

Coase on Pigou

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- A railroad is considering running one or two trains a day. Each train will damage crops with a market value of \$60. It costs \$50 to grow the crops, so the farmer expects a net profit of \$10.

The Railroad's Calculus

	One Train a Day	Two Trains a Day
Gross Receipts	\$150	\$250
Less: Operating Costs	\$50	\$100
Less: Crops Damaged	\$60	\$120
Equals: Net Value of Train(s)	\$40	\$30

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Less: Operating Costs	\$50	\$100
Less: Crops Damaged	\$60	\$120
Equals: Net Value of Train(s)	\$40	\$30

If the Railroad is liable for Social Costs

Lost Profits, not lost sales

	One Train a Day	Two Trains a Day
Gross Receipts	\$150	\$250
Less: Operating Costs	\$50	\$100
Less: Lost Profits	\$10	\$20
Equals: Net Value of Train(s)	\$90	\$130

If the Railroad is liable for Social Costs

	One Train a Day	Two Trains a Day
Gross Receipts	\$150	\$250
Less: Operating Costs	\$50	\$100
Less: Lost Profits	\$10	\$20
Equals: Net Value of Train(s)	\$90	\$130

Liability for crops, damages doubled

	One Train a Day	Two Trains a Day
Gross Receipts	\$150	\$250
Less: Operating Costs	\$50	\$100
Less: Crops Damaged	\$120	\$240
Equals: Net Value of Train(s)	(\$20)	(\$90)

Liability for social costs, damages doubled

	One Train a Day	Two Trains a Day
Gross Receipts	\$150	\$250
Less: Operating Costs	\$50	\$100
Less: Lost Profits	\$20	\$40
Equals: Net Value of Train(s)	\$80	\$110

Liability for social costs, damages doubled

	One Train a Day	Two Trains a Day
Gross Receipts	\$150	\$250
Less: Operating Costs	\$50	\$100
Less: Lost Profits	\$20	\$40
Equals: Net Value of Train(s)	\$80	\$130

The Moral

- Simply making the train operator liable for damages may give rise to the wrong solution.

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- Simply making the train operator liable for damages may give rise to the wrong solution.
- Considering transaction costs, the right solution is to give the railroad the right to operate.

The Traffic Light

- Rule 1: If you go through a red light, you will be fined. That is, you pay a Pigovian tax.

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- Rule 1: If you go through a red light, you will be fined. That is, you pay a Pigovian tax.
- Rule 2: If you go through a red light and hit a car, you are liable. That is, cars have a right not to be hit.

The Traffic Light

- If you come to a red light at 3:00 AM, the correct solution is probably to go through the red light.
- The first rule gives the wrong solution; the second rule gives the right solution.

End

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