In the first post in this series, I explained that Austrian economists view air pollution as a coordination problem. Polluters and their victims have conflicting plans for use of the atmosphere or other environmental resources. The former want to use the air for waste disposal, the latter for breathing. Both set of actors cannot realize their plans in full, but if they can find a means of coordination, both can end up better off than if each proceeds without regard for the other.

Sometimes, when the parties involved are few, environmental conflicts can be resolved through direct negotiation, backed by tort law. However, as explained in the first post, when the parties are remote and numerous, as they are in cases of large scale air pollution, those mechanisms are not enough. The only effective way to coordinate the plans of thousands or millions of actors, who do not even know each other’s identities, is through the price system.

If, then, we begin from the Austrian premise that air pollution is a coordination problem, we arrive at the conclusion that the solution lies in bringing price system to bear. How best to do so?

Regular readers will know that I have often written favorably of taxes as a way to put a price on pollution. However, taxes of any kind do not sit well with Austrian theorists. At most, it might be possible to persuade them that pollution taxes are not the worst of all possible taxes, but even that would be a hard sell, and I will not attempt it here.
Instead, this post will explore another way of putting a price on pollution, emissions trading. In my view, it is possible to develop a version of emissions trading that is entirely consistent with the Austrian paradigm. I will begin by making a positive Austrian case for emissions trading and then turn to some of the objections that Austrian writers have raised—objections that are largely misplaced, in my view.

**The positive case**

The Austrian case for emissions trading follows naturally from Murray Rothbard’s principle that pollution rights, or more properly, emissions easements, can be established by “first use” or “homesteading.” Rothbard uses the example of noise pollution from an airport. At time T, he imagines, an entrepreneur sets up an airport in an open area with no one living nearby. The facility emits X decibels into the surrounding unused airspace, thereby homesteading the right to X decibels. If someone builds a house nearby at time T+1, says Rothbard, they have no cause for action against the airport, since they have “come to the nuisance.” However, if the homeowner bought the property for a price that reflected ambient noise of X decibels, and at time T+2, the airport increases its noise emissions to 2X decibels, the homeowner would have a cause of action for 1 decibel of excess noise.

Rothbard specifies that emissions easements created by first use are permanent and are transferable by sale, gift, or bequest. Furthermore, they are separable, in the sense that their owners can sell them without selling the airport itself.

As purchases and sales of emission easements for noise, particulates, SO2 and so on became frequent, some entrepreneur would no doubt set up an exchange to trade them in standardized units. Soon a fully developed, fully private emissions trading scheme would emerge spontaneously, with the supply of easements for each type of pollution capped by the number that had been legitimately homesteaded. Once population density increased to the point that no airspace remained unused, the caps would become permanent.

In short, if we accept the first use principle, then nothing about emissions trading per se is offensive to Austrian principles. To the contrary, the spontaneous emergence of trading would vindicate the claim that clear definition and strict enforcement of property rights can solve the environmental coordination problem.

**Legal and institutional considerations**

This Austrian version of emissions trading presupposes an appropriate legal and institutional environment, including the following three elements:

1. Courts would have to recognize transferable emissions easements created by first use as a legal form of property, just as they now recognize scenic easements, conservation easements, and access easements. Otherwise, contracts to trade them would not be enforceable.
2. Second, there would have to be some kind of registry for such rights, just as there are registries for land titles, trademarks, patents, and copyrights. A registry would allow a potential buyer to check that a would-be seller actually owned the easement offered for sale, that the same easement was not being sold twice, and so on.

3. Third, and most important, there would have to be a set of rules for contesting emissions in excess of validly established easements. Otherwise, there would be no motivation for anyone to buy them.

The third element needs particular attention. As we saw in the first post in this series, declaring pollution to be a tort against the victim would be a meaningless formality if procedural rules made it a practical impossibility for victims ever to prevail in court. Fortunately, the rules for contesting excess emissions would not need to be as onerous as the Rothbardian rules for tort suits. Without trying to construct a whole field of law out of thin air, let me suggest a few general points.

- Plaintiff A who complained that emissions from source B invaded her property would no longer have to show actual harm. Instead, the question before the court would be whether source B possessed enough registered easements to cover its current level of emissions. If, for example, the court found that B was emitting 2000 units of pollution but only owned enough easements to cover 500 units, it could issue an injunction to cut back to the authorized emission level.

- The standard for proof would not need to be as high. In order to trigger a check on whether a source owned enough easements, it should be enough to show, by the preponderance of evidence, that the emissions detected at plaintiff A’s property might have come from source B. Since there would be no penalty if B were operating within its authorized quota, and since a well-run registry would make it easy to prove compliance, there would be no need to invoke the stringent standard of proof beyond a reasonable doubt.

- There would be no need for every victim to sue every polluter. The knowledge that a single complaint could trigger a check of authorized emission levels would be enough to prompt pollution sources to buy enough easements to cover their current emissions.

How many easements?

The next question is how to set an appropriate cap on the number of easements. Here are two approaches that I see as representing lower and upper bounds.

One approach would be to make a specific historical investigation of the pollution emitted by every source to see if it complied with the first use principle. For example, railroad X might be able to show that its corporate parent burned Y tons of coal per year back in the nineteenth century, when its tracks ran through unpopulated countryside. It would accordingly receive Y carbon emission units. On the other hand, electric power company Z might have built its first coal-fired plant just 5 years ago in the middle of an area that was already densely populated. It would receive zero easements, and would have to cease emissions entirely unless it bought easements from someone like railroad X.
I can see two problems with the historical approach. One is that it would be expensive and time consuming. Some special court-supervised body would probably have to devote full time to reviewing applications for validation of easements. Another problem is that a historical assessment that stringently followed Rothbardian principles of first use would probably end up authorizing a level of emissions far below what prevails today. Although such a low level might be defended on grounds of libertarian justice, making the downward adjustment too rapidly could be economically disruptive.

An alternative approach would be to grandfather in all existing emissions. Before condemning that as too great a concession to polluters, it is worth noting an important asymmetry that would make it much easier to lower the effective cap on emissions than to raise it.

Once a cap were established, the only way to create new easements by homesteading would be to establish a pollution source where the emissions would not reach any populated area. That would always be hard, and it would be impossible for pollutants that move globally. Theoretically, would-be polluters could also obtain new emission rights by buying them from downwind residents, but there might be thousands or millions of parties to deal with, each of whom would have to give consent to creation of new easements within their common airshed. A holdout by a single one of them would be enough to block an agreement.

On the other hand, it would be easy to reduce the number of permits available to polluters. Community organizations, not-for-profit conservation groups, or even wealthy individuals could buy emissions easements on the exchange and then hold them unused. Given the practical impossibility of creating new easements by buying them from victims or by finding an unused corner of the airshed, the number of easements outstanding could only go down, never up.

**Some misplaced Austrian objections to emissions trading**

What is there about any of this for an Austrian economist not to love? Still, it is a fact that Austrian writers, by and large, have not looked favorably on emissions trading. Let’s look at three of their most common objections, and the reasons they are misplaced.

*The calculation objection*

First, there is the *calculation objection*. Cordato states it this way:
Both [emissions trading and pollution taxes] are fundamentally forms of market socialism and suffer from all of the problems that Austrians have typically made against central planning. Most specifically, a central authority must know in advance, what the efficient outcome is. In the case of the tax, a central authority must know in advance the exact amount of the externality costs being imposed by the polluter, and the correct price and output, not only for the good in question but, since efficiency only makes sense in a general equilibrium context, for all other affected goods and services. In the case of tradable permits, the knowledge requirements are essentially the same. This is because the central authority must first determine the “efficient” level of emissions for the particular pollutant, which also must be determined within the context of a general equilibrium solution.

For two reasons, I think this objection misses the mark.

One is that the context is wrong. As Cordato himself notes, the origins of the objection lie in the socialist calculation debate. There, Austrian economists sought to show that real markets could solve the coordination problem better than central planning. The debate centered on ordinary goods like coal, wheat, or clothing, for which markets, backed by clearly defined and enforced property rights, actually existed. In the socialist calculation debate, Austrians rightly accused socialists of comparing real market economies to an impossible ideal of optimal central planning. In the case of air pollution, the shoe is on the other foot. Austrians are the ones who pose an idealized vision of clearly defined and consistently enforced property rights and then condemn real-world emissions trading because it falls short of the imagined ideal.

Second, it is wrong to say that the administrators of an emissions trading system would have to be able to calculate the optimal number of permits. Instead, in an Austrian version of emissions trading, as explained above, setting the appropriate cap on emissions easements would be a qualitative question, not a quantitative one. The courts overseeing the establishment of the system would rely on legal and historical evidence, not mathematical modeling or econometrics.

The compensation objection

A second Austrian objection is that although emissions trading could potentially deter pollution, it does not compensate pollution victims. Failure to compensate is not only unjust; it distorts choices about the use of environmental resources and inhibits coordination.

It is correct to say that the organizers of an Austrian emissions trading system would have to keep the issue of compensation in mind, but the difficulty is not insurmountable. It could be handled in one of two ways.

One way would be to take the historical approach to allocating emission easements. That would minimize concerns about compensation of victims, since the only emissions would originate from holders of permits that were valid under the first use principle. Under the “coming to the nuisance” rule, victims of pollution from such sources would have no claim to further compensation.
Matters would be a little more difficult if organizers decided to grandfather in all existing pollution. In that case, the initial cap on easements would exceed the level that could be justified on a first use basis. Victims of the excess pollution would then deserve compensation. One possibility would be to auction off a portion of the initial allocation of easements rather than approving them without payment. The revenue from selling the “excess” permits could be placed in a court-supervised victim compensation fund, somewhat like that set up to deal with the Gulf oil spill disaster.

**The stolen property objection**

Walter Block ([http://mises.org/journals/qjae/pdf/qjae7_2_5.pdf](http://mises.org/journals/qjae/pdf/qjae7_2_5.pdf)) raises yet another objection to emissions trading. Markets in emissions easements are illegitimate, he says, not because trading itself is objectionable, but because they are trading in stolen property, like selling stolen televisions from the back of a truck.

On examination, we see that the “stolen property” objection is a close cousin of the compensation objection. Resolving it depend on one’s views as to who the tradable easements are stolen from.

If the initial allocation of easements includes only ones that are legitimate under the first use principle, there would be no problem, because there would be no stealing. Nothing in the trading system would compel the owners of easements to put them on the market. They would have complete liberty to hold them for their own use or leave them unused altogether.

On the other hand, if the initial allocation grandfathered in all existing pollution, then tradable easements in excess of those justified by first use could be viewed as “stolen” from victims. Block’s objection is thus valid against the grandfathering approach to setting the initial easement cap, even though it is not valid against easing trading in general. The only way to meet the objection in full would be to take the historical approach to setting the cap. Alternatively, the objection could be overcome in part by means of a court-supervised victim compensation fund, as suggested above.

**The bottom line**

The bottom line is that the *concept* of emissions trading is not only consistent with the Austrian paradigm, but is in fact a natural outgrowth of it. An ideal Austrian world of clearly defined and strictly enforced property rights would see emissions trading emerge spontaneously through entrepreneurial initiative. However, overcoming Austrian objections to emissions trading on the level of ideals is not the end of the discussion, but only its beginning.

The next phase should be to draw Austrian economists into a discussion with one another, and with environmental economists from other schools of thought, about the practical implementation of emissions trading. That part of the discussion should focus not on ideal concepts, but on the relative merits of alternative policies and institutions that now exist, or could plausibly be introduced, in the real world. It would mean addressing questions like these:
What is the best way to establish the initial allocation of emission rights? By historical analysis of each individual case? Grandfathering? Auction? Mathematical modeling? Something else?

What would be the best way to set up a registry of emission rights? Who should administer it? Who should have standing to challenge alleged excess emissions? What should be the remedy when excess emissions are proved?

As a tool for promoting coordination, would a real-world version of emissions trading (taking into account any imperfections relative to the ideal version) be better or worse than the current mix of command-and-control regulations—CAFE standards, ethanol blend rules, clean energy mandates, and the like?

How would a real-world version of emissions trading stack up against taxes, which are another real world option for introducing a price on pollution?

Which would better promote economic coordination, a real-world version of emissions trading or a property-rights-based system without trading but with procedural rules like those proposed by Rothbard, which give victims of excess air pollution little or no chance of prevailing in court?

By discussing questions like these, Austrian economists could make a real contribution to debates over environmental policy. I hope someone will take up the challenge.

This post is the second of two parts. You can read the first part here.

Comments (10)

"[T]axes of any kind do not sit well with Austrian theorists."

What is the Austrians' justification for socializing the costs of individual economic activities? This is in a sense reverse taxation: levying a cost on society as a whole to increase the wealth of an individual or corporation. If I manufacture golf tees, I pay the woodsman for the wood, I pay them machine maker for the machines, and I either sell the sawdust to a chipboard maker or I pay the dump to take it. I have not asked society to pay for anything beyond the golf tees they may choose to purchase - or not. Why should the effluent of chemical manufacturing processes be treated differently? Why should you whose electricity is generated by hydroelectric dams pay to mitigate the air pollution generated with coal for the benefit of consumers in Pennsylvania - or for that matter in Shanghai? Pretending that there is not a cost associated is tooth fairy economics. So again, what is the
Austrian justification for socializing costs for personal profit? How is thus polluting the air any different from the steel mill down the block dumping slag in the community swimming pool?

2 replies (javascript: collapseThread(813126621);) · active 14 weeks ago

>So again, what is the Austrian justification for socializing costs for personal profit? How is thus polluting the air any different from the steel mill down the block dumping slag in the community swimming pool?

I hesitate to speak for all Austrian economists on this, since I am more an observer of the school than a card-carrying member. However, as I read the Austrian literature, even though they do not use language like "socializing costs," they do not approve of dumping wastes at others' expense without paying for it--or at least they do not approve of that in theory.

My complaint is that although Austrian writers like Rothbard and his many followers take the moral high ground by declaring that pollution is an "aggression against the victims' property rights," they do not propose any practicable policies that prevent such "aggression" (or "socialization" in your terms) from taking place.

"Aggression", "socialization of production costs", I don't want to get too caught up in semantics. Looking at this as simple economics I have long been troubled by the ability of some industries to ignore some of the costs of their production activities. We would never accept the idea of a company stealing some of its raw materials or hiring labor and then not paying for it. Pollution strikes me as being the same sort of proposition: I'm going to save money by throwing my trash in your backyard without paying for the privilege.

Instead of trying to criticize your argument, I would like to reference and point to John Hasnas' piece 'Two Theories of Environmental Regulation' (http://bit.ly/PjHMbm). From footnote 53:

"What would such lawsuits look like? How can there be a lawsuit when those whose property has been damaged do not know which polluter to hold responsible? But the common law has encountered this problem before and has already evolved a response to it: market share liability. In cases in which the plaintiff has been damaged by a product produced by several manufacturers, but cannot identify the particular manufacturer who caused his or her injury, the plaintiff may join all available manufacturers as defendants. As long as the defendants constitute a substantial share of the market for the offending product, the plaintiff can recover damages from each defendant in proportion to the defendant's share of the market for the product at the relevant time.

What if an individual property owner's damage is too slight to make it worthwhile to pursue a law suit? But the
common law has encountered this problem before and has already evolved a response to it: the class action lawsuit that allows the joinder of many small claims of damage presenting essentially the same factual issues into one suit.

Won’t polluters merely regard lawsuits as a cost of doing business to be absorbed, and continue with their polluting activities? Perhaps, but the common law has encountered this problem before and has already evolved a response to it: the injunction. In trespass and nuisance suits, a plaintiff can sue not merely for damages, but for an injunction that orders the defendant to refrain from the activity that is causing the plaintiff’s injury.

The essential characteristic of the common law is that it learns. At any point in time, there are interpersonal wrongs that it does not adequately address. But it is precisely these inadequacies that spur the legal innovations that produce new procedures and remedies. I can describe how the common law would be likely to handle lawsuits over acid rain because the problems that beset such suits are similar to those that have arisen and been resolved in the past. I cannot, however, predict how the common law will address novel environmental problems that present entirely new challenges. This is precisely the reason for advocating common law environmental regulation: to learn how to align private incentives with the preservation of resources that are not easily reduced to physical possession.” (page 26 of the PDF)

Hasnas’ argument is that instead of relying on the political legislative process to resolve these issues, it is better to use a common law process so that effective resolutions can be copied and then be incorporated into law.

6 replies (javascript: collapseThread(813145121)); · active 14 weeks ago

EdDolan (http://www.economonitor.com/dolanecon/) · 14 weeks ago (#IDComment813157696)

Thank you for the link. I will take the time to read Hasnas’ long paper. Let me comment briefly on the short passage that you reproduce:

First of all, I am a little uncertain what you mean when you speak of criticizing "my argument". Are you criticizing Rothbard, or are you criticizing my criticism of Rothbard?

In the post (both parts) I refer to an analysis of air pollution by Murray Rothbard (1982). My reading suggests that many if not most modern Austrian economists accept Rothbard rather uncritically. What I have attempted to do, briefly in this post and at more length in my long presentation referenced at the end of Part 1 (by the way, if anyone wants to see it, i can send a draft) is to criticize Rothbard for offering a set of procedural rules regarding nuisance suits and joinders that makes it a practical impossibility for small plaintiffs to prevail against multiple polluters.

I should point out that Rothbard’s list of rules for such suits is explicitly normative, that is, he does not attempt to describe the common law as it is currently interpreted by courts, but the common law as he thinks it should be interpreted. The points Hasnas cites indicate that in fact, the rules actually followed by courts are more friendly toward plaintiffs than the ones Rothbard proposes.

Personally, I like the rules as described by Hasnas much better than those proposed by Rothbard. I would like to see references to the relevant case law. Perhaps Hasnas gives them elsewhere in the paper, which I have not yet finished reading.

+1
I think criticize is the wrong word. What I mean is that I am not trying to ignore what you wrote and that you might be interested in Hasnas' point of view. Now that I think of it, that is exactly what I should have said instead.

I share some of your criticism of Rothbard, especially in regards to multiple polluters. But what I appreciate about Hasnas is his descriptions of both how the common law was formed and of modern tort law, and how he shows that the process of resolving disputes through these systems is actually superior to the legislative process. Using taxation to address and/or resolve conflicts about pollution requires a political process and all the problems inherent to such a process. A common law process allows for successful resolutions to conflicts about pollution to gradually be incorporated into the body of law.

Actually, I think this Ludwig Lachmann quote on institutions from 'The Legacy of Max Weber' is very appropriate here:

"Some men realize that it is possible to pursue their interests more effectively than they have done so far and than an existing situation offers opportunities not so far exploited. In concert with others they do exploit them. If they are successful their example will find ready imitators, at first a few, later on many.

Successful plans thus gradually crystallize into institutions...Imitation of the successful is, here as elsewhere, the most important form by which the ways of the elite become the property of the masses. Once an idea originally grasped by an eager mind has been 'tested' and found successful, it can be safely employed as a means to success by minds less eager and lacking originality. Institutions are the relics of the pioneering efforts of former generations from which we are still drawing benefit. Drawing once more on the analogy of the market, we may say that the theory of institutions is the sociological counterpart of the theory of competition in economics. In both cases innovation and imitation are the complementary elements of what is virtually the same social process." (68)

Interesting perspective. But polluters of air and water are transnational. What would be the court of competent jurisdiction? Would such a court recognize class actions? Could such a court issue an injunction? What entity would enforce the injunction? Is it fair to hold, say, power companies jointly and severally liable when most of the potential plaintiffs benefited from the pollution (cheaper energy costs)?

Historically, the Law Merchant formed precisely because the law provided from the state legislatures was insufficient for resolving international disputes. Today, there are arbitration services provided by firms such as the London Court of International Arbitration.

Regarding power companies, fair according to whom? Just because the plaintiffs buy the service does not
mean that they necessarily agree to pollution. But, let's assume arguendo that they did agree, what about the people who do not buy a particular company's services but are still subject to the pollution it causes?

Great stuff and it all seems very tidy from a theoretical perspective. But I suspect that various sovereigns - including the US - would stop it before it started.

"An important component to a successful arbitration is a statute receptive to arbitration in the country where the proceeding is seated. A distinction is often made in a nation's laws between domestic arbitrations, in which states tend to maintain a firmer hand through the court systems, and international arbitration, in which actors engaging in sophisticated commercial transactions are freer to agree upon their own rules."

When proposing alternatives to the modern legislative process, we don't need to reinvent the wheel. I would like to see more people point to these already existing processes and show how expanding their scope would be beneficial in areas that people wouldn't normally think of applying them. After all, this process is essentially how our modern legal principles and laws formed. For example, it wasn't a legislature that proposed the principle of reasonable doubt; it is a result of the common law process.