

## The Policy Implications

### 5.1 General Observations

The economy and the environment are inextricably linked. Policies that attempt to tackle one without reference to the other could render an economy unsustainable. The old perception of environmental protection as the luxury of the rich world has been shown to be short-sighted and misguided. Effective environmental management can be supportive of economic growth.

The term sustainable development has many interpretations. It has been argued that it should refer to non-declining human well-being over time. The previous Chapters suggest it is possible, through the manipulation of economic incentives, to move the economy to a sustainable position. Green accounting techniques can indicate, at the national level, whether an economy is growing in an unsustainable way. If an economy is not sustainable this will show up through a negative genuine savings rate.

The free market, if left alone, is unlikely to grow along a sustainable development path. Resources that can be used by everyone for free will be over-used. Incentives such as secure property rights should be created to ensure that people manage natural resources sustainably and derive benefits from doing so. Government interventions of the wrong type, which encourage high pollution and over-exploitation of resources by lowering the 'price' of pollution and resource consumption, will similarly threaten sustainability. Establishing the correct prices, i.e. ones that reflect both the true private costs and external costs of production, creates the incentives for resources to be used in a more sustainable way. The price of natural resources should reflect the true costs of production, without a government subsidy, i.e. the external costs of production and

the user costs. The final price of the good in the market should equate with the marginal social cost of production.

This principle can be applied to many sectors of the economy. The economic valuation techniques outlined in Chapter 2 are used by economists to measure the size of the external cost from consuming resources. This result can then be used by policy-makers to achieve marginal social cost pricing. Marginal social cost pricing also requires the removal of distorting subsidies. It is not always possible to identify the marginal social cost of consuming resources. Despite the absence of this information, governments often introduce a pollution standard: e.g. total emissions of lead must be less than x grams per litre of petrol. Economics demonstrates that the best way of implementing environmental policies, wherever possible, is by using market based instruments (MBIs) and not command and control measures. The end result would be the same level of reduction in the lead emissions but achieved by MBIs in a less costly way. It is this 'least-cost' quality of MBIs that makes them attractive, especially given the limited resource base in many developing countries and the need to maintain international competitiveness. The reduction in administration costs relative to regulatory approaches can also be very significant. Another very important advantage of MBIs, especially in developing countries, is their ability to raise revenue. It is, however, naïve to suggest that MBIs are the only answer; gradual introduction is required, but the potential for their use in all countries is very large.

Market based instruments (MBIs) can bring about the same result as a traditional regulatory policy but with significantly less economic costs;

in addition, they can raise significant revenues for the government. It has been noted that there may be circumstances in which MBIs, at least entirely on their own, are not suitable. In some instances public policy will demand an immediate response to unexpected circumstances – direct intervention is required. MBIs work most effectively in free market economies with strong government and legal institutions. In the absence of these, the effectiveness of MBIs may be limited.

## 5.2 Choosing the Right MBIs

Each instrument outlined in Chapter 4 has several variants. The instruments can also be used in almost limitless combinations. Choosing a ‘finely-tuned’ instrument in practice is important.

- ❖ The *scale of production* of the industry in question is important. For large industrial conglomerates tradeable permits and effluent charges can be very successful. Monitoring and enforcement are relatively simple. Small or widely dispersed industries with a large number of firms may be better suited to proxy taxes on inputs that reduce the administrative burden.
- ❖ The *degree of competition* within the industry is important. The more competitive the industry, the more reliant the firms are on the price charged to consumers, and the more responsive they will be to MBIs. Monopolised industries may not respond as well to pricing instruments. If this is the case, eliminating the monopoly power (which may itself be the result of a policy failure) should be the first step.
- ❖ *Acceptance by industry and the public in general* is crucial to a successful MBI. The basis of the instrument as an incentive for using new less polluting techniques, rather than simply a punishment for past pollution, should be stressed.

Concerns about the distributional impact of market based instruments has been a popular

‘excuse’ to defend regulatory approaches. However, it has been demonstrated that some of this reasoning is erroneous, as total impacts of MBIs are often less than those associated with a regulatory instrument. MBIs also generate revenues which can be re-distributed. No assessment of the social impact of MBIs can be made without an explicit analysis of the incidence of costs and benefits. MBIs do not have to have adverse impacts on the poor, and, in any event, alternative policies may have even more adverse impacts.

## 5.3 The Politics of Environmental Policy

Removal of subsidies in the water, agriculture and energy sector is politically difficult. The recipients of the subsidies are often powerful groups in society. The best way to overcome this type of resistance to subsidy removal is to mobilise the support of those who will gain to provide a countervailing force. Nonetheless, the difficulties of removing subsidies in practice should not be underestimated. Removing subsidies can be done in a politically acceptable manner, but the policy is clearly a difficult one to implement.

With the subsidy in place the poor often lose out anyway. Subsidies cause overconsumption of, say, water supplies; hence, during a water shortage the rich can often ensure supply of the resource by other means. The gradual removal of subsidy can aid political acceptability. Gradual reforms are often less politically damaging than swift ones. Increasing taxes on any product is also unpopular. The national treasury often gains by the introduction of marginal social cost pricing, as can a host of various other groups. If the treasury gains revenue, a critical issue becomes the question of how the money is re-distributed. As long as adversely affected people are compensated through some other fiscal measure, there is no reason to assume that they will oppose the measure. Gradual price change accompanied by explanation of the net economic effect on people can ease the passage of the suggested measures considerably.

Another major political obstacle to the introduction of MBIs is that pricing policy is already used for so many different, and often conflicting, objectives such as increasing employment, greater productivity, protection of infant industries (e.g. low energy prices), food security (e.g. subsidies to agriculture) and general income distribution. Therefore, whatever the environmental policy is (removal of policy failure or application of market-based instruments), its aims and application should be made crystal clear. MBIs have costs associated with them too, even though, in many cases, these are less than those associated with regulatory approaches. These costs must be measured against the efficiency gains and revenue raising potentials to determine whether MBIs are worthwhile in specific situations. MBIs may be costly due to technical reasons. For example, although water pricing is an effective way of reducing water wastage, installing water meters which are necessary to measure water use is highly costly. High costs also arise because of evasion. As the literature on income tax has shown, the higher the pollution tax or natural resource price becomes, the more incentives there are to evade. One way to avoid this would be to have variable prices based on incomes, so that those with higher incomes for whom evasion may be less worthwhile would face higher costs.

The costs of MBIs (and hence political opposition to them) can be lowered in various ways:

- ❖ *By altering ownership and control:* this requires that the central government and national treasury be willing to devolve more political and financial responsibility. Often private firms or fiscally autonomous agencies are more responsive to MBIs.
- ❖ *By incorporating the price mechanism into the existing social and cultural structure:* the study of economic anthropology has shown that many cultural and religious practices are conducive to economically rational behaviour, and these social sanctions can

reinforce economic signals conveyed through the formal price mechanism.

- ❖ *By altering the policy climate:* long-term education, short-term information and publicity campaigns involving the press, and using non-governmental organisations to monitor compliance, are effective means to pre-dispose firms and households to follow MBIs.
- ❖ *By providing financial incentives for both improved collection and improved payment of MBIs:* for improved payment, these incentives either subsidise those who pay early or fine those who pay late or try to avoid payment. Fines should be adjusted to the size of the MBIs themselves.

The MBIs can be redesigned if they are faced by the problem of high costs. For example, a charge can be levied on the inputs rather than on polluting outputs which requires expensive monitoring. This use of blunt instruments relies on the effectiveness of inputs as proxy to outputs. The gains from administrative simplicity must be weighed against the losses from reduced effectiveness, since there is little incentive to reduce pollution further once the tax on input is paid. One way to overcome this problem is to make the tax refundable if the polluting output is not emitted. This is in line with the principal of deposit-refund schemes and performance bonds.

To conclude, the traditional approach for environmental policy was to invest in piecemeal projects, but the seriousness of the issues has necessitated a broader emphasis on the impact of general economic policy on the environment. Market-based instruments go straight to the heart of the link between the economy and the environment. They are generally lower in financial and administrative costs and are a more integrated way of achieving environmentally sound development.