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## **Public Choice: an overview**

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Public Choice begins with the observation that in politics, as in economics, individuals and institutions compete for scarce resources and that, therefore, the same methods of analyses used by economists to explain the behaviour of consumers and producers might also serve well to explain the behaviour of governments and other (allegedly) “public-spirited” organisations . As Tullock (1988) succinctly put it, Public Choice is "the invasion of politics by economics". Public Choice derives its rationale from the fact that, in many areas, 'political' and 'economic' considerations interact so that a proper understanding of issues in one field requires a complementary understanding of issues in the other. Although the incursion of the analytical methods of economics into political science - which is the hall-mark of Public Choice - began in the 1950s, it was not until at least three decades later that the trickle became a flood. This chapter provides an overview of this field.

Keywords: Public Choice, Political Business Cycle, Median Voter

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## **1. Introduction**

Public Choice begins with the observation that in politics, as in economics, individuals and institutions compete for scarce resources and that, therefore, the same methods of analyses used by economists to explain the behaviour of consumers and producers might also serve well to explain the behaviour of governments and other (allegedly) “public-spirited” organisations . As Tullock (1988) succinctly put it, Public Choice is "the invasion of politics by economics". Public Choice derives its rationale from the fact that, in many areas, 'political' and 'economic' considerations interact so that a proper understanding of issues in one field requires a complementary understanding of issues in the other. Although the incursion of the analytical methods of economics into political science - which is the hall-mark of Public Choice - began in the 1950s, it was not until at least three decades later that the trickle became a flood.

Much of economic activity is carried out in a market environment where the protagonists are households, on the one hand, and firms, on the other. Both sides, according to the rules of economic analysis, have clear objectives: households want to consume in quantities that will maximise their utility and firms want to produce in quantities that will maximise their profits. The market allows households to reveal their preferences to firms and for firms to meet these preferences in such a way that the separate decisions of millions of economic agents, acting independently of one another, are reconciled.

However, a significant part of economic activity involves the state<sup>1</sup> and is, therefore, carried out in a non-market environment. One reason for the existence of such non-market activities is the existence of 'public goods' or goods supplied by government to its citizens. Of course, the scope of non-market activity depends on the country being considered: in Sweden, a range of services - provision of child-care facilities, health, education - are provided by government; in the USA these services are provided by the market.

Another reason for government involvement in the economy is due to the fact that markets do not always operate efficiently. When they do not, because of 'market imperfections' leading to 'market failure', governments have to step in to correct such inefficiencies. These interventions may take the form of corrective taxes and subsidies and/or it may take the form of regulation and directives. At the macroeconomic level, governments are responsible for stabilising, and promoting, its performance with respect to a number of economic variables: unemployment, inflation, the exchange rate, national income etc..

But, a third, and important, reason for governmental actions and policies is *self-interest*. At its most basic level, the problem that democratically elected governments face is of acting in a manner consistent with what its citizens desire. People express their political demands through their votes; if there is a mismatch between the demand for, and supply of, outcomes then the political market will take 'corrective action' analogous to the corrective action that economic markets take when the demand for, and supply of, goods and services is not in harmony. As Tullock (1976) observed, "voters and customers are essentially the same people. Mr. Smith buys and votes; he is the same man in the supermarket and in the voting booth". In the case of the economic market, corrective action takes the form of price changes; in the political market, corrective action takes the form of government changes, effected by voting out one party (or coalition of parties) from power and voting in another. Consequently, an important perspective that Public Choice offers is that public policies are formulated and implemented partly for the social benefits they might yield but, partly also, for the benefits they might bring to the policy-making bodies themselves.

It was dissatisfaction with the inability and failure of traditional approaches to the analysis of public policy methods to address basic issues in political economy that led to the emergence of the new discipline of 'public choice'. These basic issues were *inter alia*: what factors influence votes? what is the 'best' system of voting for ensuring a correct revelation of preferences? can the actions of individuals be made

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<sup>1</sup> Between one-third to one-half of GDP in most countries of the OECD is generated through the

more effective when they act collectively? what is the role of re-election concerns in determining the supply of government output? is there the possibility of conflict between different departments of government? The new discipline of public choice explicitly addressed these issues and its analysis of these issues was explicitly predicated on the assumption that the behaviour of individuals and of public institutions was motivated by self-interest.

In so doing, public choice theory forcefully reminds political scientists of the view held by Kautilya, Machiavelli and Hobbes that many, ostensibly public-spirited, policies may be motivated by self-interest; with similar force it reminds economists of the unreality of basing analysis of public policy on the assumption that the state is a 'benevolent dictator' acting so as to do 'the greatest good for the greatest number'. More generally, the arrival of public choice signalled a shift from a 'normative' to a 'positive' analysis of the political process: the subject matter of public choice was what political actors *actually* do, not what they *should* do.

The intellectual foundations of public choice theory lie in five seminal texts: Arrow (1951); Downs (1957); and Olson (1965); Tullock (1967); and Nordhaus (1975). Each of these is discussed below.

## **2. Voting Procedures**

A major contribution of public choice theory has been to expand our knowledge and understanding of voting procedures. The voting problem is one of selecting, on the basis of the declared preferences of the electorate, one out of an available set of options. Stated in this manner, the voting problem is akin to the problem of social choice where individual preferences are in order to arrive at a notion of 'social welfare'.

For example, every individual in society may rank different 'projects' according to the net benefits that they expect to obtain. The problem is that such a ranking by individuals may not lead to a social ranking, that is to a ranking to which all individuals in society would subscribe. For example with three individuals (A, B and

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activities of government.

C) and three projects (X, Y and Z) suppose the rankings are as given in the table below:

**Table 1: Cyclical Social Preference under Pair-wise Voting**

<i>Preference Ordering</i>	<i>A</i>	<i>B</i>	<i>C</i>
First Choice	X	Z	Y
Second Choice	Y	X	Z
Third Choice	Z	Y	X

Then in a sequence of pair-wise comparisons: X versus Y, Y wins since both A and B prefer X to Y; Y versus Z, Y wins, since both A and C prefer Y to Z; X versus Z, Z wins since both B and C prefer Z to X. The implied social ordering is that X is preferred to Y; Y is preferred to Z; but Z is preferred to X! The cyclical nature of social preferences arises from the fact that the social ordering is not transitive or, in the language of electoral studies, there is no *Condorcet winner*. Indeed, the problem of social choice is not unlike that of voting behaviour: in both cases the issue is one of translating individual preferences into an agenda for collective action that faithfully represents these preferences. This was a point noted by Black (1948).

***The Impossibility Theorem: Arrow(1951)***

More generally, the possibility of intransitivity in social rankings – of the sort described above – is not necessarily the result of obtaining such rankings from pair-wise majority rule voting; intransitivity can occur from the application of any rule for creating social rankings which satisfies certain minimal properties. This was demonstrated by Arrow (1951), in his celebrated ‘Impossibility Theorem’, when he showed that any social rule which satisfied a minimal set of fairness conditions could produce an intransitive ranking when two or more persons had to choose from three or more projects.

These conditions were the axioms of: *unrestricted domain* (individuals had transitive preferences over all the policy alternatives); *Pareto choice* (if one project made someone better off than another project, without making anyone worse off, then it would be the socially preferred choice); *independence* (the ranking of two choices should not depend on what the other choices were); *non-dictatorship* (the social ordering should not be imposed).

Arrow's result rendered all democratic rules of collective action suspect - the idea that the state could act in terms of a well-defined social interest by aggregating over individual preferences (Bergson, 1938) was now rendered invalid. The work of Black (1948) and Arrow (1951) work also drew attention to the potentially unstable nature of majority coalitions. Although the problem of cyclical voting had been known of since Condorcet (see below), Black's and Arrow's work brought out its relevance to political science. Variations and extensions of Arrow's (1951) result have taken the form of investigating whether the theorem would continue to be true when one or the other of these axioms was weakened. One line of investigation that has been extensively followed is to relax the requirement that social choice must be based on social *ordering* (complete, reflexive and transitive). Another has been to restrict individual preferences to 'single-peaked' preferences<sup>2</sup>: Arrow showed that if individual preferences are single-peaked and the number of voters is odd, then majority decision will yield transitive social preference<sup>3</sup>.

### ***The Social Welfare Function***

One property that may be dropped from Arrow's list of desirable properties (see footnote) is the requirement that the social preferences between two alternatives depends *only* on the individual ranking of these alternatives. Define for individual  $i$ , the utility associated with alternative  $X$  as  $U_i(X)$  and define the social welfare associated with  $X$  as:  $W(X) = W(U_1(X) \dots U_N(X))$ . The 'aggregating function'  $W(X)$  is called a *social welfare function (SWF)*. Using the SWF, the socially optimal point for an economy may be identified as that point on an economy's utility possibility frontier which yields the highest level of social welfare (Figure 1, below).

A particular form of the social welfare function is *additive*:  $W(X) = \sum_{i=1}^N U_i(X)$ . This is sometimes referred to as a *utilitarian SWF*<sup>4</sup>. When the SWF is additive,  $X$  is socially preferred to  $Y$  if:

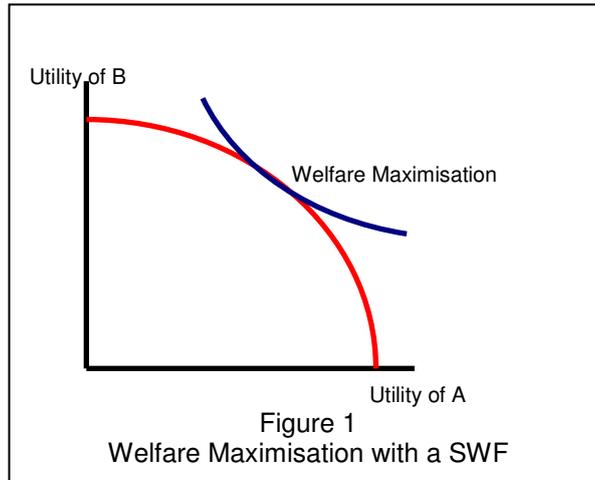
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<sup>2</sup> So that the alternatives are arranged in a line so that everyone's intensity of preference has only one peak.

<sup>3</sup> This result earlier discussed in Black (1948) cements the relationship between voting theory and social choice theory.

<sup>4</sup> A generalisation of this form is the weighted sum-of-utilities:  $W(X) = \sum \alpha_i U_i(X)$

$$W(X) > W(Y) \text{ or } \sum_i^N U_i(X) > \sum_i^N U_i(Y) \quad (1)$$



### *Inequality and Social Welfare*

In both industrialised and developing countries, the making of public policy is underpinned by tension between the conflicting demands of income growth and income equality. This tension has been greatly exacerbated by globalisation and the policies of ‘economic liberalisation’ that have followed in its wake. A consequence of liberalisation has been a growth in inequality: between individuals, through a higher relative return to education and skills that are in international demand; between urban and rural locations as job opportunities gravitate towards big cities; between regions, as some states successfully climb the globalisation bandwagon (Andhra Pradesh; Karnataka) and others do not (Assam; Bihar; Orissa). It is important, therefore, to understand how the competing demands of growth and distribution affect social welfare.

Suppose there are  $N$  persons (indexed,  $i=1 \dots N$ ) such that that  $y_i$  represents the income of person  $i$  and that  $U(y_i)$  represents the utility associated with his income. Assume that:  $U'(y_i) > 0$  and  $U''(y_i) < 0$  so that the utility functions are concave functions of income (that is, exhibit strictly diminishing marginal utility). Now suppose that social welfare is additive in the individual utilities:

$$W = \sum_{i=1}^N U(y_i) \quad (2)$$

Let  $\mathbf{x}=\{x_i\}$  and  $\mathbf{z}=\{z_i\}$  be two income vectors such that the *Lorenz curve* for  $\mathbf{x}$  lies entirely inside the *Lorenz curve* for  $\mathbf{z}$ . This means that, on the basis of Lorenz-based inequality measures<sup>5</sup>, the distribution associated with  $\mathbf{z}$  is more unequal than that associated with  $\mathbf{x}$ .

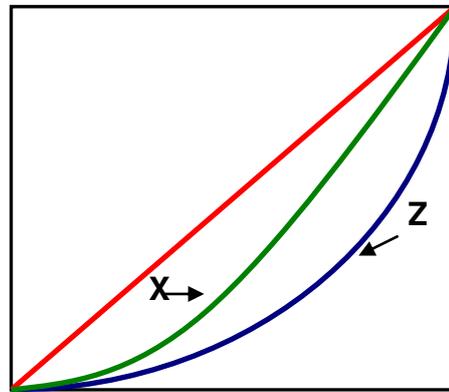


Figure 2: Lorenz-Dominance

Then, by Atkinson’s (1970) theorem on Lorenz ranking,  $W(\mathbf{x}) > W(\mathbf{z})$ . In other words, if one distribution was “more equal” than another, then there would be a higher level of social welfare associated with that distribution; conversely, if for two distributions,  $\mathbf{x}$  and  $\mathbf{z}$ ,  $W(\mathbf{x}) > W(\mathbf{z})$ , then  $\mathbf{x}$  Lorenz-dominates  $\mathbf{z}$  (that is, the Lorenz curve for  $\mathbf{x}$  lies entirely inside the Lorenz curve for  $\mathbf{z}$ : Figure 2).

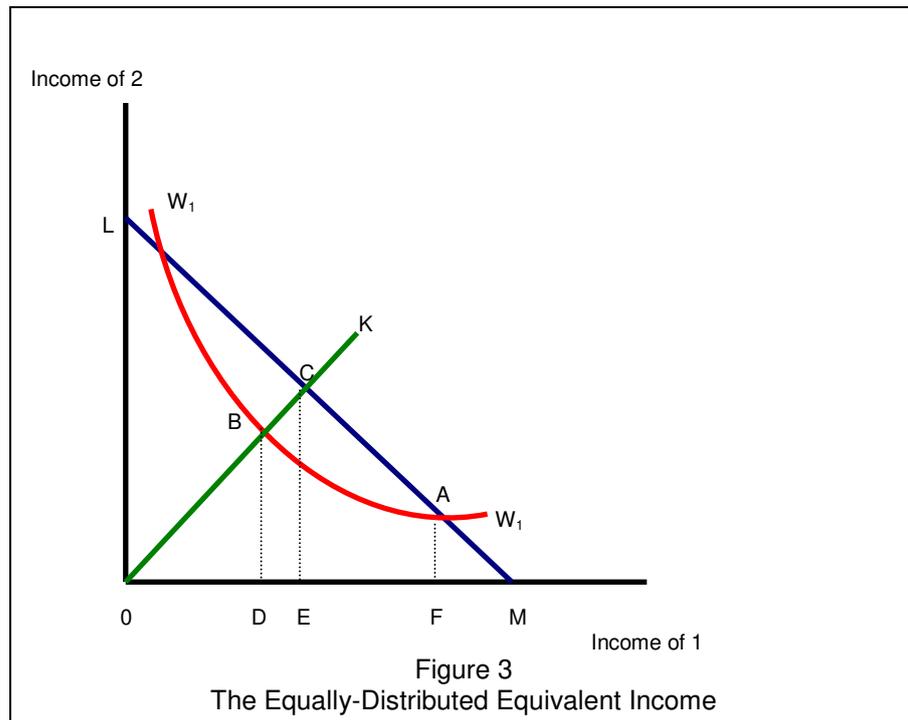
Let  $I(\mathbf{y})$  be an inequality index, defined over the vector of incomes  $\mathbf{y}$ , which takes values between 0 and 1, and which has the property of *mean-independence*. This last property means that the value of the inequality index is unchanged if all incomes are scaled up (or down) by the same factor. Then if  $\mu(\mathbf{y})$  is mean income, the welfare function  $W$  of equation (2) may be written as (Sen, 1998):

$$W = \mu(1 - I) \tag{3}$$

Equation (3) implies that in evaluating social welfare the contribution of the size of the pie ( $\mu$ ) needs to be adjusted downwards by the inequality in its distribution ( $I$ ). It follows that social welfare could be higher with a lower, than with a higher, mean income, provided that the lower income was sufficiently more equally distributed than the higher income.

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<sup>5</sup> For example, the Gini coefficient



These ideas are illustrated in Figure 3, above. The line LM shows the various distributions between 1 and 2 for a given level of income OE. At the point C on LM, both persons get the same income. If the actual distribution is at point A, then the social welfare associated with this is  $W_1$ . A lower level of income, OB which is equally distributed between 1 and 2 yields the same level of welfare as the higher level OE distributed according to A. Atkinson (1970) termed OB ( $<OE$ ) as the “equally distributed equivalent income”: *it is the income which, if equally distributed, would be welfare-equivalent to a higher income, distributed unequally.*

The above view of the welfare-reducing effects of inequality raises two questions. First, by how much should welfare be reduced in the face of inequality? Second, is there a link between average income and the degree of inequality in its distribution such that more equality means less income?

Atkinson (1970) showed that the answer to the first question depended on society’s “aversion to inequality”: the same distribution of income would generate different values of the inequality index,  $I$ , in equation (57), depending upon ones aversion to inequality. If society had a high degree of tolerance towards inequality (for example,

the USA), the value of the inequality index, and hence the reduction in welfare, would be small; on the other hand, if society was intolerant of inequality (for example, Sweden) the value of the inequality index, and hence the reduction in welfare, would be large.

On the second question, Browning and Johnson (1984) argued that reducing income inequality was not a costless process because the appropriate policies for effecting this reduction produced a misallocation of resources: using a micro dataset for the US, they showed that the marginal cost of reducing inequality could be quite high. Borooah (2002) showed, in the context of a theoretical model, that the equity gains that followed from Fair Employment regulation (or, as in India, from job reservations) needed to be offset against the efficiency losses to which such regulation gave rise.

### *Desirable Voting Systems*

The relevance of the work of Black (1948) and of Arrow (1951) to the voting problem lay in attempting to identify: (a) the desirable conditions that any voting system should satisfy and (b) a voting system that satisfied these conditions. May (1952) showed that when there were only two alternatives, majority voting was unambiguously the best. The problem was to extend this result when there were more than two alternatives. In such situations, different voting systems could be constructed, all of which seemed fair and reasonable - and all of which, in the event of two alternatives, yielded majority rule - but, which nevertheless yielded different outcomes.

One possible system is plurality ('first-past-the-post') in which each voter votes for exactly one option and the option receiving the largest number of votes wins. One problem with this system is that it is based on an incomplete revelation of preferences: there is no requirement for a voter to rank the options for which he (she) did not vote. As Table 2 shows, on the basis of votes cast by 60 voters, A wins by plurality, yet A would lose against B alone (25 to 35) and against C alone (23 to 37).

**Table 2: Plurality Voting**

	<i>23 voters</i>	<i>19 voters</i>	<i>16 voters</i>	<i>2 voters</i>
1 <sup>st</sup> preference	A	B	C	C
2 <sup>nd</sup> preference	C	C	B	A
3 <sup>rd</sup> preference	B	A	A	B

This then points to a second defect of plurality voting which is the fact that it is subject to agenda manipulation and that the presence, or absence, of options - even if those options cannot win - can affect the outcome. In the Table 2, if either B or C was “persuaded” not to stand, the other would win.

The alternative is for each voter to rank the alternatives in order of preference (as in Table 2 above) and then the appropriate electoral rule would aggregate these individual rankings into an overall ranking. Such a procedure is termed an 'ordinal procedure'. One possible electoral rule, based on an ordinal procedure, is the *Borda count*: in the presence of N options, assign N points to the option ranked first, N-1 points to the option ranked second and finally one point to the option ranked last. A Borda count applied to the data in Table 2 sees C a comfortable winner with 138 points, A coming second with 105 points and B finishing last with 91 points. The Borda count method, however, is also susceptible to false revelation of preferences: voters, irrespective of their true preferences, would be inclined to give the lowest preference vote to the candidate they thought was most threatening to their preferred candidates electoral prospects (Miller, 1987).

Both plurality and ordinal procedures may be multistage procedures - so that the chosen option only emerges after successive rounds of voting - by combining either of them with the possibility of elimination. Thus, plurality plus run-off eliminates all but the two strongest candidates in the earlier rounds leaving a simple run-off between the two candidates for the final round. An alternative is to eliminate in each round the weakest candidate and to choose a candidate after N-1 rounds of voting. Although both these voting procedures - and variants thereof - are reasonable they don't necessarily lead to the same outcome. For example, in Table 3, taken from Miller (1987): C wins under plurality; A, with 50 points, wins under a Borda count; and B

wins against C either under plurality with run-off or with successive elimination of the weakest candidate.

**Table 3: Multi-Stage Voting**

	4 voters	4 voters	2 voters	9 voters
1 <sup>st</sup> preference	A	B	B	C
2 <sup>nd</sup> preference	B	A	D	D
3 <sup>rd</sup> preference	D	D	A	A
4 <sup>th</sup> preference	C	C	C	B

The way out, as proposed by Condorcet in 1785, was to have a pair-wise comparison of alternatives, choosing, at each comparison, the alternative with greater support. An alternative that wins over all the others is then selected the preferred option and is termed the *Condorcet winner*. Thus, in Table 2, the Condorcet winner C beats A, 37-23 and beats B, 41-19. However, as Table 1 showed, and as Table 4 shows, a Condorcet winner need not exist: in Table 3 demonstrates the phenomenon of 'cyclical voting' - also termed the 'paradox of voting' - whereby A beats B (33-27); B beats C (42-18); and C beats A (35-25).

**Table 4: The Paradox of Voting**

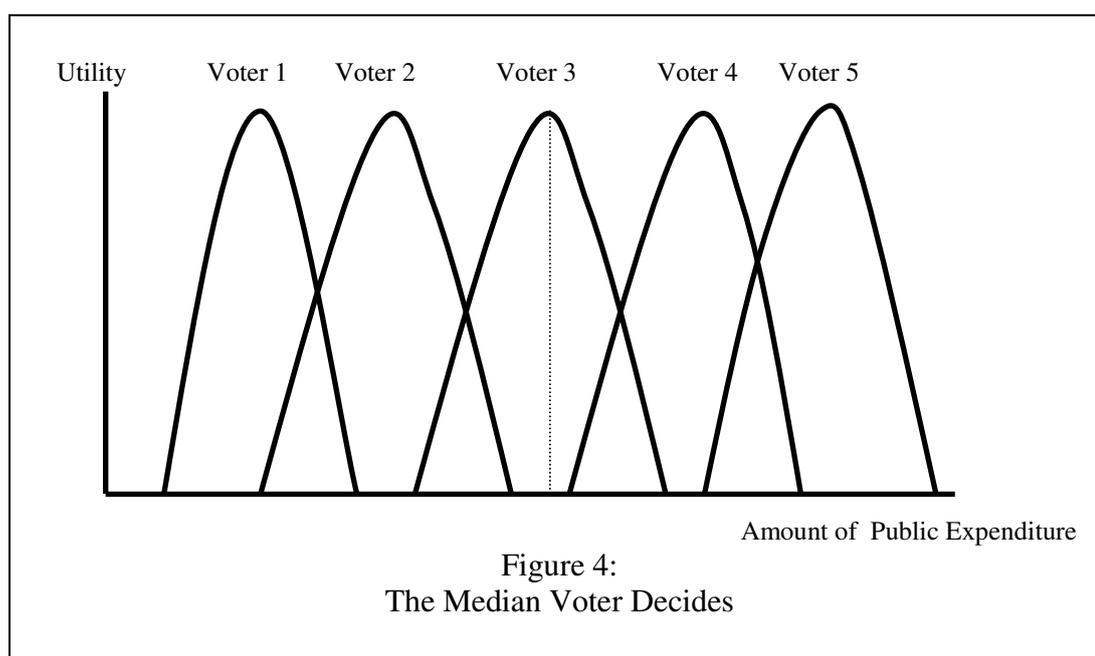
	23 voters	17 voters	2 voters	10 voters	8 voters
1 <sup>st</sup> preference	A	B	B	C	C
2 <sup>nd</sup> preference	B	C	A	A	B
3 <sup>rd</sup> preference	C	A	C	B	A

***Single- and Multi-Peaked Preferences***

The question, therefore, is whether it is possible to specify conditions under which cyclical voting will not occur. This was addressed by Black (1948 and 1952) using the concept of 'single-peaked' preferences. Suppose that the set of alternatives can be represented in one dimension - for example, choice between different levels of public expenditure - and suppose that for each voter there is a preferred level of expenditure - which may be different for different voters - such that preferences drop

monotonically for levels on either side of this optimum. In such a case (see Figure 4) voter preferences are said to be *single-peaked*. This means that the greater the distance of the actual position from the unique utility maximising position, the lower the level of utility.

Under single-peaked preferences, the median voter decides in the sense that the preferred choice of the median voter is the Condorcet winner. This result is illustrated in Figure 4 (taken from Mueller, 2003) in which there are five voters – voters 1 to 5 – each with single-peaked preferences. In a pair-wise contest, the preferred choice of the median voter, Voter 3, will beat the preferred choice of all other voters.

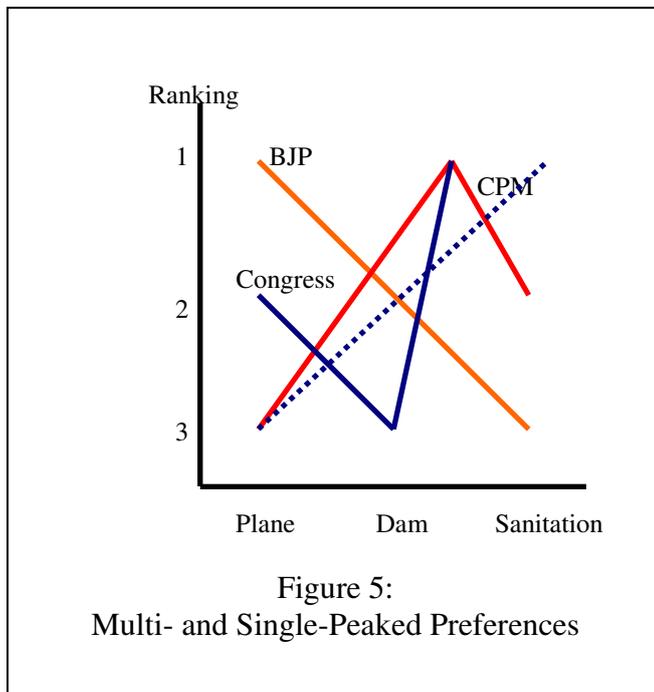


However, when the options before the voters concern the *type* of expenditure, rather than the *amount* of expenditure, multiple peaked expenditures cannot be ruled out. For example (see Connolly and Munro, 1999), suppose three parties are trying to decide on the best way of spending Rs. 100 crore. The options are: buy some fighter planes for the Air Force; spend it on a dam; embark on a major programme of improved sanitation. The three parties – BJP, Congress, CPM – set out their preferences as follows:

**Table 5: Multi-Peaked Preferences**

Party→ Ranking↓	BJP	CPM	Congres
1	Fighter Plane	Dam	Sanitation
2	Dam	Sanitation	Fighter Plane
3	Sanitation	Fighter Plane	Dam

Now the Congress Party exhibits multi-peaked preferences, while both the BJP and the CPM have single-peaked preferences (see Figure 5). The consequence of multi-peaked preferences is that in binary comparisons: plane beats dam (BJP + Congress against CPM); dam beats sanitation (BJP + CPM against sanitation); but sanitation beats plane (Congress + CPM versus BJP). A very important lesson from multi-peaked preferences is that the outcome depends very much on the *order* in which the options are voted for. So, if the first vote was dam versus sanitation, the dam would win; if the next vote was between plane versus dam, the plane would win and Rs. 100 crores would be spent on the plane. However, if the first vote was plane versus sanitation, sanitation would win; if the next vote was sanitation versus the dam, again the dam would win and Rs. 100crore would be spent on the dam. So astute chairmanship of meetings is important to ensure the “desired” outcome!



However, if instead of Table 5, preferences were represented by Table 6, then the preferences of the Congress party would also be single-peaked: this is illustrated by the dotted line in Figure 5. Under single-peaked preferences: the dam is preferred to sanitation (BJP + CPM versus Congress); sanitation is preferred to the plane (CPM + Congress versus the BJP); and the dam is preferred to the plane (CPM + Congress versus the BJP). Preferences are, therefore, transitive.

**Table 6: Single-Peaked Preferences**

<i>Party</i> → <i>Ranking</i> ↓	<i>BJP</i>	<i>CPM</i>	<i>Congres</i>
1	Fighter Plane	Dam	Sanitation
2	Dam	Sanitation	Dam
3	Sanitation	Fighter Plane	Fighter Plane

The notion of single-peaked preferences has a certain plausibility in terms of single-issue politics. Although the notion of a single-peak can be extended to multidimensional issues, the results are far more complex and will not be reported here.

### 3. How Voters Decide

Downs' (1957) book is regarded as "one of the cornerstones of contemporary rational actor theory" (Monroe, 1991) and, not coincidentally, the theory of voting contained within it accords most closely with standard economic theory. The fundamental hypothesis of Downs (1957, p. 28) was that "parties formulate policies in order to win elections, rather than win elections to formulate policies". As Mueller (2003) notes, his study was the first to explore systematically the implications of this assumption and the literature has evolved around the foundations that he laid. In a Downsian world, each voter was rational in the sense that he (she) voted for the party that was believed to offer him (her) the greatest benefits. Party manifestos were an important way by which voters evaluated these benefits and consequently, for Downs, such manifestos were a means of winning elections.

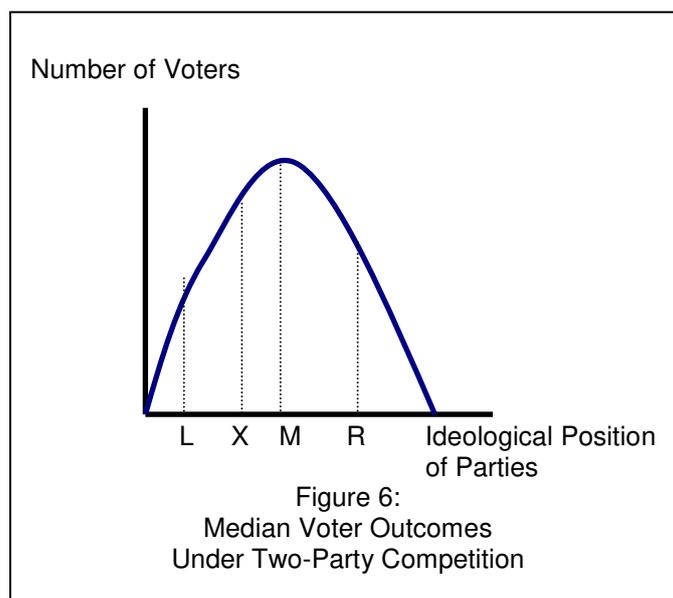
But because collecting information on parties was expensive, no voter would attempt a comprehensive evaluation. Instead, each voter would confine his (her) evaluation to those areas where party differences, in the voter's view, were significantly large. In

summary, therefore, Downs made a seminal contribution towards understanding the nature of party competition, rational ignorance and spatial voting.

### ***The Median Voter Theorem***

A stylised fact that is often cited in discussions of electoral outcomes is that electoral competition between parties engenders centrist policies. This stylised fact is due to an important result first discovered by Hotelling (1929) and enshrined as the *Median Voter Theorem*. Hotelling showed that if there were two *identical* ice-cream sellers on a beach and that if customers were spread *uniformly* along the beach, the seller closet to the centre of the beach would get the most business since he would be closest to the largest number of customers. Since both sellers would realise this, they would locate themselves, side by side, in the middle of the beach. Hotelling's result can be applied as a spatial theory of electoral competition in which political parties seek to locate themselves at a point where they maximise the custom of voters who are strung out along an ideological spectrum.

If there are a large number of voters, each of whom distils the complexity of issues facing them into a personal ideological position (extreme left; left; centrist; right; extreme right), then the Median Voter Theorem can be used to predict outcomes in a two-party democracy (Hotelling, 1929; Downs, 1957).



Suppose that voters are distributed along the spectrum of ideological positions from 'left' to 'right' as shown in Figure 6. Then, if the initial party positions are L and R, R wins: R obtains votes from those to the right of R as well as votes from those between X and R, where X is the mid-point between L and R; L receives votes from voters to its left as well as the votes of those between L and X. As things stand, R wins the majority of votes and is elected. However, L can increase its vote, by adopting a less 'extreme' left-wing position and moving closer to the centre of the ideological spectrum. The same option is available to R: it too can gain votes by adopting a less 'extreme' right-wing position. Inter-party competition will then ensure that each party will occupy the 'middle ground' that is adopt the ideological position of the median voter. Under the conditions of the median voter model, democracy favours moderate parties and penalises parties which adopt extreme positions.

#### **4. Interest Groups and Collective Action**

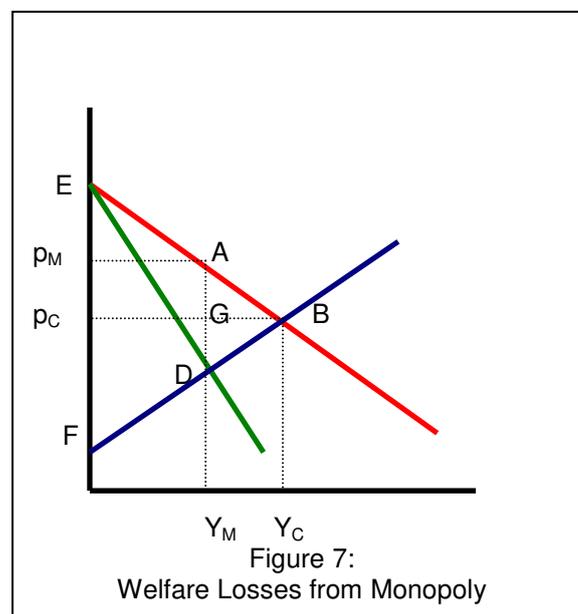
One way that people can reveal their preferences is by voting; another way is by associating with like-minded persons to form 'interest groups'. Some of these groups seek to advance the objectives of their members: for example, professional associations (doctors; dentists); caste associations (All-India Kurmi Association); business associations (Chamber of Commerce); and trade unions fall into this category. Others seek to influence public policy or outcomes, with respect to a specific agenda, by lobbying government for favourable treatment: for example, Medha Patkar and the *Narmada Bachao Andolan*.

The problem about collective action is that it does not follow from the fact that a group of people have a common interest that they will form an interest group and bear the cost of collective action. Olson (1965) pointed out that collective action is vitiated by the 'free rider' problem of public economics: an economically rational person would not participate in (and share the costs of) an interest group because he (she) cannot be excluded from any benefits that may accrue from the activities of the group. Consequently, a great deal of potential collective action will not, in fact, materialise. This view - emphasising as it did the primacy of the individual - flew in the face of those in political science who regarded organised groups as the basic units in politics.

Olson (*op. cit.*) argued that two conditions were required for collective action to occur. First, the number of persons acting collectively should be relatively small so that if one person decided to 'free ride', the group would be rendered ineffective and no benefits would accrue. Second, the group should have access to 'selective incentives' by which it could penalise those who have not, and reward those who have, borne the cost of collective action. Trade union 'closed shop' arrangements, by which only members can get jobs, is one example of selective incentives. Selective incentives are less often available to potential entrants and to low-income groups. Thus it is the employed, rather than the unemployed that are organised, and it is the professional groups - doctors, teachers, lawyers - that are better organised than unskilled occupations. For this reason, Olson (1982) observed that, in the main, collective action would be anti-egalitarian and pro-establishment. Olson's work elevated the "free rider" problem to a central position in political science. In Mueller's (2003) view, "the free rider problem pervades all of collective choice".

## 5. Collective Action and Rent-Seeking

One of the reasons that collective action would be retrogressive is that it would lead to 'rent-seeking'. Tullock (1967) was the first to analyse rent seeking. It is a well known proposition in economics that monopoly price will be higher (and output lower) than price (and output) under competitive conditions. This enables a monopolist to earn 'rent', equivalent to the loss in consumers' surplus from not producing the competitive output at the competitive price. The amount of this rent is the area of the triangle ABD in Figure 7, below.



The lines EB (and its extension) and ED (and its extension) in Figure 7, above, represent, respectively, the *average* and the *marginal* revenue curves of the monopolist, while the line FB (and its extension) represents the monopolist's marginal cost curve. The equilibrium price-output combination of the monopolist is given by the equality of marginal revenue and marginal cost and is  $p_M$  (price) and  $Y_M$  (output): this is the price-output combination that maximises monopoly profits. On the other hand, the competitive price-output combination is given by the equality of marginal cost and average revenue:  $p_C$  (price) and  $Y_C$  (output).

The loss in *consumers' surplus* in moving from competition to monopoly is  $p_M AB p_C = p_M AG p_C + AGD$ . On the other hand, the gain in *producer's surplus*, in moving from competition to monopoly, is  $F p_M AD - p_C BD = p_M AG p_C - DGB$ . So, the *net loss to society* due to monopoly is  $(p_M AG p_C + AGD) - (p_M AG p_C - DGB) = AGD + DGB = ABD$ . The area of the triangle ABD – whose area measures the net loss from monopoly – is known as the *deadweight loss* from monopoly (Harberger, 1954).

If a producer could persuade government (politicians, bureaucrats) to establish a monopoly in an industry by raising barriers to entry (requiring new entrants to obtain permission from the government to set up in that industry) then he would benefit since, as we have seen, producer's surplus is greater under monopoly than under competition. Under a *licence raj*, society transfers resources equal to the area of the triangle ABD from consumers to the monopolist. This is the *rent* accruing to the producer from being the sole producer in that industry; he would not receive this if he was operating in a competitive framework in which he was but one of many producers.

In order to obtain this rent, the monopolist would be prepared to invest an amount just about equal to the amount of the rent. Suppose the monopolist calculates that this rent is Rs. 1 crore. Then he is prepared to spend up to Rs. 1 crore in persuading policy makers (through ways which need not be spelled out in detail here) to establish a monopoly in the industry. Hence the true cost of monopoly is not just the loss in

consumers' surplus but also the total resources invested in 'rent-seeking activities'. Such rent-seeking activities may take the form of airline cartels lobbying for a monopoly over a particular route; less obviously, it may also take the form of a trade union lobbying a firm for 'single union' recognition. More broadly one can say that when rents are to be earned, business and government no longer keep their distance from each other but, instead, cosy up to each other to their mutual benefit.

In general, one can categorise three types of expenditure (Buchanan, 1980) associated with rent-seeking: (i) expenditure undertaken to secure a monopoly; (ii) the efforts of public officials to react to such expenditure; and (iii) third party distortions caused by the rent-seeking activity. For example, in a country with exchange controls, commodities may only be imported with an import licence. Businesses may lobby government to be granted such licences and the prospect of earning monopoly rents (as businessmen) or of benefiting from the largesse of businessmen (as bureaucrats) may dictate the careers of young persons. For example, a person considering a business career may prefer one area of business over another simply because it offers the prospect of monopoly rents; at the same time, a person considering a career as a civil servant may prefer one branch of the service to another simply because the prospects of benefiting from the 'generosity' of businessmen are greater.

The above analysis raises the question: what is wrong with rent seeking activities? The answer is that many rent seeking activities produce profit with producing output. Such activities have been described by Bhagwati (1982) as 'directly unproductive profit-seeking activities'. The consequence of contemporary interest in rent-seeking is that a great deal of government activity is regarded with suspicion by conservative economists: the feeling is much of public sector activity is concerned with providing rents to special interest groups and for that, if for no other, reason, small government is good government.

## **6. The Political Business Cycle**

A key proposition in public choice is that is that economic activity tends to revolve around election dates, with governments seeking favourable outcomes just before an election and postponing unfavourable till just after an election. The phenomenon to

which this gives rise is known as the political business cycle and, since Nordhaus' (1975) seminal work in formalising and clarifying the nature of these cycles, this has been one of the most researched areas in political economy.

Nordhaus (*op. cit.*) focused on the short-run trade-off between inflation and unemployment. In his model, the electorate was only concerned about inflation and unemployment and rewarded, or punished, its government according as to whether it performed well, or badly, on these two fronts. But, given the existence of the trade-off, it was impossible for a government to do well with respect to both inflation and unemployment. Under these circumstances, Nordhaus (*op. cit.*) showed that there would be a political business cycle of the following form: immediately after an election, the government raises the unemployment rate and reduces the inflation rate - this depresses inflationary expectations and moves the Phillips curve<sup>6</sup> closer to the origin; closer to the election expansionary policies lower the unemployment rate and raise the inflation rate but - and this is the crucial point - since the government has 'invested' by bringing the Phillips curve closer to the origin, the inflation rate rises, but not by much. The government then fights the election on the basis of both a low unemployment and a low inflation rate.

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<sup>6</sup> The Phillips curve, due to Phillips (1954), shows a negative relation between inflation and unemployment. The position of the curve depends upon the level of inflationary expectations - lower expectations move the curve in closer to the origin.

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