# A comparative analysis of EU Antidumping rules and application

L. Rovegno and H. Vandenbussche

Discussion Paper 2011-23

### Institut de Recherches Économiques et Sociales de l'Université catholique de Louvain





## A comparative analysis of EU Antidumping rules and application\*.

Laura Rovegno<sup>†</sup> and Hylke Vandenbussche<sup>‡</sup>

#### Abstract

Trade policy in the European Union is characterized by an intensive use of Antidumping measures. In this paper we compare existing practices in the EU to WTO rules and to other WTO Members. Our comparative analysis reveals that the EU's "lesser-duty rule", which limits the magnitude of the Antidumping duty to the level of domestic injury caused by dumped imports, results in a lower average duty level in EU cases, particularly when compared to the US. In terms of the "Sunset Clause", which limits the duration of protection to 5 years, the EU presents a lower share of measures lasting beyond this limit as compared to other users of Antidumping. In recent years, the number of case initiations by the EU has decreased. There has also been a shift towards the imposition of duties and away from the use of price undertakings as a protectionist measure. In line with other WTO members, an increasing share of cases are targeted against China, where it used to be predominantly Central-European countries and Japan, as well as other low or middle income countries.

Key words: Antidumping, European Union, Contingent protection, Trade policy, lesser duty rule, price undertakings, WTO.

JEL classification: F13, F14, F52, F53

<sup>\*</sup> This paper has been accepted for publication in a revised form in *"Liberalising Trade in the EU and the WTO: Comparative Perspectives"*, Gaines S., Olsen B. Egelund & Sørensen K. Engsig (eds.) Cambridge University Press. Forthcoming 2011. The authors thank participants in the conference "Liberalising Trade: comparing the experiences of the EU and the WTO" in Aarhus - Denmark, November 2010. We are also grateful for financial support from the Belgian French-speaking Community (convention ARC 09/14-019 on "Geographical Mobility of Factors") and the Belgian Federal Government (Grant PAI P6/07 on "Economic Policy and Finance in the Global Economy: Equilibrium Analysis and Social Evaluation").

<sup>&</sup>lt;sup>†</sup> Corresponding author: IRES, Université Catholique de Louvain. Address: Place Montesquieu 3, 1348 Louvain-la-Neuve, Belgium. Email: <u>laura.rovegno@uclouvain.be</u>.

<sup>&</sup>lt;sup>\*</sup> IRES-CORE, Université Catholique de Louvain, KULeuven-LICOS, & CEPR. Email: <u>hylke.vandenbussche@uclouvain.be</u>.

#### **1. Introduction**

In the context of the WTO system, Members are allowed to impose unilateral trade restrictions against other Members through three "contingent protection" instruments: Antidumping (AD), Countervailing duties (CVD) and Safeguards (SG). The first two are aimed at counteracting actions by foreign exporters or governments that are considered unfair (dumping or subsidies). Unlike SG, AD and CVD are applied against particular trading partners and are therefore exceptions to the Most Favoured Nation (MFN) rule.SG are instruments which allow Members to impose temporary trade restrictions in the face of unusual increases in imports, in order to help domestic producers to adjust to new situations.

In its most basic form, dumping refers to a situation in which a foreign exporter sells its product in the export market at a lower price than in its own home market. AD measures are meant to counteract this behaviour that is implicitly deemed unfair. However, from an economic perspective dumping, thus defined, is price discrimination across borders, which is not necessarily unfair<sup>1</sup>. An in-depth discussion of the merits of AD is beyond the scope of this chapter. However, it is important to keep in mind that AD is increasingly seen as a safety valve instrument giving authorities some flexibility to act in circumstances where domestic producers face unusually strong import competition. In this sense, rather than an instrument to protect domestic producers from unfair practices by foreign firms, AD is perceived as an industrial policy tool (Blonigen & Prusa, 2003, Konings & Vandenbussche, 2005).

The aim of this chapter is to compare AD practices in the EU to WTO rules as well as practices in other WTO Members. We do this in two ways. Firstly, we compare AD rules in the EU to the WTO's framework as well as rules applied by other WTO Members, and analyse their implications. In the second part, we present a descriptive statistical analysis of the use of AD in the EU to see how it applies AD rules and how this compares to other users<sup>2</sup>. On the basis of these two analyses, we identify advantages and risks associated with the particular features of EU AD law and practice.

#### 2. Peculiarities of EU Antidumping rules and their implications

In the WTO system AD is regulated by Article VI of the GATT and the Anti-Dumping Agreement (ADA). Article VI allows Members to impose discriminatory trade restrictions against another Member when a foreign exporter sells its product at less than its "normal value" (NV), and this "dumping" causes or threatens to cause "material injury" to the domestic industry. In the context of the EU, AD is regulated by Article 207 of the Treaty on the Functioning of the European Union and the Antidumping Regulation - Council Regulation (EC) No. 1225/2009. EU AD

<sup>&</sup>lt;sup>1</sup> An exception is "predatory pricing" where a firm sells its product at a price below costs in order to force other competitors out of the market and thus obtain a monopoly. However, the conditions necessary for successful predatory pricing are very unlikely to be met in most markets; in fact, studies have shown that almost all AD cases do not meet these conditions. See Shin (1998) and Bourgeois & Messerlin (1998).

<sup>&</sup>lt;sup>2</sup> All AD data used in this paper comes from the World Bank's Global Antidumping Database (GAD), (Bown, 2010a) and WTO Notifications.

investigations are carried out by the Trade Directorate of the European Commission by initiative of Community producers<sup>3</sup>.

The Commission first evaluates whether there is evidence of dumping by comparing the foreign firm's export price (EP) to the EU against NV. The EP considered is the price "actually paid or payable for the product sold for export to the [EU] net of all taxes, discounts,..., and rebates" (Macrory et al., 1991) - the ex-factory price. NV is calculated as "the comparable price actually paid or payable in the ordinary course of trade for the like product intended for consumption in the exporting country or the country of origin" (Macrory, Vermulst & Waer, 1991). If the quantity of domestic sales is insufficient or the exporting country is considered a "nonmarket economy", NV can be calculated on the basis of the export price to a third country or on the basis of a "constructed value", computed as production costs plus a specified profit margin<sup>4</sup>.

Dumping margins (DM) are computed as the difference between NV and EP. In accordance with Article II of ADA, three alternative methods can be used in this price comparison: 1) weighted average NV to weighted average EP, 2) NV and EP on a transaction-to-transaction basis, and 3) in the special case where "a pattern of export prices...differ(s) significantly among different purchasers, regions or time periods"<sup>5</sup> it is allowed to compare a weighted average NV to EPs in individual transitions. In the last two methods, a specific DM is calculated for each transaction, which is later averaged to obtain the overall DM.<sup>6</sup>

Once it has determined the presence of dumping, the Commission next evaluates whether dumping is causing or threatens to cause injury to European producers. This includes looking at the evolution of industry performance variables such as sales and employment as well as the extent to which EPs undercut prices charged by European Producers (injury margin). The Commission is also requested to verify whether measures would be against community interest, a topic we will return to below. If both dumping and injury are found, measures are imposed by the Council on recommendation by the Commission.

In the remainder of this section, we analyse in more in detail five peculiarities of EU AD laws which are particularly relevant from the economic perspective, and discuss their implications in terms of the application of AD rules and their potential effects on market outcomes.

<sup>&</sup>lt;sup>3</sup> The Commission may also initiate investigations on its own initiative, however to our knowledge this has never happened.

<sup>&</sup>lt;sup>4</sup> For further details on how normal value is calculated see (Macrory, Vermulst & Waer, 1991)

<sup>&</sup>lt;sup>5</sup> Anti-Dumping Agreement Article II: 4.2.

<sup>&</sup>lt;sup>6</sup>A common practice when calculating these averages is so-called "zeroing" or "simple zeroing", which consists on replacing negative DMs found in specific transactions with zeros. It is outside the scope of this chapter to discuss the problems associated with zeroing. We only mention that given the evident bias it introduces in the calculation of DMs, this practice has been the focus to strong criticism, becoming the "single most litigated subject in the history of the WTO" (Vermulst & Ikenson, 2007). For an in-depth discussion of zeroing see Vermulst (2009) and Prusa (2010).

#### 2.1. Community interest

As mentioned above, to the two conditions required for the imposition of Antidumping measures according to Article VI of the GATT, EU legislation adds a third condition, namely that measures should not be against the "community interest". In principle, this means that, unlike in other parts of the world where only the interests of import-competing producers are considered, in the EU AD rules warrant that the welfare of other parties should also be taken into account. In particular, this should include an evaluation of the likely effect on consumers as well as downstream industries that could be affected by the protection because they use the product as an input. However, in practice it is not clear to what extent this clause is strictly applied. In fact, the Global Antidumping database (World Bank) reports only six EU cases in which rejection was due to Community interest. Even in the case of underreporting, this small number is suggestive of the limited use of the Community Interest clause in the EU.

#### 2.2. Cumulative analysis or "cumulation"

Cumulation is a feature shared by many AD users, including the EU, the US, Canada and Australia. The importance of cumulation stems from the fact that usually simultaneous AD petitions are filed against different foreign exporters in the same product. Cumulation allows authorities to consider the combined effect of the aggregate imports from all sources under investigation in the evaluation of material injury. Despite the fact that this rule was not mentioned in the GATT/WTO, nor was it included in EU regulations prior to the Uruguay Round, it did appear to be common practice. For example, Tharakan, Greenaway & Tharakan (1998) report that cumulation was used in 91% of all multiple-country cases filed in the EU between 1980 and 1987. However, unlike the US where cumulation has been mandatory since 1984 (Hansen & Prusa, 1996), in the EU it is at the discretion of the authorities to evaluate whether "a cumulative assessment of the effects of the imports is appropriate in light of the conditions of competition..."<sup>7</sup>

Defenders of cumulation argue that several smaller foreign exporters can cause the same degree of injury as a single larger one. Nevertheless, the practice is not without its critics. One major problem is that it increases the chance of affirmative rulings, especially against countries with small import shares (Hansen & Prusa, 1996). For the case of the EU, Tharakan *et al.* (1998) find that cumulation increases the probability of an affirmative injury finding by about 42%. Moreover, they conclude that that around 36% of the cases included in their study in which cumulation was used would have resulted in a negative ruling if cumulation had not been used. Furthermore, these authors find that cumulation has a "super-additive" effect<sup>8</sup>: the probability of an affirmative injury decision rises as the number of countries being cumulated increases, even holding the total import share constant.

#### 2.3. Lesser duty rule

In contrast with other AD users such as the US and Canada, EU AD duties do not necessarily have to match the entire DM if a lower duty is sufficient to eliminate the material injury

<sup>&</sup>lt;sup>7</sup> Antidumping Regulation - Council Regulation (EC) No. 1225/2009, Article III: 4.b.

<sup>&</sup>lt;sup>8</sup> Hansen & Prusa (1996) were the first to notice this phenomenon in the US.

to the domestic industry. This "lesser duty rule" should result in a lower level of duties overall. To illustrate this, Fig.1 compares average AD duty levels in the EU to those in US and Canada between 1989 and 2009<sup>9</sup>. In almost every year, average AD duty levels in the EU are much lower than in the US. Compared to Canada, they are around the same levels at the beginning of the period considered, but are also lower towards the end. In fact, the US and Canada's duty levels show an increasing tendency, not present in the EU. The overall average duty level in the EU for the entire period is 30%, against 70% for the US and 47% for Canada. Moreover, the maximum duty level registered in the EU was 96.8% imposed in two cases against Japan in 1994 and 2000. For the US the maximum was 386% and in Canada 226%, both imposed against Chinese firms in 2009 and 2007 respectively. Although other phenomena may explain these differences, the numbers are at least suggestive and seem to indicate that the lesser duty rule is effective at keeping AD duty levels low.

#### [INSERT Figure 1]

The desirability of having lower duty levels rests on the premise that they lead to fewer distortions to market competition. However, lesser duty rules may have hidden effects. In fact, one of the peculiar features of AD policies is that their mere filing can affect firms' behaviour since the result of the investigation depends on market outcomes. From this perspective, a study by Pauwels, Vandenbussche & Weverbergh (2001) is particularly relevant. In their theoretical model, a domestic firm has the incentive to expand its quantity sold during the investigation period in order to increase the calculated DM. However, under a lesser duty rule, this is offset by an incentive to contract quantities in order to increase the injury margin. Which of the two dominates will depend on the firms' expectation regarding which margin will finally be applied. The authors show than under certain circumstances, a lesser duty system leads to lower overall welfare than a pure dumpingmargin system. Also, overall domestic output is higher under the pure dumping-margin system than under a lesser duty rule. Although this may not be the case in all circumstances, their model highlights the fact that given the endogeneity of AD duties, their effects go beyond that of a simple duty. Peculiar features of the rules, that may at first light look innocent, may have unexpected effects. In this particular case, results suggest that although it is desirable to have a mechanism assuring lower duty levels, it will be preferable that such a mechanism is not open to manipulation by firms.

#### 2.4. Treatment of non-named and potential exporters

AD investigations are directed at particular firms from the targeted country. For each of these firms a separate DM is calculated and if the case is affirmative, a firm specific duty is imposed. However, imports from other firms in the same country are also subject to a duty, even if those firms have not committed "dumping". In the EU, this duty is the highest duty of among those imposed to firms named in the investigation - in the US is the weighted average of duties imposed to named firms (Macrory, Vermulst & Waer, 1991).

<sup>&</sup>lt;sup>9</sup> To simplify the comparison, we only consider *ad valorem* duties, as it will be shown later, in the EU the vast majority of duties take this form, while in the US and Canada all AD duties are *ad valorem*.

In order to avoid circumvention of duties, the same criterion usually applies to newcomers that were not active in the EU market during the AD investigation (Macrory, Vermulst & Waer, 1991). The main problem with this provision is that it increases barriers to entry in the EU market, increasing the market power of incumbents (Stegemann, 1990). This can be particularly problematic if combined with price undertakings (PUs), where named firms agree to maintain a minimum price and thus avoid paying duties. Not only do ADmeasures in the EU allow prices to be set at a higher level, but they also eliminate the competition from potential new entrants.

#### 2.5. Single agency system

Unlike other WTO Members (such as the US where two separate agencies are involved), in the EU both the dumping and injury investigations are concentrated in the European Commission. Arguably, having two independent agencies goes in favour of objectivity (Blonigen & Prusa, 2003). Conversely, a unified system has the advantage of avoiding conflicting judgements. For example, in a two agency system, the agency in charge of the dumping decision may define the products concerned narrowly as to maximize the duty, while the other may do it broadly in order to maximize injury (Blonigen & Prusa, 2003). Yet, it is unclear how relevant this is in practice. In fact, according to our calculations using data from the Global Antidumping Database (World Bank), 95% of cases initiated between 1989 and 2008 in the US where a dumping decision was made, received an affirmative dumping ruling. In contrast, the share of affirmative rulings on total injury decisions was 62%. This suggests that the fate of an AD petition is really decided in the injury stage. In the EU, the share of affirmative rulings in total dumping and injury decisions was 77% and 74%, respectively. Additionally, a single agency system should in theory be more susceptible to political influences than two agency system (Macrory, Vermulst & Waer, 1991). However, an empirical study by Tharakan & Waelbroeck (1994) failed to find notable differences between the two systems.

What the evidence seems to suggest is that even when two separate agencies are involved, the power to decide who gets protection is nonetheless concentrated in one. This makes the distinction between the two systems less relevant than what *a priori* one may think. What seems to be important is what concerns the injury decision. It is there that authorities have more discretion and are therefore more vulnerable to political pressure. In this sense, the lower share of rejections on total injury decisions registered the EU with respect to the US is of some concern.

#### 3. Antidumping activity in the EU

In this section we analyse the use of AD by the EU and compare it to that of other selected users as well as worldwide trends. We use data from the Global Antidumping Database (GAD) from the World Bank (Bown, 2010a) and WTO Antidumping Notifications. We focus particularly on the period 1995 to 2008, although we extend this period when data availability allows it. This period is particularly interesting for at least two reasons. Firstly, it covers the years post-Uruguay Round when important changes to AD rules were introduced. In particular, since 1995 Members are obliged to notify the WTO when AD cases are initiated or measures imposed. Additionally, focusing on AD activity after 1995 allows us to compare the use of AD in the EU not only with respect to traditional users but also to countries that have started using AD in later years, in particular emerging economies. We analyse the use of AD by the EU and other users in several manners. We first focus on the intensity of AD activity both in terms of initiations and measures, we then look at what are the

outcomes of these initiations and in particular the type of measures applied and their length. We then examine which countries are targeted and how this relates to outcomes and measures, and finally we look at AD activity across industries.

#### 3.2. The use of Antidumping

How intensively does the EU use AD?<sup>10</sup> According to WTO Antidumping Notifications between 1995 and 2010 (table 1), the EU ranks third both in terms of initiations and measures, only preceded by India and the US. Fig. 2 presents the evolution of the number of AD initiations and measures by year of initiation. We divide the 15 year period 1995 to 2009 into five sub-periods and present data for the top 4 heaviest users to which we add China and worldwide WTO Notification. Unlike the EU and US which are traditional users of AD, the other three countries considered did not use AD intensively until the 1990s<sup>11</sup>. The evolution of AD activity was somewhat varied across users. In the EU, the number of initiations tended to decrease from a total of a 100 cases in the first period to 41 in the latest. The share of measures on total initiations, on the other hand, does not present significant changes. Both the US and India experienced a sharp peak in the use of AD in between 1998 and 2003, followed by a pronounced drop in the period starting in 2004. China presents a much reduced number of cases in the first period given that it started using AD only in 1997. However, it later experienced a considerable increase in AD activity. Overall, worldwide AD activity<sup>12</sup> presented a peak in the second and third sub-periods, particularly driven by the sharp increases in the US and India, with a later drop to levels similar to those of the first sub-period. Another element that emerges from Fig. 2 is that new users present a higher share of cases ending in measures than traditional users, an issue we discuss further in what follows.

#### [INSERT Figure 2]

What are the outcomes of AD petitions? Fig. 3 presents the desegregation of AD cases filed in these five users according to whether they resulted in measures, were withdrawn by petitioners or were terminated by the authorities. The EU presents a slightly higher share of cases resulting in measures than the US, but much lower than the three new users considered. In fact, these countries present a particularly large share of cases resulting in measures, especially India and China where this ratio is around 80%. Regarding terminations, only a quarter of cases are terminated in the EU, much lower than the 41% in the US. The difference is partly explained by a much higher share of withdrawals, 16%. In fact, this seems to be a peculiarity of the EU compared to the other four users.

[INSERT Figure 3]

<sup>&</sup>lt;sup>10</sup> For a more sophisticated analysis see Bown (2010b) and Vandenbussche & Viegelahn (2011).

<sup>&</sup>lt;sup>11</sup>Although Argentina had an AD law since 1972, the number of AD measures was limited until mid-1990s (Nogues & Baracat, 2005). India and China had their first AD cases in 1992 and 1997 respectively (GAD).

<sup>&</sup>lt;sup>12</sup> Although WTO Notifications only include AD activity by WTO Members, this represents the vast majority of worldwide use of AD.

It is interesting to see whether this result is driven by a new trend towards withdrawals or if it has always been the case. This is considered in the lower part of Fig. 3. Although there is some variation in the share of withdrawals, it has always been above 12%. Therefore, it seems that this is a characteristic of EU AD and it has been so for a long time. The economic literature has put forward evidence suggesting that many withdrawals may be the result of unofficial agreements between domestic and foreign firms leading to quantity restrictions and higher prices. In particular, Prusa (1992) and Zanardi (2004) present economic models where domestic firms strategically file for AD protection in order to induce foreign firms into such agreements; once this objective is achieved, the case is withdrawn. Zanardi (2004) tests this empirically using US data and finds evidence supporting the hypothesis<sup>13</sup>. In light of these findings, the greater share of withdrawals in EU decisions is somewhat worrying, since it may be a symptom of AD being used more intensively as a collusive device between competitors.

#### 3.2. The characteristics of Antidumping measures

What types of measures are applied? Although usually we think of AD measures as duties, they are not the only option available to authorities. In fact, AD regimes usually include provisions allowing authorities to suspend the imposition of duties if foreign firms agree to charge minimum prices or to restrict exports in order to eliminate dumping and injury. In the EU, such agreements are known as price or quantity undertakings. Fig. 4 presents the disaggregation of AD measures by type of measure. For duties, we indicate whether they are *ad valorem* or specific. As it is the case for most users, the vast majority of AD measures in the EU are in the form of a duty, with a preference for *ad valorem* duties to specific ones. Also, there is a greater relative use of price undertakings (PUs) in the EU, with the exception of Argentina where most cases result in a combination of duties and PUs (DPUs).

#### [INSERT figure 4]

The lower part of Fig. 4 presents the desegregation of EU AD measures since 1989. The graph gives a clear message: the use of PUs in the EU has decreased steadily in favour of duties. In fact, in the last 5-year period there were no petitions resulting in pure PUs. Although they have been partially substituted by DPUs, it is clear that the relative use of duties is increasingly preferred representing more than 80% of measures in the last sub-period.

This tendency has been reported before in the literature. If fact, Pauwels & Springael (2002) report that most AD measures in the EU took the form of price-undertakings until 1987, in which year this trend was reversed in favour of duties. One possible reading of this finding is that the European Commission is taking a more protectionist position in terms of its use of AD. However, as argued by Vandenbussche (1995)., this may be in fact related to a shift in the countries being targeted by AD petitions. We will come back to this shortly. For now let us recall that the overall share of measures with respect to petitions has stayed more or less stable through time. Therefore, the decreasing use of PUs seems to reflect not a change towards more protection but rather a choice among types of instruments. The economic literature has put forward several arguments suggesting that favouring simple tariffs over PUs may not be such a bad idea.

<sup>&</sup>lt;sup>13</sup> However, Taylor (2004) does not find support for the collusion hypothesis.

PUs are particularly attractive to foreign exporters since they allow them to capture rents that under a duty will stay in the EU. They may also provide more market access than duties, especially if these are prohibitively high (Mastel, 1998). This implies that in certain circumstance price or quantity undertakings may actually be preferable to free trade for foreign firms. Moreover, Anderson (1993, 1992) argues that agreements such as PUs may give rise to what he calls "domino dumping", a situation in which foreign producers seeking the quota rents associated with these agreements may dump in order to provoke the initiation of an AD case.

The advantages for European authorities are less evident. A PU equivalent to a given level of duty, i.e. a price for the foreign product that will result in the same level of prices and consumption in the EU market, will imply a lower level of total welfare for the EU given the loss of tariff revenue (Pauwels & Springael, 2002). Moreover, although in static terms duties and undertakings may be equivalent to domestic producers and consumers, PUs may disadvantage European producers through quality reversals, as shown by Vandenbussche & Wauthy (2001). It has been argued that one possible reason behind the use of PUs lies in the fact that they are less likely to result in retaliation, however empirical evidence does not seem to support this argument (1991)..

The discussion above seems to suggest that PUs should not be allowed under AD. However, if PUs were not in place, there is a risk that they be substituted by unofficial agreements leading to withdrawals, with similar anticompetitive effects. Of course, duties also have anticompetitive effects. The main message emerging from the literature is the need for coordination between AD and Antitrust policies given the potential anticompetitive effects of AD. This issue seems particularly relevant for the EU given the greater share of withdrawals and PUs, which as discussed are symptomatic of more anticompetitive intensions in foreign and domestic firms.

How long do measures last? One of the major changes in AD rules introduced by the Uruguay Round was to limit the duration of measures to a maximum of five years, after which they have to be revised (Sunset Reviews)<sup>14</sup>. To illustrate the extent to which this limits the duration of AD measures, table 2 presents descriptive statistics on length of measures for the five users considered<sup>15</sup>. We exclude the last three years of the sample since measures imposed in those years are still, at the time of writing of this chapter, within the 5 year limit imposed by the WTO.

#### [INSERT tables 1 and 2]

On average an AD measure in the EU lasts for 74 months, much lower than average duration in the US, 100 months, but slightly higher than in the other three users considered. Argentina presents particularly low average duration due to the fact that in this country AD measures are set to last for 3 years instead of 5. The fifth column presents the number of measures that ended precisely 5 years (60 months) after their imposition and column six the number of those that lasted longer. In the EU a third of measures are revoked respecting exactly that limit, a much higher share

<sup>&</sup>lt;sup>14</sup> However, unlike other user like the US, the EU already had mechanism of obligatory revision of measures pervious to the Uruguay Round amendments.

<sup>&</sup>lt;sup>15</sup> The descriptive analysis of duration of measures presented here is inspired by what is presented in Cadot (2007). We remit the reader to this paper for a more in depth analysis of this issue.

as compared to other users. This is probably due to the fact that in the EU AD measures expire automatically after 5 years except if a revision is initiated. As for those extending the limit, the EU presents a smaller share than the US but similar to the other users. These statistics include measures that are still in force today, for which we calculated duration until December 2010, the last period for which information on revocation is available. Measures following under this category are quantified in column 7. With respect to the different type of measure (not presented in the table), we did not find remarkable differences in the length of measures according to their type, except for DPUs which present lower average duration than pure duties across users.

Fig. 5 presents the evolution of measure length for the EU and the US since 1990. We represent duration both for the entire sample of measures and the sub-sample excluding measures still in force. The figure shows a clear decreasing tendency for both users. However, the US registers higher average duration throughout the period. Up to 1995 this could be explained by the fact that the EU had 5-year reviews in place while the US did not, yet the length of measures is persistently higher in the US. Also, the distance between the solid (all measures) and dotted lines (excluding measures still in force) is much lower for the EU, which indicates that the US has in place old measures to a larger extent than the EU.

[INSERT Figure 5]

#### 3.3. The targeted countries

Which countries are more frequently targeted? Table 3 presents the disaggregation of initiations in the EU and WTO Notifications by targeted country. China is by far the country most targeted both by the EU and worldwide, followed by other Asian countries, especially South Korea, India and Taiwan. In fact, there is a clear concentration of cases on Asian countries with the five most targeted countries by the EU all in this region. Except for South Korea, the EU seems to target relatively less high income countries as compared to worldwide tendencies.

#### [INSERT table 3]

Figure 6 compares the EU AD initiations by group of targeted country to initiations by the other users considered (we single out China as separate target group). All users present similar shares to worldwide WTO Notifications, with the exception of China. In particular, the concentration of cases against China is present in all users. The EU presents a higher share of cases against new EU Member States than other users, something not surprising given the progressive elimination of other trade barriers in the process leading to EU accession. As a user, China presents a radically different profile to others, with more than a quarter of all AD initiations directed at high income countries (16% targeted at EU15 and the remainder mostly at Japan, South Korea and the US, China's three most targeted countries).

#### [INSERT figure 6]

We next analyse how the number of initiations and measures against different targets has evolved through time in the EU as compared to worldwide tendencies. We present this information in Fig. 7. It is important to bear in mind that WTO Notifications in the second and third sub-periods are inflated by the peak in AD activity registered for the US and India, as shown in Fig. 2. There is an increasing concentration of cases against China. In particular, this concentration seems to concern only China and not other developing countries, at least in the EU where the number of cases against this group decreased progressively through the period. Finally, in both panels high income countries seem to be losing importance as targets, most notably EU Member States. This is not only related to the vanishing of EU AD cases against new Members States as they join the Union, but also to a decrease in the number of initiations against all EU Members States by other users.

#### [INSERT figure 7]

Are certain outcomes more likely depending on which country is targeted? Fig. 8 presents the disaggregation of AD cases in the EU by outcome and targeted country, splitting the period between 1989 and 2008 into two 10-year sub-periods. Shares seem to differ greatly depending on which country is targeted. Cases against new EU Member States are much more likely to end in PUs than for the other groups, especially in the first sub-period. In fact, this has been reported before in the literature and it explains at least partially why PUs are becoming more infrequent (Vandenbussche, 1995). The opposite is true for China, where duties are preferred. Also, the rate of rejection is smaller for initiations against this country, a characteristic not shared by cases against other developing countries. For other middle and low income countries, the most remarkable change is a shift to more duties and less PUs. In general terms, it seems that the overall tendency discussed above towards more duties and less PUs is mostly drawn by the growing importance of China as a target and the vanishing of AD cases against new EU Member States after accession.

[INSERT figure 8]

#### 3.4. The sectors involved

Are some industries more likely to request and obtain AD protection? Fig. 9 presents the desegregation of worldwide and EU AD initiations and measures by sector. The EU presents similar industry shares as compared to worldwide WTO notifications. There is a great concentration of AD activity in just a handful of industries. In fact, almost 80% of cases and measures worldwide involve the top 5 industries. Moreover, two industries, metals and chemicals, concentrate half of all AD activity. The lower panel presents the evolution of initiations and measures by sector in the EU. The graph shows an increasing concentration of cases in metal industries. This is not so much due to an increase in the number of petitions in this sector, but to a decrease in petitions in other industries, especially towards the end of the sample and in textiles and machinery.

#### [INSERT figure 9]

There are small differences in the share of different sectors on initiations and measures in the EU. In particular, metals and chemicals present a greater share of measures than of initiations, which suggest these industries are more successful than others at obtaining protection. To explore this further Fig. 10 presents the desegregation of EU AD initiations by industry and outcome. There are important differences across industries. For metals and chemicals more than 70% of all AD petitions result in protection. Even more successful are plastics with almost 80% of all petitions resulting in measures. At the other extreme are machinery and textiles where a much greater share of petitions are rejected, 40% and 48% respectively. Withdrawals are rather common across all industries, with the exception of plastics. As for the type of measures applied, PUs are particularly common in metal industries and plastics, while chemicals present a higher degree of duties.

#### [INSERT figure 10]

Finally, we also verify whether sectors from particular countries are more frequently targeted (Fig. 11). Sector rankings are more or less stable across country groups; however, there are certain peculiarities. Petitions targeted against new EU Member States present a particularly high concentration on metals and to a lesser extent on chemicals. As for AD cases against high income countries, they concentrate more on machinery and electronics as compared to petitions in other sectors. We also went a bit further and explored whether sectors from specific countries within each group were more frequently targeted. We found that the sector-country pair where more AD activity is present is metals from China (representing 6% of overall initiations and 10% of measures), followed by chemicals from China (5 and 6% respectively), metals from Russia (3 and 4%), electronics from China (3% in both) and textiles from India (2% in both).

#### [INSERT figure 11]

#### **3. Conclusions**

The analysis presented in this chapter shows no evidence of contradictions between the application of AD in the EU and the WTO general framework. Moreover, the EU has mechanisms in place that should allow it to keep AD protection levels under control. The presence of a lesser duty rule appears to successfully prevent the imposition of excessively high duties and results in lower average duty levels overall. Furthermore, the EU appears to respect to a large extent the limit on duration imposed by Sunset Reviews, although around 44% of measures are extended beyond that boundary. Still, it presents much lower average durations than US, although similar or higher than new users. It also has a mechanism to introduce the interests of other parties, such as consumers, in the decision on whether to grant protection through the community interest clause. However, there is not a great deal of evidence suggesting that this provision really limits the imposition of measures; on the contrary, the EU presents particularly high levels of affirmative injury determinations, especially compared to the US. Also, the use of cumulation, which is not peculiar to the EU, is found to greatly increase the probability of obtaining affirmative injury rulings. Furthermore, the fact of having a single agency system could imply less objectivity and more vulnerability to political pressures. This could explain the lower degree of rejection of AD petitions in the EU compared to the US. However, the evidence indicates that the difference does not stem from this institutional separation but rather on the way injury decisions are carried out.

With respect to the intensity in the use of AD, although it is still one of main users of the instrument, the number of cases and measures in the EU has decreased in recent years, with the exception of those against China and involving metal industries. There has also been a shift in the type of measures applied, towards more duties and less PUs, although this seems to be a result of the increasing share of cases against China and the disappearance of cases against new EU Member States. Still the EU presents both a higher share of withdrawals and PUs as compared to other AD

users. In terms of targets, the EU follows the worldwide tendency to concentrate cases and measures on China and other Asian countries. The EU also follows worldwide tendency in terms of industries, concentrating most cases in metal and chemicals, and to a lesser extent electronics, textiles and plastics.

Probably the most critical concern regarding AD policy is its potential anticompetitive effects, especially the fact that it can be abused by firms in order to bring about price collusion in domestic markets. Although we do not test this empirically here, the EU presents some worrying symptoms that point in this direction. In particular, the greater share of withdrawn cases compared to other AD users may be an indication that firms are applying for AD protection in order to force competitors to keep prices at higher levels. In this sense, a coordination of AD and Antitrust policies seems essential. The EU is particularly well placed to do so given its institutional structure, where both policies are carried out by two directorates within the same authority. A stricter interpretation of the common interest clause would not only make this possible but unavoidable.

#### References

Anderson, James E. 1993. "Domino Dumping li: Anti-Dumping." *Journal of International Economics*, 35(1-2), 133-50.

Anderson, James E. 1992. "Domino Dumping, I: Competitive Exporters." *The American Economic Review*, 82(1), 65-83.

**Blonigen, Bruce A. and Thomas J. Prusa.** 2003. "Antidumping," Choi, E. K. and J. Harrigan, *Handbook of International Trade.* Blackwell Publishing Ltd, 251 - 84.

**Bourgeois, Jacques H. J. and Patrick A. Messerlin.** 1998. "The European Community's Experience." *Brookings Trade Forum*, 127-45.

**Bown, Chad P.** 2010a. "Global Antidumping Database." *available at* <u>http://econ.worldbank.org/ttbd/gad/</u>.

**Bown, Chad P.** 2010b. "Taking Stock of Antidumping, Safeguards, and Countervailing Duties, 1990-2009." *World Bank Working Paper*, No. 5436.

**Cadot, Olivier; Jaime de Melo and Bolormaa Tumurchudur.** 2007. "Anti-Dumping Sunset Reviews: The Uneven Reach of Wto Disciplines." *CEPR Discussion Paper no. 6502. London, Centre for Economic Policy Research.* 

Hansen, Wendy L. and Thomas J. Prusa. 1996. "Cumulation and Itc Decision-Making: The Sum of the Parts Is Greater Than the Whole." *Economic Inquiry*, 34(4), 746-69.

**Konings, Jozef and Hylke Vandenbussche.** 2005. "Antidumping Protection and Markups of Domestic Firms." *Journal of International Economics*, 65(1), 151-65.

Macrory, Patrick F.J.; Endwin A. Vermulst and Paul P. Waer. 1991. "United States and European Community Antidumping Law: Similarities and Differences." *University of Miami Yearbook of International Law*, 74, 74-142.

Mastel, Greg. 1998. Antidumping Laws and the U.S. Economy. Armonk, NY: M. E. Sharpe. Nogues, Julio J. and Elias Baracat. 2005. "Political Economy of Antidumping and Safeguards in Argentina." World Bank Policy Research Working Paper No. 3587.

**Pauwels, Wilfried and Linda Springael.** 2002. "The Welfare Effects of a European Anti-Dumping Duty and Price-Undertaking Policy." *Atlantic Economic Journal*, 30(2), 121-35.

**Pauwels, Wilfried; Hylke Vandenbussche and Marcel Weverbergh.** 2001. "Strategic Behaviour under European Antidumping Duties." *International Journal of the Economics of Business,* 8(1), 75 - 99. **Prusa, Thomas J and Endwin A. Vermulst.** 2010. "United States-Continued Existence and Application of Zeroing Methodology: The End of Zeroing?" *American Law Institute Studies on WTO Case Law: Legal and Economic Analysis. Working paper.*  **Prusa, Thomas J.** 1992. "Why Are So Many Antidumping Petitions Withdrawn?" *Journal of International Economics*, 33(1-2), 1-20.

Shin, Hyun Ja. 1998. "Possible Instances of Predatory Pricing in Recent U.S. Antidumping Cases." *Brookings Trade Forum*, 81-97.

**Stegemann, Klaus.** 1990. "Ec Anti-Dumping Policy: Are Price Undertakings a Legal Substitute for Illegal Price Fixing?" *Review of World Economics*, 126(2), 268-98.

**Taylor, Christopher T.** 2004. "The Economic Effects of Withdrawn Antidumping Investigations: Is There Evidence of Collusive Settlements?" *Journal of International Economics*, 62(2), 295-312.

**Tharakan, P.; David Greenaway and Joe Tharakan.** 1998. "Cumulation and Injury Determination of the European Community in Antidumping Cases." *Review of World Economics*, 134(2), 320-39. **Tharakan, P. K. M.** 1991. "The Political Economy of Anti-Dumping Undertakings in the European Communities." *European Economic Review*, 35(6), 1341-59.

**Tharakan, P. K. M. and J. Waelbroeck.** 1994. "Antidumping and Countervailing Duty Decisions in the E.C. And in the U.S.: An Experiment in Comparative Political Economy." *European Economic Review*, 38(1), 171-93.

**Vandenbussche, Hylke.** 1995. "How Can Japanese and Central-European Exporters to the E.U., Avoid Antidumping Duties?" *World Competition. Law and Economics Review*, 18, 55-74.

**Vandenbussche, Hylke and Christian Viegelahn.** 2011. "Temporary Trade Barriers in the European Union before and During the Crisis." *forthcoming World Bank*.

**Vandenbussche, Hylke and Xavier Wauthy.** 2001. "Inflicting Injury through Product Quality: How European Antidumping Policy Disadvantages European Producers." *European Journal of Political Economy*, 17(1), 101-16.

**Vermulst, Endwin A. and Dan Ikenson.** 2007. "Zeroing under the Wto Anti-Dumping Agreement: Where Do We Stand?" *Global Trade and Customs Journal*, 2(6), 231-42.

Vermulst, Endwin A. and Thomas J Prusa. 2009. "A One-Two Punch on Zeroing: U.S. – Zeroing (Ec) and U.S. – Zeroing (Japan)." *World Trade Review*, 8(1), 187-241.

**Zanardi, Maurizio.** 2004. "Antidumping Law as a Collusive Device." *Canadian Journal of Economics/Revue canadienne d'économique*, 37(1), 95-122.

	Initiations			Measures	
1)	India	613	1)	India	436
2)	United States	442	2)	United States	289
3)	European Union	414	3)	European Union	269
4)	Argentina	277	4)	Argentina	190
5)	Australia	212	5)	Turkey	142
6)	South Africa	212	6)	China	137
7)	Brazil	184	7)	South Africa	128
8)	China	182	8)	Brazil	105
9)	Canada	152	9)	Canada	94
10)	Turkey	145	10)	Mexico	83

**Table 1:** Top 10 users of Antidumping in terms of number of initiations and measures,January 1995 – June 2010.

Source: WTO Antidumping Notifications

Imposing country	Obs.	Mean	St. Dv.	Exactly 60 months	More than 60 months	In force§
EU	207	74	34	76 (37%)	91 (44%)	56 (27%)
US	208	100	39	43 (21%)	157 (75%)	135 (65%)
India	274	67	29	10 (4%)	134 (49%)	88 (32%)
Argentina	100	59	35	6 (6%)	39 (39%)	41 (41%)
China	76	73	24	14 (18%)	51 (67%)	46 (61%)

Source: Own calculations using data from the Global Antidumping Database (World Bank).

	EU initiations			Worldwide WTO Notifications		
Targeted country	# cases	Share in total	Rank	# cases	Share in total	Rank
New EU Member States						
Poland	9	2%	12	29	1%	26
Czech Republic	7	2%	14	19	1%	36
Other	<6	< 1,5%	> 16	<37	< 1%	>22
Total group	42	10%		147	4%	
Other high income countries						
Korea, Republic of	28	7%	3	264	7%	2
Chinese Taipei (Taiwan)	22	5%	4	198	5%	4
United States	13	3%	8	205	6%	3
Japan	9	2%	12	155	4%	6
EU15 Member States				467	13%	12 - 68
Other	4 or <	< 1%	> 20	30 or <	< 1%	19 or >
Total group	93	23%		1509	41%	
Middle/low income countries						
China	90	22%	1	761	21%	1
India	29	7%	2	145	4%	8
Thailand	20	5%	5	150	4%	7
Russian Federation	19	5%	6	119	3%	9
Malaysia	16	4%	7	98	3%	11
Ukraine	13	3%	8	63	2%	14
Indonesia	12	3%	10	156	4%	5
Turkey	12	3%	10	46	1%	18
Brazil	4	1%	21	108	3%	10
Other	< 8	< 2%	> 13	< 30	< 2%	> 14
Total group	266	66%		2027	55%	

#### **Table 3:** Antidumping initiations by targeted country, cases initiated 1995 - 2009.

Source: Own calculations using data from the Global Antidumping Database (World Bank) and WTO Antidumping Notifications.

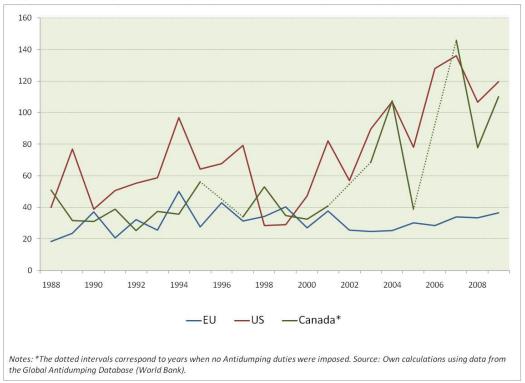


Figure 1: Average Antidumping ad valorem duty levels by year of imposition.

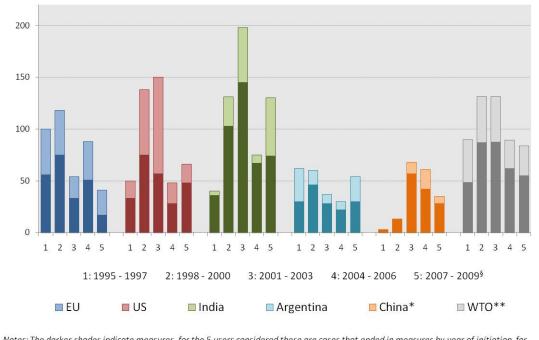


Figure 2: Number of Antidumping initiations and measures 1995 – 2009.

Notes: The darker shades indicate measures, for the 5 users considered these are cases that ended in measures by year of initiation, for the WTO they refer to measures by year of notification.\*Data since 1997, year of first Antidumping case. \*\*Worldwide WTO Notifications (scaled down). <sup>6</sup> Measures may be undervalued for 2009 since the outcome of some cases initiated in this year is not yet known. Source: Own calculations using data from the Global Antidumping Database (World Bank) and WTO Antidumping Notifications.

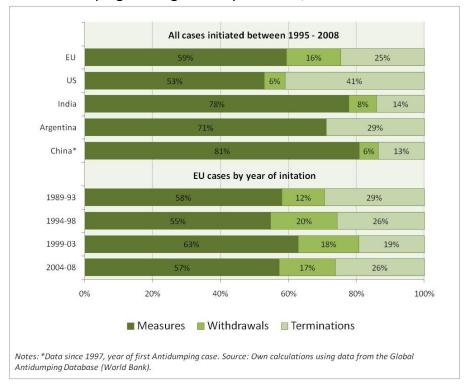
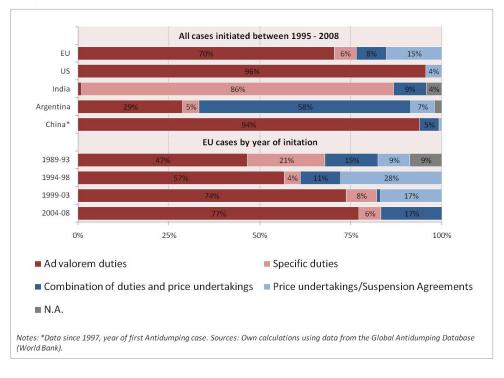


Figure 3: Antidumping investigations by outcome, cases initiated 1995 – 2008.

Figure 4: Antidumping measures by type, cases initiated 1995 – 2008.



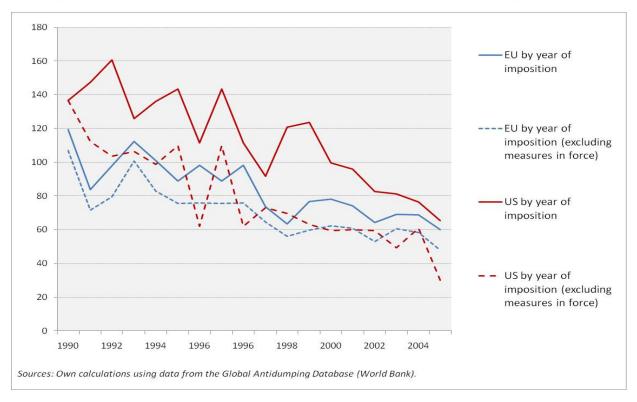


Figure 5: Evolution of the average duration (in months) of Antidumping measures.

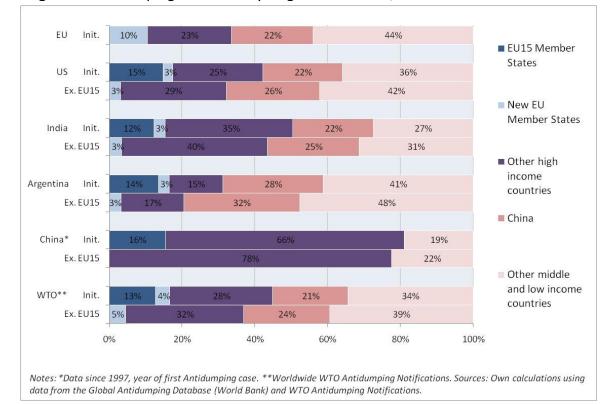
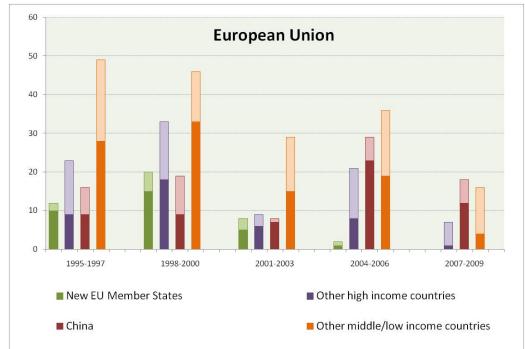
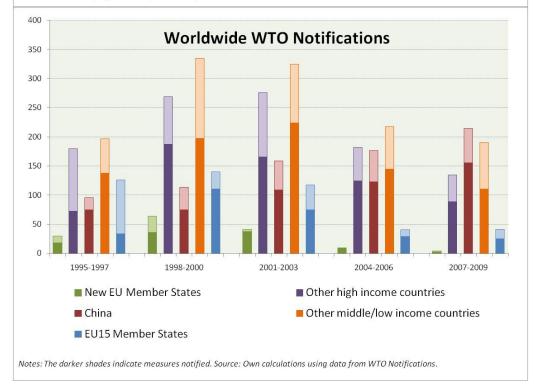


Figure 6: Antidumping initiations by targeted countries, cases initiated 1995 – 2009.



**Figure 7:** Evolution of the number of Antidumping initiations and measures in the EU and worldwide by targeted country.

Notes: The darker shades indicate cases initiated in the sub-period that ended in measures. Source: Own calculations using data from the Global Antidumping Database (World Bank).



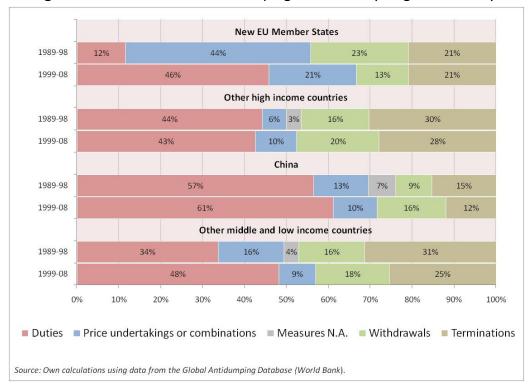
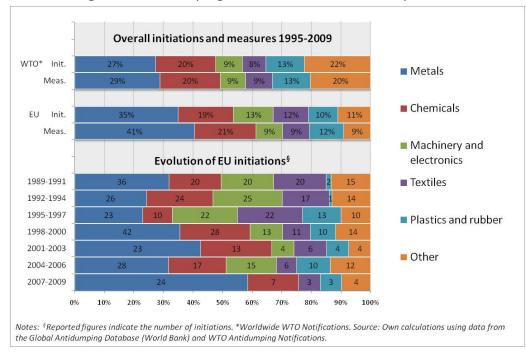


Figure 8: Outcomes of EU Antidumping initiations by targeted country.



#### Figure 9: Antidumping initiations and measures by sector.

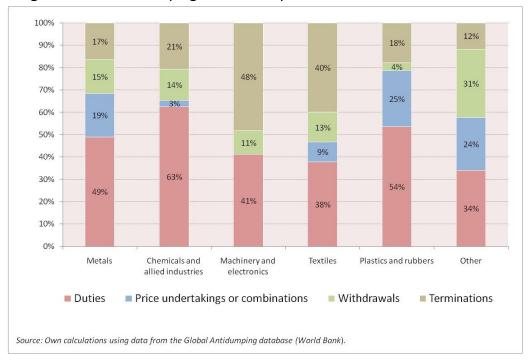
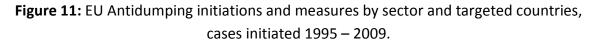
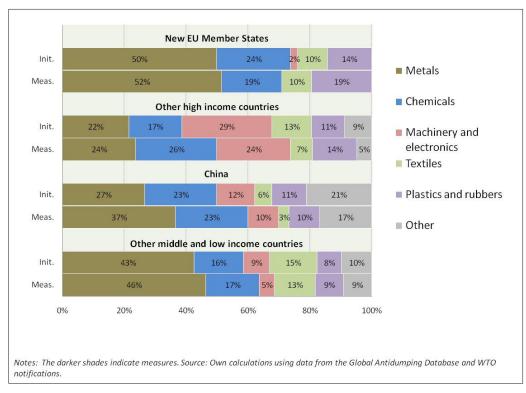


Figure 10: EU Antidumping initiations by sector and outcome 1995 – 2008.





Institut de Recherches Économiques et Sociales Université catholique de Louvain

> Place Montesquieu, 3 1348 Louvain-la-Neuve, Belgique



ISSN 1379-244X D/2011/3082/023