# Solutions to Tutorial Questions

**Chapter 11 Trade and the Environment**

**11.1 You have been invited to take part in a debate with the proposal that ‘Globalization is Bad for the Environment’. What would your three main points be if you were to argue for the proposal? Which three arguments would you have against the proposal?**

**For the proposal that ‘Globalization is bad for the Environment’.**

Pollution Haven effect: with free trade polluting industries will move to countries with lax environmental policies.

Growth effect: growth of itself by bringing more goods and services into existence automatically increases pollution by bringing more goods into existence.

Regulatory chill to maintain competitiveness in response to trade openness countries avoid introducing cost increasing environmental policies.

**Against the proposal that ‘Globalization is bad for the Environment’.**

Pollution Haven effect: instead of shifting polluting industries off-shore, developed countries are able to specialize in polluting industries where they have the capacity to manage pollution safely.

Growth effect: growth also increases income and increases consumer demand for higher environmental standards. There is also an Environmental Kusnets Curve Effect. Evidence suggests it applies to some pollutants such as sulphur dioxide but not carbon emissions.

Regulatory chill little evidence that countries engage in a “race to the bottom” instead many trading partners tighten environmental standards through time.

**11.2 Distinguish between the pollution haven hypothesis and the Porter hypothesis in relation to trade and the environment.**

The pollution haven hypothesis predicts that with freer trade multinational companies will move production of polluting goods to countries with lax environmental standards (typically developing countries). For this hypothesis to hold, then the costs of environmental compliance have to be a significant component of a firm’s production costs.

The Porter hypothesis suggests that operating under tight environmental regulations actually makes a firm more efficient. That is, regulation which imposes short-run costs on firms often enhances their long-run competitiveness. The issues relating to this hypothesis is: why do profit-maximizing firms not find these cost saving techniques without being prompted by environmental regulations?

Porter, M and van der Linde (1995). Towards a New Conception of the Environment-Competitiveness Relationship, Journal of Economics Perspectives, 9, 97-118.

Porter, P. R. (1990) ‘America’s green strategy’, Scientific American 264: 168.

**11.3  What effect would you expect a domestic environmental policy that restricts output to have on the trade of an open economy?**

Environmental policy through command-and-control, emission taxes or tradable permits, reduce the output of the good generating the pollution. If the good is exported, exports will be reduced. If the good is imported, then imports will increase.

11.4 Distinguish between the scale effect and the composition effect of trade liberalization.

A scale effect in an economy involves an increase in capital and labour that pushes the production possibility frontier outwards; this leads to an increase in output of polluting and non-polluting goods.

The composition effect involves capital accumulation and a shift in the share of output towards the capital intensive good. If the capital intensive good is also the polluting good a change in composition could lead to an increase in pollution.

**11.5 What is the link between trade and the environmental Kuznets curve?**

If trade openness leads to income growth then, through the Environmental Kuznets Curve, this will lead to an increase in demand for environmental quality.