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### **Environment, Competitiveness, International trade and commerce: activating a virtuous circle**

For some time now the more forward looking and discriminating of international firms have been developing an awareness of the impact their activities have on the environment, whether economic, social or physical. The issues raised by this awareness are addressed by Corporate Social Responsibility and the rising importance of "Core Labour Standards", together with harmonisation of environmental standards<sup>1</sup>.

The common factor in these concerns is that the growing awareness amongst the business community of the social and environmental repercussions of their activities gives rise to concrete economic decisions related to management, organization and operations expressing a commitment towards the social and environmental context. These decisions are voluntary and represent self imposed responsibilities coming from within, springing from commitments felt within the company and not imposed by an external regulatory system.

This paper will tackle the theme of the promotion at an international level of environmental standards, using flexible and constructive tools that work at a company level to produce 'eco-efficient' strategies. Eco-efficiency, as a strategy adopted by a company to implement the principle of sustainable development, is a solution that comes from the "grass roots", from the real world of business and can be used by firms with the necessary economic resources to develop clean technologies and to set out and implement an efficient environmental strategy, embracing all functional and operative areas of activity, from top management through the logistics of production to the shop floor. This strategy is followed by the company to combine the traditional economic objectives with those concerning environmental conservation and allows the most forward thinking companies to compete on the international market with a competitive edge in the developed countries where care for the environment is a factor in the consumer's preferences.

However, this eco-efficient competition excludes, as a matter of course, the production systems in developing countries. Indeed, the debate on eco-efficiency focuses on the opportunities provided by technological innovation to companies operating in developed countries, without considering the fact that competition in eco-efficiency can only occur in countries with the financial and technical resources and the institutional environment disposed to implement innovation in the clean technology and natural and energy resource saving sectors. In developing countries, environmental standards applied are generally low and the focus of development is on the satisfaction of primary needs, mainly based on the production of raw materials, with a high environmental impact.

These are the factors that will be discussed in this paper. We shall attempt to chart the way for future investigations on the theme of promoting environmental standards in developing countries. This paper will discuss three themes, describing the relationships between environment and competitiveness, environment and international trade, and environment and business.

#### 1. Environment and competitiveness

Within a framework of increasingly global and intense competition, businesses are recognising that the environment is part of the economic battle ground and can provide a competitive edge. The relevance of the environment as a variable in business management depends on a number of factors, including: the sector, characteristics of products and technologies, consumer awareness and the degree of receptivity in the market. To meet the new environmental challenges, the business community has developed a strategy that aims to combine traditional economic objectives with environmental conservation. This strategy is called 'eco-efficiency', a term coined by the World Business Council for Sustainable Development (WBCSD), an international coalition of 160 firms that represents the point of

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<sup>1</sup> See the report by Professor Angelo Ferro, "From Social Dumping to Self Imposed Responsibilities: a pact proposed by UNIAPAC", presented at the UNIAPAC congress, Buenos Aires, 10 May 2002

view of world industry on Sustainable Development and indicates "the relationship between the economic value produced and the corresponding resources used". A recent study by E. De Cristofaro and P. Trucco identifies four areas for development in eco-efficiency: integrated product design, combining the traditional objectives of quality and reliability, through instruments such as the Life Cycle Assessment (LCA) or Design for Environment (DFE); eco-efficiency in the production logistics chain, using methodologies such as the Green Supply Chain Management (GSCM), adopted by the American company AMD, which, in order to prevent any interruptions in production, carries out environmental screening of its suppliers, particularly of chemical products; industrial networking, the creation of an exchange network for secondary materials and waste products which has been piloted in the Kalundborg industrial park in Denmark; and finally, integration of eco-efficiency policies into management strategies, using tools and referents such as: environmental balance sheets, environmental management systems and management models encompassing Quality, Environment and Safety.

The competitive value of the environmental factor is especially evident if we consider the technological factors: technological innovation of product and processes, driven by demand requirements, by legislation and by changes in the industry markets, represents a real element of competitive advantage.

In order to develop 'green' technologies, innovations and products, companies must have a critical mass of managerial and financial resources needed to meet the considerable investments required. To mobilise these resources a countrywide system is indispensable, embracing all elements from business to institutions, from associations to trade unions, to reach the goal of sustainability. This approach is justified by the role the environment now plays as a possible source of competitive advantage on international markets: as markets become more global, the environmental factor can enable those countries more developed in technological innovation to achieve leading positions. This implies a dominance of some countries in particular sectors, processes and technologies. This is the case of Germany, for example, and some Scandinavian countries, in the plant and environmental technologies markets, where there is strong demand for green products and restrictive environmental legislation (Gilardoni, 2000).

These considerations can be seen in the context of classical theories of comparative advantages, which identifies the sources of a country's comparative advantage in its ready availability of factors, technologies and preferences. More precisely, according to Porter, there are four factors determining a nation's competitive edge: the conditions of factors; conditions of demand; the industrial sectors, correlated and supportive; and the strategy and structure of business. He subdivides factors into basic and advanced: the former comprise natural resources and unskilled or semi-skilled labour; amongst the latter are modern infrastructure, research structures and a highly skilled and educated workforce. Furthermore, Porter notes that despite the existing differences between economies, it is possible to identify an emerging or predominant model for the nature of a nation's competitive advantage at a particular point in time and how it evolves. He identifies four phases of competitive development: development determined by production factors; stimulated by investment; stimulated by innovation; and finally, development stimulated by wealth. The industrialised countries derive most of their income from services and in the industrial sector they specialise in high technology goods with high added value supplied by a workforce which is usually highly qualified.

A country's potential to compete in the sphere of environmental protection, using innovative technological solutions, is therefore determined by the phase of development it finds itself in: the developed countries have passed through these four phases, while the developing countries are still in the first phase.

It is precisely because many countries are at present at an early stage of their development cycle that we must now look at some considerations on the relationship between environment and international trade.

## 2. Environment and international trade

The literature regarding the links between environment and international trade provides some models (Coperland and Taylor, 1994 and 1995) which show that the expansion of international trade has three effects: an effect of scale, following an increase in income, which indirectly causes an increase in pollution as a consequence of the rise in demand for goods; an effect of variation in techniques tending towards the adoption of cleaner

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production methods; and, finally, a composition effect that leads towards a relocation at an international level of the most polluting production activities. While the first two effects generally alternate, the composition effect can cause the relocation of relatively polluting activities to less developed countries and have the effect of increasing the overall level of pollution.

The existence of differing levels of development among countries raises the question for observers and politicians of the role international trade plays in shunting pollution from one country to another and of the need to find new forms of international co-operation on environmental problems and policies.

Critics of the liberalisation of international trade point to the fact that globalisation drives the more polluting activities towards countries with lower environmental standards, which, in the absence of binding international agreements, are encouraged to adopt unilateral strategies of environmental dumping.

In general, the problem varies, depending on whether it is a relationship between economies with relatively similar degrees of development, or between developed and undeveloped economies. In the first case, satisfying increasing consumer concern for "environmental quality" imposes costs on an economy that could potentially reduce its commercial competitiveness in relation to other countries. This can shift policies towards a less rigorous environmental stance. On the other hand, businesses operating in more restrictive markets have been able to exploit the system of constraints, benefiting from the protected internal markets due to restrictive legislation and, pre-empting the changes and standards only adopted later in other countries, investing in the development of clean technologies that represent a competitive advantage in international markets. We have seen that in developed countries the environment can become a source of competitive advantage for business, considered as an autonomous agent and part of the national infrastructure: indeed, businesses can find themselves in a favourable position due to the mature demand for environmental quality and the presence of environmental legislation which, (Gilardoni, 2000) attenuating the rigid and binding approach, evolves in the following directions:

- substitution of rigid predefined standards with flexibility and technological relativity of regulations;
- negotiations between authorities and businesses on environmental obligations and actions;
- self regulation in business (see section 3).

Thus, the legislative trend is moving away from setting predefined physical standards (maximum acceptable levels of pollutants per receptor unit) and towards adoption of principles advocating the best technologies available for safeguarding the environmental, compatible with economic sustainability of their costs. In this scenario, regulations are based on the so-called BATNEEC (Best Available Technologies Not Excessive Entailing on Costs), a principle applied for some time now in the UK and afterwards also adopted in Europe. This principle seems preferable because on the one hand it is more realistic in its expectations of business, and on the other because, not being tied to fixed parameters, it allows constant improvement in the task of safeguarding the environment.

Regarding the relationship between the countries of the northern and southern hemispheres, the crucial issue is that in many developing countries the adoption of dirty technologies and intensive exploitation of natural resources derives from the difficulty of acquiring innovative technologies. For these countries, renouncing dirtier technologies would simply mean further slowing their development. Furthermore, developing countries fear that the adoption of certain environmental measures by Northern countries, such as the ban on importation of goods with certain characteristics, hides their true intent of economic protectionism. These fears have sparked two recent controversies over environmental issues at international levels, first the GATT trade agreements and secondly, at the WTO (L. Brown, 2000): the first case was in September 1991 when the USA and Mexico clashed over exports of Mexican tuna fish; the second, in 1998, saw this time India, Malaysia and Pakistan take issue with the USA over exports of shrimps. In both cases the controversy was resolved with a judgement in favour of the developing countries, finding that the US regulations violated those of the GATT and WTO. In the first case the USA imposed an embargo on Mexican tuna fish - under the US Marine Mammal Protection Act - because Mexican fishermen used drag nets which often caught and killed dolphins; in the second case, US laws sought to prevent the death of turtles during trawling for shrimps and closed the American markets to those countries which did not oblige fishermen to use special nets with a Turtle Excluder Device (TED). The legal logic which was followed in both cases is based on the principle of "national treatment", in

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line with international trade regulations, which states that all countries must apply the same conditions to imported goods that they apply to the same goods produced domestically. The application of this principle upheld the distinction between restrictions on importation due to characteristics of the product itself and due to its production process. On the basis of this distinction the US laws were deemed illegal because the USA took issue with the mechanisms for fishing tuna and shrimps and not the products in themselves. Despite the fact that the GATT, and afterwards the WTO, contains a specific clause which guarantees the rights of nations to promote policies of environmental protection, the members judged that this logic could only be applied within a country's borders and that as the fishing for tuna and shrimps took place outside US territorial waters, the American embargo was an attempt to impose their domestic laws and environmental values on the rest of the world (L. Brown, 2000).

These decisions seem to be prejudiced in favour of international trade, putting any environmental, or more generally, humanitarian, objective in second place. In fact, article XX of the GATT does deal with cases where it is possible to limit international trade in relation to environmental issues, when it considers the environment to be in the international public interest. This article recognises that it is possible to restrict the production and exchange of goods at an international level where the international public welfare is at stake.

In fact, the international public welfare has until now been pursued by means of multilateral environmental agreements such as the Montreal Protocol on protection of the ozone layer and the Kyoto Protocol on control of greenhouse gas emissions.

The controversies cited above and the absence of any common ground between the rules of international trade and multilateral environmental protection agreements, feed the debate about the necessity to introduce environment related reforms to international trade regulations. The developed countries, under pressure from environmental movements and NGOs, are to some degree favourable to such reforms, which would entail strengthening the role of the WTO Commission for Trade and Environment, a reduction of subsidies for activities with a negative environmental impact, environmental assessment of new trade agreements, a link between the rules of international trade and multilateral environmental protection agreements, the role of ecological labelling and a reinforcement of the principle of precaution (E. Neumayer, 2001). On the other hand, practically all developing countries are opposed to these proposed reforms and are convinced that they mask an attempt by the developed countries to protect their domestic markets. This position is clearly summarised in the following extract from the official Kenyan communication during a high level symposium organised by the WTO in March 1999:

"It is important to emphasise that Kenya is a keen proponent of the environmental conservation. However, Kenya objects to any move to use environmental measures as a barrier to trade ... it is Kenya's view that environmental norms and standards are a function of the stage of the development of the economy. Therefore, to impose on low income developing countries the environmental standards prevailing in advanced countries would, internally, artificially raise their costs of production and, externally, extinguish their comparative advantage in the export sector".

This declaration outlines three decisive points on which future promotion of higher environmental standards in developing countries might be based:

- developing countries share with developed countries the goal of environmental conservation;
- environmental regulations and standards are a function of the degree of development of a country and in the developing countries, which according to Porter's model are in a phase of competitive development determined by production factors, low environmental standards represent a comparative advantage;
- developing countries are opposed to any coercive measures aimed at adoption of environmental standards.

Therefore, although there is political consensus at an international level on the objective of reconciling development with environmental conservation, subscribed to by all countries represented at the World Earth Summits of Rio de Janeiro (1992) and Johannesburg (2002), no such consensus exists on reform of international trade in relation to the environment. Imposing harmonisation of environmental standards through coercive measures would mean discriminating against the developing countries. Such discrimination is against both the WTO rules which forbid countries to treat similar goods in different ways according to how they are produced, and Principle 12 of the Rio de Janeiro Declaration, which says "...Commercial policies for ecological ends must not constitute a means for arbitrary or unjustified discrimination or a falsified restriction to world trade".

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The road taken so far to promote international harmonisation of environmental standards has been to conclude grand and sweeping multilateral agreements which are extremely difficult to negotiate and even more difficult to apply, as the global warming agreements have shown (see Kyoto Protocol). Precisely to face these difficulties and to enable sustainable development through more flexible tools which take into account the context in which they are applied, the strategy agreed upon at the Johannesburg Earth Summit was to promote bilateral, rather than multilateral, agreements between states. Indeed the Action Plan approved in Johannesburg has enclosed a long list of projects aimed at developing countries: there are 562 projects, denominated "type 2", as distinct from those political, "type 1". These are partnerships between public and private bodies, NGOs and the community. The aspect to be underlined here is that many of these partnerships feature those companies whose role in the global strategy for sustainable development was strengthened by the Johannesburg summit.

### 3. Environment and business

The need to identify possible solutions to environmental problems which take into account the wider picture composed of different degrees of development, of the cultural, religious and lifestyle differences among countries, tends to favour a flexible and constructive approach such as the one adopted at Johannesburg, an approach which recognises the central role played by business in promoting and implementing sustainable development.

This central role is the result of many initiatives taken by the business community to protect the environment, with their origin in the concept of social and environmental corporate responsibility, addressing the way business responds to wider social needs and the opportunities provided by the environment it operates in. It recognises that business is an activity that is not just primarily economic but has social, political, institutional and environmental repercussions. This awareness leads business to consider the impact it has on the wider context in which it operates, and favours development of responsible management. The development of this sense of responsibility amongst the business community is a question of strategy, but first and foremost it is an ethical decision based on a system of values, shared throughout the entire business, from shareholder to board director to employee. It is expressed in a code of conduct, a system of self-regulation that goes beyond mere compliance with the letter of the law, setting out the ground-rules for a common platform on which to work. It is this aspect of shared and common values that is fundamental to these rules, which are not externally imposed but freely chosen from a "sense of responsibility". A "sense of responsibility" which grows out of a "sense of responsibility", meaning the development and interiorisation of a culture of responsibility towards the wider network in which business operates. In this respect there is much common ground with the responsible self regulation of companies, expressed through ethical decisions taken voluntarily, and the spread of 'best practices' which may constitute key elements of a sound pragmatism, giving a central role in the process of economic globalisation to human values.

It is precisely these best practices adopted by the most forward looking businesses that provide models to be copied but may also have a domino effect on the entire production chain, stimulating the introduction of environmental standards amongst less aware suppliers or those operating in the southern hemisphere, thus articulating the system of values on which the company bases its decisions.

Only through action engaging the value system of those directly involved and of the entire community is it possible to find the way towards sustainable development that is flexible and caters for the diversity of contexts it faces.

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