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While BP is on the verge of permanently capping the damaged oil well that precipitated the explosion on the Deepwater Horizon oil rig and subsequent spill, many questions remain about what has to change going forward.

An understandable and appropriate reaction to a tragedy like this is to ratchet up liability to ensure that those firms that undertake deepwater oil drilling bear the costs if something goes wrong. How we determine those costs is, of course, a complex task. The effects go beyond measurable lost profits to include ecosystem services that are often difficult to evaluate because markets often don't exist to tell us what people are willing to pay for intangible goods like fish habitat. We also need to consider what kinds of policy tools could ensure that those who impose these costs know enough to take them into account in making their choices of how and where to drill for oil. Examples include stronger liability rules, increased civil and criminal penalties, or more stringent regulations.

In the midst of the enormous public outcry over what has happened in the Gulf, it is tempting to support stricter rules simply as punishment: if a disaster happens, the big and profitable oil companies should be the ones to pay. In the immediate term, it is likely that the company, in this case BP, will pay. The company has announced that it is taking full financial responsibility for both cleanup efforts and lost wages for all who suffered the direct consequences, such as local fishermen and restaurant owners.

However, the long-term justification for making sure we have appropriate and effective liability rules and drilling regulations is to ensure that oil companies take appropriate care to avoid incidents, like the Exxon Valdez spill in 1989 or this Deepwater Horizon drilling catastrophe, in the first place. In that longer term, just because the oil companies bear the

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liability for harms or the cost of expanded regulations or stricter liability, they need not end up bearing the costs of complying with those rules. If exploration and production costs rise as a result, companies are likely to follow the dictates of the market and shift their operations overseas.

For reasons described below, the resulting expense of avoiding liability or complying with stricter regulations is likely to fall not on the oil companies but on two less mobile groups. The first will be the workers and landowners in the Gulf States, as evidenced by the prompt, vocal resistance in those states to policies to halt deepwater oil extraction because of the threat to the local economy from lost jobs, even while their beaches, marshes, and fisheries are tainted by the oil spilled into the Gulf. The second will be all of us, as taxpayers, more than as consumers, for the price we pay at the local pump is based on the global market for oil.

Getting the Bill vs. Paying It

We the people suffer an additional loss when oil companies refrain from exploring for oil and paying lease fees and taxes to the U.S. Treasury. Because this idea is important and perhaps little appreciated, a couple of examples may be useful.

Suppose first that the government elects to put a tax on energy suppliers to reflect the cost of environmental harms when energy is used. Assume that energy costs \$100 per unit to supply, the energy market is competitive, and the tax is \$20 per unit. With competition, the pre-tax price would be \$100, just enough to cover the cost of providing energy as none would be supplied at a lower price. When the energy suppliers face a \$20 tax, the per-unit cost increases from \$100 to \$120. To ensure that supplies remain forthcoming, the price has to go up to \$120. So, the tax on the energy producers ends up being paid by consumers.

A second example shows that “consumer pays” isn’t necessarily the operative principle. We’ll keep the same numbers as above, but where the government says that to keep the United States from contributing to global warming, it will charge consumers a tax of \$20 per unit of energy used from U.S. sources. However, suppose that consumers can import energy at \$100 from foreign suppliers. To remain competitive, U.S. suppliers will have to drop their price from \$100 to \$80, absorbing the tax so as not to become more expensive than imports. Even though the tax is nominally placed on the buyers, it ends up being paid by the sellers, namely U.S. suppliers, assuming they can even stay in business at \$80.

Regardless of where a cost appears to be assigned, the burden will fall on the side of the market that has no choice but to stay and pay. In the first example, even though the tax was

imposed on the suppliers, consumers ended up paying it through higher purchase prices. Because the sellers were just covering their costs, they were less committed to the market than the buyers. In the second example, even though the tax was nominally placed on the buyers, they could easily leave U.S. sellers and purchase imports.¹ Because the buyers were less “stuck” than the suppliers, the cost increase was absorbed by the U.S. energy sellers in terms of lower prices that they get for their products.

In practice, the analysis of which side of the market pays new costs, is not an either/or situation. If both the buyers and sellers are kind of but not totally stuck—what economists would call having some but not perfect inelasticity of supply (sellers) or demand (buyers)—the costs do not fall only on one side or the other. They will generally be shared in proportion to the degree of “stickiness.” The side that is the most stuck will absorb most of the cost, but the other side will absorb some as well.

In addition, most products and services, including energy, involve many intermediate buyers and sellers along a complex production chain. In the case of deepwater drilling in the Gulf of Mexico, that chain starts with the federal government as essentially the owner of the land under the Gulf. From there it includes oil companies, drilling contractors, refineries, pipeline and trucking companies, retailers (gas stations and home heating companies), and finally consumers.

The cost of enhanced liability or stricter regulations on deepwater drilling could end up being spread across all the parties in the production chain. Determining that distribution with precision goes far beyond our scope here. However, we can invoke a general principle to help identify which party is most likely to bear the costs: most resources in a sector, except for those at the ends of the production chain are not stuck. They have other options: oil and drilling companies can hunt for and produce crude oil in many locations; refiners can produce gasoline, heating oil, and other products from crude oil coming from anywhere; and transport companies and retailers can provide services to multiple brands.

¹ In another context, this is what motivates concerns about competitiveness that climate policies will end up harming U.S. sellers if U.S. buyers can purchase imports at lower prices from countries that do not adopt carbon taxes or set up emissions permit markets.

Gulf Workers, Landowners, and All of Us

This leaves the ends of the production chain. At the downstream end, the final consumers of products made from oil that comes from deepwater drilling in the Gulf can turn to products made from crude oil extracted from other locations in the U.S. and across the globe, and the prices they pay cannot rise much. As Steve Brown of RFF recently showed, because the crude oil market is global in nature, a 20 percent increase in drilling costs, reflecting added expense to reduce the chance of a second oil spill, would increase oil prices by only 28 cents per barrel by 2035, essentially indistinguishable from a forecast price of about \$140. Even an outright ban would raise prices only about \$4 a barrel, or about 11 cents per gallon of gasoline by 2035, a quite possibly undetectable figure over 25 years compared to the volatility of gasoline prices.

Therefore, the costs of avoiding enhanced liability or complying with more stringent regulations will fall on the committed owners at the upstream end of the production chain, who fall into two categories. One would be the workers and property owners in the Gulf who may not be willing or able to relocate. Workers might end up taking lower wage jobs or go without jobs rather than move, and even many of those that do move will be worse off for having had to make that choice. Those who own the land along the Gulf will lose as well if business activity and demand for housing shrink as well.

The other “owners” are all of us as taxpayers, who will end up bearing much of the costs imposed by these policies. Oil companies acquire the rights to drill on land under the Gulf through lease auctions. If the auctions are reasonably competitive, the winning bid will reflect the estimates of the profits that a firm could make once it acquires those rights. Those estimates, and hence the bids, will in turn incorporate the expense of drilling and other royalty payments into account, as well as uncertainty regarding how much if any oil lies below that tract and how much it will be worth in the future.

If liability rules lead oil companies to believe that they will pay more in the event of an oil spill, they will spend more to mitigate that risk, increasing the expected costs of drilling. Holding oil companies strictly liable for damages that occur implies that greater expected liability judgments in the event of an accident, even if the companies have been reasonably careful, will also become a cost of doing business in the Gulf. Stricter regulation of drilling activities will increase these costs as well. All of these will be translated into lower bids for the right to drill, as companies will need to hold back money in advance to cover these expected costs. If companies hold back their bids, the one that ends up covering the costs will be one that

receives these lower bids—the U.S. Treasury. By extension, we will all pay in the form of higher taxes, borrowing costs, or foregone public services.

Balancing all the economic and environmental interests associated with oil extraction in the Gulf remains as hard as it is important. How we make those judgments should not be based on the false assumption that the costs of stricter policies will be borne by widely unpopular oil companies. This is not at all to argue against stricter regulations.

Oil companies, in making their drilling decisions, should face the costs the economic and ecological harms that could occur if they choose particularly risky methods in particularly sensitive locations. But that also goes for the decisions we as citizens make to exploit natural resources to make money for the U.S. Treasury. Neither side will take proper account of those whose livelihoods depend on a healthy environment in the Gulf, and who care about the ecosystems that oil spills threaten, with liability rules or regulations that are too weak.

Further Reading

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