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Introduction

William T. Alpert, John B. Shoven, and John Whalley

1. Background to the Project and Its Wider Context

Traditionally, social scientists, and economists in particular, have limited their investigations of social policy issues to analyses with a single-country focus. While useful, such studies do not provide the full richness of perspective that comes from analyzing more than a single jurisdiction. Certainly there have been studies comparing economic systems, but until quite recently many of the studies of different jurisdictions relied on provincial or state comparisons for their variation.

This book offers a series of studies focusing on one particularly promising area for cross-national comparison—the harmonization and comparative tax reform experiences of Canada and the United States. Cross-national research requires recognition of the policy environment or context in which social programs are established and carried out. This context includes the property rights established in a society, the incentive structures, the degree and kinds of economic freedoms, and the systems of private and public decision making and their relationship. In the case of Canada and the United States, general similarities exist with respect to these matters.

This was true in the Canada-U.S. case long before the passage (in 1987) of the Canada-U.S. free-trade agreement and the latest Canadian constitutional reform (in 1982) establishing the Charter of Rights and Freedoms (Bill of Rights). The United States and Canada therefore provide a natural joint labo-

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ratory for comparing the effects of differing social and economic policies. The countries share political, legal, cultural, and constitutional inheritances, federal structures, remarkably similar standards of living, and pluralistic societies. Both are advanced industrial nations with important primary and manufacturing sectors, and large and rapidly growing service sectors.

Despite these similarities, differences exist—the melting pot in the United States versus the mosaic in Canada as metaphor for society, a universal health care system in Canada with no counterpart in the United States, a broad-based national sales tax in Canada with no such tax in the United States, a larger federal role in the United States and a smaller one in Canada. There are numerous other differences, ranging from the structure of urban areas to the official status of minorities. Recognition of these differences is critical in cross-national research.

The evaluation of social policies must consider the historical circumstances of the country under analysis. Is the society's history one that would lead it to consider certain taxes rather than others? It might be argued, for example, that the U.S. public would not consider a national value-added or consumption tax for historical and social reasons that do not exist in Canada or Europe. Such a tax may pose problems of implementation and acceptance in the United States that would not arise in Canada or Europe.

The work in this volume offers support for two competing themes. The first is that social policies of the countries are essentially different. In Canada, social policy forms a middle ground between the extremes of U.S. individualism and European collectivism. Relative to the United States, Canada has established a set of social programs that provides a higher minimum level of support for its citizens. Canadian social policy also has a tradition of universality—in health care, retirement programs, family allowances, and so on. This is not so in the United States, where the tradition is much more individualistic and less collectivist. Thus, Canada has a heritage more reminiscent of European social democracies.

The alternative view is that the social policies of the two countries are fundamentally similar. While differing in detail, they both spring from British historical roots. More importantly, the framework for policy is alike. The problems of income maintenance, employment standards, aging, pay and employment equity, equal tax treatment, immigration, and so on, are defined in similar terms in both countries. Additionally, social programs depend upon public and private components, as in the area of pensions.

In the tax policy area, both countries have federal and provincial/state tax systems with graduated personal and corporate taxes. Both rely on a diverse mixture of taxes, which include property, payroll, excise, and corporate and personal income. Furthermore, they depend on means testing for many social programs, although such testing is more common and stringent in the United States. Finally, the two countries devote significant shares of budget expenditures to social programs. Thus, in this view Canada and the United States fall squarely within a common Anglo-Saxon tradition, with similarities in policies and outcomes that overwhelm any differences that appear.

In this volume the authors find that certain aspects of the tax systems of the two countries are converging in important ways, while in other respects there is a surprising independence in their policies. For example, Canada's adoption of a national value-added tax does not promise quick replication in the United States. Neither is the United States likely to follow and eliminate mortgage interest deductibility any time soon, despite the fact that some steps have been taken to limit this tax expenditure. A second generalization from this collection of work is that although policies differ, outcomes are often surprisingly similar. For example, although the tax systems differ in many important ways (see table 1), they generate approximately the same amounts of revenue, produce similar costs of capital, and produce comparable distributions of income.

2. The U.S. and Canadian Tax Systems and Their Evolution in the 1980s

The 1980s have witnessed major tax changes in the United States and Canada. These have come in the form of both ongoing change (such as steady increases in the social security payroll taxes in the United States in the first half of the decade, and several rate increases in the federal sales tax in Canada later in the decade) and dramatic, comprehensive tax change packages (in 1981 and 1986 in the United States and in 1987 in Canada).

In the United States, rate reductions at the personal level and sharp acceleration in depreciation allowances at the corporate level characterized change in 1981. Unwinding this acceleration, eliminating the investment tax credit, consolidating brackets at the personal level, and increasing revenue at the corporate level characterized the 1986 changes. In Canada, moves to reduce both corporate tax rates and the acceleration in depreciation allowances in the 1985 budget were developed into a broad reform package in the summer of 1987. The package included further rate reductions at the personal and corporate level, bracket consolidation at the personal level, elimination of both the investment tax credit and the acceleration in corporate depreciation allowances, conversion of most existing personal-level exemptions and deductions into credits, and a commitment (since implemented) to replace the existing manufacturers' sales tax with a value-added (or goods and services) tax.

An outside observer looking only at the 1986 U.S. changes and the 1985–87 Canadian changes might well think that many of the elements involved were a reflection of two economies moving in tandem. In both countries, corporate and personal tax rates were reduced, the number of tax brackets was sharply reduced, the investment tax credit was eliminated, and depreciation deductions were decelerated. The conclusion might be drawn that these changes represent clear evidence that the tax systems of the two economies were converging, driven in part by increasing integration in the form of larger

Table 1 **Major Similarities and Differences between Canadian and U.S. Tax Systems**

Similarities	Differences
1. Both have federal tax systems.	1. Canada has a broadly based federal sales tax (MST, since replaced by GST); the U.S. has none.
2. Both have graduated personal income taxes and corporate taxes with a standard and small-business rate.	2. U.S. collects proportionately more revenue through the social security tax. Old age support in Canada is largely funded from general revenue.
3. The configuration of reliance on personal income, corporate, sales and excise, social security, and property taxes is similar. Resource taxes are more prominent in Canada (since resource industries are more important).	3. There is considerably more revenue sharing in Canada than in the U.S. The Canadian federal government collects a majority of revenues, but directly spends only a minority.
	4. Excise taxes (gasoline, tobacco, alcohol) are considerably higher in Canada.
	5. Canada has more generous tax treatment of savings (tax-sheltered pension contributions, capital gains.)
	6. Canada has integrated personal and corporate taxes, through a dividend tax credit.
	7. The tax unit in Canada is the individual, while there is both joint and separate filing in the U.S.
	8. Tax incentives and special allowances of various kinds are more widely used in Canada.
	9. Tax deductions for mortgage interest are available in the U.S.

Sources: Tax News Service (various issues); Pechman (1987).

trade and investment flows between the two economies. The similarity of change and the timing might also be taken to reflect that, being the smaller economy, Canada has had to follow the policy actions of the United States; otherwise Canada would lose tax base and revenue, and other undesirable effects could follow.

Differences in Tax Structure

Before examining further the connections between the Canadian and U.S. tax reforms of the 1980s, it may be helpful to compare the broad structure of the two tax systems. Table 1 lists their major similarities and differences. Canada has a federal structure with ten provinces responsible for the majority of public sector expenditure, particularly in education and health care. Under this structure, there is a multilevel tax system with individual, corporate, and sales taxes levied by the provincial and federal governments, and property taxes levied by the municipalities.

After the tax reforms of the 1980s, the Canadian system featured marginal federal income tax rates ranging from 17 to 29 percent on income net of deductions, with a provincial surcharge of 14–16 percent; federal corporate tax rates ranging from 12 to 28 percent, with additional provincial tax rates of 10–17 percent; and a federal manufacturers' sales tax with rates of 13.5 percent, since replaced with a goods and services tax (the GST) with a rate of 7 percent. This combined system collected federal, provincial, and local taxes amounting to around 33.5 percent of GDP in 1986/87.

The U.S. tax system is related in that it also embodies a federal structure. As table 1 points out, however, there is distinctively less revenue sharing between the U.S. federal and state governments than between the Canadian federal and provincial governments. Like Canada, there are federal and state personal income and corporate taxes, but unlike Canada, there is a large social security tax and no federally operated, broadly based sales tax.

After the tax reform of 1986, the U.S. system contained marginal personal income tax rates of 15 and 28 percent, and corporate tax rates of 20 and 34 percent. Retail sales taxes at the state level varied from 0 to 7.5 percent, with excise taxes being levied on such items as alcohol, tobacco, and gasoline. Federal, state, and local government revenues accounted for almost one-third of GNP; this figure is almost identical to its Canadian counterpart (see Pechman 1987, p. 1).

Tax Changes in the 1980s

Tables 2 and 3 document the major U.S. and Canadian tax changes during the 1980s. The first change of the decade in the United States occurred in June 1981 with the Reagan administration's Economic Recovery Tax Act. This tax package reduced individual rates, which previously had ranged from 14 to 70 percent, to 11 to 50 percent by 1983, with a corresponding reduction in the maximum capital gains tax rate from 28 to 20 percent. It also introduced a new accelerated depreciation system, termed the Accelerated Cost Recovery System (ACRS). Substantial debate followed these reforms, reflecting earlier debates in the United States on tax structure in the 1970s. This led to the 1984 U.S. Treasury tax reform proposals and eventually to the Tax Reform Act of 1986.

The main features of the 1986 Reform Act are by now well known.[1] At the personal level, the previous multibracket rate structure, with marginal rates ranging from 11 to 50 percent, was replaced by a two-rate structure of 15 and

1. See, for instance, Deloitte, Haskins, and Sells (1986), Pechman (1987, 1988), and Herber (1988).

Table 2 **Major U.S. Tax Changes During the 1980s**

1981	*Economic Recovery Tax Act (ERTA)*
	• Acceleration in depreciation allowances increased; three asset lives of 15, 5, and 3 years
	• Rate cuts at personal level and bracket consolidation (minimum tax reduced from 14 to 11 percent; maximum tax reduced from 70 to 50 percent)
	• Changes in Individual Retirement Accounts (IRAs; tax-sheltered pension contributions)
1984	*Tax Reform Proposals*
	• Proposal to raise about $50 billion in revenue
	• Three-tier system of taxation of life insurance companies and life insurance proceeds replaced by single-taxation system at corporate rate
	• Other restrictions on deductions
1986	*Tax Reform Act*
	• Investment tax credit eliminated (was 10 percent)
	• Acceleration in depreciation largely removed
	• Cut in corporate tax rate (maximum rate reduced from 46 to 34 percent; minimum rate reduced to 20 percent)
	• Reduction in number of personal tax brackets (from 14 to 5 in 1987, to 2 in 1988)
	• Cuts in personal tax rates (maximum rate reduced from 50 to 38.5 percent in 1987, to 28 percent in 1988; minimum reduced to 15 percent in 1988; the rates to be indexed)
	• Full taxation of capital gains
	• Increase in revenue collected at corporate level
	• IRA use limited
Throughout Decade	
	• Steady increase in ceilings and rates in the Social Security tax
	• Steady attempt to close tax loopholes
	• Base-broadening measures

Source: Tax News Service (various issues).

28 percent, with a 5 percent surcharge for some higher-income taxpayers. There were also increased personal and dependent exemptions. An expanded tax base was achieved through the elimination of several deductions, including those for sales taxes, the $100 dividend exclusion, and consumer interest expense, and an increased inclusion rate for capital gains.

At the corporate level, the 46 percent top rate was reduced to 34 percent. There was a substantial reduction in investment incentives, with an elimination of the investment tax credit and a sharp deceleration in depreciation allowances. In addition, a number of industry-specific tax preferences were eliminated, including those for oil and gas producers and for financial institutions. The alternative minimum tax was increased, with a 20 percent rate applying to corporations and a 21 percent rate for individuals.

Table 3 Major Canadian Tax Changes During the 1980s

1981 *Budget*

- Loophole plugging
- Cut in top marginal personal rates (reduced from 65 to 50 percent)

1984 *Budget*

- Major planned changes in pension tax rules announced, to be phased in in future years (increase in tax deductions for contributions)

1985 *Budget*

- Announcement of $500,000 lifetime capital gains exemption
- Corporate Tax Discussion Paper announces planned rate reduction and limiting of use of investment incentives

1986 *Budget*

- Announcement of plan to study VAT as possible replacement for MST

June 1987 *Tax Reform Package*

- Corporate rate further reduced
- Investment incentives eliminated (investment tax credit, acceleration in depreciation allowances)
- Personal rates reduced and brackets consolidated
- Exemptions in personal tax converted to credits
- Capital gains provisions substantially curtailed
- VAT replacement of MST confirmed, and three options spelled out

April 1989 *Budget*

- Confirmation of GST as replacement for MST by 1991
- Increase in federal surtax
- MST increases: construction materials from 8 to 9 percent; alcohol and tobacco from 18 to 19 percent; telecommunication services from 10 to 11 percent; other goods from 12 to 13.5 percent
- Excise taxes on gasoline increased

January 1991 *Budget*

- Implementation of GST/MST switch
- Credit-invoice VAT will apply to the final sale of goods and services, with certain items classified as tax-free (can claim input tax credits) and tax-exempt
- Tax-free items: basic groceries, agricultural and fishery-related products, prescription drugs
- Tax-exempt items: existing housing, charities and nonprofit organizations (with certain restrictions)

Sources: St-Hilaire and Whalley (1985), Government of Canada (1985, 1989), Fretz and Whalley (1990, ch. 7).

Tax changes in Canada during the 1980s had different origins from those in the United States. In May 1985, a discussion paper on corporate tax reform was released along with the budget of that year (see Government of Canada 1985). It suggested a reduction in statutory rates and an elimination of investment incentives. In January 1986, a minimum personal tax was introduced. In the February 1986 budget, the corporate tax rate was reduced from 36 to 33 percent and the general investment tax credit was eliminated. In late 1986, a planned release of a discussion paper on sales tax reform was shelved, ostensibly because of the passage of the U.S. tax reform legislation and because of the argument that Canadian tax reform should consider a wider range of reform options, including income tax reform (see the discussion in Bossons 1987). The result was a 1987 White Paper on tax reform, which proposed further changes in individual, corporate, and sales taxes (see Government of Canada 1987a–d for more details).

The resulting legislation in December of 1987, like the 1986 U.S. tax reform, consolidated personal rate brackets and enacted the changes in personal and corporate taxes mentioned above, with a further lowering in the corporate tax rate to 28 percent. The lowering of corporate rates was clearly seen as needed, since with lower U.S. corporate rates, increased debt financing in Canada by cross-border integrated multinationals would erode the Canadian tax base. Changes in personal taxes were also seen as following the U.S. pattern, but the arguments made were based on individual incentive (effort), rather than on tax-competitive effects. Distinctive Canadian elements, such as the conversion of deductions and exemptions into credits, were also consciously included in the reform package.

In January 1988, changes were also proposed in the then-existing federal manufacturers' sales tax that came close to shifting the tax from a manufacturing-level tax to a wholesale tax for a limited range of products. The April 1989 budget reiterated plans to introduce a value-added tax to replace this tax, with the details subsequently following on its introduction in 1991 (see Government of Canada 1989).

Objectives of Tax Reform in the 1980s

The stated objectives for tax reforms in Canada and the United States in the 1980s reflected a range of concerns: economic neutrality, lower tax rates, equal treatment of equals, fairness for families, fairness across income classes, simplicity and perceived fairness in the tax system, and inflation-proof tax law.

But, at the same time, there were differences between the countries. In the Canadian case, tax changes were less the outcome of a consciously designed strategy for improving the Canadian tax system than they were a response to various emerging pressures on the system. One was the need for revenue, in the future as well as currently. The idea was to put in place a tax system with the broadest possible base and lowered rates, not only for the resulting efficiency gains but also for the increased ease of raising rates for future revenue requirements. Another was the perception that the Canadian tax system had undermined Canada's international competitiveness and needed to be changed.

In the U.S. case, public sentiment for tax change was already present in the late 1970s in the form of attempts to limit taxes. Thus, in 1978, Proposition 13 emerged in California followed by widespread constraints upon state and local taxes, especially on property taxes. In the late 1970s and early 1980s, high inflation rates were a major further concern because of bracket creep in the federal income tax. By the early 1980s, the view had become widespread that the income tax was unfair. The congressional response to these concerns was evident in the early 1980s in the introduction of several comprehensive income tax bills, each bill advocating a substantially broadened personal income tax with sharply lower marginal rates and fewer brackets.

Beyond these factors, there was a feeling that the U.S. tax system had become overly complex, with a proliferation of exclusions, adjustments to income, deductions, and other complexities. These, in turn, were perceived to have led to substantial erosion of the tax base through loopholes, which violated principles of vertical and horizontal equity and, in addition, distorted resource allocation. This lack of a comprehensive tax base was felt to distort saving and investment, asset and financing decisions, work effort, and invention and innovation. The system, in particular, encouraged investment in socially unproductive tax shelters.

There was also a view that the tax system had created unfair treatment for families, since tax burdens increased relatively more for large families with many dependents than for other taxpayers. In the early 1980s, high inflation rates and the interaction of inflation and taxes were felt to create further inequities and distortions. In neither country did the tax system of the day accurately measure real income from capital in most cases.

3. Separate Development or Interdependent Convergence?

Perhaps the central issue in evaluating the similarities in tax reform experience during the 1980s between the two countries is the extent to which tax changes in the smaller country (Canada) were driven by earlier change in the larger country (the United States). Have the incentive mechanisms linking policy between the two economies become so strong that failure to follow change in the larger country inevitably results in large penalties on the smaller one, such as loss in tax base through migration, loss in revenue, opportunities for tax arbitrage, and other effects?[2]

2. This issue of foreign response to the 1986 U.S. tax reforms is also discussed in Tanzi (1987) and Whalley (1990). Tanzi, writing soon after the reforms and without having the full range of foreign responses available to him, suggested that the similarity of outcome reflects common intellectual forces more than direct cross-country harmonization pressures. Bossons (1987), in

There is no doubt that during the 1980s some of the tax changes introduced in Canada reflected these concerns. In 1987, reducing the Canadian corporate tax rate was rationalized, in part, by the argument that otherwise Canada would suffer base (and revenue) erosion. However, Canadian-specific issues, such as the large number of corporations that did not pay tax because they were in a net loss position for tax purposes, also were important influences on the reform. The 1987 Canadian personal income tax changes also clearly mirrored some of the features of the U.S. changes by consolidating brackets and lowering rates. The Canadian policy debate at this time unambiguously involved arguments to the effect that unmatched rate reductions in the United States might generate an outflow of professional and other higher-income labor from Canada (see Government of Canada 1987a, p. 21, and Dodge and Sargent 1988, p. 52).

At the same time, the strength of the role of tax changes in the United States in generating comparable changes in Canada remains very much in doubt, even in these cases. While the interactions involved were discussed in Canadian government circles, these changes were at the same time reflective of general directions that nearly all OECD countries were moving in during this period (see Whalley 1990). As table 4 clearly shows, rate reductions at personal and corporate levels, along with personal bracket consolidation, occurred not only in Canada and the United States but also in other OECD countries—the United Kingdom, Japan, Sweden, Australia, and New Zealand. This raises the question of whether common intellectual influences, shared by countries other than Canada and the United States, were behind these changes. Indeed, it is arguable that the 1984 corporate changes in the United Kingdom had more influence on policy in Canada and the United States, by demonstrating the resolve of at least one major government to move in this direction, than subsequent effects through direct links between the two economies. It is quite clear, for instance, that the U.K. initiatives were influential in stimulating consideration of corporate tax reform in Canada.

Other factors also enter into any evaluation of how strong tax policy interdependence between the two countries actually was in the 1980s. While there are clearly elements of similarity in tax change, as we stress above, the more fundamental differences in tax structure between the countries, detailed in table 1, have persisted throughout the 1980s (considerably higher indirect taxes in Canada, considerably higher social security taxes in the United States, much larger revenue sharing in Canada, and other features). If increasing integration between the economies generates an incentive structure for more tax similarity, why have only a subset of similar changes occurred in the

contrast, emphasizes the importance of cross-border pressures from the United States into Canada as far as corporate taxes are concerned and emphasizes the role played by the U.S. income taxes in redirecting Canadian reforms.

Table 4 Corporate and Personal Tax Changes in the 1980s: U.S., Canada, and Other OECD Countries

	U.S.	Canada	U.K.	Japan	Sweden	Australia	New Zealand
Personal Taxes							
Bracket Consolidation	14→2	10→3	13→6→2	15→5	11→4	5→4	5→2
Rate Reductions (top marginal rate)	50→28(+5)	34→29 (federal only)	80→40	70→50	80→50 (by 1991)	60→49	66→33
Corporate Taxes							
Rate Reductions	46→34	36→28 (federal only)	52→35	42→37.5	58→30 (by 1991)	46→49→39	45→42→28→33
Change in Investment Incentives	ITC eliminated; Accelerated depreciation withdrawn	ITC eliminated; Accelerated depreciation withdrawn	Accelerated depreciation withdrawn	Accelerated depreciation withdrawn	Limits on writeoffs	Accelerated depreciation withdrawn	Accelerated depreciation withdrawn
Dates of Major Changes	1986	1985/87	1984	1987/88	1984	1988	1988

Source: Adapted from Whalley (1990).

1980s, with other larger differences in tax structure between the two countries left unchanged?

A further issue in disentangling links between U.S. and Canadian tax changes in the 1980s is the question of timing. Who moved first, and with what effect? Dating tax reforms and determining their underlying intent is a difficult exercise in any case, and comparing across countries makes it even more so. One of the complexities of trying to determine whether the United States changed its tax system first and, if so, whether its actions predated actions in Canada, is that what constitutes a major tax change is often hard to determine. In the U.S. congressional system, because of the need for eventual consensus, a date of agreement and a concrete act can be taken to date the reform. Under the Canadian parliamentary system, a number of tax measures through a series of budgets cumulatively constitute reform over a much longer period of time.

Despite the difficulty in dating tax reform efforts, it does appear that Canada was considering and instituting corporate-level changes simultaneously with or even prior to the tax reforms in the United States. This claim is particularly damaging to the theory that Canadian tax policy simply must follow U.S. changes, because corporate capital is probably the most mobile of factors across the border. It is also true that many other countries were also moving in the same direction on corporate tax reform. On the other hand, once the United States moved, Canada clearly began to modify its position. In some cases, Canada went further in directions it was already moving, but in others, the policy directions were reversed. Thus, Canada modified its corporate tax reform in 1987 through deeper cuts in rates, in light of the U.S. actions of 1986, even though Canada had been moving in the same general direction from 1985 onward. At the personal level, it seems reasonable to claim the United States moved first. But the U.S. personal tax changes of 1986 seem not to have triggered the same kind of direct Canadian response that corporate tax measures did.

Two alternative interpretations of these events offer themselves. One is that change in the larger country drives the response in the smaller country. The other is that what similarities there are in the changes largely reflect common intellectual influences at work.

Our conjecture is that the common intellectual influences may well have been the primary reason for the similarity of result, rather than the strength of direct links between the two countries. This in no way negates the importance of direct linkages, but suggests that because of many impediments to the movement of factors between countries (such as immigration restrictions and trade barriers), only in the corporate capital area did these linkages dominate.

The broader implication seems to be that concerns in Canada over wider and deeper integration between Canada and the United States, particularly following the Canada-U.S. free-trade agreement—that policy autonomy in Canada will progressively weaken—do not seem to be strongly borne out by experience with tax policies in the two countries in the 1980s. This appears to have been the case for a number of reasons: large and persistent differences in tax structure remain despite the common elements in the tax changes; there is surprisingly limited effect on tax policy from direct economic integration between the countries; and a strong role is played by ideas and intellectual influences in policy formation in both countries. When ideas are jointly shared, similar policies result; when they are not, dissimilar outcomes occur.

4. Summaries of the Studies

The 1980s were clearly a decade of dramatic changes in the tax structures of Canada and the United States. The two economies are undoubtedly still adjusting to those changes. The goal of this volume is to evaluate the forces behind the changes, their consequences, and the likely evolution of tax policy for both countries. We now provide brief summaries of each of the contributions in the volume.

Tax Harmonization

The first two papers deal explicitly with the pressures for harmonization of the personal and corporate tax systems in Canada and the United States. In the first of them, Robin Boadway and Neil Bruce begin by clarifying the definition of tax harmonization and discussing its advantages and disadvantages. Harmonization's primary disadvantage is that it may constrain each country's ability to pursue different objectives using different tax policies. The advantages of tax harmonization lie in the areas of efficient allocation of mobile factors across boundaries, reduction in tax arbitrage possibilities, and more sensible treatment of transactions and institutions involving overlapping or multiple tax jurisdictions.

Boadway and Bruce describe the differing fiscal structures of the Canadian and American economies. First they examine the broad fiscal differences between the countries and then focus on the detailed differences in the personal and corporation income tax systems. In general, Boadway and Bruce find that the corporate tax systems are far more similar than the personal income tax structures. They attribute this observation to stronger pressures for harmonization in the taxation of highly mobile capital.

Boadway and Bruce also examine the harmonization of state-and provincial-level taxes with the national tax systems in the two countries. They find that the Canadian subnational tax systems are almost completely integrated or harmonized with the federal-level tax, whereas the individual states in the United States follow widely varying tax policies. The authors examine how cross-border income flows are currently treated by each country.

Finally, the authors analyze the extent to which pressures for income tax harmonization are likely to impinge on independent income tax policy making in the two countries as a result of increasing economic integration. They also consider the advantages of extending the formal harmonization provisions that exist to varying degrees within the countries to their cross-border taxation policies. The authors consider the specific issue of taxing income to capital, which is distinguished from factors such as labor and land by its high degree of mobility across the international border. Specifically, they analyze the difficulties in using the corporation and personal income tax systems in conjunction with each other (such as with an integrated income tax system) in order to tax income to capital as it accrues. The difficulties arise because of the cross-border investments of multinational corporations. Boadway and Bruce conclude by discussing the ideal system of tax harmonization from a worldwide point of view.

Roger H. Gordon's paper examines the issue of tax harmonization in light of increasing integration of the Canadian and American economies and the recent free-trade agreements between the two countries. Gordon notes that the mobility of goods and capital between the United States and Canada is already substantial and will increase as a result of the free-trade agreements. The impact of mobile goods and factors on tax design and policy has already been studied in the local public finance literature. The findings indicate that the mobility of taxed activity will drive a community's tax structure toward benefit taxation, in which people pay in taxes an amount appropriate to cover the costs they impose on the public sector. This suggests that the increasing mobility between the two countries should cause each country's *national* tax structure to evolve toward benefit taxation. Where this pressure will be greatest depends on the degree of mobility of each type of taxed activity.

Gordon, as is discussed in several other papers in this volume, notes that the mobility pressures are probably greatest when dealing with taxes on capital income. Taxing the return on capital located within the United States (or Canada) simply drives capital elsewhere, until the resulting capital shortage within the country brings the net-of-tax return to capital back up to the return available elsewhere in the world. But this capital shortage results in lower wage rates, or lower land rents—the tax is ultimately paid by immobile factors. Corporate income taxes then effectively result, not in taxes on capital, but in an arbitrary pattern of taxes on these immobile factors. Corporate income taxation of multinationals suffers from the further problem that these firms can easily manipulate their financial accounts so as to transfer profits to subsidiaries located in tax havens. It is thus very difficult to collect any taxes from such firms, regardless of who ultimately pays these taxes.

While mobility of individuals between the two countries is not great in terms of numbers, the pressures created may not be negligible. High-income individuals, or those facing high estate taxes, may have a lot to gain by relocating. Since such individuals are often retired, relocation is particularly easy. Mobility of these individuals makes redistribution of income through the tax system more difficult. While the pressure of migration is probably minor at this point for the United States and Canada, it is likely to become very important within the European Community as all barriers to migration of individuals among the member countries are eliminated.

Gordon argues that even though tax competition will push each country's fiscal structure toward that of a benefit tax, such a tax system may not be mutually advantageous; in fact, both countries may well gain through explicit or implicit coordination of fiscal policies. In many cases the appropriate form of coordination involves equalization of tax rates. If, for example, the United States and Canada agree to impose equal estate tax rates, then retired individuals will not be able to escape the tax simply by moving between the two countries. Similarly, equalizing corporate income tax rates eliminates the incentive on a firm to relocate. It is equalization of net tax rates, however, not statutory tax rates, that matters. If only the latter are included in an agreement, then each country has an incentive to attract activities that are taxed on net by giving them, for example, extra public services or tax subsidies not covered by the agreement. Unless the governments are willing to make such agreements comprehensive enough to include all the factors entering into the net tax rate, agreements are unlikely to be very effective.

The world economy has become far more integrated in recent years. Remaining barriers to the mobility of goods, capital, and individuals are dropping at a rapid pace, particularly in the European Community but almost as quickly between the United States and Canada. Gordon argues that once the implications of these changes for national taxes are recognized, national tax structures are likely to look very different than they do now.

Income Security and Tax Incidence

The third and fourth papers in the volume deal with income security and tax incidence in Canada and the United States. Jonathan R. Kesselman's paper notes an important exception to the trends toward harmonization in the two countries' tax codes. He finds that the income-security systems of the two countries have shown remarkably little convergence either in stand-alone provisions or tax-based provisions. Unlike many other areas of economic policy where Canada has imitated the United States, income security faces few competitive pressures for harmonization. This lack of harmonization pressure is at least partially due to immigration laws that make it difficult to move from one country to the other. Unskilled and low-wage workers may be particularly immobile.

Kesselman's paper provides a detailed description of the income-support policies of Canada and the United States. He finds that while each country has made many recent changes to policies affecting income security, these changes have usually been made without taking advantage of the experience with similar policies of the other country. Despite the general lack of coordination or even information sharing, the income-support systems of both countries have some common shortcomings. Three problem areas discussed by Kesselman are the high effective tax rates faced by beneficiaries due to phaseout provisions; the complexity of income-support programs in both countries (particularly due to the simultaneous use of multiple programs in each country); and the failure to achieve horizontal equity and vertical equity.

Kesselman concludes his paper by speculating about the future evolution of income-security programs in the two countries. He suggests that reforms would build upon refundable credits or income guarantees for those unable to work, including dependent children. Employable persons would be assisted mainly through work-related benefits; the choice will hinge on administrative and compliance factors as much as on pure economic considerations. Kesselman also hints that the increasingly severe competitive pressures from the rest of the world may ultimately result in pressure to harmonize and rationalize income-support policies in both countries.

The contribution of James B. Davies to this volume asks what is known about overall tax incidence and recent changes in incidence in Canada and the United States. There is a popular notion that Canada has a more egalitarian income distribution than the United States. Davies examines whether there is truth to this notion, and then attempts to assess how differences in the tax systems affect the relative degree of income inequality on the two sides of the border.

For the most part, previous estimates of tax incidence have been made in an annual framework. There has been a long-expressed dissatisfaction with this arbitrary time period, however. Recently there has been some interest in generating estimates of the lifetime, as opposed to the annual, incidence of taxes. Important insights are gained, which are relevant to the comparison of tax structures in Canada and the United States. For example, general sales taxes look considerably less regressive over the lifetime than they do in annual data, since consumption is approximately proportional to permanent income. Since Canada relies much more heavily on sales and excise taxes as a revenue source than does the United States, this finding implies a significant difference in the comparison of overall tax progressivity in the two countries, depending on whether an annual or a lifetime framework is used.

Davies's study concentrates on changes in the income distributions and the tax progressivity in the two countries over the 1970s and 1980s. In the early 1970s, the overall incidence of taxes appears to display a similar degree of progressivity, if one uses annual data in the analysis. However, if one accepts the conclusion from the studies of lifetime tax incidence that sales and excise taxes are significantly less regressive than social insurance contributions, then from a longer-term viewpoint the overall tax system was probably more progressive in Canada than in the United States, even in the early 1970s.

Since 1970 the major causes of changes in the relative progressivity of taxes have likely been changes in rate structures and overall tax mix. The absence of bracket and exemption indexation through most of the period reduced the progressivity of the U.S. federal income tax sharply. Canada, in contrast, had indexation throughout the subperiod with highest inflation and introduced measures such as child and sales tax credits, which reduced tax burdens on low-income families significantly. Finally, the shift in tax mix in the United States has been toward rising social insurance contributions, whereas in Canada the shift has been toward increasing the personal income tax. Hence, the United States has seen a buildup of one of the least progressive forms of taxation, while Canada has seen an increase in the importance of one of the most progressive forms of taxation. The conclusion is that, over the last two decades as a whole, the overall Canadian tax system has become more progressive than the American system.

The significance of the overall divergence in progressivity trends between Canada and the United States is all the greater due to the contrasting changes in inequality of pretax income between 1970 and 1990. Inequality in pretax income (which includes transfer payments) has been trendless in Canada, but has increased steadily year-by-year since about 1975 in the United States. The combination of rising underlying inequality and a decreasingly progressive tax system overall in the United States (until 1986) forms a sharp contrast with Canadian experience.

Davies argues that the relative trends in progressivity and inequality may have been reversed since 1986. The 1986 U.S. tax reform unambiguously increased overall progressivity; the Canadian reforms were probably less progressive. Further, the United States now has fully indexed bracket amounts for inflation, while Canada now adjusts the figures at the inflation rate less 3 percent. Thus, the Canadian tax system may become gradually less progressive relative to the U.S., reversing its traditional trend.

Effective Tax Rates and the Cost of Capital

The fifth and sixth papers deal with the effective rate of tax on capital investments in the two countries and the comparative cost of capital. The study by Kenneth J. McKenzie and Jack M. Mintz compares effective corporate income tax rates for companies operating in the United States and Canada. The effective tax rates are calculated for a number of specific cases that allow for differences in assumptions regarding risk, financial arbitrage, the use of tax losses, and the tax treatment of multinational investments. The McKenzie-Mintz "base case" assumptions are open economy arbitrage (i.e., only corporate-level and not personal-level tax differences are considered), an absence of risk, fully taxpaying firms, and no multinational investment. In that case, the authors find that the aggregate Canadian effective corporate tax rate (29 percent) was substantially higher than the aggregate American tax rate (20 percent) in 1990.

McKenzie and Mintz disaggregate by sector their calculations of the effective corporate tax rates for the two countries. They also compute the rates for 1975, 1980, 1985, and 1990. The authors conclude that the difference between Canadian and U.S. effective corporate tax rates was even larger in the earlier years. Thus, the combination of the tax measures adopted in the 1980s and the lower rate of inflation experienced in both countries by the end of the period examined has caused some convergence in the effective tax rates.

McKenzie and Mintz find that their conclusions are fairly insensitive to most of the assumptions imbedded in their base case. However, their conclusions are overturned when they incorporate into their analysis companies experiencing tax losses. Assuming that tax losses confer an advantage to companies in sheltering future income from taxation, McKenzie and Mintz find that the 1990 difference in effective corporate tax rates on capital in Canada and the United States is virtually eliminated. Their final assessment, therefore, is that Canadian and U.S. corporate tax rates are very similar in aggregate, although this conclusion masks considerable differences between the two countries for specific industries, investment activities, and tax-loss experience.

The paper by John B. Shoven and Michael Topper examines the cost of capital in the United States and Canada, rather than concentrating on effective tax rates. The cost of capital is the hurdle rate faced by potential new investments. In general, the cost of capital is determined by the terms available in financial markets as well as by tax considerations. For comparative purposes, the Shoven-Topper paper includes calculations on the cost of capital in Japan.

Shoven and Topper pay considerable attention to the role of risk premia and the interaction of risk premia and taxes in determining the cost of capital. They feel that most previous work on the cost of capital has relied too much on the real interest rate as a measure of the terms available in financial markets. In fact, financial market returns exhibit a great deal of risk aversion, with risky assets having much higher average rates of return than safe ones. The paper asserts that the hurdle rate on new investments should similarly differ depending on the riskiness of the venture.

One of the conclusions of Shoven and Topper is that risk premia are extremely important components of the cost of capital, at least as important as the interest rate or taxes. They also find that the corporate and personal tax systems of Canada and the United States (and Japan) magnify risk premia. That is, the tax systems cause the extra return demanded on risky undertakings to be larger. The key finding of the authors relevant to the theme of the volume is that the cost of capital is very similar for Canada and the United States. This similarity occurs because financial terms appear to be almost identical in the two countries and because the corporate tax systems are effectively quite similar. The authors conclude that the cost-of-capital figures are so similar in the United States and Canada that the location of investments between the two countries is not distorted. Shoven and Topper find that both of these countries suffer a large cost-of-capital disadvantage relative to Japan. While this is partially due to tax features, it is mostly a result of the segmented Japanese financial market, which exhibits a substantially smaller risk premium.

International Spillover of Taxation

The seventh paper, written by Joel Slemrod, deals with the impact of the U.S. tax reform on Canadian stock prices. Slemrod examines one potential channel of international spillover of taxation. The issue addressed is how Canadian businesses were affected (as reflected by the stock market) by U.S. tax reform. His analysis is an event study of the impact of the Tax Reform Act of 1986 on the abnormal stock market returns of publicly traded Canadian corporations. The paper's premise is that the U.S. tax reform induced changes in the prospects for Canadian enterprises that were promptly reflected in their stock market valuation.

Slemrod proposes that there are at least three possible avenues of influence of the U.S. tax reform on Canadian companies. First, there is the "My enemy's enemy is my friend" model, which asserts that anything that is bad for U.S. firms will therefore be good for their Canadian counterparts. Second, there is the "As the U.S. goes, so goes Canada" logic, which suggests that whatever changes are taking place in the United States will also soon be made in Canada. Finally, there is the "But I'm half American" story, which suggests that multinationals are so important that both Canadian and U.S. firms are directly affected by changes in U.S. tax laws.

Slemrod's event study examines stock price behavior around four key dates in the evolution of the 1986 U.S. tax reform. In general, he finds that Canadian stocks had negative abnormal returns around these dates, when the U.S. tax reform presumably became more likely. However, when he examines the cross-industry correlation of abnormal Canadian and U.S. returns, he finds it to be negative. That is, those industries that fell in value on the U.S. market around the key dates tended to be those that rose in value in Canada. This lends some support to the "My enemy's enemy is my friend" theory. However, there was no evidence that this negative correlation was particularly strong for industries with a high degree of competition between the two countries. Slemrod concludes his paper suggesting that further investigations into the spillover effects of one country's tax policies would be profitable.

Demographics and Fiscal Policy

The eighth paper, written by Alan J. Auerbach and Laurence J. Kotlikoff, examines how demographics and fiscal structures are likely to interact over the next several decades in Canada and the United States. They predict how these influences will affect each country's rate of capital accumulation and identify the implications of differences in projected saving for patterns of trade and capital flows. The consequences of demographic changes are particularly interesting in a Canada-U.S. comparison because Canada's population is aging even more rapidly than the United States's; the governments of the two countries offer significantly different packages of social services (such as social security, health care, and education) to their citizens; the respective public pension systems are financed quite differently; and the two countries obviously differ sharply in their size and openness.

Auerbach and Kotlikoff's study uses a general equilibrium dynamic simulation model of the United States and Canada, which takes account of the interrelated behavior of households, firms, and government during the process of demographic transition. Their model projects the behavior of each economy from 1990 to 2050 under a variety of assumptions about the fiscal response to the financial pressures imposed by aging populations.

Among the interesting findings is the prediction that rising real wages (due to the smaller relative size of the working-age population) should more than offset any added payroll tax burden to finance public pensions. Their model predicts a continuing decline in the U.S. saving rate over the next sixty years, while it forecasts that Canadian saving rates will rise until 2010 and then decline quite sharply. The different demographic patterns are behind the different evolution of saving rates. The Canadian current account is predicted to follow the same pattern as saving—increasing surpluses until 2010 followed by declining surpluses and eventually deficits.

Taxes and Housing

In the ninth paper, James M. Poterba compares the relative tax burdens on owner-occupied housing in Canada and the United States. One reason why this is an important topic is that widespread concern arose in the 1980s about international competitiveness. This concern led to calls for policies to encourage investment in plant and equipment. The net effect of the tax code on investment in a particular part of the economy depends on the relative tax treatment of investment in different sectors. Consequently, one way to encourage industrial investment is to discourage housing investment, and vice versa.

The two countries differ sharply in their tax treatment of owner-occupied housing. The U.S. tax system allows households to deduct mortgage interest payments in computing their taxable income. Further, housing capital gains are fairly lightly taxed. The Canadian tax system does not permit mortgage interest deductions and thus makes the tax treatment of housing less favorable. There are many additional ways in which the tax treatments differ.

Poterba's research shows that the net incentives for housing investment in Canada are in fact smaller than those in the United States, but that the disparities between the two nations have narrowed over time. In 1980, for example, the effective cost of purchasing owner-occupied housing was only one-third as great for a high-income U.S. household as for its Canadian counterpart. The net effect of the last decade's declining marginal tax rates in both nations, however, has been a fall in the relative U.S. tax subsidy to housing. Poterba estimates that by 1989 the cost of owner-occupied housing services for top-bracket households was nearly two-thirds as great in the United States as in

Canada. For households with lower incomes, and hence lower marginal tax rates, the disparities were even smaller.

The narrowing of tax incentives for housing investment in the two nations may explain the converging ratios of housing capital relative to GNP. In 1960, for example, the stock of owner-occupied housing in Canada was 18 percent of GNP, compared with 26 percent in the United States. In 1989 the housing stocks in both nations were 27 percent of GNP. Similarly, while in 1970 the home-ownership rate for most age groups was higher in the United States than in Canada, by the mid-1980s the rate among younger age groups in Canada was higher than that in the United States.

Poterba notes that harmonizing tax policies across countries requires attention to more than just policies related to the investment and financial transactions of international firms. It requires broad-based attention to the structure of taxation, including the treatment of nontradable assets such as housing. The last decade has witnessed convergence in this aspect of the U.S. and Canadian tax codes, but disparities remain. The Canadian tax code still provides a smaller incentive for investing in owner-occupied housing than does the U.S. tax system.

Sales Taxes

The tenth paper, authored by Charles E. McLure, Jr., discusses the lessons for the United States from the Canadian debate on sales tax reform. The United States has been looking for ways to reduce its federal deficit for nearly a decade now, and the possibility of introducing a value-added tax (VAT) or a national sales tax is often mentioned as a potential major new source of revenue. On the other hand, Canada has had a manufacturers'-level sales tax (MST) since 1924 and has just replaced it with a VAT. If the United States seriously considers some form of a national sales tax, then it seems only prudent for U.S. policy makers to learn from the Canadian experience.

McLure briefly describes the basic mechanics of three retail-level sales taxes (the credit-method VAT, a subtraction-method VAT, and a retail sales tax). He also evaluates two pre-retail taxes, the manufacturers' sales tax and the wholesale-level business transfer tax. Although ideal versions of the three retail-level taxes have identical effects, McLure notes that the credit-method VAT offers several advantages in practice. He also argues that a sales tax that stops short of the retail level distorts economic choices and creates severe administrative difficulties.

McLure summarizes the policy debates concerning sales and value-added taxes in the United States and Canada. He also elaborates on particular key issues, including intergovernmental issues, low-income relief, and economic neutrality. Special attention is devoted to the taxation of food, housing, agriculture, financial institutions, nonprofit institutions, and small businesses.

Subnational Taxes

The eleventh paper, written by François Vaillancourt, deals with the question of harmonization of subnational tax systems (state, provincial, and local) across Canada and the United States. Vaillancourt asserts that when U.S. and Canadian tax systems are compared, it is usually at the federal level, with little attention paid to subnational—provincial/state and local—tax systems. But subnational tax systems collect an important share (40–50 percent) of overall tax revenues in both countries and are, therefore, likely to have an impact on economic choices. The author describes the subnational tax systems of the two countries and examines the degree of harmonization within and between countries for 1976 and 1986. This examination is of interest since there has been little, if any, comparative quantitative assessment of the degree of harmonization of subnational tax systems in Canada and the United States.

Among the empirical findings of Vaillancourt's study are that there is a greater level of harmonization across subnational governments in Canada than in the United States, on a tax-by-tax basis. However, the overall effective tax burden is more uniform in the United States than in Canada, indicating a greater degree of tax-instrument substitution in the United States. Vaillancourt also notes that the elimination of the sales tax deduction in the U.S. federal income tax system has made subnational taxes more important in location decisions.

Evolution of Tax Policy in Canada and the United States

In addition to the eleven research papers just summarized, there are the reflections of two senior public finance figures—Richard A. Musgrave and Thomas A. Wilson—on the evolution of tax policy on both sides of the border. Their comments offer a glimpse into the future for tax policy, as well as an assessment of the current state of fiscal policy. The comments of these two eminent scholars add a unique perspective to the volume.

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