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STUDY ON THE ECONOMIC AND INDUSTRIAL ASPECTS OF ANTI-DUMPING POLICY

Peter Holmes with Jeremy Kempton
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Abstract

This paper addresses the question of the economic and industrial consequences of dumping and anti-dumping measures when the assumption of perfect markets is not satisfied and when the policy instruments available are subject to legal constraint. The Basic Regulation provides that for anti-dumping measures to be taken, a case must pass tests for dumping injury and causation, and in addition a community interest test. We argue that the traditional conclusion of economists that anti-dumping should be confined to cases where there is a risk of monopolistic predation is excessively narrow. There may be other circumstances when anti-dumping action may be a second best option, although in oligopolistic markets economic theory cannot lay down clear *a priori* rules. Since the tools for assessing dumping, injury and causation do not give any guidance as to Community Interest we suggest that an enumeration of all the foreseeable consequences of imposing or not should be part of the decision making process even if formal Cost-Benefit-Analysis is inappropriate.

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INTRODUCTION

In this paper we begin with a discussion of what recent developments in economic analysis have to say about the effects of dumping and anti-dumping in general.

♦ The first part of the report reviews the different streams of economic analysis that can be applied to the study of dumping and anti-dumping. It will show that whereas the traditional approach to anti-dumping by international trade economists in the tradition of Jacob Viner has been in general very sceptical towards the use of anti-dumping measures, newer approaches that have been developed by industrial economists for the study of strategic behaviour in imperfect markets may lead to a qualification of the traditional conclusion. Modern industrial economics tells us that there may be reasons other than predation-for-monopolisation which could justify use of anti-dumping measures, especially when other policy tools are unavailable. The stress must be on *"may*" however; modern industrial economics has only recently been applied to the analysis of dumping and the main lessons of the new approaches are that on the one hand the right policy in each case depends on quite detailed knowledge of the circumstances of the industry and on the other hand that expectations effects about the working of the rules of the game can be of strategic importance for investment decisions. In addition to contrasting the various economic approaches with each other we will attempt to compare the framework adopted by economists in general which stresses economic efficiency at the expense of other possible goals with the approach of many lawyers and policy makers in which fairness is given a central place.

♦ Part two seeks to apply the concepts discussed earlier to see what light the alternative economic approaches can in principle shed on the various steps in an anti-dumping investigation; with an emphasis on the Community Interest criterion.

♦ Part three applies the reasoning of the previous sections to propose a set of questions which might be asked during proceedings from an economic point of view, not in order to propose a simple economic calculus as the basis for decision-making, but to enable those making the decision on overall policy grounds to have the best information at their disposal. Although there is scope for better enumeration of the potential costs and benefits, it is argued that formal Cost Benefit Analysis is not likely to be a useful decision-making tool. On the other hand it seems likely that if more information can be collected on a long term basis about industries affected by dumping and by anti-dumping measures a more systematic monitoring of the impact of decisions could be fruitful.

♦ Part four summarises these recommendations.

The annexes of the report will remain confidential to the Commission services. They will, in the light of the analysis presented in this paper, look back at the effects of past anti-

dumping actions for a selected number of industries. The conclusions will however be very tentative.[1]

We are not starting from zero in this study. We have the benefit of the work of Prof. Willig (1996) and Grant Thornton (1992). Prof. Willig undertook a valuable exercise in analysing the relationship between competition concepts and dumping. Grant Thornton were asked to develop the notion of strategic dumping, to test whether one could operationalise it in selected cases and to comment on the Community interest, and we will explore the relationship between those two frameworks. Both of these studies have been carefully read and appropriate lessons drawn but are not quoted here. They have not been published but their contents are available to the Commission

1. ECONOMIC THEORIES OF DUMPING AND THEIR RELATIONSHIP TO LEGAL CONCEPTS

Before discussing the theoretical analysis of anti-dumping it must be noted here that we define dumping as in the GATT/WTO codes and the EU legislation as pricing in export markets at levels that are below prices or "normal values" in the home market, i.e. international price discrimination.[2]

Under the GATT/WTO codes dumping, though not illegal per se is actionable if it can be shown to have caused injury. EU legislation is unusual in requiring an examination of the overall Community Interest in addition to tests for dumping injury and causation.

We have to note as recent studies have done that dumping as defined by GATT covers quite a broad range of economic circumstances.[3] These can be broadly defined as:

1) Monopolistic predatory pricing
2) Strategic behaviour falling short of monopolistic predation
3) Price discrimination aimed at market entry
4) Cyclical price cutting (price discriminating or selling below cost)
5) Behaviour by state trading enterprises, not based on commercial considerations

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[1]It is unlikely that our study will be able to offer definitive evaluations of the impact of dumping and anti-dumping in the cases we are looking at for two reasons:
a) much of the data for doing this is simply not available and one of our conclusions will be that more data is needed for a proper ex post evaluation of the effects of dumping or measures to respond, and it is one of the recommendations that more follow-up data should be collected.
b) a proper evaluation of the effects of dumping or measures requires a clearly specified account of what would have happened otherwise (the counter-factual or anti-monde and it is beyond our capability to do more than guess at the alternative scenarios).

[2] If a seller is charging below normal value at home as well as abroad there can actually be dumping findings without actual price discrimination.

[3] We draw on the unpublished work of Prof. Willig for the OECD and Grant Thornton for the Commission.

At one extreme we have firms cutting prices to drive rivals out of business in order to create or preserve monopoly power. In other cases we have firms with no prospect of market power at all forced to lower prices in order to enter new markets.

Some forms of dumping are more harmful than others. Many economists would argue that only the first case of predatory monopolistic dumping is a cause for concern. This report does not share that view. The argument in the current report is that there is a wider range of circumstances than pure predatory monopolistic dumping which may justify anti-dumping action. But whilst it is clear that action to stop predatory monopolistic dumping would be per se in the Community Interest, in all other cases there is room for a detailed case by case examination of the impact of the imposition or non-imposition of the measures on the Community as a whole.

1.1. Types of dumping

There are many different economic phenomena covered by the legal definition of dumping

1.1.1. Predatory dumping and monopolisation

Everyone agrees monopolising predatory dumping should be addressed by anti-dumping duties. Competition rules are not likely to be sufficient, not least because, if the monopoly is foreign controlled, the EU would have less power over it. However, in case where monopolisation has already occurred, the advantages accruing from economies of scale may make it necessary to distinguish between the existence of anti-dumping laws and their practical application.

Pure monopolistic predation occurs when a firm (or a cartel) with a dominant position in one market seeks to drive all other firms out of the market in order to abuse the subsequently acquired dominant position by raising prices. There is a long standing debate in the economics literature about the possibility of firms actually being able to do this. Trade economists and the Chicago School of industrial economists have systematically denied that predation is a realistic possibility and this view has been shared by many trade economists. US anti-trust law has been heavily influenced by attempts to demonstrate that firms could never re-coup losses they would initially incur in doing this.

There is little dispute that when it is clear that a foreign firm or group of firms is deliberately seeking to drive our firms out of business in order to establish a dominant position on the EU market anti-dumping measures are justified. It is easy to see why the EU would not be satisfied with the right to apply its own competition rules ex post in such cases. Within the EU the competition rules are supplemented by the firm guarantees of reciprocal market access offered by the rules of the internal market (the "four freedoms"). In addition, standards of proof, time delays and problems of evidence would

mean that one would have to wait until damage had already occurred. If a monopoly that established itself were foreign controlled we would have less power over it, than if it were wholly based in the EU. Any evidence for the origin of anti-competitive conduct would be abroad.

Economic analysis therefore suggests that anti-dumping measures will be advisable if by action we can thereby prevent a monopoly arising; it is better still if the existence of our laws and the threat of their use deters attempts to monopolise. In clear cases of attempted predation the issue of Community Interest is self-evident. An analysis of the dangers could be part of the Community Interest test.

But what if the monopolisation has already occurred ? Some writers have raised the question of whether it is rational if the foreign firm has somehow acquired an insuperable advantage already. Venables (1991, p.23), for example, suggests that it may be against our interests to intervene. Venables argues that if economies of scale are very great the benefits of concentrating production in one firm could bring down costs so much that even if the firm maximises monopoly profits, prices to our consumers will be lower than if there were duplication of investment, and the gains to users and consumers could outweigh the lost profits to our producers. There is therefore a clear need to distinguish the effects of the existence of anti-dumping laws and their actual application. We may well want to keep anti-dumping laws in place as a deterrent to the abuse of asymmetric advantage.

1.1.2. Strategic Behaviour

This covers a variety of types of action and what we are above all concerned about is cases where due to the absence of EU-type competition rules foreign firms can engage in strategic behaviour that our firms cannot do.

Economists would define strategic behaviour as action undertaken with a view to influencing the behaviour of rivals. To be more precise, behaviour is strategic if it would not be optimal profit maximising behaviour if the actions of other firms were taken as given, but which becomes profit maximising when the reaction of others is taken into account. Strategic behaviour does not have to be loss-making: it just has to depend for an important part of its profitability on interaction effects. From a competition or trade policy point of view we cannot hope to test for the existence of strategic behaviour by looking for loss-making action.

Strategic behaviour includes:

- Cutting prices in one market in order to signal to a rival that you are prepared to fight a price war there or elsewhere if they undertake any price cutting at all.
- Deliberately building more capacity than you need now and openly committing yourself to high levels of output even if other firms enter
- Signing clauses with customers to match any rebates that new entrants can offer.

The extreme example of strategic behaviour is when firms engage in monopolistic predation, so that rivals leave and prices to consumers can be put up. There is however a wide spectrum of behaviour that can be termed strategic competition, some of which is quite harmless, some of which can have anti-competitive effects that fall far short of predatory monopolisation.

Most firms engage in strategic behaviour of some kinds. What we are concerned about here is where one firm or group of firms has options which other firms do not have due to some form of asymmetric market closure of their own market.

On the other hand simply selling at low prices because you have low costs is not necessarily strategic behaviour in our sense; nor is selling initially below cost to enter a new market in order to make customers try out your product.

Simple strategic behaviour may be designed to exploit asymmetric advantages or a "long purse" to enlarge market share short of monopolisation without necessarily inducing total disappearance of rivals, and the firm undertaking the action may be content with the enlarged market share without necessarily raising prices.

In addition to strategic behaviour designed to reduce the strength of rivals we must also remember that strategic behaviour can sometimes take the form of devices to influence rivals to encourage them to collude. For example, cutting prices sharply, perhaps in one market only, may be to "punish" firms who have broken price agreements in order to enforce collusion: not to drive the rivals out of business but to invite them to put up prices again.

It must be emphasised that strategic behaviour goes on all the time. It is only impossible in markets with total and anonymous free entry where any response you may induce from a known rival can be offset by a new entrant. Such purely competitive situations may be rare but they are not impossible: globalisation of business is widely thought to increase the scope for strategic behaviour in some markets (notably where there are emerging global oligopolies) and to reduce it in others where newly industrialising countries can enter and exit on an unlimited scale.

Nor is all strategic behaviour harmful. Aggressive R&D behaviour may be intended to secure such a lead that you can deter your rivals from entering a particular generation of a certain product. But if they stay in business it may prompt them to compete more vigorously for the subsequent generation or in other products. This kind of Schumpeterian strategic competition was strongly advocated within the EU by the Cecchini report. On the other hand we do not wish to allow a lead in one product secured through subsidy or asymmetric market access to drive other firms out so they do not have a chance to return.

As a general rule we do not want to stop all forms of strategic competition in the EU economy, nor in fact do we want to stop all forms of strategic competition coming from

abroad. The basic problem is that it is not easy to identify what kinds of strategic behaviour are harmful, which is likely to require a case by case analysis.

In general we should worry about strategic behaviour of two kinds:

Firstly, where it is intended to use asymmetric market access to enhance the relative position of one group of firms with market power at the expense of others and thereby reduce the intensity of competition in world markets without necessarily eliminating it altogether.

Secondly where strategic behaviour has the same effects as state-led "strategic trade policy" by using market closure to allow firms first mover advantages that enable them to capture a higher share of the profits ("rents") in the global market place than without the market access asymmetry.

1.1.3. Market opening dumping

This is probably our least concern - cutting prices is the normal way of entering a new market and doing it does not necessarily require any form of unfair advantage.

In addition to sales below normal value to influence the behaviour of rivals there is also the simple case of firms lowering their prices below their home market prices or even in the short run their full costs in order to influence consumers alone. That is to say the seller cuts prices on the assumption that his action will have a negligible effect on other firms' sales or prices. For a firm which is small and has no reputation in the foreign market, price cutting is the normal way enter a new market. Such behaviour may be facilitated by closure of the exporters' home market but it need not be.

In a case where the foreign firm undertakes market opening dumping in a downturn this is close to our next case of cyclical dumping.

1.1.4. Cyclical Dumping

This is a natural phenomenon, although it can be harmful where certain firms can do it and others cannot. The important thing is to check whether these firms can ensure that only they benefit from the cyclical peaks and an ability to off load their goods cheaply during a downturn.

This can occur in a variety of circumstances. Essentially it involves producers selling below full or even marginal cost during a recession in order to keep plant in business. What is difficult to address satisfactorily is the fact that industries typified by cyclical dumping are also characterised by large price fluctuations that are not anti-competitive. This is quite normal behaviour in all economies but can be harmful if some firms have

opportunities to do this that others do not. As Ethier (1987) notes, our main concern should not be with the immediate effects of rivals off loading their surpluses on to our market, but with the effect that the rules of competition have on market structures and the distribution of activity, for example, through the effects of additional riskiness on investment.

The central problem does not seem to be the existence of cyclical sales below normal value in the sense of full cost plus a reasonable profit as such. The problem is surely if some producers can take advantage of others' market in down turns but do not allow these other producers to do the same.

Technically it is possible for a finding of dumping to occur even when markets are actually globally open and prices equal throughout the world if any of the foreign producers are selling below cost, in which case constructed normal value will show dumping and injury may also appear. The long run impact of such dumping is likely to depend on the circumstances surrounding it, notably whether retaliation is possible.[4]

From the point of view of consumers and users cyclical dumping is beneficial when it occurs. The risk of damage to the EU would appear to arise if dumping by foreign firms artificially increases the riskiness of investment. But we have a serious problem defining "artificial". It is suggested by many US critics of Japan that if Japanese firms treat labour as a fixed cost this encourages Japanese firms to carry on producing at marginal cost and incites the US firms to exit. If the US firms can in fact easily enter and exit, and do so they may end up with more profit, but if the high riskiness created by others induces irreversible exit and no new investment, the firms with rigid production structures may end up more profitable than before. But is this a distortionary asymmetry? It clearly is if foreign firms cannot benefit from price peaks or from the ability to off load in downturns on the Japanese market.

1.1.5. State Trading Dumping

> *Where commercial factors are not relevant, and foreign producers are motivated by random variations in production and pricing, this can act as a deterrent to investment in a market economy. Our main concern should be to avoid distortions for investors caused by avoidable departures from world prices as signals.*

The cases discussed previously have been of dumping carried out by private firms. It is customary to assume that this will be motivated by considerations of profit, which inevitably put a limit on the scope for artificially low prices, even though there may be cases where firms with very strong asymmetric market positions can afford to aim at maximum sales or growth even at the expense of current profit.

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[4] Sales below full cost (equivalent to normal value) are possible in cyclical industries within the EU, but competition rules eliminate most of the sources of asymmetric capacity to sustain sales below cost. State aid rules will control "deep pocket" effects through subsidisation. However, nothing can prevent some firms having better relations with their banks than others.

But a further range of dumping cases is represented by exports from state trading countries where commercial considerations are not paramount. It is unlikely that such producers will be motivated by planned strategic considerations, but rather by random variations in internal production and pricing patterns, of accounting anomalies etc. including arbitrary and multiple exchange rates.

The random uncertainties coming from such behaviour clearly are capable of acting as a deterrent to investment in a market economy. In terms of the uncertainty argument developed above, one can make a case that the uncertainties introduced by arbitrary and capricious behaviour by state trading countries cannot reasonably be predicted by entrepreneurs. And as Miranda (1996) argues, fluctuating prices induced by non-commercially oriented behaviour by state traders can give the wrong signals to investors.

1.2. Economic Approaches

1.2.1. Why oppose dumping?

> *Lawyers and economists tend to differ on this. Economists stress efficiency not fairness and are reluctant to acknowledge that producers have rights other than those associated with maximising efficiency. As such, they argue that the justification for anti-dumping laws primarily covers behaviour that would be banned for efficiency reasons under competition rules. On the other hand, producers would argue that they are legally entitled to protection against 'unfair' behaviour by foreign firms (which they cannot do in return) and this entitlement applies regardless of strict notions of economic efficiency.*

Having reviewed the causes of dumping we should consider what economic analysis has to say about appropriate responses.

There are many points of view on if and when action should be taken against dumped imports. These broadly fall into two categories, which can be summarised as efficiency and fairness issues, and which are usually associated respectively with economic and legal perspectives.

Where dumping allows foreign firms to successfully undertake anti-competitive behaviour which would be banned for efficiency reasons under internal competition rules there is an obvious case for anti-dumping action; we do observe a limited number of cases under competition, anti-trust and regulatory rules where excessively low prices have been condemned, but on the whole the anti-dumping rules in the EU and elsewhere catch a much wider ranger of behaviour than is caught by competition or anti-trust rules.

But EU competition laws are not only concerned with efficiency per se, but with a notion of "fairness" in the sense of equal competitive opportunities to all producers, "levelling the playing field" and this has a counterpart in international trade where market

conditions are not symmetrical across borders and foreign firms have scope for practices which domestic firms do not and which may give an asymmetrical advantage. Within the EU the "four freedoms" pertain and mutual market access is guaranteed by the law. It is clear that the market integrating effects of EU competition law encourage arbitrage to undermine any attempt by a producer to use a strong position in one EU market to support low price sales in another and state aid control similarly reduces scope for asymmetric advantage.[5]

It must be noted that whilst there is universal agreement in principle about the right policy response where dumping produces economic inefficiency, there is no such agreement about the correct response to dumping caused by asymmetric market conditions as such. Economists writing in the tradition of Jacob Viner, notably represented by the US Chicago School, have argued that it is only if asymmetric conditions produce inefficiency in our own market that we should intervene. If the foreign firm is using his closed home market to drive our producers out of our market with a view to obtaining a monopoly which he can then abuse, we should intervene. If such a circumstance arises within the EU we can correct the distortion at source, but internationally we are forced to rely on trade policy.

If foreigners are selling at a loss but with no hope of ever gaining a monopoly, Chicago economists, who are indeed doubtful about state intervention of any kind, would recommend allowing consumers to take advantage of this and allowing market forces to redirect production elsewhere, and would not recommend any sort of anti-dumping or anti-trust action. Losses to producers from very intense competition in markets that cannot be monopolised are regarded as irrelevant by Chicago economists. Moreover Chicago economists such as Milton Friedman have long maintained that almost any monopoly will be eroded by new entry, and this was reinforced by the 1980s emphasis on contestable markets.[6] It must be acknowledged that most international trade economics is based on models of free entry into markets which corresponds roughly to the Chicago view. This is partly a matter of intellectual tradition and partly reflects the fact that international markets are likely to be much more open to new entrants than any one national market.

On the other hand producers themselves argue that they have a legal right to be protected against "unfair" action by foreign producers, which can be characterised as actions ruled out for home firms by "artificial" rules or entry barriers in the foreign market; and that this right is irrespective of the effects on domestic consumers.

A further perspective which is as yet quite poorly developed in the economic literature would argue that the consequences of anti-dumping action should be judged in systemic terms. The effects of the existence of anti-dumping rules in deterring or encouraging

[5] Short term price discrimination for market entry by new firms could still be observed even if competition rules are fully applied.

[6] The theory of contestable markets developed by W.J. Baumol and others formalised an old view that high concentration in an industry did not matter if there was scope for potential new entry. They showed that what mattered was the scale of sunk i.e. irreversible costs, not just initial outlays. See Baumol (1982)

certain types of behaviour needs to be examined separately from their ex post use. This perspective does not lead automatically to a clear cut conclusion about the effects of rules of different kinds. Jagdish Bhagwati (1988) whilst criticising many individual policy measures has noted that the existence of anti-dumping and safeguard laws may have positive effects in ensuring the acceptability of otherwise free trade. Critics of the anti-dumping laws such as Messerlin (1990) on the other hand argue that anti-dumping laws allow anti-competitive behaviour to be bolstered by the threat of anti-dumping action against those who compete too vigorously. It must be acknowledged at the outset that from the systemic point of view there is not a simple model that we can use, for example to assess the effect of anti-dumping on investment. Clearly if the existence of anti-dumping laws reduced economic uncertainty for investors they *could* still be beneficial even if their actual application caused economic losses so long as those losses were small.

It must be borne in mind that as a recent economic survey of the subject observed: "In addition to our deficient treatment of the fundamental issues involving factor markets, we have no theory of anti-dumping laws" (Ethier 1987, p.938). Our conclusions will necessarily be tentative; facts and theory are disputable and our aim is to end up not with precise substantive policy recommendations but with suggestions for how more useful policy analysis can be carried out when there is rather basic disagreement on some of the fundamental issues.

1.2.2. Approaches in International and Industrial Economics

The debate, which has previously been dominated by the traditional approach of Viner has tended to conclude that dumping is only really a problem when it entails monopolistic predation, and that this is unlikely to occur in reality. New work in industrial economics using game theory, however, indicates the scope for strategic behaviour and undermines the traditional consensus that asymmetric "deep purses" are not a problem. This work has not yet really been fully applied to the dumping issue.

Although in recent years a number of new contributions have been made to the economists' theory of dumping, and the issue of imperfect competition and strategic trade policy has been increasingly discussed in trade policy analysis, it is fair to say that recent developments in the industrial economics of strategic behaviour by firms have barely begun to be addressed in the literature on dumping.

Ethier (1987) notes that in most economic literature there is a strong a priori scepticism of the likelihood of pure monopolistic predatory dumping. More recent studies have stressed that there may be factors other than monopolistic intent behind dumping, some of them harmless, but others involving forms of strategic behaviour that are very loosely linked to monopolisation. In an extension to this, studies (such as that by Belderbos and Holmes (1995)) suggest that dumping can cause adverse effects from a competition point of view even when it is not monopolising in aim.

The recent work emphasises new developments in industrial economics where game theory and analyses of strategic behaviour have called into question the view which became prevalent in the 1980s that free entry and exit of firms ("contestability") could be relied on to guarantee competitive conditions even where only a small number of firms actually operate. The biggest problems from dumping and other forms of strategic competition come about when there are irreversibilities of investment and major sunk costs. The Chicago approach to markets assumes free entry and exit between economic activities, so that resources leaving one activity will readily find employment elsewhere. Alternative approaches worry more about the risk that firms and workers will become stranded with obsolete capital or skills.

Almost all analysis of dumping by international trade economists using the traditional tools of welfare economics is cast in terms of competition analysis for a number of reasons. Economic theory is built up around the notion of efficiency as an objective and the maximisation of competition has always been seen as the key to this. The prevailing opinion among both industrial and trade economists is that predatory monopolising behaviour is very rare and, if it occurs, very unlikely to succeed. As Ethier (1987) noted, economists are loathe to accept that anti-competitive behaviour is likely to lead to durable gain in many cases, above all if there is subsequent entry into markets from which one set of competitors have been excluded.

Nevertheless recent work in industrial economics on strategic behaviour emphasises the scope for strategic behaviour between firms. Modern industrial economics based on game theory show that forms of predatory and strategic behaviour are much more likely than was once supposed. Tirole (1990, p.380) in his major treatise on this subject observes: "Economists may have neglected the links between financial institutions and predation". The models of strategic predatory behaviour are very complex and efforts to incorporate them into the theory of international trade have so far led to little in the way of firm conclusions (the theory of strategic trade policy has so far offered rather few clear generalisations for policy-makers other than the need for caution).

This literature is mainly concerned with oligopolistic firms in the same geographic market, though there may be more than one product market. Belderbos and Holmes (1995) argue that in the case of the Japanese electronics industry a case can be made that closure of the Japanese colour television (CTV) market could have enabled Japanese firms to set prices at such levels that exit by US firms was induced, rendering the whole world market less competitive than it otherwise would have been. This model provides one possible interpretation of the CTV experience, and in the paper it is argued that the US Supreme Court took a rather narrow view in its rejection of the anti-trust case brought by the US producers. It follows that if the interpretation hypothesised in this case is correct, and if the US Supreme Court's interpretation of the anti-trust law is one that will stick, a case can be made that anti-trust rules are inadequate to deal with "multi-market strategic behaviour". It must be noted that in the model used by Belderbos and Holmes only the simplest forms of asymmetric behaviour are assumed. The problem of technological spillovers is not addressed and the model assumes collusive behaviour in

the home market only. If these and other strategic effects are taken into account, then the problem addressed here is more acute still.

As we noted, strategic behaviour by firms has been mainly addressed in the context of strategic trade policy orchestrated by governments. Krugman (1986) surveys the literature. Where there are big economies of scale, government policies to close markets can guarantee a profit for home producers, if they invest first. These firms can afford to cut prices in any foreign market and drive rivals out of business - even without selling below average variable cost, the predation yardstick in anti-trust law.

It must also be recognised that the economic literature both in industrial economics and trade is very reluctant to address the issue of "fairness". Patrick Low (1993, p.27) in an influential work on trade policy is typical in noting that fairness issues have only just begun to be addressed by economists and also in his expressing strong doubts about the applicability of ideas of fairness from an economic point of view: he argues like most others that "fairness and unfairness" are too subjective as concepts and argues that in the US, anti-dumping and "unfair" trade remedies under section 301 of the 1974 Trade Act have largely replaced safeguard actions etc. under Section 201 because "unfairness" is very easy to prove once injury has been claimed. Critics of EU anti-dumping policy have made similar arguments. The need for economists to address fairness issues is developed by the regulatory economist E. Zajac(1995, esp. chaps. 17 & 18 on "Unfair pricing"). He observes; "In my experience, the very mention of fairness or justice can be a cause for an economist's methodological attack that fairness arguments are simply a smoke screen for special interest, something to be exposed for the fraud they really are. However in the complex world of actual policy making, the economists' neat division into efficiency and equity has serious ethical problems .." (p.77).

The Chicago School of Law and Economics have made a central premise that economic law and policy should be only be about economic efficiency . They would reject any legal doctrines that entrench any economic rights at all on grounds of fairness rather than efficiency. Other schools of thought are less specific but most economists do implicitly accept the Chicago assumption, hence they reject the idea that trade law or policy should be legitimately about trade-offs between the rights of different actors or between different policy aims. It is a central premise of most economics texts that trade policy should not be about producers' "rights". The utilitarian calculus that underlies most economic reasoning is based solely on the consequences of policy action. The present report recognises that this approach is uncongenial to most decision makers and therefore proposes an alternative to simply adding up pluses and minuses in a utilitarian manner without attention to the implicit rights of the parties concerned.

As the study by Zajac shows, since the work of Tinbergen in the 1950s economic theory has been based on the principle that effective policy making requires that there should as many different policy instruments as targets. Gual (1995) suggests that competition policy should be directed at market imperfections arising from internal anti-competitive behaviour, trade policy at distortions to competition arising abroad and industrial policy at taxing or subsidising activities inside the EU whose social value was less or greater

than its private value. If any such policies result in "unfair" redistributions of income, economic analysis suggests that these should be dealt with by directly redistributive policies with social aims, (as allowed under the Treaty of Paris for ECSC products, but not in the Rome Treaty).

Zajac (1995), using similar logic to Gual (1995) observes that in the case of responding to dumping, economic theory "immediately suggests a policy whereby the US welcomes foreign goods sold here below cost and then compensates displaced workers either in cash or through retraining programmes." But he notes that this is not feasible and the lack of policy instruments raises major dilemmas : "Utilitarian economics would adopt policies where even in the short run overall societal benefits outweigh overall societal costs". He also concludes in chapter on unfair pricing: "As the NAFTA experience indicates, those who lose in the short run will not be easily persuaded of the fairness of a policy that promotes long run economic efficiency." (p.226).

1.2.2.1. What should determine our policy response ?

The impact of the existence of anti-dumping rules as a deterrent should be distinguished from effects of their use: effects on investment of predictable rules vs. possible costs of sticking rigidly to legal rules. The laws currently offer the opportunity to strike a balance between this desire for predictability and allowing some discretion for the decision-maker. What is important is therefore how this discretion in the form of the Community Interest criterion is applied.

The question where economists may differ from lawyers is: if we have the anti-dumping laws in place, does it make sense to apply them routinely wherever dumping injury and causation can be shown in order to give all economic actors legal certainty and economic predictability, or should we apply the law on a selective basis in the light of the likely economic consequences of actually taking or not taking measures?

There are circumstances in which we might agree with Venables (1991) that anti-dumping measures could be non optimal *ex post*, but still wish to keep the rules in place as a deterrent. As Ethier (1987) observed, this idea has been very little explored in the economic literature if only because it is very hard to estimate what would have happened to investment under other rules. It is very important however that it should be considered explicitly.

As a matter of logic, proof that use of anti-dumping laws did us harm in certain cases does not show that those laws should not have existed, if their existence deterred a lot of harmful behaviour. On the other hand economists of all persuasions would agree that in developing a policy the right approach is to design a policy to strike the right balance between the ability of the decision-maker to exercise discretion and the desire for predictability, rather than opting for one extreme or the other.

We can take it that the present law does provide a framework for this balance and we are talking about how the discretion on Community Interest might be exercised.

The cause of the dumping and the impact of the injury

> *Economic theory suggests that we should find out the circumstances of the dumping to be able to deduce ability of exporters to do us long term harm.*

From the point of view of economic theory one can make a strong case that the appropriate response to dumping depends on the circumstances behind the dumping. Practical and legal considerations would seem to rule out any suggestion that additional criteria could be introduced into the legal test for dumping in the regulation but the issues can be considered relevant for the purposes of Community Interest.

For example, consider the case of cyclical dumping. This is perhaps the example where new approaches to industrial economics suggest most different interpretations of the dumping phenomenon to those of earlier work, whilst at the same time however not giving us any absolutely firm ideas as to what to do.

Economists have traditionally argued that the temporary nature of the dumping means that we should just take advantage of cheap foreign imports. On the other hand in the perspective of asymmetric advantage that we developed in an earlier study for the Commission[7] it is clear that if our market remains open in a cyclical down turn while the foreign market does not, then we run the risk that foreign firms will be able to stay in business over the trade cycle but ours will go out of business They will then be able to make the profits in the upturn and suffer less losses in the downswing (our firms having disappeared). From the point of view of the longer term issue of investor expectations the asymmetric closure could thus make it possible for foreign industry to survive and prosper while our industry, with identical cost conditions, would be unable to weather the cyclical storms and thus disappear.

The overall effect on our economy is not entirely clear from the point of view of welfare economics. If there is free entry and free competition for their own firms in the foreign market, competition among them might be enough to ensure that our users are still supplied with the product at a competitive price even in the upturn, while benefiting from discounts in the downturn. And if our producers were themselves originally in a competitive market, economic theory suggests the forestalled new investment would have brought only marginal profits.

But as Dixit and Pindyck (1994) point out if our firms leave a sector it may take bigger profit increases to induce them to re-enter than it would have to keep them in the industry. (This point is elaborated further below)

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[7] See Holmes, Smith and Belderbos (1992).

The question from this point of view becomes whether the circumstances of dumping are in effect loading a disproportionate amount of globally unavoidable market risk on to our firms, thus reducing their perceived profits.

Such market conditions could be investigated. This means at minimum trying to find out if our firms are unable to export to the foreign market. If trade goes both ways, then we may conclude that the effect of any anti-dumping action may just be to reduce "normal" cyclical competition. From an efficiency point of view the economist would be interested in discovering whether by any chance dumping action, far from being designed to drive our firms out of business is part of a collusive tactic designed to signal to them to raise their prices in world markets.

On the other hand a comprehensive investigation of market conditions in foreign markets could lead to more support for certain measures that have hitherto been highly criticised. For example, economists have for a long time been very critical of anti-dumping actions in situations where prices are the same at home and abroad, and where the dumping is due to home prices being below a constructed "normal value". Stress should be not so much on sales at a loss, but on whether somehow foreign firms can sustain this better than EU firms due to an asymmetric market position giving them an unfairly deep pocket. We have a justification for the possibility that export sales at the same price as home sales could be a form of predation or at least unfair asymmetric strategic competition if they are in some sense below cost, but we really need to ask how this subsidy is being paid for: if the exporter is simply gambling that he can move quickly down a learning curve and this option would have been open to our firms we can hardly condemn the foreigners. If our firms have been unwilling to take the risk, any injury should really be considered due to their lack of entrepreneurialism. But if the option was not open to them because the foreign firm had market power, in another segment of the home market that it could use as a milch-cow - and our firms did not- then we have a case for policy intervention.

Predictability for investors

> *Dumping and anti-dumping can lead to uncertainty which in turn affects investment decisions. It is therefore argued that measures are necessary to deal with the adverse effects of competition which stems from arbitrary pricing decisions which could not have been foreseen. New research suggests that if trade policy can reduce investor uncertainty it can be helpful but theory points out that using trade policy can also create new uncertainties, for example if a much greater number of firms enter the market to take advantage of the stabilised prices.*

A factor not usually taken into account in the simple analysis of the impact of dumping is the impact on investment of the uncertainty caused by dumping or anti-dumping action. The point was made in the course of our business interviews for this study that risk premia on investment are greatly raised by unpredictable competition from foreign

sources - that could not have been foreseen by businessmen even with the best intelligence because it is based on arbitrary and distortionary pricing. It may be noted that if the price undertakings on DRAMs[8] had a positive effect it would have been to give the EU based producers a degree of predictability about the nature of the competition they would face. Such considerations can surely not be dismissed but they must be subject to analysis. For example in industries where entry is extremely free no amount of restrictions on one set of producers can give general guarantees that investment by EU firms will be successful.

An argument was developed by Newbery and Stiglitz (1984) which is not specifically about dumping, but the argument can be applied. They distinguish between the effects of uncertainty on investment and on production once investments are made. They develop a model with two countries. If there are unpredictable uncertainties that cause market shares to fluctuate wildly between them, they suggest that trade measures which will prospectively stabilise shares may reduce the risk premium on investment in both countries. From a theoretical point of view complex insurance contracts would be better but if these are unavailable there can be cases in which the efficiency losses of the trade measures can be offset by the predictability generated.

The major new work of Dixit and Pindyck *Investment under Uncertainty* (1994, esp. ch. 9) addresses these issues in great depth, but they show how difficult it is to know for sure whether policy measures which appear to reduce uncertainty actually do so. The basis of their theory is that where there is market uncertainty firms will be deterred from investing by the risk that they will forego a better later opportunity.

They argue that where there is uncertainty and sunk cost, we cannot rely on rational profit maximising investors to automatically rush in to invest the moment a price premium appears in a certain market. Thus for quite considerable periods of time it is normal to expect consumers in the territories where firms have shut down to be paying profit premia to producers where production continues, at the expense of trade output and employment. Dixit and Pindyck discuss at some length the implications of the new research for anti-trust and anti-dumping. Their conclusions are (as usual) ambiguous. They argue that in the presence of uncertainty irreversible investments *and* market failures there may be a case for trade taxation to reduce risk in certain circumstances.

Dixit and Pindyck throw new light on the economics of cyclical industries. They point out that where there is uncertainty and irreversibility one should expect cyclical industries to display periods of prices above and below average without instant entry and exit. On the other hand they also point out that firms will not enter such an industry if they risk the downside of low cyclical prices but do not have the bonus of cyclical profits. There is clearly a problem if as a result of market access asymmetries there are some competitors who can always keep the bonus but offset the risk on to others. This does not

[8] DRAMs from Japan : Undertakings OJ L 20/1990, Definitive Duties OJ L 193/1990. DRAMS from Korea : Undertakings OJ L 66/1993, Definitive Duties OJ L 66/1993.

automatically generate a case for policy action but it raises the question of whether risk can be redistributed.

But they conclude that it is not necessarily the case that sharp cyclical fluctuations do always reflect market failure and argue that "if government introduces price floors to support firms in bad periods, firms will react accordingly. They will enter the industry in greater numbers, and that can make the bad times even worse." They argue that it is normal for markets to display cyclical price swings in a sequence: low prices, exit, high prices - very slow new entry.

Oligopolistic industries, they note, are very hard to analyse: on the one hand uncertainty about rivals' strategy provides an incentive to wait, but this must be set against the greater advantages of first moving.

The question is whether action such as anti-dumping can genuinely reduce the riskiness of cyclical industries by ensuring that it is more evenly spread across producers in different markets. Such considerations would seem to argue strongly against such measures as the minimum price undertakings for semi-conductors. However the Dixit-Pindyck critique of price floors applies above all when price support would attract new entry: in that case it gives the *illusion* of increased predictability. Stability of prices is in that case offset by induced entry and the new entry still ends up being unprofitable and firms may end up having to scrap their new plants. On the other hand where entry is very difficult and slow the price stabilisation can lead to profit stabilisation, and may genuinely be able to reduce uncertainty.[9]

All in all the lessons of the Dixit-Pindyck and Newbery-Stiglitz theories seem to tell us two things. The first is that we need to be very careful to work out whether policy interventions will actually be able to reduce uncertainty and so the risk premium on investment (rather than merely shifting the costs somewhere else in the economy or creating a new and equally disruptive uncertainty by new entry). The second is to highlight once more that entry conditions are a crucial variable for analysis.[10]

The foregoing considerations suggest that there is a perfectly proper scope for investigation of when such conditions are the product of "normal" market conditions and when the uncertainties and risks regarding recoverability of sunk costs result asymmetrically from different market conditions.

1.2.3. The lessons of the theories

Anti-dumping can be used to address more than predation but new economic models call for careful case by case study of likely impact. Determining whether the overall benefits to the economy of applying measures outweigh the effects of not doing so requires some consideration of the circumstances behind the

[9] This may well have been the case for semi-conductors.

[10] See OECD Costs and Benefits of Protection 1985.

dumping. In a number of instances trade policy can be a useful instrument but it is unlikely to be obvious in advance which these cases are. Thus it must be attempted to use the community interest test as a way of distinguishing those cases where the overall effects will be positive.

From the point of view of economic theory, we have argued the optimal strategy depends on whether the use of anti-dumping action will in a prospective sense generate more benefits to out economy than not using them, which in turn will usually depend in part on the circumstances which have given rise to the dumping.

The big debate is whether anti-dumping policy can ever have a positive role to play in cases where the aim is other than *preventio*n of monopolisation.

A key element in the argument is the extent to which foreign firms possess an asymmetric advantage which enables them to engage in something resembling cross-subsidisation, though dumping does not require selling below cost.

Economic liberals are strongly critical of cross subsidisation when undertaken by nationalised or regulated public utilities, and it may seem paradoxical that unfair advantage gained in this way in the course of international trade is regarded as quite normal when undertaken by private firms. This can be explained by the belief that state monopolies have unlimited "long purses" from their dominant position which they may be able to abuse against other firms.

Such practices are explicitly condemned in the WTO services agreement. It would be argued by liberal economists that such conditions are rarely reproduced in normal competitive markets. Even if there were a high tariff, it is argued for example by the OECD that free entry is likely to occur by home firms (or even foreign investors) into a market with a significant protection which will eliminate the scope for asymmetric abuse.

But what about firms in non-competitive markets? Clearly if the exporter has a closed home market it can charge a higher price there without attracting competition from abroad in the form of re-shipment of its cut price exports. There is an asymmetric advantage. It can thus sell abroad below its home price and even below full cost indefinitely without losing money, raising its market share at the expense of our home producers, creating dumping and potential injury in the terms of the regulation.

The view of most economists would be that our firms are genuinely at risk if there are foreign firms with access to an asymmetric dominant position or "sanctuary market" but that the mere existence of strong competition from foreign firms engaged in price discrimination does not by itself provide an economic case for acting against any injury so caused if acting against this injury causes disproportionate costs to the rest of the economy.

It must be stressed that this is how the issue would be approached strictly from the point of view of the efficiency of our economy. The economic calculus is not seeking to find

out why the dumping is occurring in order to impose a criterion different to that of the law on what is fair: the economic view point is solely concerned with the overall effects on our economy. The economic efficiency perspective is particularly concerned with cases where when dumping has occurred, stopping it might benefit the injured producers but not the whole economy. Even more delicate is the case when stopping dumping would give short term relief to an industry and perhaps giving it the ability to adjust but at the expense of curtailing its *incenti*ve to adjust In such cases a legal and political judgement must be made whether the fact that the injury is caused by unfairness justifies making other parts of the economy pay for the redress.[11]

Suppose country X is adopting a strategic trade policy and using tariffs and public procurement to allow their firms to cover fixed costs of say telecoms equipment, we wish to stop this; but as we discuss elsewhere once the foreigners have succeeded do we have an economic interest in punishing them? There is clearly community interest in the general respect for trade laws, as it gives predictability to investors, but this must obviously be set against the gains from pragmatism. There is a trade-off between the deterrent effects of anti-dumping laws and the potential costs of actually invoking them.

As we noted industrial economics has some limited lessons for the analysis of dumping : harmful dumping may occur but the correct response depends on details of the case. Indeed what looks like dumping could even be action by members of a global oligopoly to "discipline" members and stop price cutting. In this case the imposition of duties or undertakings would do the work of the cartel for it.

Anti-dumping policy is very rarely an optimal policy, but there is a broad class of situations in which trade policy is at least second best (i.e. better than doing nothing at all), although such cases cannot be easily identified in advance. Very detailed information is needed on market structure and corporate strategy and a policy that will do good in one case will do harm in circumstances that may be hard to distinguish. The challenge from the economic point of view is to develop the Community Interest test as a filter that will, in those cases where dumping, injury and causation have been shown distinguish between those where the future consequences of action are more favourable than not acting.

The question for anti-dumping policy is whether we need to know in advance what its effects will be or whether we are content to apply a strict legal rule in order to maintain the principle of legal certainty which should act as a deterrent to harmful dumping, even at the risk of applying it in cases where *ex post* the anti-dumping duties cannot rectify the situation, which their threatened use was designed to deter.

[11] It may be argued that there is an analogy with economic damage caused by criminal acts. We may feel it is morally desirable for this to be stopped at public expense even in some cases when the costs of prevention are higher than the damage. There is ultimately however a public policy choice to be made as to how much society is prepared to pay in such circumstances.

As a matter of logic, proof that use of anti-dumping laws did us harm in certain cases does not show that those laws should not have existed, as many unobservable instances of harmful behaviour may have been deterred. At the same time, from a strictly economic point of view it is not possible to dismiss evidence that in some cases harm is done by the use of laws merely on the grounds that there may have been unobserved benefits.

One lesson from statistical theory must be recognised: if we are to have a Community Interest filter, there is a trade off at work. For any given amount of information and knowledge, the more rigorous we are in making sure that we avoid actions which are damaging (e.g. where the costs to user industries disproportionately outweigh the benefits to producers) the more risk we run of not taking action in cases when it is in the EU's strategic interest to do so. On the other hand the more the decision-making process errs on the side of guaranteeing that no producers rights are capriciously denied, the more we run the risk of taking actions whose costs exceed their benefits.

In the light of the preceding analysis we can summarise what economic theory has to say about the best policy in each of the main categories of dumping. An approach using economic theory to examine the circumstances of dumping in more depth would not necessarily lead to a rejection of all anti-dumping complaints.

1) Monopolistic predation
No need to check whether Community Interest if predation danger clear but Community Interest test should establish predation danger.

2) Strategic behaviour
Careful analysis of the state of the global industry, and the nature of asymmetries to see that the strategic behaviour is likely to cause us harm and that we can either redress the damage or deter future injury at acceptable cost.

3) Market opening by new entrants with little or no market power
No case for anti-dumping measures; internal adjustment support measures would be socially appropriate if local economic dislocation caused.

4) Cyclical dumping
We should establish whether this is normal or apparently the result of asymmetric market access. If market opening abroad is always best solution and cannot be achieved, anti-dumping could be appropriate if this is capable of redistributing risk between producers in a more efficient manner.

5) State trading
Aim should be to prevent signals which distort investment by our firms and create abnormal risk: restoration of world price is viable aim. We need to distinguish short and long term elements. There is a case for offering some form of risk reducing trade measures where arbitrary and capricious marketing behaviour emerges unexpectedly after our investors have made irreversible investments. However, where the state trader is a dominant player its actions do not merely constitute "noise" in the world price variations.

They may well determine the world price and here it would be misleading to signal to investors that the market is not subject to arbitrary fluctuations.

It is worth remembering that many examples will be mixtures of these elements. There is a fine line between monopolistic and merely strategic behaviour; cyclical and state trading dumping also may well be related.

2. ECONOMIC ANALYSIS AND THE CURRENT REGULATION

Here we examine the question of what scope there is within the framework of the existing anti-dumping framework for incorporating attention to the concerns traditionally addressed by economists.

Where can economic analysis come into the administration of the law?

The anti-dumping regulation imposes four tests that must be satisfied if measures are to be introduced :

1) Existence of dumping
2) Injury
3) Causation
4) Community interest

This report is based on the following understanding of the legal process: dumping, injury and a causal link between them must be demonstrated if measures are to be imposed. In addition we understand Article 21 to require the Commission to examine whether on the basis of the evidence put to, it can conclude that such measures would be clearly against the Community Interest: in that event measures may not be imposed. Otherwise they will be so long as the first three tests are satisfied.

2.1. Where could Economic Analysis be used?

In principle, economic analysis could be used at each stage of the process, though it would seem to be most called for at the level of Community Interest.

There has been much debate about the definition of dumping and the dichotomy between the legal and economic definitions. The present report ignores these issues since the definition of dumping used by EC legislation is based on GATT/WTO rules and is not open to question in isolation.

There is a rich scope for the use of economic analysis in the measurement of injury and in ensuring compliance with the legal requirement that injury should not be attributed to

dumping that is properly attributable to other causes, but the present report is essentially confined to the question of Community Interest, once the initial legal criteria for anti-dumping measures are satisfied.

Of course the various aspects of anti-dumping cannot be seen wholly in isolation from each other and we will make a few remarks on the inter-relationship.

2.2. The link between Dumping, Injury and Causation tests and Community Interest

> *To make a satisfactory measure of injury requires some apportionment of the blame for injury and a forward look at scope for redress.*

Broadly speaking the first three criteria for anti-dumping action seem to involve gathering information about the effects of the dumping on the producer industry. The methods of doing that are set by legal rules and while economists may not like aspects of them it is beyond the brief of this study to suggest changes.

However it is clear that there are certain factors that from an economic point of view may arise in the application of the first three tests and may not always be considered, but that may be of importance in assessing the consequences of imposing measures, even though the information in question might not affect at all the initial tests.

The various tests are all linked. We have noted that from an economic point of view one could say that the potential for durable injury to the economy as a whole depends on how the dumping is being financed and, where relevant, the proportion of sales below cost or normal value, a factor that could be considered under Community Interest.

When we come to consider the effects of measures on the Community economy we need to ask whether the measures are capable of having the desired effect, in which case it is important to have some idea of how much of the problems of the industry are caused by, for example, non-dumped imports, bad management or internal excess capacity etc.

The injury caused by these other factors cannot be removed by anti-dumping measures. This would not be of concern if the dumping, injury and causation tests were all that mattered, but a Community Interest test seems to require some demonstration that imposing measures would in fact "restore effective competition" in the sense of making the EU industry competitive again, if the "trade distorting effects" of the dumping are removed.

The implication of this is that it would be desirable to carry on the efforts (as we understand were carried out implicitly the soda ash case[12]) to see what share of injury is due to domestic demand falling, what share is due to dumped imports and what due to

[12] Definitive duty on Soda Ash from the USA, OJ L 244, 12.10.95

other imports. An X percent fall in sales can in principle be decomposed into these components.

3. DEVELOPING FURTHER THE IDEA OF THE COMMUNITY INTEREST TEST

Practitioners argue strongly that for dumping, causation and injury the rules as they currently are (as opposed to how they might be) offer little scope for judgmental use of economic criteria, though there may be more than is currently acknowledged.

However, the assessment of Community Interest cannot be anything but judgmental at two levels. There must be an empirical economic assessment of the likely consequences of different policy responses, including no action; then there has to be a balancing of the importance of the different effects that may be foreseen. Although the Commission is naturally reluctant to engage in "speculation" that may be over-ruled by the Court, it is hard to see how one can make an evaluation of the Community Interest without having to make some estimate of what the effect of imposing the measures proposed will be in the future as opposed to looking at the record of what has happened so far (as one does for dumping, injury and causation in the reference period).

Our understanding of the Community Interest test is as follows:
Assuming that dumping, injury and causation tests have been satisfied, the aim of the Community Interest appreciation is to act as a final check on whether applying measures would be in the overall Community interest. The impact of the dumping on the producer industry will have been examined in the injury analysis.

1) The Community Interest test should therefore investigate the consequences of applying anti-dumping measures on the rest of the economy.

2) In addition it could provide any additional information possible about the impact of the dumping or of anti-dumping measures on the injured industry other than the injury assessment that may have only looked at the complainants.

3) These factors including the original injury assessment should all be enumerated in commensurate terms *where possible.*

4) Once the list of impacts has been agreed the authorities must weigh up all the positive and negative consequences for both the complainants and the Community as a whole and decide whether it is in the overall Community interest to use measures.

3.1. Cost Benefit Analysis (CBA)

Formal CBA which can produce a net benefit or cost type figure cannot easily be used prospectively for various reasons, most notably the problems of observing certain variables and the subjectivity of a number of the distributional judgements needed. This does not mean however that it might not be possible to usefully look at past cases in this way - if data were available. Empirical analysis clearly cannot deal with issues of fairness, but such work could at least distinguish between the elements behind a decision making a clear assessment easier.

The first question is whether the formal techniques of cost benefit analysis (as used in retrospective studies by the US ITC (1995) and FTC (1984)) would be useful in the decision-making process.

The Grant Thornton Study (1992) concludes that it would be wholly inappropriate to suggest that the final decision in an anti-dumping case be based strictly on a conventional economic cost-benefit analysis of the kind undertaken by the US ITC (1995).

The CBA approach has the great virtue of giving a decision maker a single figure plus or minus to sum up the effects of a whole complex policy.

It does this by proceeding in a number of steps.

First, it requires the estimation of all the quantifiable impacts on prices, outputs, risk, jobs, environmental impact etc. These impacts are measured in whatever units they occur in (money, tons, etc.).

Second, for those outcomes that are not expressed in money units an effort is made to put monetary values on them, so they can be compared each to each other. This is normally by ingenious calculations of observations in the market place, for example how much people are prepared to pay to insure against the risk of a certain outcome, or through surveys of what financial value people declare they would be prepared to pay for certain things if there were markets (e.g. for environmental improvement). Benefits are assigned positive values (prices or weights); costs are assigned negative values.

Then, at a final stage, the pluses and minuses are all added up and a net benefit or cost is obtained. Using interest rates ("discount factors") benefits and costs that occur in the present are accorded more weight than those in the future.[13]

If CBA is used as a decision criterion the policy with the highest positive net value should be adopted among those considered. Economists would normally argue that policies with positive net benefits should be considered in the overall interest and those with negative sums are harmful. It has been strongly argued by economists that where there is a policy that produces net social benefits overall but would harm some particular deserving group, then the losers should be compensated in a way which would still leave the net benefit to society.

Economists tend to be divided over the rightness of adopting policies which bring more benefits than costs but where deserving losers are not compensated. The CBA analysis essentially excludes considerations of fairness, on the hand as between EU and non-EU producers, and on the other hand between producers and consumers.

[13] Clearly alternative assumptions can be used to test the robustness of the estimates.

3.1.1. Problems of formal CBA

The CBA approach was used by the US ITC in its 1995 report, and the FTC (1984) report which shows that it is definitely feasible at least retrospectively as a tool of policy evaluation, although the methodology was contested by some of the Commissioners.

On the other hand, CBA has a number of problems and there are a number of reasons why such a precisely structured tool may not appeal to the Commission for prospective decision-making purposes. At the heart of the difficulty with CBA is that it requires a quantification a) of variables that are in principle factual but are very hard to observe and b) of social valuations (e.g. how much is security of supply worth).

In more detail:

Economic cost benefit analysis is heavily dependent on a number of parameters that are often unobservable (for example demand elasticities) and whose values may critically determine the final outcome. The quantification exercise is thus made up of a number of components each of which must be examined separately for possible errors. This does not make the approach useless, but it means that a single bottom line is not helpful without the separate elements of the calculation.

CBA is deliberately intended to reduce all effects to a common yardstick so that they can be added and a net total obtained. Critics may object that the costs and benefits may not be commensurate: a trade-off between certainty of supply and lower prices may not be capable of expression as conversion into ECU-equivalents.

Micro-economic cost benefit analysis normally makes a number of specific assumptions about market processes. In particular cost benefit analysis is predicated on the assumption that employment in any activity is *a cost* not *a benefit*. This is based on the assumption that workers released from one activity can be usefully employed elsewhere: this is entirely valid and correct when they actually do have this possibility. But modification to allow for the use of "shadow prices" is needed if this is not so and this makes the system very complex.

Standard cost benefit analysis is not designed to capture issues of fairness as perceived in DG I: in general one ECU of income to consumers is worth the same as to producers.

3.1.2. Possible application of CBA ?

Having said this, it would be extremely useful if the Commission were able to undertake studies of past cases, using methodologies similar to that of the ITC (1995), but using assumptions e.g. on tariff revenues more representative of EU experience. (It must be borne in mind that the ITC study credits 50 authors who appear to have worked for 2 years! Any replication of this work is way beyond the scope of our own study).

It would also be valuable for the Commission to undertake some work on current cases, alongside the formal decision-making process. Formal cost benefit analysis of this sort could not determine cases but the parallel exploration of formal methods would be a useful discipline on thinking and would alert investigators to the questions that appeared to be most important

This approach should therefore not be dismissed entirely but be seen as a background aid.

3.1.3. Alternatives to formal CBA

More operationally it seems highly desirable that the Commission should develop a set of questions that it should seek and if possible be seen to have sought to answer.

No amount of empirical investigation could possibly answer the question of what is fair. However the purpose of economic analysis should be to separate out the elements of a decision that are based on fairness and those which are based on economic calculation. It is, for example, perfectly proper to argue that a certain Community industry does not deserve to be driven out of business by foreign firms engaged in capricious distortionary behaviour not open to our firms. It is not helpful to argue that it is in every such case in the direct economic interest of users to preserve local supply. This may be so, but a case genuinely based on fairness should be able to stand up even if consumers lose out. This however raises the question of whether there would be other less costly methods of redressing any unfair injury, a point to which we will return below.

We must be careful to distinguish between Cost-Benefit-Analysis as codified in manuals on the subject which is probably not applicable as a tool for decision-making, though it could and probably should be used as a monitoring and evaluation device ex post, and the more general principle that there should be a systematic enumeration of the costs and the benefits estimated to the best degree possible so that decision-makers can precisely see how recommendations have been arrived at and make a final decision in an informed manner.

Our suggestion is therefore that at some stage in the proceedings the calculation of Community Interest should be carried out by enumerating all of the potential consequences of the dumping and any measures. As far as possible there should be a separation of what the likely consequences will be and the next step in the process which is the appreciation of their worth.

3.2. What should go into the Community Interest analysis?

There should be an appraisal of the impact of measures on the rest of the economy (given that the domestic producers received much attention in the injury analysis) in the light of certain questions covering potential reactions to the measures.

It is clear that the injury analysis will generate a very large amount of data on the impact of the dumping on the producing industry. It follows therefore that the Community Interest test should focus very much on the impact of the dumping and the proposed measures on the rest of the economy. There is of course room for further analysis of the industry in question insofar as one can properly ask whether the measures in question will in fact have the desired effect of redressing the injury.

The basic questions one needs to address are :

How will the foreign exporters react to any proposed measures in terms of their prices and sales quantities?
How will the affected industry react to any measures and the reactions by exporter to such measures?
What will the be effect of these responses on purchasers in the short term and in the longer term.
Are there any spillover effects from the effects on producer or user firms to the rest of the economy?

Some of these factors may have been evaluated in the context of the injury assessment, but it should be borne in mind that it does not automatically follow that the consequences for the injured industry will be a reversal of the injury observed. In principle only that part of the injury caused by the dumping can be reversed and this only if there have been no irreversible losses so far. A proper evaluation of the community interest impact on the producers of imposing measures would therefore not simply be a mirror image of the injury assessment. As noted above, it could include an attempt to turn estimates of the loss of jobs into some social cost figure.

3.2.1. Costs to users

Recent decisions suggest that the Commission's reasoning in its consideration of the cost of measures has developed very positively. These costs should always be estimated as sums of money

It is instructive to read anti-dumping decisions over the years in order to trace the evolution of thinking. It is clear that the Commission's reasoning has developed over the years in a much more positive direction. Some early decisions merely assert without any justification that the survival of a viable community industry is in the interests of users and consumers.

Some decisions have gone on to say that even if the price rises caused by anti-dumping measures imposed significant costs on users this was of no consequence because they were themselves able to pass the costs on the final consumers who did not matter.

A few recent decisions have gone much further than this and have really tried to undertake serious estimates of the cost of the measures. It seems highly desirable that this approach used notably in the soda ash and PPC cases should be made more precise and used in every case.[14] But there is tendency to minimise the importance of impacts on final consumers.

Economists argue that the cost of living, which determines consumer purchasing power, should be a prime concern of public policy and moreover the cost of living is a general factor in determining the competitiveness of European industry across the board.[15]

3.2.2. Price effects

Some estimates should be made of possible scenarios in which prices may rise (or even fall) as a result of the measures and which players gain or lose from these. If it is expected that domestic prices will not rise, it should be indicated how EU firms can gain from measures. Economic analysis in the past has tended to assume that prices will go up by the whole of the duty but empirical evidence suggests that this does not necessarily occur. Some kind of forecast is needed.

It is clearly necessary to distinguish price rises due to:
a) Duties being paid and putting up the user price to which revenues collected are an offsetting counterpart.

b) Price rises implemented by the exporters designed to avoid paying duties (either as part of an undertaking, to avoid duties or to reclaim duties). These are a net cost to the EU economy and transfer profit to foreign producers.

c) Price rises inside the EU by EU producers raising their prices to restore margins to remove the injury. This represents a transfer from EU users to producers.

Against this must obviously be set reductions in price that are brought about by producers who are resigned to paying the duty and who wish to minimise the impact on their sales. This is the terms of trade gain that is made possible by the EU retrospective duty system as opposed to the US system, though anti-absorption measures could discourage this.

These income transfers can be quite straightforwardly calculated with respect to a fixed volume of sales. Economists would wish to see added in to the calculation some assessment of the possible impact of any price increases on the total volume of sales of the product in question. If users or consumers are led to alter their purchase pattern as a result of duty imposition this will result in what is known as a loss of consumer surplus.

All of the above discussion pre-supposes that the authorities can estimate the extent to which prices will go up as a result of anti-dumping measures. This is of course not

[14] Both cases Definitive Duty OJ L 244/1995

[15] Small percentage cost increases cases experienced by large numbers of buyers can add up to a big total.

straightforward. It is clearly related to the calculation of an injury margin: by how much would prices have to go up in order to remove the injury? The calculation does not itself tell us what price increases there will be, but much of the raw material for the injury calculation would be very helpful in the cost calculation. The Commission's practice has changed markedly in recent decisions and it would seem that what is needed is not a revolution in approaches but an expansion of the techniques used in the PPC review and the Soda Ash case where a real attempt was made to look at costs.[16]

It is very clear that there is an inadequacy in both conventional economic analysis and in the way the price consequences of anti-dumping have been treated in the past. In many economic studies it is simply assumed that prices of imports rise by the full amount of the anti-dumping duty and that domestic producers match this; this is of course quite possible, but it is less likely in imperfect than perfect markets, and there is evidence that foreign producers have reduced their own prices to absorb duty and that the knock-on effect in the EU market has been reduced. On the other hand, many anti-dumping decisions simply assert that import prices will not rise by the full amount of the duty and that redress will occur solely through market share adjustments and increases in profit margins without any rise in domestic producer prices. It is on this point that the greatest controversy has arisen between the Commission and its critics, i.e. economists - both in academia and elsewhere. Economic analysis and empirical experience suggest reasons why the price of close substitute products should both rise or fall together and it would be helpful in cases where the Commission services could indicate where they have reason to believe that this would not be so, e.g. when items are highly differentiated.

It is therefore highly desirable to carry out more systematic analysis.

There is clearly scope for dispute and speculation in such a forward looking exercise. But a number of questions can be reasonably asked.
Clearly where there have been measures in the past an analysis can be conducted of price movements at the time of previous measures. But is also possible to undertake simple forward looking calculations by asking the questions:
a) is there any evidence that buyers would switch away from imported to domestic goods if there are no substantial price rises?
b) is it possible for the EU industry to eliminate the injury without itself raising prices?

The calculation of an "underselling" margin requires some analysis of the potential responses by EU suppliers. But by itself it does not claim to predict how prices will actually move.

Ideally one would wish that the Commission be asked to estimate how much the prices of the imports product in question will go up (otherwise how can it estimate what duty is needed to offset the injury) and then to simply estimate the direct cost of the measure as a sum of money. It would then be reasonable to expect DG I to state, as it did in CTVs, what the likely impact would be on internal prices and why (even if the answer is merely

[16] Both PPC and Soda Ash cases OJ L 244, 12.10.95.

that the industry says this).[17] The very simplest of calculations of total cost could be made and the Commission and the Member States could judge if such a transfer was sensible in the light of other costs and benefits.

There is no doubt that making estimates of prospective price increases is highly speculative. Nevertheless some simple rules suggest themselves. We can estimate an upper bound for the cost increase by looking at the case where all of the duty is passed on by the exporters to the buyers and where in order to remove the underselling margin and restore their target price the EU producers raise their prices by the same amount.

This will not happen in all cases and it must be remembered that the costs created will generate revenue for the Community in the case of duties (though not in the case of undertakings).[18] The price increase is applied to the total volume of sales to give a total cost figure.

It seems reasonable to estimate this figure even where it is thought unlikely to be realised. At the other side a lower bound figure should be calculated. Obviously the ideal outcome is where the exporters absorb the entire cost of the duties but as a result of their loss of profitability they withdraw substantially from the market and the EU industry takes up the slack and restores profitability by getting extra sales.

On the other hand it would seem reasonable to spell out the implications of a middle scenario. Here it might be assumed that
a) exporters absorb for instance 1/3 or 2/3rds of the duty
b) domestic producers are asked how much they would put up prices on assumed duties and reactions of exporters.
This would again generate a cost increase for EU users which could be expressed as a sum of money.
It would seem reasonable if the producers argue that they would not have to put prices up to benefit from the anti-dumping measures to ask them to supply scenario projections which would illustrate how they could restore their profitability from volume changes only.

It would be difficult to make a firm estimate of this effect in advance, and scenario analysis seems called for. However recent work in the UK has attempted to use sophisticated statistical techniques to look for breaks in price trends for past anti-dumping cases.[19]

3.2.2.1. Tariff revenues

[17] CTVs from Malaysia, China, Korea, Singapore and Thailand; Provisional Measures OJ L 255, 1.10.94, Definitive Measures OJ L 73, 1.4.95
[18] But we should note that the revenues collected will not be received by the users.
[19] D. Greenaway et al Anti-dumping Policy and NTBs, unpublished 1995.

In considering reviews, we should look at how much of duty has been absorbed and what the total amount of the revenue collected is.

Where reviews are taking place it would seem imperative that the total amount of the revenue collected should be considered together with some attempt to assess, by looking at the past data, how much of the duty has been absorbed. The Commission has methods for asking that latter question. Of course it should be remembered that duty collected is both a cost for those who pay it and a source of revenue for the Community. For undertakings, no revenue is collected, and if they have been binding, revenue is in fact transferred abroad.

Both of these figures should be looked at. In other areas of decision-making it is less common to hear the argument that taxes have no disadvantageous effects because they are translated elsewhere into useful expenditures.

On the one hand, where undertakings have been used there is no revenue generated and what is needed is a time series analysis comparing actual prices, including the undertaking, with the best estimate of "free market" prices. This is always difficult to do because "rest of the world" prices are themselves influenced by the existence of undertakings. If the EU or US imposes minimum prices then less will be sold there and more will be diverted to the "free market" where prices will be artificially depressed. Nevertheless, a comparison of actual prices, undertaking prices and free market prices should be the starting point. It is our impression that in the semi-conductor case for example this data exists within the Commission but it has not yet been put together. In fact the information we have been able to gather suggests that actual market prices in the EU for Japanese DRAMs were above the undertaking levels for all but about 6 months when the undertaking seems to have put prices up by about 5-6%.[20] We were not able to obtain precise data but it seems quite possible that if the exercise were carried out it would show a rather low cost increase figure.

On the other hand in the case of some other products undertakings have been given that probably pushed prices up quite significantly, transferring revenue to foreign producers.

[20] DRAMs from Japan : Undertakings OJ L 20/1990, Definitive Duties OJ L 193/1990.

3.2.2.2. Terms of trade and tariffs

If foreigners absorb the duty tariff revenues are collected at their expense and our terms of trade improve.

The terms of trade for economists essentially refers to the relative prices of imports and exports. A region's terms of trade are said to improve if its exports command higher prices, or if its imports become cheaper. There are many ways to measure the concept. In simple terms however, the terms of trade impact of changes in the markets for our imports reflects in effect how much less we have to export in order to buy a given amount of imports if their prices fall.

In order to know the impact of measures on the terms of trade we do need to analyse market structures. If we can correctly estimate the extent to which foreign firms will absorb duties we can estimate the gain to the economy as a whole from doing this.

To know the effect of trade policy measures on the terms of trade we need to know the same information as we need to assess the cost increases. This involves estimating elasticities of demand and supply and the extent of entry into the world market: is there a going world market price? If so the sellers will not cut their price to us just because we impose a tariff.

One of the factors that should be built into the estimates of the consequences of anti-dumping calculations is the impact on EU revenue. Care must be taken to avoid double-counting here. Clearly if prices for imported goods go up as a result of the foreign supplier passing on the cost of the duties, that is at the same time an increase in costs to the purchasers but an increase in income for the Community which is available for spending and is an offsetting factor in the list of impacts. To the extent that foreign sellers however absorb the duties and do not raise prices, then the revenue is a tax paid for by foreigners and received by the EU from them. On the other hand it must be remembered that this effect is the same as the "terms of trade effect" referred to above. It represents an increase in the real income of the EU caused by lower import prices but one that is captured by the EU budget not individuals.

3.2.3. Consumer surplus

This is theoretically very important but not possible to measure directly.

All the estimations and calculations we have discussed so far rely on there being some application of industrial economics to estimate how much prices would go up in any given market given the structure.

Economic theory however suggests that an additional cost should be taken into account and this was used by the ITC (1995) and FTC (1984) studies referred to above. This is the so-called loss of consumer surplus. It is occasioned by the fact that the existence of the duties cause demand patterns to shift away from what they would otherwise be. It is based on the pure theory of supply and demand.

That is to say, in addition to the higher price paid for what would be bought anyway, the consumers lose as a result of their switch in demand away from the product whose price has risen. Supply and demand theory identifies the utility of a commodity with consumers' willingness to pay for it. Consumers will value additional units of the commodity at the price they have been willing to pay for what they did buy. So where the market price is kept above the cost of supplying additional units, there is a loss of consumer welfare. If after duties the post tariff price is greater than the import price foreigners are actually charging us, economic theory suggests that the value of the good to the consumer is greater than the economy's cost of acquiring it (the amount of foreign currency we have to earn to import another unit). Consumer satisfaction would be increased if domestic market price were closer to the import cost (i.e. how much we have to export - not the foreign cost of production).

In addition the fact that the domestic price is liable to cause rises in home production is considered a cost in terms of economic efficiency where purchases from abroad would have been cheaper.

This model is traditionally used by economists and is described for example in fig. 5-1 on p. 5-12 of the US ITC Report (1995).

This approach has been used by the UK National Consumer Council (1990) in its analyses of anti-dumping policy and has an important part to play in any retrospective evaluation of the effects of past policy, but it requires knowledge of demand and supply elasticities and would be hard to apply in the decision making process. It is also technically difficult where the assumptions of a perfectly competitive market are not satisfied.

3.2.4. Employment effects and the value of jobs

The costs and benefits of jobs depend critically on what we assume would happen otherwise: would workers be re-deployed? Do trade measures assist adjustment?

Employment effects are not easy to incorporate in standard cost-benefit analysis of trade policy.

This is largely because traditional trade theory is based on the assumption that workers released from one job can normally find jobs elsewhere that are at least socially productive.

Most outside studies of anti-dumping measures are reluctant to accept that the imposition of anti-dumping measures can improve efficiency of the firms benefiting from them. The assumption of the anti-dumping regulation however is that the firms subject to dumping risk being driven out of business by unfair competition and that they are in principle viable and will recover if allowed to survive. The implicit assumption is that if the firms suffering from the dumping are allowed to shut down, re-entry will be strongly deterred by the risk of later disturbance, but that if firms are allowed to survive the jobs saved will end up being socially valuable.

3.2.4.1. Cost per job

Estimates typically are several times the value added of the worker. This is because trade models assume all prices go up, not just those of factories kept open.

The normal approach of economists is to estimate the cost per job saved. They tend to be high, as the models tend to assume that duties raise the price of all imports and of all home produced goods by the amount of the tariff, but the direct benefit is only felt by the producers, some of whom may well be viable anyway.

Economic models stress that job losses should be treated as adjustment costs rather than permanent costs. They argue that if the market mechanism is allowed to work, workers will eventually be re-absorbed into the system. One influential US study by Tarr and Mokre for the Federal Trade Commission (1984) did attempt to use the concept of adjustment costs. They sought to calculate the number of jobs saved by import protection and estimated the reduction in sales that would be caused by removal of textile protection. They noted that this was not a figure that could be directly observed: it would depend on how prices changed and how consumers responded to these price changes. Then using average productivity figures they calculated the number of jobs this corresponded to. In addition they estimated the loss of jobs in upstream industries using input-output tables. These were estimated to be about half the direct costs.

They then used unpublished data to estimate the average duration of unemployment for workers in the textile and clothing industry. It was assumed that workers losing their jobs would be re-employed after experiencing a wait of this average.

Their study assumed that the loss to the workforce was equal to the loss of pay (estimated at average wages). The study did not take account of social transfer payments, presumably on the grounds that social security benefits are at the same time a loss to tax payers but a benefit to recipients.

This method showed large margins of error, mainly due to the difficulty of knowing how much output would be changed by the removal of protection. The authors set the gains from jobs saved (jobs lost multiplied by average earnings per month lost multiplied by

months spent out of work) against the benefits to the rest of the economy from the price falls that were estimated to result from the cut in protection.

The benefits from the price reductions were essentially estimated by taking the volume of sales in the industry and multiplying by the price cut, adding in a number of second order effects. The authors concluded from this that, although each consumer would gain a very small amount, there would be a very large number of gainers and the cost savings would be permanent so the total impact on the economy of price cuts would be such that the benefits from job savings would be much less than the savings to consumers, benefits from removing protection being between 7 and more than 20 times the costs of adjustment.

The US FTC authors estimated that the results might be sensitive to whether or not unemployment lasted for ever, the results do not change all that much with alternative estimates of temporary unemployment in the US context.[21] But they are clearly very sensitive to the price effects assumed and the very high figures for benefits if tariff removal occurs depends on the assumption that price cuts are permanent but job losses are temporary. Clearly the cost figure comes down a lot if prices of domestic goods do not go up and if the measures are strictly temporary.

Free trade economists would always wish to argue that the efficiency gains from trade liberalisation will lead to the creation of other jobs elsewhere in the system, though these cannot be identified. Of course these further gains will only be forthcoming if it is true that the industries that shut down are indeed inefficient.

3.2.4.2. Benefits per job

> *Jobs saved are worth less if the workers can find other employment. Another yardstick is how much is typically spent on job creation programmes. On this basis an average job could be said to be "worth" somewhere around 10,000 ecus per year.*

Such estimates of the cost of job creation are one way to look at the benefits in the sense of the willingness of the authorities to pay. But this does not measure the value to the people concerned.

Trade economists have made some efforts to assess the benefits of unemployment stopped by trade policy measures. One's conclusion depends critically whether one assumes that workers will soon be re-employed in better jobs or remain for long periods unemployed or in worse jobs.[22]

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[21] That is to say in the US labour market if people are re-hired this is usually within months rather than decades.

[22] It is worth noting that traditional trade theory does suggest that workers should get better jobs if they move to industries that are competitive.

The method used by the US FTC in their 1984 study would seem to be capable of use in actual cases. It says that the cost of unemployment in cash terms should be treated as the loss of earnings of the unemployed workers during the time they would remain unemployed.

If complainants can realistically state how many jobs have been lost or would be lost, the Commission can use data on average duration of unemployment and earnings to estimate the cost to those losing their jobs of the adjustment burden that they bear. This cost is of limited duration if workers do get other jobs. It is important to note that if we are looking at the effects of measures on the economy we are not interested in the total injury suffered by the complainant industry but in that part which is caused by the dumped imports and which could be redressed by action.

It is of course assumed by the economic model used here that workers who eventually get jobs in the rest of the economy get the same wage as beforehand. If this is not so one could add to the losses of the workers the wage cut they suffer. It must be noted however that such a cut is *a saving* for the rest of the economy.

The same unemployment duration data would allow an estimate of the budgetary cost by multiplying average benefits by payout rates. It must be stressed, however, that one should not add the cash costs to the loss of income figure: the state payments reduce the financial burden to individuals. One can either look at the cost to the state or the cost to individuals.

It is arguable that the social dislocation costs to workers displaced is actually greater than the financial cost they bear. This is very hard to measure, but it must be remembered that it cannot be assumed that all jobs affected by the measures will be lost and the workers unemployed for ever.

Another way to make sense of the cost per job figures is to ask what is a reasonable figure for the public authorities to spend for job creation measures. Estimates of the capital investment required to create a job do not seem entirely appropriate as the investment outlay is expected to be returned. It is that part of the capital outlay that the commercial investor does not expect to recoup that may be set against the costs to the rest of society of trade policy measures.

The Commission has set ceilings for state aids for job creation. These appear to be applied in a somewhat flexible manner. Marchipont (1994) cites the official DG IV ceilings for state aids under the regulations governing regional aids. Various types of region are identified. In the regions most eligible for aid the ceiling for aid per person is 13,000 ECU's per job created. On the other hand there exist a series of sectoral regimes. Marchipont cites data from the Kiel Institute which indicate that "around 1990" state aids for job creation in new plants in the car industry were much higher. In the table Marchipont quotes from the Kiel study the state aids actually observed (and evidently approved) ranged from 16,500 ECU's per job created in France to 517,000 ECU's for a

case in Italy (672M ECU's to create 1,300 jobs). All other examples in the study were between 30,000 and 162,000 ECU's per job (1990 prices).

Such once and for all figures can be compared with annual flows of costs due to job creation by trade measures using interest rates. If government borrowing costs 5% a set-up subsidy of 100,000 ECU's is equivalent to a subsidy of 5,000 ECU's per year for ever, which is a cost to rest of the economy and, as with any policy that pushes up prices or taxes, this can affect the rest of the economy.

The recent evaluations of the structural funds have also generated some data which could be used as yardsticks for comparisons. The UK 1991 Evaluation Report for Objectives 3 and 4 in the United Kingdom looks at expenditure per programme recipient who obtained a job, and then by using comparative data from surveys, tries to allow for the fact that some people would have got jobs anyway and some of the jobs created displace other workers. They use research from previous studies to estimate job displacement. Assuming that only 25% of the jobs apparently created really are new their figure (apparently at 1991 prices) is of £10,500 per job per year for wage subsidies to the long term unemployed. The 1992 evaluation report, giving less detail for the basis of the calculation, estimates the cost per job in 1991 for all UK Objective 3 programmes as £9,500, but only £6,700 in 1992. If we apply the 5% borrowing rate to these we come up with a capital sum of about £200,000. This is not so far from the order of magnitude of costs per job in the car industry, but the state aid figures almost certainly are gross rather than net job creation.

3.2.5. Effects on the rest of the economy

Whilst the cost of measures to user industries and consumers tend to be relatively small to each individual user/consumer this does not mean that they should be ignored. The total cost incurred across the board is also important and should be looked at in conjunction with the potential benefits to producers . Any small price rise that affects the EU cost of living can affect overall economic competitiveness if wage rises follow, meaning that jobs may be lost elsewhere.

The Commission increasingly often estimates the cost of measures to user industries, but typically it finds that the cost increase to the user industry is a small fraction of the value of its sales, (whereas inevitably the injury to the up stream producers is a higher proportion of their output). The impact of price rises on consumers is correspondingly smaller still per household. It does not follow however that these figures should be neglected. It is most desirable that any cost increases to industry should be expressed in terms of the total amount of additional costs that the user industry is being obliged to bear. Decision makers may wish to set this against the total value of the sales of the industry against its profits or some other factor, but it is inappropriate to start off merely with a percentage figure. If we are "saving" an industry we need to know how much the rest of the economy is paying. It would be unhelpful for the analysis of subsidies to

know only the scale of the subsidy as a percentage of sales. One wishes to know what the total amount involved is.

Similar considerations apply in the case of final consumers. Economists would not agree that price rises affecting only final consumers should be ignored. Where very many buyers are involved this may involve very large total costs. It is also the case that anti-dumping duties, falling typically as they do on low price imports affect most those households that rely on cheap imports. This is especially true of trade restrictions on clothing and shoes. It is entirely within the sphere of political decision making for these costs to be regarded as less important than the benefits to producers (who may be deemed more deserving) but it would be inappropriate from an economic point of view to wholly ignore the costs of final consumers.

It is also necessary to remember that the cost of living is a major determinant of wage bargaining which is itself a major factor in the competitiveness of the economy. The orders of magnitude can be illustrated by the following back of the envelope estimate. The US International Trade Commission made an estimate that the total cost in terms of economic welfare of US anti-dumping measures was of the order of 0.03% of GNP. Expressed as a total cost it becomes $1.59 bn. Suppose this figure is correct.

The simplest way to consider this is to see that a cost of 0.03% of GNP can be interpreted as a rise in the overall price level of 0.03%. Many studies have indicated that wage claims depend on the rate of price inflation. As a very crude first approximation let us suppose that a 1% rise in prices is followed by a 1% rise in wages. For those firms that are benefiting from the imposition of duties this is not a problem, but for the rest of the economy this is a pure 1% cost increase which will reduce the demand for labour by a very small amount but across a large number of firms.

Recent statistical (econometric) studies have suggested that a 1% rise in wage costs is likely to reduce the demand for labour by about 0.2% This implies that a 0.03% rise in costs would reduce employment in those parts of the economy that do not benefit from the measures by (0.2*0.03%). This is about 0.006%, which is a tiny fraction, but in absolute terms not entirely negligible. If the US labour force is of the order of magnitude of 130 million we can get an idea of the possible effects of a tiny loss of competitiveness spread across a very big field by taking 0.006% of 130 millions. This gives us about 8,000 as a very rough estimate of the number of jobs that could have been lost as a result of wage increases to compensate the price increases caused by US anti-dumping actions. Of course from an employment point of view this would have to be set against the number of jobs saved. But the analysis of the FTC would remind us that the cost of the loss of competitiveness lasts as long as the measures, while the positive effects of job creation is only for as long as the workers whose jobs are saved would have stayed out of a job if they had been made unemployed.

It therefore makes sense to estimate as well as can be done the possible impact of trade measures on prices and costs for all users and consumers.

3.2.6. Market Structures

> *Information on the structure of the global markets is important in determining what the Community Interest really is, for example in analysing how significant the danger of strategic dependency may be. The nature of the injury done to our economy will depend on the circumstances of the dumping. Simple indicators of the degree of closure of the exporter's market and the freedom of entry into the industry can help indicate the risk we face. A number of questions which could be asked about home and foreign markets would provide much of the relevant information which, although by definition somewhat subjective, could be used alongside more quantifiable evidence.*

Any attempt to calculate the effects of measures on prices in both short and long term requires an understanding of the relevant market structure.

Any analysis of the effects of measures on users must take into account the medium and long term effects on users and consumers. It is quite correct to argue that if the non-imposition of measures exposes the EU to the risk of strategic dependency on a small group of suppliers we risk facing higher costs in the future, but whether or not this argument actually applies in any one case depends on the market structure of the industry in question and it is at this point that it would be natural for any information that is actually available to be taken into account.

The difficulty in the present system comes however when we believe that the immediate effect of anti-dumping measures would have to be to raise prices substantially to users in order to eliminate the effects of the dumping and the preserve the industry. It is here the market structure analysis would be appropriate from the point of view of finding out what is actually in the Community interest.

Industry representatives argue strongly that it would be a quite unreasonable burden to place on them and on the Commission if there were an additional criterion of "true market closure" with onus of proof as a condition for imposing anti-dumping duties. There is however already a requirement that the Commission should undertake the Community Interest test and our analysis leads to the conclusion that the general Community Interest does differ markedly according to the nature of the world and EU market structure and that this should be taken into account in balancing identifiable interests of users and producers

A major declared aim of anti-dumping action (Art. 21) is to restore effective competition. We have argued that whether or not anti-dumping is the right means to achieve this depends very much on what the cause of the dumping was in the first place. At one extreme, if there is the beginnings of predatory dumping, we can indeed stop a monopoly developing (which is of course good for us unless monopoly is so ultra-efficient that it allows prices to be cut even with the extra margins). At the other extreme is the case where dumping is part of a tactic to enforce a cartel system or other implicit collusion. Where an industry has had these features in the past anti-dumping may make them worse.

There is a good case for drawing on published and even specially commissioned economic research about the structure of the world market case by case as well as seeking to build up in-house sectoral expertise in industries known to be concerned .

The outcome of such an analysis should not be treated in the same way as an estimate of the number of jobs at risk in the industry since it would be based on very subjective information and judgements. On the other hand it could be used to influence the way in which more objectively quantifiable factors are balanced.

Thus where it can be shown that there are a very large number of suppliers in the world market capable of entering the market if there were signs of dependency on the dumping exporter, this would be a factor strengthening the side of user industries. After all, their competitors in the rest of the world would have access to such competitive supplies. On the other hand where entry or re-entry is judged very difficult this supports the case for saying that the long term interests of the users need positive action to preserve sources of supply.

It is surely desirable that if any information is available, the intensity of competition in both world and EU markets should be considered.

It would seem highly desirable that as part of anti-dumping investigations, the following issues should be systematically investigated.

- What are the trends in imports into the dumping country's market from the EU and elsewhere?
- If imports are negligible, is this a sign that their competitiveness is unassailable *or* that there is some barrier to trade?
- What are the tariff rates and declared NTBs into that market?
- What evidence is there on how the dumping is being financed and how "deep" the purse is?
- Is there any published evidence or complaint on record of anti-competitive practices within the industry?
- Are the exporters multi-product firms who have access to other markets which may be closed?
- Is there a captive market for the dumped product e.g. for in house use that is likely to be less price sensitive than the open market?
- What evidence is there on concentration in the exporter, importer and world markets? And even more importantly, is there evidence that new producers not linked to dominant players have ever been able to, or could in the future, easily enter this market?

Where there are a very small number of producers in the EU or where there has been evidence of concertation among a larger number it is desirable that this issue be systematically considered as part of the community interest investigation. There have been cases in which importers offer evidence that EU producers have been using anti-

dumping action to sustain anti-competitive positions within the EU. Until now the Commission has been reluctant to take this up if there had been no competition case here, but it would seem reasonable to ask for a consideration of whether this was a possible risk.

3.2.7. The effects on our exports

Anti-dumping measures may affect the competitiveness of EU firms. In addition they may affect other countries' import situations.

An overall appreciation of Community Interest should also take account of any repercussions on EU exports.

From the point of view of the EU's export potential the impact will depend on the relative magnitude of any positive effect on the supported industry vs. the potential for loss of competitiveness due to the costs of achieving such an aim.

If it can be shown that the use or threat of anti-dumping instruments will actually open other countries' markets and allow the removal of the factors that permitted the segmentation in the first place that would strengthen the case for measures. But if it can be shown that the exporter is so dependent on our market and would be obliged to or likely to curtail imports from us, that would be an argument on the other side. From the evidence we have, it would only appear to be with the US that the EU is on both sides of the anti-dumping instrument.

3.2.8. The Injury analysis and the Community Interest

Community Interest depends on whether taking measures will actually reverse any damage done in the past, even though it may have been established that the injury did occur.

As we noted above, an analysis designed to see whether the complainant industry has suffered injury during the reference period is not quite the same as an analysis of what the impact on the complainants would be of introducing measures, or of how this can be set against the costs of the measures. Nor, as emerged in the PPC case,[23] does analysis of the injury to complainants necessarily take account of all the producer side effects of measures on upstream and associated activities that have not complained but whose interests need to be taken into account.

3.2.9. Industrial issues

[23] Definitive Duty OJ L 244/1995

The Community interest in many cases rests on arguments about the strategic need to retain a particular industry in the EU for example for technological reasons. Whilst anti-dumping decisions are not explicitly based on industrial policy criteria (and whether they should be is not within the scope of this report), in practice, making decisions on particular spillover effects of an industrial nature are unavoidable. Decisions should be based on an appreciation of the relative importance of the industry in question compared to others in the light of identifiable spillover effects etc.

It is really not for the present report to offer an opinion whether it is correct to include industrial policy criteria in the Community Interest decisions. Many officials have said that this is not intended and if this is indeed Community policy the Community Interest analysis should exclude such considerations.

On the other hand many published decisions (e.g. PPCs,[24] CTVs,[25] DRAMs[26]) do make a case on these grounds. One may assume that the injury analysis takes account of the impact of the dumping and by implication its elimination on the producing industry and a direct cost analysis on users. In anti-dumping decisions however it is sometimes argued that the disappearance of a certain industry would cause injury to parts of the EU economy not directly involved in the complaint; for example it has been suggested that injury to EU CTV producers will have a negative impact on the suppliers of TV tubes (which may go beyond the simple loss of sales) and that the anti-dumping measures in PPCs attracted Japanese investment which stimulated an EU components industry. In the case of the CTV industry it may be that a direct inclusion of the negative impact on upstream demand could have been included in injury analysis (as the FTC study does in trying to estimate the effects of increased import competition in clothing). But with the PPC industry it is clear that what is claimed goes well beyond the traditional indirect effects: the effect considered here has nothing to do with injury from dumping per se. If the argument in question is valid it would apply equally even if there were no dumping at all.

These are arguments that one must suggest should be treated with great care in a systematic evaluation of Community Interest. If there are likely to be spillover effects not adequately taken into account in market relationships it seems desirable that, at least in internal deliberations, they should be made explicit.

We need to ask why if the presence of the industry in question generates readily identifiable spillovers, these cannot be dealt with by market forces. For example in the case of soda ash[27] it is clear that the glass industry would suffer if as a result of a short period of intense competition the EU industry were to disappear leaving them dependent

[24] Definitive Duty OJ L 244/1995

[25] Small-Screen Colour Televisions Definitive Duties OJ L 107, 25.4.1990; Colour Televisions Definitive Duties OJ L 73, 1.4.1995

[26] DRAMs from Japan : Definitive Duties OJ L 193/1990. DRAMs from Korea : Definitive Duties OJ L 66/1993

[27] Definitive Duty OJ L 244, 12.10.95

on US supplies. But if it is obvious to policy-makers it is also obvious to users. It is well known in many industries that users deliberately arrange for "second-sourcing", for which they may be prepared to pay a small premium in order to avoid dependency. This deliberate action by buyers can bring new producers into an industry. Where the user industry is small and fragmented however it is easy to see how it may be possible that no individual buyer or user may be willing to pay extra for something that will benefit others more than it benefits him.

On the other hand in an industry like the glass industry which is highly concentrated a case has to be made explicitly why its producers should fail to take this into account. A possible explanation could be that the downstream industry is itself, monopolistic and can pass on price increases due to possible shortages to its consumers.

Anti-dumping officials have repeatedly stated that there should be no attempt to bias anti-dumping actions to favour some industries over others. It is not at all desirable that anti-dumping policy should prioritise sectors in advance of investigations; at the same time we know that the spillover effects etc. are not ignored in practice. It can only be suggested that either a deliberate decision should be taken to exclude such considerations or they should be made more coherent.

A set of questions could be devised that would allow industries which have positive spillovers to be identified (of course care must also be taken to enquire if industries faced with cost increases due to possible anti-dumping action have spillover effects.) Such criteria are clearly relevant alongside such questions as, for example, whether the loss of jobs caused by the injury is in a particularly sensitive region.

3.2.10. Direct Foreign Investment (DFI)

> *Looking at the data the one impact of anti-dumping measures that stands out beyond dispute is that in assembly industries it has attracted very significant amounts of inward investment. This probably has benefited the EU economy as a whole, especially via technology transfer, though not necessarily complainants.*

An examination of industrial data from past cases serves very much to indicate the difficulty of knowing what would have happened in an alternative scenario. There is one consequence of anti-dumping action that does appear to be very firmly established however: namely that, above all in cases involving electronics imports from Asia, the use of anti-dumping measures attracts inward investment from the countries found to be dumping. The evidence is very strong. Though sceptics argue that there is a mere coincidence of timing due to a general tendency towards globalisation of business in the 1980s, such a view does not fit well with evidence which compares cases where there have been measures and those where there have not. Comparing the US and the EU it is apparent that where both use commercial policy instruments, both get Japanese DFI but

where only one does DFI goes to the market where measures are taken. The principal beneficiary of this appears to have been the UK.[28]

There is no doubt that in any ex post balance sheet of the impact of anti-dumping the DFI factor must be judged positive.[29] Recent anti-dumping decisions (e.g. in PPCs[30]) have made it clear that the notion of Community Interest does not simply encompass the interests of EU based firms who complain. If anti-dumping measures secure the generation of value added by US, Swiss or Japanese-based multi-nationals on EU soil employing EU residents, and if as a result technological know how is transferred or retained, this is beneficial.

The discussion that follows is not intended to dispute the view that any simple empirical reading of the history of trade policy would probably conclude that the attraction of DFI has been the most evident quantifiable benefit. One must just be a little careful in remembering that there can be indirect effects of DFI as well as direct effects and these are difficult to measure.

Caution must be taken in the evaluation of this impact. The first point is that DFI can have costs as well a benefits. The second point is that, as a result of this, the actual net benefits of DFI are very hard to measure.

First, apart from the costs associated with any anti-dumping action which include the overall competitiveness problems of any price increases, it must be recognised that jobs created by the DFI that is attracted are not necessarily net additional jobs in this sector. Whether or not the substitution of imports from a closed home base by sales from EU based subsidiary serves to restore genuinely effective competition will obviously depend on the nature of the advantage which the exporter previously had. If the dumping exporter has benefited from past R&D and can amortise heavy set up costs rapidly in the home base and merely had to incur the low set up costs of an assembly plant in the EU an asymmetric advantage will still remain. On the other hand where the local production costs are the most important part of the competitive advantage the fact that foreign firms are producing in the EU on the same terms as EU firms "levels the playing field".[31]

There is a general problem of counterfactuals in evaluating DFI. What would have happened otherwise ? If we see a rise of DFI based jobs and a decline in EU-owned firms and we suspect that the EU firms would not have declined as fast if there had been no DFI we must say that some of the new jobs displaced other jobs. If on the other hand the

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[28]See R. Belderbos, Japanese Electronics Multinationals and Strategic Trade Policies, Oxford University Press, forthcoming.

[29] Some economists outside the main current of opinion (e.g. R. Dornbusch of MIT in his contribution to Lawrence and Schultze (1992)) have argued that trade policy should be geared to the attraction of DFI because profits (rents) can be shifted to the host country.

[30] Definitive Duty OJ L 244/1995

[31] We must remember that this levelling the playing field is not necessarily desirable for its sake where true costs are lower elsewhere in the world. The role of anti-dumping duties should be to prevent foreign firms taking advantage of a cost advantage due to some form of anti-competitive distortion.

original EU industry would have declined as fast anyway and the new jobs we have attracted are all bonuses, then the anti-dumping measures have served the Community Interest by attracting DFI, even though they have simply had no effect on the complainants.

Obviously any overall appreciation of DFI depends on the industrial issues referred to above. Many studies of Japanese DFI into the UK (e.g. Commissariat au Plan 1990) have concluded that there has been highly beneficial technological demonstration effects, though it has proved impossibly to quantify these exactly.[32]

3.3. Alternative policies

Economic theory and some empirical evidence on job creation suggest that the aims of anti-dumping action could often be achieved by other policies, at lower cost, though these may be ruled out for legal or political reasons. In those cases where anti-dumping is recommended partly on account of social or industrial spillover effects, it would seem reasonable to consider whether these alternative policies may be available.

It is not within our terms of reference to propose alternative policy instruments. Nevertheless it is clearly reasonable to suggest that wherever possible the Commission considers whether from the point of view of Community Interest the anti-dumping instrument is the most appropriate in each case.[33]

Alongside such considerations it is also surely reasonable to ask that where an anti-dumping action is being argued for on grounds of social or industrial spillover effects, there should be an evaluation of whether alternative policies might be available. Such policies could include specific industrial policy measures including subsidies.[34] There are enormous political and legal obstacles to this, but there is a long established body of economic theory in cases where there are market failures, e.g. adjustment problems or capital market failures, arguing typically that "optimal measures are part of industrial policy (including subsidies to factors of production) and trade policy is always a second best instrument."[35]

We noted above that the evaluation reports prepared for DG V on the Social Funds give estimates of about £10,000 pa. as the annual cost of creating jobs using that mechanism.

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[32] Some of the technological transfer is in "soft" managerial technologies.

[33] This report will not go into the relationship between anti-dumping and safeguard duties, which is a legal matter.

[34] One avenue that could be explored would be to consider whether member states might not be specifically permitted to give subsidies to industries where adjustment or other considerations suggest that subsidies would correct rather than introduce distortions in the world market.

[35] Gual (1995, p.11), reviewing the work of trade economists Neary and Mussa. This is an example of the proposition that instruments should be linked to targets.

3.4. Making a balance

Balancing the different elements in a case is inevitably a matter of judgement rather than arithmetic and precision is impossible. However, it would seem reasonable to try and ensure that any apparent cost is proportionate to the relevant interest.

More information can help though, especially concerning :

1) a proper evaluation of the overall Community interest will be inadequate if it relies only on interested parties. As much independent expertise as possible should be used in this.

2) continuing monitoring of cases will allow decisions to be reviewed and the process to be refined.

As we argued earlier the best approach would be a listing of favourable and unfavourable effects rather than a single "bottom line".

As a simple aide mémoire we can draw up a checklist:

	positive	***negative***
Employment effects	employment in protected sector or region	employment in user industries and general competitiveness
Revenues	Tariff revenues	
Price effects	terms of trade gain	
		cost to users
		general cost of living
Market Structure effects	ensuring survival of EU firms as sources of supply	possibly reducing competition in EU
Investment	Attracting DFI Greater predictability for investors	Risk of misleading EU firms that they will be protected
Technology effects	retention of EU know-how base	impact on user industry

Many of the factors above cannot easily be quantified in such a way that the numbers can be set against one another. In particular no-one would argue that the market structure analysis could generate numbers that could easily be set off against other numbers, but when the balancing is done, the existence of evidence in favour of possible predation could be argued as a factor strengthening the case for protecting the producers while the absence of any such evidence could go the other way.

At the very minimum one would argue that the regulation requires that the cost of any relief to the injured industry must be seen to be demonstrably proportionate to the interest at stake. The regulation requires a balance to be struck between producers and users/consumers but it does not indicate how this is to be done.

There is no doubt that, given the difficulty of making perfect judgements, error one way or the other is inevitable. A system that above all guarantees to maintain competition is likely to let through some unfair competition, while a system that guarantees to prevent all unfair competition is bound to increase the risk of catching some fair competition in the net as well.[36]

There is no simple way to avoid economic judgement going beyond mere observation of past data. It is necessary to consider what is likely in the future. The analysis must also rely on judgement in attempting to determine not merely what actually happened in the past but also what *would have happened* without the dumping.

For example, even ex post a true cost benefit analysis after the event of DFI would depend on very complex estimates of what would have happened to jobs and technology transfers with and without measures and the amount of DFI attracted or not attracted. The chances are that many of these factors will be matters of subjective judgement. Recent cases have paid attention to these matters and our suggestion is that in retrospective evaluation the Commission could systematise its analysis and seek to acquire expertise where necessary.

From the point of view of ex ante decision-making a correct decision from the point of view of Community Interest does depend on knowing what the investment intentions of foreign firms are. From an economic point of view however it is not easy to see how reliable evidence can be obtained. A complainant clearly has an interest in exaggerating the effect of trade policy on its investment intentions while a firm accused of dumping has incentives to claim it would not invest and is not under any obligation to reveal its plans. There seems little alternative but to rely on whatever independent expertise is available and to be aware that judgements in this area are notoriously difficult. But as much independent expertise as possible is desirable.

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[36] There is a basic theorem in statistics that if one wishes to test a hypothesis e.g. that dumping is occurring it is only possible to reduce the chances of erroneously concluding that it isn't happening when it actually is by at the same time increasing the chances of wrongly concluding that it is happening when it actually is not.

It is also highly desirable that dossiers should be kept open after the end of the reference period in order to check on whether the basic scenarios assumed did correspond to the outcomes.

4. POLICY RECOMMENDATIONS

Anti-dumping decisions should be based on an evaluation of the potential future impact of adopting or not adopting measures on

- *producers,*
- *users,*
- *final consumers,*
- *and related community industries.*

Information should be gathered from as many sources as possible and monitoring of outcomes should continue after decisions.

- Under present regulations the greatest scope for the use of economic analysis lies in the assessment of Community Interest.

- It does not seem sensible for formal cost-benefit analysis (CBA) to be used in decisions in a prospective manner except for illustrative purposes. It could be used retrospectively to review the progress of industries affected by decisions but only if additional data is gathered.

- Even without formal CBA some form of forward looking scenario analysis on the effects of imposing measures or not is desirable.

- It would be helpful to estimate, *as far as possible*, the potential impact on producers, users and final consumers, in terms of prices, employment, output etc. of imposing or not imposing measures. Where spillover effects are thought to exist evidence should be sought.

- It is desirable that where individual components of the calculation can be estimated the figure should be expressed as a sum of money (or as a range) not as a percentage of a large total, even if there are broad margins and alternative possible scenarios.

- No attempt should be made to identify a single net value of costs minus benefits, but the judgements on which the preference for the interests of one group rather than another are expressed should be made as clear as possible.

- Anti-dumping decisions, mindful of overall EU competitiveness, should not neglect the possible impact of small rises in the cost of living on wages and wage costs and thus on the economy as a whole.

- The difficulties of forecasting being what they are, the analysis should be based on indicative scenarios, so that decision-makers can for example obtain a feel for what kind of price increases might be needed to restore profit margins, etc.

- Some investigation of the circumstances of the dumping will help assess the likely response of markets to policy choices. For example information on the degree and the nature of closure and the competitive situation in the exporters' and the EU market could indicate the scope for the existence or acquisition of market power.

- After decisions are made data should be collected to monitor the evolution of the market.

- For the purposes of obtaining a balanced appreciation of Community Interest it is desirable where possible to collect information that is not necessarily submitted by directly concerned parties.

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