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## **ECONOMIC DEVELOPMENT OF ENVIRONMENT AND ITS MANAGEMENT**

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### **ABSTRACT**

*There is a relation between economic development and environmental. There are different aspects of this relation. On the one hand there is a belief that economic development leads to environmental degradation in developing economics and this is inevitable. On the other hand there is a view that for sustainable development environmental quality must be maintained. This paper deals with different aspects of the relation between economic development and environment.*

**KEYWORDS:** *Economic growth, Economic Development, Environmental degradation.*

### **INTRODUCTION**

Earlier it was believed that the problem of environmental pollution was applicable to developed industrial economics only and the developing countries were free from the problem of environmental pollution. But in recent years the beliefs have changed. It is now found from the experience of many developing countries that they have been suffering from massive environmental degradation. Rural areas have witnessed large scale soil erosion and water quality deterioration, deforestation and declining soil productivity. Urban areas have experienced seriously diminished air and water quality. Furthermore the environmental degradation in developing countries is not just a matter of aesthetics or quality of life, but rather a more serious issue involving diminution of productivity of natural resources. Environmental problems of developing countries are much more likely to be matters of life and death than they are in the developed countries.

This paper is concerned with the interrelation between economic development and environment in developing countries. It has two aspects – one positive and the other normative. The positive aspect considers how development and environmental degradation are reciprocally related and what factors account for the interrelationship. The normative aspect deals with issues related to the relation between economic development and environmental degradation.

### **ECONOMIC GROWTH AND ECONOMIC DEVELOPMENT**

Sometimes a distinction is made between economic growth and economic development. In simple terms economic growth refers to increase in the aggregate level of output whereas development means increase in per capita output. Thus a country can grow but not develop if its rate of growth of output is less than the rate of growth of population. The more sophisticated way is to say that economic growth refers to increase in economic activity without any change in the fundamental economic structure while development also includes a wider set of technological, institutional and social transformations. Changes in such things as education, health, population, transportation, infrastructure and legal institutions are all part of the development process.

### **ENVIRONMENTAL DEGRADATION IN DEVELOPING ECONOMICS**

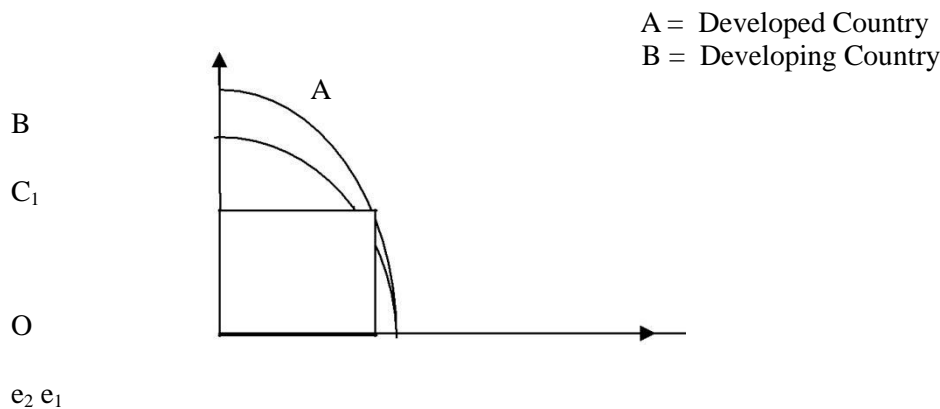
Many people in the developed world have been brought to realization of the existence of environmental problems in the developing world through recent global concerns such as rapid pace of species extinction and global warming. A disproportionately high number of world's endangered species are resident of developing countries. So effort to preserve the habitats of these species have brought people to focus on the development – environmental linkages in non- industrialised developing countries. Similarly, the developed countries' concern about global warming has heightened concern about deforestation because forests act to absorb atmospheric CO<sub>2</sub>.

Large-scale deforestation in developing countries has the potential to worsen the global greenhouse effect.

But from the stand point of the developing countries themselves, their worst environmental problems are probably the water and air pollution they suffer, especially in their expanding urban areas. In developed countries the chemical treatment of water supplies, together with the treatment of waste water, have largely neutralized the water system as a source of widespread human disease. This is not the case in many developing countries where water pollution is still responsible for vast amounts of disease and death. Lack of treatment facilities leads to widespread exposure to disease-bearing human wastes. In places where there has been an expansion of industry, mining and the use of chemicals in agriculture, rivers have become contaminated with toxic chemicals and with heavy metals. Seepage of hazardous materials from industrial sites and waste dumps is increasingly threatening the ground water resources in many developing countries. Air pollution is also a significant problem in developing countries where petrol is virtually all leaded leading to serious damages from airborne lead pollution. Indoor air pollution is also a more serious problem than in developed countries owing to the continued reliance on biomass fuels for cooking and heating.

### **RELATION BETWEEN ECONOMIC DEVELOPMENT AND ENVIRONMENTAL QUALITY**

The most frequently mentioned view point is that developing countries simply cannot afford high levels of environmental quality. This view can be explained with the help of production possibility curves. A production possibility curve shows different combinations of marketed output and environmental quality, which the economy can get, given its resources and technological capabilities. It indicates that there is a trade-off between marketed output and environmental quality. Consider the following diagram where we plot marketed output on the vertical axis and environmental quality on the horizontal axis.



The production possibility curve labelled A is for a typical developed country while B refers to a developing country. B lies entirely within A. A developing country can achieve the marketed output  $OC_1$  with environmental quality  $oe_2$ . The developed country can have same level of output with much higher level of environment quality of  $oe_1$  instead of  $oe_2$ . According to this view, developing countries cannot afford the high levels of environmental quality sought in the developed world because this would mean lower output for them.

However there is another side to this argument. The production possibility curve views marketed output and environmental quality as substitutes. But in the developing world they are more likely to be complementary. Most developing countries depend heavily on primary industries than do developed ones. For example they have a greater proportion of the population engaged in agriculture. Thus, degradation of environmental resources has the potential for being more highly destructive of productive assets in developing countries. Environmental degradation may reduce future productivity of natural resource base on which many people are directly dependent. Conversely, improvement of environmental quality will enhance future productivity of natural resource base. Thus environmental and the economy are not so much substitutes, as they are complements.

But these are essentially static arguments and the essence of economic development is long run change. So the relevant question is: How is long run economic development likely to affect environmental quality? The normal expectation is that development would shift the production possibility curve of the previous figure outward. As economies change, becoming less tied to natural resources and as less polluting technologies are adopted, this outward shift would improve the potential trade off between marketed output and environmental quality. Developing countries could then devote more resources to improving environmental quality.

Sometimes the opposite has happened, however, the short run effort to increase or maintain marketed output, in effect, tended to shift the PPC to the left and worsen the available choices this has occurred when the search for short run economic growth has led to irreversible reductions in the productivity of some part of a country's environmental assets. The concept that has become widely used to talk of this phenomenon is sustainability. A practice is sustainable if it does not reduce the long run productivity of the natural resource assets on which a country's income and development depend.

### **LONG-RUN RELATIONSHIPS**

Studies have been done to investigate the relationship between various environmental quality indices and the income levels attained in different countries. The objective is to see if as income levels change, there are systematic changes also in environmental quality variables. In fact, studies show clear relationship between income levels and a variety of environmental quality indices. These are essentially three types of relationships:

- (i) Those showing steady declines as incomes increase. This applies to access to safe water and sanitation facilities, which countries can easily afford as incomes rise.
- (ii) Those that first increase and then decrease with increase in income. This applies to ambient amounts of particulates and  $SO_2$  (Sulphur Dioxide). This pattern is probably due to the fact that in its early stages industrial development leads to greater air pollution, whereas with continued development there is a shift in industry type toward cleaner industries.
- (iii) Those showing a steady increase with income gains: This applies to municipal solid wastes and  $CO_2$  emissions per capita. The first is a reflection of the growth in material standards of

living as incomes increase, whereas the second result from the increasing demand for fossil based energy that normally accompanies development.

These relationships are not inevitable. They can be taken as general tendencies, which may be different in particular countries, depending on technology choices adopted as well as the preferences of their citizens. It points out that for many environmental problems the situation is likely to get better as development occurs; indeed, economic development may be seen as a way of combating these problems.

### **THE POLLUTION –HAVEN HYPOTHESIS**

In recent years it has been argued that developing countries may be acting as “pollution havens”, i.e. places where firms can move and operate without the strict environmental controls of the developed countries. The idea essentially has two parts:

1. That stringent environmental standards in industrialized countries are causing some firms, especially pollution-intensive ones, to flee to countries with less stringent standards.
2. That some developing countries have tried, with some success, to attract pollution intensive firms with the promise of lower pollution-control standards in the hopes of boosting their rates of economic growth.

It is surprisingly difficult to get conclusive data on this matter. Most opinions are found on the basis of anecdotal or episodic events like the Bhopal disaster. But these are not good sources from which to draw conclusions about general trends. Almost all countries, developing and developed, have regulations on the books that appear to place emissions under reasonably strict controls. But those are not usually followed in practice because of weak enforcement. Moreover, many factors besides environmental regulations could cause “dirty” industries to migrate among countries, for example, labour costs, raw materials availability, infrastructure availability and specially the state of the product cycle. By the last we mean the fact that during the process of growth of any economy certain industries will tend to expand and decline at different times. Certain basic manufacturing industries which may be “dirty”, will often expand early in a country’s development and decline later as incomes increase. So these industries might be moving around from one country to another in response to where those countries are in the product cycle, rather than because of environmental regulations.

There is some evidence, although not so strong, that dirty industries in developed countries have been migrating to developing ones. One group of researchers took a look at the relative rates of growth of toxic- intensive industries in developed and developing countries. A toxic intensive industry is one that releases relatively large amounts of toxic chemicals per unit of output produce. They conclude that the poorest economies have highest rate of growth toxic incentive industries. This result is consistent with the pollution haven hypothesis. But at this point in time it is impossible to rule out other competing explanations.

### **POLICYISSUES**

Policy institutions in developing countries have been relatively weak, but this is changing. Most environmental policy in these countries has followed the lead of the developed world, in terms of being based on command and control principles, some have suggested that developing countries should emphasize incentive- based policies so as to achieve higher levels of cost effectiveness. Population control has frequently been recommended as a means of lessening environmental impacts.

Although lower rates of population growth may facilitate environmental improvements, they are not sufficient for attaining improvements in environmental quality.

Finally, the developed world can play a substantial role in helping third world countries develop without large-scale environment destruction. The primary mechanism for this is technology transfer understood broadly to include the transfer of skills and technological capabilities that are culturally sound are not solely the transfer of western capital goods.

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