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# THE RIPPLE EFFECT

**The debate over the costs of REACH is drawing attention from the legislation's real benefits, argues Frank Ackerman. That of pushing Europe's industry to innovate and gain a leading position in the emerging 'green' markets.**

**W**ill REACH with its chemical testing requirements amount to only a minor expense, well worth the cost? Or is European prosperity so precarious that it could be undermined by this new regulation? Most government and NGO studies, including the one I conducted, find that the costs of REACH are clearly affordable, and much smaller than the likely benefits. Yet some industry studies conclude that the costs are enormous and potentially crippling.

The debate is not about the direct costs imposed by REACH. At least 36 studies of the costs of REACH have been conducted, reaching a consensus that registration and testing of chemicals will cost €2 billion - €4 billion over 11 years. The European Commission has estimated the costs at €2.3 billion. My study, for the Nordic Council of Ministers, used slightly different technical assumptions and estimated the costs at €3.5 billion. Even the most critical industry studies estimate the direct costs at only about twice this level.

How large is €3.5 billion? A natural first reaction is that, if it were on a table in front of you, it would be a very large pile of money. But of course, it is not piled on a table. It is spread across the entire European chemical industry, over a period of 11 years. The annual cost is just over €300 million, or less than one euro per person per year for the population of the EU. It is difficult to interpret this as a crippling burden. The costs of cleaning up a single category of hazardous chemicals, PCBs, will be many times this large. If REACH prevents just one such problem in the future, it will more than pay for itself.

Seen from another perspective, the annual costs of registration and testing amount to 0.0006 per cent of the sales revenues of the European chemical industry, that is, 1/16 of 1 per cent. So if the costs are fully passed on to the industry's customers, REACH will raise the average price of chemicals by 1/16 of 1 per cent. This is a very small burden on

chemical users. Cost fluctuations of this magnitude are routine, and do not bring industry to a halt. The price of crude oil varies by more than 1/16 of 1 per cent, on average, 51 weeks in every year.

The real debate is about the indirect costs that result from these direct costs - the ripple effects that will be felt throughout the economy. But how large a ripple can a very tiny stone create? Government and NGO studies estimate the indirect costs of REACH, for the European economy as a whole, at one to six times the direct costs. In contrast, the most widely quoted industry study, performed by Arthur D. Little for BDI, the German industry federation, estimates indirect costs of 650 times the direct costs.

There is no plausible mechanism by which a regulation can impose indirect costs of 650 times its direct costs. The Arthur D. Little study turns out to involve a ludicrous series of mistaken and exaggerated calculations, combined with misunderstandings of basic economics. (Details are provided in an appendix to my study.)

More generally, some of industry's concerns have already been addressed by provisions incorporated in REACH; and some concerns appear to be simply mistaken.

For example, will REACH cause the withdrawal of essential chemicals from the market? This might occur if a low-volume chemical is not profitable enough to justify the costs of testing; in this case, the price is too low. If the price rises to reflect the value of the chemical to downstream users, it will become profitable to keep the chemical on the market. In other cases, if testing shows that a chemical is hazardous, perhaps it should be withdrawn. Nonetheless, REACH explicitly allows a comparison of economic versus environmental impacts before any decision is made to restrict or ban a chemical.

Will REACH lead to the disclosure of confidential business information? In a word, no: REACH includes careful provisions

protecting confidential information. In the US state of Massachusetts, long-standing legislation requires industry to report more information about toxic chemical use than REACH; no disclosure problems have resulted.

Will REACH cause delays in innovation? This is the most credible criticism; some modest streamlining of bureaucratic requirements and/or assistance to the most heavily impacted sectors may be called for. However, the problem should not be exaggerated: the delays will last for at most 11 years; and many chemicals will be tested and approved long before the 11-year testing period ends.

Finally, will REACH undermine the competitiveness of the European economy? No, because regulatory costs are not nearly large enough to be decisive for competitiveness. On the contrary, regulations like REACH may push European industry to innovate and gain a leading position in the emerging markets for "green" products.

The US provides an instructive counter-example. The Bush administration has enthusiastically cooperated with industry efforts to block new regulations and roll back old ones. Yet despite the weak dollar, America's trade deficit continues to set embarrassing new records; evidently deregulation has not led to competitiveness. Meanwhile, the US has fallen behind in environmental technologies, and imports wind turbines from Denmark and hybrid cars from Japan.

REACH could be seen as part of a new strategy for competitiveness, based on being first to market with the next generation of clean technologies. There is a large and growing international market for green products, which Europe is well positioned to dominate. Europe will never win the race to make the world's cheapest and dirtiest products, but it could capture first place in the more appealing contest to create the world's newest and cleanest industries.

**Frank Ackerman, economist at Tufts University, Boston. His study, "The True Costs of REACH," is available on the Nordic Council of Ministers website at <http://www.norden.org/pub/miljo/miljo/sk/TN2004557.asp>.**