The Contribution of Good Environmental Regulation to Competitiveness

Paper by the Network of Heads of European Environment Protection Agencies [1]

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The Network is an informal grouping bringing together the heads of environment protection agencies and similar bodies across Europe to exchange views and experiences on issues of common interest to organisations involved in the practical day-to-day implementation of environmental policy.

“Good environmental regulation in Europe can support a clean, competitive economy and a healthy environment in which to work and live.”

Summary

In the context of the current EU focus on growth and jobs, this paper reviews the evidence on the links between environmental regulation and competitiveness. It finds that a modern approach to regulation can:

– reduce costs for industry and business

– create markets for environmental goods and services

– drive innovation

– reduce business risk and increase the confidence of the investment markets and insurers

– assist competitive advantage and create competitive markets

– create and sustain jobs

– improve the health of the workforce and the wider public

– protect the natural resources on which business and we all depend

We conclude that there is now significant evidence from international research that good environmental management and regulation does not impede overall competitiveness and economic development. On the contrary, it can be beneficial by creating pressure that drives innovation and alerts business about resource inefficiencies and new opportunities.

The Network of Heads of European Environmental Protection Agencies submits this paper as its contribution to the current debate.

Introduction

Effective environmental regulation is integral to successful markets, an essential ingredient of a vibrant, modern economy. Unregulated markets would be chaotic, unfair and unlikely to deliver what people want – safe, reliable products and a clean environment in which to live and work.

The opposite is sometimes assumed - that environmental regulation represents sand in the cogs of the economy, resulting only in burdens on business, inefficiency and lower competitiveness. Businesses often focus on the time spent and cost of dealing with regulators and tend to underestimate the benefits of regulation to business and wider society.

Oppressive environmental regulation can be damaging, but a modern approach can help to deliver the environmental improvements people want in a way that fits with a competitive economy. Good, modern regulation is likely to incorporate a mix of policy tools, including market-based measures such as emissions trading, a risk-based approach, and effective engagement and dialogue with business and other stakeholders.

Some countries, including Germany, Italy and Sweden, point to the advantages of having a coherent environmental code bringing together, summarising and harmonising all relevant environmental legislation, including on nature conservation. Such a code can enhance the clarity of law for the public and for businesses and simplify enforcement by the competent authorities.

Society benefits from less pollution and waste and improved quality of life. Businesses can also be better off with clear standards that are enforced effectively, rather than uncertainty and unfair competition from those who ignore the rules.

Good environmental regulation helps reduce costs for industry and business

Business can benefit directly because regulation in areas such as energy efficiency and waste reduction can deliver cost savings and help companies develop more attractive products.

These reduced costs add up to substantial benefits across the whole economy. Research in the UK[2] suggests that:

- waste minimisation could yield almost 4.4bn euros saving in manufacturers' annual operating costs, equal to 7% of profits in 2000 - 60% of the savings come from the costs of materials that do not end up in the final product,
- industry could save 2.7bn euros through energy efficiency,
- typical payback periods for waste investments are no more than 12 months.
- the agriculture sector could save some 1.3bn euros through improved environmental management practices

Individual companies also show that such gains need not be short-lived. The healthcare company Baxter International reckons it is saving more than 50m euros a year from measures such as packaging and waste reduction which have been introduced since 1996. The technology company 3M began its pollution prevention programme in 1975 and is still profiting from it, having saved over 740m euros since then.

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Cambridge Econometrics & AEA Technology 2003. The Benefits of Greener Business

The Italian National Consortium for the Recovery and Recycling of Cellulose Based Packaging (Comieco) recently published the results of the activities of differentiated paper and carton collection carried out by the member industries over the last six years[3]. The cost/benefit analysis shows a positive balance of 610m euros, the equivalent of the entire yearly production of the Italian paper industry and the equivalent of 3.5 years of paper consumption of the newspaper industry.

Smart regulation can help companies understand how to capture such gains, providing benefits to them and their shareholders, as well as delivering environmental improvements alongside regulatory compliance.

Voluntary agreements between governments and industry can prove to be useful policy tools to promote innovative environmental practices, particularly those based on a core regulatory framework accompanied by a series of specific voluntary measures and activities of common interest set up with a wide range of stakeholders.

An example is the Voluntary Agreement for the Petrochemical area of Porto Marghera in the Venice Lagoon (Italy). It has produced a series of qualitative advantages and environmental cost savings in terms of cleaning up and remediation of the contaminated site, also preventing or reducing the cost of ongoing or potential legal actions. It also includes a monitoring and verification component and the full involvement of public, private and social stakeholders over time.

In some countries, including Italy, EMAS and Ecolabel provide effective examples of voluntary agreements stimulated by good regulation. They can not only improve the quality of environmental management and products, but save resources, reduce costs and promote green markets.

The Network will seek to identify specific examples in member countries and promote their diffusion to a wide spectrum of stakeholders.

Higher environmental standards and regulation help create markets for environmental goods and services

The world market for environmental goods and services is estimated to be worth 425bn euros and is likely to grow to 565bn euros by 2010[4]. This figure is comparable with those for the aerospace and pharmaceutical industries. In the UK, the environmental goods and services industry already consists of over 17,000 companies with an estimated annual turnover of 33bn euros.

The International Institute for Industrial Environmental Economics in Lund reported continuous growth in the number of Sweden's environment-related jobs[5]. It is forecast that in the years ahead, more and more people will devote at least some of their working hours to environment-related tasks.

Michael Porter of Harvard University was instrumental in showing that countries with high environmental standards often have market-leading firms and record better economic performance than those with lower standards[6]. This is because high standards can stimulate innovation both in firms selling environmental solutions and in those having to comply. English Nature has provided a useful summary of international research in this area undertaken since Porter's initial challenge[7].

3 Cost/Benefit Analysis Study of differentiated paper and board collection in Italy, commissioned by Comieco for AGICI Finanza d'Impresa, June 2005

4 http://www.dti.gov.uk/sectors_environment.html

5 OECD Environmental Performance Review of Sweden, 2004

6 Porter, M. 1990. The Competitive Advantage of Nations

7 English Nature Research Report no 368, April 2005

Good environmental regulation drives innovation

Some industries depend for commercial success on high environmental standards, most obviously those providing clean technology and waste management. Danish leadership in wind turbine technology is an example of a country gaining competitive advantage by pursuing environmental leadership and innovation.

The way businesses respond to regulation is more important, especially in the environmental context where regulation is often designed specifically to change behaviour. Michael Porter has recognised this dynamism, writing: "The data clearly show that the costs of addressing environmental regulations can be minimised, if not eliminated, through innovation that delivers other benefits."[8]

Some argue that if companies risk profitability by failing to innovate then an unregulated market will pass judgement. However Porter and Van der Linde have argued that this makes unrealistic assumptions and that a regulatory push is needed to overcome business inertia, to alert and educate companies about resource efficiencies and the potential for technological improvement and to protect the environment in the interim.

It is clear, for example, that companies innovate in response to tighter waste regulation, to change products and processes so that they generate less waste. They save money and possibly find an opportunity to charge a premium price for an improved product. Similarly, companies have responded to the climate change levy by investing in energy efficiency, again cutting costs.

A World Wildlife Fund report on the effect of proposed EU chemicals regulations on innovation found that the regulations were likely to promote innovation by encouraging the replacement of risky and less sustainable chemicals with safer alternatives. Indeed, this innovation can allow an industry to be more competitive internationally because the resultant products are in greater demand[9].

Other measures must accompany good regulation in order to convince markets of the merit of environmental technologies. As the European Union's Environmental Technology Action Plan (ETAP) states[10], actions to increase purchaser confidence are necessary such as improving testing, performance verification and standardisation. The removal of environmentally harmful subsidies and targeted economic incentives are among other important policy tools.

Possible roles for government in assisting the development of environmental technologies are identified in a study of 18 examples of eco-efficient innovations from across the EU carried out for the Dutch Ministry of Housing, Spatial Planning and Environment in 2004[11].

The opportunities for growth based on the sound management of the environment should also be high on the international agenda. This is recognised by the enlarged G8 through the proposed 3Rs initiative which pursues globally a sound material-cycle approach of reducing, reusing and recycling resources and waste.

Good environmental regulation reduces business risk and increases confidence of the investment market and insurers

Financial benefits can also be seen in the results of companies that manage environmental issues well, and pension funds that invest in them.

Recent research found a close link between environmental governance – embracing policies, processes and performance – and financial performance. Such a link was found in 51 of 60 recent studies reviewed by researchers, covering performance of

8
Porter, M, and Van der Linde, C, 1995, 'Towards a New Conception of the Environment-Competitiveness Relationship', Journal of Economic Perspectives 9, No 4 (autumn 1995)

9
Berkhout, F. et al. WWF 2003. Innovation in the chemicals sector and the new European chemicals regulation

10
EC COM(2004), 28 Jan 2004

11
PricewaterhouseCoopers May 2004: Examples of Eco-efficient Innovations

individual companies, whole sectors and pension funds[12]. For example, the difference in financial performance between the best and worst environmental performers in the oil and gas sector was nearly 12% over three years . Similarly the UK Financial Times Share Exchange (FTSE) prices of the best electric utilities beat the worst companies by 39% over three years.

Another recent study, by the Climate Group, found that 5 international companies (DuPont, Alcan, British Telecom, IBM and Norske Canada) had achieved reductions of over 60% in their greenhouse gas emissions since 1990. The resulting savings of over 6bn euros resulted from improved energy efficiency (process, product, buildings), fuel switching and reduced waste[13].

The banking and insurance sectors, which provide strategic business advice and insure all businesses, look more favourably on those with a good environmental record and low environmental risks, providing better access to capital and lower insurance premiums than for businesses with a poorer record. A recent Danish study confirmed that financial institutions pay attention to environmental risk management in their evaluations of companies[14].

Good environmental regulation can assist competitive advantage and can help create competitive markets

Several economic studies have exposed the myth that regulation leads to competitive disadvantage. On the contrary, good regulation can have a positive impact through stimulating dynamic responses, innovation and better practices. The World Bank has observed that "Contrary to common perceptions, higher environmental standards in industrial countries have not tended to lower their international competitiveness"[15]. The World Resources Institute says "There is no evidence that industries affected by regulatory costs do poorly in international markets"[16].

A DG Enterprise study found that air pollution legislation in Europe has had very little effect on competitiveness of industry, particularly when compared to other international regions[17]. In fact industry competitiveness was more associated with product quality and range, raw material quality, location of the plant relative to the market and transport costs. Other studies have however pointed out that macro-economic studies can hide substantial variations and complexities at sectoral level[18].

When legislation is being developed there can be pessimistic predications of the potential impact on competitiveness. However, the Economic Policy Institute found that where predicted estimates of regulatory costs were made, and then compared with the actual regulatory costs, in every case studied the estimate exceeded the actual cost. This overestimate of predicted regulatory costs had arisen from both industry and regulators.

The EU chemical industry argued that the phase out of ozone depleting chemicals would entail excessive cost and result in small firms going out of business. The International Chemical Secretariat showed that the actual cost of this regulation was minimal, with no costs to the consumers, thereby with minimal impact on competitiveness[19].

The World Bank compared regulation in 145 countries in 2005[20]. They concluded that all the top countries for doing business do regulate, but do so in a less costly and burdensome manner. European countries in the top 20 economies in terms of ease of doing business are Norway, United Kingdom, Sweden, Switzerland, Denmark, the Netherlands, Finland, Ireland, Belgium, Lithuania and Slovakia.

12 Environment Agency, England and Wales, 2004. Corporate Environmental Governance: a study into the influence of Environmental Governance and Financial Performance

13 The Climate Group, 2004. Carbon Down, Profits Up

14 Miljoprojekt No 836, 2003: Environmentally Sustainable Markets: The Role of Financial Actors

15 World Bank. Competitiveness and Environmental Standards, 1994

16 "Jobs, Competitiveness and Environmental Regulation: What are the Real Issues", 1995

17 DG Enterprise, 2004. An Analysis of EU Air Pollution Policies: Implications for the Competitiveness of European Industry

18 Williams E, MacDonald K & Kind V. Unravelling the Competitiveness Debate. Journal of European Environmental Policy 12 (5) 284-290, 2002

19 International Chemical Secretariat. Cry Wolf – Predicted Costs by Industry in the Face of New Regulations. ICS Report No 6:04, 2004

20 World Bank 2005. Doing Business in 2005

DG Enterprise in the European Commission looked at the impact of the IPPC Directive on competitiveness. The study concluded that process-related Best Available Techniques measures generally have a positive impact on competitiveness. The evidence also showed that strong environmental performers, for example those who adopted BAT early, are not competitively disadvantaged and are viable in the long run[21]. This suggests that companies implementing environmental policy need to make full use of adaptation periods rather than choosing a strategy of resistance or inertia.

Many regulators use risk profiling to try to concentrate resources where they are of most use. Risk profiling also ensures that the administrative cost of routine inspections is reduced.

There are several reasons why regulation tends to be mistakenly seen as anti-competitive, not least that the costs in terms of time spent dealing with regulators is much more visible than the benefits, such as fair competition and less pollution. But it seems likely that businesses over-estimate compliance time. A recent report for the UK Government (the Hampton Report[22]) estimated that a firm with 19 employees would spend less than 2½ hours per person per month complying with all government-related regulation and paperwork (not just that related to the environment). The bulk of this would involve labour and financial regulation (the OECD estimate that 46% of the time needed to comply relates to taxation and 35% to employment regulations[23]). However, it is also recognised that proportionately larger businesses have less administration of regulation per person that small businesses.

More fundamentally, estimates of the impact of regulation often ignore two important issues:

– the element of self-regulation which would take place in the absence of formal requirements

– the ways in which businesses adapt.

Self-regulation is common in many areas because it is in companies' interests to behave responsibly, and because they are under pressure from society to avoid anti-social behaviour such as dumping waste. Voluntary action is not always sufficient to achieve widespread responsibility, and regulation can be more efficient because it provides certainty and equity. Indeed, voluntary action only works if there is the understanding that regulation will be introduced if the desired outcomes are not achieved. It is unlikely that the costs of regulation would disappear if the regulations were removed.

Good environmental regulation helps create and sustain jobs

Evidence tends to indicate that the net impact on employment of environmental regulation is either neutral or slightly positive. The most visible beneficiary is the environmental goods and service sector, which by 2001 already employed over 2 million full time equivalent jobs in the EU15[24].

The Confederation of British Industry (CBI), which is very alert to competitiveness issues, has acknowledged that "economic growth can be consistent with a better environment"[25] and has found that there is "no strong evidence that environmental regulation destroys jobs and businesses"[26].

High standards are also important in sectors such as tourism and leisure, which rely on an attractive physical environment to win customers. In England, economic activities connected with the management of the natural environment support an

21
DG Enterprise, 2001. The Impact of BAT on the Competitiveness of European Industry

22
Hampton P, 2005, UK Government. Reducing administrative burdens: effective inspection and enforcement

23
OECD Survey 2001. Business Views on Red Tape – administrative and regulatory burdens on small and medium-sized enterprises

24
Ecotec. Analysis of the EU Eco-Industries, their Employment and Export Potential, 2001

25
"The UK as a place to do business" 2004

26
"Environment Costs - The Effects on Competitiveness, Health and Safety" 1994

estimated 2.68 million full time jobs [27]. In Wales an estimated 1 in 6 of the workforce depends on the environment for employment, whilst in Scotland nearly as many people are employed in natural heritage related activity as are employed in biotechnology, call centres and electronics combined.

The OECD's review of environmental performance in Sweden in 2004 provides evidence that in a country with strong environmental regulation the country's environmental industry (environmental manufacturing and services) has contributed significantly to the low unemployment rate [28]. The OECD noted that the Swedish environmental industry in 1998 had over 6 700 environmental enterprises employing nearly 95 000 people (about 1.5% of the labour force), mostly in waste management and natural resource-related companies. The turnover of the environmental industry was about SEK 163 billion, or 4% of Swedish industry's total.

Good environmental regulation improves the health of the workforce and the wider public

There are close links between the environment and people's health. A high quality environment enables people to live longer in good health and thereby take an active role in the economy. Environmental regulators can make a significant contribution through their work to reduce pollution and increase public access to a high quality environment.

The World Bank states that "economic growth is only one benefit of better business regulation. Human development indicators are higher as well. Governments can use revenues to improve their health and education systems, rather than support an overblown bureaucracy. Businesses spend less time and money on dealing with regulations and chasing after scarce sources of finance. Instead, they spend their energies on producing and marketing their goods. Second, the government spends fewer resources regulating and more providing basic social services" [29]. The report identified that by reducing administrative regulatory burdens by 15% in Sweden, the UK, Norway, the Netherlands and Belgium, these countries could save between 1.2 and 1.8% of total government expenditure. Therefore better regulation can release money to be used more effectively for promoting quality of life and health.

We cannot remove all risk of harm to health from pollution from industries we regulate because it would make them uneconomic and deprive society of the goods they produce and the services they provide. Nonetheless the European Commission estimates in its recent thematic strategy on air quality [30] that it can cut the health costs of air pollution by between 42 and 135bn euros per annum by 2020 at an annual cost of 7.1bn euros by that date.

In 1998 it was estimated in the UK that the short-term effects of air pollution may lead to the premature deaths of up to 24,000 people already in poor health every year [31], as air pollution can worsen the condition of those with lung or heart disease and can aggravate asthma. A more recent UK Government evaluation of the national air quality strategy found that there were an estimated 4,225 fewer deaths in the UK as a result of a reduction in air pollutants being emitted due to regulation [32]. The European Environment Agency believes such figures may underestimate the contribution of environmental factors to European mortality and morbidity. The EEA is undertaking further research on the costs and benefits of action or inaction when faced with an environmental problem.

Some chemicals are intrinsically hazardous and may represent a risk to health if they are used in a way that makes environmental exposure likely. This would include chemical groups that are persistent in the environment, accumulate in people, are toxic, cancer causing or interfere with people's hormone messengers (known as endocrine disrupters). At the Johannesburg World Summit on Sustainable

27
The European Regional Policy Group of UK Agencies. The Environment, Economic Growth and Competitiveness: The Environment as an Economic Driver, 2005

28
OECD Environmental Performance Review of Sweden, 2004

29
World Bank 2005. Doing Business in 2005

30
http://europa.eu.int/comm/environment/air/cafe/pdf/strat_com_en.pdf

31
Committee on the Medical Effects of Air Pollution (COMEAP), 1998

32
An Evaluation of the Air Quality Strategy, Report to Defra by AEA Technology. December 2004 Report ED50252

Development, held in 2002, many EU member states signed up to a commitment to be met by 2020, that chemicals are used and produced in ways that lead to the minimisation of significant adverse effects on human health and the environment.

The development of initiatives such as the European Commission's proposals for the Registration, Evaluation and Authorisation of Chemicals (REACH) could provide a good basis for managing the health impacts of chemicals. The EU Commission calculated that occupational health benefits from its original REACH proposals were of the order of 54bn euros over 30 years [33].

Physical inactivity and exclusion from economic activity, often a result of poor health from environmental factors, is currently estimated to cost around 12bn euros a year in the UK. A 10 per cent increase in adult physical activity would save at least 735m euros a year. This would have significant impacts on the health of the community and again ensure that the adult population is able to contribute most effectively to the economy. Therefore, regulatory compliance benefits can include cost savings from lower employee absence.

Good environmental regulation protects the natural resources on which business and we all depend

Finally, it should not be ignored that good environmental regulation helps to protect and preserve the environmental goods and services provided for free by properly functioning eco-systems. These include a stable climate, natural resources such as water, air and soil, bio-geochemical recycling etc. Our economy is hugely dependent on such services, but we often take them for granted.

Recent Scottish studies sought to apply economic valuation to these eco-system services [34] [35]. They concluded that the value of eco-system services in Scotland was around 22bn euros – roughly one quarter of Scottish GDP. Yet despite this, environmental protection agencies are often forced on to the defensive by claims that rigorous environmental management and regulation inhibit economic development, reduce competitiveness and even force industry to move to regions where environmental policies are weaker.

Conclusion

The evidence summarised in this paper shows that good environmental regulation in Europe can support a clean, competitive economy and a healthy environment in which to work and live.

As members of the EPA Network, we have made considerable progress in improving the way we meet the obligations imposed on us by legislation, but we aim for continuous improvement. In this context the Network will work to identify and remove potential obstacles to good regulation and promote good examples and case studies of good regulation in practice.

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33
Assessment of the Impact of the New Chemicals Policy on Occupational Health, report by RPA for European Commission Environment Directorate-General, March 2003

34
Williams et al. Exploring the Value of Scotland's Environment. Quarterly Economic Commentary, Fraser of Allander Institute Vol 28 No1 March 2004

35
Williams et al. The Value of Scotland's Ecosystem Services and Natural Capital. The Journal of European Environmental Policy Volume 13 No 2, March-April 2003

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