crease U.S. net welfare by at least $150 million and perhaps as much as $800 million a year, depending on how competitive the West Coast petroleum market is and whether there is excess capacity among U.S.-flag oil tankers (which under the Jones Act are the only tankers that may legally transport oil from Alaska to other domestic ports).

While the net benefits of repealing the current restriction would be substantial, they would not be evenly distributed across the U.S. population. Some groups, such as producers of Alaskan oil and residents of Alaska, would realize large substantial benefits from repeal, while others, such as consumers who live in the western part of the continental United States, would be made worse off.

Producers of Alaskan oil would clearly benefit if the export ban were repealed. The net price obtainable from selling Alaskan oil to the Japanese—the price of crude oil in Japan minus the cost of shipping the oil there—is higher than the net price that can be earned by shipping oil to the U.S. Gulf Coast, the market in which residual Alaskan oil is now sold. Other beneficiaries of repeal include crude oil producers in California, who now compete with the artificially low-priced Alaskan product.

Only a minority of the increase in oil company revenues that would result from repeal would be translated into higher profits for oil producers. Approximately 60 percent would be captured by the federal government in the form of revenues from the windfall tax, and 30 percent would be captured by the governments of Alaska and California. Roush estimates that the net gains to oil producers would amount to somewhere between $60 million and $225 million a year, after the payment of increased tax revenues amounting to at least $542 million a year and perhaps $2 billion.

The increased tax revenue should either reduce the need for other sources of tax revenue or permit government to provide more services. Since oil consumers are also taxpayers and recipients of government services, they will benefit to some extent, offsetting in whole or part the cost to them of higher oil prices. How big a benefit this will represent depends heavily on which state the consumer resides in. The average family living in Alaska would get tax cuts or service increases amounting to between $700 and $2,750 a year if the ban were removed. California families would get between $12 and $62 a year. Families located in other states would receive average annual benefits in the range of $4 to $17.

On the other side of the ledger, oil consumers on the West Coast would have to pay more for petroleum products, the increase costing the average West Coast family between $35 to $103 per year. Thus, on net, residents of West Coast states would be made somewhat worse off, although a significant share of the cost is offset for California residents by higher state tax revenues.

Permitting Alaskan oil to be sold abroad would also reduce the demand for the services of U.S.-flag tankers currently used to transport Alaskan oil to U.S. ports, lowering revenues for their owners. These losses are estimated to be between $459 million and $891 million, before tax, assuming that the industry is operating at capacity before repeal but not after. Overall, however, the gains of repeal to those who gain are much larger than the losses to those who lose, Roush concludes. As a whole, the U.S. economy would clearly be better off if the ban were removed.

The Carrot and the Stick


Scholars of jurisprudence traditionally view law as a set of obligations or commands backed by sanctions or threats. In contrast, economists tend to view law as a set of official prices attached to behavior that harms others. Each of these viewpoints partakes of a characteristic blindness, argues Robert Cooter, professor of law at the University of California at Berkeley. The jurisprudential perspective blinds lawyers to the fact that officials cannot regulate an economy efficiently by giving orders. Instead, they must rely on legal instruments similar to prices. Conversely, the economic perspective is blind to the distinctively normative aspect of law, because not all misbehavior ought to be available for purchase by willing buyers. In brief, Cooter argues, the economic analysis of law lacks a clear account of sanctions and the
jurisprudential tradition lacks a clear account of prices. His article attempts to bridge the two traditions by developing a theory about the differences between the effect of prices and sanctions on behavior.

A sanction is a penalty imposed for doing what is forbidden, and a price is an amount of money exacted for doing what is permitted. "Officials should create prices to compel decision makers to take into account the external costs of their acts, whereas officials should impose sanctions to deter people from doing what is wrong." The effect of creating an obligation by erecting a sanction is to partition possible acts into permitted and forbidden zones, with the dividing line representing some social judgment about correct behavior. Typically there is a jump or discontinuity in the costs the actor encounters at the point of the partition: transgressing the limit by even a step is punishable by the full force of the law. No such discontinuity applies to a price: to get a bit more of a priced good one need only pay a bit more money.

This discontinuity has profound effects on behavior. Because the typical sanction is more than adequate to deter most actors, few of them are on the margin, the place where people would respond to moderate changes in the magnitude of the sanction or the frequency of its exaction. Actors, however, do respond to changes in the location of the partition. In other words, when an obligation is backed by a sanction, more actors' behavior will be responsive to the exact substance of the obligation than to moderate changes in the magnitude of the sanction or the frequency of its application.

By contrast, pricing grants discretion to the individual to decide whether or not to pursue an activity, so long as he pays the price. Since prices do not usually create discontinuities in the costs faced by decision makers, the individual will balance benefits and costs at the margin. In cases where benefits and costs are equi poised, a change in price will tip the balance and cause a change in behavior. Thus, many individuals will respond to changes in the magnitude of a price or the frequency of its exaction. In summary, behavior is more elastic with respect to prices than sanctions.

A prescriptive and a descriptive conclusion can be derived from this theory, the author says. To create incentives for efficient behavior using sanctions, the lawmakers must choose the right place to partition the world, whereas to create efficient official prices for externalities, the lawmakers must correctly measure the external harm that is to be priced. These facts suggest a norm: If officials know the optimal level of behavior in general, but cannot measure how much external harm is done in particular cases, sanctions are the preferred instrument of social control. Conversely, if officials can measure the magnitude of the external harm in particular cases, but do not know what overall level of behavior is optimal in general, prices are the preferred instrument of social control. This norm can be restated in different words: If obtaining accurate information about efficient behavior is cheaper than obtaining accurate information about external costs, impose a sanction; if the converse is true, impose an official price.

The author says various bodies of law can be tested to determine whether or not they conform to this prescription, including fundamental rules in torts, contracts, crimes, and regulation. A typical result is that the concept of strict liability in tort represents a price, whereas the concept of negligence represents a sanction.

Sometimes it is difficult to determine whether a law imposes a price or a sanction on an activity. To classify such a law, it is useful to note that a price is invariant with respect to the actor's state of mind but usually variable with respect to the harm caused by his action, while a sanction is usually variable with respect to states of mind and does not necessarily vary with respect to the harm caused. A price depends only on the extent of harm because its purpose is to internalize the cost of an activity. By contrast, the purpose of a sanction may include not only compensation but also deterrence and punishment, both of which often hinge on the state of mind of the offender; intentional or malicious harms get more severe punishment.

Ignoring the roles of prices and sanctions may contribute to heavy-handed regulation on the one hand, or the trampling of genuine moral values on the other. Cooter believes a unified theory of the two will advance lawmakers' understanding of how government controls behavior.