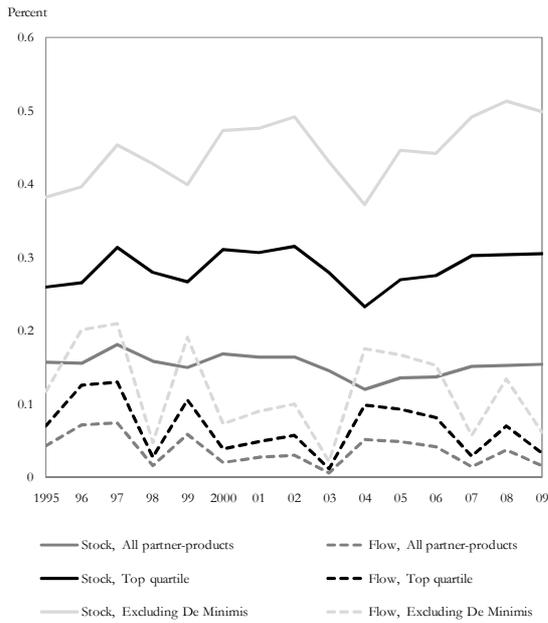
a. Stock and flow: Share of products covered



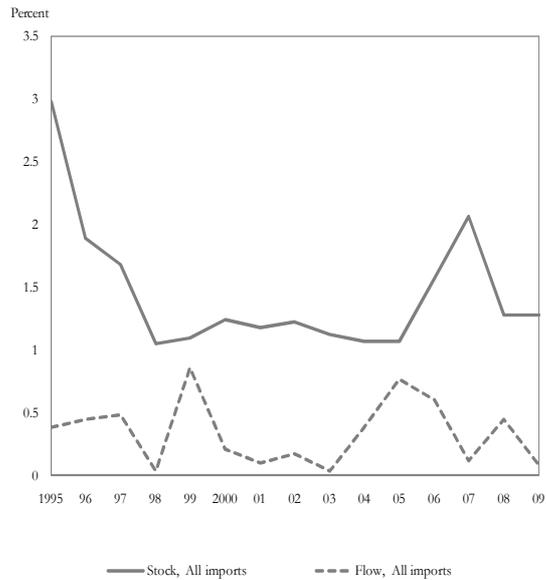
b. Stock and flow: Share of countries covered



c. Stock and flow: Share of product-country combinations covered

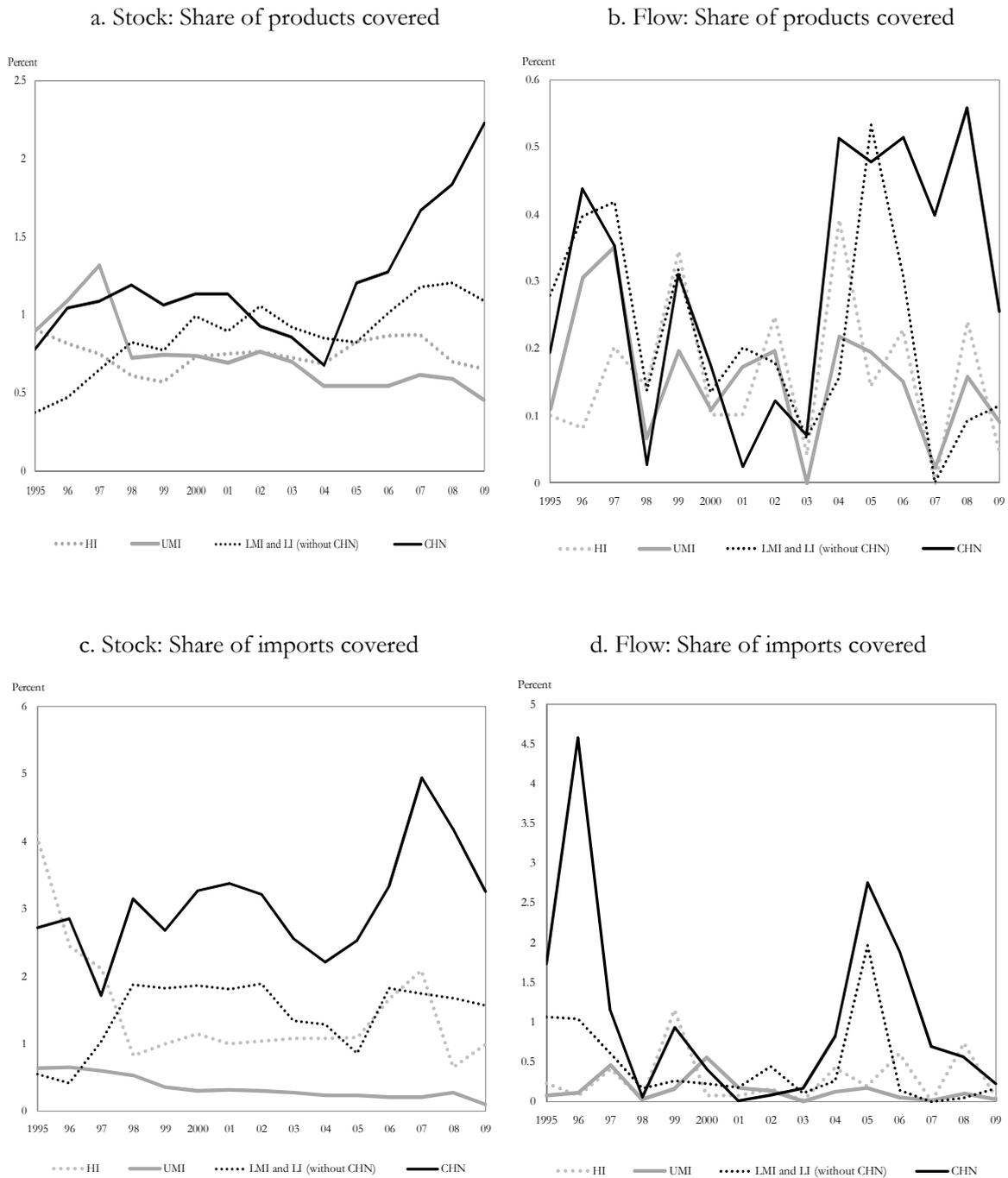


d. Stock and flow: Share of imports covered



Notes: Panel a is calculated using indicator (1); Panel b is calculated using indicator (2); Panel c is calculated using indicator (3); Panel d is calculated using indicator (4). Coverage shares calculated for the stock of AD (AD measures in force) are drawn with continuous lines. Coverage shares calculated for the flow of AD (AD initiations) are drawn with dashed lines. All figures are based on an EU definition that includes Austria, Denmark, Finland, France, Germany, Ireland, Italy, Portugal, Sweden and the United Kingdom. For definitions of ‘Top quartile’ and ‘De minimis’, see Section 4.1.

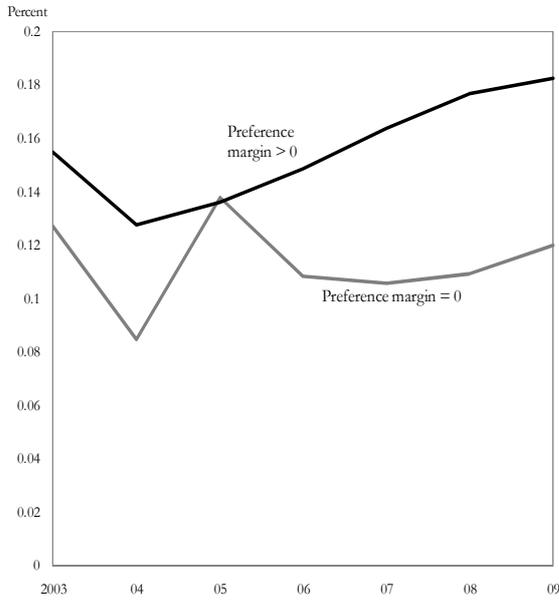
Figure 5: Total coverage shares of EU AD policy



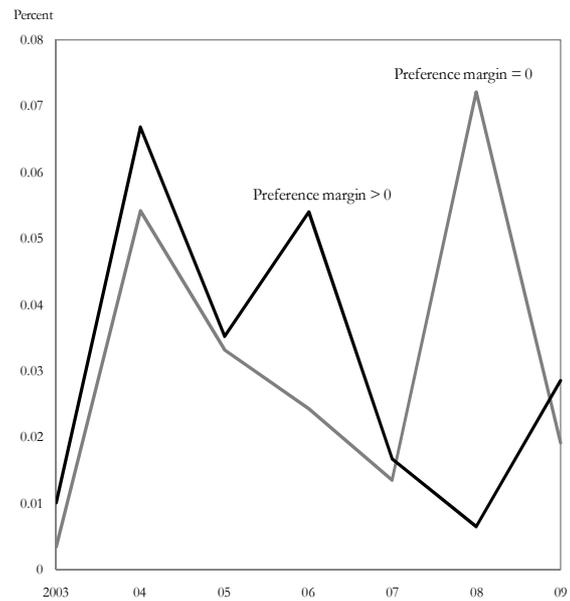
Notes: Panels a and b are calculated using indicator (1). Panels c and d are calculated using indicator (4). Panels a and c show coverage shares calculated for the stock of AD (AD measures in force). Panels b and d show coverage shares calculated for the flow of AD (AD initiations). All figures are based on an EU definition that includes Austria, Denmark, Finland, France, Germany, Ireland, Italy, Portugal, Sweden and the United Kingdom. HI= high income countries, UMI= upper middle income countries, LMI and LI (without CHN) = lower middle and low income countries without China, CHN = China.

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

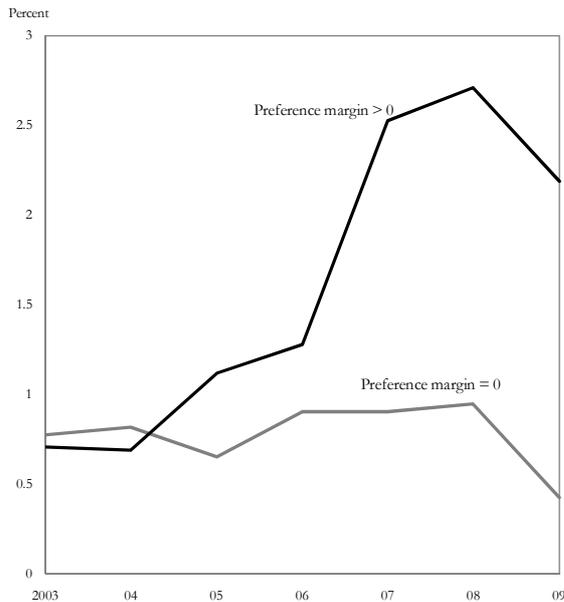
a. Stock: Share of product-country combinations covered



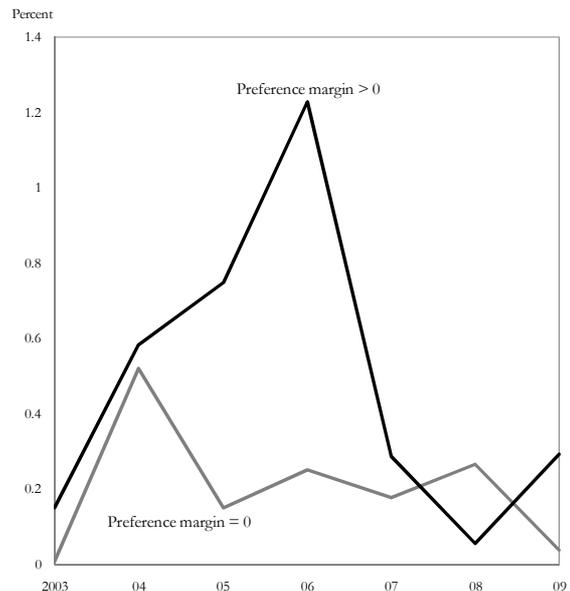
b. Flow: Share of product-country combinations covered



c. Stock: Share of imports covered

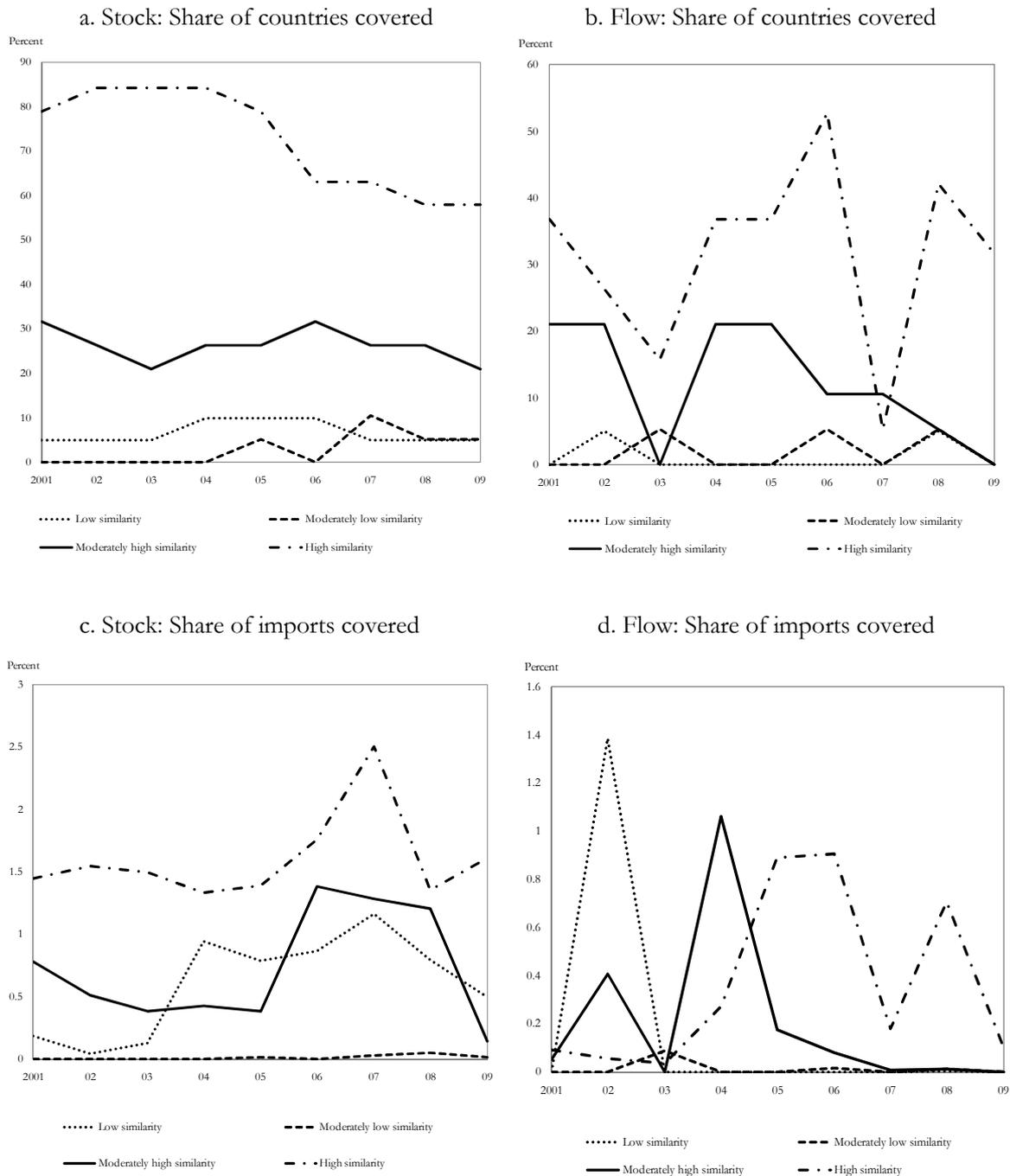


d. Flow: Share of imports covered



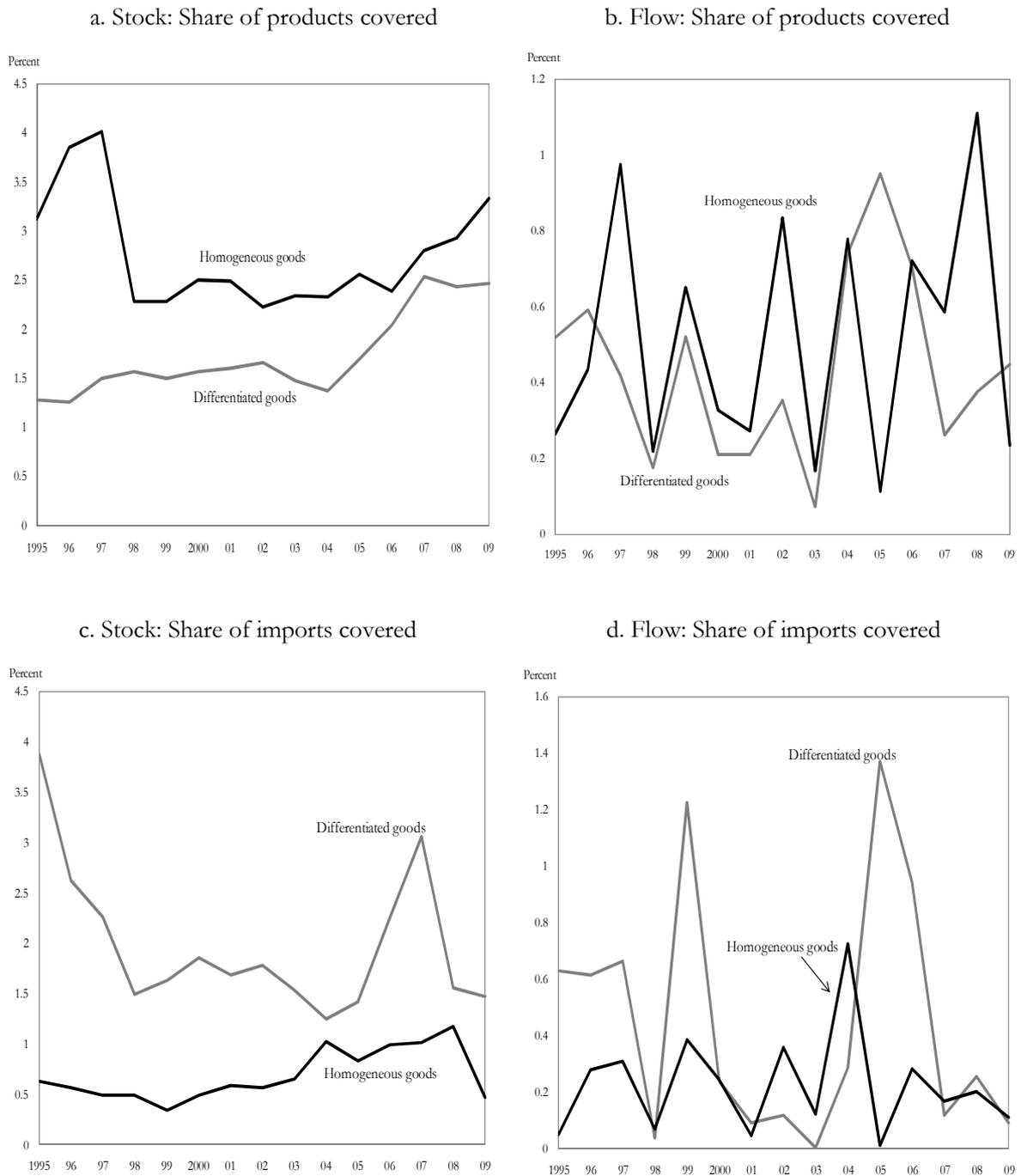
Notes: Panels a and b are calculated using indicator (3). Panels c and d are calculated using indicator (4). Panels a and c show coverage shares calculated for the stock of AD (AD measures in force). Panels b and d show coverage shares calculated for the flow of AD (AD initiations). All figures are based on an EU definition that includes Austria, Denmark, Finland, France, Germany, Ireland, Italy, Portugal, Sweden and the United Kingdom. Preference margin corresponds to the difference of applied MFN and preferential tariff as described in Section 5.1.

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



Notes: Panels a and b are calculated using indicator (2). Panels c and d are calculated using indicator (4). Panels a and c show coverage shares calculated for the stock of AD (AD measures in force). Panels b and d show coverage shares calculated for the flow of AD (AD initiations). All figures are based on an EU definition that includes Austria, Denmark, Finland, France, Germany, Ireland, Italy, Portugal, Sweden and the United Kingdom. Index for product mix similarity by country calculated following Finger and Kreinin (1979). Degree of product mix similarity is based on assignment of index value to corresponding quartile as described in Section 5.2.

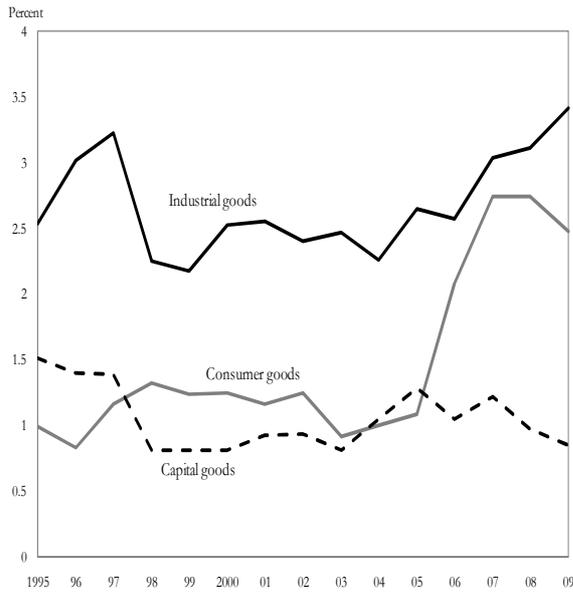
**Figure 8: Coverage shares of EU AD policy by product mix similarity at country level**



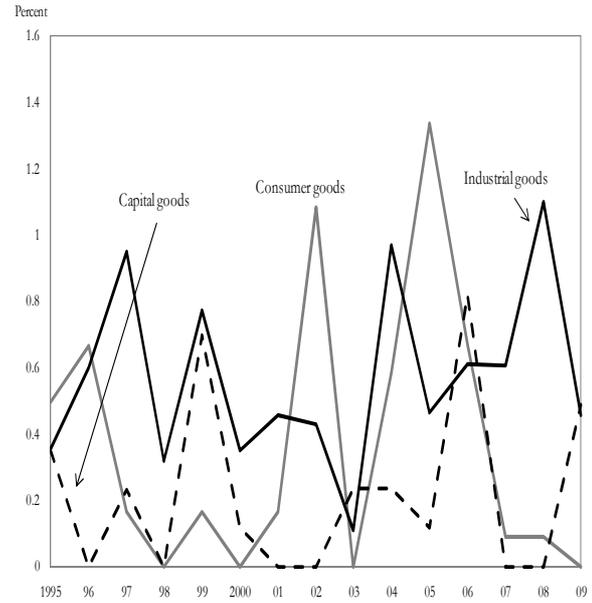
Notes: Panels a and b are calculated using indicator (1). Panels c and d are calculated using indicator (4). Panels a and c show coverage shares calculated for the stock of AD (AD measures in force). Panels b and d show coverage shares calculated for the flow of AD (AD initiations). All figures are based on an EU definition that includes Austria, Denmark, Finland, France, Germany, Ireland, Italy, Portugal, Sweden and the United Kingdom. Definition of differentiated and homogeneous goods follows ‘conservative’ Rauch (1999) classification.

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

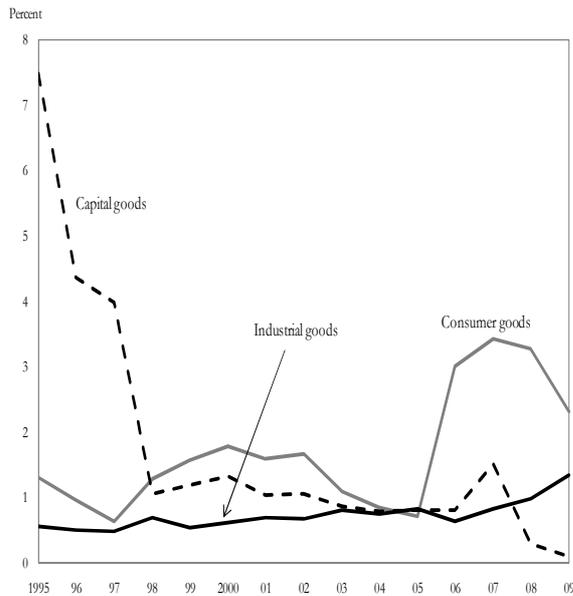
a. Stock: Share of products covered



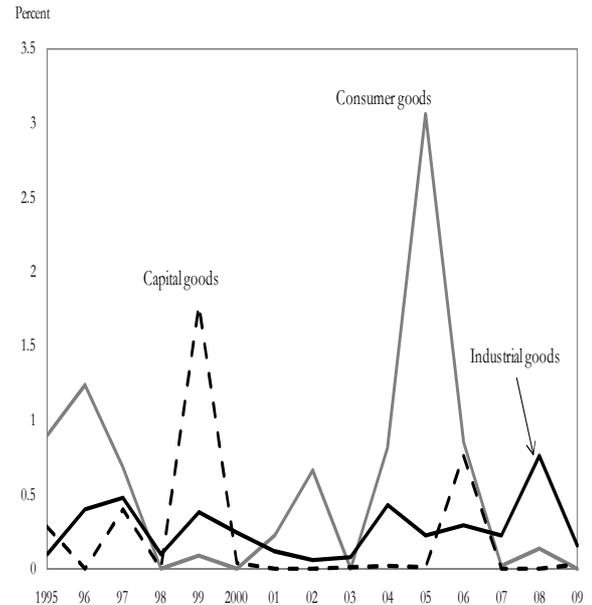
b. Flow: Share of products covered



c. Stock: Share of imports covered



d. Flow: Share of imports covered



Notes: Panels a and b are calculated using indicator (1). Panels c and d are calculated using indicator (4). Panels a and c show coverage shares calculated for the stock of AD (AD measures in force). Panels b and d show coverage shares calculated for the flow of AD (AD initiations). All figures are based on an EU definition that includes Austria, Denmark, Finland, France, Germany, Ireland, Italy, Portugal, Sweden and the United Kingdom. The exact link between the definition of consumer goods, industrial goods and capital goods and BEC is available from the authors of this paper upon request.

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

**Table 1: ‘Doing Business’ indicators on importing, EU-27**

<b>Year</b>	<b>Mean ‘Number of documents to import’</b>	<b>Mean ‘Time to import in days’</b>
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: All EU-27 countries are included except Cyprus, Luxembourg and Malta.

Source: Authors’ calculations based on ‘Doing Business’ indicators from World Bank.

**Table 2: Use of temporary trade barriers by the EU**

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

	1995	96	97	98	99	2000	01	02	03	04	05	06	07	08	09	Total	Relative
<b>AD</b>	33	23	42	21	66	31	27	20	7	29	24	35	9	18	14	<b>399</b>	<b>87.89%</b>
<b>CV</b>	0	1	4	8	20	0	6	3	1	0	2	1	0	2	6	<b>54</b>	<b>11.89%</b>
<b>CSG</b>	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	<b>1</b>	<b>0.22%</b>

a2. Total number of global safeguard (SG) case initiations

	1995	96	97	98	99	2000	01	02	03	04	05	06	07	08	09	Total	Relative
<b>SG</b>	0	0	0	0	0	0	0	1	1	1	1	0	0	0	0	<b>4</b>	<b>100%</b>

b1. Number of antidumping (AD) countervailing (CV) and China-specific safeguard (CSG) case initiations, counted by trading partner and HS-06 product

	1995	96	97	98	99	2000	01	02	03	04	05	06	07	08	09	Total	Relative
<b>AD</b>	55	94	99	27	123	33	76	42	8	72	90	65	22	62	25	<b>892</b>	<b>89.03%</b>
<b>CV</b>	0	4	6	8	55	0	6	9	2	0	4	1	0	5	10	<b>110</b>	<b>10.97%</b>
<b>CSG</b>	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	<b>1</b>	<b>0.01%</b>

b2. Number of global safeguard (SG) case initiations, counted by HS-06 product

	1995	96	97	98	99	2000	01	02	03	04	05	06	07	08	09	Total	Relative
<b>SG</b>	0	0	0	0	0	0	0	120	1	6	1	0	0	0	0	<b>128</b>	<b>100%</b>

Notes: TTB=Temporary trade barrier, AD=Antidumping, CV=Countervailing, CSG=China-specific safeguard, SG=Safeguard. AD case initiations with HS code missing in the Temporary Trade Barriers Database (Bown, 2010) are excluded. Global SG measures are non-discriminatory, *ie* they apply to all trading partners.

**Table 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 prod.															
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 prod.															
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%
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Notes: Panel a is based on calculation of indicator (1). Panel b is based on calculation of indicator (4). Both panels are based on an EU definition that includes Austria, Denmark, Finland, France, Germany, Ireland, Italy, Portugal, Sweden and the United Kingdom.

**Table 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%
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Note: Based on calculation of indicator (1).