



The Environmentally-Minded Economist

by Craig D. Hafer, President

April 22nd will mark the 47th anniversary of the first Earth Day in the United States. While many people credit Rachel Carson's 1962 book, Silent Spring, as the beginning of the environmental movement, few have heard of E.J. Mishan. While Carson's book opened the world's eyes to the detrimental effects of pesticides, Mishan provided the economic argument for environmentalism by introducing the idea of externalized costs.

My father once told me that when he was a child, the Schuylkill River was so polluted that it would blacken one's feet, due to the years of coal and other runoff that had turned the river into a slurry. He mentioned that the air was so dirty that his grandmother would complain about blackened sheets on the clothesline and windowsills coated with soot. He grew up during Reading, PA's heyday, when conventional economics did not look at the impact of pollution.

The Schuylkill River was not the only casualty of early industrialization. Before the Industrial Revolution, each year over 50,000 salmon would journey up the Connecticut River to as far as Vermont and New Hampshire to spawn. It was not until the early 1800's that the salmon disappeared, as dams were constructed to power the numerous mills built during America's early industrial revolution. Since the dams blocked access to their spawning grounds, the salmon stopped being able to reproduce.

Such tales of environmental decline in the midst of economic gain are common in post-industrial America. However, while many speak of the environmental damage done, few consider the economic consequences or lost opportunities. One consequence of building dams to power mills in the 1800's was the lost opportunity of harvesting salmon in many of our rivers. Today, we import \$2.4 billion of salmon each year.

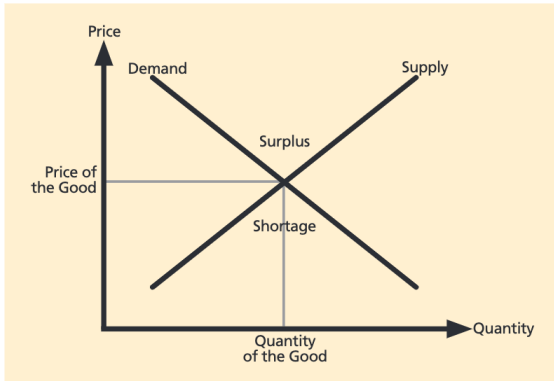
Conventional economics teaches that the price of a good or service is where supply intersects demand. As the chart below illustrates, the higher the price, the lower the quantity that will be demanded. In a competitive market, the price of an item is dependent on how much it costs the manufacturer to produce it. By introducing mass production, the Industrial Revolution enabled manufacturers to lower their costs and sell more items at a lower price. In fact, lowering costs has been a staple of most business plans as a way to increase profits. *—continued*



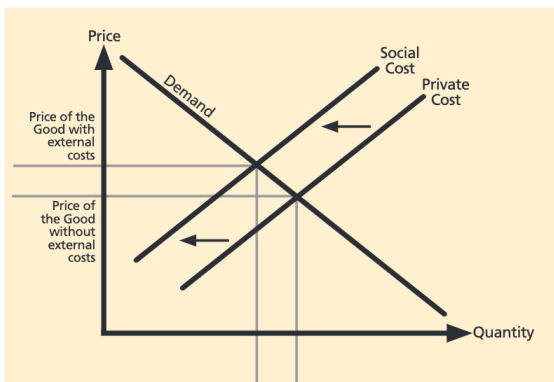
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However, in 1967, a professor from the London School of Economics, E.J. Mishan, wrote in his controversial book, *The Costs of Economic Growth*, that the conventional chart for supply and demand (above) only includes costs incurred by the producer and not externalized costs, which are transferred to society (such as pollution). The result is that the price of an item does not fully reflect all costs involved with its production. The chart below illustrates how social costs alter the supply and demand graph.



The idea of companies externalizing costs is generally accepted today, but it was a contentious theory when it was first introduced. It was not until 1993, when Douglas Dockery, a professor from Harvard University leading a team of researchers, published the “Six Cities” study, that the concept of externalized costs became generally accepted. The report noted that the citizens of Steubenville, Ohio, the city with the most polluted air in the study, were 26% more likely to die prematurely than were citizens of Portage, Wisconsin, the city with the cleanest air. The primary culprit was fine particulates, which were associated with increased incidence of lung cancer and cardiopulmonary disease. In other words, the pollution from various industries had a cost that was being incurred by society through higher medical bills and lower life expectancies.

In the words of Mishan, industry was externalizing the cost of pollution by transferring it to society.

As the idea of externalized costs gained acceptance from the economic community, the environmental community began to incorporate externalized costs as a tool to advocate for greater controls and regulations. Today’s regulatory environment requires many companies to look at their externalized costs (often brought up by citizen or environmental groups) and reduce them as part of their permit review process. They must also rectify any potential harm they might create, if at all possible, often done through a cost-benefit analysis. As these regulations create an added expense for a company, they are often not embraced by corporations. Without regulations, however, there would be a competitive advantage for “bad actors” within each industry. Accounting for externalized costs has dramatically altered how corporate America operates.

Over the past year, we have reviewed the companies in our clients’ portfolios and have noted an unexpected statistic: they all have active stewardship policies that include environmental sustainability programs. In fact, many of the companies whose stocks our clients own are on the top of CR Magazine’s 100 Best Corporate Citizens 2016 list, including Microsoft, AT&T, Procter & Gamble and 3M.

Yet, the greatest impact of externalized costs and the cost-benefit analysis may be in how they can be used to support environmental stewardship programs and reverse damage already done. In 1967, scientists began a valiant effort to try to introduce salmon back into the Connecticut River. Twenty-five million dollars was spent and after fifty years of hard work, the project appeared to be a failure. Then, in 2016, when it seemed that all hope was lost, wild Atlantic salmon returned to the Connecticut River for the first time in over 200 years. While it is not certain that the salmon will rebound for good, scientists have seen a surge in other fish populations in the river, due to added environmental regulations and programs to improve hydraulic dams. Although the *cost* of reintroducing salmon back into the river was significant, the potential *benefit* for generations to come is greater.

While there is undoubtedly more work to be done to protect America’s environment, the past 47 years have seen vast improvements. The inclusion of externalized costs in our business *and* environmental decisions has been a valuable tool, with profound outcomes. Whether it is cleaning up our waterways, returning salmon to the Connecticut River, or improving the air we breathe, the concept of externalized costs has transformed not only our environment, but how we view long-term economic growth. 🌱