



## Voting Mechanisms: The Heart of Taxation Research

by Beth Hunsberger

The use of voting models can be linked to empirical work on fiscal systems and used to approach a large number of taxation research questions. Walter Hettich and Stanley L. Winer explore the use of voting models in “Public Choices and Fiscal Means: Analyzing Taxes as Collective Outcomes,” a chapter from *POLITICS, TAXATION, AND THE RULE OF LAW*, a new book from Public Interest Institute.

Taxation is the most common way to draw needed resources from the private sector. For some time, economists have asked whether there is a way to structure taxation in such a way that is similar to the private economy’s price system. Is it possible for each member of society to be charged the true costs of the public services that they use? User charges are taxes that accomplish this feat, and they end up playing a role in the financing of public budgets.

There are three variables that are crucial to the understanding of the nature of taxation. First, the taxation rates that appear in a political equilibrium where voting relates to fiscal issues needs to be explained. Second, the total budget size as an outcome of the model needs to be determined. Third, special attention needs to be paid to the shares in total revenues raised from different available tax sources, and to changes in such revenue shares.<sup>1</sup>

Duncan Black derived the median voter model that economists have used to explore fiscal issues referring to instances of direct democracy. In this model, each voter is completely informed about the consequences of any possible rate, and at the same time has a well-defined preference ordering of all rates. Pair-wise voting of proposed tax rates is used until a winner is found. “The winning rate will equal the most preferred one for the voter having median preferences in the group.”<sup>2</sup> This model only provides stable outcomes if voting occurs on a single issue and if preference orderings of voters have a single peak. The median voter’s winner may not be the winner in an agenda setting. The shortcomings of this model become more significant in tax analysis studies.

Probabilistic voting is a model more able to handle the complexity of tax systems. Using this model, at least two competing parties offer policy platforms to the voters who in turn evaluate them and compare the benefits and costs pertinent to their own individual situation. Parties are able to estimate the probability of the voters’ support in the next election. As a result, parties will modify party platforms to continually maximize the number of expected votes.<sup>3</sup>

A graphical analysis of tax structure in political equilibrium provides two important suggestions. It first implies that a democratic political environment’s tax system will have complex features. “In addition, it

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shows that exogenous shocks affecting any one of the underlying components will lead to changes in all of the crucial variables characterizing the tax system.”<sup>4</sup> Ideally, a governing party attempting to maximize support would like to have individually tailored tax rates. However, this would bring about large administrative costs and the party would be less able to provide benefits. A compromise would be a situation where rate bands are used to group individual taxpayers. Each member in a rate band would be paying the same tax rate.<sup>5</sup>

There are several areas in which voting models can be used in empirical applications. These include: the evolution of the tax skeleton, unusual trade-offs such as taxation versus regulation, political regime and revenue composition, identification problems concerning the appropriate model of revenue structure in competitive political systems, and governance and structural features of revenue systems.

The history of taxes provides a wealth of information that in turn can be helpful in hypothesis testing of the character and penalties of policy actions. Voting models play a large role in this. The authors reiterate that, “Voting models provide the basis for a theoretical understanding of fiscal decisions and fiscal structures.”<sup>6</sup>

#### ENDNOTES:

<sup>1</sup>Walter Hettich and Stanley L. Winer, “Public Choices and Fiscal Means: Analyzing Taxes as Collective Outcomes,” in Donald P. Racheter and Richard E. Wagner, (eds.), *Politics, Taxation, and the Rule of Law: The Power to Tax in Constitutional Perspective*, Kluwer Academic Publishers, Boston, 2002, p.103.

<sup>2</sup>Ibid., p. 104.

<sup>3</sup>Ibid., p. 105.

<sup>4</sup>Ibid., p. 108.

<sup>5</sup>Ibid., p. 109

<sup>6</sup>Ibid., p. 118

*This Institute Brief is one in a series on the chapters of a recently published book, POLITICS, TAXATION, AND THE RULE OF LAW, edited by Dr. Don Racheter, President of Public Interest Institute, and Dr. Richard Wagner, Economics Professor at George Mason University and Chairman of the Institute’s Academic Advisory Board. POLITICS, TAXATION, AND THE RULE OF LAW looks at the balance between providing government with the power to operate while preserving and protecting our rights of person and property.*

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