Recycling: is it always good for the environment?

By
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Recycling, the world's second-oldest profession, according to archeologist William Rathje, is a superb example of early entrepreneurial enterprise. But today new recycling enterprises are rarely conceived and built by entrepreneurs seeking to provide an important economic service in a competitive market place. Now, they are created by social planners, academics and bureaucrats who gather in conference rooms and plot to save the earth from the deadly impact of paper, metal, glass, and plastic.

The recovery (scavenging) and reuse (recycling) of paper products and metals were mature business enterprises long before they became mistresses to the political environmental movement. Production managers and individual citizens have long realized that wastefulness is not the pathway to prosperity. When a manufacturer is not an efficient user of resources, the business will falter and probably fail. It is not the exception, but the rule, that inefficient operators ultimately lose their market shares and businesses. However, most laws and regulation regarding resource conservation and recycling are aimed at the exception, the very small fraction of operators that are inefficient, wasteful polluters.

If regulators would simply wait for market forces to do their work, the bad actors would be eliminated. Instead, laws are passed and regulations promulgated that hinder the natural development of recycling markets and make it difficult for entrepreneurial businesses to develop and effectively compete. When direct production costs and benefits are experienced by producers and consumers, governmental intervention is not needed to encourage the efficiency of commercial or personal action.

It is generally true that when the net market value of a post-consumer commodity (trash) exceeds the net cost of collection and disposal of the commodity, the commodity will be recycled. When a waste product can be collected, processed, and reused for less money than it cost to collect and dispose of the same commodity, it will be recycled. One result of recycling mandates is that overall waste management costs increase. When operating costs rise it is generally accountable to an increase in resource use. Labor accounts for some of the additional cost, but the additional labor cost is insignificant by comparison to the increase in the consumption of natural resources that are required to deliver politically mandated collection and processing programs.

Much is made of the negative environmental impact of waste disposal, such as sanitary landfill and transformation. However, little attention is given to the impacts of recycling collection and processing operations. For example, when politically mandated recycling programs are implemented, it is common that twice the number of trucks are required to collect the same amount of material. If 10 trucks are needed to collect all of the municipal garbage, an additional 10 trucks are required to separately collect recyclable commodities and organic discards. In most cases, the programs create thousands of pounds of additional diesel emissions, noise, traffic congestion, and road damage.

If these impacts are considered at all, they are usually brushed aside and justified as mitigation for some ill-defined externality. Source separated recycling collection produces a significant environmental impact, but it is just the beginning. Consider the resources that are used in

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the operation of a recycling processing plant.

Typical plants contain steel framed conveyor machinery, the manufacture of which requires thousands of tons of iron ore and which use rubber conveyor belts that wear and must be replaced. There are also wheeled loaders and forklifts burning diesel, propane or gasoline, and balers and conveyors with electric motors totaling 300 to 750 horsepower in continuous use. Consider the commodity transport trucks to pick up and deliver the recovered commodities, and the problems commonly associated only with landfill disposal. These include dust, odor, vectors (birds, bees, flies, ants), and vermin (cats, dogs, rats, raccoons). Considering all of the operating requirements, it is unlikely that governmentally imposed recycling programs have reduced the direct or the external environmental impacts of landfill disposal. In most cases, government mandates skew real market costs and values, and simply spread the impacts of waste handling to other facilities.

The efficient recovery and recycling of certain commodities are sometimes hindered by the same bureaucracies that require them. When a government subsidizes or obscures the true market cost of waste collection and disposal, it makes recycling a less attractive option. When government agencies use tax-exempt financing and off-budget, or shared-budget accounting practices, it results in cheap (below market cost) disposal and a hindrance to the development of recycling markets.

To overcome the market problems created by subsidized disposal costs, governments sometimes initiate redemption programs or advance disposal fees. This creates a merry-go-round of governmental action, with subsidies from one sector needed to overcome the consequences of a subsidy in another. The contradiction, meanwhile, is not lost on the public.

They ask now, as they did 25 years ago, why they have to subsidize a recycling program if their participation is reducing the consumption of resources. At the commencement of all forced recycling programs, managers receive numerous inquires and complaints regarding the higher fees or taxes that are required to deliver the service. As they see it, the program managers are selling the recyclables, so why should anyone do the work of separating it for you, then pay more in addition to that?
They don't understand that the value of the recovered commodities rarely, if ever, covers the entire cost of delivering the mandated program.

For some analysts, the case stated here is overly simplistic and will be dismissed for failure to account for important factors such as resource depletion, opportunity costs, and externalities. This road, however, leads almost invariably to a stalemate. Proponents of competing views seem always to have one more move to make and debate becomes mostly subjective. Scientific and economic studies often render valid measurements and, when properly interpreted and applied, produce useful results. Problems arise when politicians attempt to apply the data by combining the findings of multiple studies, from multiple disciplines, whereby the measurements often lose their stand-alone veracity, to establish a "scientific" basis for new laws and regulations. The result is often a public policy that defies common sense.

Is it possible, then, that a mandated government recycling program can produce a positive economic and environmental benefit? Any business activity, public or private, that ignores or obscures the basic market signals of supply, demand, cost, and price is unlikely to cause and sustain a reduction in the use of raw materials. Though many mandated recycling programs carry on as net consumer of resources, significant technological breakthroughs and policy changes have been accomplished. Operations managers and engineers have diligently moved to develop more efficient recycling collection vehicles, processing methods, and machinery. And, importantly, many organizations such as the Pacific Research Institute, the Reason Foundation, the Political Economy Research Center, and the Competitive Enterprise Institute have effectively revealed the shortcomings of forced recycling programs and are helping to bring about important policy changes.

Arthur Miller's *The Crucible* portrays the troubling events surrounding the Salem witch trials

in colonial Massachusetts. Early in the play, the judges realize that they have been fooled by an outlandish story that was supported by many false witnesses. Unfortunately, they have already sentenced and executed several of the "witches." Rather than acknowledge their horrendous error, they carry on with the phony trials in order to protect their credibility. In similar style, wrong or right, it is not likely that politicians will withdraw recycling mandates.

Those who hold a genuine concern for a vibrant economy and a healthy environment must continue to make strong arguments for policies that will allow the economy and the environment to function at peak performance. Entrepreneurs and operations managers should strive to overcome the negative impact of governmental interference and focus upon the development of new techniques and technologies that will produce the most efficient use of resources, from the point of manufacture to post-consumer collection, material recovery, re-use, and disposal.

Because communities and waste streams are dynamic, public policies, service contracts, and operating systems must be flexible. There is no "one-size-fits-all" policy or technology that can be successfully applied to the management of waste. If government must be involved in the management of waste – and unfortunately, it feels that it must – it should act as a passive voice. At most, government should only prescribe a desired outcome, such as less disposal, more recycling, controlled costs, and so on. Government should then stand back and let human creativity make it happen through the marketplace.

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