CHAPTER 2.2

The Competitive Edge in Environmental Responsibility

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The rise in environmental awareness in the 1960s and 1970s was driven by concern over pollution by the products of industrial society, such as oil spills, pesticide residues, toxic contamination from industrial wastes and accidents, and urban air pollution. The solution was government regulation and heavy investment in unproductive "end of pipe" waste treatment. It is only natural that this resulted in a business view of the environment as increasing costs and imposing endless bureaucratic requirements. However, this attitude is not only outdated, but counterproductive, as it blinds many business leaders to the opportunities created by a rapidly evolving environmental situation. This chapter provides an update on environmental issues as they are understood today, with a special focus on the ways business can profit from the situation to gain a competitive edge.

Integrated approach

Scientific understanding of complex systems has advanced greatly in the last half century, propelled by information technology, computers and modelling. The essential message of this work is that complex systems are highly integrated, with emergent properties that are characteristic of the whole system while not being evident in the component parts. The same principle applies to human and natural systems (Dahl, 1996). It is not enough to understand each part of the system through highly specialized studies. An integrated perspective is required to see how each part affects all the others. This is true of effective business management, where senior executives must have an integrated view of all company operations; it also lies at the heart of the concept of sustainable development.

Sustainable development was first brought to public attention by the Brundtland Commission in 1987 (World Commission on Sustainable Development, 1987). It has since become a central concept and goal for international action, approved by over 100 heads of state and government at the Rio Earth Summit in 1992, and confirmed at the World Summit on Sustainable Development in Johannesburg in 2002 (United Nations, 2002). It calls for development that meets the needs of the present generation without constraining the ability of future generations to meet their own needs. Since business is the principal driver of wealth creation for development, it has a critical role to play in the implementation of sustainability.

The concept of sustainable development has expanded the environmental debate by requiring that economic, social, environmental and institutional issues be combined in an integrated perspective on human progress. As it has been pursued in many countries, economic development has been accompanied by unacceptable social and environmental costs. While the Western economic system has generated wealth, which would have been unimaginable even a half century ago, it has not eliminated poverty among much of humanity, and has steadily degraded the environmental resources and planetary systems, upon which future well-being depends. The latest report on the state of the environment from the United Nations Environment Programme (UNEP, 2002) documents the continuing overall decline in the planetary environment, with improvements in some areas, such as water and air pollution in Western countries counter-balanced by persistent poverty, increasing emissions of greenhouse gases, soil degradation, biodiversity loss, continuing problems with toxic chemicals and wastes, and unsustainable overuse of water resources. The result is the increasing vulnerability of human society to natural and man-made disasters, and erosion of the resource base necessary to sustain human well-being. We are continuing to live off natural capital rather than its interest. Sustainable development means addressing all these issues together.

The changing context

As a result of rising concern over these problems, governments and public opinion have formulated new expectations from the private sector. It is no longer sufficient just to make a profit, essential as that is as a source of wealth, and as a sign of business efficiency. The private sector is expected to show corporate social and environmental responsibility. Failure to do so can have a significant impact on the bottom line.

Business has too often viewed environmental protection measures as a burden, assuming that anything that increases costs hurts competitiveness, and that high standards are a disadvantage in the global market place. However, recent experience shows that adherence to environmental standards, when carefully planned, not only protects the public and the environment. It also represents investment in a good reputation, increasing market share; at the very least, it insures against the negative impact of scandals and revelations, which—as recent exposure of accounting wrongdoing and product recalls have shown—can be disastrous, if not fatal, to business survival. With the globalization of information exchange, a problem in one country is quickly known around the world, so there is no hiding behind national boundaries. A business that is caught practising double standards can find the rebound very expensive. Consumer trust is generally built slowly, and with considerable effort. Loss of confidence is swift, painful and costly to restore. How can a consumer assume that bottled beverages are safe everywhere, after the discovery of pesticide residues in famous soft drinks in India?

Today, some innovative enterprises are turning these apparent liabilities into business opportunities. This requires scientifically literate managers, who can follow the rapidly evolving environmental and social contexts in which they operate, understand the implications of new discoveries, assessments and emerging problems, reduce their risk of being implicated in problem areas, and develop new business opportunities. By actively exploring the implications of sustainable development for business, far-sighted business leaders can position themselves ahead of their competitors, and can judge more effectively the speed at which to implement new innovations.

The following brief catalogue of some major environmental and sustainability issues highlights their implications for business competitiveness, and the importance of factoring them into corporate strategies and decision-making.

Specifics of environmental competitiveness

While the debate has raged over the reality of *climate change* due to global warming from greenhouse gases, the scientific and practical evidence that such change is *already taking place is accumulating*. A study prepared for the UNEP Finance Initiatives and supported by the reinsurance industry (Innovest, 2002) looked at the rising level of insurance claims due to natural disasters linked to climate change, and projected that the annual cost of such disasters in ten years' time could reach US$150 billion, representing a threat not only to the insurance industry, but to the whole world economy. Adding these indirect costs to simple questions of supply and demand suggests that the cost of energy, and of fossil fuels in particular, will continue to rise. Those businesses will be ahead of the game that are most successful in achieving energy economies and reducing dependence on fossil fuels and petroleum-derived raw materials. There will also be growing opportunities in alternative energy-efficient technologies and renewable energy sources. However, as in any emerging area, the successful businesses will be those that best judge the speed at which markets will evolve, and neither fall behind, nor get too far ahead of demand.

The case of stratospheric *ozone depletion* by halogenated compounds like CFCs is an excellent example of government and business cooperation in an international legal framework, made easier by the fact that a small number of multinational chemical companies were responsible for the bulk of production. Once the risk was clear and the Montreal Protocol provided the collaborative mechanism for global action, the private sector developed alternatives and the damaging chemicals were phased out, with a special fund and additional time allowed for developing country compliance. There are still some problems with smuggling cheap banned substances, and the phase-out of methyl bromide, as a result of pressures from the *agriculture industry*. But overall, business benefited from collaboration in the adoption and implementation of the necessary regulations.

One dimension of globalization is the increase in international trade, travel and tourism. Humanity has become a single international community in which *epidemic diseases* can spread rapidly. While medical advances have eradicated smallpox and are on the way to eliminating polio, new diseases like AIDS, SARS and Bird Flu are emerging and spreading rapidly around the world, both among people and animals. Moreover, the over-use of antibiotics and the resulting development of resistant strains are causing a come-back in traditional killers. The economic impact on business and agriculture is considerable. Managers who anticipate these new risks and take measures to cushion their impact will stay ahead. While it is not desirable to profit directly from emergency situations, close collaboration with the authorities at such times will be appreciated, as evidence of good corporate citizenship. Emergency situations can also suggest new business opportunities in such areas as medical treatment and control measures, which can be pursued in the medium and long term to reduce vulnerability.

Another problem reaching global epidemic proportions is that of invasive *introduced species,* i.e. organisms that may be unremarkable in their native environment, but which multiply uncontrollably when introduced elsewhere, without their predators and diseases. Examples are the zebra mussel and the fire ant in the United States, the cane toad in Australia, a jellyfish in the Black Sea, and the brown tree snake on Guam. The costs of prevention and control run to many millions of dollars, and in some cases have caused the collapse of whole economic sectors, such as the Black Sea fisheries. Responsible businesses will take care not to spread such species, whether inadvertently, or through intentional introduction—as for instance in aquaculture—since their own business survival may be at risk.

There is major scope for new business approaches in *waste reduction* and management. Too many products, ranging from household appliances and packaging to armaments, were conceived without any concern for their ultimate disposal. Urban areas in particular have great difficulty in coping safely with the waste they generate, whether solid, liquid or atmospheric. Every waste is, in a sense, a lost opportunity. In the highly industrialized countries where pollution and waste disposal are tightly regulated, the rising cost of disposal drives innovation in waste reduction. There is enormous business potential in eco-efficiency, material flow management (Adriaanse et al., 1997), cleaner production, recycling, through-life-cycle management of products from cradle to grave, and industrial ecology, where one company's wastes become another's raw materials (Bleischwitz et al., 2004).

One of the nightmares facing many industries today is their liability for *historical pollution* and contamination. Problems unsuspected or ignored decades ago now require expensive cleanup or compensation, threatening current balance sheets, if not bankruptcy. Examples are asbestos contamination of workers, buildings and ships, and soil and groundwater contamination at old industrial sites. While little can be done to avoid unknown and unsuspected risks, early anticipation and rapid response can minimize the business impact of many such problems, while application of the precautionary approach and thorough testing can help to avoid future surprises. Cutting corners in this area can be dangerous to business survival.

One of the first environmental problems to capture the headlines was massive *oil spills* at sea, when such names as "Torrey Canyon", "Santa Barbara", "Amoco Cadiz", "Exxon Valdez" and more recently "Prestige" became household words. As ship design and improved operation have reduced the risks, the problem has become more one of irresponsible businesses using overage tankers belonging to unscrupulous owners, whose responsibility is hidden behind a legal tangle of phantom corporations. The result, nevertheless, is a tarnished reputation for business.

Another area of risk and opportunity concerns *food safety*. A food scare or product recall can be very expensive, and consumer confidence, once lost, is difficult to restore, as illustrated by the impact of BSE (mad cow disease) or the discovery of contaminants in various products. Public concern over hormones in meat, or genetically modified organisms, is an important factor in business planning, export development and the success or failure of investments. On the other hand, many businesses are built on their reputation for quality or even luxury products, for which an image is constructed at great expense over many years.

More generally, whole new consumer markets are being built around *"fair trade"* and *"green" consumerism* based on the demand for socially responsible, environment-friendly products. The emergence of social and environmental certification and labelling, such as the Max Havelaar brand of food products, the Forest Stewardship Council label for sustainably managed wood products, and the Marine Stewardship Council logo for fish from sustainable fisheries, creates opportunities, even in the developing countries, to rise above the competition and sell to niche markets at higher prices. Ideally these precursor products will set standards that will eventually be adopted across the industry, but where a reputation as a pioneer will be a continuing advantage.

Ethical issues represent a whole new area of business concern with a significant impact on competitiveness. Management can no longer afford to focus only on profitability, as both governments and the public, shocked by repeated scandals over unethical behavior in business, demand both penal sanctions and new regulations. While it may be difficult to justify ethical behavior in purely economic terms, the contrary unethical conduct can be immediately fatal to even the largest companies. While the most obvious examples involve misleading accounting and fraud, environmental and social misbehavior are also seen by many as ethical issues. Illegal forest cutting in the tropics, unregulated destructive fishing on the high seas, and the export of hazardous wastes to developing countries are widely seen as morally reprehensible. They may be profitable in the short term, but in an increasingly globalized world, there will inevitably be a negative rebound.

Another dimension not always immediately appreciated by business leaders is the impact of their image on *recruitment*. An increasing number of talented young people want to work only for organizations they perceive as being in harmony with their personal values. A company that is seen as socially and environmentally responsible, with high ethical standards, will have a competitive advantage in recruiting the best and brightest managers and workers, which in turn raises the competitiveness of the whole company in the world market.

For businesses that want to stay ahead, it is cost-effective to be proactive rather than reactive. This means anticipating problems and avoiding them rather than compensating after investments have already been made. It also means being transparent about *reporting* up front on corporate policy and behavior, instead of responding reluctantly to the demands of environmental groups or governments. Examples are the Global Reporting Initiative in the framework of the United Nations, certification by the International Organization for Standardization (ISO) and other professional bodies, and collaboration in initiatives such as the United States toxic release inventories. Too many companies still see environmental and social responsibility as efforts in public relations, rather than significant determinants of company strategy. They risk falling behind in a rapidly changing world.

However, another problem still to be addressed concerns the environmental responsibility of small and medium enterprises (SMEs). While large corporations can easily afford a special unit to respond to regulatory reporting requirements, and to organize corporate certification, a small business with only one manager, or a small team, cannot afford the time necessary for the often complex procedures involved. This may require collective efforts on behalf of SMEs in a geographical area or business sector, or assistance from bodies such as chambers of commerce, business organizations or even government units. Large corporations can also provide assistance and guidance to their smaller suppliers to maintain standards along their whole supply chain.

The issue of environmental responsibility leads inevitably to one of the major areas of discord between economists and environmentalists, and that is *growth*. For economists, growth is a necessary, or even absolute, requirement. If a business does not grow, replace the management. If an economy does not grow, the party in power is sure to lose the next election. Environmentalists reply that material growth cannot continue forever in a finite world, and show examples where growing environmental damage and planetary limits are already putting brakes on growth. The challenge for business is to recognize that no one kind of growth can go on for ever; no resource is unlimited and every market eventually reaches saturation. But there are always new kinds of growth opportunities to be developed. Retaining competitiveness means finding and exploiting them. In the environmental context, manufacturing products with material content must either become increasingly efficient to stay within environmental limits, or be replaced by substitutes that avoid the limits, at least in the short term. There will still be limits for material products in any mature economy, which explains why such economies turn increasingly to the service sector, where the material component is limited, and the value added is in intangible products or services.

National competitiveness and environmental responsibility

The sections above have outlined the global context for corporate environmental responsibility and the advantages of responsible behavior in the global market place. However, much also depends on business practices and governmental regulation at the national level. The 2004 World Economic Forum Executive Opinion Survey includes a section on Social and Environmental Responsibility that, for the first time, gives a coherent overview of the situation in 104 countries, with respect to both the climate for environmental responsibility created by government action or inaction in this area, and the awareness and response of the business community to these issues.

Twenty questions were included in this section of the survey. Seven addressed government action such as environmental regulations and their enforcement, standards and reporting requirements, subsidies, government-business cooperation and compliance with international environmental agreements. These assessed the effectiveness of governments in providing a clear framework for businesses to demonstrate environmental responsibility. A second set of six questions gauged business attitudes toward environmental issues, such as environmental management systems and reporting, environmental marketing and labelling, cleaner production and waste reduction, energy efficiency and long-term planning. These provided an estimate of the proactive efforts of business to use environmental opportunities to improve their reputation and competitiveness. Five questions dealt primarily with corporate social responsibility, including corporate codes of conduct, socially and environmentally responsible investing, charitable contributions, company encouragement of voluntary social activities by employees, and country-wide efforts at poverty reduction. Finally, two questions concerning traffic congestion and transport-derived pollution were included in the survey for other reasons, but were not used for this environmental evaluation, as they did not correlate well with either government action or business responsibility.

All responses were given on a seven point scale. For the analysis, responses for each question were averaged for each country and assigned to one of four categories: high (5–7), marginally positive (4–5), marginally negative (3–4) and low (1–3). Each country was scored for the number of questions rated in each of these categories, with very high or low ratings weighted twice the more marginal values. The one adjustment made to this rating scheme was the decision not to rate negatively those industrialized countries with a strong social welfare system, where there has been less need for businesses to make charitable contributions or to encourage volunteering. The resulting ranking of countries (Table 1) gives the evaluations by business leaders of the positive or negative climate for competitiveness created in each country by government and business action for environmental and social responsibility. The rankings do not necessarily reflect the environmental quality or status of countries. A country with a good environment may not be making adequate efforts to maintain it, while a country with a degraded environment may recently have implemented more effective measures to reverse the situation.

Respondents found it more difficult to judge performance in those countries grouped in the middle of the survey, with a higher variability of ratings within the country. There was more unanimity on the situation in countries at the two extremes. There was also greater variability in responses from some countries in Africa and the Arab world.

The results of the Executive Opinion Survey show, in general, that economic development and environmental responsibility are reasonably well correlated. Wealthier economies can afford more environmental action. Moreover, there is evidence that dynamic and competitive business sectors correlate well with positive responses to this part of the survey. Environmental care and social responsibility make good business sense.

A detailed analysis of the responses on this section of the survey, covering both business and governmental actions for environmental and social responsibility, show that countries can be grouped in six categories (Table 1).

Nine countries are rated strongly positive, and another 13 are positive on balance, but still have some weak areas. 20 countries are making progress, with positive areas outweighing negative ones, making a total of 42 countries ranking positively, for at least half of the topics surveyed.

Table 1: Country performance in environmental and social responsibility as assessed in the 2004 Executive Opinion Survey

High country performance	Positive with some weak areas	Progress but major weaknesses
1. Sweden	10. Taiwan	23. South Africa
2. Japan	11. Austria	24. Brazil
3. Denmark	12. Canada	25. Hong Kong
4. Finland	13. United Kingdom	26. Slovenia
5. Netherlands	14. Belgium	27. Estonia
6. Switzerland	15. Australia	28. Indonesia
7. Singapore	16. New Zealand	29. Costa Rica
8. Norway	17. Luxembourg	30. Slovak Republic
9. Germany	18. Iceland	31. Tunisia
	19. France	32. Korea
	20. Ireland	33. Gambia
	21. United States	34. Chile
	22. Malaysia	35. China
		36. United Arab Emirates
		37. Lithuania
		38. Thailand
		39. Spain
		40. Israel
		41. Uganda
		42. Czech Republic
Some progress but balance negative	**Mostly negative**	**Negative—not yet started**
43. Bahrain	67. Turkey	94. Ethiopia
44. India	68. Sri Lanka	95. Nicaragua
45. Kenya	69. Mali	96. Bolivia
46. Mauritius	70. Romania	97. Serbia and Montenegro
47. Ghana	71. Jamaica	98. Georgia
48. Hungary	72. Malta	99. Honduras
49. Morocco	73. Philippines	100. Venezuela
50. Portugal	74. El Salvador	101. Ecuador
51. Nigeria	75. Uruguay	102. Paraguay
52. Greece	76. Ukraine	103. Bosnia and Hercegovina
53. Jordan	77. Zimbabwe	104. Angola
54. Egypt	78. Panama	
55. Zambia	79. Poland	
56. Italy	80. Trinidad and Tobago	
57. Botswana	81. Croatia	
58. Cyprus	82. Mozambique	
59. Colombia	83. Russian Federation	
60. Namibia	84. Algeria	
61. Madagascar	85. Macedonia	
62. Tanzania	86. Pakistan	
63. Latvia	87. Argentina	
64. Mexico	88. Bangladesh	
65. Vietnam	89. Bulgaria	
66. Malawi	90. Dominican Republic	
	91. Guatemala	
	92. Peru	
	93. Chad	

Of the 62 countries that were still considered negative on balance, 24 are making progress in at least some areas, 27 are mostly negative, and 11 are ranked so poorly—with a majority of responses at the very bottom of the scale—that they have clearly not even started to consider most environmental issues.

There are some surprises in the country rankings, which show that the level of development does not always determine the level of responsibility. Singapore and Taiwan compare favorably with the most industrialized countries. Portugal, Greece and Italy are rated below Hungary, India and Kenya. Some poorer countries are making good environmental and social progress despite limited resources, while businesses in some industrialized countries have clearly neglected their responsibilities. Developing countries also vary considerably in the extent to which the private sector has felt the need to respond through charitable contributions to social problems inadequately addressed by government. Thus, overall, the stereotype of business as anti-environment is clearly no longer generally applicable, although it may still apply in some countries and industries. Enlightened business leadership, political orientation and different business traditions all influence country rankings.

It is important to recognize that environmental responsibility takes different forms, depending on the developmental stage of the country concerned. In a poor developing country, where the principal development assets are primary commodities and cheap labor, the key factor in responsibility is whether primary products are extracted with due regard to environmental consequences and the well-being of the labor force. Does development aim only to maximize immediate profits—the cut-and-get-out mentality—or does it aim toward a sustainable flow of resources and the strengthening of workers' qualifications? For intermediate economies, effective environmental responsibility will be reflected in more cost-effective environmental controls, pollution reduction, and the efficient production and use of primary commodities. For the most advanced economies, the competitive edge will be found in new environmental technologies and clean production processes, and in new markets for environmentally friendly and socially responsible products. For a business to retain its competitive edge, its investments in socially and environmentally responsible actions will need to evolve with the changing requirements of the national economy as it develops.

Public-private partnership

The complementary roles of the public and private sectors in protecting and managing the environment are now widely accepted, and an effective public-private partnership for environmental protection clearly contributes to competitiveness. Businesses are at a disadvantage in countries where environmental regulations are lax, or where they are poorly and erratically enforced. In about 40 percent of countries, governments apply subsidies in ways that distort competition and encourage inefficient use of energy and materials. Corruption in the application of standards also undermines competitiveness. Where governments adopt and apply clear environmental standards and regulations, and mandate company disclosure of environmental performance, businesses have a level playing field, where their true competitive advantage can stand out. However, governments were rated as doing well in this area in only 40 percent of the countries surveyed.

Too many political leaders still see the environment as somehow preventing economic development, and are therefore hesitant to legislate in this area. They need to appreciate that appropriate environmental standards and regulations, when applied consistently in a framework which allows businesses the necessary time and incentives to adapt their technologies and investments, can stimulate growth and creativity, and improve their international competitiveness.

Enlightened leaders in the private sector already understand this. In a considerable majority of countries, survey respondents indicated that complying with environmental standards helped long-term competitiveness by encouraging improvement in products and processes, and that government-business cooperation and voluntary corporate action contributed to environmental gains. It would clearly be in the interest of improved competitiveness to push governments to improve their performance in this area.

It is critically important that the same issue be considered at the international level. With rapid globalization, competition has become global, but the present anarchy in environmental and social regulation creates serious inefficiencies for business, unlike the economic field where the Bretton Woods Institutions and the World Trade Organization maintain certain principles and standards. The considerable differences in environmental standards between countries—if not their complete absence—puts responsible companies at a disadvantage, while those companies, which repeatedly outsource or delocalize their production units from country to country in search of least-cost situations, leave wasted investments, pollution and social disruption in their wake. This gives all business a bad reputation, and helps to fuel the anti-globalization movement. If businesses, particularly multilateral corporations, pushed governments to strengthen environmental governance at the international level, both consistent global competitiveness and efficient environmental responsibility would improve.

The business case

The world economic environment is constantly evolving. Rapid technological innovation makes old products and processes obsolete, and changing public tastes and concerns affect marketability. Brand reputation and market share are built slowly with considerable investment, but can be easily damaged by incidents concerning environmental and social performance that hurt consumer confidence. Public trust is quickly lost and difficult to restore. To remain competitive, a business must keep ahead of the trends and be proactive in maintaining its reputation. Environmental and social responsibility are ways of doing this.

The steady growth in environmental awareness and concerns for sustainable development over the last few decades has created new markets for what is sometimes termed *"green" consumer demand*. The survey shows that this is already widespread and profitable in a third of the countries surveyed. While the situation varies from country to country, organically-grown or environmentally friendly produce, such as pesticide-free cotton, fish or forest products from sustainably-managed stocks, energy-efficient appliances, safe vehicles and toys, and products manufactured and traded in socially-responsible ways are growing in market share. Enlightened consumers are demanding certification schemes and eco-labelling, to ensure that they can buy a product that reflects their ethical principles. An increasing number of businesses and product lines are responding successfully to this new market. Given the deterioration of the global environment, this is clearly a growth area in the medium and long term.

The rising cost of certain raw materials and of waste disposal also make a strong business case for efficiency, cleaner production, improved management of material flows, and waste reduction and recycling. They stimulate the development of new technologies and production processes, and encourage a more integrated view of business practices, such as through-life-cycle management of products (UNEP, 1996). Companies that innovate to seize the new opportunities created by these pressures will maintain their competitiveness. For example, given the rising cost and eventual exhaustion of petroleum feedstocks for the plastics industry, two major multinationals have launched a partnership to develop a new synthetic textile produced from agricultural products. Given the potential volatility in costs associated with the unsustainability of many sectors of present industrial society, companies that do not plan well ahead could suddenly find their backs to the wall.

As explained above, *energy* is another area where the environment and sustainability are critical to future business planning, both in the energy industries themselves, and in all businesses where energy costs are a significant component of the business. In 40 percent of countries surveyed, businesses already see energy efficiency and the transition to new and renewable sources of energy as a high priority. Yet relatively few businesses are giving much consideration to environmental risks and long-term factors such as global climate change (which is linked to fossil fuel consumption) in their planning. There is a conflict between the short-term accountability for profits that drives most business decisions today, and the growing risks to business viability and competitiveness represented by increasing rates of global environmental change, and the inevitable surprises that will accompany them. Environmental change often occurs not as smooth averages, but as extreme events and sudden shifts to a new equilibrium. Businesses will need flexibility, creativity and careful contingency planning to keep ahead in such rapidly changing times.

Environmental factors not only affect the market, they are also of increasing importance in raising capital. Socially and environmentally responsible investing is already important in 40 countries, and can be expected to grow. UNEP launched a Responsible Investment Initiative in July 2004, in collaboration with major international investors and fund managers, based on a report on social and environmental issues in equity pricing (UNEP, 2004). This trend will push the development of corporate environmental reporting and adherence to environmental management systems such as the ISO 14000 series, which are presently implemented in only a quarter of the countries surveyed. Businesses are now recognizing that transparency and accountability are increasingly demanded by governments, investors, consumers and the general public. A proactive response to that demand can help to build a reputation for good corporate citizenship. Nearly half the countries report a growing use of corporate codes of conduct and other aspects of corporate social and environmental responsibility.

How corporate social responsibility is expressed in action appears quite variable even within the limited scope of the survey. A large majority of responses report contributions by individuals and companies to charitable causes, but this is generally more prevalent in developing countries than in industrialized countries with a strong social welfare system, where this role has been left to government. In only a small fraction of countries do companies express their social responsibility by encouraging workers to volunteer for social causes, and by providing incentives to facilitate that involvement.

Conclusions

This chapter has highlighted the significant potential for business leadership in the field of environment and sustainable development. By taking a positive, proactive view of environmental and social challenges, the private sector can generate new technologies, open up new markets, reduce costs, and allow themselves more time for adaptation with phased investments and reduced write-offs or special charges. It can also bring to the attention of governments the important role that effective environmental regulation, enforcement and reporting can play in improving competitiveness and attracting stable investments. It is clear today that corporate social and environmental responsibility do indeed generate a competitive edge.

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Competitiveness vs. Social and Environmental Responsibility