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# THE STRUCTURE OF THE SIEVE: POLITICAL ECONOMY IN THE EXPLANATION OF TAX SYSTEMS AND TAX REFORM\*

STANLEY L. WINER\*\* AND WALTER HETTICH\*\*\*

## I. INTRODUCTION

In the past two decades, economists have made much progress in understanding how individuals and private markets respond to taxation. There has not been a similar advance, however, in the explanation of tax systems and tax reform. As Atkinson and Stiglitz point out in the concluding paragraph of their well-known collection of lectures on optimal taxation, "government behavior — and the wider political structure — must be taken into account in any realistic assessment of the prospects for [tax] reform. In this 'return to political economy,' a great deal remains to be done."<sup>1</sup>

There is a tendency among economists to think of political analysis as an additional step, to be taken only after economic analysis has already been completed. We argue in this paper that a meaningful 'return to political economy' requires a more basic

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<sup>1</sup> A.B. Atkinson & J.E. Stiglitz, *Lectures on Public Economics* (Maidenhead, Eng.: McGraw-Hill, 1980) at 576.

change in approach. The theoretical framework must be revised and broadened to make political as well as economic behaviour endogenous.

Fifty years ago, Henry Simons spoke out forcefully against loopholes in the personal income tax by declaring: "It is high time for Congress to quit this ludicrous business of dipping deeply into great incomes with a sieve."<sup>2</sup> Simons's metaphor of a "sieve" remains highly descriptive of modern tax systems, which continue to embody a myriad of special rates and provisions. While economists may decry these features for normative reasons, they must also confront the task of explaining their persistence in the face of repeated attempts at tax reform. This can only be accomplished by taking account of the simultaneous influences of political and economic choices on tax systems.

We begin our argument by sketching a simple illustrative model that includes both political and economic components. We then consider the implications of the proposed framework for tax reform if it is interpreted as a positive representation of reality. The analysis suggests a different way of looking at change in the tax system and yields some predictions about the nature and direction of such change. Positive political economy does not preclude a normative approach, however. We ask next: What implications does an extended theoretical framework have for normative theories of taxation? The question is examined in relation to equitable taxation, the normative tradition that originated mainly in Henry Simons's work and that formed the intellectual foundation for the Royal Commission on Taxation.

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<sup>2</sup> H.C. Simons, *Personal Income Taxation* (Chicago: University of Chicago Press, 1936) at 219.

## II. AN ILLUSTRATIVE MODEL

The model of economic and political choice outlined in this paper and developed in more detail elsewhere<sup>3</sup> emphasizes several elements essential for the analysis of taxation. Like most models in economics, it is based on the concept of static equilibrium. This allows interpretation of the tax system as an equilibrium outcome and highlights the interdependence of different tax instruments. The general-equilibrium nature of the model also makes it possible to study change in exogenous factors and to analyze the consequences of such change for tax policy.

A second key element concerns the treatment of individual reactions to taxation. Taxpayers make economic and political responses, both of which affect the government's use of policy instruments. While economic adjustment or 'exit' has been much discussed in the literature on taxation, political reactions or 'voice' have not, so far, been integrated into the analysis. The model uses the concept of stable political-cost or opposition functions associated with different tax instruments to take account of both factors.

We assume that the political cost to the government of taxing a particular individual depends on the resulting loss in full income, including deadweight loss, weighted by the political effectiveness or influence of the taxed individual. Political effectiveness, in turn, will depend on factors such as the taste for civic duty (voting behaviour), membership in interest groups and wealth.

Consider a government that attempts to maximize the number of votes expected in the next election.<sup>4</sup> To achieve this objective, it will have to minimize total political cost or opposition in raising revenues for any budget of given size. In order to see the implications of government behaviour for the treatment of taxpayers

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<sup>3</sup> W. Hettich & S.L. Winer, "A Positive Model of Fiscal Structure" (1984) 24 *J. Pub. Econ.* 67; W. Hettich & S.L. Winer, "Economic and Political Foundations of Tax Structure" (1988) *Am. Econ. Rev.*, [forthcoming]; S.L. Winer & W. Hettich, "The Evolution of Revenue Systems: A Theoretical and Empirical Investigation" (1987) *Carleton Economics Papers* 87-104, Carleton University.

<sup>4</sup> Some other similar objective would not alter the analysis in an essential way.

and for tax structure, assume that there is a large number of taxpayers, each of whom engages in several taxable activities. Assume also that economic exit is possible in each activity. In its attempt to minimize opposition by equalizing marginal political costs across tax sources, the government will then tax all individuals and all activities, using different rates across such taxpayers and activities. The result is a complex tax system containing differentiated treatment for each individual in every activity. While the introduction of administration costs into the model leads to some simplification in structure, the tax system remains highly complex even when differentiation among taxpayers is costly to the government.<sup>5</sup>

Complex tax systems are thus the logical consequences of heterogeneity in economic and political behaviour among taxpayers. On the economic side, heterogeneity occurs in the ability of taxpayers to adjust their behaviour and to escape into non-taxed activities, such as leisure. On the political side, there are variations in the taste for voting and political activity, in interest group membership, in wealth, and in other politically relevant factors. In response, governments in representative democracies create tax systems looking much like the "sieve" deplored by Henry Simons. The use of special features such as exemptions, exclusions, deductions, credits, and variations in nominal rates, simply represents an attempt by those seeking to stay in power to cope with heterogeneous behaviour among affected voters.

### III. TAX REFORM IN A POSITIVE MODEL

As generally used, the term "reform" implies a change away from the present situation in the direction of some desired standard. In this section it has no such normative content but is employed merely in a descriptive manner. We shall apply it to any substantive change in the equilibrium structure of the tax system, regardless of what form it takes or for what purpose it has been initiated.

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<sup>5</sup> Administration costs lead to grouping of taxpayers into tax bases and rate brackets. For a formal derivation of this result, see "Economic and Political Foundations of Tax Structure," *supra*, note 3.

Because the literature on public finance has been predominantly normative in character, economists have paid only limited attention to the historical development of tax systems and have only rarely tried to explain the changes that have occurred over time. It may be useful to remind the reader briefly how extensive some of these changes have been. During the first hundred years of Canadian confederation, there were, for example, seventeen instances where a new federal tax was introduced or an existing federal tax was abolished. Established taxes fluctuated greatly in relative importance. The federal corporate income tax, when introduced in 1919, raised only 0.2 percent of total revenues: its share rose to 11.3 percent by 1922 and to 30.9 percent by 1952, falling back to 16.3 percent by 1967. Federal sales taxes, to take another example, rose from an initial share in total revenues of 9.6 percent in 1921 to 29.7 percent in 1924, dropping back sharply to 4.7 percent in 1931. By 1938, their share had recovered to 26.5 percent, but fell back to 15.4 percent by the end of 1967.<sup>6</sup>

The theme of change is repeated if we look at more recent history. Studies of Canadian federal budgets show that the Canadian tax system undergoes continual adjustment.<sup>7</sup> Between June, 1971 and April, 1980, federal ministers of finance proposed fifty-five major tax revisions (each resulting in a change in revenues exceeding \$100 million) and forty-eight less important ones. Since Canada has a parliamentary system, these proposals were implemented with only minor exceptions. One should note that the period above follows an episode of major revision in Canadian tax law that was initiated by the Royal Commission on Taxation. The numbers cited do not include the "Carter reforms", but represent only subsequent changes. Finally, a further indicator of change relates to underlying legal documentation necessary for implementing tax policy. Currently, according to R.D. Brown, the Canadian government turns out more

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<sup>6</sup> From unpublished data obtained from Irwin Gillespie.

<sup>7</sup> W.I. Gillespie, *In Search of Robin Hood* (Montreal: C.D. Howe Research Institute, 1978); A. Doman, "The Effects of Federal Budgetary Policies 1978-80 on the Distribution of Income in Canada" (1980) 2 *Can. Tax.* 112.

than a hundred pages of amendments to the *Income Tax Act* each year.<sup>8</sup>

An extended theoretical framework, such as the illustrative model, provides a new perspective for understanding the transformation of tax systems. Continual change can be seen as the logical outcome of the government's attempt to maximize votes and to stay in power. Any shocks to the system create a need to adjust the use of all revenue instruments and to re-establish equilibrium. We may therefore expect to see continual reform from within; that is, initiated by the government itself. Furthermore, such changes will occur regardless of whether or not the tax system is judged deficient with reference to normative standards.

An extended framework also suggests new questions for research. One may ask, for example, what future reforms will be likely to occur or how past changes can be explained as the outcome of self-interested behaviour by government agents in response to shifts in economic and political factors. Such work requires the formulation of hypotheses on how exogenous factors influence the nature of political cost functions associated with different tax instruments, and how they cause shifts in such functions.<sup>9</sup>

While more extensive research on determinants of political cost functions is needed, one can make some initial suggestions about factors that may explain important changes in tax structures that have occurred in the past. It is useful to distinguish between changes in factors affecting mainly private economic responses, and shifts in factors related primarily to political adjustments. Examples of the former include changes in the age distribution, in labour force participation, in the rate of inflation; and in the prices of major imported commodities such as oil. Among shifts falling in the latter category are changes in the cost of political organization, in

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<sup>8</sup> R.D. Brown, "Canada-U.S. Tax Issues: The Tax Treaty, Unitary Taxation, and the Future" (1984) 32 Can. Tax J. 547 at 564.

<sup>9</sup> For a presentation of hypotheses explaining differences among tax systems of U.S. states, see "A Positive Model of Fiscal Structure," *supra*, note 3. Hypotheses dealing with the historical evolution of the Canadian tax system are developed and tested in "The Evolution of Revenue Systems: A Theoretical and Empirical Investigation," *supra*, note 3.

constitutional restrictions, in the cost of acquiring information, and in political entrepreneurship.

One should note that alterations in the tax system that do not correspond to changes in underlying factors create disequilibrium situations, and are not likely to be sustained. Reforms in the United States in the early 1980s may represent an illustration of this point. When President Reagan assumed office, he instituted changes in the corporate income tax that dramatically altered the balance between revenues from corporate and from personal income taxation. Apparently, underlying economic and political forces did not support this shift. When the implications of accelerated depreciation and investment tax credits became widely apparent, Congress re-balanced the mix of personal and corporate taxes during the major tax reform of 1986.

Although the theoretical discussion in Part II assumes that the government has complete information on political cost or opposition functions, in reality the government will have only limited knowledge of such functions. This suggests that positive analysis should also focus on the government's search for information as part of the process of tax change. Gillespie<sup>10</sup> has argued that when political cost functions are well-known to the government, changes in the tax system are simply announced in the budget and passed by the House of Commons without amendments. In cases where the government is uncertain about political costs, it proceeds differently, making use of mechanisms such as royal commissions or task forces, or issuing white papers to stimulate discussion. Available information may thus determine the agenda of debate, the process of change, and some of the final outcome.

In summary, an extended framework interpreted in a positive way leads to a different view of tax change. It suggests that reform will be continual and that changes will involve several aspects of tax structure at the same time, since re-establishment of political equilibrium in response to disturbances will require a series of related adjustments. It also draws attention to a long history of tax changes that remains to be explained, rather than deplored as has

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<sup>10</sup> W.I. Gillespie, "Birth, Growth and Death of Taxes: Financing the Canadian Federation - The First Hundred Years" (Ottawa: Carleton University, 1985) [unpublished].

often been the case in the literature. Finally, it suggests that we should study the role of political institutions in shaping or changing fiscal structure.

#### IV. EVALUATING NORMATIVE TAX THEORY

The illustrative model indicates that private political voice, both of individuals and of groups, and self-interested behaviour by the government, are all important determinants of equilibrium tax structure. In this section, we explore the implications of this view for equitable taxation (ET), the normative tradition underlying the Royal Commission on Taxation.

ET blueprints favour simple, rather than complex, tax structures and rules, rather than political discretion in tax policy. The ET tradition of analysis derives primarily from the work of Henry Simons, who had his philosophical roots in classical liberalism, and who developed his approach to taxation as part of a broader framework for economic policy.<sup>11</sup> Tax reform in the ET tradition focuses on the creation of a comprehensive tax base where income from all sources is treated the same, and taxable capacity is measured by the change in net wealth plus consumption during an appropriate accounting period. It is argued that such a base will result in the equal treatment of taxpayers with the same ability to pay, thus achieving the goal of horizontal equity. As a result, proponents of ET are interested primarily in broadening the existing base, and in eliminating special provisions, often called tax expenditures.

To Simons, a comprehensive tax base was not merely a means of creating horizontal equity. In his view, a 'liberal' society required definite rules that were not subject to special interest politics. He saw the comprehensiveness of the base (having a function similar to a monetary rule) as a way of preventing the state from using taxation as an instrument of electoral politics.

The flaws in Simons's argument, and in the ET tradition, stem from the failure to develop an adequate theory of the political

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<sup>11</sup> W. Hettich, "Henry Simons on Taxation and the Economic System" (1979) 32 Nat. Tax J. 1.

process and of political rule-making. The Royal Commission on Taxation *Report*,<sup>12</sup> undoubtedly still the best ET blueprint and probably the best blueprint in any normative tax tradition, reveals this lack of understanding of political forces: "If equity were not a vital concern, taxes would be unnecessary. The state could simply commandeer what is needed. The burden of a reduced private command over goods and services would then be borne by those individuals and families who happen to be within easy reach of the state."<sup>13</sup> The argument suggests a rather curious view of the constraints faced by democratic governments. Political opposition to taxation, either by individuals or by special interest groups, is ignored altogether. One may also ask how a mere concern with equity could limit the actions of a government having the extensive powers implied.

The implications of a comprehensive tax base and of horizontal equity for tax structure can be illustrated with a simple example. Let us assume that there are only two tax bases,  $B_1$  and  $B_2$ , representing different components of income, such as wage earnings and capital gains, and that the two components add up to comprehensively defined income. Assume also that taxation is proportional at rate  $t$ , and that each base includes one exemption,  $s$ . Equal treatment of equals would then require that

$$s_1/B_1 = s_2/B_2$$

and

$$t_1 = t_2$$

where total tax payments from either base are given by

$$T_i = t_i(B_i - s_i) ; \quad i=1,2.$$

Unless these conditions are satisfied, taxpayers with equal comprehensive incomes, drawn from the two sources in different proportions, will not incur equal tax liabilities.

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<sup>12</sup> Canada, Royal Commission on Taxation, *Report* (Ottawa: Queen's Printer, 1966) (Chair: K.LeM. Carter) [hereinafter *Report*].

<sup>13</sup> *Ibid.*, vol. 1 at 4.

The same example can also be used to bring out a second implication of ET theory. We can interpret  $B_1$  and  $B_2$  as referring to comprehensive income and to some other possible base, such as sales receipts for consumer goods. It will then be apparent that the ET ideal can only be satisfied if taxation is restricted to  $B_1$ , except in the unlikely case where consumer expenditures make up the same proportion of comprehensive income for all taxpayers in the same economic circumstances.

There is no reason why a tax structure consistent with political cost functions should satisfy these conditions. Political cost functions associated with different components of comprehensive income appear to vary widely in practice, with the result that income from various sources is generally treated quite differently. In a similar fashion, there is no political reason why the government should restrict itself to taxing only income, or even to deriving a sizable proportion of total revenues from income taxation. (There are, for example, several states in the U.S. that have no income tax at all.)

The extended model sketched in Part II implies that tax reform will fail to achieve the objectives of ET unless political cost functions are changed in just the right manner. The tax reform literature in the ET tradition does not approach the problem in this way, contenting itself with proposing changes in tax laws necessary to implement the comprehensive base, or with suggesting changes that would bring the existing base closer to the comprehensive one. It should not be surprising, therefore, that such proposals are rarely implemented in the form in which they are made. One should also note that moves toward a comprehensive tax base may set off political adjustments in the tax system as a whole that may reduce rather than enhance horizontal equity.

How can we use the extended model to throw light on the concepts of tax expenditures and of the tax expenditure budget often associated with the theory of equitable taxation? Tax expenditures equal revenues foregone from granting special treatment, and from applying lower rates to selected components of income. In other words, the existing situation is compared to a hypothetical tax system that uses a comprehensive base and does not include any special provisions or rates. The difference in revenues raised by the two systems is then identified as total tax expenditures.

Whenever we define a theoretical counterpart to the existing situation, we face certain logical difficulties. In this instance, it is not immediately clear what tax rates should be applied under the hypothetical tax regime. One possibility is to assume that tax rates on all components of income are set equal to the highest rate that is presently observed ( $t_n^*$ ). In the context of our simple example, with a single exemption on each base and proportional rates, this implies the following definition:

$$E_1 = R(s_i = 0, t_i = t_n^*) - R^*(s_i, t_i); i = 1, 2$$

where  $E_1$  stands for total tax expenditures and where the expressions  $R$  and  $R^*$  on the right-hand side represent revenues collected in the hypothetical and the actual situations.  $E_1$  can be calculated as long as we either disregard likely economic adjustments to the imposition of the higher rate on all components of income (the procedure generally adopted in so-called tax expenditure budgets), or estimate  $R$  subject to predicted economic adjustments. While the second course would determine the  $E_1$  consistent with economic equilibrium, it would not ensure the existence of political equilibrium. There is no reason why the government, in the face of given political cost functions, should choose  $t_n^*$  as the solution to its problem of staying in office. An alternative definition avoids this lack of reality:

$$E_2 = R(s_i = 0, t_i = t_e) - R^*(s_i, t_i); i = 1, 2$$

Where  $t_e$  represents the tax rate that would be chosen by a self-interested government restricted to the use of a single proportional tax rate for all components of income. Unfortunately,  $E_2$  can only be determined if political cost functions are known; otherwise, it is not feasible to predict  $t_e$ . While we can expect a lower total budget if the government's objective function has to be maximized subject to more severe constraints (that is,  $s_i = 0, t_i = t_e$ ), it will be difficult if not impossible to predict the exact extent of the decrease.

The analysis indicates that the concept of tax expenditures is theoretically unsatisfactory or, if redefined in the manner suggested, largely non-operational. While it is generally understood that tax expenditure budgets are of restricted value as long as they fail to take account of general-equilibrium effects in the private economy,

it is only rarely acknowledged that they also fall short because they neglect readjustments in the political equilibrium underlying tax structure.

## V. CONCLUSION

The analysis in the preceding section suggests that ET remains incomplete as a basis for tax reform, because it offers no guidance on how to design and implement *politically stable* reforms. The same criticism also applies to blueprints derived from other normative traditions. Unless political cost functions change so as to be consistent with a particular proposed tax system, that system will not be adopted or implemented. Optimal taxation makes use of social welfare functions to derive its results, but it does not concern itself with the question of why any such function would ever be chosen as the maximand by the government. The normative public choice tradition, which we have elsewhere labelled fiscal exchange, suffers from a similar limitation.<sup>14</sup> Although writers in this tradition clearly recognize the necessity for models of collective choice, they rarely address themselves to the question of why a particular constitutional change would be adopted in the existing political framework. Furthermore, partial changes in political constraints, such as tax limitations, can have unexpected results unless the substitutability of instruments is taken explicitly into account.

Where does this leave us? Certainly, we want to avoid the analytical trap pointed out by Agnar Sandmo. In his words: "If the economist were to accept any kind of political constraint on the tax system as a true constraint on economic policy, much of the prescriptive power of welfare analysis would clearly be lost."<sup>15</sup> Sandmo was speaking in the context of optimal taxation, but his warning applies equally to other normative traditions. On the other hand, as John Woolley has persuasively argued:

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<sup>14</sup> W. Hettich & S.L. Winer, "Blueprints and Pathways: The Shifting Foundations of Tax Reform" (1985) 28 Nat. Tax J. 423.

<sup>15</sup> A. Sandmo, "Some Insights from the New Theory of Public Finance" (1984) 2 Empirica 111 at 116.

Students of political economy make an error in defining their point of departure in such a way that they rule out as illegitimate any political survival strategies. It is analytically misleading ... to define the study of political economy in terms of some supposed set of errors in economic policy that are then attributed to politics.... That is, by taking politics as bad compared to some ideal counterfactual policy, we will always discover that policy has been corrupted by politics. Surely this conclusion is no longer interesting.<sup>16</sup>

Is there a middle ground between these views? We would suggest, first, that tax specialists should study the implications for tax structure of particular political institutions. This is a prerequisite to the understanding of why tax systems evolve as they do, and therefore is a necessary step toward lasting tax reform. Of special importance in this regard is the study of how the agenda for policy discussion is set. Henry Simons believed that developing and advocating a cohesive theoretical framework was enough to ensure its eventual adoption. It is interesting to see how Simons's ideas long after his death have been successful in controlling the agenda within which the precise details of reform are discussed. This was certainly the case in the most recent U.S. tax reform debate despite the presence of advocates of optimal tax theory. But it is also instructive to note the limits to this influence — the Royal Commission's work and that of the U.S. *Treasury Report* of 1984 notwithstanding.

Second, we should ask what institutions or institutional reforms are required to support desired tax systems, whatever the underlying normative tradition. Simons believed that ET theory was consistent with political institutions that allowed maximum personal freedom and initiative, but this belief was not substantiated by a careful analysis of behaviour in the public sector.<sup>17</sup> It may turn out, of course, that some of the institutions most compatible with a particular set of economic recommendations are undesirable on broader philosophical grounds. But this would surely be an

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<sup>16</sup> J.T. Woolley, *Monetary Politics: The Federal Reserve and the Politics of Monetary Policy* (Cambridge, New York: Cambridge University Press, 1984) at 184.

<sup>17</sup> Simons's most prominent student interested in public sector analysis, James Buchanan, comes to quite different conclusions. See G. Brennan & J.M. Buchanan, *Power to Tax: Analytical Foundations of a Fiscal Constitution* (Cambridge, Mass.: Cambridge University Press, 1980), for the argument that a comprehensive tax base results in excessive government.

important conclusion, helping economists to realign their normative assumptions with more general criteria of human welfare.

The emphasis on political economy in this paper does not imply that analysts should neglect the more traditional study of how taxes affect private behaviour and how they are shifted through adjustments in private markets. Economists will continue to make a major contribution by focusing on the impact of taxation on the private sector. At the same time, a full understanding of tax policy requires an extension of economic analysis to encompass the logic of political action.