

Briefing on ‘Energy Efficiency’

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The efficient use of resources is fundamental to the efficient functioning of an economy. Generally, such efficiency arises through the voluntary exchange of goods and services, since such exchanges result in goods and services going towards their highest-valued (and hence most efficient) uses. However, in certain circumstances, the free exchange of goods and services is hindered and thus resource use is less efficient than might be desirable.

Some economists describe a model of an ideal world in which goods and services automatically attain their highest-valued use. Of course, all actual economies deviate from this model because it is overly simplistic. In particular, the model ignores the cost of information. Deviations from this ideal world are not necessarily inefficient, since it is very possible that information is itself being distributed in the most efficient way possible. However, there are circumstances in which the flow of information is distorted.

In particular, taxes, subsidies and regulations all change the flow of information, by altering the price at which goods are sold, often resulting in inefficient use of resources.

Inefficient use of energy is one aspect of this general phenomenon. However, energy efficiency should not be considered entirely separate from other types of resource efficiency. Failure to take such a holistic view may result in (perhaps unintended) misallocation of other resources. For example, subsidies to energy efficiency improvements necessitates taxation, which itself creates very large distortions to the efficient use of resources. These unintended consequences must be taken into consideration when policies are developed.

Self interest has been an abiding generator of resource efficiency throughout history, from the development of the steam engine to the laminated drink carton. Entrepreneurs are primarily interested in reaping the highest profits from any venture. As a result, they source their inputs as cheaply as possible (in line with the quality of their outputs). Consider the example of beverage cans, which now weigh about one fifth what they weighed in the 1960s. As a result, less materials and energy are consumed during the use and transportation of these cans, costing the manufacturer, the retailer and the consumer less. Innovations leading to this reduction in resource use were largely, if not entirely driven by the profit motive.

Some people have argued that the spectre of global warming necessitates at least 'no regrets' policies. If by 'no regrets' policies, what is meant is elimination of price distorting taxes, subsidies and regulations, then I am in agreement - who but the small number of beneficiaries could object to the eradication of subsidies to the extraction of coal in Germany or China? But if by 'no regret' they include subsidies to energy efficiency improvements (such as home insulation and lighting) then I object. Better to eradicate the cause of the inefficiency in the use of energy, rather than a symptom. After all, addressing the symptom may only cause further distortions.

The main cause for concern in this area is the relative lack of insulation in rented domestic accommodation. One of the principle causes of this lack of insulation is the lack of a reliable mechanism for providing potential renters with information about the quality of domestic insulation. At the moment, the state mandates that buildings meet certain specifications. Amongst other things, this results in a large implicit subsidy to building inspectors, which has meant that the cost to a homeowner of having their insulation checked is actually higher than the cost of the insulation material itself. Exempt these building regulations and entrepreneurs may well discover that there is a private market for information about building insulation (such a market already exists in certain parts of the United States).

Indeed, there may even be a way to provide information privately in spite of the building regulations. Probably the most effective way for this to be done would be for the manufacturers of insulation material to offer a certification scheme, to be operated by the people laying the insulation and by independent inspectors. Potential lessors would then be able to prove to potential tenants that their building will be warmer and cheaper to heat than non-certified accommodation. This would enable the lessor to charge a higher rent and thereby reap the benefits from investing in the insulation.

One could object, more generally, to all this materialism by saying that we should use less or that we should reuse and recycle more. But, ultimately, most individuals wish to live in a world filled with consumer durables and they are willing to pay for these goods. We don't want to go back to some prehistoric age of cave-dwelling (or even tree-dwelling) simian existence, we want to consume. Moreover, we don't necessarily want to consume in an 'efficient' manner (we want to leave our TV on standby so that we can switch it on from the remote when we come home). I defy any government official to know better what I want. I'm sure you are the same ('I'm not', says the Monty Python fan in the corner).