

# Optimal Voting Rules

The Optimal voting rule model is a very simple model of what sort of voting rules should be adopted  
It models voting rules on a scale of few decision makers to many decision makers  
So on the far left axis, one decision maker, on the far right, unanimous rule

We can thus rank order various decision making groups:

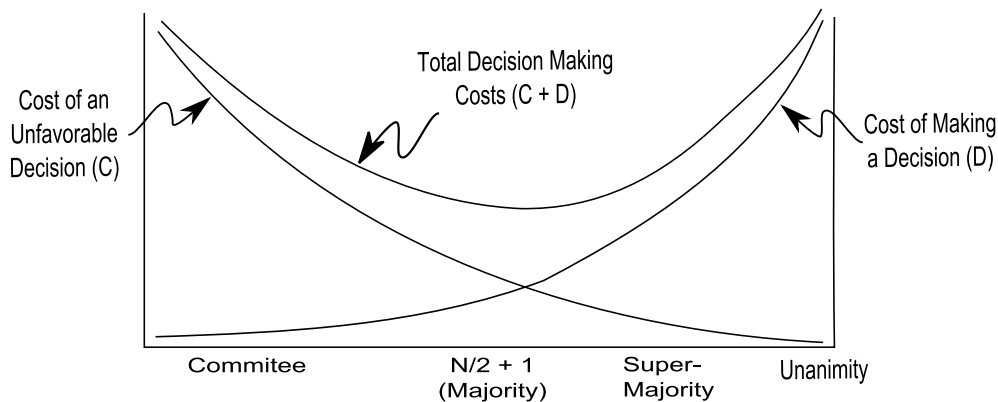
- Dictators
- Committees
- Majority Rule
- Super-Majorities
- Unanimous Rule

There are costs associated with decision making are two-fold

There is the cost of decisions that are unfavorable to you (C in the graph below)  
These are the costs when somebody makes a decision that negatively effects you  
The likelihood of this goes up, the few the number of people making a decision  
Very high costs, if only one dictator is making the decision  
As it takes more people to make a decision  
The likelihood, and thus costs, of unfavorable decisions go down  
In the extreme – unanimity, no decision you don't like can happen

There is also the cost of actually making the decision, regardless of whether you approve of it or not  
These costs go up as more people are necessary to make the decision  
Note: for private goods, the costs are simply your own information costs  
For collective decisions, as more people are involved, higher transaction costs  
Plus the holdout problem, strategic voting, crazy people  
And the difficulty of strict Pareto Superiority for large N  
Conversely, a dictator can make decisions quickly

The sum of the two decisions, is the total cost of decision making  
Note, it slopes downwards for some distance, then slopes upwards again  
As drawn in this graph... it does not have to.



Above is a sample of the graph for a typical liberal democracy  
The optimal voting rule is somewhere close to majority rule  
In democracies, you often see majority rule, sometimes supermajorities. Why?

## Majority Rule, and Super Majorities

Empirically, we see different voting rules for different circumstances

**Dictatorship** has been a dominant form of rule for much of history

Often times, dictatorships did have elements of consensual rule

At least within a smaller ruling class or clique

See North, or Olsen

Even in Democracies, dictatorship is still used for some sorts of decision

When time is short, for example – such as crises, wars, battles

U.S. Army Sergeants – “the army is here to defend democracy, not to practice it”

Generalship by committee/democracy – few examples of it actually working

The Peloponnesian wars, Cannae, the 10,000

**Committee** is often used when information costs are high

Bureaucracies run on committees – experts at making the decision

Even though the appointing body has ultimate authority, committees control the agenda

Technocracy – rule by disinterested experts, or “technocrats”

The Modern EU?

**Majority Rule** is widely seen

So widely seen, that Buchanan/Tullock theorized that it must have unique properties

In any voting rule requiring less than majority rule (such as committee or plurality)

A larger plurality can outvote it.

Thus, the decision is not final, and the losers will keep fighting it

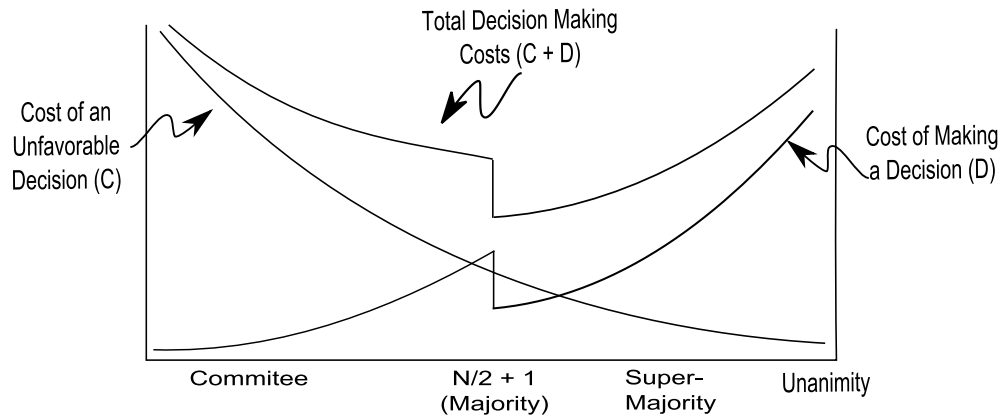
But once you have a majority vote, no larger coalition can exist

Thus, our cost curve D is kinked, as is C+D

This is why we see majority rule so often

Additionally or alternatively, majority rule is popular because it is “fair”

People accept votes they disagree with, so long as the process is fair



In the above, majority rule is our optimal vote rule, it minimizes C+D

While the kink implies majority rule, it does not have to be the case

It is possible for C+D to decline after the kink,

If C is declining faster than D is rising

In that case, our optimal rule is a super-majority

**Super-majority** voting

A super-majority rule is when a group larger than a majority must approve

Often, the rights of a minority must be protected, the “tyranny of the majority”

Examples: Changing constitutions, foreign treaties, condo associations

Super-majorities create stability, since many must agree to change things

Often, a status quo stability leads to better decisions

Stability for decision making.

Think the Coase Theorem – if the property right is wrong, you can contract around it

So long as the property rights are set, and unchanging

But if they can change regularly, everybody fights about them

And nothing gets done

**Unanimity** (unanimous vote)

Everybody must agree. In large groups, a practical impossibility

due to hold outs, transaction costs and extreme preferences (grandpa Simpson)

Often used in small groups – where do we go to dinner?

Also used when the stakes are very important, and we can take time on the vote

Jury decisions

Often used when exit is an option, since this leads to homogenous groups

(see the theory of the club later)

Under what conditions do we prefer what voting rule?

Assuming a contract state, when is majority rule preferable, when is a super-majority/unanimity preferable? This is a very difficult question to answer. In general, we can look at the voting issue along several dimensions, to see which would logically seem most appropriate.

See Table pg 105 for more discussion. (amend notes for next semester here).