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EDITORIAL

The environment rightly occupies a growing place in public discussion and international negotiation.

Economic analysis offers vital starting points, but it needs to be complemented by other perspectives.

Clearly, green taxes must first of all serve the specific objectives of environmental policy. However, they can also contribute to broader tax reform. This report tackles the question of replacing some capital taxes with environmental taxes head on.

Analysing the relationship between competitiveness and environmental policy is necessarily complex: although environment policies need to pay more attention to competitiveness, they must not become less ambitious in doing so. Recommendations range from the need to reinforce green taxes to increased WTO involvement in drafting environmental standards and the creation of a specialist body in France similar to the British Green Tax Commission.

Christian de Boissieu
Executive Chairman of the CAE

Environmental Policies and Competitiveness

Report by Dominique Bureau and Michel Mougeot

The environment occupies a growing place in public discussion and international negotiation. Nonetheless, existing environmental policies are fairly cautious, mainly because governments are reluctant to burden businesses with the cost of adapting production processes in order to make them less harmful to the environment, for fear of damaging competitiveness.

Dominique Bureau and Michel Mougeot show that environmental policies do not have a significant impact on corporate competitiveness, except in very specific cases. This does not make the issue of the effectiveness of these policies any less relevant. The use of tax incentives and emission permits is an interesting avenue, which France has so far scarcely explored.

The report was presented at the CAE plenary session held on 11th March 2004, then on 27th May 2004 in the presence of the Prime Minister. This letter, which is published under the direction of the permanent cell of the CAE, summarises the authors' main conclusions.

Manufacturers' often-expressed fear that environmental policies will weigh on competitiveness appears at present to be a recurring obstacle to the adoption of new regulations, not only in France, but indeed in all OECD countries. This can be seen in the debate surrounding the Charter on the Environment, the conditions for approving chemical products via the Reach project or the establishment of a European greenhouse gas trading scheme.

The objective of the report is to highlight the relationship between environment and competitiveness based on four questions: does the stringency of environmental regulations affect industry location? Are the benefits of environmental standards in proportion to the costs to the economy? How should the level of environmental taxes be determined in an open economy? And, on the issue of the strategic use of environmental policies: what is the reality of ecological dumping and what is at stake?

From this, the report goes on to examine whether the competitiveness argument justifies a less ambitious environmental policy. The report outlines several courses of action for the development of green tax in France.

Environmental policies and industrial location

Empirically, it seems that environmental costs are too low to influence decisions concerning international industrial location in most sectors. Indeed, business spending on environmental protection accounts for less than 1% of GDP. At this level, environmental regulations are only one factor among others that determine business location. Furthermore, industries that are relatively 'dirty' and therefore most affected by environmental regulations are also the least geographically mobile because of the weight of transport costs in the price of the products in question.

In the past, substantial progress has been made on waste and industrial water usage and industrial consumption of commodities and some air emissions without, it seems, endangering the competitiveness of our economy.

The fact that the bulk of French environmental standards stem from Community regulations reduces the risk. However, the tension between environmental and trade objectives could become more acute in the future. Empirical studies carried out within federal states show that environmental policies do not always produce a 'win-win' situation.

Therefore, they need to be reconciled with our involvement in international trade.

The case of steel

An illuminating study on the steel industry shows that a tax on CO_2 emissions would have harmful repercussions for European industry if it were not applied elsewhere.

More precisely, the study shows that an environmental tax (CO_2 emissions) applied to all OECD producers would bring about changes in manufacturing processes with considerable benefits for the environment. Furthermore, consumers would bear the bulk of the burden, because it would feed through to prices.

However, applying the tax to a smaller number of countries has more ambiguous effects. In addition to the above-mentioned benefits, it produces production lags between geographical regions. Furthermore, producers in traditional sectors would bear the brunt of the cost.

It would therefore be necessary to set up instruments that limit international distortions (e.g. customs duties based on emission content and export subsidies) or compensate industries through a system that does not reduce the incentive to decrease emissions (on the basis of a licensing system that has scope to go as far as financial neutrality for the sector).

Tax incentives and emission permits

The cost of environmental regulations is not in itself an argument against such regulations. First, regulations encourage a switch to cleaner products and processes within domestic production. Furthermore, if the relative stringency of environmental regulations in various countries accurately reflects the environmental absorption capacity of each country, such regulations will not necessarily harm trade specialisation, since dirty industries will tend to be located in countries where less damage will be done.

This positive view of the relationship between the environment and competitiveness assumes that environmental regulations are effective. Economic instruments, i.e. environmental tax incentives and emission permit markets or tradable quotas assume a particular relevance here. They are in fact intrinsically designed to distribute responsibility for environmental protection in a way that minimises the total cost to the economy insofar as efforts are made by sources of pollution with the lowest abatement cost.

The idea of these instruments is to establish a price signal to convey the scarcity of environmental resources. In the case of pollutants, the so-called 'Pigouvian' principle is to set the price at the level of associated marginal damage cost. If a polluter can reduce pollution for a lower protection cost, he will endeavour to do so, and the cost-benefit balance for the community will be favourable. If the cost of reducing pollution is too high, he will prefer to pay the 'price' of damage and again this will be the best decision from a social point of view. From an economic point of view, environmental policies would focus on creating these types of economic incentives in order to steer protection choices efficiently.

The term 'green tax' is unfortunate in this case, because it does not convey the fundamental differences between these taxes and contributive taxes, whose aim is to generate revenue. For contributive taxes, the rule is to minimise distortions ('low tax rate/large tax base'), whereas for green taxes the opposite applies ('strong targeting and sharp differentiation' of tax rates in order to influence behaviour).

This approach, based on the price signal, is fundamentally opposed to both voluntary and regulatory approaches. In effect, it recognises that the markets do not spontaneously factor in environmental resources. The overuse of these resources cannot be corrected without concerted public action (such as was needed to introduce the catalytic converter).

Relying on OECD studies, the report stresses that the effectiveness of voluntary instruments is subject to caution. However, public intervention may take more effective forms than regulation, which is not generally efficient at distributing environmental protection efforts, since it tends to require excessive efforts from some quarters while neglecting others.

France is trailing behind

International comparisons currently put France behind other countries in the use of economic instruments. Although its use of energy taxes is average, it is trailing considerably on other environmental taxes and, unlike some countries, neither has it adopted the alternative economic instrument formed by tradable quotas.

The use of tradable emission permits is in fact equivalent to 'internalising' environmental damage costs in polluter behaviour. In this case, the price emerges from market conditions and the market develops once emission rights are restricted relative to the past situation, when they were free and unlimited.

Therefore, there is never such a thing as a 'right to pollute'.

The case of global pollutions

The principle governing the selection of economic policy instruments and objectives, according to which priority should be given to instruments that go to the source of a particular objective, suggests that the same rules should be applied to define environmental taxes once we possess economic policy instruments that go to the root of competitiveness: macroeconomic policy, industrial policy, structural policy, research and development policy, etc.

For global public goods, such as greenhouse gas emissions, however, the argument only holds good if environment policies have been harmonised at the international level. Otherwise, one is faced with a genuine trade-off between environmental compliance and competitiveness, as the Guesnerie report on the greenhouse effect has already shown. However, there is less of a tradeoff if the tax is redistributed effectively in terms of competitiveness (see inset).

Faced with conflicting objectives, the number of instruments needs to be increased in order to move closer to the one objective/one instrument rule. In this respect, the ideal solution would be to simultaneously apply the environmental tax and a border tax adjustment. The question is whether such import taxes and export subsidies would be acceptable to the WTO.

The Swedes offer another solution with their tax on nitrogen oxide, which is redistributed to businesses pro-rata to the energy they produce, which in this case constitutes a simple activity indicator. The advantage of this combination of instruments is that it creates a price differential that accurately reflects pollution costs in order to steer production choices without having an *ex ante* effect on marginal production costs and therefore the competitiveness of the industry. This system is obviously far superior to the solution of abandoning any ambitious environmental policy towards climate change because it will have to be applied unilaterally as long as the United States remains out of the Kyoto Protocol.

The reality of ecological dumping

'Ecological dumping' is defined as the preferential treatment of exporting companies by applying pollution taxes that are lower than the abatement cost (or less stringent environmental standards). Nevertheless, some pressure groups argue that it is both a strategy used by countries competing on international markets and a necessary choice in a context of strategic trade policy.

The report shows that ecological dumping can only occur under highly specific conditions, which underlines the weakness of the above argument. The policy is only credible when: trade policy instruments are confined to environmental purposes; competition occurs through production capacity (and not prices) and is limited to a small number of businesses; pressure groups representing export businesses are more effective than ecological groups; and government efforts are completely uncooperative, which raises the question of the role of international institutions.

Indeed, if each government practices ecological dumping in order to give domestic firms a competitive advantage, the commercial advantage is cancelled out (and the final impact is simply lower environmental protection). This is a typical example of the 'prisoner's dilemma': both countries have an interest in not practising ecological dumping, but in the absence of cooperation, the best response is to adopt it.

Taxes in France (TGAP: general tax on polluting activities) and Sweden, and costs

Emissions	TGAP	Marginal damage cost (ExternE)	Marginal abatement cost (CITEPA)	Swedish Tax
NO_x	45,73 €/t	10 800 €/t	200 à 8 900 €/t	4 412 €/t
SO_2	38,4 €/t	7 500 €/t	1 200 à 8 300 €/t	3 309 €/t

Sources: ExternE, European Commission and CITEPA.

Environmental policies and competitiveness

The competitiveness argument does not justify that we should lower our environment ambitions. Most econometric studies show that environmental taxes have had little effect on corporate competitiveness and a limited impact on business relocation and international direct investment. Furthermore, distortions from environmental policy generally carry a higher social cost than any other policy targeting competitiveness.

Nonetheless, it would be good if our environmental policies were designed with a greater focus on their potential effects on competitiveness, whereas they rely primarily on regulation rather than economic instruments such as environmental taxes and tradable emission permits. The insufficient development of these instruments is therefore disabling competitiveness but is also a disadvantage from a strictly environmental point of view, because diffuse pollution can only be treated, behaviour only be changed and prevention only be developed through economic incentives that encourage accountability.

It also follows that the quality of environmental policies needs to be looked at more closely and must be a key focus when it comes to researching the effectiveness of regulation. When regulation is used, it is essential to make sure that its modalities do not constitute an obstacle to innovation. When a voluntary approach is implemented, the credibility of the approach must be carefully argued.

Placing the conflict between environment and competitiveness into perspective does not appear incompatible with the intensity of public debate surrounding the issue, whether on the subject of chemical products, the Charter for the Environmental or the Kyoto Protocol.

Indeed, the public debate tends to extend to the economy as a whole a notion of competitiveness that applies only to business. The notion of competitiveness has a relatively clear meaning in the context of an individual firm. If, for example, a firm's unit costs exceed the ruling prices on its markets, it will be unable to sell its product except by making a loss and will end up disappearing.

But this type of reasoning cannot be extrapolated to the level of a country because a firm is a form of organisation, talent and capital that can very well disappear without the resources it used disappearing; rather they are recombined through other organisations. At the macroeconomic level, the question is therefore whether environmental policies will have harmful effects in terms of industrial specialisation and location.

In addition, the public debate focuses less on the desirable level of protection and identifying the least costly ways of achieving it, than on how the cost of these efforts is to be allocated. The debate therefore boils down to a domestic issue concerning distribution.

Courses of action for France

Here we can draw inspiration from a number of overseas examples.

The United Kingdom has made impressive progress in introducing green taxes over the past decade or so despite changes in government. These taxes includes landfill taxes, quarry taxes and, more recently, a climate change tax and the introduction of congestion charges in London, whose initial results seem positive and confirm the role of monetary incentives in encouraging environmentally-friendly behaviour. At the same time, elements of taxation that acted as a 'pollution subsidy' have been eliminated with the removal of the price differential between diesel fuel and premium grade unleaded petrol in 1994.

Swedish tax reform offers another point of reference. It is characterised by the systematic use of tax differentials in order to change certain behaviour or speed up the incorporation of technical progress by applying numerous taxes in the areas of air pollution and water pollution, with significant charges on chemical products used in farming. Officially, such taxes also exist in France, but at insufficient rates to guarantee changes in behaviour. This situation seems highly destructive, because it discredits what could be highly cost-effective instruments (see table).

Green Tax Commissions

A point often highlighted concerns the institutions that are needed to build accep-tance of environmental taxes. In countries where they have taken off, a key element of their success has been the establishment of Green Tax Commissions, which bring together an even balance (to avoid the possibility of hijack) of representatives of the public, industry and academia and environmental, tax and legal experts.

The recommended deve-lopment of green taxes could coincide with a reduction in capital taxation. However, this must not be seen simply as a combination of two distortions in our tax system requiring correction. Under no circumstances does it allow certain polluters to escape the mechanisms of accountability, because it would involve companies.

In conclusion, the main obstacle to the expansion of green taxes is the need to build mechanisms and institutions that fit in with economic policy in order to create a common interest when the benefits of current policy are thinly and unevenly spread.

Comments

Roger Guesnerie agrees with the authors as to the superiority of economic instruments (tax and permits) over standards and voluntary agreements. He points out that an exclusively European response to global pollution risks impoverishing Europe through relocation and could also increase greenhouse gas emissions. He argues for a gradual and structured implementation of environment taxes to give businesses time to adapt.

He stresses that the corresponding tax revenue is unable to sustain public finances.

Jacques Delpla also stresses the superiority of economic instruments. The introduction of a Green Tax Commission based on the UK and Swedish model would be a step towards an environmental tax system that offers genuine incentives. After talking to a number of business leaders, Jacques Delpla concludes that their biggest concern is the predictability of environmental rules rather then the rules themselves as well as fears about increasing judicial involvement in environmental disputes. As such, businesses prefer taxes that are clearly defined in advance to legal uncertainty.

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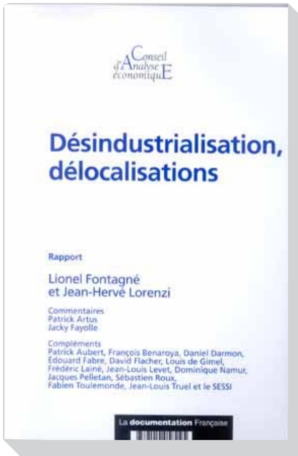

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