

Economic Growth *versus* The Environment

Economic growth is indispensable to the world economy as it currently functions. In this regard there is hardly a difference between capitalist countries and the remaining socialist and mixed economies. Economic growth as a policy-goal is unquestioned either in theory or in practice by any existing government. On the other hand a growing number of scientists are warning that economic growth is incompatible with long-run environmental sustainability. There seems to be an irreconcilable conflict between the virtual necessity of economic growth and the absolute necessity of environmental preservation. The failure to recognize explicitly this conflict has regrettable consequences, as (1) it leads to dangerous optimism that the economy–environment problem will take care of itself or at least may be alleviated with a minimum of effort, and (2) it precludes the search for institutional alternatives to economic growth.

Why Economic Growth is Essential to Economic Health

1. Economic growth makes it possible to have a rapid turnover in capital stock (investment) which in turn means that a growing economy will have a high proportion of new technologies and thus be capable of high growth in productivity. A large portion of jobs in the economy, especially high-paying jobs, are found in industries that are bent on designing and producing investment goods (Johnson & Hardesty, 1971).

2. When the productivity of the average worker increases, the resulting higher incomes generate a need for new products to absorb the concomitant increase in demand. A growing economy generates surplus value which must be reinvested to be realized, and which in turn generates more economic growth, and so on *ad infinitum*.

3. Politically, a growing economy allows politicians to avoid thorny questions of income redistribution (Daly, 1977): ‘A rising tide raises all ships’.

4. Increasing the overall size of productive enterprises makes it possible to capture economies of major scale. This may be one of the main reasons for the phenomenal productivity growth-record of the twentieth century.

Consequences of Positive Relationship Between Economic Growth and Economic Well-being

A) Population increase tends to be good for the economy. The more people there are, the more consumers there will be, and the more economies of scale can be captured. This is explicitly recognized in government policies, and is apt to be used as an excuse to encourage population growth — most recently by the Japanese government.

B) Increasing *per caput* consumption is good. For the reasons listed above, more consumption per person leads to greater technological efficiency and the necessity for even more growth. A corollary is that profit margins may be higher on luxury goods. This may favour an unequal income distribution, especially if sellers can go world-wide and not have to worry about their own employees’ lack of purchasing power.

C) Expansion of markets is good. This also creates more income, more purchasing power, and more surplus value to absorb, which leads in turn to still more growth. It also allows economies of substantial scale to be captured through increased plant-size, a greater division of labour, and so on.

D) Expanding investment into the third world is a desirable way to expand markets. Much of the large-scale investment in the third world is funded by major international agencies whose aim is to foster a transition from underdeveloped economies to ones mirroring the consumption patterns of the West.

All four of items A–D are more or less lethal to the environment. Greater population pressure means greater pressure on biological resources for food, fuel, and living space, with concomitant losses of habitat and biodiversity. More income *per caput* means more production and therefore more irreplaceable resources going into (and more pollution coming out of) the economic system. The expansion of markets means eventually that if anyone on the entire planet has a use for a natural resource, that resource will be used. Black Bears (*Ursus americanus*) are being killed in the wilds of Ontario, Canada, because their gall-bladders fetch a price of \$10,000 a kilo as medicine in Japan and Korea (Gordon & Suzuki, 1990). Markets also make it economically desirable for regions to specialize in one activity, such as one crop, thereby eliminating the necessity and desirability for biodiversity (Norgaard, 1988).

Because growth is so important to economic well-being (and the well-being of elected officials!) people go to almost any lengths to deny the connection between economic growth and environmental disruption. Some of the arguments are so ‘hysterical’ that they have no general credibility (Simon, 1982; Wattenberg & Zinsmeister, 1986). Nevertheless, these extreme arguments get wide publicity, are well-funded, and widely reported. More dangerous, perhaps, are the arguments from those who profess sympathy with efforts to protect the environment but who nevertheless reassure us that economic growth and environmental protection are not in conflict. Two common arguments are:

1. The use of some advanced material or energy-saving technology is apt to be extrapolated to the whole economy, thereby showing that we can produce the same GNP with a fraction of the resources' input currently used. Such examples usually involve the substitution of one scarce or polluting input for another, and there are almost always economic reasons (costs) why the technique cannot be universally adopted. The basic problem is that practically all production uses scarce resources and generates pollution.

2. Natural changes in the composition of growth — usually a move from manufacturing to service industries — will negate its bad effects. However, there are economic and environmental objections to this point. The service sector does not generate the large multiplier effects, and thus does not contribute to economic growth to the extent that manufacturing does. And even if one country could successfully move to service-sector economy, manufactured goods would have to be produced somewhere. Again, practically all economic activity produces pollution and uses scarce resources. Even if one worked out the perfect formula for the least environmentally-damaging mix of industry and services, there would still be an absolute limit in terms of minimum environmental effects (assuming that people still eat, live in houses, etc.). Growth beyond that limit would produce more pollution and use more scarce resources than any growth leading up to it.

The Economy and the Resource-base

The early economic growth debate focused on potential resource exhaustion. The argument presented by the Club of Rome, and others, was that economic growth will overshoot the resource-base and collapse. A much more frightening possibility is that resource scarcity will not be a binding check. Although resource scarcity will almost certainly result in slowed growth, the market economy has proved to be resilient. On the input side, substitutes are in some sense generated by scarcity. On the pollution output side, history has shown that humans are adaptable to a fault. According to Hern (1990), it may be possible for humans to survive without most of the other species now present on Earth.

Scarce resources used as productive inputs do have prices, so the market to some extent takes this scarcity into account. On the output side, however, except in very special cases, the economy–environment link is not priced. The only way to take it into account is through political action, namely through prohibition and regulation of environmental disruption. Slower economic growth makes this more and more politically unfeasible. To the extent that resource scarcity results in slower growth as less desirable inputs are substituted, it generates negative effects on environmental protection.

Economic Theory and Economic Reality

Ecologists and ecologically-minded economists have spent a great deal of time and effort criticizing the dominant neoclassical model of how the economy operates. A problem with some of these criticisms is that they fail to distinguish between economic theory and economic reality. For example, in all standard texts the economy is described as a circular-flow, perpetual-motion machine (Georgescu-Roegen, 1971). No natural resources go into the system, and no pollution comes out. This is obviously a physical impossibility. But, this model offers a good description if the economy acts *as if* that were the case. Consider the economic value of The Biosphere. In the market system, not only is the value which humans place on environmental quality grossly underestimated, because of the lack of prices for most environmental goods and services, but there is no way in which any values other than those originating with or from present-day humans can influence prices and thus influence the use of those resources.

Humans living in the present are the only creatures who can enter the market and bid. The world was outraged (and rightly so) over plans of a Japanese businessman to be cremated with paintings by Van Gogh and Renoir for which he paid \$190 US million dollars (Brisbane Courier-Mail, 1991). It cannot be argued that this is simply a case of 'market failure', as it could very well be that the businessman would put a higher value on the destruction of the paintings at his funeral than would be the collective sum that people would be willing to pay to save it.

The ethical outrage should be even greater when private interests buy pieces of the environment, such as a rain-forest, and yet destroy it. Natural treasures that took hundreds of thousands of years to create, are being burned according to the whims of ephemeral owners. The destruction of a picture by Van Gogh or Renoir, tragic as it would be, would not affect the survival of the planet's inhabitants.

What is objectionable, then, is not the neo-classical model of the market, but rather the reality of the market system itself. The task is not to come up with a more realistic model but to change the current economic system before it effectively destroys all higher life-forms on the planet.

The Search for Alternatives to Growth

When once the iron-clad link between economic growth and environmental degradation is admitted, it becomes clear that, to protect the environment, we need to find alternatives to growth. It may seem to be an

impossible task, but it is a necessary one if the existing world superecocomplex is to be preserved, and if life is to be worth living for humans in the future. The goals of growth alternatives are straightforward (Cohen & Polunin, 1990): (1) the continuation of all life into the distant future, and (2) the preservation of human dignity.

Interestingly, the same policies which promote human dignity and security also lead to environmental harmony. Gordon & Suzuki (1990) argue that social insurance in mainland China is just as important as the one-child policy in reducing that country's birthrate. Social security and old-age pensions have been credited in the reduction in population growth-rates in Kerala Province in India and in Sri Lanka. When life is perceived to be secure, people do not need large families to insure that they will be taken care of in old age. Another goal which is both ecologically and ethically desirable is the improvement of the status of women in many third-world countries. Jacobson (1987) has documented the relationship between high fertility and the low social status of women in Africa.

Yet another policy that is desirable for ecological and ethical reasons is the provision of more social capital as opposed to private capital. For example, the provision of public transport instead of private automobiles, and public rental cabins in national parks and preserves instead of private second homes, would have a positive effect on environmental quality.

Some years ago Warren Johnson (1973) argued for a guaranteed income as an environmental measure. A guaranteed income would make it possible for some to leave the treadmill of full-time work and consumption. It should have the effect of encouraging a diversity of life-styles and breaking the link between growth and well-being. Only a minority would want to try dropping out of the market system, but those who wanted to could do so without fear of economic devastation. If successful, their example would appeal to a larger and larger part of the population.

The phasing out of economic growth does not have to be (yet) an all-or-nothing proposition, that is, between flat-out consumption or totally reverting to a subsistence existence. Human society is addicted to economic growth. As with any addiction, the first step is to recognize the problem and take an initial if tentative step towards a solution.

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