UNINTENDED CONSEQUENCES

How regulation changes behaviour

by Christopher J. Coyne

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Unintended consequences are the results of an action that differ from the expected outcome. As the name implies, these consequences are not the intended outcome of the action taken. Unintended consequences can be either positive or negative.

A positive unintended consequence is an unanticipated benefit that emerges from an action. Adam Smith's notion of the "invisible hand" is one example of a positive unintended consequence. Smith famously argued that each individual pursuing his own ends generated widespread benefits beyond that individual. For example, the butcher does not provide beef out of benevolence, but in order to make profit. However, in pursuing his own self-interest, the butcher generates unintended benefits for numerous consumers who now have access to his product.

Given that positive unintended consequences often emerge from individuals actions, emphasis should be placed on allowing individuals the freedom to act and interact. As individuals discover and pursue opportunities to better their own situation, they will also almost inadvertently contribute to improving the well-being of others. This process can only take place within an environment characterized by private property and individual freedom, where individuals have an incentive to experiment and act entrepreneurially.

Unintended consequences can also be negative. Negative unintended consequences often emerge when a simple regulation is imposed on a complex system. Regulations are relatively simple because regulators cannot possess all of the relevant knowledge regarding the workings of the complex institutions that underpin economic and social interaction. Because of their simplicity, regulations often change the incentives individuals face, resulting in unforeseen consequences.

Seatbelt laws provide one example of unintended consequences arising from regulation. Economist Sam Peltzman analyzed the effects of mandatory seatbelt laws in the United States. Regulators believed that requiring drivers to wear seatbelts would reduce the number of automobile related fatalities. Surprisingly, Peltzman found that there was no change in auto-related deaths. The reason was that seatbelt laws changed the incentives drivers faced. The perceived safety provided by the seatbelt reduced the cost of driving recklessly, so more drivers operated their vehicles in a dangerous manner. The increase in reckless driving not only increased the danger for other drivers, but also for pedestrians and cyclists. Indeed, there was an increase in pedestrian and cyclist deaths after seatbelt laws were passed. Overall, Peltzman found that while seatbelts might have saved lives in a given accident, the total number of automobile-related fatalities did not change.

This finding is known as the "Peltzman Effect"—the tendency of individuals to respond to safety regulations by engaging in more dangerous behaviour. An explanation for this tendency is that people have a desired level of risk when it comes to driving (and other activities) and will change their behaviour as regulations change. The Peltzman Effect was confirmed in a recent study by economists Russell Sobel and Todd Nesbit, who found that increased safety regulations by the National Association for Stock Car Auto Racing (NASCAR) led to more accidents due to riskier driving.

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Fuel efficiency regulations provide another example of negative unintended consequences. At first look, increased fuel efficiency appears desirable because of the associated reductions in fuel consumption. However, in order to increase fuel efficiency, automobile manufacturers tend to reduce the size and weight of automobiles. While accomplishing the goal of increasing fuel efficiency, smaller and lighter vehicles also offer drivers and passengers less protection. The result has been an increase in the number of automobile-related deaths. A study by economists Robert Crandall and John Graham found that fuel efficiency standards result in between 2,000 to 4,000 additional car occupant deaths each year. Another unintended consequence of increased fuel efficiency is that the cost of driving has fallen because drivers can now get more miles per gallon of gasoline. As such, these regulations may actually result in more driving, leading to more congestion and accidents.

Negative unintended consequences can arise from all types of policy and regulation, domestic and international. For example, government efforts to manipulate international trade through tariffs, quotas, and other controls can generate perverse outcomes. While trade restrictions may protect members of a specific industry, they also raise the price of goods for consumers and "downstream" producers who use those goods as inputs in their products.

The US sugar industry provides an example of such consequences. The US government has put a variety of controls (i.e., price supports, tariffs, and quotas) on international sugar trade to protect the US sugar industry. As a result, the domestic price of sugar is artificially high, and this has harmed other US industries. For example, a 2006 report by the US Department of Commerce found that the high price of sugar was driving US food and candy manufacturers to reduce their workforces and, in some cases, relocate abroad. Because sugar was a significant input for these producers, the artificially high price of sugar increased the costs of production. In the end, the regulations that were intended to protect members of the US sugar industry actually harmed producers and those employed in other industries.

Recognizing the possibility of negative unintended consequences, regulators must appreciate the role that incentives play in directing individuals' actions. Even regulations motivated by the best of intentions can have perverse secondary effects that generate significant costs. The possibility of negative unintended consequences does not, by itself, mean that regulators should never intervene. However, it does mean that regulators should be extremely humble in both their decision to intervene and in the design of their regulations. Given the complexity of our social and economic systems, negative unintended consequences are likely to emerge and to be significant.

Suggestions for further reading

Bastiat, Frederic (1850). *What is Seen and What is Not Seen*. Library of Economics and Liberty. <http://www.econlib.org/library/Bastiat/BasEss1.html>.

Crandall, Robert, and John Graham (1989). The Effect of Fuel Economy Standards on Automobile Safety. *Journal of Law and Economics* 32, 1: 97–118.

Merton, Robert K (1936). The Unanticipated Consequences of Purposive Social Action. *American Sociological Review* 1, 6: 894–904.

Peltzman, Sam (1975). The Effects of Automobile Safety Regulation. *Journal of Political Economy* 83, 4: 677–725.

Sobel, Russell S., and Todd M. Nesbit (2007). Automobile Safety and the Incentive to Drive Recklessly: Evidence from NASCAR. *Southern Economic Journal* 74, 1: 71–84.

US Department of Commerce (2006). *Employment Changes in US Food Manufacturing: The Impact of Sugar Prices*. <http://www.ita.doc.gov/media/Publications/pdf/sugar06.pdf>.

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