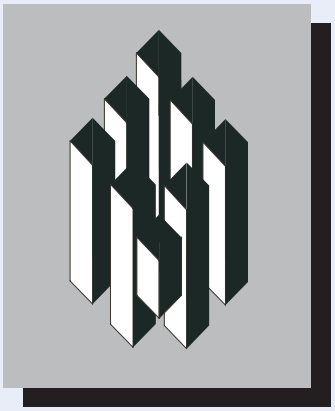

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Dealing with the Fiscal Imbalances: Vertical, Horizontal, and Structural

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Inside...
The important "fiscal imbalance," if there is one, lies in governments' tax and expenditure mixes. The solution begins with tax reform, especially for provinces that have retail sales taxes, and a lower federal GST.

The Study in Brief

Three types of fiscal imbalance — vertical fiscal imbalances between the tiers of government, horizontal imbalances across a single tier of government, and structural imbalances in the tax and expenditure mix — have figured prominently in recent public policy debates in Canada. The most widely used definition of vertical fiscal imbalance — the gap between a government's spending responsibilities and its own source revenues — is inadequate as a guide for public policy.

A better measure of vertical fiscal imbalance is the difference in the marginal cost of raising tax revenue between the levels of government. If we adopt this definition, it is by no means clear that there is a vertical fiscal imbalance between the federal and provincial governments, because the tax bases available to provinces are not necessarily more costly on the margin than they are at the federal level.

The federal equalization program is the main policy tool for addressing horizontal fiscal imbalances among the provinces. With respect to these imbalances, the existing level of equalization grants probably satisfies the constitutional requirement that the provinces be able to provide reasonably comparable services at reasonably comparable levels of taxation.

With regard to the structural fiscal imbalances, the key issue is excessive reliance on certain forms of taxation — the retail sales taxes levied by five provinces, the capital and corporate income taxes levied by the federal and provincial governments, and the heavy taxation of the financial institutions. An economically beneficial resolution is coordinated sales tax reform, whereby the five provinces that levy retail sales taxes would switch to a value added tax, with a base similar to the federal Goods and Services Tax, and the federal government would simultaneously cut the GST across Canada by two percentage points to five percent.

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The stresses and strains on our fiscal system have been slowly building, and there is now much discussion of our "fiscal imbalances." These imbalances can be grouped under three headings:

- vertical fiscal imbalances between the tiers of government

The alleged imbalances in revenues and expenditures of the federal and provincial government have received a lot of media attention in the past year, and they are being investigated by a parliamentary subcommittee.

- horizontal fiscal imbalances across a single tier of government

The differences in the fiscal capacities of the provinces, arising from the growth in nonrenewable resource revenues in Alberta, is a contributing factor, but at least as important is the Atlantic Accord that the federal government recently signed with Newfoundland and Labrador and Nova Scotia. These agreements have created immense pressures on the existing equalization system, leading to the current review of the equalization and territorial funding systems by an expert panel, headed by Al O'Brien, which is to report in December 2005.

- structural fiscal imbalances concerning the tax and expenditure mix

Here I will emphasize our excessive reliance on certain forms of taxation — the retail sales taxes levied by five provinces, the capital and corporate income tax (CIT) rates levied by the federal and provincial governments, and the heavy taxation of the financial institutions. On the expenditure side, there is the continuing pressure from the rapid expansion of health-care spending that is threatening to crowd out other forms of spending. In Canada, these tax and expenditure mix issues have an intergovernmental dimension because of the overlapping tax bases and blurred expenditure responsibilities of the two levels of government.

In this paper, it is not possible to deal adequately with all of these issues, but it is possible to give broad surveys of them. I will characterize my views as "skeptical" with regard to the vertical imbalance, as "realistic" with regard to the horizontal imbalance, and as "idealistic" with regard to the structural imbalance.

I would like to thank the Donner Canadian Foundation for its ongoing support of my research on tax policy and fiscal federalism in Canada. I would also like to thank John Lester of the Department of Finance, without implicating him in any way with the analysis or conclusions, for providing me with data.

Defining Fiscal Imbalances

Before launching the analysis, we need to examine the underlying concept of fiscal imbalance because much of the confusion and debate, especially with regard to vertical fiscal imbalance, has arisen from a faulty conception of what constitutes a fiscal balance. Here it is important to distinguish between accounting definitions and economic definitions. Measuring a gap between spending and revenues is the accountants' role. Determining whether taxes and spending are too high or too low is the economists' role. In any economic model of resource allocation, whether something is too high or too low depends on the gap between marginal costs and marginal benefits, and not on the gap between revenue and expenditure. For example, the fact that a firm's revenue exceeds its expenditure by $1 million does not tell us whether the firm's output is too high or too low, given its goal of maximizing profit. To determine whether the firm should produce more output or less, we need to know its marginal revenue and its marginal cost of production.

Similar principles apply in evaluating fiscal policy in the public sector. From an economist's perspective, balance does not mean that revenues equal expenditures for a particular government at a particular point in time or across levels of government. We do not know whether taxes or expenditures are too high or too low unless we have some measures of the additional benefit from increased spending and the additional burden from tax rate increases. As I will argue in the following sections, the distinction between accounting measures of balance and economic concepts of balance is crucial for evaluating the claims that there are horizontal, vertical, and structural imbalances in Canada's public finance system.

Vertical Fiscal Imbalances: A Skeptical View[1]

The existence of a fiscal imbalance is almost an article of faith among some Quebec and Ontario politicians. For example, Bob Rae (2005), Ontario's former premier, has argued that "both the cities and the provincial governments that are not oil rich have a grievance — the government that is the furthest from the coal face of dealing with the real condition of the people appears to have more money than it knows what to do with."

However, not all commentators have jumped on the fiscal-imbalance bandwagon. For example, Andrew Coyne (2005) has derided the simplistic and self-serving way in which provincial governments have adopted the notion of a fiscal imbalance, arguing that it is "one of those things like dark matter or quantum uncertainty that defy comprehension by the ordinary layman."

[1] Parts of this section are drawn from Dahlby (2005b).

I will argue that fiscal imbalance is a useful concept, but that the conventional definition of fiscal imbalance is almost totally inadequate as a guide for public policy. On the substantive issue of whether there is actually a fiscal imbalance in Canada, I remain a skeptic.

Defining Vertical Fiscal Imbalance

First, consider the conventional definition of vertical fiscal imbalance. The three definitions given below are drawn from American, Australian, and Canadian sources:

- "the inability of one level of government…to fund its own responsibilities from its own revenue streams without monies from elsewhere, in this case by borrowing" (Walter 2004)

- "The difference between the relative revenue and spending responsibilities of the Commonwealth and States…" (Webb 2002)

- "the mismatch of own revenues and expenditures of governments located at various jurisdictional tiers — and the consequent flow of funds among governments…." (Breton 1996, 197)

Although these definitions might be considered neutral, having no inherent policy implications, the word imbalance, as Breton (1997, 197–198) has noted, is like the words "distortion, irresponsibility, illusion, and manipulation, [which] if they do not speak of intrinsic evil, do not signal much that should be encouraged and nurtured, either.… Those who focus on the effects of vertical fiscal imbalance and on the money flows among governments…almost invariably decry vertical imbalance and the consequent flows of intergovernmental funds."

Not only are these definitions of fiscal imbalance emotionally loaded terms, they are totally inadequate for evaluating whether taxation and spending is too high or too low across the various tiers of government.

Consider first David Walter's definition. The "inability" of a government to fund its spending responsibilities from its own revenue sources would only strictly apply in situations where a government is at the top of its Laffer curve and could not raise any more revenues from any of its available tax sources by raising tax rates. Although this might occur in some rare situations, it is surely not relevant in the current Canadian situation. Provinces could raise more tax revenue by increasing their tax rates, but they do not want to because the cost of raising additional revenue is high. Furthermore, Walter's definition seems to imply that any time a government runs a deficit it can claim a fiscal imbalance, providing politicians with a ready-made excuse for fiscal mismanagement or for failing to impose the taxes that are necessary to finance their election promises.

Richard Webb's definition — a gap between revenue and spending responsibilities — is no better. While the Constitution determines the spending responsibilities of the provinces, in areas such as health, education, and welfare, it says nothing about the level or quality of these services. Meeting responsibilities is a vague concept. Meeting voters' demands for services is much more meaningful and should be the basis for defining a vertical fiscal imbalance.

Consider an alternative definition: There is a vertical fiscal imbalance in a federation if the marginal cost of raising tax revenue varies between the levels of government.

Central to this definition is the concept of the marginal cost of public funds (MCF), which measures the loss that occurs when a government raises an additional dollar of revenue. Taxes usually distort consumption, savings, labour supply, and investment decisions, resulting in a less-efficient allocation of resources. We can think of this efficiency loss as a decline in the size of the economic pie — the value of goods and services produced and consumed in the economy, including the value of leisure time and the quality of the environment. It usually costs a society more than a dollar to raise an additional dollar of revenue because of the additional distortions in resource allocation that are caused by a tax rate increase, and therefore the MCF usually exceeds one. Generally speaking, the MCF will be higher the greater the tax sensitivity of a government's tax bases.

This definition provides a basis for determining whether taxes and expenditures are too high or too low across the various levels of government. Just as a multiplant firm minimizes the total cost of producing its output by allocating production across its plants until the marginal cost of production is the same in all plants, so a federation will minimize the total cost of raising any given amount of revenue by equalizing the MCF across the two levels of government. For example, if the MCF is $1.20 for the federal government and $1.40 for the provincial governments, then an increase in taxation at the federal level that finances a transfer to the provincial governments, allowing them to reduce their taxes by the same amount, would result in a net social gain of $0.20 for every dollar transferred. Consequently, there is a vertical fiscal balance when the MCF is the same at both the federal and the provincial levels because this will minimize the cost of raising a given amount of tax revenues.

This way of defining vertical fiscal balance has the attractive feature, at least for public finance theorists, of integrating the concept of vertical fiscal balance with the theory of optimal taxation, which is the backbone of normative public finance. An optimal tax system is one that minimizes the total deadweight cost of raising a given amount of tax revenue. This can be achieved if a government sets its tax rates so as to equalize the MCFs across its various tax

bases. Our definition of vertical fiscal balance is simply an application of the principle of optimal taxation to a multi-tiered system of governments.

Why would the MCF be higher at the provincial level than at the federal level when, as Andrew Coyne and others have pointed out, the provinces have "access to every major revenue stream the feds have, plus some the feds do not"? One reason is that almost all tax bases are somewhat mobile between provinces, and therefore provincial tax rate increases are usually more distortionary than a federal nationwide tax increase. For example, an increase in Saskatchewan's retail sales tax rate may induce more cross-border shopping from some of its residents, who drive to Alberta to save on the retail sales tax. An increase in the federal GST does not make shopping in Alberta more attractive than in Saskatchewan, although it may induce cross-border shopping with the U.S. Similarly, some businesses may flee a province in response to higher provincial corporate income taxes, and some individuals' choice of residence may be partly determined by the provincial income tax rate, but federal increases in these taxes do not alter location decisions within Canada.

Because of interprovincial tax base mobility, a province's MCF may be significantly higher than the federal government's MCF. This is one reason why central governments in most federations around the world raise more in taxes than they spend on their own programs and why they make transfers to subnational governments. The fact that subnational governments' tax revenues do not match their expenditures and that they rely on central government transfers to balance their books is not an indication of fiscal imbalance. Quite the opposite. Fiscal transfers from a central government to subnational governments will normally be required for a federation to achieve fiscal balance.

However, before we jump to the conclusion that MCFs are always higher at the provincial level than at the federal level because of tax base mobility, we need to consider some factors that might lead to the opposite result. For example, tax exporting — shifting the burden of a tax to the residents of other provinces — can artificially reduce a province's MCF. A similar effect is created by the deductibility of provincial government taxes from federal taxes because this shifts some of the burden of a provincial tax increase to taxpayers in other provinces. Smart (1998) and Dahlby (2002) have argued that the equalization system reduces the MCF for recipient provinces because the equalization formula shelters them from the full distortionary cost of a tax rate increase. More generally, the overlap of provincial and federal tax bases means that provincial governments may face an MCF that is biased, either up or down, as Dahlby and Wilson (2003) have shown.

Knowing whether a federation has achieved a fiscal balance is difficult because the MCFs of the federal and provincial governments are not directly observable. For the United States, Gruber and Saez (2002) found that the

elasticity of taxable income with respect to a tax rate increase was 50 percent higher at the state level than at the federal level, although their estimates of the elasticities were not statistically different. For Canada, Mintz and Smart (2004) found that the provincial Corporate Income Tax revenues were very tax sensitive, implying that the provincial MCFs for a CIT tax increase may be substantially higher than at the federal level. Obviously, we need further econometric studies of tax base sensitivities at the federal and provincial levels and economic models that would allow us to calculate the MCFs for both levels of government, taking into account the interdependence of the tax bases of the two levels of government. Undoubtedly, we are a long way from developing models that would allow us to determine whether there is a vertical fiscal imbalance in Canada as measured by the MCFs at the two levels of government.

However, there is another and possibly more important way of determining whether there is a vertical fiscal imbalance. The MCF plays an important role not only in the normative theory of public economics but also in the positive models of government spending behaviour.[2] These models predict that if a provincial government's MCF is high, voters will be reluctant to accept higher taxes, and provincial government spending will be constrained. Similarly, if the federal MCF is lower, voters would be willing to accept higher federal taxes, and federal government spending would expand. This would lead to an imbalance in the provision of public services, with the marginal benefit from additional spending on provincially provided public services exceeding the marginal benefit from federally provided public services. This provides the basis for a test of fiscal imbalance. If the Canadian public, by a wide majority, expressed a strong desire for more spending on a wide range of provincially provided services, such as education or social assistance, and would be willing to forgo an equally wide range of federally provided services, such as national defence and international aid, then this would be evidence of a fiscal imbalance in the federation. These matters could be investigated through public opinion polling, by asking Canadians where more public sending is a priority and where they would be willing to see cuts. If their responses overwhelmingly indicate that more spending at the provincial level is a priority and less spending at the federal level is an acceptable compromise, then the provinces could claim that there is a fiscal imbalance.

I do not know whether the provincial governments, or the parliamentary subcommittee charged with investigating this issue, have conducted such surveys. If they had conducted a survey of this kind, and it unambiguously indicated a desire for more spending at the provincial level and less spending at the federal level, it is likely that we would have heard the results, loud and clear.

[2] See Dahlby (2005c), where it is shown that the level of government spending in three standard public choice models varies inversely with the MCF.

In the absence of such evidence and given substantial transfers that the federal government currently makes to the provinces, I would argue that the best verdict that we can render regarding the existence of a fiscal imbalance in Canada is "not proven."

However, some might argue that the public pressures for increased spending on health care, a provincial responsibility, is prima facie evidence of a vertical fiscal imbalance according to the definition that I have promulgated. On the surface, this would appear to be true. The clear demand for increased spending on public health care should be considered as evidence that the public views the additional benefit from an extra dollar spent on health care is high. However, the notion of a fiscal imbalance means that the public would like to see a broad range of provincial services expanded, and not just pressure for increased spending on a single, albeit very important, service. Furthermore, the pressure for increased spending on health care is more a reflection of a structural imbalance in the health-care system — the excessive reliance on public provision of health-care services — and not an indication of vertical fiscal imbalance as such. The recent Supreme Court decision that appears to open the way for private health insurance in Quebec may lead to further experimentation in the provision and financing of health care among the provinces and reducing government spending pressures on health care.

It has been argued that the existence of provincial deficits and federal surpluses is sufficient evidence of a vertical fiscal imbalance. Clearly, measuring deficits and surpluses at different tiers of government does not tell us whether the MCFs at the different tiers are equal or not. Defining fiscal imbalance based on observed provincial deficits provides the provinces with a ready-made excuse for fiscal mismanagement and for not imposing the taxes that are necessary to finance their election promises. Likewise, federal surpluses are not necessarily an indication of a low MCF. There are a number of reasons why the federal government should be running a surplus. It will allow the federal government to reduce its tax rates over the long term as interest payments on the public debt decline. Lower taxes improve incentives for investment in human and physical capital, leading to higher living standards. A model of the benefits from debt reduction in Dahlby (2004b) indicates that reducing the public debt by $1.00 can lead to an improvement in economic welfare of $1.20 to $1.40.

Another reason why federal and provincial governments should be running surpluses now is that it will help reduce the fiscal strains that will accompany the ageing of the baby boom generation in the coming decades. Increased public spending on health and pensions due to population ageing may push future budgets into deficit. We will be in better shape to handle these fiscal pressures if our debt ratio is low. Otherwise, we may be forced to raise taxes on a diminished working population or engage in socially divisive cuts to social programs for seniors.

Finally, as I have argued elsewhere, lowering the federal debt might make Quebec independence less attractive (Dahlby 2005d). It is no coincidence that the separatist forces constantly rail against the fiscal imbalance between the federal and Quebec governments. They would love to see a federal government saddled with debt because a highly indebted federal government is a weak federal government, tipping the balance in favour of separation.

For these reasons, we should reject any suggestion that federal surpluses and provincial deficits are an indication of vertical fiscal imbalance.

Horizontal Fiscal Imbalances: A Realistic View[3]

The three main arguments for a fiscal equalization program are:

- to reduce fiscally induced migration
- to achieve horizontal equity
- to equalize the marginal cost of public funds across provinces

Fiscally Induced Migration

If some provinces have a greater fiscal capacity than other, they can provide a given level of provincial services at lower tax rates than in other provinces. Some individuals will migrate to take advantage of these net fiscal benefits. This fiscally induced migration leads to a misallocation of the labour force among the provinces because workers will migrate from provinces with low fiscal capacity to provinces with high fiscal capacity until the net gain from migration is eliminated. Differentials in net fiscal benefits arising from differentials in fiscal capacity create artificial incentives to migrate, resulting in too many workers in provinces with high fiscal capacity. As a result the marginal productivity of labour (net of migration costs) will be lower in the high fiscal capacity province than in the low fiscal capacity provinces, and the economy's aggregate net output will not be maximized.

The importance of the fiscally induced migration rationale for equalization will depend on the size of the efficiency loss, which in turn depends on the extent of labour market mobility and the magnitudes of the net fiscal benefit differentials. While Canadian workers are undoubtedly mobile, there are many factors besides private and public benefit differentials that determine the location of work and residency. The pecuniary and nonpecuniary costs of interprovincial migration may be high, limiting the response to differential net fiscal benefits.

[3] Parts of this section are drawn from Dahlby (2005e).

Are the net fiscal benefit differentials large enough to generate significant interprovincial migration? Figure 1 shows the net fiscal differentials between Alberta and the other provinces in 1999 and 2004.[4] The first graph shows that a family of four with an income of $75,000 in 2004 paid higher taxes in all provinces than Alberta. This tax differential ranged from $4,377 in Quebec to $1,372 in Ontario. The second graph shows the adjusted provincial program expenditure differential for a family of four.[5] Some provinces, such as Quebec, spent more than Alberta while other provinces, notably Nova Scotia, spent less on provincial programs. The third graph combines the expenditure differentials with the tax differentials to show the net fiscal benefit differential between Alberta and the other provinces for a family of four earning $75,000. In 2004, the differential was negative in all provinces, i.e., in Alberta the gap between provincial spending and taxes was larger than in any other province. The net fiscal benefit differential was especially large for Nova Scotia. Our calculation indicate the Nova Scotia family would have a larger net fiscal $8,227 gain in higher provincial spending and lower provincial taxes if it moved to Alberta.

Are these differences in net fiscal benefit differentials large enough to induce significant migration to Alberta? To judge this, several other considerations need to be taken into account. One is housing cost differentials. The final graph shows the net gain from moving to Alberta by subtracting housing cost differentials from the net fiscal differentials.[6] According to these calculations, the family of four would gain $7,461 in moving from Toronto to Calgary. A family in Vancouver would gain $6,623, while a family in Halifax would gain $6,623. In the other provinces where there would be a financial gain in moving to Calgary, the gains are less than $2,500 in the case of families in Fredericton and Charlottetown and virtually zero for a family in Winnipeg. Families in Saskatoon, Montreal, and St. John's would be worse off if they moved to Calgary.

While these calculations cannot be conclusive with regard to the magnitude of the pecuniary incentives for interprovincial migration, they indicate that the greatest incentives to move are from a "have" province, Ontario, and a "quasi-have" province, British Columbia, and the only "have not"

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[4] The calculations were based on data in the section of the Government of Saskatchewan's budget documents, "Intercity Tax Comparisons."

[5] Adjusted provincial program expenditure is defined as total provincial and local expenditure minus debt service and resource development expenditures. In addition, 4 percent of current deficits (surpluses) were subtracted (added) to reflect the anticipated future interest payments from the current deficit (surplus). The expenditure data were obtained from CANSIM Matrix 3850001.

[6] The housing cost differentials are based on the data in the Saskatchewan "Intercity Tax Comparisons" data and compare the mortgage and utility costs in Calgary with the largest city in each of the other provinces.

province where there is a strong pecuniary incentive to move to Alberta, which is Nova Scotia.

Overall, while the impact of net fiscal differentials on the interprovincial migration decisions ideally should be investigated using sophisticated econometric techniques, the calculations in Figure 1 suggest that they may not be very strong. Of course it should be borne in mind that these calculations reflect the impact of the existing Equalization program, and the net incentive for migration would probably be considerably stronger in the absence of that program.

In assessing the importance of fiscally induced migration, it is important to consider other labour market distortions. Some of these distortions may arise from imperfect information in financial and labour markets. For example, workers may not be able to borrow the funds required to finance a move to a region with higher employment opportunities. In this case, there would be too little interprovincial migration, and any fiscally induced migration (by implicitly subsidizing migration) might help to overcome these costs and lead to an improvement in allocation of labour in the economy. Second, there may be other labour market distortions created by federal and provincial government policies that inhibit labour mobility. Regionally-extended employment insurance benefits may reduce incentives to move from areas of high unemployment. Industrial subsidies to regions with high unemployment also reduce the need for labour market adjustment through out-migration.

Our political system, both at the federal level and at the provincial level, seems to be biased against labour mobility as a means of adjusting to long term-trends in regional economic growth. In Quebec, mass out-migration of the francophone population is not considered a viable option, but the politicians in other provincial governments also garner power and prestige from the size of their population, and therefore they may bias their policy choices in favour of employment maximization, instead of productivity maximization. The federal government, by bowing to these regional pressures, may acquiesce in these biases. The large and persistent unemployment rate differentials in Canada are suggestive of inadequate labour market adjustments, and therefore fiscally induced migration, far from reducing aggregate output, may actually offset market and policy-induced labour market distortions.

In summary, while I would not dismiss the significance of fiscally induced migration, it seems to be a very slender reed upon which to argue for a major expansion in the fiscal equalization program.

Horizontal Equity

It has been argued that equalization grants help to fulfill the goal of achieving horizontal equity within Canada. According to this view, which has been articulated by the Economic Council of Canada and by Robin Boadway in particular, the principle of horizontal equity is a cornerstone of the Canadian federation. This principle means that the public sector should provide the same net fiscal benefit to all Canadian who have the same standard of living. This is basically the equal-treatment-of-equals concept applied to the total impact of the public sector. Boadway argues that Canadian citizenship confers on all Canadians the right to equal treatment of equals. This strong ethical position, if accepted, would justify equalization grants to provincial governments with low fiscal capacity to permit them to provide the same net fiscal benefit to their residents as are provided in provinces with high fiscal capacity.

While Canadians' commitment to equality is undoubtedly strong, there are a number of weaknesses or challenges that can be made to using horizontal equity as the basis for an expanded Equalization program.

First, the principles of horizontal and vertical equity are usually applied to a particular government, be it federal, provincial, or local, and not to the public sector as a whole. Applying the principle to the entire public sector seems to ignore the very federal nature of Canada, that the federal and provincial governments are sovereign in their respective areas of jurisdiction. If the commitment to horizontal fiscal equity were paramount, Canadians would have adopted a unitary form of government instead of the federal form, and they would not have vested the ownership of natural resources with the provinces. It seems clear that the principle of fiscal equity is not backed by a shared ethical preference that it is so strong that it trumps all other considerations in the design of our fiscal system.

Furthermore, there are many examples of policies where governments depart from the principle of horizontal equity because this principle, even if it is valued, conflicts with other desirable policy outcomes. For example, taxing capital gains at half the rate of other forms of income surely violates the principle of horizontal equity at least to some degree. Another example is the Employment Insurance (EI) program. The expected net benefit from EI for a bank teller in Edmonton is lower than that for a bank teller in St. John's. In the 1990s, the federal government lowered its tax rate in the eastern provinces to combat cigarette smuggling, but maintained higher rates of tax on cigarettes in Western Canada — a clear violation of the horizontal equity principle. These examples, and others, reveal that the principle of horizontal equity is often honoured in the breach.

How much variation in provincial net fiscal benefits is consistent with the goal stated in the Constitution of providing reasonably comparable levels of services at reasonably comparable levels of taxation? Would a 10 percent, 20 percent, or a 50 percent variation be consistent with the constitutional mandate? We have no precise guidance on this question, but in other areas of public life, we are willing to accept large deviations from strict equality because other values and considerations are important. One example is the variation in the number of eligible voters in federal and provincial constituencies. These variations mean that the residents of Atlantic Canada are overrepresented in the federal Parliament, and rural voters are overrepresented in the federal Parliament and the provincial legislatures. However, Canadian courts have ruled that these large variations in effective voting power are permissible because of practical issues and countervailing factors such as "geography, community history, community interests and minority representation may need to be taken into account to ensure that our legislative assemblies effectively represent the diversity of our social mosaic."[7] If equality of representation in provincial and federal legislatures can be readily compromised by the need to consider other practical issues and countervailing factors, reasonable comparability in public services and level of taxation should have a very liberal interpretation. In my view, the net fiscal differentials that are illustrated in Figure 1 can be interpreted as well within the ballpark of reasonably comparable services at reasonably comparable levels of taxation, and they do not provide any justification for a major expansion in equalization payments.

One of the important factors in determining the equalization standard — how comparable is reasonably comparable? — is that it must be "affordable" because it is financed by federal taxes, and the federal tax base does not closely correspond to the resource revenues that can give rise to equalization entitlements. It does not make sense to impose very high federal personal income taxes across the country in order to pay substantial equalization payments to the Atlantic provinces and Quebec arising from resource revenues in Western Canada. The burden of this policy would be largely borne by Ontario residents, with deleterious effects on equity and economic efficiency.

Equalizing the Marginal Cost of Public Funds across Provinces

A third justification for fiscal equalization is that it helps to equalize the marginal cost of public funds across governments. This rationale for equalization grants has been described in Dahlby and Wilson (1994). By transferring funds to regions where the MCF is high from regions where the MCF is low, equalization grants help to minimize the total cost of raising a given amount of tax revenue in a

[7] *Friends of Democracy v. Northwest Territories (Commissioner)*, 1999 CanLII 4256 (NWT S.C.).

federation. This approach to equalization grants makes it consistent with the theory of optimal taxation. Therefore I will call this approach to fiscal equalization the efficient tax system (ETS) approach.

Although the ETS approach provides a theoretical basis for equalization grants, it does not provide a ready means of calculating those grants because we do not have estimates of the MCFs for the taxes levied by all of the provinces. In spite of its practical limitations, this framework provides a number of insights into the calculation of equalization.

The Representative Tax System (RTS) formula, which has been the basis for the calculation of equalization grants, will equalize the provincial MCFs if the tax bases in all of the provinces have the same degree of tax sensitivity.

Conversely, if the tax sensitivity of a given tax base varies across provinces, then the RTS will not adequately compensate provinces with highly sensitive tax bases. For example, the tax bases of a small province may be more tax sensitive than the tax bases of a large province. In the case of a sales tax, it is easier for taxpayers to engage in cross-border shopping in a small province if only because the average taxpayer lives closer to a border in a small province. The RTS formula, by ignoring differences in tax sensitivity, may not provide adequate equalization payments to small provinces.

The failure of the RTS system to account for variations in the tax sensitivity of tax bases that are nominally the same, but qualitatively different, has led to the proliferation of tax bases. For example, the current equalization formula contains six definitions of the oil revenue plus the shared revenues from the offshore activities for Newfoundland and Nova Scotia.[8] The proliferation of tax bases for oil under the RTS system is recognition that different sources of oil production represent different amounts of fiscal capacity because they generate different levels of economic rent. Variations in economic rent are, of course, simply a reflection of variations in the tax sensitivity of the bases. Thus, under the RTS system, there is an implicit recognition that the tax sensitivity of the tax base matters in defining fiscal capacity, even though tax sensitivity is not explicitly recognized in the RTS approach.

The RTS approach to equalization breaks down when the tax bases are completely insensitive to tax rate changes. If the tax base is completely inelastic, a province has the same fiscal capacity, regardless of the size of the tax base, because the MCF is equal to one. This insight explains why the attempt to use RTS to calculate equalization payments for property taxes has encountered so

[8] The tax bases are new oil, old oil, heavy oil revenues, mined oil, third-tier oil, and other oil and gas revenues.

much resistance. A large property-tax base, reflecting higher land rents because of scarcity, does not create a greater ability to raise revenue at a lower total cost, only the ability to raise a given amount of revenue at a lower tax rate.

These insights into the need for equalization and the inherent problems in trying to use the RTS to calculate equalization flow from the ETS approach to fiscal equalization.

Fiscally induced migration, horizontal equity, and equalizing the MCF, taken together, provide a firm basis for providing equalization grants. However, the standard of equalization that we should try to attain is by no means clear given the wide range of factors that should affect this decision. My main conclusion is that there is no pressing need to expand the scope of the equalization system, by, for example, adding a needs component, and that a suitably revised RTS system, with partial equalization of nonrenewable resource revenues and property taxes, would be an adequate basis for equalization over the long term.

Structural Imbalances: An Idealistic View

Another source of fiscal imbalance is the structural imbalances in the tax and expenditure mix. By this I mean that there are distortions in the tax mix because the MCFs for the different tax sources are not equalized, and there are spending misallocations because the marginal benefits from spending on different types of public services are not equalized. In Canada, these structural imbalances also have a federal-provincial dimension because of the overlaps in federal and provincial taxation and blurred lines of responsibility in spending. In this section, I will focus on our excessive reliance on certain forms of taxation: the retail sales taxes levied by five provinces, the capital and CIT rates levied by the federal and provincial governments, and the heavy taxation of the financial institutions. On the expenditure side, the continuing pressure for more spending on health care is threatening to crowd out other forms of spending. The recent Supreme Court ruling on private health insurance in Quebec may provide the impetus that will help to relieve these pressures. The blurred lines of expenditure responsibility between the federal and provincial governments need to be addressed, but majority voting, the federal spending power, and the interdependence of federal and provincial governments' budgets means that it very difficult to achieve narrowly defined expenditure assignments.

Sales Tax Reform[9]

Sales taxes represent an important source of tax revenue for both the federal and the provincial governments in Canada. As Figure 2 indicates, provincial sales tax rates have declined since the mid-1990s, and the range of tax rates has narrowed. However, there is no evidence that tax competition between the provinces has affected the provinces' reliance on sales taxes, because the share of sales taxes in provincial and local government revenues has not changed very much over the last 15 years. The reductions in sales tax rates mask changes in the retail sales tax bases over time in individual provinces and variations in the sales tax burdens levied by provinces with similar sales tax rates. Part of this variation, especially between Ontario and Quebec, arises from the taxation of business inputs under the Ontario retail sales tax. The part of the retail sales taxes that falls on business inputs is a highly distortionary tax, and therefore it is a high-cost source of tax revenue. Our increasingly competitive business environment behooves us to move to a more efficient form of sales taxation, the value-added tax (VAT), and therefore the adoption of the dual VAT system should be a high priority for provincial governments. I will argue that sales tax reform should have a very high priority and that the federal government should assist in this process by lowering the federal Goods and Services Tax (GST) to 5 percent.

Canada provides examples for other federations of some of the best practices, and some of the worst practices, in tax harmonization. This is especially obvious in the sales tax field, where we have the uncoordinated provincial Retail Sates Tax (RST) and the GST in B.C., Saskatchewan, Manitoba, Ontario, and P.E.I.; the dual VAT system in Quebec, where the province levies a VAT — the Quebec Sales Tax (QST) — and also collects the federal GST; and the Harmonized Sales Tax (HST) in New Brunswick, Nova Scotia and Newfoundland, whereby the federal government levies 15 percent VAT and shares the tax revenues with the provinces on a 47 to 53 percent basis. Also there is No Damn Sales Tax (NDST) in Alberta, a policy that has taken on the status of a religious belief in the province.

While the HST has the advantage of reducing administration and compliance costs and limiting tax competition from cross-border shopping, especially between New Brunswick and Nova Scotia, it has taken the tax-rate-setting decision out of the hands of individual provinces, limited their ability to vary their tax mix, and perhaps reduced the accountability of provincial governments to their taxpayers since they can always blame the HST on the decisions made by the other governments. For these reasons, we should not pursue the HST as a model for further sales tax harmonization in Canada, but rather focus on the dual VAT system that has emerged in Quebec.

[9] Parts of this section are drawn from Dahlby (2005a).

In a series of papers, Bird and Gendron (1998, 2000, 2001) have argued that the Canadian experience with a dual VAT system — the federal GST and the Quebec QST — works quite well, and they have held it up as a model that other developed countries could follow. I will go one step further and argue that it is the model that the other provinces that currently levy RSTs should follow.

The differences in the provinces' RST bases and the VAT bases are illustrated by the data in Figure 3, which shows the estimated provincial sales tax paid by a family of four earning $75,000.[10] First, note that while the RST rate in P.E.I. is 10 percent, the sales tax burden for the family of four is less than in the HST provinces where the provincial tax rate is 8 percent. This illustrates the point that the RST base is narrower than the HST or GST base. Further evidence of this can be seen by comparing the sales tax burdens in Ontario and Quebec. Although their sales tax rates are very similar, in 2004 the family in Quebec would pay $500 more in provincial sales tax than a family in Ontario because the QST base is broader than the Ontario RST tax base. Of course, this does not take into account the additional cost of producing goods in Ontario because of the taxation of business inputs, but the degree to which these are reflected in higher consumer prices in Ontario is uncertain. Most of the burden of the provincial RST on business inputs is likely shifted to workers through lower wage rates.

To the extent that the RST falls on business inputs, it drives up production costs and distorts production decisions. It has been estimated that approximately one-quarter of the marginal effective tax rate (METR) on capital in Canada is the result of taxes on business inputs (see Chen and Mintz 2003). The potential cost of the sales tax distortion on business inputs was recently revealed in a study by Baylor and Beauséjour (2004). They used a computable general equilibrium model of the Canadian economy to calculate the net welfare gain from replacing various taxes with a lump-sum tax. Roughly speaking, the gain from replacing a dollar of tax revenue from a highly distortionary tax source with a less-distortionary tax source is the difference between the welfare gains for each tax. As Figure 4 indicates, Baylor and Beauséjour found that the welfare gain from replacing a dollar of tax revenue from a sales tax on capital inputs was $1.30 while the welfare gain from replacing a dollar of consumption tax revenue was only $0.10. Switching from a dollar of tax revenue from an RST that falls on capital to a VAT would produce a gain of $1.20. Roughly speaking, this suggests that the gain from shifting from an RST to a provincial VAT would be on the order of $0.60 per dollar of sales tax that falls on business inputs. If, as Baylor and Beauséjour assume, that half of the RST burden falls on business inputs, then the total welfare gain would be $6 billion by replacing the $10 billion collected from taxes on business inputs with a VAT. Although these are only very rough, back-

[10] These data were obtained from the Government of Saskatchewan's budget documents, "Intercity Tax Comparisons."

of-the-envelope-calculations, they reflect the magnitude of the distortion caused by the current RSTs and the potential improvements that could be made by shifting to a dual VAT system for provincial sales taxes.

The fact that economists can identify large potential gains from substituting RSTs for a dual VAT system does not mean that the policy will be readily adopted. Sales taxes are the least popular taxes in Canada, and provincial governments are loath to touch this potentially explosive issue. A revenue-neutral switch to a provincial VAT with the same (or similar) base as the GST would require an increase in the effective tax rate on services and other products that are currently not taxed under the RST. The $500 difference in the sales tax burdens of the family of four in Ontario and Quebec is an example of the type of tax increase that a provincial government would have to impose if it were to move to an equal-yield VAT. Of course, the resulting reduction in business costs might reduce the prices of some goods, offsetting this effect, and it would increase wages and salaries, but it would be very difficult to convince the public that these gains from a more competitive business sector would make them better off.

Consequently, to achieve this type of tax reform, it might be necessary for the federal government to reduce its GST rate by about two percentage points, from 7 percent to 5 percent, to make an 8 percent Ontario VAT an attractive proposition for Ontario voters. Reducing its GST rate by two percentage points would reduce federal sales tax revenues by approximately $9 billion, but this would be offset, at least to some degree, by the increased competitiveness of Canadian businesses. Since the federal government gets two-thirds of any increase in personal and corporate income taxes that would result from an improvement in the competitiveness of Canadian industry, there could be a substantial offsetting revenue effect for the federal government.

The key elements of this proposal are summarized below:

- The five provinces that levy RSTs would switch to revenue-neutral VATs (approximately an 8 percent VAT in Ontario).

- The federal government would simultaneously cut the GST across Canada by two percentage points to 5 percent. It is crucial that the sales tax changes be linked to avoid the problem that occurred with the introduction of the GST, when personal income tax cuts preceded the introduction of the GST and were not closely linked to the sales tax introduction.

- This sales tax reform would impose approximately the same direct sales tax burden on families in the provinces that levy RSTs. Realistically, sales taxes would be higher or lower for different families depending on their spending patterns and income levels. Some goods that are exempt under the RSTs, such

as children's clothing, would likely become taxable and impose higher burdens on young families with relatively low incomes. On the other hand, given that the income elasticity of demand for services is relatively high, higher-income households would probably pay more under a broad provincial VAT than they do now under the provincial RSTs.

- There would be a reduction in the sales tax burden in Quebec, New Brunswick, Nova Scotia, and Newfoundland, unless offset by QST and HST increases. The Quebec government would probably welcome the opportunity for a larger share of the sales tax field. An increase in the provincial component of the HST would have to be approved by the federal government and the three provincial governments.

- There would be a sales tax reduction in Alberta.

- Efficiency gains of approximately $6 billion would accrue in the form of wage and salary increases, and 40 to 50 percent of these would likely accrue in Ontario.

- The direct revenue loss to the federal treasury would be approximately $9 billion, but this would be offset by increases in federal personal and corporate income taxes. These additional federal revenues might be on the order of $2 billion.

- There is an opportunity cost to the federal contribution, in the form of reduced budget surpluses (or higher deficits), forgone opportunities for other tax reductions, or lower program spending. Simple back-of-the-envelope calculations indicate that if the MCF for the federal government is less than 1.67, there would be a net social gain from this tax substitution. The computations by Baylor and Beauséjour (2004) and Dahlby (1994, 2004) suggest that the MCF from federal taxes or debt is less than this critical figure.

More research, including a detailed simulation of the interactions between federal and provincial tax bases using a computable general equilibrium model, is required before this proposal can be properly evaluated. This line of research should be a high priority for the federal and provincial governments.

We will conclude this section by considering some of the drawbacks of sales tax reform. It might be argued that this proposal has little to attract Ontario voters because they would not see a sales tax reduction. However, most of the efficiency gains, in the form of wage and salary increases, would accrue in Ontario, and the Ontario government would likely gain additional income and payroll tax revenues from the increases in private sector incomes.

This proposal would have been more attractive before the minority Liberal government went on its 2005 spending spree, which has reduced its room

for further large tax cuts. This is unfortunate because sales tax reform, which would eliminate one of our most distortionary taxes, should be a high priority with both levels of government. As I have argued above, there are good reasons for the federal government to continue to run surpluses, but sometimes good reasons are trumped by better reasons. A more detailed analysis of the federal budgetary position over the coming decade is required, especially in light of its new spending commitments, but sales tax reform should be viewed as a high priority in any assessment of federal budgetary options.

It might also be argued that the sales tax reform, by lowering the federal GST rate, would take us further from the desirable goal of increased reliance on indirect taxation. However, the reduction in indirect taxation caused by the reduction in the GST would be offset to some extent if Quebec and the HST provinces increased their sales tax rates. While arguments can be made for greater reliance on indirect taxation in Canada (see Dahlby 2003), it seems unlikely that a major move in that direction is possible at this time. Therefore, it would be preferable to grab the efficiency gains that are possible through a sales tax reform now and postpone the gains from changing the direct/indirect tax mix through a coordinated federal-provincial sales tax increase.

Excise Taxation

Another area that is ripe for reform is the excise tax field. Both federal and provincial governments levy a variety of excise taxes, principally on alcohol, tobacco, and motive fuels. In 2004, the provincial-local government sector collected 53 percent of the alcohol and tobacco taxes and 60 percent of the taxes on motive fuels, with the federal government collecting the remainder. The co-occupation of the excise tax field reduces transparency and accountability because the public cannot readily tell who is responsible for which tax and why. Furthermore, if both levels of government tax impose per unit excise taxes on the same base, there is a negative fiscal externality on the other level of government — that is, when federal excise taxes increase and the tax base shrinks because of tax avoidance and evasion, provincial tax revenues decline unless the provinces increase their tax rates. This interaction between the tax policies of the two levels of government is a generic problem in a federal system where both levels of government have significant tax powers and impose taxes on the same or highly interrelated tax bases. However, it could be avoided in the excise tax area, where the degree of overlap is very high.

Which level of government should levy excise taxes on alcohol, tobacco, and motive fuels? Although provincial excise taxes on alcohol and tobacco might give rise to cross-border shopping if there are significant tax rate differentials between neighbouring provinces, this problem is likely to take care of itself through rate adjustments by the provinces. A more important issue in assigning the tax bases is the potential linkage between these tax bases and the expenditure

responsibilities of the provinces. Consumption of alcohol and tobacco products affects the health status of the population and drives up spending on health care, a provincial responsibility. Provincial taxation of these products helps to correct this public expenditure externality. Similarly, consumption of gasoline and other motive fuels is linked to the consumption of highways, streets, and roads. Although modern technology is making it possible to implement user fees for highways and expressways, there is still a good case to be made for using motive fuel taxes to provide some link between the use of our provincially provided transportation systems and the taxes that have to be imposed to pay for them.

For these reasons, I think that the excise taxes on alcohol, tobacco, and motive fuels should be turned over to the provinces. The withdrawal of the federal government from the alcohol and tobacco excise taxes would have cost the federal government $4.425 billion in 2004, and withdrawal from the gasoline and motive fuel would have cost $5.119 billion. Other fiscal realignments, to be discussed below, would offset or more than offset this loss of revenue for the federal government.

Capital and Corporate Income Tax Rates[11]

Since 2000, the federal government has gradually reduced corporate income tax rates and capital taxes. These statutory rate reductions have lowered the marginal effective rate of tax on real investments, which helps to stimulate real investment in Canada. In addition, they have helped to prevent the erosion of the Canadian corporate income tax base through debt placement, transfer pricing, and other strategies that can be pursued by corporations to minimize their global tax bill. Levelling the playing field by imposing a common rate of taxation on corporations in the manufacturing and processing, service, and resource sectors has lessened the tax-induced distortions in investment across these sectors and reduced the compliance and administration costs that arise when different forms of income are taxed at different rates. Further reductions for middle-sized and large corporations were postponed in the 2005 federal budget. However, even with the proposed CIT rate reductions, Chen and Mintz (2005) show that the marginal effective tax rate (METR) on investment in Canada is still above the levels imposed in similar industries in the United States (see Figure 5). Further reductions in the METR are required to make Canada an attractive location for investment. This should be viewed as part of the federal government's productivity agenda.

Our proposal for reforming provincial sales taxes, by switching from RSTs that fall on business inputs to provincial VATs, would help to reduce the METRs by approximately 25 percent. The other major contributor to our high METRs are

[11] Parts of this section are drawn from Dahlby (2004a).

the capital taxes that are levied by the provincial governments. Figure 6 shows that six provinces levied general capital taxes in 2005, at an average rate of 0.433 percent, and that all the provinces except Alberta imposed special capital tax rates on financial institutions. In Ontario and Quebec, these rates are 0.90 percent and 1.45 percent respectively (or two to three times the provincial general rate), and in the other provinces the rates on financial institutions vary between 3 and 5 percent. These capital tax contribute about 20 percent of the total METR burden (see Chen and Mintz 2003, Table 2). Capital taxes also place a particular heavy burden on the capital intensive sectors of the economy. An Ernst and Young (2002) study found that 40 percent of the capital tax burden fell on the resource and manufacturing sectors, even though they account for less than 25 percent of GDP. Capital taxes are also independent of a firm's profitability, and firms have to pay the tax even if they are in a loss position when their financial resources are already stretched. The Ernst and Young study found that 55 percent of capital taxes were collected from firms that were in a loss position in 1998.

The federal government has long argued that the provinces have imposed high capital taxes (and payroll taxes) because they are deductible under the federal corporate income tax whereas provincial corporate income taxes are not deductible under the federal corporate income tax. Thus, part of the cost of imposing a provincial capital tax is shifted to the federal government and therefore to taxpayers across the country. Provincial variations in capital tax rates distort investment patterns across provinces, leading to a less-efficient allocation of capital for the country as a whole. In addition, because there are significant differences in the way the capital tax bases are defined in different provinces, provincial capital taxes impose large compliance costs on corporations that operate in several provinces (see McQuillan and Cochrane 1996). Achieving a coordinated reduction in the provincial capital taxes is a desirable goal, but it would require leadership on the part of the federal government, and the provincial governments would have to be compensated for their loss of provincial tax revenues, perhaps by giving them greater access to other shared tax fields, such as the excise tax field as discussed above. In the absence of such an agreement, the Bird and McKenzie (2001) proposal for a provincial business value-added tax as an alternative to provincial capital and corporate taxes should be considered.

Taxation of Financial Institutions

Imposing high taxes on banks is politically popular, but is it wise? Over the period 1992–1998 (the longest period for which comparable data can be obtained), income taxes as a percentage of positive adjusted profits were 28.2 percent for the financial sector and 26.2 percent for the non-financial sector.[12]

[12] Calculations based on data from CANSIM II Table 180-0001.

While the rate of taxation for the financial sector as a whole does not seem to be terribly out of line, the average tax rate on banks, 37.9 percent, is significantly above the tax rates imposed in the non-financial sector. McKenzie (2000) has shown that the marginal effective tax rate on the cost of intermediating an incremental loan is more than 70 percent. The high taxes on the Canadian banking industry reduce investment and ultimately the banking services that are provided to the Canadian public. Even if the banking industry is an uncompetitive oligopoly, it is likely that a significant portion of the tax burden is shifted forward to borrowers or backward to depositors. In others words, high capital taxes on the banking sector probably increases the interest rate spread between loans and deposits, reducing domestic savings and investment. The distortionary effects of taxes are even greater for a noncompetitive industry because taxes cause the sector, where too few resources are employed in the absence of taxation, to shrink even further. For this reason, noncompetitive industries should be taxed at relatively low rates, not high rates. Thus, on efficiency grounds, but perhaps also on equity grounds, a strong case can be made for removing the relatively high tax burden that we currently impose on the banking industry.

I have outlined a series of measures that would improve economic performance and average standards of living in Canada, but these measures — cutting the provincial capital taxes and transferring the excise taxes to the provinces — would cut federal tax revenues by approximately $8.8 billion, assuming a $0.7 billion offset if provincial capital taxes are no longer deductible from federal corporate income tax. (This, plus the two percentage point GST reduction used to finance the sales tax reform, would plunge the federal budget into a large deficit.) One option would be to cut federal transfers to the provinces by approximately $6 billion, a move that would leave the provinces in an approximately revenue-neutral position and reduce the federal revenue shortfall to $2.8 billion. Of course, in an ideal world, any revenue shortfall would be covered by an increase in the least-distortionary tax, which the analysis in Baylor and Beauséjour (2004) confirms is the GST. Of course, one would want to simultaneously increase the GST tax credit to shelter the lowest-income groups, those on fixed income, and the elderly from the full adverse effects of a GST increase.

Spending Responsibilities in a Federal State

Examples of federal intervention in areas of provincial spending jurisdiction abound. The most recent prominent examples are health care, child care, and urban infrastructure. Federal intervention is justified by its spending power, the ability of the federal government to make grants in areas of exclusive provincial jurisdiction. Two questions arise. Is federal intervention in areas of provincial jurisdiction a good thing? Is federal intervention in areas of exclusive provincial jurisdiction inevitable?

First, it is clear that federal intervention in areas of provincial jurisdiction may obfuscate responsibilities and reduce the accountability of governments. Second, conflicting priorities between the federal and provincial governments may lead to ineffective programs. Third, federal intervention, by establishing national standards, may limit provincial experimentation and innovation in the development of new programs and new ways of tackling problems.

However, it must also be acknowledged, even by an ardent decentralist like myself, that there are instances in which federal intervention in areas of exclusive provincial jurisdiction are potentially useful. One example is the vertical fiscal externality from provincial education, spending that contributes to the formation of human capital and boosts labour productivity. These productivity improvements increase wages and salaries, leading to higher income and sales tax revenues for the federal government. To the extent that provincial governments ignore this positive fiscal externality, they will tend to underprovide education. In order to provide the provinces with the appropriate incentive to spend on education, the federal government should provide a matching grant for provincial education spending. Dahlby and Wilson (2003) show that under some simple assumptions about the effect of education spending on labour productivity, the federal matching grant rate should be the federal marginal tax rate on additional wage income. Note that this rationale for a matching grant for education does not depend on the mobility of trained workers between provinces, which is another source of externality that can provide a rationale for a federal matching grant. Note also that other productivity-enhancing activities of provincial governments, such as the provision of transportation infrastructure, can also give rise to these positive vertical fiscal externalities, and this justifies federal matching grants for provincial infrastructure projects. The lesson is that in a federation where subnational governments provide productivity-enhancing inputs, there is an efficiency argument for matching grants from the federal government.

Now we turn to the second question: Is federal intervention in areas of exclusive provincial jurisdiction inevitable? Here we will consider two possible explanations for the relentless drive by the federal government to intervene in areas of exclusive provincial jurisdiction. First, federal politicians may be responding to a demand or preference by federal voters for federal intervention. Why would federal intervention in areas of provincial responsibility be so popular — a winning strategy for the federal Liberal party over the last 60 years? One possible explanation is contained in a simple political economy model developed by Usher (1977), Bös (1979), and Wilson (1985), who show that there may be a greater demand for a public service at the federal level than at the provincial level if the national income distribution is more skewed to the right than the provincial income distributions. In these models, the tax price that the median voter pays for a government service is determined by the ratio of the

median income to the average income in that jurisdiction. In other words, the ratio of the median to the mean income indicates how much an individual with the median income has to pay for a dollar of government spending, assuming that the revenue is collected from a proportional income tax. The lower this ratio, the lower the effective price paid by the median voter for public services, and the higher the level of services that will be provided by the government.

It is easy to construct theoretical models where the ratio of the median income to the average income is lower at the national level than in any province. Therefore, the median voter in any federal election would like to see a higher level of service than the median voter in any provincial election. Under these conditions, it is easy to see why federal politicians promise federal subsidies for provincial public services.

Can variations in the median voters' tax prices explain the pattern of federal and provincial spending in Canada? Some impressions can be gleaned from the data on the ratio of the median to the mean income for the provinces and for the country as a whole in Figure 7, which shows data from Wilson (1985). Wilson's calculations show that in the 1960s and 1970s, the Ontario median voter's tax price was above the national average, while in Atlantic Canada they were considerably below the national average. The model would predict that provincial per capita spending would be higher in Atlantic Canada than in Ontario and that the federal government would be willing to support a higher level of public services than the Ontario government would like to support. Further investigation of this model may reveal whether it can explain the pattern of provincial spending and the pressures for federal intervention in areas of provincial jurisdiction.

An alternative, and less benign, explanation of federal intervention in areas of provincial responsibility is based on Niskanen's view that politicians and bureaucrats try to maximize the size of their budgets because their prestige and incomes depend on the size of the programs that they administer. In the 20th century, the growth areas for government were those under provincial jurisdiction — health, education, welfare, and local public services. In order to get where the action was, the federal government had to impose itself in these growth areas of government. The provision of disability pensions under the Canada Pension Plan is one example of the way Ottawa expanded into an area of provincial jurisdiction. Another example is the federal provision of training and other non-insurance services under the Employment Insurance program. If bureaucratic empire building is the motivation behind the expansion of the federal government into areas of provincial jurisdiction, then restricting the federal government to its own areas of jurisdiction should be welfare improving and politically popular in all provinces. If the median voter hypothesis is the motivation, then there would be little scope for limiting the intervention of the

federal government because such interventions reflect the democratic forces in our society.

I have characterized my view of the structural imbalances in our tax and expenditure mix and my preferred solutions as idealistic because I am under no illusion but that they run counter to some deeply held opinions by large sections of the Canadian public. Still, I have been very surprised over my 30-year career as an economist to discover that an opinion or policy that was at one time considered beyond the pale could, in a short time, take on the lustre of an important and obvious innovation. I hope that our discussion will help to accelerate that process.

References

Baylor, Maximilian, and Louis Beauséjour. 2004. "Taxation and Economic Efficiency: Results from a Canadian CGE Model." Department of Finance Working Paper 2004–10.

Bird, Richard, and Pierre-Pascal Gendron. 1998. "Dual VATs and Cross-Border Trade: Two Problems, One Solution?" *International Tax and Public Finance* 5: 429–442.

———. 2000. "CVAT, VIVAT, and Dual VAT: Vertical 'Sharing' and Interstate Trade." *International Tax and Public Finance* 7: 753–761.

———. 2001. "VATs in Federal Countries: International Experience and Emerging Possibilities." *Bulletin for International Fiscal Documentation* (July): 293–309.

Bird, Richard, and Kenneth J. McKenzie. 2001. *Taxing Business: A Provincial Affair?* C.D. Howe Institute Commentary 154. Toronto: C.D. Howe Institute.

Bös, Dieter. 1979. "A Voting Paradox of Fiscal Federalism." *Journal of Public Economics* 11: 369–382.

Breton, Albert. 1996. *Competitive Governments*. Cambridge: Cambridge University Press.

Chen, Duanjie, and Jack Mintz. 2003. "How Canada's Tax System Discourages Investment." C.D. Howe Backgrounder 68.

Chen, Duanjie and Jack Mintz. 2005. "Federal Corporate Tax Cuts Would Lift Canada's Standard of Living" e-Brief April 26, 2005. Toronto: C.D. Howe Institute.

Coyne, Andrew. 2005. "Defining the 'Fiscal Imbalance.' " *National Post*, April 13, p. A18.

Dahlby, Bev. 1994. "The Distortionary Effect of Rising Taxes." In W. Robson and W. Scarth, eds, *Deficit Reduction: What Pain; What Gain?* Toronto: The C.D. Howe Institute.

———. 2002. "The Incentive Effects of Fiscal Equalization Grants." In Paul Boothe, ed., *Equalization: Welfare Trap or Helping Hand?* Halifax: Atlantic Institute for Market Studies.

———. 2003. "Restructuring the Canadian Tax Mix by Changing the Direct/Indirect Tax Mix." In H. Grubel, ed., *Tax Reform in Canada: Our Path to Greater Prosperity*. Vancouver, b.c.: Fraser Institute.

———. 2004a. "The Chrétien Government's Legacy: A Tax System For the 21st Century?" In C. M. Beach and T. A. Wilson, eds, *The 2003 Federal Budget: Conflicting Tensions*. Kingston, Ont.: John Deutsch Institute, Queen's University.

———. 2004b. "What Does the Debt Cost Us?" In C. Ragan and W. Watson, eds, *Is the Debt War Over? Dispatches from Canada's Fiscal Frontline*. Montreal: Institute for Research on Public Policy.

———. 2005a "The Canadian Experience with Federal VAT and Provincial Consumption Taxes: Is the Canadian Model Viable for a Free Trade Area?" Paper presented at the 9th annual conference of the Brazilian Tax Law Association, Belo Horizonte, Minas Gerais, Brazil.

———. 2005b. "Is There a Fiscal Imbalance? I'm Not Sure." *Fraser Forum* (July-August): 12–13.

———. 2005c. "The Marginal Cost of Public Funds: Theory and Application." Draft Manuscript, Chapter 4.

———. 2005d. "Public Debt Reduction a Fix, Not Fixation." *National Post*, March 16.

———. 2005e. "Review of the Canadian Equalization and Territorial Funding System" Paper prepared for the Expert Panel on Equalization and Territorial Formula Financing. www.eqtff-pfft.ca/english/submissions.asp.

Dahlby, Bev, and Sam Wilson. 1994. "Fiscal Capacity, Tax Effort, and Optimal Equalization Grants." *Canadian Journal of Economics* 27 (August): 657–672.

———. 2003. "Vertical Fiscal Externalities in a Federation." *Journal of Public Economics* 87: 917–930.

Ernst and Young. 2002. "Who Pays the Capital Tax?" *Tax Policy Bulletin* (Spring).

Gruber, Jon, and Emmanuel Saez. 2002. "The Elasticity of Taxable Income: Evidence and Implications." *Journal of Public Economics* 84: 1–32.

McKenzie, Kenneth J. 2000. "Taxing Banks." ATAX Discussion Paper No. 1. Sydney: Australian Taxation Studies Program, Faculty of Law, University of New South Wales.

McQuillan, Peter E., and E. Cal Cochrane. 1996. "Capital Tax Issues." Technical Committee on Business Taxation Working Paper 96–8. Ottawa: Department of Finance.

Mintz, Jack, and Michael Smart. 2004. "Income Shifting, Investment, and Tax Competition: Theory and Evidence from Provincial Taxation." *Journal of Public Economics* 88: 1149–68.

Rae, Bob. 2005. "We Mustn't Shortchange Canada." *Globe and Mail*, March 22.

Smart, Michael. 1998. "Taxation and Deadweight Loss in a System of Intergovernmental Transfers." *Canadian Journal of Economics* 31: 189–206.

Usher, Dan. 1977. "The Welfare Economics of the Socialization of Commodities." *Journal of Public Economics* 8: 151–168.

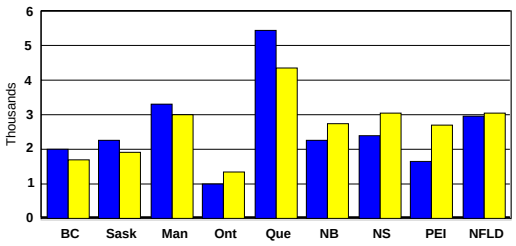
Walter, David M. 2004. "The Nation's Growing Fiscal Imbalance." U.S. Government Accountability Office. www.gao.gov/cghome/fisimb/csisfiscalimbalance.pdf. Accessed May 20, 2005.

Webb, Richard. 2002. "Public Finance and Vertical Fiscal Imbalance." Research Note no. 13 2002–03. Economics, Commerce and Industrial Relations Group Parliament of Australia. www.aph.gov.au/library/pubs/rn/2002–03/03rn13.htm. Accessed May 20, 2005.

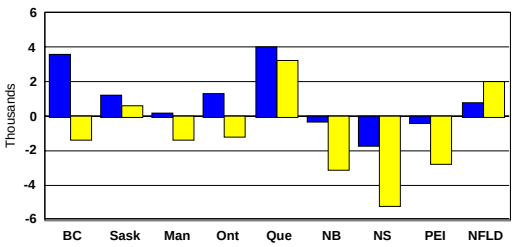
Wilson, Leonard S. 1985. "The Socialization of Medical Insurance in Canada." Canadian *Journal of Economics* 18 (May): 355–376.

Figure 1: Net Fiscal Differentials

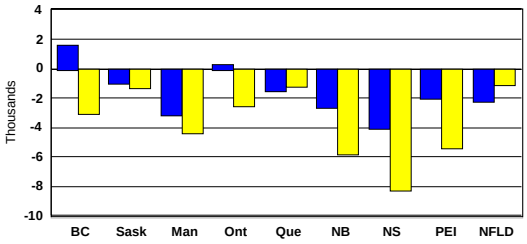
Provincial Tax Differentials with Alberta
Family of Four Earning $75,000 in 1999 and 2004



Provincial Expenditure Differentials with Alberta
Family of Four in 1999 and 2004



Net Fiscal Benefit Differentials with Alberta
Family of Four Earning $75,000 in 1999 and 2004



Net Gain in Moving to Alberta
Family of Four Earning $75,000 in 1999 and 2004

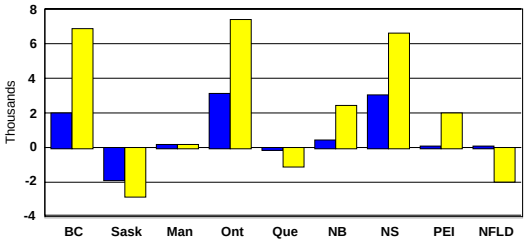
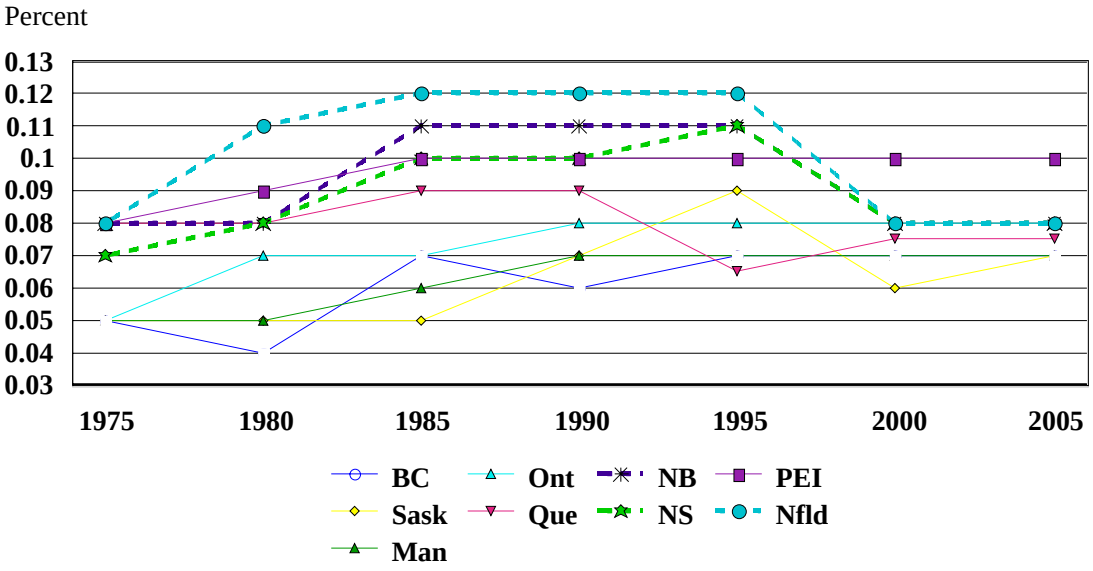


Figure 2: The Evolution of Provincial Sales Tax Rates, 1975–2005



HST Provinces have a dashed line

Figure 3: Provincial Sales Tax Burdens on a Family of Four Earning $75,000

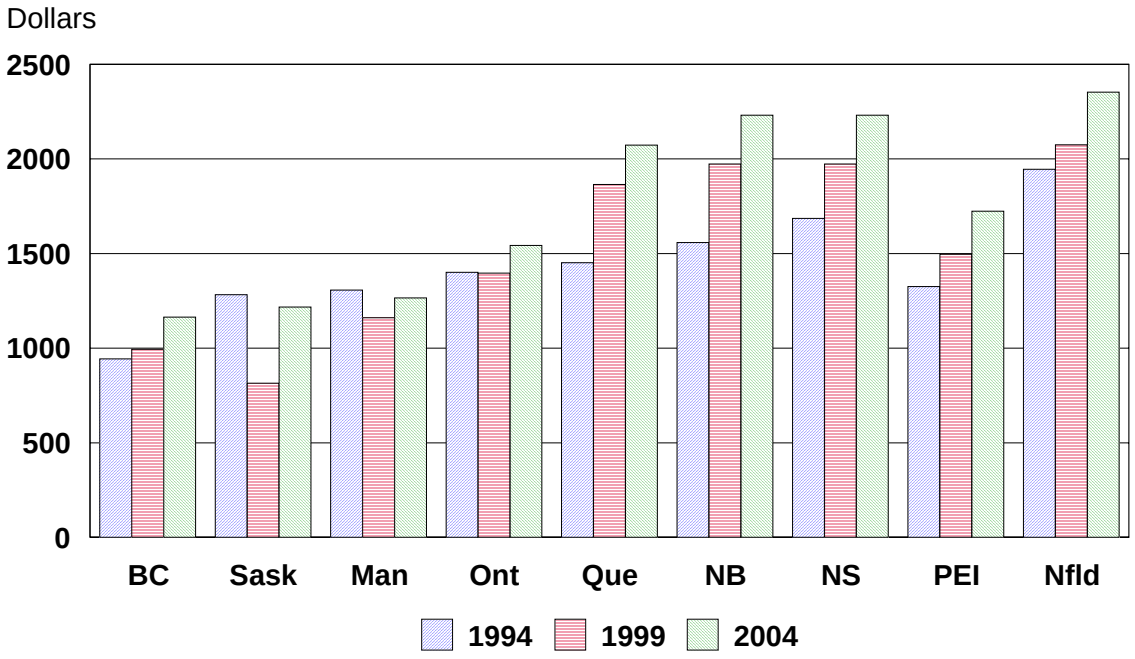
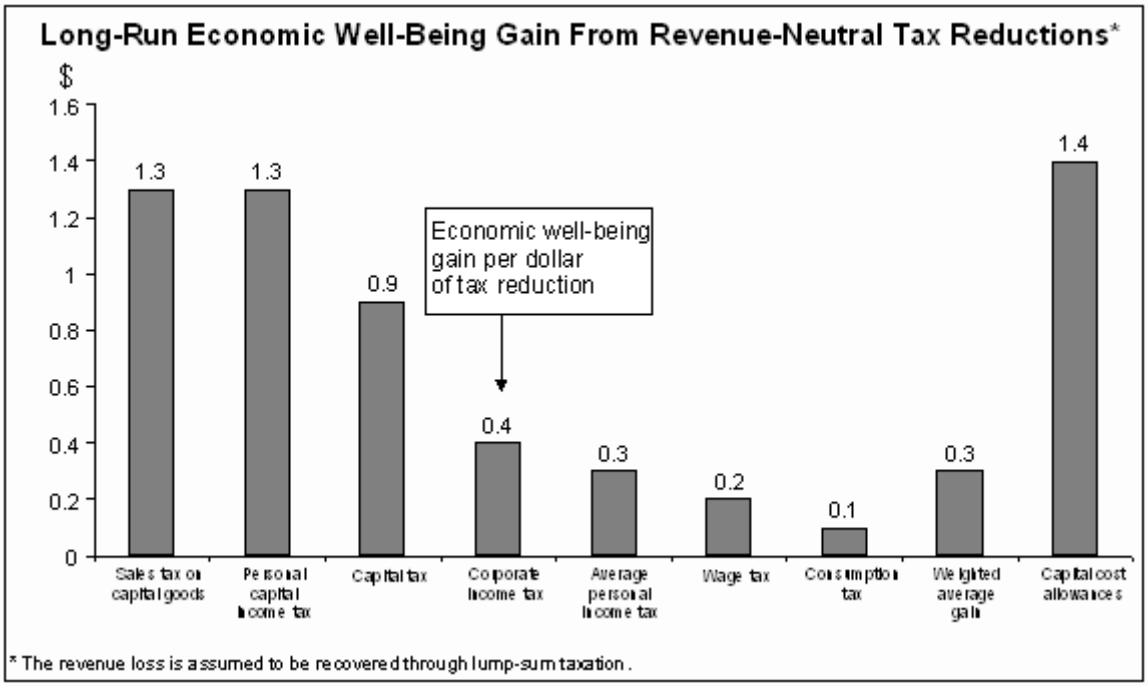


Figure 4: The Marginal Efficiency Costs of Taxes



Source Baylor and Beauséjour (2004)

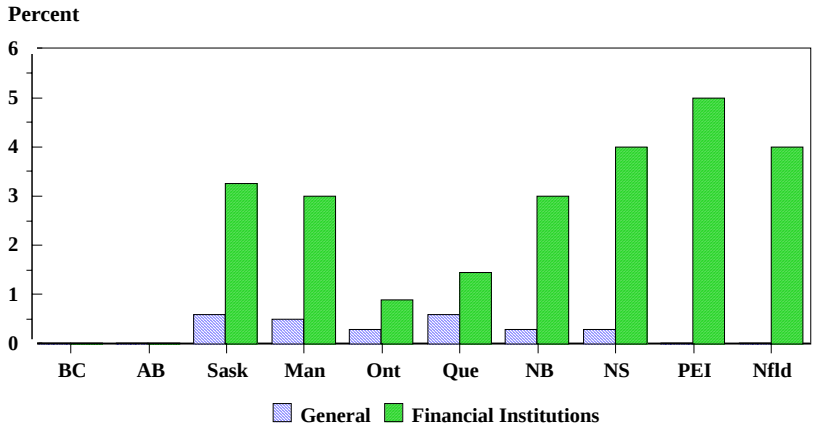
Figure 5: Marginal Effective Tax Rates in Canada and the United States

	2005		2010	
	Canada	U.S.	Canada	U.S.
	percent			
Forestry	28.0	21.5	23.8	20.6
Mining	7.9	14.8	3.5	14.7
Oil and gas	6.3	16.8	5.1	16.3
Manufacturing	28.6	25.9	24.5	24.9
Construction	33.2	24.4	29.2	23.3
Transportation and storage	30.2	24.3	26.0	24.3
Communications	27.8	15.6	23.5	15.6
Electrical Power, Gas & Water	23.3	13.8	18.7	13.6
Wholesale Trade	37.2	27.1	33.7	27.1
Retail Trade	40.0	30.4	36.4	30.4
Other Services	33.5	27.1	29.7	27.1
Aggregate	28.8	24.1	25.0	23.6

Source: Chen and Mintz (2005, Table 1).

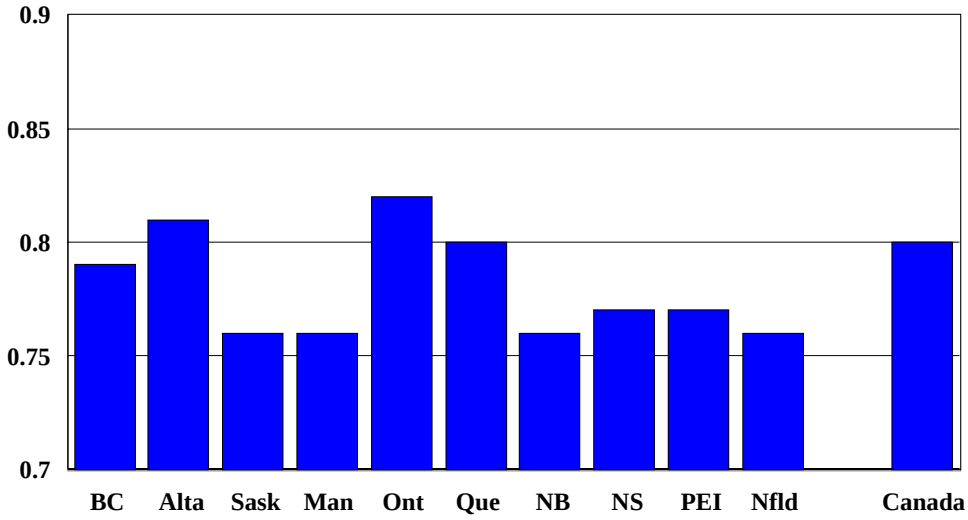
Notes: The calculations for Canada assume that the corporate tax rate reductions in the original federal budget of 2005 are implemented.

Figure 6: Provincial Capital Taxes in 2005



Source: Alberta Budget, 2005

Figure 7: Ratio of the Median to Mean Income in 1979



Source: Wilson (1985)

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