Summing Up Social Dilemmas
Summing Up Social Dilemmas

In Part II we learned about three kinds of social dilemmas—externalities, coordination problems, and commitment problems. Each of these models describes a broad array of social phenomena. Moreover, when any one of them occurs, the right policy intervention could achieve a Pareto improvement. The hope is that having a conceptual understanding of these dilemmas clarifies where there are opportunities for policy to do good.

Importantly, different dilemmas require different types of policy responses. Table 6.1 offers a summary, showing the policy technologies best matched to each social dilemma.

<table>
<thead>
<tr>
<th>Social Dilemma</th>
<th>Types of Intervention</th>
<th>Length of Intervention</th>
</tr>
</thead>
<tbody>
<tr>
<td>Externality</td>
<td>Pigovian tax or subsidy</td>
<td>Long Run</td>
</tr>
<tr>
<td></td>
<td>Regulation</td>
<td></td>
</tr>
<tr>
<td>Coordination Problem</td>
<td>Leadership and Communication</td>
<td>Short Run</td>
</tr>
<tr>
<td></td>
<td>Insurance</td>
<td>Long Run</td>
</tr>
<tr>
<td>Commitment Problem</td>
<td>Enforceable contracts</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Limit discretion</td>
<td>Long Run</td>
</tr>
<tr>
<td></td>
<td>Vertical integration</td>
<td></td>
</tr>
</tbody>
</table>
SOCIAL DILEMMAS AND GOVERNANCE

Each of our social dilemmas also happens within government

Externalities and interest groups

Coordination failure in the bureaucracy

Commitment problems and fiscal policy

Let’s see an example
Outline

Externalities and Interest Groups
A Model of Interest Groups

1 factory owner and 2 citizens invest in lobbying

Each hour of lobbying costs $100

If the citizens do $C$ hours of lobbying and factory owner does $F$ regulator sides with the citizens with probability

$$\frac{C}{C + F}$$

If both do 0 hours of lobbying, 50-50

If citizens win, each benefits 175. If factory owner wins, she benefits 250
Utilitarian Solution

If regulate, net benefits is 350

If don’t regulate, net benefit is 250

Utilitarian solution is regulation
  ▶ Citizens care more, in aggregate, than does the factory owner
Thinking about equilibrium

No citizen will ever lobby more than 1 hour

The factory owner will never lobby more than 2 hours
If factory owner chooses 2 and other citizen chooses 1, best response is 0:

\[ \frac{1}{2} \times 175 - 100 \ < \frac{1}{3} \times 175 \]

If factory owner chooses 2 and other citizen chooses 0, best response is 0:

\[ \frac{1}{3} \times 175 - 100 \ < 0 \]
If factory owner chooses 1 and other citizen chooses 1, best response is 0:

\[
\frac{2}{3} \times 175 - 100 < \frac{1}{2} \times 175
\]

If factory owner chooses 1 and other citizen chooses 0, best response is 0:

\[
\frac{1}{2} \times 175 - 100 < 0
\]
If factory owner chooses 0 and other citizen chooses 1, best response is 0:

\[ 175 > 175 - 100 \]

If factory owner chooses 0 and other citizen chooses 0, best response is 0:

\[ 175 - 100 < \frac{1}{2} \times 175 \]
**EQUILIBRIUM**

Suppose neither citizen invests

Factory owner’s payoff from buying 1 hour of lobbying is

\[ 250 - 100 = 150 \]

Her payoff from not lobbying at all is

\[ \frac{1}{2} \times 250 = 125 \]

In the unique equilibrium, the factory owner invests. the citizens do not, and there is no regulation
The citizens would be better off if they both invested in lobbying

Citizens equilibrium payoff is 0

If they both bought an hour of lobbying, they’d each make

$$\frac{2}{3} \times 175 - 100 > 0$$

They don’t lobby because of a failure to internalize externalities
**Concentrated vs. Diffuse Interests**

Diffuse interests are hampered by internal externalities problems.

This makes it hard to organize in support of even very important issues.

All else equal, concentrated interests (fewer people) are better able to wield political power than diffuse interests (more people).