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# **THE IMPLEMENTATION OF GREEN TAXES**

## **THE BELGIAN EXPERIENCE (\*)**

One of the ways by which the Belgian government has been trying to integrate environmental policy and fiscal policy is through the introduction of the so called ecotaxes by the law of 16 July 1993 (<sup>1</sup>).

This paper will comment on the practical experience of introducing ecotaxes in Belgium.

For a better understanding of the significance and of the impact of this law some preliminary institutional remarks have to be made.

### 1. THE INSTITUTIONAL CONTEXT

Belgium is a federal state composed of three communities (the Flemish community, the French community and the German community, mainly dealing with cultural and educational affairs) and three regions (Flanders, Wallonia and Brussels, mainly competent for powers in territory related matters, e.g. economy, housing, land use planning, infrastructure). So in Belgium environmental policy is mainly dealt with by the three regional governments of Flanders, Wallonia and Brussels. The national government is left with only limited powers in this field : mainly related to product standards, nuclear waste and to the negotiation and the implementation of the international engagements of the country (e.g. the introduction of EC directives in Belgian environmental law). In this respect it is important to note that there is no hierarchy of legal systems in Belgium. Hence the national government can not impose its will on regional governments in environmental matters. In cases where they are all stakeholders the national government and the regional governments have to consult with each other. They then arrive at a common position by - sometimes lengthy - negotiations. In contradiction to environmental matters which are mostly within the realm of regional competence, with respect to consumption taxes competence rests with national authorities. Therefore, the integration of environmental considerations into the tax system is the task of the federal government. The regions have to agree with any change in the ecotax law,

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<sup>1</sup> Here the notion ecotaxes is used in a narrow sense, because in Belgium a lot of emission charges and energy taxes that can also be labelled ecotaxes exist outside the framework of this law.

because the law stated that the tax receipts will be transferred to their budget. So they have a clear interest in any amendment of the law. Moreover, most modalities of indirect taxation are governed by the regulatory framework of the European Union.

The Belgian ecotax law contains both a general framework for the introduction of ecotaxes and a first series of ecotaxes. They will gradually be implemented according to a precise time table laid down in the law. The original time table however proved to be too stringent in view of a large number of implementation problems and accordingly had to be relaxed by parliament. Both in order to follow-up the implementation of the ecotaxes already established by the first law and in order to prepare the introduction of new ecotaxes a follow-up commission was created consisting of 13 experts in environmental economics, ecology, environmental law, waste treatment, fiscal affairs ... It has been given broad powers to amend the existing law, to propose the introduction of new ecotaxes and the abolishment of existing ones. No amendment of the ecotax law by the government is possible without consultation of the ecotax commission. The final decision of course rests with parliament, which has no legal obligation to consult the commission, but can do so if it considers such consultation useful.

## 2. THE BELGIAN ECOTAXES

### 2.1. General principles

Belgian federal ecotaxes are products taxes. Their main aim is to change the structure of relative prices in the Belgian economy, thus confronting Belgian consumers with a clear incentive to change their consumption pattern in a more environmentally friendly way. Underlying this approach is the idea that as the change in consumer behaviour would feed back into the economic system, producer behaviour would also change since producers have a clear interest in offering more attractive goods to the consumers in order to protect and expand their market shares. Crucial variable in this respect is the elasticity of demand. Product taxes being indirect taxes, a low elasticity of demand means trouble : a high price increase and a small decrease in the consumption of the targeted goods. Therefore the law departs from the principle that ecotaxes are only installed when the consumers or the users of the goods they are levied upon, have an alternative - economically acceptable and ecologically desirable - by which they can avoid the payment of the ecotax. Thus for every tax the law stipulates a number of exemptions that specify the alternative behaviour of consumers that one aims for.

As is already suggested by the tabel Belgian ecotaxes are not of the Pigovian type. Their tax rate is not related in a precise way to the environmental damage, the products on which they are levied, are causing. They are more of the Baumol-type, the level of the tax rate is rather high and set explicitly to put pressure upon the producers and the consumers to adapt the alternative behaviour that is stipulated in the exemptions. In some instances the maximum price raising effect however is rather uncertain. With respect to pesticides e.g. the tax base is the active material so the price raise to which the consumer is confronted depends to a large extend upon the precise formulas of the different products that are made using this active material and upon the prices of the products concerned. With respect to drank containers there are instances that prove that the distribution firms follow a global policy so it is not sure that

the ecotaxes on one way containers would be passed on through the prices of those products and not by price increases of refillable bottles.

Belgium is a small open economy, completely integrated in the European Union, based on the free movement of goods and services. Accordingly it has a high propensity to import and to export. Factors of production as well as consumers are very mobile. Due to its geographical situation in the center of the Union, the country is also the heart of many distribution networks within the European Union. In order to protect the vital economic interests of the country a second principle was followed : exports have to be exempted from ecotax, while imports have to be taxed in the same way as home-produced goods.

Belgian federal ecotaxes are product taxes. The general philosophy embodied in the law is that products are only submitted to an ecotax provided that the payment of ecotaxes can be avoided through selecting a more environment friendly alternative. So if consumers will respond effectively to the ecotaxes, tax receipts will be minimal.

## 2.1. The main characteristics of the individual ecotaxes

Six categories of products are subjected to ecotaxes.

### 2.1.1 DRINK CONTAINERS

In the original law containers of mineral water (except non fizzy water), limonades and other soft drinks, colas and beers were subjected to an ecotax. The law made it possible however to expand the system thus created to other drinks.. The Commission advised to the government to expand the application field of the law to all drink containers as from 1996, january 1st on. This proposed modification has just recently been accepted by parliament. The law provided for a rather complex system of exemptions based on the one hand on re-use conditions and on the other hand on recycling rates that have to be met by individual producers or by associations of producers. This exemption system is clearly the result of a compromise between those who favour re-use and those who favour recycling. In a sense Belgium lays on the dividing line between the North of the EU (where the distribution system is oriented towards re-use) and the South (where it is oriented towards one-way packages).

A general exemption is given for those containers that can be re-used at least seven times, provided they are effectively collected by means of a deposit refund system and are also effectively re-used. The law fixes the minimum rate of the deposit refund (15 BEF for large and 7 BEF for small containers) and states that in accordance with the polluter pays principle the collection has to be entirely financed by the producers themselves.

For producers that put containers on the market that do not fulfill those conditions a tax exemption is still possible provided that in a particular time period they reach a combination of re-use and recycling conditions. The re-use percentage differs according to the product packed. A distinction is made in this regard between fizzy water, cola, beers and other limonades in order to take into account the existing differences in consumption habits, especially with respect to the use of one- way or refillable containers. The objectives are strenghtened in the period 1994-1998. E.g. for fizzy water from 44 to 69 pct., for cola from

44 to 60 pct. and for beer from 94 to 95 pct. The producer submitted to the ecotax can fulfill this condition either individually or in an association with other producers. With respect to the non-re-used containers the producer who asks for an exemption must in addition fulfill recycling conditions which differ according to the material out of which the one-way containers are made.

Because the mixed condition proved to be too difficult for the fiscal administration to control, parliament accepted a government proposal based on a recommendation by the Follow up Commission. Apart from the mixed exemption clause, based on increased recycling of one-way packaging and on an increase in the share of re-usable packaging put on the market, a more simple exemption clause based on recycling conditions alone is also accepted up until the year 2000. As a consequence exemption of ecotaxes can be obtained for :

- re-usable containers;
- one-way containers provided targets of recycling are reached for the period 1996-2000. Those targets change over time and are differentiated according to the material out of which the drink containers are made :

	1996	1997	1998	1999	2000
- glass	55	62	67	73	80
- metals	40		47,5	58	64
- plastics	20		30 43	56	70
- carton for milk	20		30 43	56	70

The original law stated that PVC bottles could never qualify for the exemptions and thus were automatically submitted to an ecotax. The follow-up commission was asked to draw up a report on the ecological aspects and the socio-economic effects of this discriminatory PVC tax. The Commission came up with a report summing-up the main arguments of the debate and later concluded that PVC bottles could be given the same exemptions that were applicable to plastics. The threat to PVC bottles however made producers to decide to withdraw them from the market already before the final decision was taken.

### 2.2.2 *THROW-AWAY PRODUCTS*

The objective of this part of the law is to create an incentive for the consumer to substitute those products by more durable goods. At the moment only throw-away raisors and throw-away cameras are subjected to the ecotax. The follow-up commission will have to add other more important goods to the list.

For throw-away cameras an exemption is provided for in the law. It stipulated that for those producers that could proof that 80 pct. of the spare parts of the cameras are actually re-used in cameras of the same type, the ecotax did not apply. The original law provided that when proof was given that 80 pct. of the spare parts were recycled a lower tax rate applied. The ecotax law thus de facto favoured those producers that oriented their environmental management systems towards re-use over those that in the past opted for recycling. The ecotax commission

proposed to make recycling and re-use equivalent for those throw-away cameras and the government accepted this modification.

### *2.2.3. THE PACKAGING OF CERTAIN INDUSTRIAL GOODS*

This tax applies to packaging of glue, of printers' ink, of pesticides for agricultural use. The tax does not have to be paid if a deposit-refund system is installed and if the packaging collected through this system is re-used or disposed of or usefully applied in conformity with the existing solid waste regulations and on the condition that those operations are financed by the producer. The ecotax does not apply to products for non-professional use (small content). On the suggestion of the follow-up commission other collection systems were also accepted provided certain collection targets are met.

With respect to packaging of glues (with a content above 20 l) the following collection targets must be met :

- after 6 months                      40 % collection
- after 1 year                              55 % collection
- after 2 years                              70 % collection.

Packages of glue with a content between 10 and 20 liter must be collected by a voluntary collection system, but no specific targets apply.

The collection system of packages of ink that have a content exceeding 2,5 liter must meet the following collection targets :

- 1 year                              40 %
- 2 years                              60 %
- 3 years                              85 %.

Packaging of pesticides for agriculture use the collection system must meet the following targets :

- after one year                      60 %
- after 2 years                      80 %.

In contrast to the other collection systems collection systems based on a deposit-refund must not need certain performance targets as the use of a deposit-refund is thought to be a good enough guarantee for the effectiveness of the collection system. Anyhow, the Government can set upon a proposal of the follow-up Commission a minimum level of the deposit-refund.

### *2.2.4. PESTICIDES AND FYTOPHARMACEUTICAL PRODUCTS*

The objective of this tax is to give an incentive to the users of toxic products to substitute them by cleaner alternatives. A list was published that made a distinction between very toxic, toxic and less toxic products. The tax rates differed accordingly. A large number of exemptions is provided for of which the exemption granted to farmers is the most disputed one.

Originally a list was published that made a distinction between very toxic (tax rate 10 BEF), toxic (tax rate 5 BEF), and less toxic (tax rate 2 BEF). The follow-up Commission had to define for each of those products the substitute(s) that are composed of active substances that are proved in the long term to have the best effect upon human beings and upon the natural environment. The three lists were however very much contested both by the industrial sectors concerned and by the scientific world. The determination of the non-taxed substitutes proved such a time consuming and costly effort that the follow-up Commission opted for a quite different approach.

The new law now makes a distinction between two categories of pesticides and phytofarmaceutical products. The first list is taxed with a rate of 10 BEF per gram of active substance and contains substances that are frequently present in an environment to a degree that exceeds the legal limits as the toxicity limit accepted for the most vulnerable organism in an environment. The second list consists of products the presence of which in the environment does not exceed the above mentioned limits but roughly approximates those limits. They will be taxed at a rate of 2 BEF per gram of active substance. A third list consists of substances that are not yet submitted to an ecotax but for which the emission in the environment creates enough concerns to put them under surveillance. Products are only put on those list after a thorough evaluation based both on environmental and socio-economic criteria (is an economically acceptable substitute available). In addition the environmental criteria concerned will be gradually broadened and refined. So the lists will be evolving. New products could be added each year.

#### 2.2.5. BATTERIES

The purpose is to separate the waste stream of batteries from other domestic waste. So ecotaxes are not due if industry sets up and finances an individually or collectively organised deposit refund system that enables it to valorize the collected batteries. The ecotax commission proposed to the government also to accept a voluntary collection system provided it meets certain performance targets :

1996 : 40 %  
1997 : 50 %  
1998 : 60 %  
1999 : 67,5 %  
2000 : 75 %.

Batteries have to be recycled on the expense of the battery producers using BATNEEC-techniques.

#### 2.2.6. PAPER

The goal of this ecotax is to stimulate the use of recycled paper and to limit the use of chlorine gas in paper production. So the law stipulates the objectives with respect to the recycled fibre content of different kinds of paper. These objectives have to be met between 1994 and 1999. The tax is lowered by 50 pct. if the paper pulp is not chlorine bleached. The

system of taxation incorporated in the law runned into serious problems because it proved scientifically not possible to ascertain with enough reliability the exact recycled content percentage or the absence of chlorine bleaching during the production process. Therefore, on an advise of the ecotax commission the execution of this part of the law was postponed untill the end of 1996. The follow-up Commission in the meantime will decide on a reform of the tax.

### 3. IMPLEMENTATION PROBLEMS

The implementation of the eco-taxes ran into serious difficulties. As a consequence, the execution of the law had to be postponed several times. The follow-up commission had to suggest many technical amendments. The following paragraphs present a general overview of the main difficulties that were encountered during the implementation phase.

#### 3.1 THE NEED FOR CLEAR AND AGREED ENVIRONMENTAL OBJECTIVES

Perhaps the most important and in a way a somewhat paradoxical experience is that the instrument as such is less disputed than the goals it is meant to serve. This phenomenon could be observed on a great number of occasions : the choice of the harmful pesticides and phytopharmaceutical products, the favouring of re-use over recycling, the justification for imposing recycled content provision in the paper industry. The conclusion is obvious : in order to avoid great difficulties in implementing ecotaxes the environmental philosophy behind the introduction of the ecotaxes has to be clearly defined, understood and accepted by the public and by the actors concerned. Furthermore the ecological links that are crucial for the success of the ecotax solution have to be clearly established. Gradually it became clear that in a number of cases this condition was not fulfilled in the Belgian ecotax law.

Problems often arise because one instrument (the ecotax) is used to reach several goals, whilst the relationship between those goals is insufficiently established out before. Whenever one violates the old Tinbergen rule of economic policy (Tinbergen 1970) that for every goal a different instrument has to be chosen, one ends up in trouble. The ecotax on drink containers illustrates this point perfectly. The law favours re-use systems over recycling ones. It is however not at all clear whether in all situations this is the best solution. Instead it is more likely that the best choice will depend upon the individual situation of the producer. Re-use systems are e.g. cheaper when one can easily organize several trips, when the distance from the polluter to the consumers is rather small, when the distribution sector has the possibility (e.g. space) and the willingness to collaborate, etc. Mineral water producers e.g. in general have more problems with the REF/PET solution than other soft drink producers because they are afraid that the quality of that product might deteriorate. So a general assessment of the relative benefits of the two options that would lead to the same optimal outcome for all producers of all drinks in all circumstances is very difficult, if not impossible to achieve. The experience rather confirms the wisdom of the Austrian School : correct assessment of benefits and costs of alternative actions is only possible by the actors themselves. So emphasis should lay on creating the right institutional environment that enables producers to take the appropriate decisions as to the design of their products and distribution systems instead of on government prescriptions of the products they should produce and the distribution systems to

be used. Important in this respect are e.g. correct prices. The efforts to reach a global ranking of goods (here alternative packaging systems) based on a multitude of environmental criteria and irrespective of the other non-environmental criteria that are important for their utility will almost certainly fail. In this respect there is a general demand for ecobalances although this instrument does not prove to be the magic tool that solves all problems in the discussion (King Baudouin Foundation, 1995). Amongst others because data in most cases are obtained from industry and as such are disputed by the other actors concerned and because some basic choices (e.g. what effects have to be incorporated, and how are different effects to be aggregated, what is their relative weight) continue to provide ample stuff for discussion.

Moreover, goods create a large number of environmental problems from cradle to grave. To be able to solve them all by way of an ecotax on the product level seems an illusion and is very likely to be inefficient because doing so one limits the number of options open to producers and consumers for remedying those environmental problems. Once again the old economic prescription that the instrument must interfere as near to the problem as possible seems to be the best rule to follow. Within this philosophy product taxes on consumption goods can offer a good solution for environmental waste problems created during and after their consumption; they are in general only a second or third best solution for problems during the production phase.

Another example of unclear goalsetting is provided for by the ecotax on pesticides and fytofarmaceutical products. At the basis of this tax lies the classification of products in very toxic products, toxic products, less toxic products and least harmful ones. This classification was heavily disputed, both because of a lack of scientific justification and of a lack of clearly defined environmental goals. In particular it became clear that in a number of instances a clear difference exists between the ecotoxicity of some substances and the human toxicity of those products. The scientific material with respect to human toxicity is more available, but unreliable with respect to eco-toxity. Moreover, evaluating only the substances is insufficient because the effect on the environment depends also upon the concrete formulations in which those substances are applied and upon their concrete application for certain specific purposes. In this case a general instrument like a tax is less suitable to solve the problem. Because our knowledge is too limited and we cannot make a global judgement on all pesticides and products together, one must be very careful not to create perverse incentives : newer products are ecotaxed because their harmfulness has been scientifically proved; thereby a incentive is given to buy older products that are not tested for ecotoxicity. All of this of course makes the tax system very complex, provides ample room for discussion, creates a severe impediment for the acceptability of the new tax and makes it more difficult to implement it.

### 3.2 THE AVAILABILITY OF AN ALTERNATIVE AS A POLITICAL CONSTRAINT

Economists have advocated the use of ecotaxes because they were seen as an instrument that is in conformity with market logic. They change relative prices and as such they give a direct incentive to the consumer to alter his consumption pattern substituting ecotaxed products by non-ecotaxed alternatives.



The economic argument in favour of green taxes goes even one step further. Even when no alternatives are available, eco-taxes have a clear advantage over standards because they stimulate technological innovation. Market competition will induce polluters (producers and consumers) to search actively for new methods to lower their tax burden. Environmental taxes thus make it possible to mobilize the great potential that research and development offer in favour of the environment. Therefore, confronted with economic theory the necessity that a non ecotaxed alternative must be available which is incorporated in the Belgian law can be reduced to what it really is : a political constraint for the application of the ecotax, instead of a solid economic argument.

When substitutes do exist, is it not more feasible simply to ban the environmentally undesirable product and as such force the previous users of it to opt for the available alternative ? This is true provided :

- a. the undesirable product has to be banned completely;
- b. the international trade rules allow the government to act as such;
- c. the alternatives are correct substitutes for the undesirable products.

If one of those conditions is not fulfilled the administration will be under pressure to set up a complex set of administrative rules to govern the use of the undesirable products. In this case it is easier to use a product tax than a system of standards.

E.g. the pesticides and fytofarmaceutical products submitted to ecotax seldom have a perfect substitute in concrete applications. Instead different products have different degrees of substitutability with respect to each other in concrete applications. Potential users have to judge the relative performance of those products for a number of criteria (effectiveness, price, frequency of application, facility of use, technological and administrative requirements for use, depreciation period of existing capital stock, market position with respect to possible suppliers ...). The administration does not have enough information at hand that enables it to decide where the product is still necessary and where not. If it would try to do so this would lead to a complex system of permits that could easily be manipulated by the private sector. In such a situation ecotaxes have the great relative advantage that they interfere only indirectly in the choice process. Ecotaxes interfere in this evaluation affecting one but only one parameter - price - , thereby tilting the balance in favour of substitution in one case, inducing towards a more limited use in another or towards abolishing the practice altogether etc. As a consequence only a hard core of users will remain after the installment of the tax, those where - according to the market and not according to the administration - the use of the tax really has an economic justification.

### 3.3. POLITICAL BARRIERS TO THE INTRODUCTION OF ECOTAXES

Standard text book economics favours environmental taxes because they are more in conformity with the market system. Why do they still meet such stiff resistance then ?

1. First of all it is clear that the business community does not like the ecotax idea. The business community favours voluntary agreements and the regulatory approach to incentive charges for several reasons.

- Those instruments are less costly for them, because residual pollution is for free.
- The regulatory approach provides polluters with much more room for influencing environmental policy goals than taxation. Specific environmental policy regulation in most instances arise out of negotiations between polluters and environmental bureaucrats about the exact meaning of "BAT or BATNEEC, so they can be manipulated by industry, which has a clear information advantage over the administration.
- In some less Calvinistic countries (e.g. Belgium) the effectiveness of the regulatory approach is still rather weak due to a lack of control and a lack of effective sanctions. Most textbooks state that environmental standards are in general more effective than charges. This statement may be true in theoretical models, but in practice it can be doubted. The economic analysis of law on the contrary suggests that there is no much difference between both instruments in this respect. Most differences between charges and standards, mentioned in the literature, are on closer examination not convincing<sup>(2)</sup>. The compliance with standards must indeed be seen as the result of micro-economic decisions by members of the target groups based on balancing marginal non-compliance costs (determined by moral beliefs, public pressure, consumer behaviour, subsidies, expected sanctions) with marginal compliance costs (marginal sanitation costs). According to this analysis, compliance with regulatory standards seldom is an all - or - nothing decision, but on the contrary leads to the establishment of some optimal rate of compliance. Hence, regulations also are not 100 % effective. Furthermore, behaviour that conflicts with policy goals is immediately sanctioned in the charge system whilst sanctioning in the bureaucratic system may require a long bureaucratic/judicial and even political decision process, the outcome of which is highly uncertain. It is precisely this lack of effectiveness that sometimes makes the regulatory approach interesting for some target groups.
- The business community also opposes to charges because they suspect that incentive charges after a while will be seen as an easy way to raise government revenue. Especially in countries - like Belgium - with a high average and marginal tax rate this fear is very real.

2. Not only the business community is opposed to the ecotax idea. The ecotax idea met stiff resistance by other segments of the population too. The main preoccupation of economists is efficiency. This is not the main preoccupation in the political arena where distributional issues and the relative bargaining power of the target groups dominate the outcome of the decision process more than the theoretical economic analysis based on the efficiency motive does. Environmental charges are to a large extent still seen as licences to pollute. Economically this argument only holds ground if adaptation costs are very high and the elasticity of demand is very low, which in most cases is certainly not true in the

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<sup>2</sup>. See R. Osterkamp, (1984) and H. Weck-Hannemann and B.S. Frey (1994).

long term. The short term however prevails in the political arena. From a distributive perspective the argument is a little more convincing. Political actors often take a moral stance and resent that some people willing and/or able to pay are allowed to do something which according to their opinion should be forbidden altogether. This moral approach is coupled with a somewhat naive belief in the effectiveness of government regulations and laws (<sup>3</sup>). Partly to overcome the scepticism of the population it was decided to accompany the introduction of ecotaxes by a media campaign.

3. It is generally accepted that the environmental bureaucracy is not keen on environmental taxes, because they fear their influence in important policy decisions will be diminished. Although one would have expected the opposite reaction from the fiscal bureaucracy, the fiscal administration too proved to be rather reluctant to this new instrument. This could be explained by several factors. The financial approach presents a clear turn-away from tradition in fiscal policy. Recent developments in fiscal practice favour indeed more simple fiscal systems in order to raise the effectiveness of tax collection and to affect as little as possible the allocation of goods and services in the economy (tax neutrality). That policy approach allows only for taxes to finance government expenditures.
4. The Belgian experience clearly shows that producers and consumers of products that bear the risk of being ecotaxed remain not passive actors in the decision process itself. In other words they do not wait until the ecotax is installed and then react to it. Instead they intervene in the decision process offering advice, asking for changes in the legislation, suggesting new solutions, pointing to application problems and attempting to twist the regulation gradually in their advantage. The Belgian experience also points in this respect to the importance of the announcement effects. A lot of adaptation clearly occurs before the actual system is in force, because once industry knows in what direction government regulation will go it has a clear interest in reacting early enough in order to strengthen its market position. As a consequence it might well be that when we will be writing the history of this new tax bill a lot of taxes will in practice never have been paid. They will only have served as a stick for the private sector to come up with alternative solutions. E.g. in the law on several occasions deposit refund systems were suggested as an exemption to the ecotax. Industry proposed alternatives to the deposit refund system in the form of voluntary collection and treatment systems. It is clear that such collective efforts by industry could only be obtained because of the threat of a collective enemy, being the ecotax. Moreover the continuation of the threat proved to be crucial for the viability of the

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<sup>3</sup>. See e.g. Kelman (1982).

industrial initiatives. Without such a threat industry could never have found the cohesion necessary to make such solutions work.

### 3.4. THE IMPORTANCE AND THE DANGERS OF CONSULTATION

While working out the concrete details of the Belgian ecotax it became clear that there is a great need for consultation with the sectors concerned.

Putting into practice the ecotax idea asks for a lot of specific decisions for which a detailed knowledge (data) of the sector concerned is indispensable. This information is in most cases not known by the administration, so it has to rely on the information obtained from the industry concerned. Only industry knows or can foresee to a certain extent e.g. the possible reaction of the sector to a certain measure, the concrete market structure and the eventual reactions of the buyers and the importers and exporters, the technological details of the production processes. Obtaining the voluntary co-operation of producers and users in a mixed economy proves to be an important political challenge for any proposal in this field.

This however creates the well known danger described by STIGLERS regulatory capture theory<sup>4</sup>: the regulated sector takes over the regulatory process itself and tries to create rents by erecting artificial market barriers. Many modalities of application (time, exemptions, stock treatment, import treatment, definition of products) could serve de facto as a barrier to entry. In this respect it is understandable that industry is seldom united. Representatives of an industrial sector are indeed at the same time competitors, and therefore distrusting towards each other (leading e.g. to large representations during consultation). Representatives are often not only representing the groups interest, but at the same time they are pursuing their own specific targets in order to strengthen their own market position. In a mixed economy lobbying for regulation which affects differently subgroups of an industry, is a well known strategy for rising rivals costs. This strategy is indeed more efficient for attacking enterprises than predatory pricing, because is less costly. The firm does not need high financial reserves<sup>5</sup>. The danger of hidden protectionism as such is very real because importers are seldom represented by such sectorial delegations. Thus domestic industry does not only ignore the specific interests of foreign firms but in some cases even tries to use the ecotax law as a hidden import barrier.

Although very useful and even imperative the consultation process constitutes a complicating factor in the decision process. It is often not easy for industry to speak with one voice. Common positions are only arrived at after long internal negotiations. They are based upon whealing and dealing and do not always reflect economic efficiency. After all, the different firms are in a somewhat uncomfortable position : they must collaborate to combat a common enemy, whilst on the market they remain competitors. So one must be very careful with advice coming from the industry; small and medium enterprises e.g. are not adequately

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<sup>4</sup> See Stigler (1971).

<sup>5</sup> See S.C. Salop and P.T. Scheffman (1983) and also S. Oster (1982).

represented by great multinational firms. Producers do not have the same interests as the distribution sector. Moreover in order to strengthen the political acceptability of the new tax it is important to consult not only with industry but to extend the consultation also to other groups involved : employees, consumers, environmental groups, local policy makers. All this argues for a balanced and coherent consultation policy.

One more complicating factor : industry concerned does not always have the necessary insight into the environmental philosophy that led to the imposition of the ecotax and as such does not speak the same language as the legislators, a factor which is crucial for getting the right message around. In Belgium industry was clearly surprised by the political debate and as such was at the beginning unable to play its full role in the discussion. This explains partly why so many implementation problems were put forward only after the voting of the ecotax bill.

### 3.5. THE INSTITUTIONAL INTEGRATION PROBLEM

Both the effectiveness of action and the political acceptability are negatively affected if on the field elements of the new ecotax law prove to be in contradiction to other parts of the regulatory framework. Once again in the implementation process in Belgium the collaboration of the sectors concerned proved to be crucial for detecting this implementation problem. A complicating factor in finding adequate solutions to this problem proved to be that both for political and juridical reasons it is in most cases not possible to change other pieces of regulation in order to accommodate for the introduction of ecotaxes. Therefore solutions for this kind of conflicts have to be found nearly always in the ecotax system itself. This complicates the task considerably. With respect to the Belgian ecotax law this co-ordination problem mainly exists with respect to waste policy initiatives taken on other policy levels (both the EU and the regions) and with respect to the incorporation of the new ecotaxes into the existing fiscal regimes.

Belgium is a decentralised state where competence for environmental policy mainly rests with the regions. Therefore they are involved in the implementation strategy. Regions are for instance responsible for the recognition of the recycling associations that have to be created by industry in order to fulfil some of the conditions to get exemption of ecotaxes on drink containers. Within the framework of their competence with respect to waste treatment they are negotiating a take-back obligation with respect to package which could lead to a waste recycling structure similar to the German Dual System. The need for co-ordination between the regional take-back system on the one hand and the national ecotax system on the other hand is obvious, but difficult. In general Belgian industry seems more attracted by the regional recycling system and lobbies in favour of a change in the ecotax law in such a way that it would accept adherence to the less stringent regional global recycling scheme as a sufficient condition for ecotax exemption. The separation of powers already has created an incentive for forum shopping.

### 3.6. THE NON-DISCRIMINATION ARGUMENT

The problem of alleged discrimination proved to be very important for the implementation of ecotaxes. The ecotax commission was confronted with many allegations of discrimination. It became gradually clear that this accusation could have several meanings.

### 3.6.1. Discrimination on ecological grounds

The explicit purpose of any ecotax is to discriminate environmentally unfriendly products and to favour environmentally friendly ones. Although in general this principle for obvious reasons cannot be disputed, its practical application provokes heavy discussions. E.g. there was much discussion about the relative importance of the ecotaxed products with respect to the environmental problem at hand. Are the products selected for ecotax really the most important ones with respect to the environmental problem at hand? Producers of the throw-away products submitted to ecotaxes argued that the amount of waste created by their products is really insignificant compared to the total amount of solid waste. So why not start elsewhere ... Producers of the ecotaxed (soft) drink containers argued that their competitive position was worsened vis-à-vis non ecotaxed products, without solid environmental arguments : ecotaxed beer versus non ecotaxed wine, ecotaxed lemonades vs non-ecotaxed juices. The answer to those complaints of course is obvious, one has to speed up the introduction of new ecotaxes. So the ecotax commission took the decision to install a general ecotax regime for the drink containers.

A lot of arguments related to the link between the negative external effect created by the products submitted to an ecotax and the exact tax rate imposed on them. Industry often invoked the principle of the Pigovian tax in order to criticise the ecotax law. According to them the tax rate was not equal to the marginal external costs created at the optimal level of economic activity. This theoretically sound principle is however very difficult to put in practice because of the great difficulties in measuring ecological damage. The methods of assessing external damage are far from perfect and very time- and money- consuming. Moreover the economic methodology is often heavily criticised by environmentalists. Behind the rejection of the economic valuation system by environmentalists often two implicit value judgements are hidden. Firstly, they do not accept the principle of consumer sovereignty, the cornerstone of neo-classical cost/benefit techniques. Instead they prefer value judgements based on democratic decision mechanisms. Secondly, their implicit relative price of environmental goods vis-à-vis material wealth is much higher - sometimes even equal to infinity - than the relative value given to both goods by most citizens.

Eco-balances are often advanced as a solution to the valuation discussion, but do not in reality make an end to it. E.g. some time before the ecotax law came into being the Flemish government ordered an ecobalance study with respect to several types of drink containers. It became clear that the results of this study could be used to assess whether the discrimination contained in the ecotax law was justified. The methodology of the study became however very disputed.

Apart from other shortcomings eco-balances suffer from the following weaknesses. There is no general consensus on the effects that have to be taken into consideration when making the analysis. In other words, how far does one want to go in order to assess potential negative effects. As a consequence Belgium ecotax rates are of the Baumol type. They are chosen

without an optimisation calculers. Data are provided by industry and as such do not constitute a reliable source of information to everybody. The ecobalance methodology wrestles also with the problem of how to assess the relative importance of different environmental impacts. As a consequence ecobalances are not the magical tool that could solve all decision problems. Although they are of great use in making the decision more objective, political value judgements are inevitably involved. Moreover, much additional research will be needed on the incorporation of this decision tool in the global decision process and on the link with economic decision tools, like e.g. cost/benefit analysis.

### 3.6.2. Discrimination due to the implementation process

It became gradually clear that the decisions concerning the implementation are as important with respect to possible discrimination as the actual legal provisions themselves. The timing of the tax, the way one calculates recycling and re-use rates, the interpretation of possible definitions by the administration (e.g. what exactly is a throw-away raisor?), stock treatment, exemptions... are administrative details but often could offer an important competitive advantage to one producer over the others. Therefore great attention must be paid to avoiding unjustified discrimination. Our experience made it perfectly clear that in a mixed economy the competition tools are not only price, product, place, promotion, but that influencing government regulation is also a very important aspect of competition. In the same sense we must be aware that many modalities of application are advocated by local industry at least partly because they contain one or more hidden market barriers favouring them over their foreign competitors.

### 3.6.3. International discrimination

In an open economy consumers and producers are free to move. So if the government of such a country takes action alone it always runs the risk of being confronted with deflection of trade. Consumers can go shopping directly in neighbouring countries. This element is very important in a small country where the border is always very near. Producers could relocate outside the country making use of the fact that the fiscal administration has no authority to control in a foreign country. As a consequence local producers protest when foreign competitors are not submitted to the same stringent standards that are imposed on them. They complain about ecological dumping and argue for the necessity of prior harmonisation of standards. This proves that the ongoing debate on the greening of world trade is very important.

## 3.7. TRADE OFF'S

Democratic governments pursue a lot of political goals simultaneously. Although for analytical reasons they are often separated, in the reality of political decision making one cannot prevent that even when pursuing one particular goal with a particular instrument the performance of this instrument with respect to the other goals becomes an important political constraint. Environmental effectiveness, efficiency, the impact on the welfare position of

particular groups of the population, the impact on the competitive position, the employment effects all determine the choices that have to be made. As a consequence a lot of trade-offs are inevitable. It remains one of the positive contributions the economic adviser can offer to the political debate to show that many alleged trade-off's can be overcome by clever policy making.

Ecotax experience clearly shows there is a trade-off between administrative feasibility and ecological and political demands. The fiscal administration asks for simple systems in order to limit administrative costs and to prevent circumvention of the law. Ecological reasons sometimes call for more refined tax systems establishing an exact link between the environmental problems created by different products, used by different persons under different ecological conditions. Also political acceptability leads to more complex systems, as the socio-economic impact has to be taken into account. E.g. with respect to the ecotaxes on pesticides a general exemption was made in favour of farmers, although the use of pesticides by farmers is much more important for the environmental quality than the use of pesticides by industry and individual households. So this exemption clearly hampers the environmental effectiveness of the law. Moreover it serves as a pretext for other sectors to lobby for exemptions too. Thirdly, it creates opportunities for circumventing the law : private persons instead of buying in shops and paying ecotax could easily buy through a local farmer thus avoiding the ecotax.

Certainly in an open economy and in the short time a trade-off is inevitable between ecological impact and socio-economic effects. One of the shortcomings of the Belgian ecotax law is the lacking of a socio-economic escape clause. In particular circumstances due e.g. to the specificity of production processes, the time period necessary for depreciation of the old capital stock, the period required for installing new technology, the administrative permits required for changing input use and production processes, an adaptation period and/or temporally relief measures might be justified. As a consequence one of the tasks of the follow-up commission is to establish the criteria that would enable to make an objective judgement as to the different demands made in this respect and to propose the conditions governing this escape clause.

#### 4. CONCLUSION

The introduction of ecotaxes on products in Belgium proves to be a very complicated task, more complicated than the law makers anticipated. It is not easy to combine environmental objectives on the one hand with the economic conditions connected with the free movement of goods and services and the existing fiscal system on the other. As a consequence there is a delay in the implementation process. Nevertheless we should not forget that even before their implementation ecotaxes have already had important effects. Industry has become aware of the underlying problems and now looks very actively for solutions. This 'soft' signalling effect is at least as important as the actual price differentiation that will be created in the market.

Belgian ecotax law, in line with OECD guidelines, provided for the introduction of a follow-up commission. This certainly proved to be a wise decision in view of the many difficulties of implementation. The commission plays the role of an objective forum where



implementation problems can be examined thoroughly and sometimes the consumers even acts as a catalyser in the implementation process. From the start it became very clear that two risks had to be avoided. One is that the commission could be overwhelmed by demands for revision or even abolishment of the taxes voted by parliament and thus should served de facto as a court of appeal for which it has neither the competence nor the powers. Secondly, there was a real danger that the commission should take over the tasks of the administration and become involved in all practical decisions. Although today it has not solved all the problems yet, the work of the commission clearly shows that it can play a constructive role in the policy implementation process.

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