Economic Growing Pains

It is a commonly held belief that economic growth always improves the health of nations and the well-being of the people living in them. In the United States, the promise of continued economic growth has been a constant theme in advertising campaigns, selling everything from automobiles to political candidates. Now, in this age of global interdependence and environmental awareness, we may be “outgrowing” these long-held economic principles.

Much of our economic growth is dependent upon using the finite resources of the Earth, from the plants and animals we harvest, to the oil and ore we mine. But if rapid growth of human populations and per capita resource consumption continues we may reach a point where the Earth can no longer sustain its inhabitants. Warning signs of the Earth’s limitations are already apparent in the deterioration of our life-support systems: shrinking forests, expanding deserts, eroding croplands, thinning ozone layer, accumulation of greenhouse gases, increasing wildlife extinction and biological damage from air pollution and acid rain.

Many people have resisted environmental regulations to reduce pollution, and protect wetlands, biodiversity and scarce resources because they fear that these efforts hamper economic growth, and thus human well-being. At times trade-offs between environmental protection and the economy are easy to see. Take logging in the Pacific Northwest, for example. Protection of old-growth forests seems to come at the expense of loggers’ jobs. In other cases, clean air and clean water regulations can increase the costs of producing goods, and company owners may lower wages or lay off workers in order to maintain profits.

Nonetheless, Robert Repetto, Senior Economist of the World Resources Institute, argues that “much of the alleged burden that environmental protection measures impose on the economy is illusory.” He and others have concluded that we perceive conflict between economic and environmental interests only because we have flawed measures of economic progress.

The most common measure of economic growth and also of a nation’s general welfare is the Gross Domestic Product (GDP), which is defined as the total value of all the goods and services bought and sold in a given year. However, GDP measures have several shortcomings. First, they make no distinction between “good” spending and “bad” spending. For example, pollution increases this measure of economic growth not once, but twice — first with the sale of products from factories that produce the pollution, and second when money is spent to clean up the pollution. In other words, according to GDP measures, pollution is good for the economy. Furthermore, GDP measures do not count things which have no monetary value, such as community and volunteer work and use of our natural resources. The figures do not account for the economic services nature provides people by conserving soil, cleaning air and water, providing habitat for wildlife and supporting recreational activities. GDP measures ignore resource depletion and count sales of resources only as income. For example, the only economic value placed on a forest is for its harvested timber.
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**Ecological Economics**

Because traditional economic thought tends to ignore the role of the environment in the economy, a growing number of economists are calling for new ways of thinking about the economy and of measuring economic progress. Robert Costanza and Lisa Wainger of the International Society for Ecological Economics recommend that environmental interests be incorporated into economic planning, since a healthy economy can only exist in symbiosis with a healthy ecology. They point out that “the most obvious danger of excluding nature from economics is that nature is the economy's life-support system, and that by ignoring it, we may inadvertently damage it beyond repair.”

All economists agree that the environment serves as a **source** and a **sink** for the economy. That is, the economy draws resources and energy from the biosphere (source) and then gives them back in the forms of byproducts and waste (sink). Where ecological and traditional economists differ is in their beliefs in the ultimate ability of the Earth to keep providing these services with ever-increasing levels of production and consumption.

Herman Daly, Senior Research Scholar in the School of Public Affairs at the University of Maryland and founder of the International Society of Ecological Economics, argues that economists traditionally have taken the environment for granted because when traditional economic theories were first developed, the ability of the biosphere to provide resources and absorb wastes was considered infinite relative to the demands of the economy. However, through population growth and increased consumption levels, the scale of the economy has now grown to the point that the sources and sinks are becoming scarce relative to the demands of the economy.

In Daly's view, using economics to explain the human condition today without recognizing the role of the environment in the economy is “as if biology tried to understand animals only in terms of their circulatory system, with no recognition of their digestive tract.” On the other hand, Daly’s critics point out that improvements in technology — making our cars, appliances and power plants more efficient — compensate somewhat for the impact of economic growth on the environment. They can allow us to produce and consume more without taking quite as much from sources or putting quite as much into sinks.

**A Sustainable Economy**

Ecological and traditional economists have very different ideas on how natural resources, which they call “natural capital,” must be treated if we are to maintain a “sustainable economy.” By a sustainable economy, we mean an economy that meets the needs of people today without threatening its ability to meet the needs of future generations. Traditional economics says that if you use natural resources and convert them to man-made things like cars or buildings, the world will be just as well off, or better off, than it was before. The new things, or “physical capital,” created replace the value of the natural capital that was lost. An economy is sustainable as long as it does not deplete the total amount of capital. It does not matter what form the capital is in.

On the other hand, the ecological economics argues that because our natural capital is scarce, it
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needs to be treated as a special case. Man-made products, or physical capital, cannot fully replace the loss of our natural capital. Natural resources provide a number of crucial services, such as protection from ultra-violet rays and purification of water. The ecological economists claim that benefits gained from new roads or malls cannot match or outweigh the costs of pollution and resource depletion. Therefore, in order to have a sustainable economy, natural capital must remain intact. This does not mean that you cannot use any natural resources, only that they must not be used faster than they are replaced.

Clearly, these two types of economists would make very different recommendations on what use of natural resources is best for the economy and for the well-being of future generations. Consider the example of the loggers and the old-growth forests. According to traditional economists, rapidly logging old-growth forests can be economically desirable because the trees, or natural capital, that are cut down are transformed into furniture, new homes or paper. The total amount of capital remains the same; it just takes a different form.

However, according to ecological economics, rapidly logging the old-growth forests is not economically desirable if the forest is depleted faster than it is replaced because the value of the new homes cannot fully replace the natural benefits and services lost when the forest is cut down. From this analysis, we see that if the role of the environment in the economy is recognized, protecting environment does not conflict with economic progress. In fact, because the economy is dependent on the environment, if an investment is not good for the environment then it cannot be good for the economy either.

New Alternatives

Many organizations are now working on developing new ways of measuring economic growth which incorporate the environment’s role in the economy. One group, Redefining Progress, has created an alternative to GDP measures called the Genuine Progress Indicator (GPI). The depletion of natural resources such as wetlands, farmlands non-renewable minerals (including oil) and the costs of pollution all lower the GPI. GPI measures also account for the use of chemicals which deplete the ozone or cause other long-term environmental damage.

Both the United Nations and the World Bank are in the process of developing new economic indicators. The United Nations Statistical Division has devised a measure called the Environmentally Adjusted Domestic Product (EADP). EADP measures count depletion of natural resources as a loss in capital which is subtracted from the overall growth. When this measure was applied to Mexico, the country’s economic growth was 13 percent

![Gross Production vs. Genuine Progress 1950-1995](image_url)

“When social and environmental costs are taken into account, the overall health of the economy shows a steady decline since the 1970s,” according to Redefining Progress, a nonpartisan, public policy institute. Redefining Progress developed the Genuine Progress Indicator (GPI) to account for more than 20 indicators of economic well-being missing from the traditional Gross Domestic Product (GDP), such as natural resource depletion, volunteer work and income distribution.

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lower than initially measured by GDP measures, due to damaging ecological practices. The United Nations argues that these new measures allow economic growth to be “evaluated in new and more realistic terms.”

Making new decisions about how economies should work using these new measures of evaluation may push us towards what Herman Daly calls the “steady-state economy.” Unlike our present economy, the steady-state economy is characterized by a constant population of humans and a constant amount of available goods. This economy focuses on producing a quantity and quality of goods that will provide for a decent standard of living for both present and future generations. In the interest of conserving resources and preserving our environment, Daly also argues that the rate of input and output should be reduced to the lowest feasible levels. This ensures that the economy will never outgrow the ability of the Earth to perform its roles of sink and source. The availability of natural resources can be sustained if we live off the dividends, rather than using up our natural capital. Limiting our use of fossil fuels, for example, will, in turn, limit the amount the Earth will have to absorb from the production of gases contributing to air pollution, acid rain and global climate change. In this scenario, the Earth’s ecosystems could be maintained indefinitely and more people could enjoy a better quality of life.

Some communities have started to recognize that environmental and economic interests go hand and hand, and are recreating their cities in line with this idea. The citizens of Chattanooga, Tennessee, for example have made a commitment to becoming an “environmental city.” By re-focusing its economy, Chattanooga has expanded business investment and jobs at the same time as improving its air and water quality. One example of an environmentally friendly business located there is the manufacturer of zero-emission buses. Chattanooga continues to target other environmental businesses to expand or relocate there, and they are building an environmental conference center. All of these efforts have effectively revitalized the city after decades of economic depression.

Growing Together

Achieving a sustainable economy will require an international commitment to slowing population growth worldwide and reducing consumption levels of finite resources, especially in industrialized countries. Even if resources are used efficiently, consumption of water, energy and forest products will continue to rise if human numbers increase.

“Despite what leading economic indicators may imply,” write Sandra Postel and Christopher Flavin of the Worldwatch Institute, “no economy can be called successful if its prosperity comes at the expense of future generations and if the ranks of the poor continue to grow.” These new economic indicators will help the economy develop in a way that results in the ends we all value: improved quality of life, and protection of the health of our Earth and its inhabitants.

Endnotes

4 Herman Daly: Beyond Growth: The Economics of Sustainable Development, Boston: Beacon Press, p. 34.
5 Herman Daly: 1988 quoted in op. cit. Note 3.
6 Factsheet: “What’s Wrong with the GDP as a Measure of Progress.” Redefining Progress, San Francisco, CA.
Population Growth—It All Adds Up

Student Activity 26

Introduction:
Many industries and most communities are built with the assumption that there will be ever-increasing populations — or, that growth is vital to survival. The purpose of this activity is to identify the ways industry encourages population growth and to examine the ultimate utility of such motivation. Students will reexamine the values expressed by the cliches, “Growth is good” and “More is better.”

Procedure:
1. Ask the students to collect ads which reflect in some way the concept of “growth.” This may be an ad announcing the growth of a company into some new region or product. It may be an ad that encourages growth by the product or service it is selling. It may be a promotional ad encouraging movement into an area by industry. It could be an ad which directly or indirectly promotes childbearing and/or large families. Ads for new housing developments, shopping centers or vacation spots could also be clipped. If students have difficulty in locating enough print ads for this assignment, they can also write a brief synopsis of television or radio ads, or even describe billboards and bus ads.
2. Arrange the ads or descriptions of ads on the wall around the room so the group can see them. Allow the group 5-10 minutes to wander about the room to become familiar with the ads.
3. Begin discussion with the general question, “How do ads encourage growth?” Some responses may be:
   a) Appeals to better quality of living (housing ads)
   b) Appeals with tax incentives (chamber of commerce ads for industry)
   c) Appeals to the right location (access to resources, markets, etc.)
4. Once the kinds of appeals have been identified, the focus should shift to the general question: “Does the product or service really improve the quality of life?” A variety of more specific questions should be used to get at this question:
   a) How does the product or service limit the quality of life? (Look at the negative side.) For example, a new subdivision of quality homes may appear to be an improvement on the surface, but consideration should be given to such things as the additional demands on resources.
   b) What other factors must also be considered? An ad to invite industry into an area also implies needs for community planning, support services, etc.
   c) What, specifically, is being improved? Often, this becomes a difficult answer to ferret out of a glamour ad.
5. A final question to be raised in this discussion should be, “Could the same results be achieved without the growth that is being advocated?” Answers to this question will require some creative thinking on the part of individuals in the group. The solutions they are now looking for have not been extensively explored. However, the whole growth scheme must be assessed carefully in a world that is becoming acutely aware of its finite resources and continued population growth rates.

Follow-up Activities:
1. Economic and population growth often come into conflict with environmental quality and aesthetic beauty. Many communities throughout the U.S. have proposed moratoriums on growth to preserve an area’s livability. Arrange for students to attend a local city council meeting, chamber of commerce meeting, or local planning commission meeting to observe discussions on growth in their local areas and draft a report of their findings.
2. In recent years, numerous ads have appeared promoting products or services which claim to help the environment. These products include anything from water conservation devices to unbleached toilet paper and all-natural cosmetics. Have students collect ads promoting “ecologically sound” products and services. They should examine these ads critically to determine if, in fact, these items aid environmental preservation.

Concept:
In a world with finite resources and a growing population, we must re-evaluate our perceptions of “growth.”

Objectives:
Students will be able to:
• Identify ads which reflect the desire for growth.
• Examine the ads and discuss how they encourage growth, whether they improve quality of life and whether the same results could be achieved without growth.
• Collect and critically examine ads for products claiming to be “ecologically sound.”

Subjects:
Economics, social studies, environmental science, family life

Skills:
Collecting, analyzing data, critical thinking, research, discussion

Method:
Students collect and analyze print ads which promote growth and discuss whether an increased quality of life can be achieved without growth

Materials:
A wide variety of magazines and newspapers (including business and real estate sections of newspapers)

Changing Values

Introduction:
A value is a principle or belief that is regarded as being desirable by an individual or a group of individuals. There is often an emotional attachment to values. People and their societies have certain values because they serve various desires and/or needs. But the situations of people’s lives change with time and so often do their values. The values of past generations do not always meet our present needs.

Certain junctures in the course of world history have brought about a change in values. For example, as people become more concerned about the environment, they may rethink their habits and beliefs. Long-held economic values may also change as nations become more interdependent.

Procedure:
Listed on the Student Worksheet are some of the principles and beliefs that have been widely held by Americans in the past. Some of these values are still held; others have been replaced by new values. If the value listed is still widely held in the community, students should state “no change.” If the value listed has changed or is changing, they should state the new value that has replaced it or is replacing it. Students should also state briefly what they believe is the cause of the change. (Note: A diversity of opinion should be tolerated)

Discussion:
1. Of the ten values listed, how many have changed? How many do you think have changed for the better? For the worse?
2. Are there any that have not changed that you would like to see changed?
3. Are there any economic, social or environmental values which you hold that are different from those of your parents? Your grandparents?

Follow-up Activity:
Divide the room in half. For each value stated, have those students who believe the value is still held stand on one side of the room, and have those who believe the value has changed or is changing stand on the other side. Students can now debate and defend their positions.

Concept:
Changes in the global economy and environment often affect the values held by individuals and the larger society.

Objectives:
Students will be able to:
• Examine values that have traditionally been held in North America and determine whether they have changed in recent years.
• State currently held values related to growth in our society.
• Participate in a class discussion or debate about what values are commonly held today.

Subjects:
Economics, social studies, family life

Skills:
Critical thinking, values clarification

Method:
Students examine principles of growth that have been traditionally held in North America and determine whether they have changed in recent years.

Materials:
Copies of Student Worksheet
A value is a principle or belief that is regarded as being desirable by an individual or a group of individuals. There is often an emotional attachment to values. People and their societies have certain values because they serve various desires and/or needs. But the situations of people's lives change with time and so often do their values. The values of past generations do not always meet our present needs.

Listed below are some of the principles and beliefs that have been widely held by Americans in the past. Some of these values are still held; others have been replaced by new values. If the value listed is still widely held in the community, state “no change.” If the value listed has changed or is changing, state the new value that has replaced it or is replacing it. Then state briefly what you believe is the cause of the change.

1. It is important that we have economic growth.

2. People ought to have large families.

3. Be productive.

4. Everyone has the right to have as many children as they want.

5. Everyone has the right to own a car.

6. Americans have a right to the resources of the world.

7. Material wealth is a measure of your worth as an individual.

8. There is no problem that science and technology can’t solve.

9. The bigger the better.

10. All useful land should be available for development.