**Chapter 3**

**First-Best and Second-Best Analysis and the Political Economy of Public Sector Economics**

1. First best analysis: government has a sufficient set of policy tools to reach the bliss point on the utility possibilities frontier.

a. Requires lump-sum taxes and transfers with sufficient distributional bite to reach the bliss point—unlikely

b. Advantages of first best analysis-Two dichotomies

1). Pareto-optimal conditions and interpersonal equity conditions dichotomize.

2). breakdown of a technical or market condition for efficiency for a good/factor can be corrected without affecting the form of the pareto optimal conditions for other goods/factors or the interpersonal equity conditions; permits focus on issues in isolation to gain intuition about them;

2. Second-best analysis—government does not have sufficient policy tools to achieve the bliss point on the utility possibilities frontier; eg., taxes and transfers not lump sum, introduce inefficiencies

a. The set of attainable utilities is constrained and may not include points on the utility possibilities frontier

b. Government chooses the point on the restricted frontier that maximizes social welfare

[Reproduce figure 3.2]

c. Common constraints in public sector analysis that add to the fundamental constraints of production technologies and market clearance to make the analysis second-best

1). Distorting taxes and transfers

2). Fixed budget constraints

3). Drafting resources of giving them away

4). Maintained monopoly or market power

5). Asymmetric or private information

3. Further implications of second-best analysis

a. Scope of government intervention becomes broad

1). Lipsey-Lancaster Theorem of the Second-best: if one of the conditions for a first-best optimum cannot hold, then in general none of the others should hold as well

2). Optimal conditions difficult to interpret since they are typically a mixture of social welfare and MRS/MRT terms

3). There cannot be one second-best theory of anything because adding a new constraint or changing the nature of an existing constraint changes the optimal conditions.

4). One similarity with first-best analysis: for simplicity, most analysis assumes perfect competition with utility maximizing consumers and profit maximizing firms, and government purchases and sales are at competitive prices

4. The political economy of the social welfare function

a. Reasonable limits of the social welfare function

1). Utilitarian/Benthamite--maximize aggregate happiness or satisfaction

[Reproduce equation 3.1 and Figure 3.3]

a). Honors impersonality principle: , all h

b). Indifference to the distribution

2). Rawlsian

a). View distribution behind a veil of ignorance

b). Assume most extreme risk aversion—maximin: maximize the utility of the worst off individual

c). Min function

[reproduce equation 3.2 and Figure 3.4]

d). Most egalitarian social welfare function

3). Usual assumption is diminishing marginal rate of substitution along

social welfare indifference curves

b. A flexible-form social welfare function to be used in policy analysis

[reproduce equation 3.3, including limits on V]

1). V is society’s aversion to inequality, with V=1 the utilitarian social welfare function, V=- inf (put in the inf symbol) the Rawlsian social welfare function

c. Arrow’s impossibility theorem—viewed voting over public policies as an exercise in cooperative game theory and asked what principles democratic voting ought to exhibit

1). Arrows five axioms

a. universality of individual preferences

b. a complete ordering of social preferences

c. honor the pareto principle

d. independence of irrelevant alternatives

e. non-dictatorship

2). Not all axioms can hold simultaneously

a). If a through d hold, then someone is a dictator

b). I a, c, d, and e hold, then not a complete ordering of social preferences.

3). Consider preferences of two people over three items X, Y, Z. All the possible preferences of person 2 over the three goods if person one says XPYPZ

[reproduce the six XYZ columns on p 88)

4). Consider possibilities of cycling with the following preferences of three people for splitting $100 in accordance with their self interest

[reproduce the $50, $20, $30 box on p. 91 and the person 1, 2, and 3 preferences right below it]

a). Individual preferences have to be single-peaked to avoid inconsistent social preferences

[Reproduce Figure 3.6]

d. Gibbard-Satterthwaite theorem—democratic voting rules subject to manipulation by self-serving individuals

1). Gibbard-Satterthwaite’s four axioms

a). universality

b). non-degeneracy

c). non-manipulability

D). non-dictatorship

[reproduce the X, Y, Z columns on the middle of p. 93]

e. Reactions to Arrow’s impossibility theorem

1). technocratic-just ask the politicians in power what their social welfare function is and then advise them how to maximize it

2). Adopt a flexible form social welfare function in policy analysis to judge sensitivity of policy prescriptions to the degree of society’s aversion to inequality—the primary mainstream view

3). Public choice –indifferent—does not recognize a social welfare function--distribution policies can be understood as arising from desires of self-serving individuals to maximize their own utilities