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World Trade Organization

Economic Research and Statistics Division

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NATIONAL ENVIRONMENTAL POLICIES AND MULTILATERAL TRADE RULES

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Abstract

This paper provides an overview of institutional, economic and legal aspects of the relationship between national environmental policies and the multilateral trading system. In particular, it analyses some of the difficulties the WTO Dispute Settlement System faces when having to evaluate disputes on national environmental policies that have an impact on trade. From an economist's point of view it would be desirable that optimal environmental policies, i.e. policies that correct existing market failures, be ruled consistent with multilateral trade law. This paper argues that WTO law in theory provides appropriate tools to ensure rulings that are consistent with economic thinking. Yet, the paper also argues that economists have a rather imperfect knowledge of the precise welfare effects of different types of environmental policies. In practice, therefore, it is questionable whether economists are able to give adequate guidance to legal experts when it comes to the evaluation of national environmental policies. This is one of the reasons why there continues to be some degree of uncertainty as to the possible interpretations of certain WTO rules in the context of environmental disputes.

JEL classification: F18, K33, Q58.

Keywords: environmental policy, international trade, national treatment, WTO.

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I. INTRODUCTION

In the last decades the intensity of commercial links between countries around the globe has increased significantly. Thanks to lower transportation and communication costs, technological innovation and lower trade barriers the ratio of trade to GDP has more than doubled for the world as a whole in the last thirty years. Over the same period concern about the deterioration of the environment – like air and water pollution, acid rain, deforestation- has become a more and more prominent policy issue. This raises the question of the links between trade and trade policy on the one hand and environment and environmental policies on the other hand.

In the Preamble to the 1994 Marrakech Agreement GATT Members recognize that "their relations in the field of trade and economic endeavour" should be such that they allow for "the optimal use of the world's resources in accordance with the objective of sustainable development, seeking both to protect and preserve the environment and to enhance the means for doing so in a manner consistent with their respective needs and concerns at different levels of development". In the Marrakech Decision on Trade and Environment (1994) GATT Members also noted that it should not be contradictory to safeguard the multilateral trading system on the one hand, and act for the protection of the environment and the promotion of sustainable development on the other hand. Even so trade disputes on national environmental policies have arisen in recent years, which shows that sometimes conflicts exist between environmental policies and multilateral trade law. Some of these disputes have received a lot of public attention and have led some to conclude that WTO activities systematically undermine environmental standards.¹

We take such concerns as a motive to offer in this paper a closer look at the links between multilateral trade law and domestic environmental policies and in particular at the potential conflicts that may arise between them. Our discussion will reveal that it is incorrect, if not naïve, to assume from the outset that all environmental policies have been designed for purely environmental reasons and that it is unjustified to conclude that WTO case law shows a systematic bias "against the rights of sovereign states to enact and effectively enforce environmental laws".² At the same time, however, the paper will point at certain difficulties the WTO faces when dealing with the interface between multilateral trade law and domestic environmental policies.

There are numerous linkages of different types between trade and environment. Trade flows may have an effect on the environment through different channels. Trade for instance involves transport between countries and transport may in turn be polluting. More trade would then potentially be bad for the environment as it increases transportation. Trade also is expected to have a positive impact on growth and several environmental indicators turn out to depend on a society's level of development. Trade therefore has an indirect impact on the environment through its effect on development. The WTO's activities are only relevant to this "link" to the extent that the WTO favours trade liberalization and thus trade. This link will not be discussed in this paper.

National environmental policies may have an effect on trade mainly through two mechanisms: environmental policies may affect companies' international competitiveness and they may affect the competitiveness of foreign companies in the national market. The first effect has received much attention in the public debate. It has been argued that national environmental policies represent additional costs for domestic companies, thus giving them a competitive disadvantage in international markets. As a result polluting industries would move away from countries with stringent environmental policies to countries with laxer regulations (the "pollution haven" effect). In order to avoid massive re-allocations of companies national governments would feel under pressure to lower

¹ See for instance Public Citizen's website: <http://www.citizen.org/trade/wto/ENVIRONMENT/>.

² <http://www.citizen.org/trade/wto/ENVIRONMENT>.

environmental standards and standards would therefore be bid down in accordance with the race-to-the-bottom hypothesis. Evidence of the existence of such a race-to-the-bottom has so far been weak.

National policies that give domestic companies a competitive advantage in foreign markets may be in contradiction with WTO provisions.³ Yet the environmental policies discussed in the last paragraph tend to give domestic companies a competitive disadvantage and are therefore not in conflict with international trade rules. The question of whether policy makers have incentives to apply more lenient environmental policies in order not to hurt the international competitiveness of domestic companies will not be treated in detail in this paper.

National policies that give foreign companies a disadvantage in the domestic market instead, may be in contradiction with WTO law. This may in particular be the case if such policies imply the ban of imports from foreign countries. An example is the EU ban on imports of hormone beef. It may also be the case if governments apply taxes that mainly affect imported products. This could for instance be the case if a country decides to levy higher taxes on fuel-inefficient cars than on fuel-efficient ones and if the majority of imported cars fall into the fuel-inefficient category, as defined by the environmental policy. In addition national standards or regulations can lead to a competitive disadvantage for foreign companies, if compliance with those standards or regulations implies higher costs for foreign companies than for national ones.⁴ Standards and regulations can in these cases act as so-called "technical barriers to trade".

As mentioned before, national environmental policies have in the past led to disputes at the WTO. Think for instance of the *US-Shrimp* case, where a US policy restricted the imports of shrimps that had been captured using techniques endangering the lives of turtles. Some WTO Members complained that this policy was incompatible with multilateral trade law and a first panel decision ruled that this was indeed the case.⁵ This decision led to outrage among parts of the environmental community. The intention of this paper is to give some insights into the decision making process and to explain why certain national environmental policies may be considered incompatible with WTO law and others not.

The focus of this paper is on the linkages between institutional, economic and legal aspects of the relationship between national environmental policies and the multilateral trading system. The paper does not pretend to provide a comprehensive discussion of any of the three domains individually. The legal discussion, for instance, focuses on the GATT Agreement, which we consider to be of fundamental importance for any environmental matter. For analytical purposes, we frequently refer to the Agreement of Technical Barriers to Trade (TBT), but we do not discuss this Agreement in detail. Because of its rather narrow focus on certain aspects of life and health protection, this paper does not deal with the Agreement on the Application of Sanitary and Phytosanitary Measures (SPS), although this Agreement may be relevant for certain environmental measures.⁶ Besides, this paper focuses on trade in goods and does therefore not discuss environmental provisions in the General Agreement on Trade in Services (GATS).

Throughout the paper the reader should keep in mind the following. Although there is a formal obligation for WTO Members to have all laws and regulations compatible with WTO law, there is no institutional policing or control of Members' laws. In practice, therefore, this policing is left to individual Members' complaints. Only in case of such a complaint it may come to a dispute in which

³ This is above all the case for subsidies that affect exported products. These policies will not be treated in this paper.

⁴ According to common usage, regulations are mandatory, while standards are voluntary.

⁵ This decision was later reversed after the US revised its policy. See Section IV for more details on this case.

⁶ For a more detailed discussion of the legal relationship between GATT, TBT and SPS, see Marceau and Trachtman (2002).

WTO compatibility will be evaluated. In this process legal experts have to base themselves on existing legal texts, some of which have been written more than 50 years ago. Ideally such texts should give clear guidelines as to how to assess whether an environmental policy is justified and thus not incompatible with WTO law. "Justified" should in turn ideally refer to the economic concept of "optimal intervention", i.e. a policy that effectively resolves an existing market failure related to the environment. Yet there are several reasons why it may often not come to such an "ideal" outcome.

First, as this paper will argue, it is in many cases difficult to know exactly what the optimal policy instrument would be. Economists can in general only give rough indications as to how to evaluate certain policy interventions. Concrete answers can only be given on a case by case basis and even then they are likely to be imprecise.⁷ Second, laws have not necessarily been written on the basis of economic arguments, as imprecise as the latter may be. This is likely to be the case for certain WTO provisions that are relevant for environmental policies and that have been written decades ago when in most WTO Member countries environmental concerns were not high on the political agenda.

The remainder of this paper proceeds according to the following structure. Section II gives an overview of the discussions and negotiations on trade and environment that have taken place within the GATT/WTO since the creation of the GATT until today. Section III analyses the economic linkages between environmental policies on the one hand and trade and trade policy on the other hand. Section IV presents a discussion of key GATT provisions that form the legal basis for the analysis of conflicts between national environmental policies and the multilateral trading system and also discusses how Dispute Settlement Reports have interpreted these provisions in cases that are relevant for the trade and environment debate. Section V concludes.

II. DISCUSSIONS AND NEGOTIATIONS WITHIN THE GATT/WTO

When the multilateral trading system was reconstructed after the Second World War, the environmental consequences of economic integration were not a primary concern for policy makers. This may explain why references to the environment were only indirect in the original GATT. The issue was first put on the agenda in the early 1970s but it was only in the 1990s that a real discussion on the relationship between trade and environment started within the GATT. This discussion is ongoing in the WTO, among others in the WTO's Committee on Trade and Environment (CTE). Aware of the importance of policy coordination at the national level, the CTE has actively been seeking an exchange of ideas with environmental and trade experts from Member governments. Although this exchange of ideas has certainly helped to enhance our understanding of the linkages between trade and environment, progress has been slow when it comes to mitigating the potential tensions between multilateral trade law and national environmental policies.

During the preparatory work for the Conference on the Human Environment (Stockholm, 1972), the GATT Secretariat was requested by the Secretary-General of the Conference to make a contribution. In the debate around this contribution the idea came up to create within the GATT a flexible mechanism to follow the problems that could be created for international trade by anti-pollution measures concerning industrial processes. In 1971 a Group of Environmental Measures and International Trade was established for this purpose. It was set up as a standby machinery which would be ready to act, at the request of a contracting party. During nearly twenty years, however, no request was made to convene a meeting of the Group.⁸

⁷ What is the optimal level of an environmental tax? When should a labelling policy be preferred over a price-based policy?

⁸ See Annex 1 of Nordström and Vaughan (1999).

A request was made for the first time in 1990 by the countries from the European Free Trade Association (EFTA). Among the reasons they gave for their request, they explained that

"[t]he approach to environmental policy making varied considerably from country to country due to differing geographical settings, economic conditions, stages of development and environmental problems. Accordingly, governments' priorities on these problems differed as well. The important point here was that the resulting differences in actual policies could set the stage for trade disputes. The EFTA countries' prime concern was to ensure that GATT's framework of rules worked, provided clear guidance to both trade and environment policy makers and that its dispute settlement system was not faced with issues it was not equipped to tackle.."

As a result of this request the Group of Environmental Measures and International Trade was indeed convened and the links between trade and environmental policies have been an object of discussions within the GATT/WTO ever since. Even so, the concern expressed by EFTA at the time is probably still valid today.

The debate on trade and environment was further institutionalised within the GATT through the Marrakech Decision on Trade and Environment (1994). In this decision GATT Members noted that it should not be contradictory to safeguard the multilateral trading system on the one hand, and act for the protection of the environment and the promotion of sustainable development on the other hand. They further noted their desire to coordinate policies in the field of trade and environment, "but without exceeding the competence of the multilateral trading system, which is limited to trade policies and those trade related aspects of environmental policies which may result in significant trade effects." The Marrakech Decision also foresaw the establishment of the Committee on Trade and Environment (CTE) which took place in January 1995. The tasks allocated to this Committee were to "identify the relationship between trade measures and environmental measures, in order to promote sustainable development" and "to make appropriate recommendations on whether any modifications of the provisions in the multilateral trading system are required, compatible with the open, equitable and non-discriminatory nature of the system .. ". The Marrakech Decision lists ten items of relevance, including:

- "the relationship between the provisions of the multilateral trading system and trade measures for environmental purposes, including those pursuant to multilateral environmental agreements."
- "the relationship between environmental policies relevant to trade and environmental measures with significant trade effects and the provisions of the multilateral trading system."
- "the relationship between the provisions of the multilateral trading system and:
 - a) charges and taxes for environmental purposes
 - b) requirements for environmental purposes relating to products, including standards and technical regulations, packaging, labelling and recycling."

The 1994 Marrakech Agreement Establishing the World Trade Organization (the "WTO Agreement") also introduced new elements into the legal texts that are of relevance for the trade and environment debate. Its Preamble includes, for the first time in the context of the multilateral trading system, reference to the objective of sustainable development and to the need to protect and preserve the environment. During the negotiations preceding the Agreement (the "Uruguay Round"), it was suggested to alter GATT Article XX and to explicitly mention the protection of the environment as a valid reason for a Member to depart under certain conditions from its obligations under the Agreement. Although no effect was given to this proposal, Article XX is of relevance for any legal disputes concerning the compatibility of environmental policies with the multilateral trading system. This is also true for the 1994 WTO Agreements on Technical Barriers to Trade (TBT) and the Agreement on Sanitary and Phytosanitary Measures (SPS). Section IV of this paper will provide a

more detailed discussion of these Agreements and on how existing WTO Dispute Settlement Reports have interpreted WTO law in disputes that are relevant for the trade and environment debate.

The CTE continued to meet and pursue its mandate after the Marrakech Conference. It focused its activities on the preparation of a report to the Ministerial Conference in Singapore (1996). In this report the CTE points out a number of concerns that are still of relevance today:

- On the issue of the relationship between trade measures in multilateral environmental agreements (MEAs) and the multilateral trading system the report expressed concerns regarding the measures applied by MEA signatories to WTO Members that are not a party to the MEA in question;
- The report expressed concerns about the possible trade effect of eco-labels: the multiplication of eco-labelling schemes with different criteria and requirements, or the fact that they could reflect the environmental conditions, preferences and priorities prevailing in the domestic market might have the effect of limiting market access for overseas suppliers;
- More generally, the report also stressed that further discussion was needed on how criteria based on non-product related processes and production methods should be treated under the TBT Agreement. This point is also relevant for the eco-labelling debate as eco-labels tend to be based on such criteria.

The Doha Declaration (2001) reflects the same concerns and to a certain extent stresses the need for further discussions, yet its text also reflects the lack of real advances in the debate so far. For the first time negotiations (as opposed to "discussions") on trade and environment are taking place, as the Doha Declaration instructs Members to negotiate on "the relationship between existing WTO rules and specific trade obligations set out in multilateral environmental agreements." Yet the Declaration also stipulates that "the negotiations shall be limited in scope to the applicability of such existing WTO rules as among parties to the MEA in question. The negotiations shall not prejudice the WTO rights of any Member that is not a party to the MEA in question." This implies that the point of concern expressed in the CTE's Report to the Ministerial Conference in Singapore is explicitly excluded from the negotiations.

The Doha Declaration also instructs the CTE to pursue its work on all items on its existing agenda and to give particular attention to among others:

- "the effect of environmental measures on market access, especially in relation to developing countries, in particular the least-developed among them, and those situations in which the elimination or reduction of trade restrictions and distortions would benefit trade, the environment and development" (Doha Ministerial Declaration, Paragraph 32,i));
- "labelling requirements for environmental purposes" (Doha Ministerial Declaration, Paragraph 32,iii)).

Discussions so far reveal that Members espouse quite different positions with some Members stressing the importance of environmental protection and others being above all concerned to avoid the misuse of environmental arguments to impose unjustifiable trade barriers. This may be one of the reasons for the lack of concrete results in the discussions so far. Yet it has to be conceded that the problem at hand is complex and Members seem to be aware of this. The different trade-offs are reflected in Paragraph 6 of the CTE's Report to the 5th Session of the WTO Ministerial Conference in Cancún (July 2003), that states:

"In striking the appropriate balance between safeguarding market access and protecting the environment, it was felt that there was a need to examine *how* environmental measures could be designed by importing countries in a manner that (i) was consistent with WTO rules; (ii) was inclusive; (iii) took into account

capabilities of developing countries; and, (iv) met the legitimate objectives of the importing country."

Although labelling requirements could in principle be considered to be one of many "environmental measures affecting market access", they are considered to be a separate agenda item in the Doha Declaration. The CTE's Report to the 5th Session of the WTO Ministerial Conference in Cancún (July 2003) once again reflects the existing differences between Members and the trade-offs that are inherent in the trade and environment debate. Most Members agreed that "voluntary, participatory, market-based and transparent environmental labelling schemes were potentially *efficient economic instruments* in order to inform consumers about environmentally friendly products. As such they could help move consumption on to a more sustainable footing. Moreover, they tended, generally, to be less trade restrictive than other instruments. It was also noted, however, that environmental labelling schemes could be misused for the protection of domestic markets." On the other hand, some Members noted that "for developing countries, and their SMEs in particular, difficulties arose along with the growing complexity and diversity of environmental labelling schemes in export markets." Besides for developing countries "the recognition of the *equivalency* of their own certification systems was an area of particular concern." Regarding the *basis* for environmental labelling schemes, familiar differences of views remain on what was characterized by one Member as "the root cause of controversy surrounding the labelling debate: the WTO compatibility of measures based on non product-related processes and production methods (NPR-PPMs)."

To summarize, an active debate on the issue of trade and environment was initiated when EFTA countries pointed out in 1991 that it was desirable for the GATT's framework of rules to work, to provide clear guidance to both trade and environment policy makers and to avoid that its dispute settlement system was faced with issues it was not equipped to tackle. Today, GATT Articles III and XX (from 1947) (and, to a certain extent, also the 1994 WTO Agreement on TBT) form the legal basis for the analysis of conflicts between national environmental policies and the multilateral trading system. The following sections will argue that these provisions and resulting WTO jurisprudence only give a very imperfect reflection of potentially complex economic linkages between environmental policies and trade flows. As a consequence and notwithstanding the intensive debate within the GATT/WTO, the multilateral trading system still does not seem to provide full certainty as to how environment-related trade disputes are being dealt with.

Lack of progress in the debate and negotiations around trade and environment can be explained by a number of factors. First of all it should be noted that any tension on the international level between the two policy areas arises because countries differ and therefore have different priorities when it comes to environmental policies. It is because of these differences that countries also defend different interests when discussing or negotiating issues relating trade and environmental policy, which makes it sometimes difficult to find a common ground. Developing countries are particularly sceptical towards the trade and environment debate, as they fear that developed countries press the issue at the WTO with a protectionist intent. Yet it is also the case that the relationship between environmental policies on the one hand and trade and trade policies on the other hand is a very complex one. The next section argues that even from a purely economic point of view, i.e. ignoring political and legal issues, it is not always clear a-priori, how environmental policies should be designed when countries with different priorities start trading. This is certainly a major explanation for the above-mentioned shortcomings as to the legal situation that will be further discussed in section IV.

III. OPTIMAL ENVIRONMENTAL POLICIES IN OPEN ECONOMIES

A. THE ROLE OF PRODUCT DIFFERENTIATION IN TRADE AND ENVIRONMENTAL POLICY

National environmental policies typically aim at making economic activity more environment friendly. They may therefore try to encourage the use of certain environment friendly products and discourage the use of environment unfriendly products. In order to reduce the emission of green house gasses a government may for instance want to tax cars according to their fuel efficiency. Such an environmental policy would de facto discriminate between varieties belonging to the same product category.

It is from this discrimination that the potential conflict with international trade law arises. WTO provisions want to avoid protectionism, i.e. the discrimination against foreign products with the aim to protect domestic producers. Protectionist policies imply the discrimination between varieties in the same product category on the basis of products' origin. A problem may arise if an environmental policy discriminates between varieties of the same product category and if mainly varieties produced abroad suffer the negative consequences of this discrimination. It may be difficult in such cases to distinguish whether the relevant policy is an environmental policy measure that happens to be discriminative against foreign producers or whether it is a protectionist measure disguised as an environmental policy.

The notion of products appearing in different varieties is very common in the economic literature. Numerous economic models contain elements of product differentiation, some of them being very popular in the trade literature.⁹ This concept, instead, does not seem to be adequately reflected in the WTO legal texts. When it comes to determining whether a policy is protective or not, Article III of GATT 1994 plays an important role. Paragraph 2 of this article states that foreign products should not be treated less favourably than "like domestic products" once imported into the territory of another country. This paragraph thus creates the impression that a national policy conflicts with WTO law if it treats foreign products less favourably than domestic products belonging to the same product group. The concept that the foreign and the domestic products may belong to different varieties within the same product group is thus not adequately reflected in the legal text. Cars with different levels of petrol consumption per kilometre, and different impacts on the environment, would thus potentially be considered to be goods belonging to the same product group. A policy imposing higher taxes on cars with higher petrol consumption could thus end up being considered an infringement of Article III if the country imposing the tax turns out to be an importer of cars with a high petrol consumption. Section IV of this paper will give a more detailed discussion of WTO law and the way it has been applied to cases relevant for the environment debate. This section instead focuses on the question why the concept of product varieties is important when it comes to environmental policies.

Economists distinguish between two types of product varieties: varieties that differ in a "vertical" way and varieties that differ in a "horizontal" way. In the case of vertical differentiation, different varieties can be ordered according to a certain scale. One variety is better than another, larger than another, noisier than another etc. Examples of such varieties are chocolates with higher or lower contents of cacao butter, or cars that use more or less petrol per kilometre. The characteristic that differentiation is based on, is content of cacao butter in the first case and petrol use in the second case. This characteristic appears to a higher or lesser extent in the different product varieties. One characteristic of vertical differentiation is that it often leads to price differences among varieties. Consumers may for instance be willing to pay a somewhat higher price for a car that consumes less petrol because it will in the long run be cheaper to drive such car.

⁹ Think of the literature on intra-industry trade (e.g. Krugman, 1980)

In the case of horizontally differentiated products, the characteristic that is responsible for the differentiation cannot be ranked. Colour is an example of such a characteristic, or flavour. A red t-shirt is different from a blue t-shirt, but the two varieties cannot really be ranked according to an objective scale. The same for strawberry ice-cream and vanilla ice-cream. Horizontal differentiation does typically not lead to price differences.

In reality many products are differentiated along both lines. Cars for instance appear in different colours and differ in their use of petrol. But for the purpose of this paper it is very useful to draw a clear distinction between the two types of differentiation. In particular it is the case that environmental policies in general aim at characteristics leading to vertical product differentiation.

Consumers differ and they appreciate characteristics of products in different ways. The availability of different varieties of products in the market should therefore be welcomed. In general it can be presumed that markets provide those varieties demanded by consumers and that they provide them in the appropriate quantities. Yet this is not always the case. In some cases consumers may be better off if the government or private institutions enforce the supply of only one product variety in the market (harmonization). In other cases there is an undersupply of varieties in the market, or certain varieties are not supplied in optimal quantities.

Harmonization can mostly be justified in the case of certain types of horizontally differentiated goods. This is for instance the case for plugs. It is more efficient and less costly for consumers if they know that any plug they buy fits in any socket available. For efficiency reasons it therefore makes sense to harmonize the design of plugs and sockets sold in the market. Note that it does not matter for the functioning of the market what the plug and socket look like (e.g. wide or narrow pegs). What matters is that plugs and sockets supplied fit together.

The phenomenon of an undersupply of varieties above all occurs in the case of vertically differentiated products and tends to be the result of information asymmetries in the market. Information asymmetries occur if producers have information about the characteristics of the good they produce that consumers do not have when they purchase the product. In many cases consumers discover those characteristics once they use the product. Economists talk about "experience goods" in these cases. A consumer may not see that a washing machine is broken when buying it, but if it starts losing water upon use, the consumer knows that something is not okay. Some product characteristics however may never be discovered. This can happen in the case of so-called "credence goods". A consumer doesn't know how many calories a chocolate bar has even after eating it and he will never know the flour content of his toothpaste. It is in these latter cases, i.e. if consumers don't know the characteristics of the products they used even after a long time span, that undersupply of varieties may occur.¹⁰ This is the case because for consumers all product varieties are the same when they buy them. They will therefore go for the cheapest product supplied as they cannot be sure that the more expensive products are of a "higher quality", which would in the context of this paper correspond to more environment friendly varieties. If producing varieties that are more environment friendly is more expensive, producers of these varieties may not be able to break even, as less environment friendly varieties are supplied cheaper in the market and consumers are only willing to pay the lowest price they perceive. As a consequence and depending on a number of market characteristics environment unfriendly varieties may push more environment friendly products out of the market.

¹⁰ In the case of experience goods, i.e. if consumers can discover product characteristics upon use, producers can offer guarantees to signal high product quality or have the possibility to build a reputation for offering a certain type of product (see for instance Shapiro (1983)). As a result a large range of product varieties will be supplied in the market equilibrium. If consumers do not discover product characteristics upon use, instead, only a restricted number of varieties may be supplied in equilibrium or markets may completely disappear (Akerlof, 1979).

Externalities are another type of market failure that may justify government intervention in the case of vertically differentiated goods, as they tend to lead to the over- or undersupply of particular product varieties. Sometimes, in the process of producing or consuming certain goods, harmful or beneficial side effects called externalities are borne by people not directly involved in the market exchange. An often used example of an externality is the one of a chemical firm polluting the river on the banks of which it is based. Fishes in the river die as a consequence of the pollution and fishers living on the banks of the same river are unable to make a living. The chemical firm's activity thus has a negative impact on the fishermen's activity, but without government intervention, the firm would not have to make any (compensation) payments to the fishermen. In the absence of government intervention the chemical firm would therefore produce more than would be optimal from the point of view of the whole economy and an intervention would be desirable to reduce production and thus reduce the pollution of the river.

B. WHY MARKETS FAIL WHEN IT COMES TO THE ENVIRONMENT

Environmental policies are typically related to problems of externalities. It is useful to distinguish two types of externalities, externalities that occur when consuming a good and those occurring when producing a good. A good example of the first category is driving a car. CO₂ emissions involved deteriorate the quality of the air and also contribute to the problem of global warming. Driving a car negatively affects the wellbeing of others, because of the air pollution this activity creates. Externalities related to consumption can be local or global in nature, the example cited in this paragraph being one with a global character.

Externalities related to the production process can also be local or global in nature. Many production processes for instance involve the burning of fossil fuels and have thus a global effect. The previous example of a chemical plant polluting a river is one of a rather local nature.

Economists' suggestion for solving this kind of problem is to use taxes/subsidies in order to ensure that market prices reflect the real value of a product or activity. The chemical company would, for instance, have to pay taxes for polluting the river. To achieve a reduction in the emission of green house gases a government would for instance want to impose a tax on the carbon content of fuels. A tax on cars related to their fuel efficiency would be another option. It would be lower in the hierarchy of possible policy instruments, but superior to a tax on cars based on size.

Yet in some cases of production externalities, prices can reflect environmental concerns of consumers without government imposed taxes/subsidies, although only to a certain extent. Take the example of salmon. It has been argued that salmon farms pollute the marine environment they are situated in. Some consumers of salmon may at the same time be concerned about the marine environment and would therefore decide not to buy farmed salmon anymore and to switch to wild salmon instead. They may even be willing to pay a higher price for wild salmon than they paid for farmed salmon. The mark-up consumers are willing to pay would thus be a reflection of the value of the externality, i.e. of how much the consumer values the more environment friendly production method.

Yet it is unlikely that the externality is completely controlled for. There may be plenty of people around who care for the marine environment, but do not like to eat salmon. Those people have no opportunity of expressing their disapproval through the market. The externality would thus still be at work even if only partly.

Another market failure may lead to additional complications. Information asymmetries may make it difficult for consumers to distinguish between farmed and wild salmon when buying the product. Farmed salmon would normally be grey and thus easily distinguishable from the pink wild salmon. But producers add chemical additives to make sure that farmed salmon looks similar to wild salmon. It has been explained before what happens if consumers miss important information about a relevant

product characteristic. They will consider farmed salmon and wild salmon to be the same product and will pay the same price for both. Prices would therefore not reflect the environmental concerns of consumers, but this time because of an information asymmetry. Besides it cannot be excluded that wild salmon would slowly but surely disappear from the market if its "production" is more costly than the production of farmed salmon. This is the case because catching wild salmon would not be a profitable activity anymore at the prices prevailing in the market.

The introduction of a labelling policy can help to overcome these problems caused by an information asymmetry. A label indicating whether salmon is farmed or wild would allow the consumer to distinguish between the two product varieties. Wild salmon would then be able to obtain the mark-up in the market reflecting the willingness of consumers to pay for the environment. Note that this mark-up will not reflect the full size of the externality at work, as the opinion of those not consuming salmon is not reflected in this mark-up. This is why, in theory at least, a government imposed tax on farmed salmon would be a preferable instrument, as the government would take into account all individuals in an economy when evaluating the value of a cleaner marine environment and the resulting tax level. But what works well in theory doesn't necessarily work well in practice. Indeed, in practice it is virtually impossible for a government to know the value each individual attaches to the marine environment and to calculate the optimal tax to be applied in this particular case. Excessive taxation would introduce new distortions into the market, while too moderate taxation would only partly correct for the externality. A price-based policy may therefore in practice completely miss the target and besides exposes the government to the criticism that its policy does not reflect consumer interests. A labelling policy instead will lead to market prices that reflect the interests of at least a section of the economy's consumers. This makes labelling policies very attractive, notwithstanding their before-mentioned shortcomings.

Note that in the above-mentioned case the labelling policy in fact corresponds to what is referred to as a "standard" in the WTO context. A standard defines a set of criteria that producers can choose to satisfy or not. In the case of credence goods, a label is needed in order to indicate to the consumer, which standard the relevant producer has chosen (e.g. whether salmon has been raised or captured). Labels in such a case merely reveal information regarding the application of a predefined standard. Labels can however also serve the purpose of giving information on product characteristics, like the indication of calories content on food, fruit content in juices etc. Whether it is more appropriate to go for one or the other labelling policy is a complex question in itself that will not be dealt with in detail in this paper.

Another policy a government may want to impose to overcome environmental externalities is a regulation, imposing the circulation of only a limited number of product varieties in the market. Product varieties not satisfying the specified criteria will thus be banned from the market. If the relevant good is traded a regulation may thus result in an import ban, to the extent that product varieties not satisfying the criteria cannot be imported. Market mechanisms will not be at work anymore. Such a policy indicates a strong priority in favour of the environment in the trade off between environment and price, as cheaper but less environment friendly products will not be supplied anymore.

C. DIFFERENT CONCERNS, DIFFERENT MARKET FAILURES, DIFFERENT POLICIES.

In general, there would be no potential for conflict between environmental policies and international trade law, if environmental policies were equal across countries. So why is this not the case? Why does one country ban a certain product, while another country does not? Why do the environmental standards introduced in one country not correspond to those in another country? There are basically two reasons for such differences. The first reason is that countries pursue different environmental

objectives. The second reason is that countries prefer different policy measures to achieve a given environmental objective.¹¹

In principle it is perfectly legitimate for governments to pursue different environmental objectives. Countries differ in many aspects like size, climate, population density, geography. And people differ across countries and within countries. They have different tastes, face different financial restrictions and have different attitudes towards risk. All these aspects determine whether and to which extent certain environmental concerns affect their well-being. Waste reduction is likely to be a bigger concern in densely populated countries than in countries with scarce population. People are likely to be more worried about water pollution the scarcer the country's water supply. In general concern for the environment seems to increase with wealth. It is easier to pay a higher price for free range eggs, bio milk and wild salmon when you do not have to worry about having enough money to cover your basic expenses for food, shelter and clothing.

Different objectives though lead to different policies across countries and this may have an effect on trade.¹² Let's have a look at price based policy instruments. Let's assume that a country decides to impose a tax on a product variety that it considers to be less environment friendly than other product varieties and let's assume that the country imports a certain amount of the less environment friendly variety. Foreign producers of the relevant variety would be hit equally hard by the tax as domestic producers. A distinction should be made in this case between a local environmental externality and a global externality. If the relevant externality is local in character (remember the example of the chemical firm), it is not obvious why taxes should hit imported products at all. If the externality is global though, a tax looks in principle perfectly legitimate from an economic point of view, even if the outcome of this policy is that mainly imported product varieties are hit by the tax. Certainly, the relevant tax may look suspicious in such a case and give the impression to be used for protective reasons, but it is perfectly possible that this is just the unfortunate outcome of an otherwise legitimate environmental policy.

In reality though it is in many cases difficult to come to a clear-cut judgement of such situations. Governments typically have some room when it comes to deciding which varieties will be hit by the tax, for instance when deciding which is the maximum level of fuel consumption at which cars will not be taxed. Governments should take into account a number of factors when taking that decision, including consumer preferences, production costs and the extent of the externality. Yet, as pointed out before, information on those factors is far from perfect and the decision is therefore likely to be an imperfect one from the economic point of view. The government's decision can of course also be influenced by protectionist purposes, which would lead to an outcome that favours domestically produced varieties over foreign produced varieties. In practice therefore, the government's choice may be determined by a combination of three factors: legitimate environmental purposes, imperfect information about the policy instrument to use and protectionist intents. In case of a trade dispute it will be very difficult for the external observer to disentangle the three factors. Yet this is exactly what the WTO dispute settlement system is supposed to do.

If the government chooses a non-price based policy to discourage the use of environment unfriendly products things become more complex. Let's consider the case of a label indicating the use of a certain standard, for instance an eco-label. Product varieties carrying the eco-label would signal to consumers that the varieties have been produced using certain environment friendly production methods. It's the government that decides which production methods qualify for the use of the

¹¹ Differences in conformity assessment procedures can also represent a barrier to trade, that will however not be discussed in detail in this paper. See for instance Sykes (1995) for more information on this issue.

¹² See also Vaughan (2001).

label.¹³ As discussed before the typical outcome of such a label would be that labelled products will be sold at a higher price as consumers are willing to pay a mark-up for more environment friendly production methods.

What are the possible trade effects of such a labelling policy? Labelling policies in principle have the potential to have stronger trade effects than price based policies. One important reason for this is that the effect of the labelling policy can be different for foreign producers than for domestic producers, if foreign producers face a different labelling policy at home. Let's assume the foreign labelling policy is less restrictive than the domestic one in the sense that in the foreign market varieties qualify for the eco-label that would not qualify in the home market. The foreign producer now has the option to upgrade his production method, which is costly. Besides the upgraded method may be too expensive for the foreign market as it is not necessary to apply this method in order to qualify for the label there. As a consequence the foreign producer may be forced to apply different production methods for the home market and for the foreign market which is again costly. A labelling policy therefore bears an element of discrimination against foreign producers as soon as those policies differ across countries, which is not necessarily the case for price-based policies. Labelling policies however keep the advantage of bearing a stronger element of consumer sovereignty than price-based policies, in the sense that consumers will decide whether and to which extent labelled varieties can command higher prices in the market.

It would be interesting to know in which situations price-based policies should be preferred over regulatory policies, like labelling, and vice-versa. Economists, however, tend to analyse the two policy tools in different types of models, which makes a direct comparison of both measures difficult.¹⁴ At the current stage economic analysis therefore does not seem to permit to give clear indications as to which policy tool to apply when.¹⁵

In order to overcome the problems inherent to labelling policies trading partners have a number of policy options. They may agree to mutually recognize their labelling policies, in the sense that product varieties carrying an eco-label in the foreign market can automatically qualify for carrying the label in the home market. At the first sight this seems to be an attractive option, in particular for cases of local externalities. Yet it should be noted that this approach carries the risk of the home label being undermined. If consumers cannot distinguish between the foreign and the domestic label, they will not be willing anymore to pay a higher price for the domestic one, even though it is more environment friendly.¹⁶ The problem is, again, that consumers don't know this is the case. Mutual recognition therefore only seems to be an option for rather similar countries that pursue similar environmental objectives.¹⁷ Accepting a trading partner's labelling policy would in such cases not have the effect of putting the national policy objectives at risk. Article 2.7 of the TBT Agreement, on the equivalence

¹³ Labelling policies can also be based on private initiatives. A private entity (like a company or an NGO) would in that case determine the labelling policy and guarantee that labelled varieties are indeed produced according to the specified methods. Yet, in the case of credence goods it is difficult for consumers to verify the assertions made by the private entity and there are significant incentives for the private entity to cheat. See for instance Brown (1999) on the implementation problems of labelling programmes related to the use of child labour.

¹⁴ Taxes tend to be studied in models with homogeneous consumers, whereas regulatory measures tend to be analysed in models with heterogeneous consumers. This makes a direct comparison of the effects of both measures difficult.

¹⁵ The approach towards regulatory policies taken in WTO Agreements also seems to reflect a certain dichotomy in that the TBT Agreement contains references to the design of regulatory policies and to international standards, but not to price based policies like tariffs or taxes. It could therefore be argued that in the case of a dispute on a measure like an eco-label, legal experts are unlikely to evaluate the question whether an eco-tax would have been a less discriminatory policy in the relevant situation.

¹⁶ See for instance Jansen and Lince de Faria (2002).

¹⁷ The European Union's approach to the treatment of different national standards within the Union contains a strong element of mutual recognition (e.g. Messerlin and Zarrouk, 2000).

of foreign technical regulations, seems to reflect a similar line of thinking. This Article states that if policies of trading partners differ from domestic policies but "adequately fulfil domestic policy objectives", Members should consider accepting these policies as equivalent. Article 2.7 thus seems to encourage mutual recognition of regulatory policies, but only to the extent that these policies fulfil the same objectives.

Harmonization of labelling policies is another option, in the sense that the trading partners may consider to agree on a common standard or to apply an already existing international standard.¹⁸ It may turn out to be quite cumbersome to reach agreement on such a standard given the differences in priorities. It has been mentioned before, that from an economic point of view it is also not clear whether harmonization is a desirable outcome at all. In principle each country is better off applying the policy that best corresponds to its own setting. Harmonizing those policies would thus imply a welfare loss for each country. Yet on the other hand harmonization may lead to welfare gains from increased trade. Harmonization therefore makes sense if the gains from trade exceed the "losses from harmonization".¹⁹ To a certain extent the TBT Agreement seems to take this trade-off into account, as it reflects the idea that harmonization may not be desirable if countries pursue significantly different objectives. Article 2.4 of the TBT Agreement says that Members shall use relevant international standards if they exist, except when such international standards or relevant parts would be ineffective or inappropriate to fulfil the "legitimate objective" pursued by the Member. Deviation from international standards is thus discouraged²⁰, but only to the extent that these standards allow Member countries to fulfil their policy objectives.²¹ It could therefore be argued that harmonization in the TBT Agreement should be interpreted as harmonization of policy measures for a given policy objective and not as harmonization of policy objectives. This approach is in line with economic thinking on this question. Geographical and climatic conditions differ across countries and so do consumer preferences and other aspects that are relevant for the definition of environmental policy objectives. It would therefore not be desirable to harmonize those objectives at the international level. Yet where similar objectives are pursued, it would be desirable to harmonize policies in order to minimize economic inefficiencies introduced by the policies themselves.

Another very important problem occurs when labels refer to production methods that do not leave any easily measurable impact on the characteristics of the product when it comes on the market. WTO terminology refers to non product-related processes and production methods (NPR-PPMs) in such cases. The problem that arises is one of control and it actually does apply to our example of eco-labels. The use of a more environmental friendly production method in the production of for instance carrots has no systematic, measurable effect on the carrot. Carrot sizes may be affected and their taste, but the former not in a systematic way and the latter is not something that can be measured according to an objective criterion. The question then arises, how the importing country determines whether the imported product variety qualifies for the label or not. In order to take that decision the production site itself would need to be controlled, but it is located abroad. Countries may be reluctant to allow foreign entities to control their production sites as they may interpret it as a loss of

¹⁸ The size of countries may affect their bargaining power when it comes to such a harmonization attempt. Baldwin (2000) points out that hegemonic harmonization is de facto the default option for many small nations that are heavily dependent on a large trading partner, in the sense that the large trading partner imposes its own policy on the smaller trading partner.

¹⁹ Compare this with the previous discussion on horizontally differentiated goods, where such a trade off would not be present as harmonization is efficiency enhancing. Strictly speaking there might be an adjustment cost for one of the trading partners, but the loss from harmonization in the case of vertically differentiated goods is a permanent one.

²⁰ Paragraph 2.5 of the TBT Agreement further indicates that technical regulations that are in accordance with international standards are presumed to be WTO compatible.

²¹ The definition of policy objectives is therefore of some relevance. The Preamble of the TBT Agreement, for instance, indicates that each Member is free to define these objectives as it wishes. Each Member can thus choose to protect the environment at the level it considers appropriate. See Marceau and Trachtman (2002) for more on this issue.

sovereignty.²² This is probably the single most important reason why measures based on non product-related processes and production methods have so far been incompatible with WTO rules and why it is so difficult to change this. The extensive but so far fruitless debates within the WTO on the issue of eco-labelling are a reflection of the relevance of this problem but also of the difficulties to solve it.

D. HOW TO DEAL WITH TRADE DISPUTES ON ENVIRONMENTAL POLICIES ?

Which are the lessons we can learn from this section when it comes to evaluating a trade dispute in which one trading partner accuses the other of applying a protectionist policy that is disguised as an environmental policy? Remember that the task would be to identify whether and to which extent three different factors may have determined the specific design of a particular environmental policy: legitimate environmental purposes, imperfect information or protectionist intents. The first conclusion from our discussion would probably be that there are not many straightforward rules to be applied and that there is still a lot of room for economic research to improve our understanding of the linkages between environment and trade policies.

There are a number of candidates for rules that should not be applied. The fact that a policy differentiates between product varieties within a product category is not an indication for an illegitimate policy. On the contrary, environmental policies typically aim at making such a differentiation.

The fact that the policy is applied by one country but not the other is also not an indication for protectionist intentions. It is perfectly legitimate for countries to have different preferences with respect to environmental quality and differences in policies may reflect such differences in preferences. It is also not always obvious how to rank different types of policies. The discussion above has for instance shown that the use of labelling policies has both advantages and disadvantages when compared with price-based policies.

If a policy predominantly affects product varieties supplied by foreign producers as opposed to domestic producers, this could be a reason for suspecting that the policy has been installed with the intention to protect domestic producers. But it can at best be a reason for suspicion, not much more and certainly not a proof. Perfectly legitimate environmental policies may happen to hit foreign producers harder than domestic ones. Economic theory gives several reasons why this may happen. Foreign producers may, for instance, have a competitive advantage in the production of less environment friendly products. It may also be the case that domestic producers have a better knowledge of the domestic market and have already adapted to consumer preferences before the introduction of the policy.

Evaluation of a case should instead focus on the characteristics that determine the differentiation between varieties relevant for the environmental policy. This characteristic should in an evident way be related to the environmental objective that is pursued. A car's level of fuel consumption can for instance easily be related to the objective of reducing air pollution.

The "cut-off point" that determines whether a variety is affected by the policy or not can also give some indications as to whether an element of protection is present in the design of the policy. If a minor change of the cut-off point (e.g. the level of petrol consumption that determines whether a vehicle is taxed or not) has no major impact on the environmental effect of the policy, but does reduce imports significantly, there are reasons for suspicion that the design of the policy is not purely based on environmental concerns.

²² Although in the settled US-shrimp case the US now offers to certify imports on a vessel by vessel basis.

The consistency with which a policy is applied can also play a role in evaluating a trade dispute. The policy should be applied consistently across varieties in the same product group and maybe also in related product groups, where varieties can be distinguished on the basis of the same characteristics of relevance for the environmental policy. It could for instance be considered to be inconsistent for fuel inefficient passenger cars to be taxed, while fuel inefficient sport vehicles are not taxed. It could also be considered to be inconsistent to ban the use of hormones in beef production but not in pig rearing. In such cases it can make sense for the WTO dispute settlement to require, as has happened in the past, greater consistency in order for the relevant policy to be considered WTO compatible.

It is possible to be a bit more specific when it comes to externalities with a local effect. One conclusion that could be drawn from the above analysis is that foreign producers should not be affected by policies aiming at a local production externality. When it comes to local consumption externalities, it could be argued that price based policies should be preferred over regulations/standards. This is the case because a tax would affect foreign and domestic suppliers equally. Standards or regulations, however, have the potential to inflict higher costs on foreign producers than on domestic producers. This is the case if norms in the foreign suppliers' country of origin are different and if foreign suppliers are therefore forced to either use two production processes simultaneously or to abandon one of the two markets.

IV. RELEVANT GATT PROVISIONS AND JURISPRUDENCE

As stated above, the focus of this paper is on national environmental policies that encourage the use of environmentally friendly products and discourage the use of products seen as being relatively less environmentally benign. Thus, a regulatory distinction is being made between product varieties belonging to the same product category. It must be assumed that usually both varieties are produced both domestically and by foreign producers. A trade problem may arise if the product variety disfavoured by an environmental policy is imported to any significant extent and/or is of major export interest to another country.²³ It needs to be examined whether the measure simply happens to hit foreign producers comparatively harder or whether it is *de facto* protectionist and disguised as an environmental policy. WTO rules clearly aim at preventing discrimination against foreigners and disguised restrictions on international trade, while, at the same time, affording sufficient regulatory autonomy to governments to pursue policies genuinely targeted at environmental concerns, and this perhaps irrespective of the relative incidence between foreign and domestic producers. One of the central questions for domestic policy-makers may therefore be how a genuine national environmental policy may be designed in order not to be seen as protectionist, even in the absence of explicit references to origin.

²³ It is interesting to note that merely "different" treatment of like products, including on the basis of origin, cannot automatically be considered a violation of GATT Article III. In *Korea - Beef*, the Appellate Body clarified that "the Panel erred in its general interpretation that '[a]ny regulatory distinction that is based exclusively on criteria relating to the nationality or the origin of the products is incompatible with Article III'" (WTO, 2001a: para. 138). And: "A formal difference in treatment between imported and like domestic products is thus neither necessary, nor sufficient, to show a violation of Article III:4" (ibid.: para. 137). What mattered instead was a determination of "less favourable" treatment, and "[w]hether or not imported products are treated 'less favourably' than like domestic products should be assessed instead by examining whether a measure modifies the conditions of competition in the relevant market to the detriment of imported products" (ibid.). This line of argument was also taken up in *EC - Asbestos*: " [...] a Member may draw distinctions between products which have been found to be 'like', without, for this reason alone, according to the group of 'like' imported products 'less favourable treatment' than that accorded to the group of 'like' domestic products" (WTO, 2001b: para. 100).

This section presents key legal provisions and WTO jurisprudence that may be relevant for national policy-makers in forming their judgement as to the potential WTO compatibility of environmental policies. It is important to note that there is no obligation for national governments to undergo a "compatibility test" with multilateral trade law *a priori*. Governments are free to set environmental policies according to their own preferences. Yet these policies can be challenged by other WTO Members if those have the impression that they are incompatible with WTO law. This may typically only happen when the relevant Member(s) have the impression that their own exports to the country are negatively affected by the policy, i.e. if the policy has a trade impact. In order to avoid a resulting trade dispute, policy makers may want to ensure that their policy is WTO compatible. Yet, the following will show that no absolutely clear guidelines exist as to when this is the case and when it is not. The only guidance for policy makers are the relevant legal texts - many of which were formulated more than 50 years ago – and the interpretation given to these texts by WTO case law.

In this section, we will discuss evidence of how relevant WTO provisions have been interpreted, and a number of unresolved or as yet unspecified issues will become apparent. The analysis is structured in the as follows: First, the GATT national treatment provision is introduced, and it is being examined how products are determined to be "like". Second, recent approaches to interpreting "less favourable treatment" of "like" foreign products will be reviewed. This will include a discussion of possible shortcomings of the chosen method and a comparison to the earlier "aims-and-effects" approach. Third, the possibility to justify environmental policies under the GATT's general exception clause in Article XX will be examined, in case a national environmental policy measure was found to violate the "national treatment" obligation. Finally, some concluding remarks are offered as to the ambiguous and incomplete picture that emerges from a legal analysis of potential WTO (in)compatibilities of national environmental policies.

A. "LIKENESS" AS A PRECONDITION FOR A POSSIBLE DISCRIMINATION BETWEEN DOMESTIC AND FOREIGN PRODUCTS

The focus of this paper is on national environmental policies that may give the impression to favour producers in the home country over those in a foreign country. This is not a legal paper, and by far not all legal aspects that may be relevant are covered here. We leave aside, for instance, a discussion of the most-favoured-nation principle contained in GATT Article I or the prohibition of quantitative restrictions in GATT Article XI. Because of its central importance, we instead chose to limit our analysis to the national treatment obligation contained in GATT Article III.²⁴ We also assume that the environmental policies in question do not contain an explicit differentiation based on origin. It is often implied that the disfavoured variety is not produced domestically but is exclusively imported. This may hold true in exceptional cases, but here it shall be assumed that in general both varieties are produced in both countries.

In order for violations of Article III to occur, the two product varieties, in a first step, would need to be found "like". The concept of "like products" is probably meant to correspond to what economists

²⁴ As was said in the introduction, it should also be recalled that in order to keep our analysis within certain dimensions, we do not deal specifically with Agreements other than the GATT. We may make reference to certain aspects, especially of the TBT Agreement, but only cursorily for analytical purposes, and not in any consistent manner. For instance, the national treatment principle is also contained in TBT Article 2.1 and other Agreements, but these provisions will not be further highlighted. Quite obviously, we also assume that the national environmental policies we hypothetically refer to in this paper are not, for instance, TBT measures in accordance with relevant international standards, which would, pursuant to TBT Article 2.5, "be rebuttably presumed not to create an unnecessary obstacle to international trade". For the purposes of this paper, it is not necessary either to delve deeper into the differences between GATT Articles III:2 relating to taxation and III:4 relating to other domestic policy measures. We also skip the discussion on how broadly "like" products are defined in Article III:4 as opposed to the spectrum of "like" products in the first sentence of Article III:2 and as opposed to "directly competitive and substitutable" products referred to in the interpretative note to Article III:2 in connection with its second sentence. For more see WTO (2001b): para. 100.

view as varieties within one product group. In other words, national policies that treat different product categories differently (e.g. cars and bicycles, alcoholic beverages and soft drinks) do not pose a problem for WTO legislation. Yet, policies that differentiate between varieties within one product group (e.g. between cars with a different fuel efficiency) may potentially pose a problem, if they are considered to treat "like" products differently.

The definition of "like" products is therefore of considerable importance to policy-makers. In *EC – Asbestos* the Appellate Body concluded that "a determination of 'likeness' under Article III:4 is, fundamentally, a determination about the nature and extent of a competitive relationship between and among products."²⁵ In recognition that there is "a spectrum of degrees of 'competitiveness' or 'substitutability' of products in the marketplace" (ibid.), the Appellate Body recommended as an appropriate starting point the use of four categories of "characteristics" that the products involved might share:²⁶

- i. the physical properties of the products;
- ii. the extent to which the products are capable of serving the same or similar end-uses;
- iii. the extent to which consumers perceive and treat the products as alternative means of performing particular functions in order to satisfy a particular want or demand; and
- iv. the international classification of the products for tariff purposes.

Competition law has quite intensively made use of cross-price elasticities in order to define "relevant markets". Similarly, the Appellate Body confirmed that common end-uses of two products may, *inter alia*, be shown by their elasticity of substitution,²⁷ but cautioned that such quantitative measures could not be the decisive criterion for determining whether products are "directly competitive or substitutable".²⁸ In the *Japan – Taxes on Alcoholic Beverages* Panel Report, many contradicting arguments were presented by the parties with regard to an appropriate methodology for the estimation of elasticities of substitution relating, in particular, to the necessary statistical adjustments in time series analysis vs. panel data approaches on the basis of household surveys.²⁹ In *Korea – Taxes on Alcoholic Beverages*,³⁰ the Appellate Body confirmed the panel's sceptical attitude to quantification of the competitive relationship between imported and domestic products. At the same time - and also in recognition that under national antitrust law regimes elasticities are widely used to measure the extent to which products directly compete – it has been acknowledged that studies of cross-price elasticity may nevertheless provide some useful insights in assessing latent demand that is suppressed by regulatory barriers but crucial to gauge the degree of *potential* competitiveness between substitutable products.³¹ In view of the goal to protect expectations of equal competitive relationships, it was held that any examination under Article III needed to go beyond the static concept of situations where consumers already regarded products as alternatives.³² In order to effect the necessary calculations, it was noted that "evidence from other markets may be pertinent to the examination of the market at issue" (WTO, 1999: para. 137). The utility of quantitative factors as possible inputs in the examination of the nature and degree of competitiveness was also confirmed in the *EC – Asbestos* case.³³ Yet, in the overall consideration of "likeness", the Appellate Body recognized that "[n]o one approach will be appropriate for all cases" [footnote omitted]. Rather, an assessment utilizing 'an

²⁵ WTO (2001b): para. 99.

²⁶ These criteria were first mentioned in the Report of the Working Party on Border Tax Adjustments (GATT, 1972).

²⁷ It should be noted that cross-price elasticities and elasticities of substitution are related, but different concepts, the latter being more widely used in production theory and the determination of conditional factor demand.

²⁸ WTO (1996b): 32.

²⁹ WTO document WT/DS8/R, WT/DS10/R, WT/DS11/R: paras 4.82-4.93.

³⁰ WTO (1999): para. 134.

³¹ WTO (1999): paras 120-121.

³² Ibid.

³³ WTO (2001b): para. 123.

unavoidable element of individual, discretionary judgement' [footnote omitted] has to be made on a case-by-case basis" (WTO, 2001b: para. 101).

Concerning the four criteria endorsed by the Appellate Body, it is not at all clear whether the fulfilment of one or even of all four of them would suffice to make two products "like", nor what would happen if two of the Appellate Body criteria, or even different aspects within the same criterion, were to suggest contradictory outcomes as to the likeness of the products in question.³⁴ Supposedly, a decision on each one of them as to whether it supports "likeness" or not would need to be reached, as it has been made clear that in all cases, all elements of the fourfold framework must be examined,³⁵ and that any piece of evidence that could make the case for or against "likeness" may be adduced and may not be ignored by the panel.³⁶ Given the emphasis on the non-exhaustive nature of the fourfold catalogue, the question remains under which circumstances other criteria may be added or may shape the consideration of the four criteria (e.g. of the third criterion on consumer perceptions regarding alternative means, or not, in order to satisfy a particular want) to support "un/likeness". This question is particularly acute in the discussion on whether differences in non-product related processes and production methods (NPR-PPMs), i.e. the way a good is produced without leaving any visible or otherwise detectable impact on the final product, can render two product varieties "unlike".

Hence, indications as to the relative importance of the four criteria seem rather unavoidable. However, on this account, the Appellate Body does not go into much detail hinting solely, in *EC – Asbestos*, that the physical differences, including toxicity, between asbestos and substitute products already placed a high burden on the complaining party to show that there was a competitive relationship "between the products such that, all of the evidence, taken together, demonstrates that the products are 'like'" (WTO, 2001b: para. 136). Yet, this approach also raises questions. If two products are considered to be "unlike" because they have different levels of toxicity due to their physical disparities (say, as regards one molecule), could this then also be said about similarly different products that have widely divergent environmental impacts? As a consequence, governments would be free to design their environmental policies in more or less trade distorting ways and would presumably go unchallenged, as long as those goods are indeed considered unlike. The analogy is probably defective. It seems unlikely that anybody would consider a toxic (potentially lethal) product a substitute for a good that is innocuous. In other words, even though the relevant "product varieties" may have, for instance, similar end uses, the difference in level of toxicity is such that they can be considered to fall into different product groups. This is an extreme case and it would therefore not apply to most of the environmental policies of relevance to our discussion. This seems to be confirmed by what was acknowledged, on an individual basis, by one of the Appellate Body Members stressing the possible "supremacy" of the physical properties and qualities of a product: "It is difficult for me to imagine what evidence relating to economic competitive relationships as reflected in end-uses and consumers' tastes and habits could outweigh and set at naught the undisputed deadly nature of chrysotile asbestos fibres, compared with PCG fibres, when inhaled by humans, and thereby compel a characterization of "likeness" of chrysotile asbestos and PCG fibres. [... This is not meant to suggest] that any kind or degree of health risk, associated with a particular product, would a priori negate a finding of the 'likeness' of a product with another product, under Article III:4 of the GATT 1994, [... but it is simply to express a certain doubt] as to the 'fundamental', perhaps decisive, role of economic competitive relationships in the determination of the 'likeness' of products under Article III:4" (WTO, 2001b: paras 152-153).

³⁴ This issue is acknowledged by the Appellate Body as being relevant probably in many cases. See WTO (2001b): para. 120.

³⁵ Each criterion should also be examined separately in order to avoid that different, and distinct, elements of the analysis become entwined along the way. See WTO (2001b): para. 111.

³⁶ See WTO (2001b): paras 102 and 109.

In two GATT cases (*United States – Taxes on Automobiles* and *US – Malt Beverages*³⁷), the issue of "likeness" was approached rather differently. In this case, the so-called "aims-and-effects" test was applied in such a way that the examination of "likeness" and "less favourable treatment [...] so as to afford protection" were collapsed into one single test. As a result the panel affirmed the right of countries to define likeness in terms of the regulatory objective being pursued, in this particular case, fuel efficiency. The defendant's policy was found not to be in breach with Article III, because the regulatory distinction was not aimed at protecting the domestic industries. Hence, the question of determining "likeness" or not of fuel-inefficient and fuel-efficient vehicles did not actually arise. The danger of such an approach would be that, in a somewhat circular manner, products would be considered unlike as long as the regulating government defines them as such. Consequently, an inquiry into "likeness" would indeed be rendered meaningless.³⁸

B. LESS FAVOURABLE TREATMENT OF "LIKE" PRODUCTS AND PROTECTION

Once two products or product varieties are considered "like" for the purposes of GATT Article III, it needs to be determined whether the importing country accords "less favourable treatment" to the group of "like" imported products than to the group of "like" domestic products. In this regard, the Appellate Body explained in *Korea – Beef* that mere distinctions between "like" products did not necessarily imply "less favourable treatment".³⁹ The latter would only take place if the conditions of competition were modified to the detriment of imports. Going further into this direction, the Appellate Body, in *EC – Asbestos*, recalled its ruling in *Japan – Taxes on Alcoholic Beverages*,⁴⁰ that "less favourable treatment" expressed the general principle in GATT Article III:1 that "internal measures 'not be applied to imported and domestic products so as to afford protection to domestic production.' [...] Article III protects expectations not of any particular trade volume but rather of the equal competitive relationship between imported and domestic products" (WTO, 2001b: para. 97).

Two important conclusions may be drawn from this: First, the Appellate Body clarified that the mere distinction between "like" products drawn by an environmental regulation is not sufficient to conclude that the group of "like" imported products is being accorded "less favourable treatment" than the group of "like" domestic products. It insisted that protectionism, the central theme of Article III, must be proven to exist. Second, the right of importers not be treated less favourably by a regulation does not imply that actual trade volumes are maintained. This appears to suggest that import volumes of the "like" product may decline following the introduction of an environmental legislation as long as this is not the consequence of protectionism and the equal competitive relationship is maintained. From the economic point of view it makes sense not to use trade volumes as a criterion when evaluating an environmental policy. Yet the "protection of an equal competitive relationship" does not seem to be a workable concept either. A policy, for purely environmental reasons, be it a tax/subsidy or a norm, that negatively affects a larger proportion of foreign than domestic products, is likely to have an impact on both the competitive relationship and trade flows.

The question therefore remains, which criterion could be used to decide whether there is less favourable treatment of foreign goods.⁴¹ As noted earlier, it cannot normally be assumed that the

³⁷ See GATT (1994) and GATT (1992) respectively.

³⁸ It should be recalled that this report was never adopted and that an inquiry into subjective intent (such as the reasons stated by the legislator) was explicitly rejected by the Appellate Body. See WTO (1996b): 27 and 29 and WTO (1997): para. 241.

³⁹ WTO (2001a): paras 135-137.

⁴⁰ WTO (1996b): para. 111. More precisely, the Appellate Body recognized the importance of applying the principles contained in GATT Article III:1 also to Article III:4 and not only to Article III:2 second sentence, as implied in previous decisions.

⁴¹ A "before – after exercise" to detect a change in competitive opportunities to the detriment of imports will rather rarely be as straightforward as in *Korea – Beef*, where beef was distinguished according to origin: Imported and domestic beef used to be distributed through the same channels, when, in 1990, retailers had to choose between imported and domestic beef. Not surprisingly, most chose domestic beef. The Appellate

foreign country exclusively produces the disfavoured product variety and the home country only the favoured one. With an environmental regulation, the home country discriminates at least against some of its own producers. It would be absurd, and most likely economically inefficient, if "national treatment" was to be understood such that foreign producers automatically receive the best available treatment, no matter which product variety they produce.⁴² It would, however, be equally unfair if discrimination was rejected out of hand provided that at least some domestic products are disfavoured as well. This raises the questions of how the "group" of imports comprising both varieties should be compared to the "group" of domestically produced "like" varieties. No explicit answer can be found in the WTO jurisprudence. Ehring (2002) advocates a one point-in-time comparison between the domestic proportion of favoured over disfavoured products with the same ratio for imported varieties. A larger ratio between favoured and disfavoured products on the domestic side could be considered to buttress a suspicion of protectionist motives, which would need to be examined further. It could mean that the home country government's aim was to provide an advantage to domestic producers, knowing that a majority or all of them currently are or will be more competitive in producing the favoured variety than its foreign competitors. Ehring (2002) draws on analogies in the areas of tax and gender discrimination under European Communities Law, where asymmetric effect is a necessary condition in order for a case not to be dismissed.

Yet, the proportion of favoured over disfavoured products should certainly not represent the ultimate yardstick in any examination of "less favourable treatment". There may be numerous reasons why an environmental measure could affect foreign products in a disproportioned way, even in the absence of any protectionist intent. It is for instance not unlikely that domestic producers are better aware of changes in consumer preferences or in environmental legislation than foreign producers. They are therefore more likely to anticipate the legislation and switch to the favoured variety. They may also have stronger incentives to do so than foreign producers, if the domestic market absorbs a higher share of output of domestic producers as compared to the output share of foreign producers. Foreign producers may have decided, for a variety of reasons, not to supply the favoured variety to the country in question, despite their ability to produce it as well. It is conceivable that they were able to sell the favoured variety at a higher margin elsewhere (due to different demand functions) and contented themselves to predominantly export the disfavoured variety to the country initiating the new environmental regulation. Foreign producers would be even less inclined to adapt their production if they anticipate that in the context of a WTO dispute, the panel would take a comparison of the favoured-disfavoured ratio between domestic and foreign products as evidence of protectionism.

Thus, for an investigation of protectionism and a purposeful modification of competitive opportunities it may be more relevant to ask whether an environmental regulation inevitably makes it more burdensome for suppliers in the foreign country to produce the favoured product variety due, for instance, to circumstances that cannot be changed, at least in the short-run. To some extent, this would amount to an evaluation of reasons why the production of the favoured variety cannot be conducted in a similarly competitive manner as the disfavoured one. For instance, in *US – Malt Beverages*,⁴³ wine made from grapes growing only in one region of the United States and the Mediterranean received more favourable tax treatment than other wines. In view of the limited

Body concludes: "[...] the putting into legal effect of the dual retail system for beef meant, in direct practical effect, so far as imported beef was concerned, the sudden cutting off of access to the normal, that is, the previously existing, distribution outlets through which the domestic product continued to flow to consumers in the urban centers and countryside that make up the Korean national territory. The central consequence of the dual retail system can only be reasonably construed, in our view, as the imposition of a drastic reduction of commercial opportunity to reach, and hence to generate sales to, the same consumers served by the traditional retail channels for domestic beef. In 1998, when this case began, eight years after the dual retail system was first prescribed, the consequent reduction of commercial opportunity was reflected in the much smaller number of specialized imported beef shops (approximately 5,000 shops) as compared with the number of retailers (approximately 45,000 shops) selling domestic beef" (WTO, 2001a: para. 145).

⁴² Some would argue that this notion was, however, seriously considered in GATT (1989): para. 5.14.

⁴³ GATT (1992): paras 5.23-5.26.

geographical dispersion and presumably considerable difficulty or unfeasibility to grow specific grapes in new locations, the panel's observation seems well-founded that the tax break was put in place so as to afford protection to domestic producers.⁴⁴ Thus, in this case, while the effect of the regulation was taken as an important piece of evidence for possible protectionism, it was further examined whether there are good reasons to believe that the disproportionate impact may also have been its aim.

There appears to be no cogent reason why double-checking a new regulation as to its aims and objectives should be foregone, given that it is always conceivable that neutrally designed and purpose-oriented legislative measures lead to disproportionate impacts on different groups of people (countries) that are to be treated equally.⁴⁵ For instance, if the possibility to serve in the military was limited to men, this could be seen as discriminating against women. Yet, if the ability to lift X kg was indispensable in order to be able to hold a firearm for a sustained period of time, this could be seen as a reasonable requirement for acceding to a military career that may only be fulfilled by, say, a quarter of all women as compared to every other man. Considerations of this kind may call for a more far-reaching approach, such as the so-called "aims-and-effects" test, which, besides in the *US – Malt Beverages* case, has been applied once more (albeit in an unadopted GATT panel) and later been discarded by the Appellate Body. Its revival was advocated by several legal experts, most prominently Hudec (1998). Ehring, again highlighting possible model cases in the jurisprudence of the European Court of Justice, notes that the Court, "in the area of sex discrimination, ruled against sex-neutral differentiations only when they hit predominantly one sex and do not service a legitimate objective" (Ehring, 2002: 950). Interestingly, the requirement to take into account also the aim of a regulation is not unfamiliar to the WTO's TBT and SPS Agreements. The TBT Agreement holds that technical regulations are not to be more trade-restrictive than necessary to fulfil a legitimate objective, taking account of the risks non-fulfilment would create. This appears to suggest that even if a regulation places a considerable (probably disproportionate) burden on foreign producers, the objective may be too important and its non-fulfilment represent too great a risk to tinker with it.

⁴⁴ It may be argued that this is the "pure" aims and effects test. In contrast, the aims and effects test in *United States – Taxes on Automobiles* (GATT, 1994, not adopted) - later explicitly rejected by the Appellate Body - equated the regulatory "aim" with ascertaining a regulation's subjective intent, as is, for instance, obvious in its paragraph 5.10: "[T]he phrase 'so as to afford protection' called for an analysis of elements including the aim of the measure and the resulting effects. A measure could be said to have the aim of affording protection if an analysis of the circumstances in which it was adopted, in particular an analysis of the instruments available to the contracting party to achieve the declared domestic policy goal, demonstrated that a change in competitive opportunities in favour of domestic products was a *desired outcome* and not merely an incidental consequence of the pursuit of a legitimate policy goal. A measure could be said to have the effect of affording protection to domestic production if it accorded greater competitive opportunities to domestic products than to imported products. The effect of a measure in terms of trade flows was not relevant for the purposes of Article III, since a change in the volume or proportion of imports could be due to many factors other than government measures" (highlights by author). Some have argued that it is generally impossible to identify the "intent" of a state. It would therefore be impossible to know whether a change in competitive opportunities was the "desired" outcome of a piece of legislation that may have gone through laborious parliamentary and other debates and been modified a number of times to accommodate special interests. It may have had an initial aim that got blurred or changed or amplified into several "aims". Yet, the word-splitting left aside, it seems not at all useless to evaluate alternative regulatory schemes and scopes in the light of the stated environmental objective and to look for evidence of ostensibly inconsistent, and hence possibly purposeful, regulatory design that modifies competitive opportunities. We agree with Mattoo et al. (2002) that if, for instance, in *US – Taxes on Automobiles*, it had been found that, at some stage in the legislative process, the exemption for sporting vehicles (so-called "SUVs") was introduced in order to cater to specific constituencies or lobby groups, this may provide an important proof that "something else", beyond a - possibly - genuine environmental concern, may have been pursued.

⁴⁵ In fact, economists would probably want to emphasize the need of a policy to meet the relevant environmental purpose rather than focusing on the burden the policy represents for foreign producers.

In the two instances, where an "aims-and-effects" test was applied in the GATT, the examination of "likeness" and subsequently of "less favourable treatment [...] so as to afford protection" were collapsed into one single test. This implied that the defendant's logic to defining "likeness" on regulatory grounds was followed, and the panel did not embark upon establishing "likeness" itself pursuant to a pre-determined framework. Rather than that, the intent and effect of the regulatory distinction between products were examined. As long as it was assured that protection was neither intended nor afforded to domestic products, any regulatory distinction between product varieties seemed acceptable. In *United States – Taxes on Automobiles* a luxury tax was levied on cars selling above a specified dollar threshold,⁴⁶ as well as an environmental tax on cars not achieving a certain fuel efficiency. The panel declined to find protectionism despite an initially larger tax incidence on imports and more extensive use of exemptions by US manufacturers. Putting a dynamic spin on the concept of competitive opportunities, the panel observed, among others, that foreign manufactures had the capability to produce small cars for other markets. The various threshold levels were therefore not "inherently" missed more easily by foreigners than domestic producers. Similarly, in examining a measure that treated beer according to its alcohol content (*US – Malt Beverages*),⁴⁷ the panel noted that there was no reason to believe that the resulting burden was inherently more difficult to bear by foreign than domestic manufacturers.

One of the criticism levelled at the "aims-and-effects" approach was that this "inherence" test was impossible to fail, as mere production possibilities are rarely confined to national boundaries except in cases where nature sets definitive geographical limits, such as for the above-cited grape species.⁴⁸ It may be that many technologies are available across boundaries such that production of a specific good *could* take place anywhere in the world. Yet, in search of evidence for protectionist motives, it may still be of legal interest to know whether or not the favoured variety is *already* being produced in the foreign country to any significant extent, for instance for export to a third country. Existing production and export of the favoured variety by the complainant to a third country of similar economic characteristics as the regulating country may provide at least some evidence that the defendant may not have sought to protect domestic producers, as it must have expected production of the favoured variety in the complainant to pick up rather easily and undermine such protection.

Mattoo and Subramanian (1998) also point out that in the case *United States – Taxes on Automobiles* the domestic policy was not applied consistently by the defendant in the domestic market. Sporting vehicles were exempted from the various tax measures – products that are closely related to the "other passenger vehicles" that were being taxed depending on their fuel efficiency. Thus, one may suspect that at least part of the problem with the "aims-and-effects" test seems to be grounded in the fact that it has been applied in a rather unsatisfactory way in the past. This may not provide good enough reason to conclude that it cannot be an appropriate tool in future cases, especially if combined with and preceded by an inquiry into "likeness".

It is often said that since *Japan – Taxes on Alcoholic Beverages*, the Appellate Body has rejected the "aims-and-effects" test in declaring that "it is irrelevant that protectionism was not an intended objective if the [...] measure in question is nevertheless [...] *applied* to imported or domestic products so as to afford protection to domestic production" (WTO, 1996b: 32, emphasis in original).⁴⁹ This seems little more than stating the obvious, namely that it is not enough for the defendant to invoke an innocent regulatory objective. Indeed, the Appellate Body continued to see the need to examine the way a regulation was designed in order to gather evidence to sustain a hidden protectionist purpose. It conceded that "[a]lthough it is true that the aim of a measure may not be easily ascertained, nevertheless its protective application can most often be discerned from the design, the architecture, and the revealing structure of a measure" (WTO, 1996b: 33). The major interpretational change

⁴⁶ GATT (1994), not adopted: paras 5.13-5.34.

⁴⁷ GATT (1992): paras 5.23-5.26

⁴⁸ See for instance Mattoo and Subramanian, 1998.

⁴⁹ For other key references see also footnote 38.

should be considered to lie in the unmerging of the "likeness" and "protection" determinations into two successive steps. The emphasis of "protective application" to be revealed by the design of a measure instead of a "protective aim" also to be discerned in scrutinizing a measure's structure and context may be more of a clarification of a self-evident legal nuance than the drastic reversal of what could simply be called a common-sense approach.

The proceeding suggested in *Japan – Taxes on Alcoholic Beverages* continues to be geared towards collecting a maximum of evidence for alleged protectionism. This was probably also the initial goal of the so-called "aims-and-effects" test. Thus, by turning against an inquiry into "aims-and-effects", the Appellate Body simply rejected both the uncritical acceptance of a legislation's stated purpose on the one hand and the second-guessing of the intention behind it - from merely its letter - on the other. It did not appear to want to reduce the analysis to a mere investigation of protective effect on competitive conditions with no "aim" test either. This cannot be better explained than in the words of Bob Hudec: "The Appellate Body ruled that [...] something more [is required] than just an analysis of protective effect. The Appellate Body took pains to make clear that it was not talking about the analysis of regulatory purpose called for by the 'aim' in 'aim and effects.' However, the 'aim' analysis it seemed most concerned with rejecting was a search for the actual motivation behind a measure, repeatedly stressing that the intent of legislators or regulators was irrelevant. The additional element the Appellate Body called for was an investigation of something called 'protective application,' a concept that for all the world looked like an objective analysis of regulatory purpose. [...] The [quotation of the respective Appellate Body report] makes a great deal more sense if one substitutes the word 'purpose' for 'application.' Indeed, neither the Appellate Body's insistence on different words nor its insistence on objective analysis serve to mark a clear distinction between its 'protective application' concept and the 'aim and effects' analysis" (Hudec, 1998: 19-20).

Hudec's advice has seemingly been heeded to in *Chile – Taxes on Alcoholic Beverages*.⁵⁰ In recalling its ruling in *Japan – Taxes on Alcoholic Beverages* the Appellate Body reconfirmed that "[t]he subjective intentions inhabiting the minds of individual legislators or regulators do not bear upon the inquiry, if only because they are not accessible to treaty interpreters. It does not follow, however, that the statutory purposes or objectives – that is, the purpose or objectives of a Member's legislature and government as a whole – to the extent that they are given objective expression in the statute itself, are not pertinent" (WTO, 1996b: para. 62). In addition, it made the link between the concept of "protective application" and a measure's "purposes" explicit: "We called for examination of the design, architecture and structure of a tax measure precisely to permit identification of a measure's objectives or purposes as revealed or objectified in the measure itself. Thus, we consider that a measure's purposes, objectively manifested in the design, architecture and structure of the measure, are intensely pertinent to the task of evaluating whether or not that measure is applied so as to afford protection to domestic production" (WTO, 2000: para 71). The examination of the design, architecture and structure of the new Chilean system ultimately revealed that the application of dissimilar taxation "will afford protection to domestic production" (WTO 2000: para. 66, highlight by author). In arriving at this conclusion the Appellate Body had also taken into account that most domestic beverages were found at the end of the lower tax bracket and that the (considerably!) higher tax bracket began at the point at which most imports, by volume, were found.⁵¹ In that regard, *Chile – Taxes on Alcoholic Beverages* also provides an illustration of how the evidence of a differing distribution of favoured over disfavoured products between domestic and imported varieties can usefully be married with the investigation into "protective application", without making such a "proportions" approach a hard and fast (let alone automatic) litmus test.

The way in which the examination under the Article III is conducted will determine the likelihood with which violations occur and, thus, how often national environmental policy-makers may need to take recourse to the general exceptions contained in GATT Article XX. Article XX comprises ten

⁵⁰ WTO (2000).

⁵¹ WTO (2000): para. 66.

policy objectives that can be invoked in order to justify policy measures contravening other GATT provisions. Two of those relate to the environment and, although "environmental protection" is not explicitly listed as an objective, they are commonly viewed as being worded broadly enough in order for national environmental policies to be covered. It deserves to be mentioned that there is a host of other policy goals, for instance in the social or consumer policy areas, which may not fall within the range of those ten objectives and for which a justification under Article XX is therefore not available. Hence, "the identification of a measure's objectives or purposes as revealed or objectified in the measure itself" (see above) as part of the process to establish compliance with GATT Article III may prove an important safety net for policies of all kinds other than those listed in Article XX.

Lawyers continue to struggle with the limited scope of Article XX and the question of how to dismiss its possible redundancy if an examination of aims was allowed under Article III.⁵² Interestingly, the Appellate Body pointed out in *EC – Asbestos* that "the fact that an interpretation of Article III:4, under those rules, implies a less frequent recourse to Article XX(b) does not deprive the exception in Article XX(b) of effect utile" (WTO, 2001b: para. 115.⁵³ In the same paragraph, it is also noted that the same (or similar) evidence serves different, but related purposes under both provisions, namely under Article III:4 it serves to assess whether the competitive relationship in the marketplace between allegedly "like" products has changed to the detriment of foreign producers, whereas in Article XX it is used to find out whether a measure in pursuit of one of the objectives listed in that provision nevertheless represents a disguised restriction on international trade. This indicates that the analysis of "the design, the architecture, and the revealing structure of the measure", first, allows to evaluate whether or not there is protective application. If that is the case, and hence a violation of GATT Article III occurs, the measure may still provisionally qualify under one of the general exceptions in GATT Article XX. "Design, ..." would then again be looked at in order to, secondly, test the good faith of a Member in applying that measure, i.e. to prevent abuse of the exceptions.

The formal procedure purports to neatly separate an examination into protectionism, prohibited under Article III, from a possible toleration of protectionist effects if good faith implementation of a measure (provisionally qualifying under one of the subparagraphs of Article XX) is ascertained under the chapeau. As this paper has shown, in practice the determination of protectionist effects may not be easy – to a large extent due to the fact that favoured and disfavoured products exist both domestically and in the foreign country – and, hence, more often than not, clean separability may not be in the cards. If *de facto* discrimination is at issue, the same evidence is likely to be reviewed in both determinations. Environmental policy-makers, more than with legal strategy, may therefore be most concerned with how the design, architecture and structure of their measures is likely to be perceived. It is by no means surprising that Hudec, in the aftermath of *Japan – Taxes on Alcoholic Beverages*, was able to trace the aims-and-effects test throughout major cases, and this, he wrote, was "merely the tip of an iceberg" (Hudec, 1998: 27).

It should be recalled at this point that Article XX was drafted more than 50 years ago with little if any experience on these matters.⁵⁴ It is worth noting that the later TBT Agreement,⁵⁵ for instance, seems to reflect an approach better suited to deal with *de facto* discrimination. Three aspects are particularly

⁵² Such redundancy would be in breach with the Vienna Convention on the Law of Treaties, Article 31.

⁵³ By the same token, the Appellate Body had stated in a previous report: "[..]. Nor may Article III:4 be given so broad a reach as effectively to emasculate Article XX(g) and the policies and interests it embodies" (WTO, 1996a: 18).

⁵⁴ In a related context, this line of thought was also confirmed by the Appellate Body in *United States – Import Prohibition of Certain Shrimp and Shrimp Products*, WTO (1998): para. 129, where it was stated that Article XX(g) must be read "in the light of contemporary concerns of the community of nations about the protection and conservation of the environment". Particular reference is made to the WTO Preamble, which explicitly acknowledges the objective of sustainable development as informing the GATT and all other agreements.

⁵⁵ Marceau and Trachtman (2002) summarize and juxtapose all disciplines of the GATT, TBT and SPS Agreements that may be interesting to compare.

noteworthy for the purposes of this paper: Firstly, the TBT Agreement, in Article 2.1, formally prohibits discriminatory regulations without containing an equivalent to the exceptions contained in GATT Article XX. At the same time, TBT Article 2.2 "explicitly calls for attention to the protective 'aim and effects' of product standards. [...] Under Article 2.2, the issues of trade effects and regulatory justification are considered on the same level, without any conclusion as to violation until both sides of the equation have been fully considered" (Hudec, 1998: 36-37).⁵⁶ Thus, Article 2.1 in connection with Article 2.2 seems to call for the kind of consideration required in cases of *de facto* discrimination under GATT Article III. Secondly, Article 2.2 contains elements to be analyzed in the GATT under Article XX, namely an inquiry into whether the degree of trade restrictiveness is indeed necessary to accomplish the regulatory objective. As discussed above, the type of cost-benefit analysis that would usefully be carried out under TBT Article 2.2 can be seen as similar to a proper balancing test under GATT Article XX. Finally, the TBT Agreement enumerates a non-closed illustrative range of "standard" legitimate objectives, whereas GATT Article XX only features a narrow list of eligible policies. This clearly has to be seen within the historical context. It may also be legitimate to assume that the Article XX objectives are of such eminent importance or frequency that it has been made explicit that exceptions are to be made even in the face of blatant, albeit "justifiable", discrimination. The exemplary list of objectives in the TBT Agreement also has the advantage of being clearly identified as "legitimate", whereas the Appellate Body highlighted in *EC – Sardines* that, in all other cases, "there must be an examination and a determination on the legitimacy of the objectives of the measure" (WTO, 2002b: para. 286).

These and other issues of compatibility between disciplines in different WTO Agreements may be puzzling from a legal perspective, but many are analytically much less interesting. Suffice to say for the purposes of this paper that it is hard to imagine that the TBT Agreement, in particular Articles 2.1 and 2.2, and GATT Articles III and XX would have been meant to be incongruent, had they been drafted at the same time. Some would go as far as to say that later Agreements, such as TBT and SPS, have simply merged the requirements of GATT Articles III and XX.⁵⁷ The relevant jurisprudence on Article XX concerning national environmental policies is briefly reviewed below.

C. GENERAL GATT EXCEPTIONS FOR ENVIRONMENTAL POLICIES

In order to defend an environmental measure found to be in breach with other GATT provisions under Article XX, the policy pursued through the measure needs to fall within the range of policies designed either to protect human, animal or plant life or health (Article XX(b)) or to conserve exhaustible natural resources (Article XX(g)): For instance, policies to protect dolphins, clean air or petroleum have been considered under either one (or both) of the two paragraphs in the past. Most notably, other bodies of international law, such as the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES) were referred to in the Appellate Body's deliberation on whether sea turtles constituted an exhaustible natural resource for the purposes of Article XX(g). Further specific requirements need to be fulfilled in order for the environmental measure to provisionally qualify under Articles XX(b) or (g), in particular the elements of "necessary" in paragraph (b) and of "relating to" in paragraph (g). Finally, none of the requirements contained in the

⁵⁶ Article 2.2 reads: "Members shall ensure that technical regulations are not prepared, adopted or applied *with a view to or with the effect* of creating unnecessary obstacles to international trade. For this purpose, technical regulations shall not be more trade restrictive than necessary to fulfil a legitimate objective, taking account of the risks non-fulfilment would create. Such legitimate objectives are, inter alia: national security requirements; the prevention of deceptive practices; protection of human health or safety, animal or plant life or health, or the environment" (highlights by author).

⁵⁷ One could add that, legally speaking, this merge was in favour of the environment. This conjecture may be deduced from the Appellate Body's ruling in *EC – Sardines* under TBT Article 2.4 in connection with Article 2.2 that the complainant has to demonstrate that a measure taken in pursuit of a legitimate objective, such as the environment, is not WTO compatible. Conversely, under GATT Article XX, the burden of proof rests with the respondent in invoking the environmental provisions in its defence.

introductory clause (the "chapeau") to Article XX must be violated. Each of these elements will be discussed in turn.

The "necessity" test in paragraph (b) was interpreted by a number of GATT panels such that a measure could only qualify if there was no GATT-consistent measure reasonably available to the government and if, among those measures reasonably available, it was the one with the least degree of inconsistency with other GATT provisions.⁵⁸ This approach became commonly known as the requirement of "least trade-restrictiveness", and it has been pointed out in *Mattoo* and Subramanian (1998) that the goal of "least trade-restrictiveness" does not correspond to the one of "welfare maximization", which would be the objective preferred by economists. Decisions in the past critically depended on what measures were considered to be reasonably available to the government. In *United States – Gasoline*,⁵⁹ the panel clarified that an alternative measure did not cease to be "reasonably" available simply because it involved administrative difficulties, and in *US – Malt Beverages* the panel even provided examples of less trade-restrictive alternatives applied by other US states.⁶⁰ In *Korea – Beef*, the Appellate Body elucidated further that the "determination of whether a measure, which is not 'indispensable', may nevertheless be 'necessary' [...] involves in every case a process of *weighing and balancing a series of factors* which prominently include the contribution made by the compliance measure to the enforcement of the law or regulation at issue, the importance of the common interests or values protected by that law or regulation, and the accompanying impact of the law or regulation on imports or exports" (WTO, 2001a: para. 164, emphasis added). It has been observed that following *Korea – Beef* a more adequate terminology may be to refer to the "necessity" test as an inquiry into "less trade-restrictiveness" supplemented with an evaluation of proportionality.⁶¹ This interpretation would get closer to the concept of "welfare maximization", where the welfare losses due to imposed restrictions on trade are weighed against the welfare benefits from correcting a market distortion linked to the pursued policy objective (which would be environmental in the context of this paper).

The exact relationship between the suggested factors remains elusive in the jurisprudence, although the principle direction is clearly expressed in statements, such as: "The more vital or important those common interests or values are, the easier it would be to accept as 'necessary' a measure designed as an enforcement instrument" (WTO, 2001a: para. 162).⁶² TBT Article 2.2 seems to refer to a similar test of "less trade restrictiveness" in connection with proportionality. In the TBT context, the trade "costs" of a measure are weighed against the benefits inherent in the importance of the objective pursued and the degree to which the risk of non-fulfilment is minimized. If the latter is assumed to mean the same as the contribution made by the measure to achieving a given policy objective, the two approaches seem rather similar.

The "relating to" requirement in Article XX(g) has commonly been seen as being less difficult to fulfil, as it clearly covers a wider range of measures than merely those "necessary".⁶³ The same panel (*Canada – Herring*) clarified that a measure for the purposes of Article XX(g) had to be primarily aimed at the conservation of an exhaustible natural resource. Subsequent panels followed this interpretation and determined that measures primarily aimed at conservation could not be based on unpredictable conditions, as would, for instance, be the case if the measure was only effective if other countries changed their policies. A key observation was made by the Appellate Body in *United States – Gasoline* highlighting that it was the *measure* itself, i.e. the fact of establishing baselines for the quality of gasoline, that needed to be primarily aimed at environmental conservation: It found that the baselines were primarily aimed at achieving certain clean air standards, since without such baselines

⁵⁸ See for instance GATT (1990): para. 75.

⁵⁹ WTO document WT/DS2/R: paras 6.26 and 6.28.

⁶⁰ GATT (1992): para. 5.52.

⁶¹ WTO Secretariat (2002a).

⁶² Some may argue that the value at stake can be such that trade restrictiveness loses all its relevance.

⁶³ GATT (1988): para 4.6.

the stabilization and subsequent reduction of air pollution was not feasible. In so doing, it reversed the panel which had wrongly assumed that it was the "less favourable treatment" of the imported product which needed to be primarily aimed at the policy objective of environmental conservation.

Further clarification was provided in the *US – Shrimp* case that it was the relationship between the general structure / design of the measure and the policy goal that mattered: "The means [must be][...] reasonably related to the ends. The means and ends relationship between [the US measure] and the legitimate policy of conserving and the legitimate policy of conserving an exhaustible, and, in fact, endangered species, is observably a close and real one, a relationship that is every bit as substantial as that which we found in *US - Gasoline* between the EPA baseline establishment rules and the conservation of clean air in the United States" (WTO, 1998: para. 141). In addition, the measure must be "made effective in conjunction with restrictions on domestic production or consumption". In *US – Gasoline*, and recalled in *US - Shrimps*, the Appellate Body established the need for "even-handedness" in the imposition of restrictions, meaning that a measure may not be imposed just on imports, but, in the name of conservation of exhaustible natural resources, also had to curb domestic production and consumption.⁶⁴ This evokes the concept of consistency, emphasised earlier on in this paper.

Finally, an environmental measure must not violate any one of three requirements contained in the introductory clause to Article XX, i.e. it may neither be a means of unjustifiable nor arbitrary discrimination between countries where the same conditions prevail nor a disguised restriction on international trade. This "chapeau" essentially fulfils the function of preventing abuse of Article XX by keeping a balance between the right of a Member to build its defence on one of the general exceptions contained therein while safeguarding the rights of other Members under the GATT. The Appellate Body in *US – Shrimp* endorsed earlier rulings that such a determination must address not only "the detailed operating provisions of the measure" but also the manner in which the measure "is actually applied".⁶⁵

The first two elements clearly imply that an Article XX measure may discriminate between countries, but not in an unjustifiable or arbitrary manner. In *US – Gasoline*, unjustifiable discrimination was considered to be one that could be "foreseen" and that was not "merely inadvertent or unavoidable".⁶⁶ This was translated into two concrete requirements in the *US - Shrimp* case. First, the US was expected (before resorting to unilateral measures) to make serious efforts to negotiate a conservation agreement with all relevant parties, and not only with some.⁶⁷ Second, the original US measure lacked flexibility in the way it was implemented to take into account the different situations in different countries.⁶⁸ The Appellate Body further elaborated that an inquiry into whether a measure required "essentially the same" regulatory programme of an exporting Member as that adopted by the importing Member was a useful tool in identifying measures that do not meet the requirements of the chapeau of Article XX,⁶⁹ whereas "conditioning market access on the adoption of a programme *comparable in effectiveness*, allows for sufficient flexibility in the application of the measure" (WTO, 2001c: para. 144, emphasis in original).

The same rigidity of the original measure that required foreign countries to adopt essentially the same policies and enforcement practices as those applied to domestic shrimp trawlers in the US without inquiring into the appropriateness of that programme to the conditions prevailing in the exporting

⁶⁴ WTO (1996a): 19; WTO (1998): paras 143-145.

⁶⁵ WTO (1998): para. 160.

⁶⁶ WTO (1996a): 27.

⁶⁷ WTO (1998): para. 166.

⁶⁸ WTO (1998): paras 161-164.

⁶⁹ WTO (2001c): para. 141.

countries also led to the finding of arbitrary discrimination.⁷⁰ Conversely, the modified implementation measure allowed for the possibility to demonstrate that an alternative programme was comparable to that of the US. As it was no longer based on the application of certain methods, but on the achievement of given objectives,⁷¹ the measure was considered flexible enough to qualify under Article XX.

Finally, the Appellate Body, to a large extent, equated the third requirement with the other two conditions listed in the chapeau in deciding that "'disguised restriction', whatever else it covers, may properly be read as embracing restrictions amounting to arbitrary or unjustifiable discrimination in international trade taken under the guise of a measure formally within the terms of an exception listed in Article XX" (WTO, 1996a: 23). The implementation panel in *US – Shrimps* decided that the design, architecture and revealing structure of the measure, as actually applied by the US authorities, might help in determining whether it constitutes a disguised restriction on international trade. In view of the flexibility allowing the use of alternative programmes for the protection of sea turtles and the offers made by the US to provide technical assistance to develop the use of the technology required from US fishermen in third countries, the panel was confident that there was no disguised restriction on international trade. This view was upheld by the Appellate Body.

D. SUMMARY: HOW ARE NATIONAL ENVIRONMENTAL POLICIES EVALUATED UNDER THE GATT?

There appear to be three major lines of defence under the GATT for national environmental policies that may be seen as making an implicit regulatory distinction between domestic and imported product varieties. All three of them feature considerable uncertainty as to their possible interpretations. First, if a regulating country can show that the disfavoured product variety is "unlike" the favoured one, any negative effects on the trade of other countries may supposedly be ignored. Yet, environmental policy-makers have little *ex ante* guidance as to quantitative measures, such as thresholds of cross-price elasticities (e.g. a precise non- or low negative value), that could show that consumers are not ready to substitute one product for another. The four qualitative criteria advanced by the Appellate Body are hazily defined as well, both individually and regarding the relationship relative to each other. Considerable room for interpretation remains for other elements to be adduced, besides the non-closed fourfold list of "likeness" criteria, and the defending party seems entitled to insist to have additional evidence considered in support of "unlikeness". Still, while there appear to be limitations, it is not clear whether, for instance, NPR-PPMs as part of consumer preferences could be a basis for such a distinction. The legal uncertainty and judicial discretion surrounding "likeness" is readily admitted by the Appellate Body, stating that "[t]he concept of 'likeness' is a relative one that evokes the image of an accordion. The accordion of 'likeness' stretches and squeezes in different places as different provisions of the WTO Agreement are applied. The width of the accordion in any one of those places must be determined by the particular provision in which the term 'like' is encountered as well as by the context and the circumstances that prevail in any given case to which that provision may apply" (WTO, 1996b: 26).

Second, an environmental policy-maker may be in a position to demonstrate that a piece of legislation regulating "like" product varieties may not necessarily afford "less favourable treatment" to the group of "like" imports. It must be shown by the complainant that the application of the policy measure protects domestic producers. This is not a straightforward exercise, but rather one of collecting a maximum of evidence without the *ex ante* certainty that one particular piece of evidence may be powerful enough to make or break the case. It cannot be excluded that the defending party did follow an innocent legislative purpose that, at the moment of the regulation's coming into being, hit imports comparatively harder. Should this still be regarded as protectionism, even if it was not intended and

⁷⁰ WTO (1998): para. 177; see also the implementation panel in WTO document WT/DS58/RW: para. 5.122.

⁷¹ WTO document WT/DS58/RW: para. 5.124.

the measure, as it happens, may be an excellent, if not in economic terms, the optimal policy instrument? If the approach suggested in the previous sections is followed, this would probably not be the outcome. Despite a strong negative impact on importers, the measure would only be found in breach of Article III obligations if its design, architecture and revealing structure suggest a protective application. The suggestion by Mattoo et al. (2002) to inquire into what the optimal policy instrument may have been to pursue a given environmental objective in order to evaluate the genuine environmental character of a measure may form part of this examination. In other words, while the analysis of "less favourable treatment" boils down to an investigation of a measure's protective effect, this, in all likelihood, cannot be determined without asking whether it has been designed in a way that has the potential to protect domestic producers. This seems to blur the major distinction between GATT Article III and Article XX, namely that "less favourable treatment" does not presuppose the intention of protectionism whereas the non-fulfilment of the Article XX chapeau does. It may be due to the fact that "less favourable treatment" is not easily ascertained, let alone amenable to quantitative assessments. Thus, in the absence of hard (quantitative) evidence, an inquiry into the regulatory "design, architecture, ..." becomes inevitable to find indications of wilful acceptance of "less favourable treatment" of importers, although more appositely, this analysis should have been reserved for Article XX.

Third, and finally, a national environmental measure may have been found to provide "less favourable treatment" to importers. It may still be defensible if qualifying for one of the general exceptions contained in GATT Article XX. Here it is noteworthy that the factors that must be balanced against each other in judging whether an environmental measure is "necessary" would look somewhat familiar if both the *aim* of an environmental measure (and how well it achieves its purpose) and its *effect* were to be considered under Article III: The importance of the policy objective pursued is linked to the degree to which the measure really contributes to achieving this objective and to its impact on trade. Again, if aim-and-effect considerations were to be precluded from examinations under Article III, then this approach, supposedly providing additional leeway for policy measures, would be reserved for the ten objectives listed under Article XX. If they are not precluded, it begs the question what additional examination can be conducted under Article XX, except for a hardening of the finding that the measure was put in place with a protectionist *intent* by looking at the chapeau ("*disguised*" restriction on international trade). It still seems strange that the "design, architecture and revealing structure" may be analyzed twice for allegedly separate purposes.

In sum, in anticipating a possible defence strategy under the GATT, environmental policy-makers continue to face a significant amount of legal uncertainty, especially as far as the definition of "like" products is concerned and the way the determination of "less favourable treatment" is handled. Conversely, Article XX seems to provide good protection for all kinds of genuine environmental policies, as an *intention* to protect domestic producers must be adduced if justification under Article XX is to be rejected. Following the Shrimp case, even a possible role for NPR-PPMs in characterizing goods may have been established, given that a measure was justified under Article XX that distinguished products on the basis of how they were produced, namely in banning shrimp harvested in a way that adversely affected certain sea turtles. The safeguards against abuse of these exceptions built in the chapeau of Article XX also seemed to have worked well, as testified in the Shrimp DSU Article 21.5 Implementation Panel and Appellate Body reports.

V. CONCLUSIONS

This paper provides a discussion and analysis of the WTO's activities of relevance for national environmental policies. Two different type of activities can be distinguished. First there are discussions and negotiations within the WTO that aim at enhancing Members understanding of the linkages between environmental policies on the one hand and trade and trade policy on the other hand.

These discussions and negotiations may at some point have an impact on the formulation of WTO rules. The second type of activities are trade disputes, in particular those on environmental policies. Existing WTO rules form the basis of such disputes and an analysis of the relevant legal texts and the existing case law can give domestic policy makers an idea of potential incompatibilities between domestic environmental policy and multilateral trade law.

When the GATT was established after the Second World War, the environmental consequences of economic integration were not a primary concern. This may explain why references to the environment were only indirect in the original GATT. The issue was first put on the agenda in the early 1970s but it was only in the 1990s that a real discussion on the relationship between trade and environment started within the GATT. This discussion is ongoing in the WTO, but although the ensuing exchange of ideas has certainly helped to enhance our understanding of the linkages between trade and environment, progress has been slow when it comes to mitigating the potential tensions between multilateral trade law and national environmental policies.

Trade disputes will arise when one or several WTO Members have the impression that a policy measure of another Member discriminates against the producers of the former. Such a policy may be claimed to be an environmental measure by the defendant government. In such a case the WTO dispute settlement system is supposed to distinguish between a genuine environmental policy that happens to be discriminative and a protectionist measure disguised as an environmental policy. Only the latter should be considered to be in conflict with multilateral trade law. The experts charged with the case have to base themselves on existing case law and existing legal texts, some of which have been written more than 50 years ago, when the environment was not an issue for most Member governments. Their task is rendered more complex by the fact that policies they have to evaluate may be the combined outcome of a genuine environmental purpose and some level of protectionist intent.

Ideally, the evaluation of a Member's environmental policy should take the optimal environmental policy as a point of reference.⁷² Yet, this paper argues that economists have a rather imperfect knowledge of the precise welfare effects of different types of environmental policies. It is for instance in many cases not clear whether price-based measures should be preferred over norms (i.e. regulations or standards, potentially combined with a labelling policy). In addition governments (and economists) are unlikely to have full information over the extent of the relevant environmental distortion, which makes it difficult to pin down the precise design of a policy measure. But economic analysis does provide an idea as to which aspects of the design of a policy indicate environmental purposes and which indicate protectionist intent.

Our discussion of WTO provisions and jurisprudence reveals that there continues to be considerable uncertainty as to the possible interpretations of existing rules. Yet this paper also argues that existing WTO law provides appropriate tools to evaluate disputes on environmental policies. In particular the approach to analyse the "design, architecture, and the revealing structure" of the relevant measure seems promising. This paper argues that certain elements of the "design, architecture, and the revealing structure" of a policy will at the same time give indications about a potential "protective aim" and the resulting "trade effect" on the one hand and of the policy's "environmental purpose" on the other hand. Ultimately any decision should be based on a process that weighs these three elements against each other, in an attempt to use a maximum of available evidence in order to approximate what would be the economist's decision criterion: the trade off between the losses from trade distortions created by the policy and the gains from attenuating market distortions that are negative for the environment.

⁷² "Optimal" from the point of view economic analysis. See also Mattoo and Subramanian (1988) on this point.

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