Welfare Economics and Public Choice

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Welfare economics provides the basis for judging the achievements of markets and policy makers in allocating resources. Its most powerful conceptual tool is the utility possibility frontier. This defines the set of utility allocations that can be achieved in a society subject to the constraints of tastes and technologies. Any allocation on the frontier cannot be Pareto dominated and hence would satisfy a rather minimal condition for it to be socially desirable.

Distributional judgements about points on the Pareto frontier are typically embodied in a social welfare function. The social choice literature, beginning with Arrow (1951), has demonstrated the difficulties of *deriving* such a function from citizens' underlying preferences over social alternatives without making interpersonal comparisons of utility. By postulating a social welfare function for pedagogical purposes, the analyst is implicitly assuming that interpersonal comparisons of utility can be made and has adopted a position on how society should weigh such comparisons (Sen (1977)).

The analysis of competitive markets culminated in the fundamental theorems of welfare economics which elucidated the (restrictive) conditions under which resource allocation by markets would achieve Pareto efficiency. The first fundamental theorem says that all perfectly competitive equilibria with complete markets (to deal with externalities and uncertainty) are Pareto efficient. The second fundamental theorem says that any Pareto efficient allocation might be decentralized by suitable choice of lump-sum transfers.

Modern welfare economics builds on this by putting incentive constraints at centre stage. Among the seminal contributions are Mirrlees (1971) and Hammond (1979). This analysis dispenses with the assumption that lump-sum transfers are feasible because of the incentive problems that they create. The appropriate benchmark for government is second best Pareto efficiency, taking into account appropriate restrictions on policy instruments. A whole tradition of policy analysis in this vein has been developed (see, for example, Atkinson and Stiglitz (1980)).

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Welfare economic approaches to the policy process have been criticized by those operating in the public choice tradition, for failing to consider how actual policy choices are made. Thus, even if we were able to understand what optimal policies are, there is no guarantee that the kinds of decision making institutions that we observe in reality will bring them about. The *public choice critique of welfare economics* says that, by failing to model government, it provides a misleading view of the appropriate role for government. (See Buchanan (1970) for a forceful plea for a level playing field.)

To see the logic of the critique, consider the argument that the government should intervene to fix a market failure, say by introducing a Pigouvian tax. Then, the welfare economist will select the tax, and other policy instruments, to maximize some social welfare objective. There is no reason at all to expect the political process to yield this outcome. Even if the tax is chosen to be second best Pareto efficient, the distributional outcome selected by the political process need not match that of the "social planner". While this may suggest that a public choice approach has to be more conservative, this is only true when equilibrium effects on other policy instruments are ignored. As argued in Besley and Coate (2002), it is possible for these other policy instruments to be changed in a welfare improving direction.

Many models in the public choice literature lead to efficient policies which fail to maximize social welfare. A good example is the Leviathan approach of Brennan and Buchanan (1980). In this case politicians extract resources for themselves at the expense of voters. Proponents of probabilistic voting models have sometimes suggested that particular social welfare functions are maximized in political equilibrium. (See Coughlin (1992) for a discussion.) However, they rest on strong assumptions and it appears unlikely that technological assumptions are at the heart of the distributional conflict implicit in political competition.

Some economists use the benchmark of social surplus to judge political outcomes. However, this is conceptually problematic and is even (misleadingly) labeled as an efficiency criterion. The notion of surplus is only defined under restrictive assumptions about preferences. Moreover, the criterion really only makes if (i) there are lump-sum transfers and (ii) social preferences weight a dollar in every citizen's hands equally. This would be fine if both the political process and the planner were able to use lump-sum transfers. However, even then, the exact allocation of transfers would enter the calculus of whether the intervention is

justified unless (ii) also holds. But the latter is only one particular distributional preference and not an efficiency criterion.

Policies chosen by the political process may fail to be efficient using second-best efficiency as a benchmark. Besley and Coate (1998) define a welfare economic definition of *political failure* in this way. To motivate this, consider the textbook analysis of market efficiency. First, the set of efficient allocations is characterized (graphically, the utility possibility frontier). This is a purely technological notion of efficiency, since the frontier depends only on the tastes and technologies of the economy. The second step requires a model, such as that developed by Arrow-Debreu, to specify how markets allocate resources. The idea of market failure, then comes from observing that, under certain conditions, markets do not result in allocations that are on the frontier. The term "failure" is justified by the observation that, in principle, all citizens could be made better off. A parallel notion of political failure arises when resources used to determine policy fail to produce a selection from the second-best Pareto frontier so that, in principle, all citizens can be made better off.

This welfare economic notion of political failure should be contrasted with the standard approach to political failure rooted in the work of Wicksell. He argued that government intervention is legitimate only if government dominates a status quo point where government is absent. Then a political failure is defined when government fails to select a Pareto dominant point.

The welfare economic approach and Wicksellian approach are distinct. To see this, consider the comparison between the outcome attained from a political process to a policy vector x_0 which is the outcome that would prevail with no government intervention. A *Wicksellian political failure* is now defined as a situation in which the political process selects a policy outcome which does not Pareto dominate x_0. Let A denote the utility allocation associated with x_0. By fixing market failures, we suppose that (in-line with the welfare economic approach) the government can, in principle, shift out the Pareto frontier. Let x_0 be the new policy vector and consider possible utility outcomes associated with it. Point B which is on a higher Pareto frontier and hence is (second best) efficient. However, this point is not a Pareto improvement over point A. Hence, if chosen by government, it would constitute a Wicksellian political failure. However, it would not be a political failure according to the definition above as it is on the Pareto frontier and there is no scope for improving government

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efficiency. Now consider point *C*. According to the Wicksellian definition, it is not a political failure as it a Pareto improvement relative to *A*. However, the definition based on second-best Pareto efficiency would regard it as a political failure. It is possible to make all citizens better off beginning from this point.

(Figure 1 about here)

Wicksell's definition of political failure embodies an important distributional judgement which outlaws any pure redistribution of resources around point *A* except in so far as this is justified on citizens' underlying preferences for redistribution. A government can intervene efficiently in the welfare economic sense and yet still create a political failure. Moreover, the scope for political failure on this definition is vast, depending on the status quo point x_0 being posited.

Are there good reasons to believe that governments chose inefficient policies using second best Pareto efficiency as the criterion? In answering this, it is essential that the same set of instruments that a welfare economist would allow the government to use should be available in the political process. Claims about the inefficiency of outcomes associated with the median voter often miss this point. Consider the claim that the median voter fails to provide public goods efficiently. While it is true that, in general, the Lindahl-Samuelson rule does not yield the same outcome as the median voter rule, this has nothing to do with political inefficiency. The Lindahl-Samuelson rule requires that lump-sum transfer are feasible while the median voter model usually works with a more restrictive tax system. The former achieves first best efficiency while the latter a very constrained form of second best efficiency.

Why then does this kind of claim persist? The difficulty lies in the need to make sufficient restrictions on the model of political resource allocation to get an equilibrium to exist. These often exclude the rich policy space studied in welfare economics. However, the failing is on the side of economists not governments -- the latter struggling with a satisfactory theory of public choice. If the theory of market failure had proceeded in this way, it would have lead to many strange conclusions. Suppose that economists were limited in their ability to study multi-product pricing by firms. Then, we would conclude that there is always a market

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failure when the government can make these choices instead! This critique of the literature was raised in an important article by Wittman (1989).

In a static model of policy choice where rulers choose policy in their own interests (no matter how narrow), there is a presumption of second-best efficiency (Besley and Coate (1997)). A good example of this is the Leviathan model. There is no reason for Leviathan to extract resources from citizens in an inefficient way. However, there are potential sources of second-best Pareto inefficiency: the use of influence activities, legislative inefficiencies, coordination problems and strategic use of policies in a dynamic setting. We now discuss each of these briefly in turn.

There is a vast literature on why the policy process may be subject to influence activities -- rent-seeking or lobbying. The literature on rent-seeking originating with Tullock (1967) and Krueger (1974) studied how private actions influence policy. Following Tullock (1980), formal analysis has focused mostly on modelling competition among individuals or groups to obtain an indivisible policy favor, the aim being to characterize the aggregate expenditure on rent-seeking activities (see, for example, Baye, Kovenock and de Vries (1994) and the references therein).

Whether this activity is inefficient depends critically on the form that it takes. Cash transfers, as modeled by Grossman and Helpman (1994) yield movements around the Pareto frontier. However, examples such as campaign finance as modeled in Grossman and Helpman (1986) yield real resource misallocation. For this to be second-best inefficient (i.e. a political failure), there must exist is a way of re-organizing the influence game so that all players (including those involved in the influence process) can be better off. An example along these lines is studied in Besley and Coate (2001). But why might political favors not be granted in the most efficient way? An intriguing answer is given in Coate and Morris (1995). If voters fail to re-elect politicians who engage in such behavior that disguised forms of transfer may be preferred to keep voters in the dark.

Political failure may also occur because of coordination difficulties among voters. Consider a world where there are both competent and incompetent candidates -- the latter defined as candidates who (for fixed ideological preferences) can generate a potential Pareto improvement. Then, it is possible to construct a political equilibrium between two

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incompetent and one competent candidate of different ideologies where voters fail to coordinate on the competent candidate who therefore loses (Besley and Coate (1997)).

Legislative policy making is also a potential source of political failure -- with important insights going back to the seminal work by Buchanan and Tullock (1957). However, for a legislature to pick a Pareto dominated point, it must be that there is some failure in the bargaining procedure used to make decisions -- either limits on transfers or the credibility of promises. The famed example of Shepsle, Weingast and Johnsen (1981) rests on limits of transfers between the legislators operating the norm of universalism.

In dynamic models, examples of political failure are created principally by the strategic use of policy. One of the earliest examples to illustrate this is the work of Persson and Svensson (1989) and Tabellini and Alesina (1990). They show that governments will have an incentive to run deficits to reduce the policy flexibility of future incumbents. Aghion and Bolton (1980) and Milesi-Ferretti and Spaolore (1994)) show that strategic policy choice can also lead to changes in who is elected. This too may lead to policies being selected that are inefficient. Privatization decisions may be a key practical instance of this (Biais and Perrotti (2002)). Many governments underpriced privatizations to create a class of stakeholders committed to voting in favor of particular kinds of governments. This could explain privatization even without appealing to economic gains. Besley and Coate (1998) pulls this ideas together to give a unified definition of political failure in dynamic models where the criterion is second best Pareto efficiency.

So what do we learn from this pathology? In cases of true political failure, there should be unanimous consent that something should be done (provided that the failure results in a truly Pareto dominant outcome). In all the above cases, there are important and interesting questions about institutions can be redesigned to mitigate the political failure. This is similar in spirit to the notion, in traditional public choice writings, that there should be a focus on designing a fiscal and procedural constitution (Brennan and Buchanan (1985)). In practice, it is likely that progress will come from piece-meal analysis of specific institutional variations.

The juxtaposition of welfare economic and public choice approaches to the role of government is frequently overstated. There are as strong reasons for public choice economists to study welfare economics and optimal policy. Similarly, welfare economists

need to understand public choice. Societies frequently have make choices about how to govern their affairs which have both efficiency and distributional implications. The role of welfare economics in a world of public choice is to provide an analysis of this.

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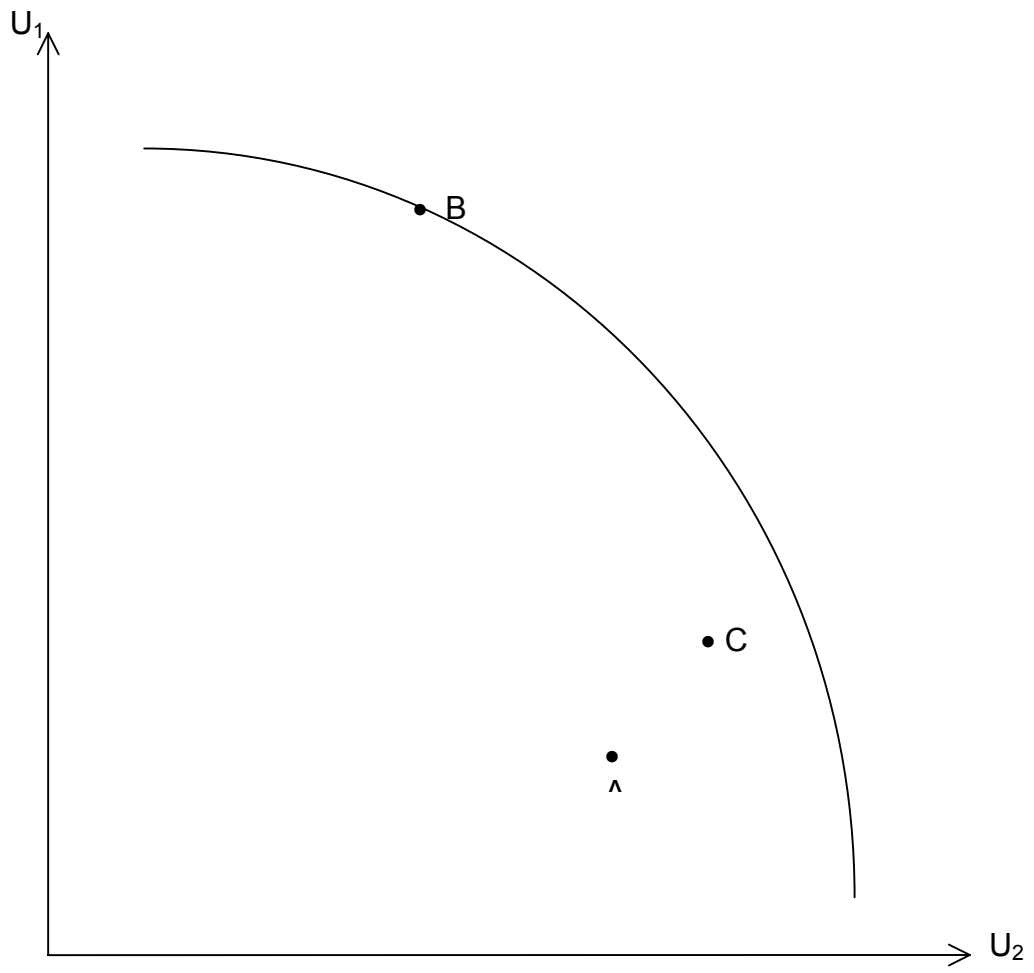Wittman, D. (1989). Why Democracies Produce Efficient Results. *Journal of Political Economy* 97, 1395-426.

Figure 1