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Thomas Power

*Technological University Dublin*, [thomas.power@tudublin.ie](mailto:thomas.power@tudublin.ie)

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# Are Government Laws Consistent with the Laws of Supply and Demand

Thomas Power

*Lecturer Economics and Financial Management  
College of Engineering and the Built Environment  
Dublin Institute of Technology  
[thomas.power@dit.ie](mailto:thomas.power@dit.ie)*

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*Abstract: Government laws are not always consistent with the laws of supply and demand and when enacted have unintended consequences. Three real world examples provide illustrations of policy makers implementing policies that have unintended consequences. When households and firms look at prices when deciding what to buy and sell, they unknowingly take into account the social benefits and costs of their actions. As a result, prices guide these individual decision makers to reach outcomes that maximize the welfare of society as a whole.*

Ronald Regan once quipped that if economists invented the game of trivial pursuit it would have 1,000 questions and 3,000 answers. This is hardly fair on the economics profession since most economists agree on most of the major propositions in economics. A study by Richard M. Alstron, J.R. Kearl and Michael B. Vaughan in the American economic Review (1992), and restated by Mankiew (2001), concluded that there is widespread agreement among economists on, for example, the impact of rent controls on the supply of housing, the effect on economic welfare of tariff and import quotas, the effect of budgets deficits on the macroeconomy, the effect of minimum wage laws on employment among young and unskilled workers and the preference of marketable pollution permits in controlling pollution over price ceilings.

According to the Harvard economist Gregory Mankiew (2001), economists have two roles. As scientists they make observations and develop theories to explain those observed behaviours in the world around them. Secondly, they act as policy advisers using their theories to help governments make informed decisions on policy. Of course, economists do offer conflicting advice to policy makers because they will have different scientific judgments on alternative theories about how the world works. For Mankiew, having different scientific judgments is not something that is unique to the economics profession. After all, up to quite recently, meteorologists differed on the extent of global warming (or indeed if it was happening at all). Different views prevailed because they held different scientific judgments on the evidence. Indeed, two hundred years ago astronomers were split on the question as to whether the sun or the earth was at the centre of the solar system.

However, the problem of economic theory is that policy makers tend to ignore it. Three real world examples provide illustrations of policy makers implementing

policies that did not consider economists advice on the unintended consequences of these policies.

### **Rent Control**

Begg et al (2001) and Mankiew (2001) delineate the classic example of many countries imposing rent controls, which limit the rent landlords, can charge their tenants for rented accommodation. While the intended effect is laudable and designed to make accommodation more affordable for the poor, the unintended effects are quite the opposite. Initially the supply of rented accommodation is insensitive (or, to use the economic term, inelastic) to the new price, which is below the equilibrium rent. This is because in the short run landlords cannot put their properties to alternative uses. In the short run therefore, the supply of rented accommodation is not reduced significantly below the quantity supplied at the market equilibrium rent. In the longer run the outcome is quite different. Landlords will tend to sell off their properties to purchasers who wish to buy their own home or perhaps use it as their own home. In addition, because landlords do not get the required return on their investments, properties run into disrepair. Indeed, Mankeiw cites one economist who described rent control as “the best way to destroy a city apart from bombing it.”

The U.S. states of Massachusetts and California have abolished or scaled back their rent control laws but New York is one of the few that hasn't changed. In an article in the Boston Globe in April 1997 it was estimated that over two million people – over a quarter of the New York City's population – live in apartments covered by rent control legislation. While the indented effect of rent control was to help the poor, the unintended effect was that those who occupied rent control apartments included movie stars, stockbrokers and lawyers, paying a fraction of the market equilibrium rent. This led the state of New York to pass a law that became known as the 'Mia Farrow Law.' This was reference to the actress who rented a ten-roomed apartment in Central Park for a fifth of the market rent. However, the law only lifted rent control for people earning more than \$200,000 per annum. The author concludes that, in essence, rent control is a law that few people and analysts (even liberal ones) support, apart from those, of course, who get to live in rent controlled apartments.

### **Water Shortages**

Policy makers tend to respond to water shortages by regulation and controls. Economists favour a market-based solution. One of the unintended consequences of controls and regulation is that people tend to cheat and increase their consumption despite the controls. This leads to a form of 'water policing' where law enforcement agencies collect names of people suspected of 'breaking the law.'

While immediate water shortages are caused by many factors, droughts for example, the real offender is the regulation that prevents the market forces of supply and demand for operating. This market solution, favoured by economists, is a better proposition than 'water police' spying on the poor consumer. Contrary to the view expressed by many regulators, water is not in fixed supply. The supply of water (like all resources) will change in response to economic conditions and to the market equilibrium price. For example, the Wall Street Journal noted that in developing countries the number of people with access to

clean water in 1980 was 44%. In 1994 this had increased to 74% despite population growth. The reason: increased living standards brought about by rising real incomes that gave those countries the ability to supply drinking water. Furthermore, and invoking one of the first principles of economics that people respond to incentives, the supply of water will increase when people have the incentive to preserve their use of water. By pricing water, the number of people wanting to sell (supply) water will exceed the number of people that will want to buy (demand) water.

The data from around the world shows that when water prices increase by ten percent water use goes down by twelve percent. If the role of policy makers is to increase the supply of water, then water must be treated as a commodity and the market forces of supply and demand will do the rest.

### **Pollution**

Invoking Adam Smith's notion of the 'invisible hand' of the market place, i.e. when households and firms look at prices when deciding what to buy and sell, they unknowingly take into account the social benefits and costs of their actions. As a result, prices guide these individual decision makers to reach outcomes that maximize the welfare of society as a whole. However, even Adam Smith acknowledged that markets will sometimes fail to allocate resources efficiently and that sometimes market outcomes are not efficient. The principle reason for this is what economists describe as 'externalities.' If all the costs and benefits of production are not included in the market price then the market outcome will be inefficient. For example, if during production, a pharmaceutical company emits pollution (a social cost) and if this social cost is not included along with all the explicit costs of production (raw materials, wages, etc), then the market prices charged will be too low and the output produced too high. Regulators therefore must find a way of 'internalizing' (adding the social cost to the private explicit cost) this negative externality.

A law that prohibits all pollution would only consider the marginal benefits that society would receive and would not consider the marginal cost. A law that prohibits all pollution would actually harm society. Indeed if such a law existed we would all die because individuals emit greenhouse gases in the form of CO<sub>2</sub>. An alternative, favoured by economists, is market based solutions. Market based solutions provide incentives to polluters to take into account the costs of their actions and by doing so move market outcomes to efficient outcomes. For example, suppose two factories, X and Y, each produces 200 tons of waste each year. The government wants factories to reduce this pollution to, say, 100 tons. There are three possible solutions to this – one regulatory and two market based.

In the first instance, the government could command the factories to reduce their emissions to 100 tons per annum. However, this may not be the most efficient way to solve the problem because one company, X, could possibly reduce their pollution at a lower cost than the other company, Y. Forcing both companies to reduce emissions to the same level may lead to the overall costs being greater than the benefits.

An alternative to regulation is taxation. Under regulation there is no incentive to reduce pollution beyond the stated level. Each company will simply reduce their emissions to the stated amount. By taxing pollution an incentive is created to

lower pollution beyond the stated amount. By taxing each ton of pollution, companies will have the incentive to develop alternative cleaner technologies and therefore, possibly, reducing their tax liabilities to zero.

A second market-based approach is tradable pollution permits. This is a mechanism to use property rights and the market to reduce pollution back to an efficient level. Any polluter that cuts its pollution below the regulated amount will obtain an emissions reduction credit and this can be sold to another company who wants to pollute above their level. Suppose that, in our example, company X wants to increase its pollution by 100 tons and that company Y agrees to reduce its emissions by 100 tons if factory X agrees to pay it, say, €1m. In other words the market price of this pollution permit is €1m. Factories that find it very costly to reduce pollution now have an incentive to research new, cleaner technologies and therefore spend less on permits. This has the same outcome as the taxation proposal. The consequence is that regulators (governments) do not have to find out which factories are most efficient in reducing pollution – the market forces of supply and demand does this.

### **Conclusion**

Markets are a very efficient way of allocating the world's scarce resources. The laws of supply and demand ensure that efficient outcomes are usually guaranteed. It is also accepted that market outcomes are sometimes inefficient because of the existence of externalities. How these externalities are internalized to improve market efficiency is the subject of much debate. The laws passed by governments with the intended effect of improving market efficiency and equity are not always in tune with the laws of supply and demand.

### References:

For excellent expositions of the theoretical concepts discussed see:

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