If the Market Fails Can the Government Succeed?

• A competitive market will produce Pareto optimal outcomes as long as:
  – Informational asymmetry does not destroy the market.
  – There is no monopoly power.
  – Externalities are “internalized.”
• If these conditions are not met, then there seems to be a role for government intervention.
  – While this argument for intervention is necessary, it is not sufficient.
  – If the government also fails, then outcomes may be no better than in an imperfect market.

The Mechanisms of Democratic Government

• There are (at least) two schools of thought:
  – Government, based on the limited information that it has, tries its best to set policies that maximize social welfare.
  – “Public choice school”: The actions of government is the outcome of interplay between competing interest groups, which often do not lead to socially optimal policies.

What Does Social Welfare Mean?

• Everyone has different preferences about what they want the government to do.
• In the market, these divergent preferences are indulged in countless individual decisions about whether to buy or sell.
  – This can lead to a social optimum in a well defined sense.
• In a democratic government, elections aggregate information about the preferences of voters.
  – Can the outcome of elections be said to reflect societal desires? Is there such a thing as an electoral mandate?

Condorcet Voting Cycles

• Example: Suppose there are three people in a society (Smith, Ricardo, and Arrow), and they are voting on three candidates:

<table>
<thead>
<tr>
<th>Candidates</th>
<th>A</th>
<th>B</th>
<th>C</th>
</tr>
</thead>
<tbody>
<tr>
<td>Smith</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>Ricardo</td>
<td>2</td>
<td>3</td>
<td>1</td>
</tr>
<tr>
<td>Arrow</td>
<td>3</td>
<td>1</td>
<td>2</td>
</tr>
</tbody>
</table>

Voting Cycles Example

• Smith and Ricardo prefer A to B
• Smith and Arrow prefer B to C
• If society can be said to have rational preferences, then transitivity must hold, and society must prefer candidate A to C.
• But, Ricardo and Arrow prefer C to A.
• Voting in this case produces irrational societal preferences.

Criteria for a Social Welfare Function (I)

• The social welfare function should satisfy a few simple axioms.
  – Unlimited domain of preferences: The final social ranking should not restrict people with strange or weird preferences from consideration
  – Transitivity: If the social welfare function ranks outcome A > B, and it ranks outcome B > C, it should rank A > C.
  – No Dictatorship: That one person prefers A > B should not automatically imply that society prefers A > B, regardless of what anyone else thinks.
### Criteria for a Social Welfare Function (II)

- **More criteria:**
  - **Completeness.** The social welfare function should rank all possible outcomes.
  - **Independence of Irrelevant Alternatives.** If \( A > B \) when \( C \) is not available, then \( A > B \) when \( C \) is available.
  - **Relevance of Individual Preferences.** If everyone prefers \( A > B \), then society prefers \( A > B \)

### Arrow’s Impossibility Theorem

- No social welfare function exists that meets all of these criteria!
- Social orderings (such as those produced by voting) must in some sense be either irrational or dictatorial.
- What does this say about claims that the outcomes of elections produce “mandates”? What does this say about divining the “will of the people”?