1321 National Agency for Enterprise and Construction

Economic Assessment of the Community interest in EU Anti-dumping Cases

August 2005

COPENHAGEN ECONOMICS

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Preface

This report identifies opportunities to improve current methods for economic impact assessments of the Community interest in EU anti-dumping cases and documents an appropriate economic modelling framework, the Copenhagen Anti-dumping Model.

The model framework has been developed by Copenhagen Economics in cooperation with Professor Joseph Francois of the Tinbergen Institute and CEPR. This report documents the economic model and demonstrates its use by applying the model to four anti-dumping cases.

Comments regarding the study, including this report, may be sent directly to the project leader, Mr. Martin Hvidt Thelle, Copenhagen Economics (mht@copenhageneconomics.com).

Date: 22 August 2005

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Executive summary

The new strategy for growth and jobs presented by European Commission President Barroso identifies trade policy as a key area for improving the competitiveness of the European economy (European Commission, 2005). In light of the need for more focused efforts to realise the ambitious Lisbon agenda, it is essential that all trade policy measures are scrutinised and subject to thorough economic impact assessments to ensure that they serve the interests of European consumers and enterprises. Appropriately, the EC Anti-dumping Regulation requires that for anti-dumping measures to be imposed, the interest of the Community as a whole must call for intervention.

It is obvious that the assessment of the Community interest in anti-dumping investigations is a comprehensive task. While current investigations cover many aspects of the Community interest, there are opportunities to enhance the applied methodology to ensure that anti-dumping measures do not hinder the development of the European economy. These opportunities relate to three specific areas:

- **Collect data on impacts on European consumers and user industries.** Current investigations into the Community interest are based only on data provided to the Commission by interested parties. However, since the total costs of anti-dumping measures are typically distributed across a large number of users and consumers, individual users and consumers have few incentives to provide the necessary information. This hampers investigations and very often forces the Commission to draw conclusions based on partial information, despite the availability of additional facts from other sources. Collecting more representative data on the impacts on European consumers and user industries could therefore improve economic assessments of the Community interest.

- **Use a transparent and economically consistent analytical framework.** Once data on the Community industry, user industries and affected consumers has been collected, investigations should apply a coherent economic framework for assessing the facts available. Without an analytical framework, investigations could fail to internalise significant costs associated to the imposition of anti-dumping measures. For example, the economic rigour of a transparent framework can be used to assess whether Community producers can gain from higher prices, without consumers being disproportionately worse off (despite higher prices).

- **Quantify the total economic impacts on European consumers and producers.** The Community interest test should be a comprehensive assessment of the economic impact of anti-dumping measures, but current investigations do not quantify the aggregate costs and gains of imposing anti-dumping measures. As a result, the cumulative effects of cost increases for individual consumers and user industries are often overlooked. Calculating the total costs and gains to European consumers and enterprises would therefore be an important contribution to assessments of the Community interest.

This report documents an economic model, the Copenhagen Anti-dumping Model, which addresses all of these opportunities by providing a coherent analytical framework for economic impact assessments of anti-dumping measures. The model is conceptually similar to other generally accepted quantitative models already used by the Commission services for economic impact assessments. Based on a consistent representation of the economic transactions affected by anti-dumping measures, the model allows for:

- **Calculations of the total economic impact of anti-dumping measures for the Community.** Importantly, the model quantifies the economic costs and benefits to all European consumers, user industries and producers. This allows for a comprehensive and transparent analysis of the overall Community interest in anti-dumping cases, as well as an assessment of economic impacts on individual Member States.

- **Use of official statistics to analyse impacts on European consumers and enterprises.** Official Eurostat statistics on bilateral trade flows between individual Member States and their external trade partners form the core of the model. Importantly, informative model calculations can be performed even if the product concerned does not match the statistical classifications in Eurostat databases, or if only imports from certain firms are concerned. Eurostat statistics are already used in some investigations, but often only to analyse the volume of imports. With the model, the very same statistics can be used for quantitative assessments of the Community interest even if some interested parties fail to submit information to the Commission.

- **Improved analytical consistency and use of case-specific parameters.** The modelling framework is theoretically consistent, which ensures that results are clear and intuitive. The economic interactions captured by the model provide a comprehensive picture of the economic effects of anti-dumping measures. For example the model captures that consumers and user industries may react to price increases by consuming less of the concerned product and by shifting to alternative (but more costly) products and varieties. Moreover, the model explicitly includes international interactions between markets. For each anti-dumping case, the model can be calibrated with case-specific parameters to capture the relevant market mechanisms.

The model can easily be applied to specific anti-dumping cases and has only limited data requirements, yet it allows for a significant level of detail regarding policy parameters. To illustrate its use, we have applied the Copenhagen Anti-dumping Model to four anti-dumping cases. The four sample cases analysed here are salmon, bed linen, TV sets and fertiliser. The result in all four cases is that costs to final consumers and user industries disproportionately outweigh producer gains by at least a factor of 2, and that therefore – in the four selected cases – the imposed measures are predicted to be in clear conflict with the interest of the Community from a strict economic point of view.

However, the purpose of the Copenhagen Antidumping Model is to help and assist anti-dumping investigations, not to eliminate them or replace other methods of investigation. The results from the model should be used to inform investigations on the magnitude and distribution of economic outcomes across the protected industry, and European consumers and users. It is always important to interpret and qualify modelling results in the light of other available information. For example, information provided by interested parties could be used to establish if modelling results reflect upper or lower limits for the potential economic effects. Thus, the Copenhagen Antidumping Model is a complement to current methods and is designed to help on one particular aspect of current practices – the assessment of the Community Interest.

Chapter 1: Introduction

The EC Anti-dumping Regulation[1] is unique in requiring that anti-dumping measures must be in the interest of the Community as a whole. In fact, Article 21 of the Regulation explicitly requires that any intervention must take into account the interests of the domestic industry, users and consumers. A finding of dumping and injury is thus not automatically sufficient to impose anti-dumping measures. The European Commission must also determine that the Community interest calls for action. Since its introduction, the Community interest requirement has, however, had only a limited impact on the European Commission's practice in anti-dumping matters (Van Bael and Bellis, 2004).

The new strategy for growth and jobs presented by European Commission President Barroso identifies trade policy as a key area for improving the competitiveness of the European economy. In light of the need for more focused efforts to realise the ambitious Lisbon agenda, it is essential that all trade policy measures are scrutinised and subject to thorough economic impact assessments to ensure that they serve the interests of European consumers and enterprises.

Given the complexity and variety of anti-dumping issues, the large number of Member States and the diversity of affected parties, analysing the Community interest poses a significant methodological challenge. If an investigation of the Community interest in an anti-dumping case does not properly take into account all effects on the domestic industry, as well as on European users and consumers, anti-dumping actions may have adverse effects on competitiveness and growth of the European economy.

Identification of favourable policy outcomes requires a good methodology. This includes the application of both qualitative and quantitative analysis. Recent evidence indicates that there are significant opportunities to enhance the methodology currently applied by the Commission in its investigations of the Community interest.

This study presents concrete opportunities to enhance current practices and documents an economic modelling framework that facilitates economic impact assessments of anti-dumping cases.

1.1. Opportunities to improve current methodology

A recent study by *Kommerskollegium* – the Swedish National Board of Trade (see National Board of Trade, 2005), the central administrative body in Sweden dealing with foreign trade and trade policy – reviews the practice for analysing the Community interest in anti-dumping investigations. The study systematically examined the 20 latest cases where provisional or final anti-dumping duties were imposed.

[1] Council Regulation 384/96, 1996 O.J. (L 56) 1.

However, the study identifies a number of limitations in the methodology used to investigate the Community interest, particularly in terms of data coverage, and economic rigour and consistency. This is best illustrated by the list of arguments used to show that anti-dumping measures are not against the Community interest, as displayed in Table 1.

Table 1: Arguments for anti-dumping measures being in the Community interest

Argument	Number of cases
Measures are in the interest of the Community industry	16
Imports can continue from third countries	10
Fairly prices imports can continue	9
The Community industry has spare capacity	8
Measures are in the interest of suppliers to the Community industry	8
The product is a small share of users' total costs	6
The product is a small share of importers' turnover	6
Users have not provided any comments and measures are therefore not contrary to their interests	4
Importers/retailers have not provided any comments and measures are therefore not contrary to their interests	3
Consumers have not provided any comments and measures are therefore not contrary to their interests	3
Increased costs for importers can be passed on to users	3
Increased costs for users can be passed on to consumers	3
The product is a small share of consumers' costs	2
Measures were found to be in the Community interest in a previous investigation	2

Note: The table shows the results of a review of the 20 latest cases were measures are imposed.
Source: National Board of Trade (2005).

The arguments used to show that anti-dumping measures are in the Community's interest demonstrate that current methods can be improved in a number of ways. For example, investigations generally focus on the interests of the Community industry and neglect to take into account the cumulative effects of small cost increases for users and consumers.

A typical obstacle is that users and consumers fail to provide comments to the Commission, which is sometimes interpreted as implying that anti-dumping measures are not contrary to their interests. But because the costs of anti-dumping measures tend to be distributed across a large number of individual users and consumers (which investigations often suggest), they have few incentives to go through the cumbersome procedures required to provide information. However, the total costs can be very significant if the costs are added up for all users and consumers throughout Europe. A calculation of cumulative costs should therefore be an important addition to the current methodology. The calculation should also take into account that higher prices imply increased costs (which is often ignored), and that costs passed on to other Community users and consumers are still costs to the European economy.

Also, the current methodology does not take into account that alternative imports (from third countries or at fair prices) tend to be more costly for European users and consumers than dumped imports. If this were not the case, users and consumers would have chosen the alternative imports at "fair" prices in the first place (rather than the dumped imports). Such costs must also be quantified in order to assess the economic impacts of anti-dumping measures on all interested parties.

In short, the examination of the investigations revealed three specific limitations in the applied methodology:

- **The economic impact of imposing anti-dumping measures is not calculated for the Community as a whole.** Current investigations do not quantify the aggregate costs and gains of anti-dumping measures for the Community. As a consequence, the cumulative effects of marginal impacts for users and consumers are often neglected. This methodological drawback is an obvious weakness in the assessment of the Community interest. Thus, a framework for quantitative economic impact assessments for the Community as a whole would be a valuable addition to current investigations.

- **The methodology and findings are based on unsatisfactory data.** Current investigations are based only on data provided to the Commission by interested parties. Unfortunately, interested parties frequently fail to provide data, in particular European consumers and user industries. This hampers detailed analysis, and if a failure of users and consumers to supply information is interpreted as implying that anti-dumping measures are not contrary to their interests, data collection will *de facto* be biased against consumers and user industries. In lack of sufficient data, investigations are forced to be based on assumptions and partial information. Extending the current methodology to make more use of data available from other sources would therefore greatly improve anti-dumping investigations.

- **Conclusions can be based on inconsistent arguments and assumptions.** The outcomes of the reviewed investigations are usually a number of standard arguments. Current investigations lack a coherent economic framework for assessing the validity and economic impact of those arguments. As a result, conclusions can be based on unsubstantiated and sometimes inconsistent assumptions that contradict economic principles. A coherent analytical framework would ensure that arguments and assumptions are always based on sound economics. Moreover, the lack of a coherent framework means that investigations often fail to internalise all costs associated to the imposition of anti-dumping measures. The methodology applied in anti-dumping investigations could therefore be improved if complemented with an analytical framework based on acknowledged economic principles and methods.

The most accessible way to address these limitations is to complement the current methodology with a tool for economic impact assessments of anti-dumping measures. An economic model is such a tool, and economic models are already widely used by the Commission services for economic impact assessments of trade policies.

The economic model presented in the next chapter is based on a coherent representation of the economic transactions affected by anti-dumping measures that allow interested parties to:

- **Calculate the total economic impact of anti-dumping measures for the Community.** This would allow for a more comprehensive analysis of the Community interest and quantify impacts on individual Member States.

- **Complement existing data on user and consumer impacts with official trade statistics.** This would improve data coverage in cases where interested parties fail to submit comments and facilitate calculations of total costs to the Community.

- **Improve analytical consistency and logic.** This would serve to eliminate or substantiate logically problematic claims, e.g. that Community producers would gain (from higher prices), but that consumers would not lose (despite higher prices).

Chapter 2: The Copenhagen Antidumping Model

This chapter presents an economic model, the Copenhagen Anti-dumping Model (CAD), which allows for an economic impact assessment of the Community interest in anti-dumping cases. Specifically, the model facilitates a formal quantitative analysis of the economic impacts of anti-dumping measures for the European Union.

The model can easily be applied to specific anti-dumping cases and has only limited data requirements, yet it allows for a significant level of detail regarding policy parameters. The model thus complements the current methodology for analysing the Community interest in anti-dumping investigations in a number of important areas:

- **The model quantifies the economic impacts of anti-dumping measures for the Community as a whole.** Importantly, the model quantifies the economic costs and benefits to European consumers, user industries and producers. This allows for a transparent analysis of the Community interest in anti-dumping cases, as well as an assessment of economic impacts on individual Member States.

- **The model calculations are based on official trade statistics.** Data on bilateral trade flows between the individual Member States of the EU and their external trade partners form the core of the model. The required data is readily available from official Eurostat databases. This allows for quantitative assessments of the Community interest even if interested parties fail to submit comments to the Commission. Importantly, informative model calculations can be performed even if the product concerned does not match the statistical classifications in Eurostat databases (by applying thorough sensitivity analysis and carefully interpreting the results), or if only imports from certain firms are concerned (which can be explicitly modelled).

- **The model is based on state-of-the-art economics.** The modelling framework is theoretically and logically consistent, which ensures that results are clear and intuitive. The economic interactions captured by the model provide a comprehensive picture of the economic effects of anti-dumping measures. For example the model captures that consumers and user industries may react to price increases by consuming less of the concerned product and by shifting to alternative (but more costly) products. Moreover, the model explicitly includes international interactions between markets. Not only intra-EU linkages are considered, but also the effects of EU anti-dumping measures on extra-EU producers. The model can for example be calibrated with case-specific elasticities (representing market behaviour) that take into account that foreign producers may move production from countries hit by anti-dumping to countries without anti-dumping tariffs.

The model allows for the analysis of anti-dumping measures using a range of policy options, including changes in:

- Anti-dumping duties and bilateral tariff structures
- Price undertakings
- Export subsidies and export taxes
- Production taxes

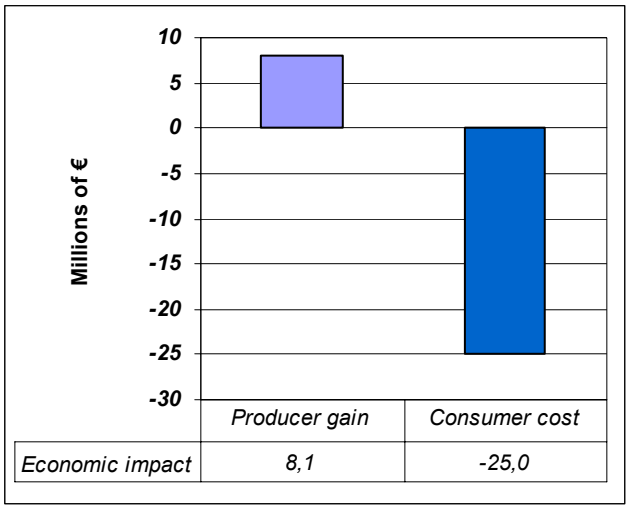
In addition to data on policy parameters, the model requires data only on bilateral trade flows (including domestic shipments) and elasticities of supply, composite demand and substitution. Employment effects can also be calculated if additional data on labour inputs is available.

Output from the model includes quantitative results for a range of parameters that are important for analysing the Community interest. The results are reported both for individual Member States and for the Community as a whole. Examples of the output include:

- Gains for the protected industry (producer surplus, output, revenues, employment)
- Costs for consumers and user industries (consumer surplus, output, revenues, employment)
- Costs per job saved
- Changes in tariff revenues

Perhaps the most useful output from the model is the changes in producer and consumer surplus, which capture the economic costs and benefits of introducing anti-dumping measures. This allows for a direct and consistent comparison of costs and benefits. A sample comparison is provided in Figure 1 below. In this example, the figure shows that total producer gains amount to around €8 million, whereas the total costs to consumers are around €25 million. Though such results should not be interpreted as conclusive evidence, they are valuable complements to any assessment of the Community interest.

Figure 1: Sample comparison of producer gains and consumer costs



Note: The graph shows hypothetical numbers for illustrational purposes.
Source: Copenhagen Economics.

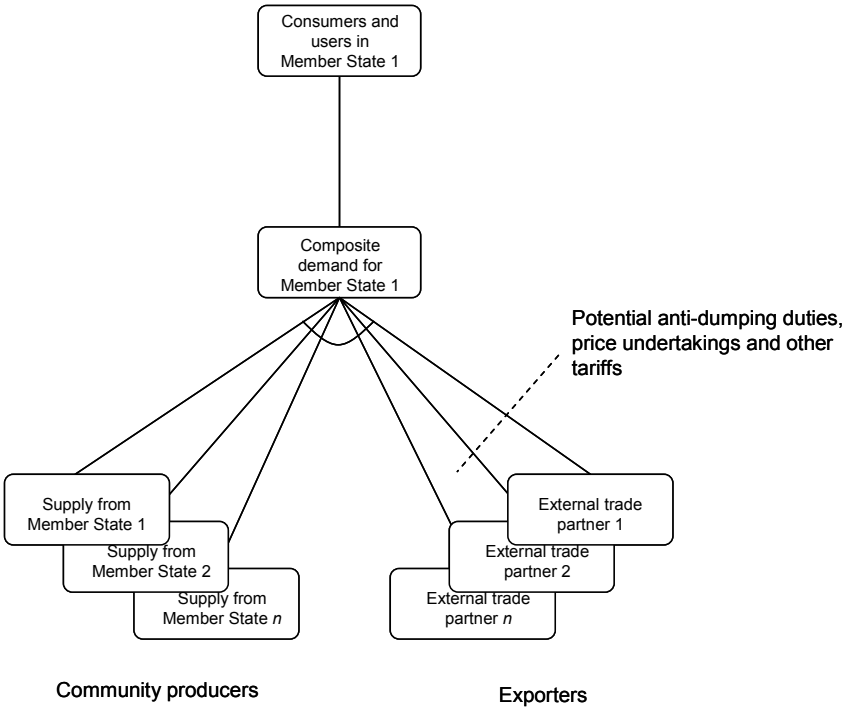
2.1. Overview of the model structure

Ease of use and conceptual transparency have been two principles guiding model development. The model consequently focuses on the direct industry effects of anti-dumping

measures. It does not include indirect economy-wide effects that would introduce substantial complexity and reduce tractability of the model. As a result, the model can with minor training be applied by users with normal computer skills.

A schematic overview of the model structure is provided in Figure 2 below. Note that the figure shows the structure for one single Member State. In practice, the model considers global supply and is solved simultaneously for all Member State of the EU.

Figure 2: General structure of the Copenhagen Antidumping Model



Note: The figure shows the structure for one single Member State. The model is solved simultaneously for all Member States of the EU. Note that the external trade partners can be either countries or individual firms (when such data is available). This means that firm-specific duties can be taken into account.
Source: Copenhagen Anti-dumping Model simulations.

In the model, export prices for the concerned product initially change as a result of changes in e.g. anti-dumping duties, price undertakings, other tariffs, export subsidies or production taxes. If sufficient data is available, the model can be adapted to distinguish between exporting firms facing different anti-dumping duties (by allowing for explicit modelling of each individual firm and its supply to the EU). Another option is to calculate an average anti-dumping duty applying to all exports from a country according to firm-specific duties and each firm's share in the country's total exports.

Community producers and extra-EU exporters adjust their aggregate supply according to changes in world market prices. Consumers and users also adjust their aggregate demand and demand for imports from specific countries according changes in the prices of composite demand and national varieties. The associated changes in e.g. welfare, output, employment and tariff revenues are calculated for individual countries and for the EU as a whole.

Technical aspects of the model

The Copenhagen Antidumping Model is a detailed partial equilibrium model that provides a structured way to combine information on trade flows and trade policy for detailed product

categories. It is a multi-region, imperfect substitutes model of world trade used to simulate welfare and price effects, changes in tariff revenues and trade volumes induced by tariff changes. The behaviour of agents and markets are determined by elasticities for aggregate supply, export supply, substitution and aggregate demand. The Copenhagen Antidumping Model is furthermore extended to include a module for calculating employment effects in up-stream and down-stream industries

A basic assumption is national product differentiation (which can be extended to firm-level product differentiation if appropriate). As implemented in the model, it means that imports from different source countries are imperfect substitutes for each other. The elasticity of substitution is held to be equal and constant across products from different sources within a country. The elasticity of demand in aggregate is also constant. These elasticities can, however, be assumed to vary across importing countries. Finally, global supply from each country is also characterized by constant supply elasticities. The values of the elasticities are set to capture the characteristics of the concerned product and market. This ensures that the analysis captures the details of each specific anti-dumping case.

A complete technical description of the CAD model is provided in a separate technical appendix[2].

2.2. Using the model in anti-dumping cases

The model is conveniently implemented in an Excel worksheet, making it easy to apply to new anti-dumping cases. Combined with the limited data requirements, this means that the model can be flexibly applied to support future anti-dumping investigations.

Trade and production statistics to calibrate the model are readily available from Eurostat databases. Using official trade statistics from Eurostat is straightforward in anti-dumping cases where the product concerned closely matches statistical classification codes and where the investigation involves most imports from the relevant countries. If this is not the case, the trade statistics should be disaggregated using more detailed data (for example provided by the interested parties).

Data on elasticities is to some extent available in the economic literature, but some scenario-specific analysis is also required to properly reflect important product and market characteristics. It is worth noting that the required elasticities merely are quantitative measures of how markets and agents react to price changes. The current methodology applied by the Commission in its anti-dumping investigations generally arrives at authoritative findings regarding the specific market mechanisms for the concerned products. This information (already produced by the Commission) is typically sufficient for calibrating the model. Or in other words, if it is impossible to find the necessary elasticities for the model, it is also impossible to arrive at robust findings using any other method of investigation.

When the Copenhagen Antidumping Model is applied to a specific case, the results produced will transparently reflect the input data provided. The quality and credibility of all results will therefore depend on the quality of available statistics and the assumptions made on product and market characteristics. Easy handling of the model implies that sensitivity analysis to verify that results are robust to changes in key parameters can be performed without excessive efforts.

[2] The technical documentation is upon request available from Copenhagen Economics.

It is important to bear in mind that the purpose of the Copenhagen Antidumping Model is to help and assist anti-dumping investigations, not eliminate them or replace other methods of investigation. The results from the model should therefore be used to inform ongoing investigations on the approximate magnitude and distribution of economic outcomes across the protected industry, consumers and users for Europe as a whole. However, it is important to interpret and qualify modelling results in the light of other available information. For example, information provided by interested parties could be used to establish if modelling results reflect upper or lower limits for the potential economic effects.

2.3. Typical criticism against model-based approaches

Economic models can become subject to criticism, often revolving around effects that cannot be included in a formal economic framework. Much of the standard criticism is off the mark if it is made absolutely clear that formal economic modelling is only meant to complement, not replace, other methods of investigation.

Indeed, applying the Copenhagen Antidumping Model to assess the Community interest in anti-dumping investigations does neither imply a revolution to anti-dumping policy *per se*, nor does it mean that current methods should be scrapped. Instead, the model is a complement to current methods and merely an evolutionary improvement of one particular aspect of current practices – the assessment of the Community Interest.

Still, proper use of the model and its results is crucial to avoid typical criticism and to ensure the credibility of the analysis. To illustrate that this is the case, it is useful to consider how some common criticism against economic models measures up to reality:

- *Claim:* An economic model only measures economic efficiency, but cannot include the value of "fair trade".
  Fact: This is technically valid, but off the mark. It is correct that economic theory does not value "fair trade" or "producers' rights". However, there are at least two strong arguments in favour of model analyses.

  First, it is important to stress that economic modelling can assign a price to "fair trade", i.e. inform policy makers how much it costs to uphold an allegedly "fair" trading regime. This is particularly important considering that the Anti-dumping Regulation presupposes that "unfair" trade and competition is against the Community interest. A model analysis is therefore highly relevant for uncovering the costs of upholding "fair trade", particularly when taking into account the modest progress towards realising the Lisbon agenda and the importance of increasing the competitiveness of the EU economy (which depends also on the competitiveness of user industries).

  Second, an analytical framework that quantifies gains to producers, users and consumers can shed new light on the issue of fairness. If it is found that "fair trade" benefit producers at disproportionate costs to consumers and user industries, the latter are clearly subject to unfair treatment.

- *Claim:* An economic model cannot capture the effects of not doing anything.
  Fact: Again, this is formally valid, but largely irrelevant because a model analysis should only be a complement to existing methods. Current methods applied by the Commission for analysing the effects of inaction should be applied alongside the Copenhagen Antidumping Model. Moreover, one of the benefits of formal modelling is precisely that it allows for a comparison between adopting a policy measure (e.g. an anti-dumping measure) and maintaining status quo.

- *Claim:* An economic model assumes perfect competition.
  Fact: In fact, the Copenhagen Antidumping Model does not make an explicit assumption about perfect competition. The model only needs information about how markets and consumers react to price changes (embodied in various elasticities), and does not impose a particular market structure. Information about market structures should however be used to properly calibrate the model and assess the distribution of costs and benefits across industries, firms and consumers.

- *Claim:* An economic model is based on unknown elasticities.
  Fact: This criticism is usually off the mark. Elasticities are never complete unknowns. They merely reflect the behaviour of a market, and an analyst with sufficient insight into a market can easily pin down realistic elasticities. The Commission is already able to arrive at authoritative conclusions regarding market mechanisms in anti-dumping cases, and this knowledge can easily be translated into elasticities. In fact, the Copenhagen Antidumping Model requires no more data on elasticities than what is implicitly required by the Commission's own methods of investigation. It is worth emphasizing that if it is indeed impossible to determine plausible elasticities, then it is also impossible to establish the characteristics of the market concerned and the Commission would be unable to reach any conclusions using its current methodology. Since this is rarely (or never) the case, it is also possible to determine the necessary elasticities.

- *Claim:* Required data does not exist.
  Fact: Eurostat's foreign trade statistics measure goods traded between Member States (Intrastat) and goods traded by Member States with third countries (Extrastat). They are the official source of information about Member States and EU imports, exports and trade balances. Community legislation in the field of foreign trade statistics ensures that the statistics are based on precise legal texts, directly applicable in the Member States and on definitions and procedures which, to a large extent, have been harmonised. Eurostat statistics are already used in anti-dumping investigations to analyse import volumes. The Copenhagen Antidumping Model can combine this official trade data from Eurostat with the firm-specific and high quality data collected by Commission questionnaires. Precise and targeted questionnaires to interested parties can indeed provide very valuable information. When such information is available, it should be combined with Eurostat statistics and other data sources to provide a comprehensive foundation for formal economic analysis. Importantly, informative model calculations can be performed even if the product concerned does not match the statistical classifications in Eurostat databases, if only imports from certain firms are concerned, or if the investigation period is different from the period of data availability (the potential bias created by a partial mismatch can easily be handled with standard methods for sensitivity analysis).

Chapter 3: Application to specific anti-dumping cases

This chapter demonstrates the use of the Copenhagen Anti-dumping Model by applying it to four anti-dumping cases. To show their usefulness in an assessment of the Community interest, the results highlight the economic impacts of anti-dumping measures on European consumers and producers, as well as on tariff revenues.

The four sample cases analysed here are salmon, bed linen, TV sets and fertiliser[3]. Depending on the status of actual anti-dumping measures, each scenario involves either the imposition or removal of anti-dumping measures. The different scenarios illustrate that the model can be used not only to investigate future anti-dumping measures, but also to evaluate existing policies.

Precise definitions of the scenarios and data sources are provided in Appendix II. Note that the defined scenarios only serve to demonstrate the use of the model and to provide a rough estimate of the economic effects in each case. Case-specific details (e.g. absorption, partial mismatches between concerned products and statistical classifications and modelling of firm-level duties) have thus not been explicitly addressed. Such details should obviously be taken into account in actual investigations of anti-dumping cases.

3.1. Impacts on consumers, user industries and producers

To analyse the Community interest in anti-dumping cases, the economic effects on consumers, user industries and producers must be explicitly considered. The following sections highlight gains and costs to consumers, user industries and producers in the European Union. Detailed results on the individual member state level are presented in Appendix I. The results reflect yearly economic impacts based on trade flows and production in 2002, which is the latest year for which statistics on imports and exports are available. In the following, the term consumers will refer to both final consumers and user industries.

Salmon

Anti-dumping tariffs and price undertakings for Norwegian salmon were in place from 1997 to 2003 (when they were removed following a Council decision). The model has been used to analyse the effects of removing these anti-dumping measures already in 2002.

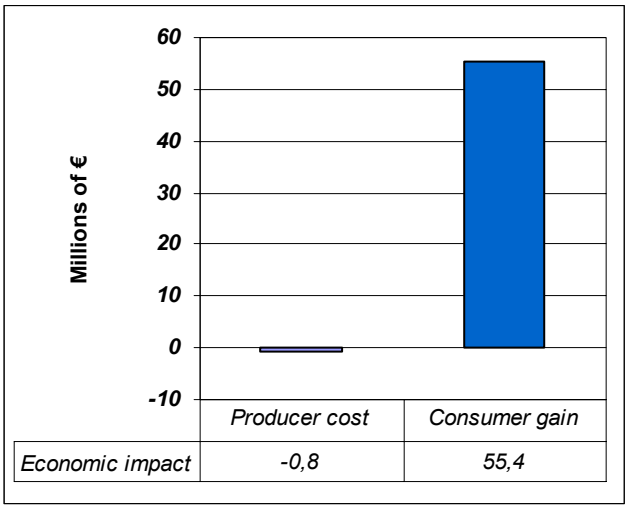
Figure 3 illustrates that the consumer gain from removing the anti-dumping measures is vastly larger than the associated costs to producers. Moreover, Table 1 of Appendix 1 documents that all Member States but one experience consumer gains that are larger than producer costs.

The consumer gain is intuitively explained by a fall in final consumer prices when the anti-dumping measures are removed and the price of imported Norwegian salmon decreases.

[3] Only fertiliser in the form of ammonium nitrate is considered.

Producers within the EU must respond to lower demand for their products by lowering prices. The large difference between the consumer gain and the producer costs, amounting to a factor of almost 70, is primarily explained by the large market share of Norwegian salmon. Furthermore, branding effects differentiate Norwegian salmon from primarily Scottish salmon in national markets (Asche et al, 2002; Guillotreau and Le Grel, 2001), making salmon produced within the EU an imperfect substitute for Norwegian imports.

Figure 3: The Community interest in removing anti-dumping measures on salmon



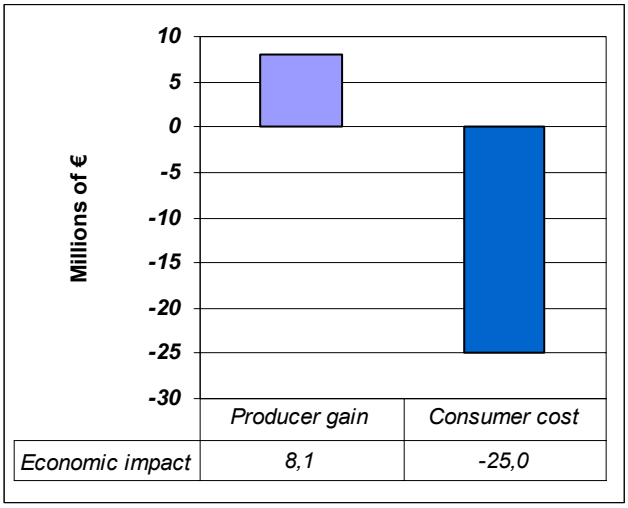
Note: The figure shows yearly costs and gains for the EU as a whole based on trade flows and production in 2002. The consumer gain includes final consumers and user industries.
Source: Copenhagen Anti-dumping Model simulations.

Bed linen

Anti-dumping tariffs on bed linen from India, Pakistan and Egypt were abolished in 2001. The model has therefore been used to analyse the potential effects of reinstituting the abolished tariffs in 2002. Figure 4 shows that consumer costs outweigh producer gains by a factor of 3. Put differently, for each euro that EU producers gain from trade protection, EU consumers and user industries must pay 3 euros.

The consumer costs are explained by a rise in consumer prices, following the imposition of import tariffs. Because imported bed linen becomes more expensive and EU products are good substitutes for the imported products, EU producers will benefit from higher producer prices. Table 3 of Appendix I shows that only one country (Portugal) experiences significant producer gains that are larger than consumer costs.

Figure 4: The Community interest in imposing anti-dumping measures on bed linen

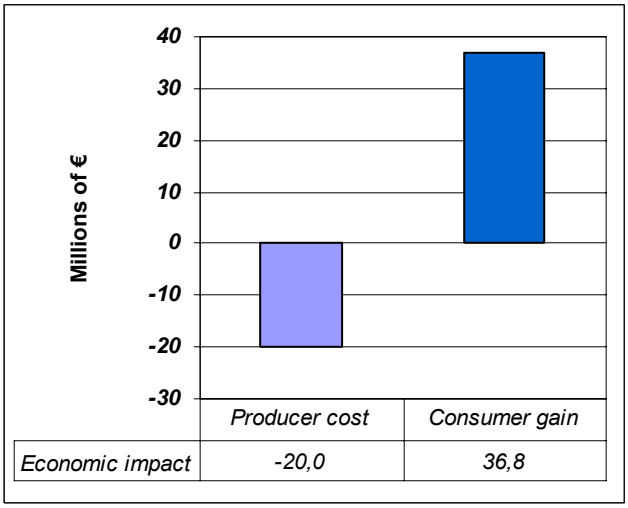


Note: The figure shows yearly costs and gains for the EU as a whole based on trade flows and production in 2002. The consumer gain includes final consumers and user industries.
Source: Copenhagen Anti-dumping Model simulations.

TV sets

Anti-dumping tariffs on TV sets from Thailand, Malaysia, Singapore, China and South Korea were introduced in 2001. The model has been used to analyse the effects of removing the tariffs for 2002. Figure 5 shows that consumer gains from removing the anti-dumping tariffs are almost twice as large as the costs to producers. Consumers gain from shifting their consumption to lower-priced imports that are good substitutes to TV sets produced within the EU. Producers within the EU must respond to lower demand for their products by lowering prices. Consequently, when the anti-dumping tariffs are removed, both consumer prices and EU producer prices fall. Only a small number of Member States experience producer costs that are larger than the consumer gains, as documented in Table 5 of Appendix 1.

Figure 5: The Community interest in removing anti-dumping measures on TV sets



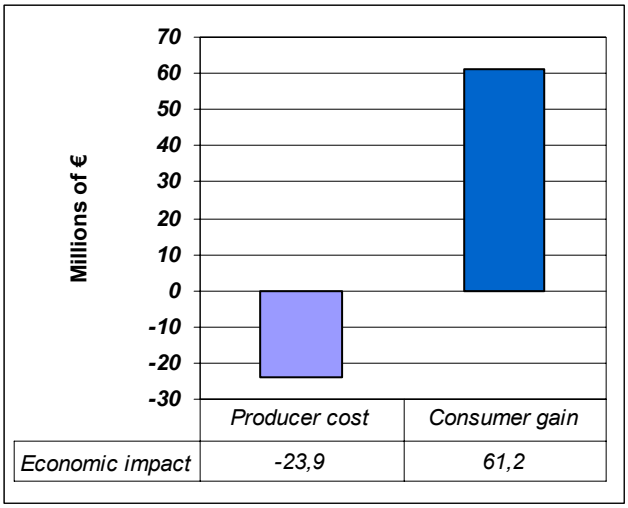
Note: The figure shows yearly costs and gains for the EU as a whole based on trade flows and production in 2002. The consumer gain includes final consumers and user industries.
Source: Copenhagen Anti-dumping Model simulations.

Fertiliser

Anti-dumping tariffs on fertiliser from Russia and Ukraine were introduced in 1995 and 2001, respectively. The model has been used to analyse the effects of removing the tariffs for 2002.

Again, a removal of the anti-dumping tariffs leads to consumer gains that significantly outweigh producer costs. The economic mechanisms at work are similar to the case of TV sets. Consumers gain from access to lower-priced imports that are good substitutes to fertiliser produced within the EU. This leads to a fall in both consumer and EU producer prices. The consumer gain is almost three times larger than the costs to producers. Again, only a small number of Member States experience producer costs that are larger than their consumer gains.

Figure 6: The Community interest in removing anti-dumping measures on fertiliser



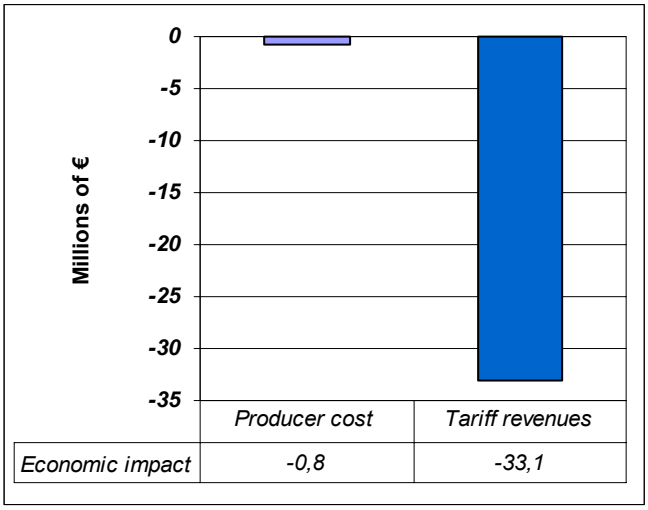
Note: The figure shows yearly costs and gains for the EU as a whole based on trade flows and production in 2002. The consumer gain includes final consumers and user industries.
Source: Copenhagen Anti-dumping Model simulations.

3.2. Impacts on tariff revenues

The purpose of anti-dumping measures is to protect EU producers from allegedly unfair trade competition. Imposition of anti-dumping tariffs will generally benefit EU producers, but also generate tariff revenues accruing to the EU budget. It is clearly in the Community interest to apply policies that efficiently support EU producers, as opposed to using policies that primarily redistribute resources from consumers and user industries to the EU budget. The efficiency of anti-dumping measures in terms of supporting EU producers can therefore be evaluated by analysing how economic benefits are distributed among producers and the EU budget.

The analysis shows that anti-dumping measures on salmon are a very inefficient policy instrument for supporting EU producers. The scenario analyses the effects of removing anti-dumping measures, which results in producer costs and lower tariff revenues. The important point, illustrated in Figure 7, is that the anti-dumping tariffs primarily affect tariff revenues and that the cost to producers is significantly smaller than the revenue losses. It is worth noting that the anti-dumping measures on salmon included price-undertakings. If these had been replaced with higher anti-dumping tariffs, the revenue effects would have been considerably larger.

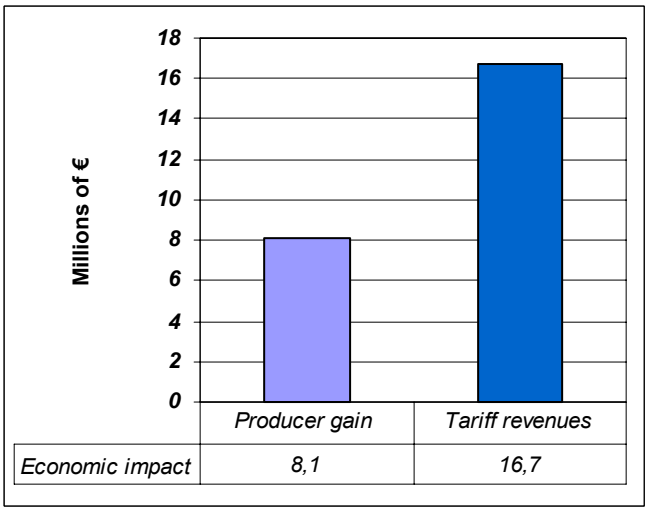
Figure 7: Producer costs versus tariff revenues for salmon



Note: The figure shows yearly effects for the EU as a whole based on trade flows and production in 2002.
Source: Copenhagen Anti-dumping Model simulations.

The efficiency aspect of anti-dumping measures is clearly illustrated for the case of bed linen, where the scenario analyses the imposition of anti-dumping tariffs. Figure 8 shows that only a third of the benefits accrues to EU producers. Instead, the main beneficiary of the anti-dumping tariffs is the EU budget. The anti-dumping measures on bed linen are consequently a very inefficient way of supporting EU producers, especially when taking the large consumer costs into account.

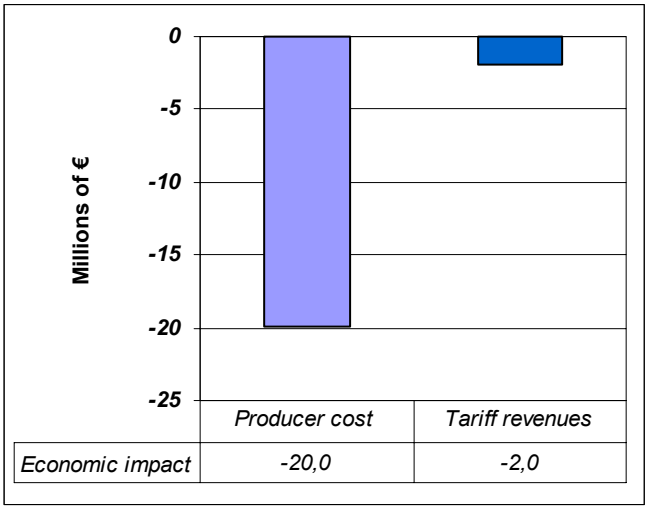
Figure 8: Producer gain versus tariff revenues for bed linen



Note: The figure shows yearly effects for the EU as a whole based on trade flows and production in 2002.
Source: Copenhagen Anti-dumping Model simulations.

The case of TV sets is somewhat different, because the original imposition of anti-dumping tariffs implied a very sharp drop in imports from anti-dumping countries. Since the scenario analyses the effects of removing the anti-dumping tariffs, the relatively small import volume leads to only a small drop in tariff revenues, as illustrated in Figure 9. The small drop in tariff revenues essentially indicates how the impact of anti-dumping measures can be influenced by changes in trade flows with third-party countries, in this case Turkey.

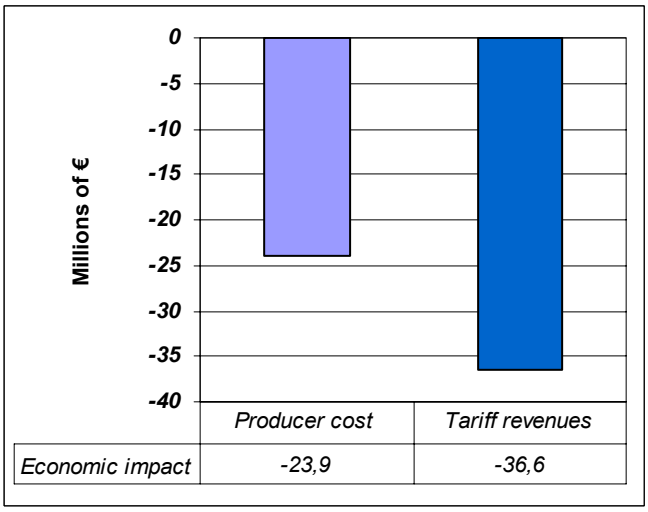
Figure 9: Producer costs versus tariff revenues for TV sets



Note: The figure shows yearly effects for the EU as a whole based on trade flows and production in 2002.
Source: Copenhagen Anti-dumping Model simulations.

Anti-dumping tariffs on fertiliser are clearly an inefficient policy instrument for supporting EU producers. As was the case for salmon and bed linen, the primary economic effect of the anti-dumping measure concerns EU tariff revenues rather than EU producers. Figure 10 documents that the loss of tariff revenues is significantly larger than the cost to producers.

Figure 10: Producer costs versus tariff revenues for fertiliser



Note: The figure shows yearly effects for the EU as a whole based on trade flows and production in 2002.
Source: Copenhagen Anti-dumping Model simulations.

The model analysis shows that the economic effects of anti-dumping measures on EU tariff revenues tend to be significantly larger than on producers. Still, the revenues from anti-dumping tariffs are very low in absolute terms compared to the total EU budget. The conclusion is that anti-dumping measures constitute an inefficient policy instrument for the purpose of supporting EU producers. The most evident effect of introducing anti-dumping measures is not increased support to EU producers, but a redistribution of consumer and user industries' resources to the central EU budget.

Chapter 4: Concluding remarks

This study has documented an economic model, the Copenhagen Antidumping Model, which can be used to complement the assessment of the Community interest in both new anti-dumping investigations and in review investigations of existing anti-dumping measures. In particular, the model improves assessments of the economic impacts of anti-dumping measures on the Community as a whole.

As demonstrated in the previous chapter, a formal modelling approach gives new and relevant insights to the economic relationships between consumer and user costs, producer gains and revenue effects of anti-dumping measures. A formal analysis can be performed to assess the Community interest in specific anti-dumping cases, and the effects on individual Member States can be determined. The analysis is not dependent on active involvement by the interested parties, but can be performed independently using publicly available data. As a result, a modelling approach provides a stringent methodology that should complement all investigations into the Community interest in anti-dumping measures.

Chapter 5: References

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Appendix I Detailed results

Table 1 Economic effects of removing antidumping measures on salmon

	1. Output	2. Producer revenues	3. Producer prices	4. Consumer prices	5. Producer surplus	6. Consumer surplus	7. Net effect
Austria	-0,16	-0,31	-0,15	-0,10	-0,3	6,6	6,3
Belgium	-0,05	-0,09	-0,04	-0,07	-6,6	44,3	37,7
Cyprus	-0,07	-0,14	-0,07	-5,11	0,0	32,3	32,3
Czech Rep.	-0,06	-0,11	-0,05	-4,14	0,0	109,2	109,1
Denmark	-0,10	-0,20	-0,09	-4,69	-289,8	26893,7	26603,9
Estonia	-0,31	-0,59	-0,28	-3,13	-4,1	93,5	89,3
Finland	-0,51	-0,97	-0,47	-5,27	-13,9	1513,1	1499,1
France	-0,04	-0,08	-0,04	-0,08	-21,0	281,7	260,7
Germany	-0,06	-0,12	-0,06	-2,64	-42,8	7452,6	7409,8
Greece	-0,03	-0,05	-0,03	-0,09	0,0	3,6	3,6
Hungary	0,00	0,00	0,00	-3,38	0,0	46,4	46,4
Ireland	-0,06	-0,11	-0,05	-0,06	-24,7	4,5	-20,3
Italy	-0,15	-0,29	-0,14	-0,09	-25,3	65,9	40,6
Latvia	-0,54	-1,03	-0,49	-5,44	-2,0	184,1	182,1
Lithuania	-0,44	-0,83	-0,40	-4,33	-3,3	159,6	156,3
Luxembourg	-0,02	-0,05	-0,02	-0,06	-0,1	1,5	1,4
Malta	0,00	0,00	0,00	-4,90	0,0	27,7	27,7
Netherlands	-0,06	-0,11	-0,05	-0,30	-14,9	181,0	166,1
Poland	-0,43	-0,82	-0,39	-5,09	-29,3	1938,7	1909,4
Portugal	-0,02	-0,04	-0,02	-0,09	-0,5	10,9	10,4
Slovakia	-0,08	-0,16	-0,07	-0,57	-0,1	3,4	3,4
Slovenia	-0,01	-0,02	-0,01	-5,05	0,0	23,8	23,8
Spain	-0,07	-0,14	-0,07	-0,15	-15,9	189,2	173,3
Sweden	-0,13	-0,24	-0,12	-5,80	-192,4	15177,9	14985,6
United Kingdom	-0,08	-0,15	-0,07	-1,21	-126,4	944,0	817,6

Note: Columns 1, 2, 3 and 4 show percent changes. The unit for columns 5, 6 and 7 is thousands of €.

The table shows yearly yearly effects based on trade flows and production in 2002.

The consumer effects include user industries and final consumers.

The country-level results for Denmark and Sweden are especially affected by the existence of reexports in the underlying statistics.

Source: Copenhagen Antidumping Model simulations.

Table 2 EU aggregate effects for salmon

	Import taxes	Producer surplus	Consumer surplus	Net welfare effect
EU25	-33,1	-0,8	55,4	21,4

Note: All values are millions of €.

The table shows yearly yearly effects based on trade flows and production in 2002.

The consumer effects include user industries and final consumers.

Source: Copenhagen Antidumping Model simulations.

Table 3 Economic effects of imposing antidumping measures on bed linen

	1. Output	2. Producer revenues	3. Producer prices	4. Consumer prices	5. Producer surplus	6. Consumer surplus	7. Net effect
Austria	0,67	1,29	0,61	0,73	86,9	-429,8	-342,9
Belgium	0,73	1,41	0,67	0,87	292,2	-884,3	-592,0
Cyprus	0,41	0,78	0,37	1,45	0,2	-53,1	-52,9
Czech Rep.	0,79	1,51	0,72	1,97	199,3	-184,0	15,2
Denmark	0,83	1,60	0,76	1,71	57,8	-667,5	-609,7
Estonia	0,69	1,32	0,62	0,72	147,2	-90,3	56,9
Finland	0,76	1,45	0,69	1,01	38,6	-335,9	-297,3
France	0,67	1,28	0,61	0,99	894,4	-3000,1	-2105,7
Germany	0,78	1,50	0,71	1,22	1377,4	-5877,4	-4499,9
Greece	0,52	0,99	0,47	0,60	41,4	-118,1	-76,7
Hungary	1,24	2,39	1,13	2,31	74,8	-250,6	-175,8
Ireland	0,86	1,66	0,79	1,04	43,2	-274,9	-231,6
Italy	0,37	0,70	0,33	0,47	1257,1	-1943,2	-686,2
Latvia	0,85	1,64	0,78	0,84	32,0	-5,6	26,4
Lithuania	0,97	1,86	0,88	1,47	53,1	-7,0	46,1
Luxembourg	0,60	1,15	0,55	0,65	0,6	-30,3	-29,7
Malta	0,00	1,35	0,64	1,62	0,0	-12,2	-12,2
Netherlands	0,65	1,25	0,59	1,32	178,2	-1356,1	-1177,9
Poland	0,90	1,72	0,81	1,73	519,3	-240,1	279,2
Portugal	0,78	1,50	0,71	0,68	1058,4	-157,5	901,0
Slovakia	0,70	1,34	0,64	0,87	96,3	-48,3	48,0
Slovenia	0,77	1,47	0,70	1,14	46,3	-97,8	-51,4
Spain	0,58	1,11	0,53	0,80	356,3	-835,7	-479,4
Sweden	0,81	1,55	0,73	1,66	113,8	-1238,0	-1124,1
United Kingdom	0,85	1,64	0,78	1,30	1153,3	-6835,3	-5682,0

Note: Columns 1, 2, 3 and 4 show percent changes. The unit for columns 5, 6 and 7 is thousands of €.

The table shows yearly yearly effects based on trade flows and production in 2002.

The consumer effects include user industries and final consumers.

The country-level results for the Netherlands are especially affected by the existence of reexports in the underlying statistics.

Source: Copenhagen Antidumping Model simulations.

Table 4 EU aggregate effects for bed linen

	Import taxes	Producer surplus	Consumer surplus	Net welfare effect
EU25	16,7	8,1	-25,0	-0,1

Note: All values are millions of €.

The table shows yearly yearly effects based on trade flows and production in 2002.

The consumer effects include user industries and final consumers.

Source: Copenhagen Antidumping Model simulations.

Table 5 Economic effects of removing antidumping measures on TV sets

	1. Output	2. Producer revenues	3. Producer prices	4. Consumer prices	5. Producer surplus	6. Consumer surplus	7. Net effect
Austria	-0,32	-0,62	-0,30	-0,29	-993,0	519,2	-473,8
Belgium	-0,35	-0,66	-0,32	-0,36	-773,5	903,0	129,5
Cyprus	-0,38	-0,72	-0,34	-1,88	0,0	296,3	296,3
Czech Rep.	-0,35	-0,67	-0,32	-0,87	-1126,8	890,5	-236,3
Denmark	-0,35	-0,66	-0,31	-0,34	-437,2	643,9	206,8
Estonia	-1,85	-3,50	-1,68	-1,78	-5,5	229,8	224,3
Finland	-0,48	-0,90	-0,43	-0,78	-115,6	659,5	543,9
France	-0,33	-0,63	-0,30	-0,68	-2899,3	6482,1	3582,9
Germany	-0,35	-0,66	-0,32	-0,36	-1229,5	5270,4	4040,8
Greece	-0,53	-1,01	-0,48	-0,50	-19,5	697,8	678,3
Hungary	-0,34	-0,65	-0,31	-1,61	-1301,4	1601,2	299,8
Ireland	-0,33	-0,62	-0,30	-0,28	-54,5	242,7	188,2
Italy	-0,31	-0,59	-0,28	-0,39	-553,5	3013,1	2459,6
Latvia	-0,75	-1,43	-0,68	-2,55	-1,0	426,5	425,5
Lithuania	-0,35	-0,67	-0,32	-2,70	-101,8	1124,7	1023,0
Luxembourg	-0,29	-0,55	-0,26	-0,31	-25,3	63,7	38,4
Malta	0,00	-0,71	-0,34	-1,30	0,0	66,7	66,7
Netherlands	-0,28	-0,54	-0,26	-0,39	-760,7	2483,3	1722,6
Poland	-0,36	-0,69	-0,33	-0,44	-3343,0	971,6	-2371,4
Portugal	-0,28	-0,54	-0,26	-0,29	-10,2	403,9	393,6
Slovakia	-0,41	-0,78	-0,37	-0,35	-383,3	172,4	-210,9
Slovenia	-0,32	-0,61	-0,29	-0,39	-144,4	61,6	-82,7
Spain	-0,34	-0,65	-0,31	-0,36	-3121,6	1796,2	-1325,4
Sweden	-0,40	-0,76	-0,36	-0,36	-338,3	1295,8	957,5
United Kingdom	-0,33	-0,62	-0,30	-0,43	-2227,1	6463,3	4236,2

Note: Columns 1, 2, 3 and 4 show percent changes. The unit for columns 5, 6 and 7 is thousands of €.

The table shows yearly yearly effects based on trade flows and production in 2002.

The consumer effects include user industries and final consumers.

Source: Copenhagen Antidumping Model simulations.

Table 6 EU aggregate effects for TV sets

	Import taxes	Producer surplus	Consumer surplus	Net welfare effect
EU25	-2,0	-20,0	36,8	14,8

Note: All values are millions of €.

The table shows yearly yearly effects based on trade flows and production in 2002.

The consumer effects include user industries and final consumers.

Source: Copenhagen Antidumping Model simulations.

Table 7 Economic effects of removing antidumping measures on fertiliser (AN)

	1. Output	2. Producer revenues	3. Producer prices	4. Consumer prices	5. Producer surplus	6. Consumer surplus	7. Net effect
Austria	-3,87	-7,25	-3,52	-4,14	-110,8	85,2	-25,6
Belgium	-1,94	-3,67	-1,76	-1,83	-1462,2	991,7	-470,5
Cyprus	-5,33	-9,93	-4,86	-6,55	-136,1	240,4	104,3
Czech Rep.	-13,92	-24,89	-12,74	-22,26	-31,4	1904,1	1872,7
Denmark	-4,41	-8,25	-4,02	-6,03	-514,3	846,5	332,1
Estonia	-20,21	-35,02	-18,56	-33,15	-14,9	3979,3	3964,4
Finland	-1,37	-2,60	-1,24	-1,69	-119,1	210,4	91,3
France	-2,47	-4,66	-2,25	-3,02	-6926,1	11388,7	4462,7
Germany	-7,04	-13,00	-6,42	-9,25	-1776,0	2764,0	988,0
Greece	-0,86	-1,63	-0,78	-1,05	-211,5	371,2	159,7
Hungary	-6,66	-12,33	-6,07	-21,69	-240,8	8728,1	8487,3
Ireland	-1,25	-2,37	-1,14	-1,37	-91,0	120,5	29,5
Italy	-1,64	-3,11	-1,49	-2,00	-645,5	1130,7	485,2
Latvia	-10,45	-19,00	-9,55	-32,06	-19,3	2842,2	2822,9
Lithuania	-3,48	-6,54	-3,17	-33,35	-1604,4	4717,3	3112,9
Luxembourg	-1,58	-2,99	-1,44	-1,55	-18,2	17,6	-0,7
Malta	0,00	-1,81	-0,87	-1,18	0,0	3,9	3,9
Netherlands	-2,10	-3,97	-1,91	-2,01	-931,2	180,1	-751,1
Poland	-9,96	-18,16	-9,10	-22,49	-1384,7	7236,1	5851,4
Portugal	-1,02	-1,93	-0,92	-1,26	-88,4	156,5	68,0
Slovakia	0,00	0,00	0,00	-25,36	0,0	766,6	766,6
Slovenia	-2,07	-3,92	-1,89	-2,56	-70,6	124,3	53,6
Spain	-2,53	-4,77	-2,30	-3,17	-1677,4	2846,5	1169,1
Sweden	-2,13	-4,03	-1,94	-2,42	-476,4	600,4	124,0
United Kingdom	-2,35	-4,44	-2,14	-2,90	-5359,4	8993,3	3633,9

Note: Columns 1, 2, 3 and 4 show percent changes. The unit for columns 5, 6 and 7 is thousands of €.

The table shows yearly yearly effects based on trade flows and production in 2002.

The consumer effects include user industries and final consumers.

Source: Copenhagen Antidumping Model simulations.

Table 8 EU aggregate effects for fertiliser (AN)

	Import taxes	Producer surplus	Consumer surplus	Net welfare effect
EU25	-36,6	-23,9	61,2	0,8

Note: All values are millions of €.

The table shows yearly yearly effects based on trade flows and production in 2002.

The consumer effects include user industries and final consumers.

Source: Copenhagen Antidumping Model simulations.

Appendix II Input data and scenario definitions

This appendix contains a description of input data and precise definitions of the policy changes analysed in the scenarios. Note that the defined scenarios only serve to demonstrate the use of the model and to provide a rough estimate of the economic effects in each case. Case-specific details (e.g. absorption, partial mismatches between concerned products and statistical classifications and modelling of firm-level duties) have thus not been explicitly addressed. Such details should obviously be taken into account in actual investigations of anti-dumping cases.

The benchmark year for all scenarios is 2002, the latest year for which data is available. All scenarios share the common assumption that the European Union was enlarged to include 25 Member States already in 2002. No anti-dumping measures against the new Member States are therefore included in the analysis. Furthermore, the analysis assumes that all anti-dumping measures are efficiently enforced and that no illegitimate trading, particularly country and product mis-declarations, occurs. The input data and specific scenario definitions are laid out in the following sections.

Input data

The model requires data on the value of trade and production for the analysed products[4]. For all scenarios, data on bilateral trade flows and domestic production has been acquired from Eurostat. Statistics on bilateral trade flows have been extracted from the COMEXT database, which covers 11000 products. The trade statistics are the best available and generally of a high quality, but it should be noted that they contain reexports of extra-EU trade. The implication is that extra-EU imports are registered at the first port of entry in the EU, rather than at their final destination. The existence of reexports in the statistics does not significantly affect aggregate results on the EU-level, but it does introduce some bias at the country level. Reexports will magnify both consumer and producer effects in countries that are first ports of EU entry for extra-EU imports.

The bilateral trade statistics from COMEXT have been complemented with production data from Eurostat's Europroms/PRODCOM database. It should be noted that the two databases use different and not entirely consistent nomenclatures. The Europroms/PRODCOM database is furthermore not complete for all product categories. Again, this problem does not significantly affect aggregate results, but may introduce some bias at the country level.

The behaviour of economic agents (consumers and producers) in the model is determined by their response to price changes, which is measured using elasticities of supply, demand and substitution. Estimates of elasticities are available in the economic literature, but some case-

[4] The model also allows for side-calculations on employment effects, which requires employment data. Employment effects have, however, not been considered in this study.

specific research is also necessary to properly reflect important product and market characteristics. The meaning of elasticities is quite intuitive. For example, a demand elasticity of -2 means that if the price were to increase by 10%, there would be a 20% drop in the quantity demanded. In the same way, a supply elasticity of 2 means that if the price were to increase by 10%, there would be a 20% rise in the quantity supplied. The elasticity of substitution similarly describes the degree of substitution between national varieties. Export supply elasticities describe the response of exporters to changes in prices. Note that pure export supply elasticities are significantly higher than supply elasticities. This is because exporters generally have the possibility to sell their produce at the world market price, which is assumed to be largely unaffected by national price changes. Thus, if the EU price of a good falls, exporters in e.g. Asia will significantly decrease their supply to the EU market and instead increase their supply to other markets.

Salmon

The model has been used to analyse the effects of removing anti-dumping measures for 2002[5]. The scenario consequently entails the following policy changes:

Policy parameter	Initial anti-dumping measures	After removal of anti-dumping measures
EU-wide import tariff on Norwegian salmon	3,84 %	0 %
Norwegian export tax on EU exports (calculated to sustain a price undertaking of 3,25 €/kg)	4,00 %	0 %

Note: Total import tariffs include anti-dumping tariffs and any general duties. The Norwegian export tax is based on an average salmon price of 3,12 €/kg for 2002.
Source: Own scenario definitions based on National Agency for Enterprise and Housing (2004).

The following elasticities were used for salmon:

Case		Value	Source
Salmon	Demand elasticity	-1,18	National Agency for Enterprise and Housing (2004)
	Elasticity of substitution	2,5	Hertel et al (2004, table 1)
	Supply elasticity	1,1	Own estimate
	Export supply elasticity	10	Own estimate based on National Agency for Enterprise and Housing (2004)

Source: See table.

Bed linen

The model has been used to analyse the effects of imposing anti-dumping measures for 2002[6]. The scenario consequently entails the following policy changes:

[5] The analysis covers the CN product codes 03021200, 03032200, 03041013 and 03042013.

[6] The analysis of bed linen covers the CN products 63022100, 63022290, 63023110, 63023190 and 63023290.

Policy parameter	Initial tariffs	After imposition of anti-dumping tariffs
EU-wide import tariff on bed linen from Egypt	0 %	11,73 %
EU-wide import tariff on bed linen from Pakistan	0 %	3,26 %
EU-wide import tariff on bed linen from India	9,6 %	23,38 %

Note: Total import tariffs include anti-dumping tariffs and any general duties. Anti-dumping tariffs are calculated as the average of firm-specific tariffs.
Source: Own scenario definitions based on National Agency for Enterprise and Housing (2004).

The following elasticities were used for bed linen:

Case		Value	Source
Bed linen	Demand elasticity	-1,2	Erkel-Rousse & Mirza (2002)
	Elasticity of substitution	7,5	Hertel et al (2004, table 1)
	Supply elasticity	1,1	Own estimate
	Export supply elasticity	10	Own estimate based on National Agency for Enterprise and Housing (2004)

Source: See table.

TV sets

The model has been used to analyse the effects of removing anti-dumping measures for 2002[7]. Data on domestic shipments of the analysed TV sets is often missing in official statistics. This does not significantly affect the results because the vast majority of production in individual countries is not meant for domestic consumption, but for the European market as a whole. Most of the production is therefore captured in the trade data. The scenario entails the following policy changes:

Policy parameter	With initial anti-dumping tariffs	After removal of anti-dumping tariffs
EU-wide import tariff on TV sets from Thailand	28,48 %	9,8 %
EU-wide import tariff on TV sets from Malaysia	26,73 %	14,0 %
EU-wide import tariff on TV sets from Singapore	20,60 %	14,0 %
EU-wide import tariff on TV sets from China	54,40 %	9,8 %
EU-wide import tariff on TV sets from South Korea	21,55 %	14, 0%

Note: Total import tariffs include anti-dumping tariffs and any general duties. Anti-dumping tariffs are calculated as the average of firm-specific tariffs.
Source: Own scenario definitions based on National Agency for Enterprise and Housing (2004).

The following elasticities were used for TV sets:

Case		Value	Source
TV sets	Demand elasticity	-1,1	Own estimate
	Elasticity of substitution	8,8	Hertel et al (2004, table 1)
	Supply elasticity	1,1	Own estimate
	Export supply elasticity	10	Own estimate based on National Agency for Enterprise and Housing (2004)

Source: See table.

[7] The analysis of TV sets covers the CN products 85281252, 85281254, 85281256, 85281258, 85281262 and 85281266.

Fertiliser

The model has been used to analyse the effects of removing anti-dumping measures for 2002. Only fertiliser in the form of ammonium nitrate is considered (CN product codes 31023090 and 31024090). Because there are few producers of fertiliser in each country, production data are confidential and not reported in official statistics. Data on domestic shipments has therefore been constructed based on the assumption of a fixed import share (23,5%) in the EU15 and a fixed ratio of own-trade to exports (80%) in the new Member States. The scenario entails the following policy changes:

Policy parameter	With initial anti-dumping tariffs	After removal of anti-dumping tariffs
EU-wide import tariff on fertiliser from Russia	52-76 %	6,5 %
EU-wide import tariff on fertiliser from Ukraine	32-45 %	6,5 %

Note: The anti-dumping tariffs on fertiliser are determined as a fixed value per tonne of fertiliser. The tariffs have been recalculated to effective tariffs based on the value of imports. Individual country tariffs vary accordingly. Total import tariffs include anti-dumping tariffs and any general duties.
Source: Own scenario definitions based on National Agency for Enterprise and Housing (2004).

The following elasticities were used for fertiliser:

Case		Value	Source
Fertiliser	Demand elasticity	-0,31	National Agency for Enterprise and Housing (2004)
	Elasticity of substitution	8	Own estimate based on National Agency for Enterprise and Housing (2004)
	Supply elasticity	1,1	Own estimate
	Export supply elasticity	10	Own estimate based on National Agency for Enterprise and Housing (2004)

Source: See table.