



THE ECONOMIC WAY OF THINKING

Thirteenth Edition

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Chapter 10

Externalities and Conflicting Rights

(外部性与冲突的权利)

Learning Objectives (学习目标)

- Define the concept of externality and distinguish between positive and negative externalities. (定义外部性的概念, 区别正外部性和负外部性)
- Distinguish how the problem of negative externalities can be approached through negotiation, adjudication, and legislation. (区分如何通过协商、裁定和立法来解决负外部性问题)
- Investigate policies associated with pollution. (探索与污染相关的政策)
- Explore and apply the concept of market pricing to reduce externalities tied to traffic congestion. (探索并将市场定价的概念用于减少交通拥堵负外部性)
- Explain how transaction costs affect people's ability to effectively limit externalities. (解释交易成本如何影响人们有效减少外部性的能力)

Chapter Outline（大纲）

- Externalities, Negative and Positive（正外部性和负外部性）
- Perfection is Unattainable（完美不可及）
- Negotiation（协商）
- Reducing Externalities Through Adjudication（通过裁定减少外部性）
- The Case of the Complaining Homeowner（抱怨的房主）
- The Importance of Precedents（先例的重要性）
- The Problem of Radical Change（剧烈变化带来的问题）
- Reducing Externalities Through Legislation（通过立法减少外部性）

Chapter Outline（大纲）

- Minimizing Costs（把成本降到最低）
- Another Approach: Taxing Emissions（另一种方法：征收排放税）
- Another Approach: Taxing Emissions
- Licenses to Pollute?（许可污染吗？）
- Efficiency and Fairness（效率与公平）
- The Bubble Concept（泡沫法）
- Rights and the Social Problem of Pollution（权利与污染带来的社会问题）
- Traffic Congestion as an Externality（交通拥堵作为一种外部性）

Externalities, Negative and Positive（正外部性与负外部性）

- **Externalities** are **spillover costs (or benefits)** from an action not considered in decision making（外部性是决策中未考虑的行为所产生的溢出成本（或收益））
 - negative externalities are costs（负外部是成本）
 - positive externalities are benefits（正外部性是收益）
- **Examples**
 - Congestion（交通拥堵）
 - Pollution（污染）

Perfection Is Unattainable（完美不可及）

- Externalities can be **internalized**, when individuals take into account the externality when making a decision（当个人在做出决定时将外部性考虑在内时，外部性就可以被内部化）
- Negative externalities cannot be completely eliminated because of transaction costs.（由于交易费用的缘故，负外部性通常无法完全消除）

Perfection Is Unattainable (完美不可及)

- In modern industrialized societies (在现代工业社会中)
 - civil people ignore minor externalities and cultivate civic virtues (文明人忽视轻微的外部性，培养公民道德)
 - Empathy (共情), Courtesy (礼貌), Humility (谦逊), Tolerance (宽容)

Negotiation（协商）

- **Negotiation** is used to minimize social problems created by negative externalities（协商用于最小化负外部性造成的社会问题）
 - negotiation produces mutual gains from exchange（协商让人们通过交换共同获益）
- Clearly defined property rights provide the basis for negotiation（明确的产权是协商的基础）

Reducing Externalities Through Adjudication（通过裁定减少外部性）

■ Adjudication（裁定）

- a process for **discovering** who has which rights（发现谁拥有哪些权利的过程）
 - Clarifies property rights（澄清产权）
- ## ■ Aims to maintain the continuity of expectations（维持预期的连续性）
- tries to support expectations that are most widely and confidently held（尝试支持人们持有的最广泛、最确信的预期）

The Case of the Complaining Homeowner（抱怨的房主）

■ Scenario

- citizen Regretta Sigh buys a house（市民塞买了房子）
- airport is built nearby creating noise（机场建在附近，噪音很大）
- this is a negative externality（这是负外部性）

- ## ■ Question: Should the owner be compensated for the costs created by the airplanes?（是否应赔偿房主飞机对其造成的成本？）

The Case of the Complaining Homeowner（抱怨的房主）

■ Factors to consider:

- Would compensating one resident require compensating others?
（补偿一名居民需要补偿其他居民吗？）
- Is this heavy cost on airlines and airports justifiable?（对航空公司和机场来说，这么高的成本合理吗？）
- If we correct this one, do we correct all negative externalities?
（如果我们纠正了这个，我们是否要纠正所有的负外部性？）

The Problem of Radical Change（剧烈变化带来的问题）

- Events sometimes forces rapid changes（事情有时会发生剧烈变化）
 - Technology（技术）
 - attitudes to the environment（对环境的态度）
- New rules must be formed if negative externalities rapidly multiply（如果负外部性迅速成倍增加，则必须制定新的规则）

Reducing Externalities Through Legislation（通过立法减少外部性）

- The creation of new rules is **legislation**（新规则的产生就是立法）
- The challenge for legislators is to（立法者面临的挑战是）
 - avoid gross injustices（避免整体不公平）
 - minimize cost of achieving objectives（最小化实现目标的成本）

Minimizing Cost（把成本降到最低）

- Case study: three factories in Arcadia（案例研究：阿卡迪亚的三家工厂）

Table 10-1 Yuck in Arcadia（阿卡迪亚的污染物）

	<i>Units of Yuck Emitted Monthly</i>	<i>Cost of Reducing Emissions, per Unit (\$)</i>
Factory A	15,000	1
Factory B	30,000	2
Factory C	45,000	3

Minimizing Cost（把成本降到最低）

表 10-2 排污达标的方法

不同的减排方案	每个工厂不得超过 15 000	每个工厂都减半	每个工厂减少 15 000	让成本最低的减排
	A: $\$1 \times 0 = \0	A: $\$1 \times 7\,500$ = $\$7\,500$	A: $\$1 \times 15\,000$ = $\$15\,000$	A: $\$1 \times 15\,000$ = $\$15\,000$
	B: $\$2 \times 15\,000$ = $\$30\,000$	B: $\$2 \times 15\,000$ = $\$30\,000$	B: $\$2 \times 15\,000$ = $\$30\,000$	B: $\$2 \times 30\,000$ = $\$60\,000$
	C: $\$3 \times 30\,000$ = $\$90\,000$	C: $\$3 \times 22\,500$ = $\$67\,500$	C: $\$3 \times 15\,000$ = $\$45\,000$	C: $\$3 \times 0 = \0
减排总成本	\$120 000	\$105 000	\$90 000	\$75 000

Minimizing Cost（把成本降到最低）

- Minimizing cost isn't the only consideration when government officials are trying to achieve some objective
（当政府官员试图实现某些目标时，降低成本并不是唯一的考虑因素）
- Fairness is also a criterion for the evaluation of government decisions（公平也是评估政府决策的标准）

Another Approach: Taxing Emissions（另一种方法：征收排放税）

- Suppose the EPA does not know the unit cost of cutting emissions（假设环保局不知道减排的单位成本）
 - it is difficult at times for government agencies to determine unit cost（有时政府机构很难确定单位成本）
 - polluters have an incentive to exaggerate their costs（污染者有动力夸大其成本）

Another Approach: Taxing Emissions（另一种方法：征收排放税）

- To resolve this kind of information scarcity in the least costly manner, the EPA could impose a tax per unit of emissions（为了以最廉价的方式解决这种信息稀缺的问题，环保局可以对每单位排放量征税）
- With the tax, less pollution will occur（有了税收，污染将减少）

Another Approach: Taxing Emissions（另一种方法：征收排放税）

- Suppose the EPA simply required the factories to pay a tax of \$2.01 for each unit of yuck emitted.（假设环保局要求工厂为排放的每单位污染支付2.01美元的税）

主体	征税（即不减排的成本）	权衡	各自的减排成本	选择及相应成本
A	\$2.01	>	\$1	减排：\$1 × 15 000=\$15 000
B	\$2.01	>	\$2	减排：\$2 × 30 000=\$60 000
A 和 B 承担了所有的减排任务，并支付了所有的减排成本：\$75 000				
C	\$2.01	<	\$3	不减排
C 通过缴税补偿社会（compensate the community）以换取排放权，其付出的对于社会来说并非净成本，而只是财富的转移：\$2.01 × 45 000=\$90 450				

Another Approach: Taxing Emissions（另一种方法：征收排放税）

- The task of the government agency is to compare the marginal cost of reducing the emissions with the marginal benefits.（环保局的任务是比较减少排放的边际成本与边际收益）
 - Determine an appropriate tax rate（确定适当的税率）

License to Pollute（污染许可证）

- Pollution tax acquires the label of “Licenses to pollute”
（污染税被贴上了污染许可证的标签）
- Pollution is:
 - a cost（成本）
 - not a crime（不是犯罪）

Efficiency and Fairness（效率与公平）

- Some object to taxes on pollutants because they regard such taxes as **unfair**（有些人反对对污染征税，因为他们认为这种税是不公平的）
 - taxes supposedly place the whole burden of the tax on the poor, while allowing the rich to go on fouling the environment（据称，税收使穷人负担了全部税收，同时又使富人继续对环境造成污染）

Efficiency and Fairness (效率与公平)

- It must be shown that *the efficient solution can be achieved while settling the fairness issue in different ways*. (在以不同方式解决公平问题的同时，可以实现有效的解决方案)
- We don't necessarily commit ourselves to place the costs **on any particular parties** when selecting the most efficient solution. (在选择最有效解决方案时，我们没有必要非得让特定的主体承担成本)

Efficiency and Fairness（效率与公平）

- Pollution reduction is a lot like any other useful activity in that（减排很像其他活动）
 - some are more efficient at it than others.（一些人比其他人更有效率）
- *comparative advantage*（比较优势）

Efficiency and Fairness (效率与公平)

- Suppose the EPA wants to impose the entire pollution cost on Factory C (假设环保局把全部污染成本强加给C)
 - i.e. to reduce emissions into the Arcadian air by 45,000 or pay \$2.01 for every unit by which they fall short of that goal.
 - C will look for a low cost solution (C会寻找低成本的解决方案)
 - C might pay A and B to reduce emissions (C可能会付钱给A和B以减少排放)
- The tax approach is generally superior to physical restrictions (税收方式通常优于具体限制)

Rights and Social Problem of Pollution（权利和污染带来的社会问题）

- Pollution is major social and political concern, and people disagree about rights（污染是重大的社会和政治问题，人们对权利有不同意见）
- The economic way of thinking suggests a few principles of considerable.（经济学思维方式提供了一些重要原则）

Rights and Social Problem of Pollution（权利和污染带来的社会问题）

■ To keep in mind:

- demand for any good is never completely inelastic, including clean air（对任何物品的需求从来都不是完全没有弹性的，包括清洁空气）
- leave people with as much freedom（给予人们尽可能多的自由）
- The importance of stable property rights（产权稳定的重要性）

Traffic Congestion as an Externality（交通拥堵作为一种外部性）

- Traffic congestion is a classic externality（交通拥堵是经典的外部性）
 - We tend only to recognize the cost others create（我们往往只意识到别人造成的成本）
- Can traffic externalities be internalized?（交通外部性能否内部化？）

Traffic Congestion as an Externality（交通拥堵作为一种外部性）

- **Use congestion pricing（使用拥堵定价）**
 - Tolls（通行费，过路费）
- **gasoline taxes（汽油税）**
 - For road construction（道路建设）
 - “not for use”（不是使用道路）

Once Over Lightly（简单回顾）

- Spillover Costs = Externalities（溢出成本=外部性）
- Negotiation used to secure cooperation（协商用于确保合作）
- Transaction Costs prevent negotiations（交易成本阻碍协商）
- Clearly defined property rights ease negotiations（产权明晰有利于协商）
- Some pollution reduction activity is more efficient than others（一些减少污染的活动比其他的更有效）
- Congestion pricing（拥堵定价）