

## **I. The Forest from the Trees**

The purpose of this chapter is to provide an overview and recapitulation of the main points developed during the course. This is a useful addition to the course because students have a tendency to remember the course as a collection of “things” that have to be memorized rather than ideas and results that should be internalized into a coherent perspective on public policy from the perspective of methodological individualism.

Developing the “forest” has been the main goal of the course, but it has to be done “one tree at a time” or one step at a time. Thus, the forest created may have been missed by students who focused on the individual trees (ideas, principles, logic, graphs, etc.) developed in the individual lectures and chapters of the webnotes. (Your final papers are an attempt to get you to see the forest created—the over-arching themes of the course and how the various pieces fit together into a unified whole.)

### **A. What is Methodological Individualism?**

Methodological individualism is the perspective on social phenomena are the results of individual decisions. Which is to say, social phenomena such as markets are usually best understood as the—often unanticipated and unnoticed—outcomes of independent individual decision making by dozens, thousands, or millions of individuals. To understand those outcomes, methodological individualism directs one’s attention to the factors that motivate the individuals whose choices generate the outcome(s) of interest.

This perspective treats individuals not as passive members of a tribe but as purposeful individuals who make independent decisions that generally advance their purposes—as they themselves understand them.

This course has focused on economic and political phenomena and so focused its attention on the types of decisions that generate the economic and political outcomes that result from millions of independent choices that jointly determine those outcomes. These included both the effects of taxes and subsidies on markets and the political decisions that indirectly generated the tax systems that we analyzed in the first part of the course.

**B. What is rational choice? And how rational are individuals?**

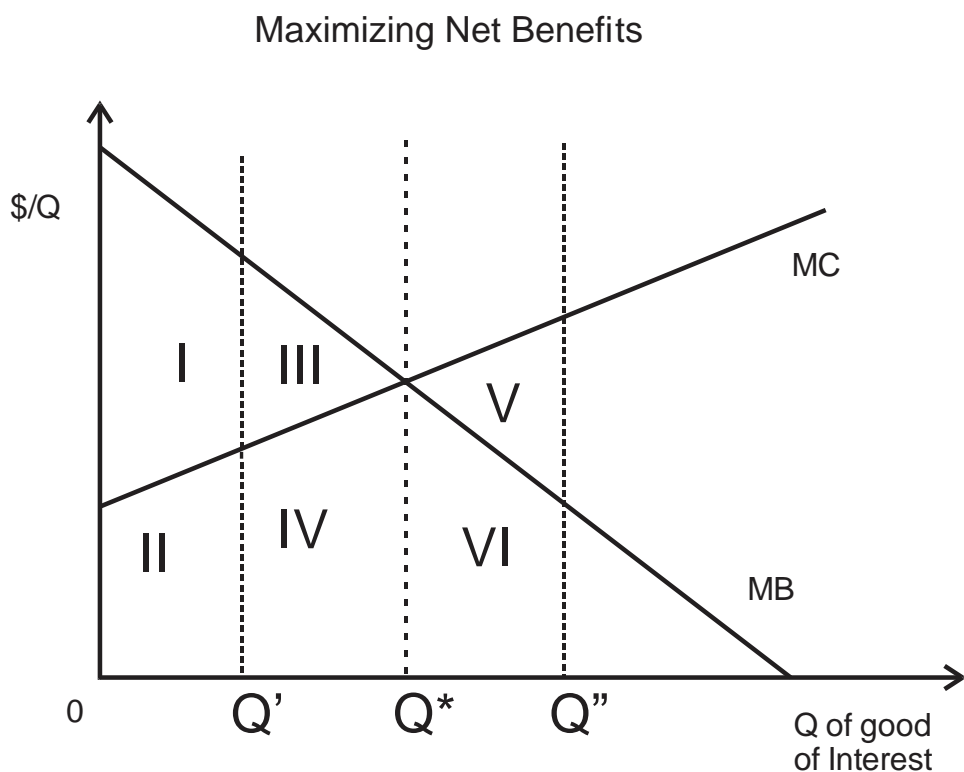
There are a number of ways that one can undertake the study of social phenomena from the perspective of methodological individualism. One could, for example, interview thousands of individuals and use their answers to understand why they made the decisions and took the actions that they did. One might also simply observe the individual behavior of millions of people and attempt to deduce the factors that caused them to behave as they did.

Instead, the approach used in this course and most of economics is deductive and based on a few premises about human behavior. It assumes that whatever purposes people have, they are smart enough and informed enough to make decisions that systematically advance those purposes. This is not to say that they are brilliant and super informed, and thus, make no mistakes or never give into impulses that divert them from pursuing their long- or medium-term interests. It simply assumes that people are “self conscious,” and so know how to determine the steps that advances their interests in the medium and long run. Those steps tend on average to have the consequences that they anticipated (on average)—whether this be reducing hunger, getting some rest, training up for a long career in a particular field, or refining their ideas about a good society or good life.

To systematically advance one’s purposes requires a form of rationality—namely optimizing behavior—that can be characterized graphically and/or with other mathematical tools such as calculus. For about 80-90 percent of this course, we have relied upon the “net-benefit” maximizing characterization of the optimizing behavior. When choosing how much of a given product to purchase in a grocery store or which political candidate to favor in an election, we assumed that individual’s attempt to maximize their net benefits.

We also made one or two reasonable assumptions about how those benefits increase as the quantity of a good or activity level increases—that all goods and activities are subject to diminishing marginal returns (at least “at the margin,” for the last units chosen). Thus, the marginal benefit curves (and marginal utility curves) for all goods and activities tend to be downward sloping.

This allowed us to characterize decisions with respect to both market activities and the selection of public policies using relatively simple diagrams—albeit diagrams that became more elaborate and sophisticated as the course went on.



For example, we used the above diagram of a net-benefit maximizing choice to characterize an individual's purchase of goods and services. Similar diagrams were used to characterize a firm's profit-maximizing output and a voter's ideal public policy (vector). Such diagrams characterize the kinds of choices that a purposeful (net-benefit maximizing) individual would adopt. If he or she is free to choose,  $Q^*$  will be chosen. Any quantity larger than  $Q^*$  or less than  $Q^*$  will generate smaller net benefits. However, if  $Q^*$  for some reason is not an option, then individuals will choose from among the quantities that are possible the one that generates the highest net benefits for him- or herself—as he or she perceives them.

The latter cases were, for example, common in choices among political candidates and public policies, because an individual's ideal candidate or policy may not be on the

ballot. An individual may have a very narrow sense of the benefits of his or her choices, or a broader one that takes into account various norms that he or she has internalized. Teachers, for example, may vote for increases in educational budget because they are likely to increase teacher salaries or because they expect the quality of education in their towns, states, or nations to improve.

Such “rational” choices are said to be “self-interested” even in cases in which ethical ideas are used, at least in part, to determine the net benefits of interest. Self-interests are not always the same as one’s biological or pragmatic interests—although sometimes they are.

In many cases, the relevant choice attempts to pursue quite narrow interests (quench a thirst, relieve hunger, or to “just enjoy” whatever activity is being undertaken), but other choices may include consideration of ideas about fairness, proper sourcing, social net benefits, etc. etc. As long as choices are purposeful, they can be regarded as “rational” in the sense used in this course. Indeed, even some choices made “without thinking” can be rational in the sense that they are internally consistent.

Thus, economists, game theorists, and other users of rational choice models in other social sciences and biology use the term “rational” in a somewhat broader sense than the word is usually used in English. It simply means generally consistent, purposeful, behavior.

We used the net-benefit maximizing model of “rational” decisionmaking throughout the course. It provided the underlying logic and models for about 80-90% of our conclusions about the effects of public policies on economic outcomes, the interests that voters have in public policies, the way the voters vote, and the outcomes of elections. Every social outcome—markets, elections, policy choices, etc.—was characterized as purposeful choices (rational choices) in the choice setting of interest.

In the normative parts of the course, we used a normative theory (maximize social net benefits) grounded in the same logic and set of geometric models. A “good” policy either increased social net benefit or maximized them. Other ideas of “goodness” are of course possible, but this is the normative theory that is most widely used by economists, and so was the one stressed in the course.

## II. Implications of the Net Benefit Maximizing Model about the Effects of Public Policies

We first used the net-benefit maximizing model to characterize the effects of public policy on the private economies, focusing most of our attention on the effects of taxes and subsidies of various kinds.

### A. The Effects of Taxes and Subsidies on Market Outcomes

After a review of the key features of net-benefit maximizing choice, we used that “model” to develop theories of market supply and demand. We then assumed that markets prices tend to converge to levels that set demand equal to supply—e.g. market clearing prices—which allowed those models to be used as an explanation of market-level prices and outputs. The logical foundations of demand and supply allowed us to represent aggregate consumer surplus and aggregate profits as areas under sections of the demand and supply curves (generally from 0 to  $Q^*$ , the quantity produced and sold).

This model of markets and prices, in turn, was modified to take account of targeted taxes (excise taxes) and subsidies on individual markets. The analysis built on our model of supply and demand. Since taxes or subsidies do not affect the marginal benefits of the thing subsidized (the source of demand curves) nor do they affect production costs (the source of supply curves), neither demand nor supply curves “shift” as a result of direct taxes or subsidies.

Instead, direct taxes and subsidies create a “tax wedge” between the prices paid by consumers and that received by firms (net of taxes or subsidies). Thus rather than finding a single price that clears markets, we needed to find a pair of prices (one for consumers and one for firms) separated by the amount of the tax or subsidy per unit that would clear the market—e.g. set market prices equal to demand.

It also turned out that competitive markets (in the absence of externalities) tend to maximize the gains from trade and the aggregate social benefits from each product.,

We were then able to use the “area” tools used in net benefit models to determine the effects of taxes and subsidies on profits, consumer surplus, and either tax revenues generated or subsidy expenditures made. We found that the distribution of tax burden is not determined by who “writes the check” to the tax authorities, but by the slopes of the supply and demand curves. It is these that determine who actually “pays” the tax in terms of losses in net benefits associated with them (ignoring other net benefits that might be generated by spending the taxes raised). For example, although merchants write the checks that pay the sales taxes owed to the state tax agencies, it is their customers that bear most of the burden of taxes collected on products sold in national or international markets. In other cases, the tax burden may be more equally shared or shifted entirely to merchants. How they are distributed is a matter of supply and demand—not tax law per se.

In most cases it turned out that the burden of taxation (lost profits and consumer surplus, e.g. reduced social surplus) was greater than the revenue generated by a direct tax. And, in most cases, it turned out that the subsidy expenditures were greater than the net benefits created (new profits and consumer surplus). Both taxes and subsidies could thus be said to have excess burdens or to create dead weight losses.

Similar losses would be associated with regulations that do not address externality problems or monopoly power, although we did not analyze such policies in class.

## **B. Externality and Public Goods Problems**

We next used a combination of the net-benefit maximizing model of human decision making and the social net benefit maximizing normative theory to identify two cases in which competitive markets do not usually generate outcomes that maximize social net benefits.

To reach that conclusion we generally assumed that individuals do not take full account of the effects of their behavior on others. In such cases there may be spillover benefits or costs that are borne by persons in the economy that are not consequences of active decisionmaking.

Such spillovers create problems—from a normative perspective--when the outputs or activity levels that emerge from consumer choices and competition among firms for consumer purchases **do not** maximize social net benefits.

(Such “problems” reflect a particular normative perspective and do not necessarily exist under all other norms that an individual might employ. On the other hand, most ethical systems do discourage causing negative externalities—e.g. harming others. So, negative externalities—although not usually by that name—or often considered problems from other ethical perspectives as well.)

Given the existence of externality problems, we considered methods that our rational choice models imply would tend to reduce the problem (e.g. increase social net benefits). A variety of solutions were possible including (i) do nothing because the externality problems are smaller than the cost of addressing them, (ii) Coasian contracts (negotiations between the affected parties), (iii) forming a club or other organization to internalize the externality, (iv) Pigovian taxation or subsidization, (v) having government take over the production of public goods (and financing them with Samuelsonian or Lindahl taxes).

Both the problems and their possible solutions were all implications of the net-benefit maximizing model that we employed throughout the course. As long as people engage in purposeful behavior, that model can be used to characterize individual choices, market outcomes, voting behavior, and the potential for increasing social net benefits through various public policies.

### **III. Public Policies that We Observe**

Next, the course analyzed the types of policies that we actually observe, rather than the ones that might increase social net benefits. Policies do not come from Mars, they are products of human decision making—although in this case one’s made via various political institutions rather than through market transactions. For the most part, we focused on policies that are generated via competitive elections, rather than in autocracies or through rent-seeking activities, although similar models could have been developed to analyze the results of rent-seeking or the interests of authoritarian rulers.

It turned out that the net-benefit maximizing model could be used to shed light on the public policy choices in a democracy. This required analyzing voter interests, how those interests affect the incentives of candidates for high offices, and the outcomes that tend to emerge under majority rule voting.

### **A. The Median Voter Model**

It turned out that the “median voter” is pivotal under majority rule. He or she always votes with the majority in a two-candidate election or two-issue referendum—and in many other cases where multiple candidates and issues are decided through elections using somewhat more complex voting rules such as single transferable voting. Under many voting systems, it turns out that there tends to be convergence toward the median voter’s ideal candidate or policy.

The latter allowed us to use the median voter model to approximate the kinds of policies that tend to emerge from democracies, when elections are competitive, and voting and vote counts are honestly undertaken.

Using that model, we were able to see that in many cases, majority rule tends to promote policies that reduce externality and public goods problems, without necessarily maximizing social net benefits.

We also were able to show how tax systems affect patterns of voting by changing the “price” of government services faced by various groups of voters. Thus, fiscal systems affect voting, while at the same time voting affect tax systems.

Economic and political systems are interdependent. Thus one cannot fully understand either of those systems without understanding the other—and their many interdependencies.

### **B. Fiscal Federalism**

We also extended the net-benefit maximizing model and the median voter model to examine how differences in government institutions (mainly the extent of decentralization) affect public policies.



Decentralized systems of government have many levels of policy making authority. Within democratic forms of federalism, policy makers are elected by different electorates (national, state, county, city, town, school district, etc.) These different electorates produce different median voters except in cases in which voter preferences (net benefits) do not vary at all by region. Since, voter preferences do tend to vary by region, the public policies that emerge at different levels of government and among governments at the same level tend to vary, because each regional government has its own median voter.

Thus, one of the consequences of decentralization is that public policies among states, cities, and counties tend to vary systematically. This simply follows from the median voter model, which followed from the net benefit maximizing model when applied to elections.

In addition, we noted that competition for residents and tax base occurs within federal systems among governments at the same level (e.g. states, or cities, or towns). When that competition is intense and people are very mobile—as in the Tiebout model—individuals “vote with their feet” as well as with ballots on election day. In such cases, both competitive pressures and electoral pressures tend to induce governments to be efficient (least cost) providers of services. Differences in the services provided and taxes used to finance those services tend to generate “sorting” or “stratification” among towns, or among cities, or among states, or even nation states. People migrate to places offering the best package of public services and taxes that they are aware of and away from places offering the worst fiscal packages.

In this and other ways, fiscal federalism can increase social net benefits. However, at the central government level, the “pork barrel politics” associated with fiscal federalism may generate losses, because each lower level of government will favor subsidies for projects that only or mainly benefit a locality’s own residents. That “fiscal commons problem” can be moderate to some degree through cost-benefit analysis.

Again the analysis was grounded in the net-benefit maximizing characterization of purposeful behavior. We did not always focus on individuals, per se, but all the demand and supply curves that we used were derived from our model of individual decision making.

As long as individuals are “rational” in the sense assumed (purposeful, consistent choices), the implications of our model will be found in the real world as well as in the models. It should be admitted that the models do not explain everything (fiscal illusion and ignorance are possibilities, as is rent seeking), but the models almost always provide a reliable point of departure for additional analysis of special circumstances and interests that are not fully represented in the models.

#### **IV. Conclusion**

We covered other topics as well. We covered a bit of fiscal history in the West, noting trends in the size of government, in taxation, and looming fiscal problems with deficits and rising healthcare costs. We also occasionally used the utility maximizing model of optimizing choice to explore a few points of interest with respect to optimal taxation and the effects of conditional subsidies. Nonetheless, the main theme of the course was that the net benefit maximizing model can be used to understand a wide range of both economic and political phenomena.

One does not have to give up on the individual to understand large scale social phenomena. They are not simply cogs in some great social machine. Rather, the best way to understand large scale social phenomena is to start with individuals and to understand their interests, the incentives they face, and how their choice settings (markets, politics, or combinations of the two) affect their choices and thereby produce the large-scale social phenomena that we are trying to understand (markets and public policies).

That is the forest that we’ve developed and explored in this course—one tree at a time until this lecture.

(Anyone that has taken the time to read this overview will, I hope, take a few minutes to answer the student evaluation survey questions (SEIs) for this course. It will only take a few minutes. This seems to be the [link](#) you'll need.)