

PERVERSE SUBSIDIES

Tax \$s Undercutting Our Economies and Environments Alike

Norman Myers with Jennifer Kent

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EXECUTIVE SUMMARY

A typical American taxpayer forks out at least \$2000 a year to fund perverse subsidies, and then pays another \$2000 through increased prices for consumer goods and services or through environmental degradation.

Subsidies are a prime feature of our economic landscape. That much is well understood. Not so widely recognized are “perverse” subsidies, definable here as exerting adverse effects on both the economy and the environment in the long run. This report documents the problem of perverse subsidies in five main subsidy sectors: agriculture, fossil fuels/nuclear energy, road transportation, water and fisheries. Total subsidies in these sectors, plus a few others, have long been thought to be around \$1 trillion worldwide per year, which means that subsidies play a prime role in the functioning of the global economy. If perverse subsidies amount to a sizeable proportion of subsidies overall, they exert a significantly distortive impact on the global economy.

It has long been recognized that certain subsidies are detrimental to the economy. Not so well known is that many of these same subsidies are harmful to the environment as well. Subsidies for agriculture foster over-loading of croplands, leading to erosion of topsoil, pollution from synthetic fertilizers and pesticides, and release of greenhouse gases among other adverse effects. Subsidies for fossil fuels aggravate pollution effects such as acid rain, urban smog and global warming. Subsidies for road transportation promote some of the worst forms of pollution, plus excessive road building with loss of landscape amenity and other environmental ills. Subsidies for water encourage mis-use and over-use of supplies that are increasingly scarce in many lands. Subsidies for fisheries foster over-harvesting of depleted fish stocks.

This is not to say that subsidies cannot serve many useful purposes. They can overcome deficiencies of the marketplace, they can support disadvantaged segments of society, and they can promote environmentally friendly technologies. Despite their distortionary effects in many instances, then, there is nothing necessarily bad about subsidies. Sometimes we need a bit of positive distortion, otherwise we might never get as much as we want of e.g., non-polluting and renewable sources of energy with their many benefits—economic, environmental, political, social and even security benefits. True, these energy sources should be able to make their way in the marketplace when once they become established. But without help in their opening phase, they might never become established at all because of competition from entrenched energy sources. The same applies to recycling, dematerialization, agricultural set-asides, and a host of other subsidies beneficial to both the economy and the environment.

The key question is: which subsidies, of what sorts, of what scope and with what impacts, can be viewed as “perverse”, i.e., adverse to society’s overall interests? What is their total scale worldwide? This is a question of major importance, yet it has only recently been addressed as a salient issue of our times, let alone documented and analyzed.

Types of Subsidies

Subsidies come in many shapes and sizes. They range from financial transfers to opportunity costs, and they can be both direct and indirect. In addition to subsidies of conventional and formal type, there is a host of implicit subsidies, especially in the form of environmental externalities. Car drivers pollute everyone’s atmosphere without compensating everyone, so they effectively gain a benefit at everyone’s expense. Much the same applies when farmers spray pesticides which then extend their toxic effects into everyone’s ecosystems; when industrialists fail to clean up and recycle water taken from everyone’s water supplies, which are becoming increasingly scarce in many lands; and when loggers over-exploit forests and deplete the habitats of everyone’s wildlife and biodiversity. However little it is acknowledged, these activities amount to uncompensated services from society to individuals. They should count as implicit subsidies in both spirit and substance, even though they are not dispensed by a government department through actual financial transfer. They are just as economically distorting and socially unfair, as well as environmentally damaging, as are many financial subsidies.

Environmental externalities are widespread and significant, and growing fast. The current level of environmental injury is ample evidence that they should be included in a comprehensive assessment of subsidies. While it may be unusual to include them, it is realistic. In Costa Rica, for instance, the depletion of soils, forests and fisheries results in a 25-30 percent reduction in potential economic growth. Soil erosion worldwide levies unintended costs on society of around \$150 billion per year, while pesticides harm society’s interests to the extent of \$100 billion per year—and these two items alone mean that such hidden subsidies are almost as large as the formal subsidies in agriculture. The report’s sectoral chapters document a host of similar externalities. They are environmentally adverse by definition, and their societal costs make them economically adverse too. They are subsidies in and of themselves, i.e., they are not dependent on the “up front” subsidies in the form of financial and other transfers from governments. We need not ask what proportion of the annual \$150 billion “subsidy” from soil erosion is due to conventional subsidy payments to farmers. Such a subsidy is 100 percent perverse.

The Deficient Database

Despite their importance and the huge amount of literature on them, even overt subsidies, let alone implicit ones, are often difficult to document and the database is incomplete, imprecise and inconsistent. Trying to pin down the essential information is like putting one's foot on a dozen jellyfishes. Understandably perhaps, governments are reluctant to admit that they hand out subsidies of myriad sorts in munificent amounts. Still less do they want to concede that some of these subsidies could be ill conceived, out of date, politically dubious, or otherwise off target. In many instances, moreover, governments simply do not compile consistent and comprehensive records on an issue as contentious as subsidies. As a result, this report's statistics and other data are sometimes patchy, though they still tell a distinctive tale.

If it has been hard to assess subsidies overall, it has been much more difficult to come up with comprehensive estimates for perverse subsidies. Hardly any of the 1600 papers consulted tackles this question directly. In face of the virtual wall-to-wall lack of data and analysis in this respect, the author has generally had to depend on his own best-judgement assessments, based on such information and illumination as are available. He has estimated that in most instances, the proportion of all subsidies that is made up of perverse subsidies ranges from half to three quarters. When he has run the sectoral chapters past several dozen established experts in the five areas, most have proposed that the proportion should be 100 percent.

To this considerable extent, the findings are to be viewed as conservative and cautious. The holes in the database mean that many subsidies are only partially assessed or overlooked altogether, which means in turn that many estimates are surely under-estimates, possibly severe underestimates. At the same time, the author has decided to side-step the problem often associated with complex topics, that of analysis paralysis. He has chosen to go with the limited information to hand, and derive such findings as appropriate for an issue of exceptional significance. It is worthwhile to come up with an exploratory estimate of perverse subsidies (set around with numerous qualifications) on the grounds that political leaders, policy makers and the general public should be appraised of the overall scale of these subsidies—and hence of their adverse impact on both our economies and our environments.

The conclusions may still seem rough and ready to many readers, and unduly rough and ready by comparison with the precise findings presented in most reports reviewing major sectors of public policy, whether as concerns the economy or the environment. To some readers, the figures may even appear arbitrary. The author considers the exercise has been worth doing, however approximate and exploratory the outcome. He takes this stance because of (a) the size of the problem, and (b) the asymmetry of evaluation. Perverse subsidies total in

The United States accounts for 21 percent of perverse subsidies.

the rough order of \$1.5 trillion, this is larger than the economies of all but five countries in the world (using purchasing power parity for the GNPs of China and India). It is a powerfully distortive factor at the heart of most governments' economic activities. Were perverse subsidies to be reduced or phased out, that would correct a factor that grossly depletes economies and environments alike, and would release enormous funds for more productive forms of fiscal management. The measure would also open up the six sectors to marketplace discipline, hopefully making them more productive and efficient.

On the grounds of their sheer scale, then, perverse subsidies need to be documented and appraised as far as possible. This leads on to the second reason for tackling an unusually “mushy” issue. As long as it remains untackled for the most part, there tends to be an implicit presumption that the perverse subsidies total must effectively be zero: there is the asymmetry of evaluation at distortive work. Of course, this is not what is intended. But as long as a problem is not accorded adequate attention, it is implicitly viewed as if it is not a problem at all. It becomes obfuscated by institutional inertia and relegated to the remotest of back burners.

Chief Findings

The principal findings are set out in Table ES.1. Total subsidies are estimated at around \$1,900 billion per year, and perverse subsidies \$1,450 billion. Plainly, then, perverse subsidies have the capacity to (a) exert a highly distortive impact on the global economy of \$28 trillion, and (b) inflict grand-scale injuries on our environments. On both counts, they foster unsustainable development. Ironically the total of almost \$1.5 trillion is two and a half times larger than the Rio Earth Summit's budget for sustainable development—a sum that governments dismissed as unthinkable.

Note that:

- The OECD countries account for two thirds of all subsidies and an even larger share of perverse subsidies.
- The United States accounts for 21 percent of perverse subsidies.
- The single sector of road transportation accounts for 48 percent of all subsidies and 44 percent of perverse subsidies.

While the two totals—overall subsidies of almost \$1.9 trillion per year, and perverse subsidies, approaching \$1.5 trillion per year—may seem large to some

observers, one should bear in mind that the documentation and calculations are often cautious and conservative to an exceptional degree. Moreover, many environmental externalities (including what could prove to be as big as the rest put together, viz. global warming) are either underestimated or omitted from the final results through sheer lack of documentation of economic costs entailed. In fact, the total for perverse subsidies, approaching \$1.5 trillion per year, is surely on the low side. In the road transportation sector alone, total costs worldwide are roughly estimated at around \$2 trillion per year, possibly more (*Delucci, 1997; Litman, 1996*), of which environmental externalities could account for \$1 trillion (*von Weizsacker, et al., 1997*).

Table ES.1

SUBSIDIES: OVERALL TOTALS (billion \$ per year)

Sector	Conventional Subsidies*	Environmental Externalities documented/quantified	Total Subsidies (range)**	Perverse Subsidies (range)**
Agriculture	325	250	575	460 (390-520)
Fossil Fuels/Nuclear Energy	145	***	145	110
Road Transportation	558	359	917 (798-1041)	639
Water	60	175	235	220
Fisheries	22		22	22
Totals (rounded)	1,110	785	1,895	1,450

* *Subsidies of established and readily recognized sorts, including both direct financial transfers and indirect supports such as tax credits.*

** *Ranges: some of these estimates are supported by ranges: for details, see text. In some instances, estimates are not inserted because there is simply too little agreement even about ranges.*

*** *Regrettably it has not been possible to come up with even a reasonably agreed estimate for this value: the data are too patchy and disparate.*

Leading instances of perverse subsidies include:

1. German coal is subsidized to the tune of \$6.7 billion per year. It would be economically efficient—and would reduce coal pollution such as acid rain and global warming—for the government to close down all the mines and send the workers home on full pay for the rest of their lives.

2. The annual global ocean fisheries catch—well above sustainable yield—costs around \$100 billion to bring it to dockside, where it is sold for some \$80 billion, the shortfall being made up with government subsidies. The result is depletion of many major fisheries to commercial extinction, plus bankruptcy of fishing businesses and sizeable unemployment.
3. The European Union has subsidized excess food production until there have been milk and wine lakes and butter and beef mountains (not to mention a manure mountain in the Netherlands). In early 1993 cereal surpluses of 30 million tonnes would have been enough to provide a more-than-sufficient diet to 75 million people for one year. Taxpayers footed the bill to supply the subsidies that boosted these crops in the first place, then they paid again to store the excess stockpiles.
4. In the United States, one government agency heavily subsidizes irrigation for crops that another agency has paid farmers not to grow. To cite the comment of an economist critic, Paul Hawken (1997): “The government subsidizes energy costs so that farmers can deplete aquifers to grow alfalfa to feed cows that make milk that is stored in warehouses as surplus cheese that does not feed the hungry.”
5. Also in the United States, gasoline is now cheaper than bottled water, thanks in major measure to subsidies of many sorts. Despite the view of many Americans that gasoline is expensive, it now costs less in real terms than 60 years ago. The same applies to many other aspects of United States road transportation, thanks to extensive subsidies. It may be said that Detroit and oil companies are on a kind of welfare—the unpaid costs of road transportation amount to \$464 billion per year, which is equivalent to \$1700 per American. Hidden subsidies for oil serve to create an energy policy by default—a policy that is actually the reverse of the government’s stated priorities. Oil subsidies prolong the country’s risky dependence on foreign supplies, especially from the Persian Gulf. Moreover, this de facto energy policy discourages private investments in new, cleaner technologies such as hyper-cars and other revolutionary forms of energy efficiency (Heede, 1997; Lovins, 1996).

All in all, a typical American taxpayer is paying at least \$2000 per year in perverse subsidies, and paying almost another \$2000 more for consumer goods and services with their increased prices, or through environmental degradation.

Despite their general irrationality (though they often have a political rationale), perverse subsidies persist virtually untouched. This is because subsidies tend to create special-interest groups and political lobbies, leaving the subsidies hard to remove long after they have served their original purpose. In all major capitals, there are swarms of lobbyists, sometimes a hundred or more for each legislator. By definition, these lobbyists are bent on advancing narrow sectoral interests

rather than the public good. For instance, the American Petroleum Institute spends for public relations and other forms of lobbying almost as much as the total budget of the top five United States environmental groups (*Gelbspan, 1997*). In the face of subsidy support of this scale and leverage, most efforts to cut back on even the most perverse subsidies amount to spectacular failure. In late 1997 during the run-up to the Kyoto Conference on Climate Change, a coalition of fossil-fuel interests in the United States mounted the Global Climate Information Project, being a \$13 million ad campaign pushing a do-nothing agenda.

The perverse subsidies total approaching \$1.5 trillion is larger than all but the five largest national economies in the world. It is twice as large as global military spending per year, and almost twice as large as the annual growth in the world's economy. It is larger than the top 12 corporations' annual sales. It is three times as much as the annual cash incomes of the 1.3 billion poorest people, and three times as much as the international narcotics industry. Were just half of these perverse subsidies to be phased out, just half of the funds released would enable most governments to abolish their budget deficits at a stroke, to reorder their fiscal priorities in fundamental fashion, and to restore our environments more vigorously than through any other single measure.

Policy Options and Recommendations

We may have reached a propitious time to tackle perverse subsidies. Many governments are espousing the marketplace economy with its reduced scope for government intervention. Many governments also face fiscal constraints that give them further incentive to reduce activist roles in their economies. So the political climate for radical reform of subsidies is probably better than it has been for decades. The transition economies in particular face an admirable opportunity thanks to their political and economic liberalization. At the same time, the OECD countries have a special responsibility to set the pace in that they account for roughly two thirds of all subsidies and an even larger share of all perverse subsidies.

In addition, there is now a solid track record of countries that have greatly reduced or even abolished some of their subsidies. This should serve as a helpful precedent for other countries.

We may have reached a propitious time to tackle perverse subsidies. Many governments are espousing the marketplace economy with its reduced scope for government intervention. Many governments also face fiscal constraints that give them further incentive to reduce activist roles in their economies.

- New Zealand has eliminated virtually all its agricultural subsidies since the early 1980s, even though—or perhaps because—its economy is more dependent on agriculture than most OECD countries. Today there are more farmers in New Zealand than when the subsidy phase-out began. Several Latin American countries, notably Chile and Argentina, have recently taken to slashing their agricultural subsidies.
- Russia has reduced its fossil fuel subsidies from \$29 billion in 1990-91 to \$9 billion in 1995-96. China has slashed its subsidies from \$25 to \$10 billion.
- Brazil has gone far to cut back its subsidies for cattle ranching in Amazonia, thus reducing deforestation.
- Since the mid-1980s, Bangladesh and several other Asian countries have recognized that excessive applications of nitrogenous fertilizers, stimulated by extravagant subsidies, are wasteful in economic terms and highly polluting in environmental terms (eutrophication of waterways, threats to drinking water supplies). Indonesia has reduced its fertilizer subsidies from \$732 to \$96 million per year; Pakistan from \$178 to \$2 million; Bangladesh from \$56 million to zero; and Philippines from \$48 million to zero (*World Bank, 1997a*).

How shall we set about the challenge of reducing perverse subsidies within the body politic? There are various policy openings available. One generalized option is to be opportunistic and to seize on emergent “windows” such as the recent strong political shift in favor of marketplace-ism. The credo of the marketplace stands opposed to subsidies, let alone perverse subsidies, as a form of government intervention that ipso facto must be distortive and counter-productive (this applies especially to the economies in transition with their switch to market liberalism). Resistance to subsidies in general also stems from the privatization ethos, which is becoming widespread. There can even be opportunity in economic crisis, such as the one which spurred New Zealand’s move to drop agricultural subsidies: the public economy was finally overburdened to breaking point. India’s subsidies total over 14 percent of GDP, yet the government wishes to bring down its fiscal deficit to under 4 percent of GDP, thus supplying marked motivation to cut subsidies drastically. There could be parallel scope in the wake of an environmental crisis such as another Chernobyl-type disaster.

Formidable obstacles match these formidable opportunities. There are the special-interest groups, which often feel so addicted to their “entitlements” that they suffer severe withdrawal pangs at talk of cutting back any subsidies, let alone perverse subsidies. They find allies in bureaucratic roadblocks and institutional inertia. Then there can be upsets to equity concerns, especially with regard to who no longer gets what. Finally there is uncertainty about how reduc-

tion of perverse subsidies, however rational in principle, will work out in nitty-gritty practice; for instance, will it mean losing a competitive edge to competitors abroad?

There are various ways to overcome these obstacles. One is to formulate alternative policies that target the same subsidy objectives better, while also compensating losers. A related measure is to develop an economic-policy context that encourages subsidy removal through e.g., reducing government controls generally and freeing up markets. A subsidiary measure is to introduce “sunset” provisions that require surviving subsidies to be re-justified periodically, thus avoiding the entrenchment problem. All these measures can be strongly reinforced by promoting transparency about perverse subsidies, especially as concerns their impacts both economic and environmental, and their costs to both taxpayers and consumers.

Perhaps the most important way of all to overcome obstacles to reform is to build support constituencies, especially among the public. The more citizens know that their tax dollars and consumer payments are going down a rathole of perverse subsidies, the more there will be political support for reform. These constituencies—with an interest in the public good rather than sectoral benefit—can engage in information campaigns about the perversity of certain subsidies. Governments cannot deal with perverse subsidies without first learning about the nature and extent of these subsidies. Yet information, especially statistical data, is often incomplete and fragmented across agencies, if it exists at all. An information campaign stands a better chance of success when it stems from grassroots activism, i.e., from the taxpayers and consumers who are penalized by perverse subsidies.

There has been a success story on this front in the United States, where environmentalists such as Friends of the Earth, the Sierra Club and the Wilderness Society have made common cause with economic reformers such as Citizens for Tax Justice, Taxpayers for Common Sense and the Public Interest Research Group. This coalition of 22 NGOs has highlighted perverse subsidies through their periodic “Green Scissors” reports. The most recent report fingers 47 government projects worth \$39 billion over five years, with items ranging from over-logging of the Tongass National Forest and price supports for cotton to a royalty holiday for deepwater oil drilling and aid to the Three Gorges Dam in China. The whistle blowing has done much to mobilize the social consensus and political will to tackle the offending subsidies.

In somewhat similar style, the Organization for Economic Co-operation and Development (OECD)—the Paris-based secretariat for developed countries—has run a research program for several years to appraise and evaluate the role of subsidies in advanced economies. The program has published a series of revealing reports, albeit in much more technical form than the public-oriented publica-

tions of NGOs. A parallel though more limited effort is being undertaken by the International Energy Agency, also based in Paris.

As a follow-up to information campaigns, there are action initiatives such as (a) regulation via environmental standards, tradable quotas, limits to resource exploitation, the polluter pays principle, and the precautionary principle; (b) user charges for goods and services—whether as concerns energy, transportation, water, timber, etc.—that will encourage more careful use; (c) tradable permits, the largest inside the United States being the 1990 Clean Air Act that allows permits to emit sulphur dioxide; (d) green taxes as a prime mode to change people's behavior toward the environment; and (e) environmental subsidies in support of e.g., agri-environmental measures to support soil conservation and wetland protection.

When once we start to remove perverse subsidies, it will be essential to measure progress. To meet this purpose, the International Institute has formulated a number of principles for Sustainable Development. Performance assessment should (a) be guided by a clear vision of sustainable development as the justifying framework for subsidy reform; (b) include a review of the entire economic sector in question; (c) evaluate the economic, environmental and human subsystems at issue, covering all costs and benefits in both monetary and non-monetary terms; and (d) consider equity factors within communities, also between present and future generations, with focus on such concerns as poverty and over-consumption, also human rights. Taken together, these principles can constitute a “template” for measuring progress toward sustainable development. The task should be undertaken by governments that are ready to devise a consistent framework for statistical analysis of perverse subsidies in all salient sectors, through e.g., a radical revision of their national accounts. Thereafter they will need to standardize and disseminate their information as a routine practice.

The Crux: Covert Costs of Perverse Subsidies

Finally, let us reiterate the many covert costs of perverse subsidies.

- Economically they push up the costs of government, inducing higher taxes (and often higher prices as well). In turn, this means they aggravate governments' budget deficits.
- They divert government funds from better options for fiscal support.
- They distort economies in numerous other ways. For instance, they undermine market decisions about investment, and they reduce the pressure for businesses to become more efficient.
- They tend to benefit few at the expense of many, and, worse, the rich at the expense of the poor.

- They often serve to pay the polluter.
- They foster many other forms of environmental degradation, which apart from their intrinsic harm, act as a further drag on economies.

For all these reasons, perverse subsidies militate against sustainable development. They are a no-no whether economically or environmentally or socially. If they were to be reduced (while still leaving lots of subsidies to placate special interests), there would actually be a double dividend:

1. There would be an end to the formidable obstacles imposed by perverse subsidies on sustainable development.
2. There would be a huge stock of funds available to give a new push to sustainable development—funds on a scale that would be unlikely to become available through any other source. In the case of the United States, for instance, they would amount to more than \$300 billion per year. This is larger than the Pentagon budget, \$240 billion, and more than twice as large as the federal deficit, \$126 billion.

Compare the prospect to a car. Eliminating perverse subsidies would be like, firstly, taking the brakes off and moving into high gear. Secondly it would be like giving the engine and all the other major mechanisms such a streamlining that the car would operate with undreamed of efficiency.