

HOW MARKETPLACE ECONOMICS CAN HELP BUILD A GREENER WORLD¹

Daniel Goleman[©]

Consumers now have little information about the true ecological impacts of what they buy. But that may be about to change, as new technologies that track supply chains are emerging and companies as diverse as Unilever and Google look to make their products more sustainable. With climate legislation dead in Congress and the fizzled hopes for a breakthrough in Copenhagen fading into distant memory, the time seems ripe for fresh strategies — especially ones that do not depend on government action.

Here's a modest proposal: radical transparency, the laying bare of a product's ecological impacts for all to see. Economic theory applied to ecological metrics offers a novel way to ameliorate our collective assault on the global systems that sustain life. There are two fundamental economic principles that, if applied well, might just accelerate the trend toward a more sustainable planet: marketplace transparency about the ecological impacts of consumer goods and their supply chains, and lowering the cost of that information to zero.

First transparency. A maxim in economics holds that transparency makes markets work more efficiently. This rule has long been applied to price, but why not also apply it to the ecological impacts of industry and commerce? At present when it comes to the ecological consequence of the things we buy, we have information asymmetry, where sellers know far more than buyers.

This seems about to change. One big mover is WalMart, which last summer announced it will develop a "sustainability index," a credible rating of the ecological impacts of the products it sells boiled down into a single metric that shoppers can use to compare Brand A and Brand B. There are signs this is more than marketing hype: WalMart has started to pilot life-cycle analyses of products it carries, and, some say, hopes to make transparent such data on the environmental and social impacts of suppliers four levels deep in the chain of vendors. The key, of course, will be to make sure the cost of quantifying and listing such data is minimal, as price will remain the primary determining factor for consumers.

WalMart is by no means the only player in taking steps to become more ecologically transparent. Companies such as Unilever (brands like Dove Soap and Lipton Tea) and Google (its servers consume enormous amounts of energy) are following their own maps to transparency about the eco-impacts of their operations, to find ways to make operations more sustainable.

Several global companies are forming a "Group of Ten" to develop a supply chain transparency system called [Earthster](#) into its newest version, "E2 Turbo." Rather than go to the expense of a full life-cycle analysis (which can cost \$50,000 and take months), E2 Turbo asks for data only on the 20 percent or so of a product's life cycle that accounts for around 80 percent of environmental impacts. Now under development, this supply-chain-tracking software lets companies understand where their largest negative impacts are, and how to find more sustainable alternatives. A built-in recommendations engine, drawing on a Department of Commerce database, suggests suppliers or other players that can help companies improve those

¹ environment 360, Yale University, August 19, 2010

impacts. That guides business-to-business decisions, with companies better able to find vendors that will let them keep their eco-impact scores low. As more and more companies feed data into E2 Turbo — which is open source — they will together build what amounts to an information commons. There has also been discussion about the U.S. government establishing a site for that commons, creating a public database on ecological impacts that amounts to new public resource that any company, small or large, could draw on to improve the impacts of its operations.

A radical transparency about the ecological impacts may yet emerge from these efforts — and many in the business world are paying attention. A recent article in *Harvard Business Review* proclaims that sustainability has become an essential business strategy² and the key driver of innovation. To be sure, there are large numbers of companies who resist — but they may yet join in, if markets shift toward brands that are more transparent about ecological footprints, creating a compelling business case.

That shift will become far more likely with the application of the second economic principle, lowering to zero the “cost” of this information, the cognitive effort we must make to get relevant data. Consumer surveys show that about 10 percent of today’s shoppers will go out of their way to get information about the ecological impacts of what they buy, while about a third could not care less. The majority in the middle say that if the information were easy to come by, they might use it in deciding what to buy. That’s where the action is: making crucial data easy to get. That was done, for instance, at the Hannaford Brothers grocery chain in Maine, with nutritional ratings of foods. While the ratings were sophisticated — made by nutritionists at institutions like Yale and Dartmouth — they were boiled down into a three-, two-, or one-star rating posted next to the price tag (there was also zero, which about 80 percent of foods received, mainly because of the salt and fats in processed foods).

The result was a significant shift in purchases toward the more nutritious food and away from the less. The shifts in market share were large enough to get the attention of food brand reps who started asking what they needed to do to get higher ratings. That switch in a company’s actions because transparency in the marketplace has driven consumer decisions in a better direction has been called a “virtuous cycle” by Archon Fung at Harvard University’s John F. Kennedy School of Government. Fung led a group studying how transparency alters market dynamics and becomes a mechanism for positive change.

Such marketplace transparency about the ecological impacts of consumer goods can be seen today at www.GoodGuide.com, a website that aggregates more than 200 databases on the environmental, health, and social impacts of tens of thousands of consumer goods. GoodGuide — a free smart phone app — allows shoppers to compare the eco-virtue of products while in the aisles of a store. Today that comparison requires running your shopping list by the website on your computer or swiping a product’s bar code with a cellphone. But the day will come when a daring retailer puts that data next to price tags — thus reducing the information cost to zero, as Hannaford Brothers did with nutritional data.

Another website, [Skin Deep](#), a project of the Environmental Working Group, reveals the potential medical risks of the chemicals used in personal care products, and so ranks them from safest to most risky. Skin Deep’s ratings are made by searching in medical databases for the biological effects of a given ingredient, and then weighting the health risks accordingly.

² Lubin, D.A. and D.C. Esty. 2010. The Sustainability Imperative. *Harvard Business Review*, May 2010

Skindeep has been consulted more than 100 million times by shoppers wanting to know which skin cream or baby lotion might be a better bet. These two websites offer ratings that are credible, independent, and transparent themselves — the three criteria proposed by the Kennedy School of Government group. To be sure, systems like GoodGuide have yet to obtain fully transparent data about the total eco-impacts of any company or product. These consumer-facing transparency systems are more proof of concept than state-of-the-art. But they offer a hopeful sign we may be headed in that direction.

As the head of product innovation at a global company pointed out to me, ecological transparency would change the business landscape in two ways. First would be a shift in the “value basis” of a product, adding its ecological impacts into the equation. Second, such transparency would drive intense competition to rethink products to lower those impacts, and so protect a brand’s market position. As non-proprietary data collection systems like Earthster compile numbers on the ecological footprints of industry, that information could well feed into an emerging metric that has been designed to replace GDP. Called the “General Progress Indicator,” or GPI, this index of national progress rethinks economic indicators by, for example, rising when the poor receive a larger portion of a nation’s income and dropping when they get less.

Among the indicators factored into GPI are resource depletion, pollution, and long-term environmental damage. So while the GDP counts pollution as a double gain for an economy — for the economic activity while it is created and again while being cleaned up — GPI counts the costs of that pollution as a loss. Earthster-type databases could bring more precision and currency to GPI’s metrics.

Another movement in economics that might embrace such data is the attempt to “internalize externalities” — that is, to make companies bear the costs of, say, cleaning up their pollution rather than governments, by taxing their goods proportionally to their negative eco-impacts. That idea remains a hard sell to business, and to most governments. But marketplace ecological transparency makes pollution, toxics and the like a reputation cost for a brand or company. This substitutes a market force for government action, which — given political realities — may be both more realistic and quicker. While many business people are starting to take ecological transparency seriously enough to embed it in their strategic thinking, the question arises: Are economists paying attention? A few are. But for the most part these potentially disruptive information technologies, and the marketplace transparency they promise, are beneath the field’s radar, or entirely off the map.

One exception is James Angresano, a political economist at Albertson College of Idaho, who sees promise in ecological transparency as a tool for sustainability — itself not a topic central to orthodox thinking in economics. “We’ve got to think differently,” Angresano told me. When Angresano lectured on these ideas recently to students in environmental economics at Peking University, they were so interested they stayed an extra hour. “Of all the theories I covered over several weeks of lecturing, this resonated the best,” he commented. “They’re depressed just hearing what the problems are. This is a way of making changes; here are some solutions.”