**Externalities - policy options**

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**Introduction**

**Government intervention to reduce market failure from negative externalities**

Traditionally, policy towards the environment has concentrated in two main areas

* **Intervention in the price mechanism** – for example environmental taxes and subsidies
* **Command and control measures** – for example through regulations and directives

These policies are designed to:

* Achieve a more **efficient use of resources.**
* Promote **substitution between resources** (e.g. abundant for scarce, renewable for non-renewable).
* Provide incentives for lower [**emissions**](http://www.tutor2u.net/blog/index.php/economics/tagged/tag/emissions/) or a change from harmful to benign emissions.

**Environmental taxation**

In 2008 Economist Robert Frank wrote that *“When market prices convey accurate signals of cost and value, the invisible hand promotes the common good. But prices often diverge from cost and value and, in those cases, taxes can actually help steer resources toward more highly valued uses.”*

An [environmental](http://www.tutor2u.net/blog/index.php/economics/tagged/tag/environmental/) tax is a tax on a good or service, which is judged to be detrimental to the environment. It may also be a tax on a factor input used to produce (supply) that final product. The main aim of green taxation is to:

* **Increase the private cost** of producing goods and services so that the producer / consumer is paying for some of the negative externalities that their actions are creating (i.e. **the externality is internalised**) – this promotes **allocative efficiency.**
* Raise the final cost / price of the product so that **demand contracts** -there is normally a direct link between the level of output / consumption and the total pollution created.
* Reduce output levels towards the **estimated social optimum level of production**.
* Well designed environmental taxes can **encourage innovation and the development of new technologies** which reduces our dependency on pollution-inefficient forms of energy. This can help to promote **dynamic efficiency.**
* **Revenue** derived from these taxes can be earmarked for lower taxes elsewhere in the economy so that a new environmental tax is ‘revenue neutral’ or to fund increased spending on environmental projects.
* **Inter-generational equity justification**: Achieving improved sustainability in our resource use now helps to protect the resources available for future generations.

Examples of environmental taxes include: fuel duty, vehicle excise duty, air passenger duty, the aggregates tax, the landfill tax and the London Congestion Charge. The Irish Government also introduced a tax on plastic bags in a bid to reduce consumption and encourage recycling. The main aim of an environmental tax is to increase the firm’s private marginal cost (PMC) until it equates with the social marginal cost curve (SMC).

**Problems with environmental taxation**

There is a growing body of economists who argue that reliance on [environmental taxation](http://news.bbc.co.uk/1/hi/business/6209676.stm) is an ineffective way of promoting environmental improvement, and that some taxes are prone to [government failure](http://www.tutor2u.net/blog/index.php/economics/C168/).

The main criticisms of environmental taxes are discussed below:

**Valuing the environment:** There are problems in setting taxes so that marginal private costs will equate with the marginal social costs. Frequent adjustments of tax levels may be required and this involves substantial organisational costs.

**Consumer welfare effects:** Taxes reduce output and raise prices, and this might have an adverse effect on consumer welfare. Producers may be able to pass on the tax to the consumers if the demand for the good is inelastic and, as result, the tax may only have a marginal effect in reducing demand and final output.

**Achieving a target quantity of pollution reduction:** Taxes do not lend themselves to the government achieving an accurate reduction in total pollution. This is because no government can ever predict how consumers and or producers will respond to higher costs and prices. The price elasticity of demand will vary over time.

**Income distribution:** Taxes on some de-merit goods may have a regressive effect on low-income consumers and lead to greater inequalities in the distribution of income.

**Employment and investment consequences:** If pollution taxes are raised in one country, producers may shift production to countries with lower taxes. This will not reduce global pollution, and may create problems such as structural unemployment and a loss of international [competitiveness](http://www.tutor2u.net/blog/index.php/economics/tagged/tag/competitiveness/).

**More efficient alternatives?** It might be more cost effective for governments to switch away from pollution taxation to direct subsidies to encourage greater innovation in designing cleaner production technologies. The impact of green taxes depends crucially on what is done with the revenues. If they are balanced by reducing other taxes through ‘revenue re-cycling’, research suggests that green taxes could result in an overall economic improvement