

Externalities and the challenge of valuation

David Possen

DIS Environmental Economics

o. Economics: “soft” but street-smart



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is that *economists are well aware*
of the “softness”

of basic microeconomic theory—

here, the fact that markets often

fail to take into account

many consequences of economic activity—
and so have developed an additional theory,
the *theory of externalities*, to deal with this.

0.1 Recap: My Two Tips

From my prerecorded lecture:

- (1) Remember that the “laws” of supply and demand describe and explain *group* behavior, not individual behavior.

WARNING: Your intuitions about the former will probably help you—but your intuitions about the latter may mislead you.

- (2) Remember the four most important words in economic modeling: *all things being equal!*

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- prices of substitutes & complements
- expectations of future prices

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- costs of substitutes & complements
- expectations of future prices

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But actual markets don't ignore them.

*Actual markets do take supply and demand
shifter into account.*

*(And one goal of advanced microeconomics
is to follow suit!)*

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Externalities are factors that *ought* to function as demand or supply shifters, but often *don't*.

If *actual markets* don't take them into account,

then it becomes up to governments—and economists—to make them do so.

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Formal definition:

An externality is a cost or benefit associated with a market transaction that affects *third parties* (parties not involved in the transaction).

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Combining these two definitions:

Externalities are costs or benefits associated with a market transaction that *ought* to be taken into account (“internalized”) in demand & supply curves so as to maximize total economic welfare, but which sometimes *aren't*,
or aren't completely,
just because they have *no direct effect* on the particular consumers and producers who are involved in the transaction.

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and *four basic kinds*:

(NP) negative production externalities

(NC) negative consumption externalities

(PP) positive production externalities

and (PC) positive consumption externalities

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Some examples of the four types:

(NP) pollution by, e.g., dry cleaners, carmakers

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A *private* supply/demand curve
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that **doesn't take the externality into account.**

A *social* supply/demand curve
reflects producer/consumer behavior
where **the externality is fully internalized.**

2.2 Private vs. social curves

Let's apply this to the four kinds of externalities.

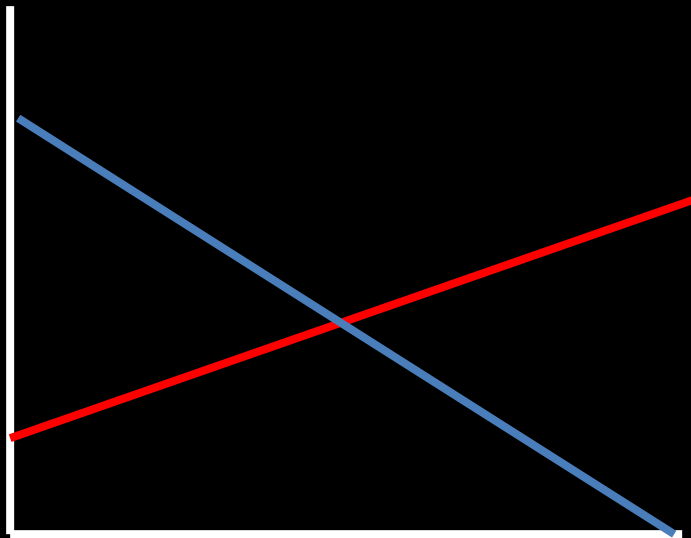
In each case (assuming no internalization),
what new “social” curves are needed?

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NP: producers make 'em, others suffer

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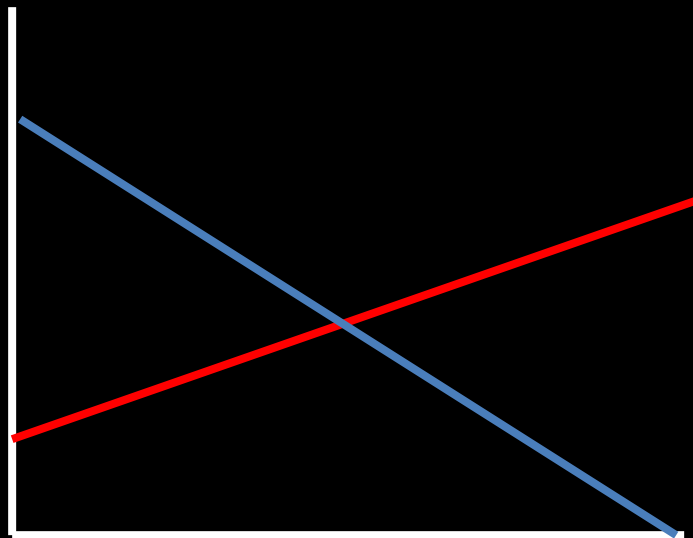
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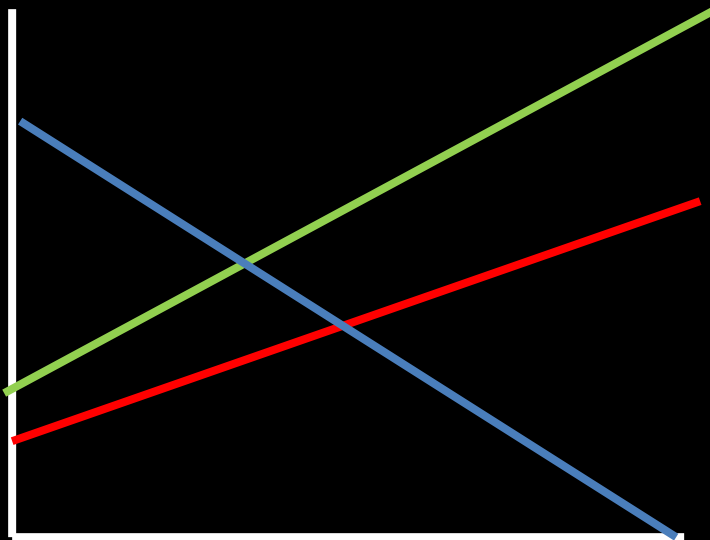
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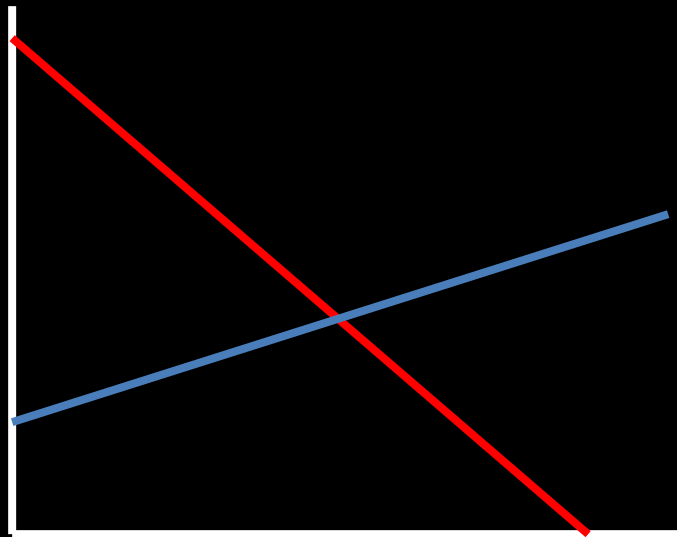


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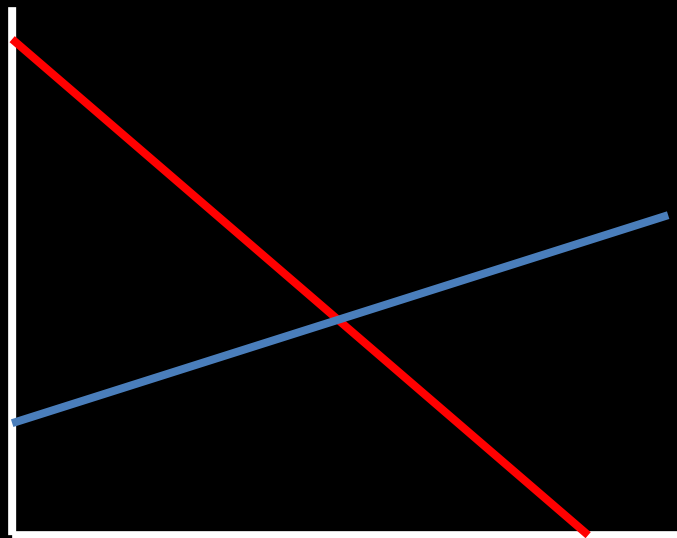
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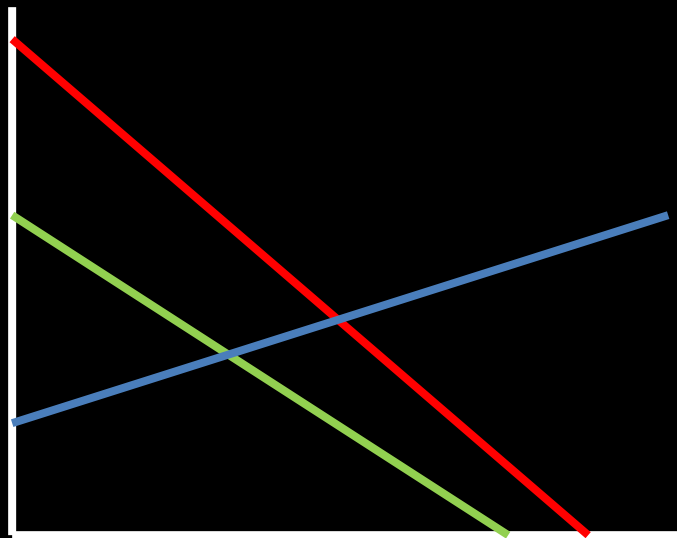
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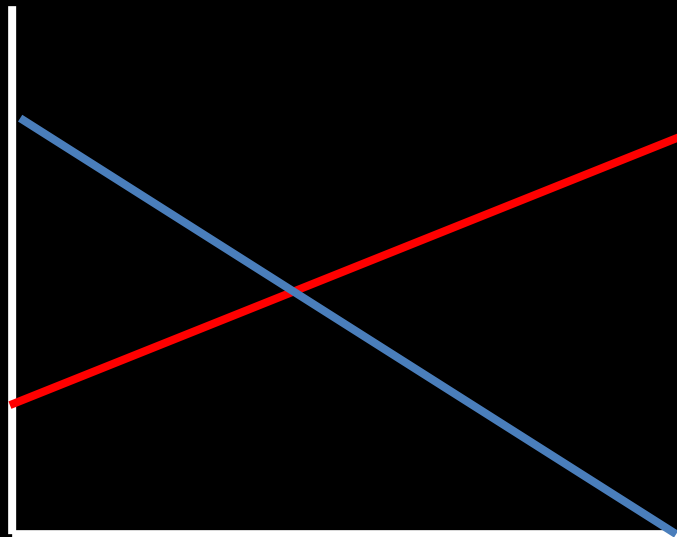


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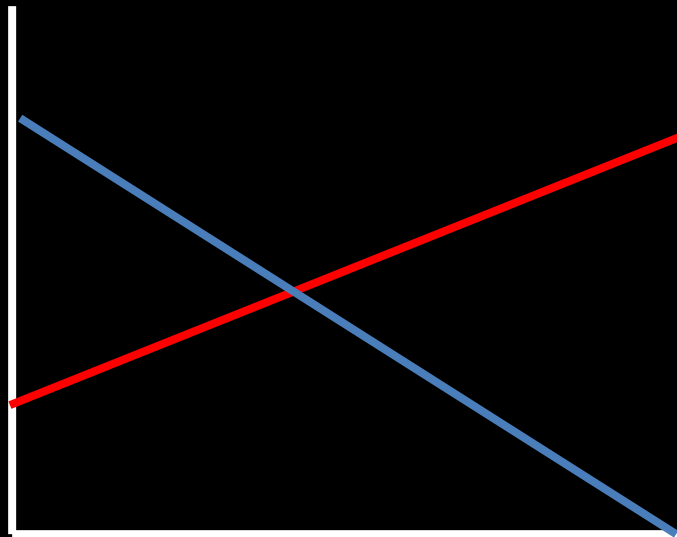
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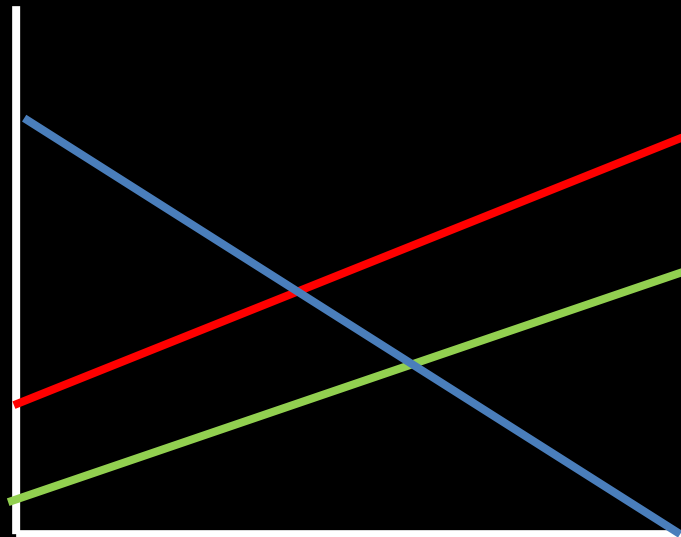
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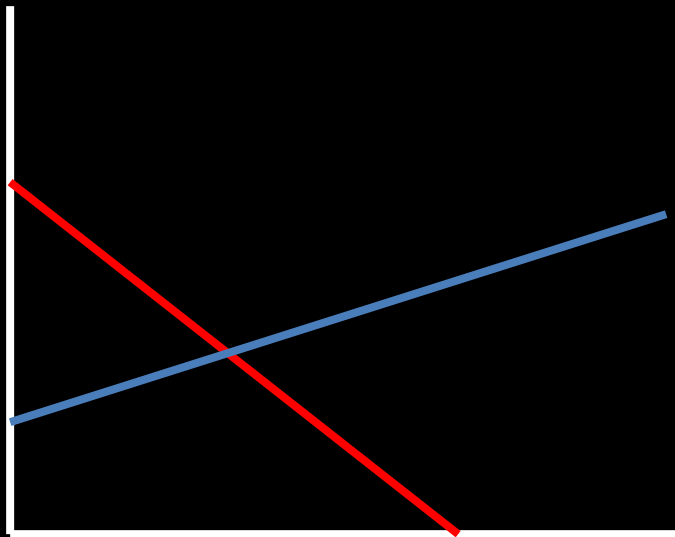


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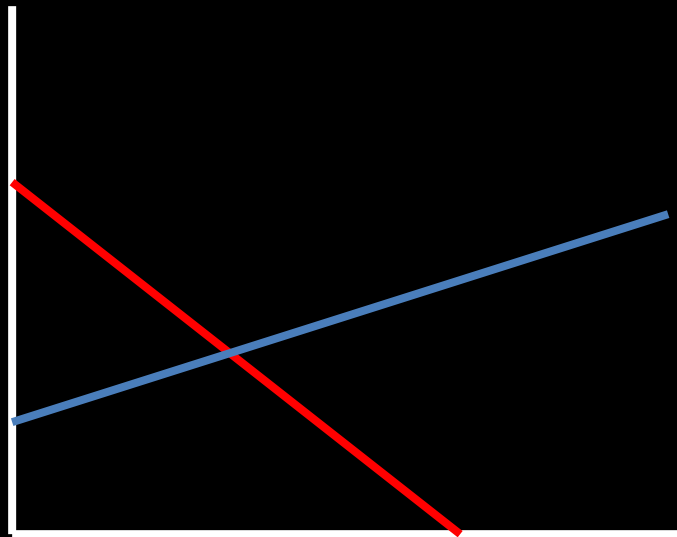
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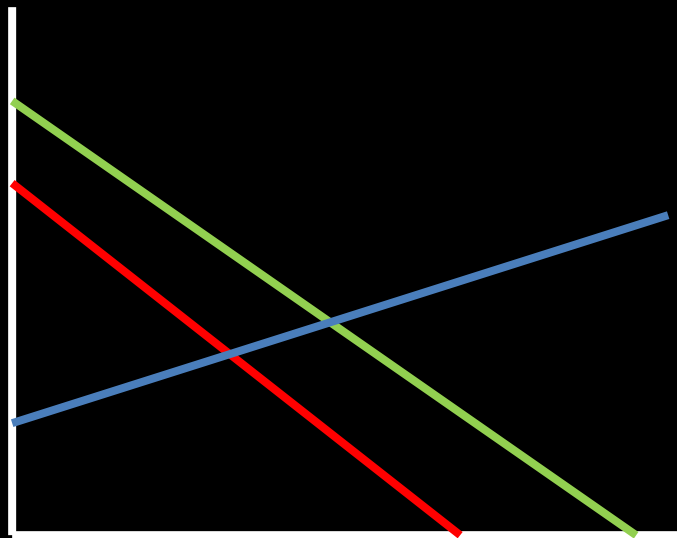
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So making sure externalities are internalized is a high priority for governments.

But internalizing externalities isn't easy.
There's a **structural difficulty**.

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Namely: In order to force markets to internalize externalities, governments first need to be able to *assign value* to these externalities. And the markets themselves are of no help in this.

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As Harris writes on p. 40 of your reading:

2.3 Transition to Valuation

“If we fail to assign some value to environmental damage, the market will automatically assign a value of *zero*, because none of these issues are directly reflected in consumer and producer decisions.”