

## On Equalizing the Distribution of Political Income

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### The Problem

Individuals obtain utility from the consumption of both public and private goods. There has been considerable interest recently in how money income—the power to purchase private goods—should be distributed (Fair 1971, Thurow 1971). In this paper we explore the complementary question of how political income, or voting rights, should be distributed to obtain a desirable distribution of individuals' utility from public goods.

It is important to distinguish two concepts of equality in the discussion of public policy which we will employ to discuss the distribution of political income.<sup>1</sup> Ex ante equity refers to fairness in the sense that risks or opportunities before the fact are equalized. Ex post equity is fairness in the sense of actual outcomes of social processes involving risk and uncertainty. In most cases ex post equity is probably of greater importance than ex ante equity, although, as we shall discuss, equalitarians have curiously failed to extend considerations of equity in the distribution of political income to an ex post setting.<sup>2</sup> There are, however, cases where ex ante equity would be more important. For instance, this would be the case where equality of opportunity is the objective or where it may be more desirable to substitute a mechanism to achieve ex ante equity (or some combination of the two concepts) because ex post equity is impossible or too costly to achieve. We will argue that the lack of consideration of establishing equality in the ex post distribution of political income cannot be explained by either the impossibility of achieving such an outcome or the high costs of pursuing such a goal.

Political equality is generally thought to be more feasible and desirable than economic equality. Economic equality—for example, in Lerner's sense of complete ex post equality of utility distribution—is typically expected to generate serious excess burden and disincentive effects, since the generation of private income takes a large part of an individual's time, that is, the elasticity of supply is higher.<sup>3</sup> Thus, emphasis in achieving greater equality of the private income distribution focuses on a mix of mechanisms which trade off some degree of ex post inequality in private incomes against the disincentive effects on the total amount of private income generated. For example,

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mechanisms such as fair employment laws can be viewed as generating greater ex ante equity, or equality of opportunity, while a progressive income tax can be viewed as generating greater ex post equality.

Discussion of the analogous problem of the distribution of political income has been characterized primarily by the discussion of generating mechanisms to achieve ex ante equality of opportunity to participate (e.g., one man, one vote). Perhaps the primary reason that this form of ex ante equality has been stressed in the literature and institutions of democracy is that it is considered a basic sort of right, or value judgment, which goes hand in hand with political democracy (Vlastos 1962, Tobin 1970).<sup>4</sup> A second important reason for one man, one vote could be that there are only minor disincentive effects associated with guaranteeing this form of political equality.<sup>5</sup>

Given the relative lack of disincentive effects associated with mechanisms for reallocating voting rights, it is interesting that the discussion of political equality has never seriously considered establishing an ex post equality of the distribution of political income.<sup>6</sup> In markets for private goods, each voter-consumer allocates his income so that the expected marginal utility from each dollar vote on a good is equal. Planned consumption at equilibrium prices is identical with actual consumption. In the absence of mistakes due to lack of sufficient information, this assures equality between expected and actual utility. These conditions are not likely to hold where public goods are allocated via one man, one vote majority rule. The utilities a voter expects from each vote may vary widely. And there can exist a large divergence between what he expects (hopes?) to receive in public goods as indicated by his voting decisions and what he actually receives after all votes are cast and counted.

These two characteristics of voting have been typically described as giving rise to problems of “minority rights” or the “tyranny of the majority.” It is important to note, however, that these characteristics create *two separate problems*, and thus require separate remedies. Let us illustrate their differences with an example.

Suppose a community plans to build a town hall. A referendum is held on whether the building should be of Gothic or Greek architecture. Fifty-one percent of the voters have a slight preference for the Gothic style, the other 49 percent are strongly opposed. On a straight majority vote, the Gothics win even though their utility gain is far outweighed by the minority’s loss. We can describe this as a situation violating the principle of ex ante equality. Each citizen’s vote does not represent an equal potential utility change.

Consider next the case where each citizen’s vote does represent an equal potential utility gain. Then a simple majority rule will maximize the net utility gain for the community on this decision. Suppose, however, the town grows and new public buildings are erected. Each time the town votes on the architecture of the next building, and each time the pro-Gothics win. Every decision will be *efficient* in the sense that the utility gains of the winners exceed the losses of the minority, but one might well regard the long-run outcome as

*inequitable*, as all the utility gains accrue to the pro-Gothics (ignoring the utility losses both groups might experience from mixing Gothic and Greek revival buildings). Thus, even where there is full *ex ante* political equality, there is still the possibility of *ex post* inequality of the utility income derived from the political sector. A person consistently in the minority may receive *ex post* a far smaller share of the gains generated by public collective action, even where there is *ex ante* equality over all voters.<sup>7</sup> Indeed, we would expect considerable *ex post* inequality of political outcomes to be the general case, rather than the exception.

Can political systems be devised to achieve both *ex ante* and *ex post* equality of political income? In the following section we consider mechanisms which seek to achieve this objective.

### **Solutions**

The problem created by differing intensities of preference among voters can be solved by introducing point voting. Since point voting has been discussed in detail elsewhere, we shall only briefly outline it here (Musgrave 1959, 130–31; Mueller, Tollison, and Willett 1971, 1975). To begin with, voters and issues must be grouped into polities such that in any given polity each voter has an “equal stake” (in terms of his potential aggregate utility change) in the *set* of issues decided by the polity.<sup>8</sup> That is, governmental units are broken up into, say, neighborhood, city, regional, and national jurisdictions, so that the integral of voters’ utility distributions over the issue set to be decided by a given polity is approximately equal. Each member of a polity is given an equal number of vote points to be allocated over the set of issues to be decided by the polity. If the voters honestly allocate the vote points in proportion to their relative intensities of preference on all issues (i.e., they do not engage in strategic behavior), the point allocations will reflect each voter’s marginal rates of substitution between issues.<sup>9</sup> If the equal-stake criterion is met, the total expected utility of each voter in a polity will be equal, and the outcomes obtained from aggregating the point-vote allocations will maximize the utility gains of the community from voting. The equal-stake criterion produces *ex ante* political equality for each voter over the set of issues, while point voting allows each voter to achieve *ex ante* equality on every issue by revealing his relative intensities of preferences over the issue set. Together they form a system for achieving *ex ante* political equality for each voter on every issue.

There are two contexts in which one can conceive of equalizing the distribution of political income *ex post*. First, one could adjust each individual’s vote stock at the beginning of a voting period, depending upon his success over *all* previous periods. Suppose that in the first round an individual won on issues totaling 90 percent of his vote points, while the average voter won only 70 percent. If the initial stock were 100 votes, the individual would be given 80 votes at the start of period 2. If he again won on 90 percent, he

would win on 72 vote points, and his tax for the next period would be two votes. He would thus have 78 votes for period 3, and as long as he continued to win on 90 percent of his vote point allocations, he would be winning on issues totaling 70 vote points, the average for the community. If, on some round, either his tastes or the community's changed so that he only won on half of his allocations, his total successful allocations would fall to 39. In the next round his cumulative overall tax would be  $20 + 2 - 31 = -9$ , and he would receive 109 votes. If he continued to win on only 50 percent of his vote-point allocations, his vote holdings would continue to rise until he began receiving 140 vote points, assuming the average voter was still winning on 70 vote points.<sup>10</sup>

This procedure is a compromise between the *ex ante* equalitarian condition embodied in the equal-stake criterion, and a full *ex post* equality of political income as described below. The stability of voter preferences, and therefore of voter winning percentages, is relied upon to adjust their vote holdings so that each voter's expected successful vote allocations, based on past outcomes, are the same for the coming round. (If the voters' winning percentages are not stable over time, there is no long-run tyranny of the majority problem, and hence no need to adjust individual vote stocks.) In the above example, the voter would continue to get 78 votes as long as his winning percentage stayed at 90, because he would then continue to win on issues totaling 70 vote points, the community's average. No adjustments would ever be made, however, for the 22 "extra" vote points he won in the first two rounds. He is always "ahead of the game" by that amount. Alternative tax subsidy schemes could be designed to achieve equal *cumulative* *ex post* political income, but these would have the serious disadvantage of requiring a constant potential total utility gain for each voter from period to period.<sup>11</sup>

No such restrictive assumption is required for the lagged vote-tax scheme, since its goal is merely to equate each voter's expected winning number of vote points in the coming period. By basing these expectations on each voter's past history of successes, and taking into account the stability of these winning percentages, individual vote stocks could be adjusted to bring *ex ante* and *ex post* political income into equality over time.<sup>12</sup> The voter who has done badly in the past can only write these losses off, and console himself with the knowledge that he may expect a more equal share of public-goods pie in the future, whatever the size of that pie might be.<sup>13</sup>

Alternatively, one might decide to equalize the realized utility gains over the set of issues a polity decides at any point in time, by a system of taxes and subsidies on voting rights and a sequential, nonbinding series of votes on issues. Such a system could achieve *full ex post* equality of political income. Initial votes would be tentative, subject to the vote-income distribution that resulted from voting. As an example, suppose that after the initial vote the set of outcomes would be such that each voter would have on average decisions corresponding to 70 percent of their vote-point allocations satisfied. If a particular voter won on a set of issues corresponding to 90 percent of his vote-

point allocations after the first round, then his total vote holdings would be reduced for the second round of voting. Thus, vote stocks would be adjusted by taxing abnormally high winners (say a tax of 20 votes on the 90 percent winners) and subsidizing losers, after which the vote points would be cast again. Over a series of recontracts with adjusted stocks of vote points, the gains from winning and losing would be equalized. To avoid excessive recontracting under this scheme, one might be satisfied with bringing everyone within five or ten points of the average utility gain.<sup>14</sup>

Thus, as is illustrated by these examples, operational systems of vote taxation that attain greater equality of political income can be devised and applied in representative democracies. The importance of such a mechanism in a well-working model of representative democracy lies in its ability to reduce or eliminate the potential for a tyranny of the majority problem to persist over a long period of time.

### **Summary**

This paper has discussed possible mechanisms for achieving *ex ante* and *ex post* equality of political income. While any of the structural reforms could be implemented separately, it makes the most sense to combine them. Indeed, the equal-stake criterion is to some extent a necessary condition for the implementation of a redistributive vote tax. A voter's winning percentage on an issue set cannot be regarded as an index of his political income unless each vote has an equal value *ex ante* to all voters.<sup>15</sup>

The idea of the state arising from a "social contract" formed by all citizens to achieve collective ends can imply the concepts of both *ex ante* and *ex post* political income equality. Of the two, only *ex ante* equality has received attention in the literature. Yet, to those who embrace the equalitarian ethic, the *ex post* equality of political income should be of even greater importance than *ex ante* equality of voting rights. This paper argues that the attainment of *ex post* equality of the political income distribution is conceptually plausible and quantitatively important.

Further, a policy of vote taxation does not appear to be subject to as serious disincentive effects as taxation to obtain complete equality of *ex post* private economic income. This follows by analogy to elasticity conditions where voting takes very little time as opposed to the length of the work week, for example, and attempts to equalize realized private income.

There do not appear to be any functional equivalents under present democratic systems to achieve *ex post* equality of political income.<sup>16</sup> Indeed, taking the United States as an example of a two-party, geographic-based democratic system, one could argue that there are perverse mechanisms, such as monopolistic systems of committee power and the like, which tend to lead to greater inequality of realized utility for many voters. Many voters from lower income-education classes do not vote under the present system, which, although it does not mean that these voters do not receive political incomes, does mean that the equalization of political income would be a difficult task

without also implementing a thorough reform of public choice mechanisms to insure efficient revelation of *all* voter preferences in politics defined on the equal-stake criterion.

#### NOTES

We are grateful to James M. Buchanan for useful comments. Any remaining errors are our responsibility.

1. For an extended treatment of the two concepts of equity, see Pauly and Willett 1972 and the references cited there.
2. Note, however, the following quotation from a paper by Kolm (1971, p 8): “Les Américains ne s’intéressent pas à la justice sociale, du moins au sens où l’entendons en France (Léon Walras écrivait déjà: ‘La justice est une idée gréco-latine et française’). En particulier, la notion d’égalitarisme dans les résultats—plutôt que dans les chances—a beaucoup moins d’attraits pousseux que pour nous.”
3. For Lerner’s proposal and some discussion of it, see Lerner (1935; 1980), Breit and Culbertson (1970; 1972), Morrison and Higgins (1971), McCain (1972), and McManus, Walton, and Coffman (1972).
4. Tobin (1970, 269) also argues that “obviously an equalitarian distribution of the vote can be enforced without any loss of efficiency. The aggregate supply of votes is intrinsically inelastic.” This is an overstatement of the issue, since although voting can be enforced or subsidized and in the extreme all would vote, this does not guarantee that votes are of any given level of informational quality. We have discussed elsewhere some ways out of this dilemma. See Mueller, Tollison, and Willett (1971; 1972; 1975).
5. For example, an alternative distribution of the right to participate in the political process might be to give votes proportional to years of formal education, i.e., some sort of scheme of weighted voting rights (Vlastos 1962). Counteracting the need for this sort of system, however, are such factors as the effect of education on one’s perception of his “obligation” (elasticity) to participate in politics which tend to lead to very few observed disincentive effects for educated voters under a system of full, *ex ante* political equality with everyone voting and weighted equally. Thus, on practical grounds political equality of this sort could be defended. For empirical evidence on this point, see Milbrath (1965). For a discussion of the economic theory of voting behavior, see Tollison and Willett (1973).
6. Braybrooke (1968) is a partial exception. In his proposed tests for whether actual governmental systems conform closely enough in practice to the theoretical norms of democratic theory to be approximately labeled democracies, Braybrooke suggests the criteria that no voter be in the minority more than 90 percent of the time and that not more than 10 percent be in the minority more than two-thirds of the time (p. 171).
7. The point here is similar to Arrow’s (1971) discussion of input and output equalization for public expenditures. Also, evidence from simulation studies of the gains from trade from vote trading indicate that the quantitative importance of the problem of political income distribution may be significant (Mueller, Philpotts, and Vanek 1972).

8. For analytical discussion of the equal-stake criterion, see Mueller (1971).
9. Mueller (1973) discusses the conditions under which point voting proceeds honestly.
10. One might think at first glance that the tax would not have to be the integral of all past deviations from the median, but just the divergence since last period. But such a system does not converge to the median, since the voter is only taxed the incremental divergence of winning or losing votes from the median in the immediately preceding period. In the above example the individual's tax at the end of two periods would only be two votes, allowing him a total of 98 votes as opposed to 78 votes where the integral of differences over all past votes is taken.
11. This problem could possibly be handled by introducing equal increments of votes: say each voter in the polity gets 10 additional votes in the period in which a new public-good issue (of importance roughly equal to 10 percent of the normal total) is introduced. Then the vote-tax system can continue, and "new money" in the form of the extra votes will keep "purchasing power" proportionate to total income. Such a solution would follow, of course, if voting periods were time dependent. An alternative way to meet this problem is to make voting periods not time dependent, but dependent on the total value of issues, e.g., vote every  $x$  issues worth of political income. However, the problem of holding the total utility gain constant for each voter from period to period would involve gains and losses analogous to the windfall gains and losses that accrued in the first few periods to above average winners and losers. That is, changes in the size of the pie would create additional gains and losses until the lagged vote-tax system equated expected voters' winnings over a longer run. To handle either of these problems neatly would probably make the vote-tax system unduly complicated and also raise additional conceptual problems.
12. Of course, where there are strong differences in preferences on an issue (i.e., an intense majority facing an intense minority), the system of political taxation may never succeed in equalizing income. For that matter, the equal-stake criterion may not be satisfied. Such issues should rationally be decided under conditions of equal ignorance about the future in a constitutional period, and if agreement cannot be reached there, then separate states should be set up. See, in particular, Mueller (1971, 1973) and Mueller, Tollison and Willett (1971; 1972; 1974; 1975).
13. Problems exist in applying the lagged vote-tax system to a representative body. If the legislators represent geographic units, a newly elected member could simply inherit the stock of vote points of his predecessor. This would introduce a certain amount of instability if newly elected representatives had significantly different tastes than their predecessors. Redistricting would also cause problems, as would a proportional representation scheme as discussed in Mueller, Tollison, and Willett, (1971; 1975). These problems vanish if immediate recontracting is employed.
14. The recontracting procedure can be simplified by the use of a computer. The voter need reveal only once the percentage of his vote stock he assigns to each issue (i.e., his relative intensities over the issue set). The computer can then adjust stocks to bring each voter's realized gains into equality.
15. It should also be noted that the application of the vote-tax system relaxes the problem of assuming that identical tastes obtain for the distribution of public goods in models of simultaneous determination of optimal distribution and opti-

mal allocation with both private and public goods. See, e.g., Winch (1969; 1970) and Roberts (1970).

16. Approximations in the private sphere can be found in the way competition is set up in some sports. Perhaps the handicapping system in golf is the best example corresponding to the vote tax. However, such institutions as the player draft in professional sports show much the same purpose as the vote tax in the sense that successful teams are penalized after the season with lower draft picks in an effort presumably to make next season's competition more equal ex ante. The ability of teams to trade personnel and their lack of ability to forecast perfectly future players' performance hinders the attainment of full ex ante equality (in the sense that each team becomes equally likely to win the title) over time in such sports (thus the Green Bay Packers, Boston Celtics, and so forth). However, there do not appear to be any equivalent reasons to think that the vote tax would operationally generate long winning or losing streaks. Indeed, it is to avoid such winning streaks in the political process that one would advocate a vote tax.

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