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Structural Obstacles To Preventing Pollution In Developing Countries

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Industry in developing countries usually operates short of capital compared to industry in developed countries, and those investment funds that are available are first put into the equipment and resources necessary for production. Capital that is applied toward control of pollution is considered "unproductive" by economists because such investment does not lead to increased production and financial return. However, the reality is more complicated. Investment in control of pollution may not bring an obvious direct return on investment to the company or industry, but that does not mean that there is no return on investment. In many cases, as in an oil refmery, control of pollution also reduces the amount of wastage and increases the efficiency of the operation so that the company does benefit directly. Where public opinion carries weight and it is to the advantage of a company to maintain good public relations, industry may make an effort to control pollution in its own interest. Unfortunately, the social structure in many developing countries does not favour this because the people most negatively affected by pollution tend to be those who are impoverished and marginalized in society. Industry in developing countries tends to be less efficient than in developed countries.

This lack of efficiency is a chronic problem in developing economies, reflecting untrained human resources, the cost of importing equipment and technology, and the inevitable wastage that occurs when some parts of the economy are more developed than others. This inefficiency is also based in part on the need to rely on outdated technologies which are freely available, do not require an expensive license or that do not cost as much to use.

These technologies are often more polluting than the state-of-the-art technologies available to industry in developed countries. An example is the refrigeration industry, where the use of chlorofluorocarbons (CFCs) as refrigerant chemicals is much cheaper than the alternatives, despite the serious effects of these chemicals in depleting ozone from the upper atmosphere and thereby reducing the earth's shield from ultraviolet radiation; some countries had been very reluctant to agree to prohibit the use of CFCs because it would then be economically impossible for them to manufacture and purchase refrigerators. Technology transfer is the obvious solution, but companies in developed countries who developed or hold the license for such technologies are understandably reluctant to share them. They are reluctant because they spent their own resources developing the technology, wish to retain the advantage they have in their own markets by controlling such technology, and may make their money from using or selling the technology only during the limited term of the patent. Pollution may damage the environment and society as a whole, but these are "externalized dis-economies" that do not substantially hurt the company itself, at least not economically.

Instead, the costs of pollution tend to be carried by society as a whole, and the company is spared the costs. This is particularly true in situations where the industry is critical to the local economy or national priorities, and there is a high tolerance for the damage it causes. One solution would be to "internalize" the external dis-economies by incorporating the costs of clean-up or the estimated costs of environmental damage into the operating costs of the company as a tax. This would give the company a financial incentive to control its costs by reducing its pollution. Virtually no government in any developing country is in a

position to do this and to enforce the tax. In practice, capital is rarely available to invest in equipment to control pollution unless there is pressure from government regulation

However, governments are rarely motivated to regulate industry unless there are compelling reasons to do so, and pressure from their citizens. In most developed countries, people are reasonably secure in their health and their lives, and expect a higher quality of life, which they associate with a cleaner environment. Because there is more economic security, these citizens are more willing to accept an apparent economic sacrifice in order to achieve a cleaner environment. However, in order to be competitive in world markets, many developing countries are very reluctant to impose regulation on their industries. Instead, they hope that industrial growth today will lead to a society rich enough tomorrow to clean up the pollution. Unfortunately, the cost of clean-up increases as fast as, or faster than, the costs associated with industrial development. At an early stage of industrial development, a developing country would in theory have very low costs associated with the prevention of pollution, but hardly ever do such countries ave the capital resources they need to do so. Later, when such a country does have the resources, the costs are often staggeringly high and the damage has already been done. Another problem faced by developing countries is lack of expertise in and awareness of the effects of pollution, monitoring methods and-the technology-ollutien-control.

There are relatively few experts in the field in developing countries, in part because there are fewer jobs and a smaller market for their services even though the need may actually be greater. Because the market for pollution control equipment and services may be small, this expertise and technology may have to be imported, adding to the costs. General recognition of the problem by managers and supervisors in industry may be lacking or very low. Even when an engineer, manager or supervisor in industry realizes that an operation is polluting, it may be difficult to persuade others in the company, their bosses or the owners that there is a problem that must be solved. Industry in most developing countries competes at the low end of international markets, meaning that it produces products that are competitive on the basis of price and not quality or special features.

Few developing countries specialize in making very fme grades of steel for surgical instruments and sophisticated machinery, for example. They manufacture lesser grades of steel for construction and manufacturing because the market is much larger, the technical expertise required to produce it is less, and they can compete on the basis of price as long as the quality is good enough to be acceptable. Pollution control reduces the price advantage by increasing the apparent costs of production without increasing output or sales. The central problem in developing countries is how to balance this economic reality against the need to protect their citizens, the integrity of their environment, and their future, realizing that after development the costs will be even higher and the damage may be permanent.

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