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FISCAL PROBLEMS, TAXATION SOLUTIONS

OPTIONS FOR REFORMING CANADA'S TAX AND TRANSFER SYSTEM

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Fiscal Problems, Taxation Solutions: Options for Reforming Canada's Tax and Transfer System is the fourth paper in the Mowat Centre's Fiscal Transfers Series.

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EXECUTIVE SUMMARY

The anticipated expenditure pressures associated with population aging constitute a major challenge to long-term fiscal sustainability in Canada, especially for provinces. According to the Office of the Parliamentary Budget Officer (2012), in order to achieve long-term fiscal sustainability, provincial governments will need to increase revenues or reduce spending by an amount equal to 2.9 per cent of annual GDP. Put simply, the provinces will need to find an extra $49 billion a year to keep up with growing expenditure demands. The search for new revenue is on.

Debate over the structure of the country's tax system is inevitable in this context. Currently, both the federal and provincial governments have considerable access to the major tax bases (e.g. personal and corporate income). The 1960s and 1970s witnessed some federal-provincial realignment of taxation responsibilities in response to the growth of provincial expenditure programs, such as healthcare, education, and social assistance. As a result, Canada has the most decentralized taxation structure among OECD countries.

But since the last major coordinated change—the transfer of personal and corporate income tax points to the provincial governments in 1977—there has been little discussion of structural realignment. This lack of discussion is a concern due to major changes that have occurred in the global and national economies. Long-term fiscal sustainability will require an efficient tax system that responds to dynamic national and global economic contexts.

Globally, the mobility of goods, capital and labour means that Canada's tax system must compete with the rest of the world to attract new talent and business, and to ensure that Canadian firms are successful in international markets. Value-added taxation (VAT) will be a key component of making Canada globally competitive. Several provinces have already adopted a harmonized sales tax (HST) in an effort to increase investment and productivity. Having efficient corporate and personal income tax systems will also be important to Canada's competitiveness.

Nationally, major changes include the growing importance of natural resource rents as a source of income for some provinces—to which the federal government has little access. Provinces are also facing escalating demands on their programs, particularly healthcare, due to demographic pressures.

But it is unclear to what extent the country's tax system can cope with the pressures on provincial government finances and rapidly changing domestic and global economies. Is the current taxation structure—and the corresponding size of intergovernmental transfers—appropriate? Are there alternative arrangements that would provide provinces the resources they need in the short-term, while also ensuring long-term fiscal sustainability through an efficient tax system?

This paper examines four potential reforms:

1. Centralizing corporate income taxation combined with a rules-based revenue-sharing system
2. Transferring personal income tax-points to provinces combined with some centralization of corporate income taxation
3. Expanding the national value-added tax combined with a rules-based revenue-sharing system
4. Adopting a national carbon-pricing system combined with a rules-based revenue-sharing system

Each option is discussed with respect to its potential effects on the efficiency of taxation in the federation, the autonomy of provincial governments, fiscal disparities among provinces, the stability and predictability of federal transfers and provincial revenues, and accountability.

This paper does not make any explicit recommendations about which option to pursue, but does recognize the importance of balancing the tradeoffs inherent in any choice. For example, centralizing one or more forms of taxation is perhaps the easiest way of gaining efficiency and, in turn, achieving long-term fiscal sustainability, but comes at a cost to provincial autonomy. Combining tax centralization with formal revenue-sharing mechanisms could compensate for this loss. In this respect, formal revenue-sharing agreements are an attractive and compelling option when measured against established principles and objectives for the tax and transfer system.

Integrating formal revenue-sharing mechanisms into the tax system would add greater clarity, transparency, and predictability to Canadian fiscal relations. Formal revenue-sharing agreements could be accompanied by a reduction (or the elimination) of existing transfers, like the CHT. Increasing the share of federal transfers that are determined by collectively negotiated rules, rather than by the federal government's discretion, could reduce intergovernmental conflict. Guaranteeing provinces a set portion of federal tax revenues could give provinces the stability they need to meet their growing expenditure demands.

Even if provinces are reluctant to cede more tax room to the federal government, current fiscal pressures warrant consideration of all options. No path to fiscal sustainability will be free of hard choices. The provinces may have to be willing to make tradeoffs and decide to give up some autonomy for greater efficiency, stability, and predictability. One thing is certain: in the search for an extra $49 billion a year, leave no stone unturned.

FISCAL PROBLEMS, TAXATION SOLUTIONS

OPTIONS FOR REFORMING CANADA'S TAX AND TRANSFER SYSTEM

JEAN-FRANÇOIS TREMBLAY

INTRODUCTION

The federal government recently announced that the six per cent annual increase in the Canada Health Transfer (CHT) that was part of 2004's ten-year health accord with the provinces will be extended up to 2016-17. The growth rate of the CHT will then be equal to a three-year moving average of nominal GDP growth (with a three per cent floor) until 2024. Recent estimates of the Office of the Parliamentary Budget Officer (PBO 2012) that include the effects of this new escalator suggest, however, that CHT growth beyond 2016-17 will fall significantly short of the projected growth in provincial healthcare expenditures, unless healthcare systems are significantly reformed. This could compromise the long-term fiscal sustainability of provinces.

More generally, the fiscal sustainability estimates of the PBO indicate that, although population aging will have considerable fiscal implications for both orders of government, through its effects on healthcare expenditures and on public pensions systems in particular, it represents a bigger threat to the long-term fiscal sustainability of provinces. Part of the problem for provinces could possibly be addressed by reforming healthcare delivery systems to improve efficiency. In fact, the recent federal announcement may well provide provinces the incentives to do so. But it is unlikely that the potential efficiency gains could compensate for the cost pressures resulting from the demographic shock. Unless there are changes to federal-provincial fiscal arrangements, provinces will likely have to raise more own-source revenues, which will lead to greater tax decentralization in the federation.

This was recently recognized in the Drummond Report, which advocated important changes to fiscal arrangements, including to the vertical allocation of tax responsibilities and to federal transfers (Commission on the Reform of Ontario's Public Services 2012). In particular, it recommended the elimination of the Canada Social Transfer (CST) combined with a tax-point transfer to provinces. This would involve reducing federal tax rates on a particular base and simultaneously increasing provincial ones.

Quantitatively, the structural adjustments to provincial finances required to achieve sustainability are large. According to the PBO, provinces would currently need to permanently increase revenues or reduce program spending by an amount corresponding to 2.9 per cent of GDP (approximately $49 billion) in order to eventually stabilize the consolidated provincial debt-to-GDP ratio in the long-term at its current level (2012).[1]

Of course, this estimate masks substantial variations across provinces in indebtedness levels and in the levels of fiscal adjustment required to achieve sustainability. There is also a risk of widening disparities in provincial fiscal capacities, especially if resource prices increase significantly in the future. Larger disparities, combined with greater provincial occupation of the tax room, could in turn raise difficult horizontal equity issues.

THE APPROPRIATE TRANSFER SYSTEM AND ALLOCATION OF OWN-SOURCE REVENUES ACROSS ORDERS OF GOVERNMENT MUST BE JOINTLY DETERMINED

The current period of fiscal consolidation and the need to address the long-term fiscal implications of population aging offer an occasion to question, and perhaps fundamentally reform, the fiscal architecture of the federation. Adjustments to the transfer system and the allocation of taxation among orders of government warrant consideration. The design of the federal-provincial transfer system and the issue of tax assignment are directly linked. In effect, the appropriate transfer system and allocation of own-source revenues across orders of government must be jointly determined.

The objective of this paper is to provide an assessment of whether the level of tax decentralization in the Canadian federation—and the corresponding size of intergovernmental transfers—is appropriate and to outline potential options for reform.

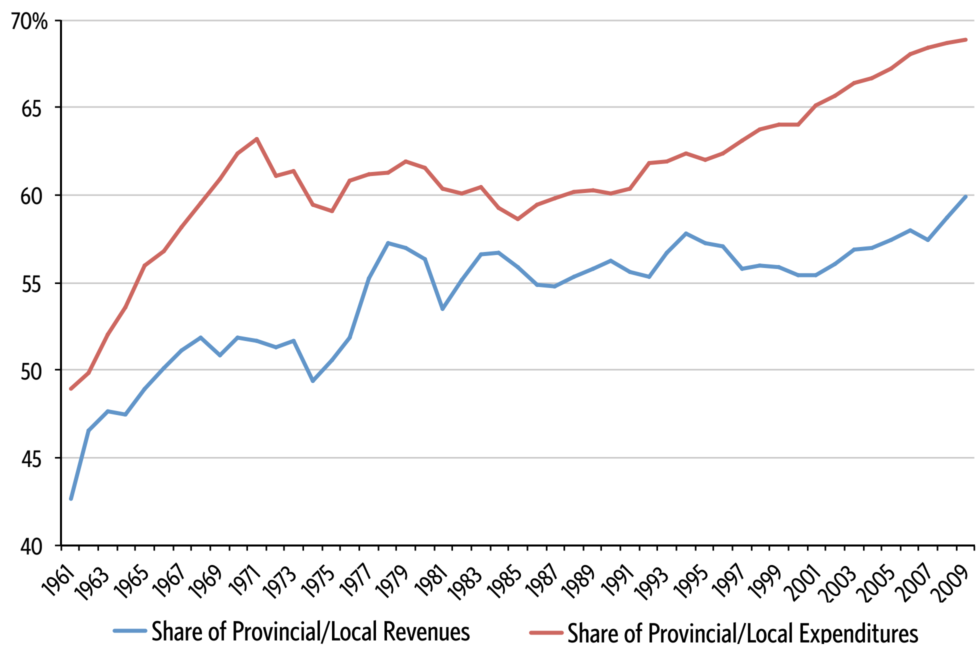
But first, to provide some perspective on this issue, it is useful to start by briefly looking at the evolution of fiscal decentralization in Canada over time and to compare Canada with other OECD federations.

FISCAL DECENTRALIZATION
SOME BASIC FACTS

There has been considerable decentralization in the Canadian federation over the last five decades, both on the revenue and expenditure sides. The establishment and growth of the welfare state, including major programs of provincial jurisdiction, have significantly increased the size of provincial governments relative to that of the federal government.[2] This is illustrated in Figure 1, which depicts consolidated provincial and local government revenues and expenditures as shares of total government revenues and expenditures.

On the expenditure side, the relative importance of provincial and local governments increased rapidly during the 1960s and steadily since the mid-1980s, with the share of provincial and local expenditures increasing from 49 per cent at the beginning of the 1960s to 69 per cent in 2009. The rapid growth of provincial expenditure programs in the 1960s was facilitated by the establishment of federal transfer programs, including Equalization in 1957, as well as cost-sharing programs for hospital insurance and medical care, social assistance, and post-secondary education (Lazar, St-Hilaire, and Tremblay 2004). Nonetheless, the role of provinces has dramatically increased over the period.

Figure 1 Provincial/local government own-source revenues and expenditures as a percentage of total government revenues and expenditures, 1961-2009



Source: Calculated using data from the National Economic and Financial Accounts, Statistics Canada, Table 380-0007.

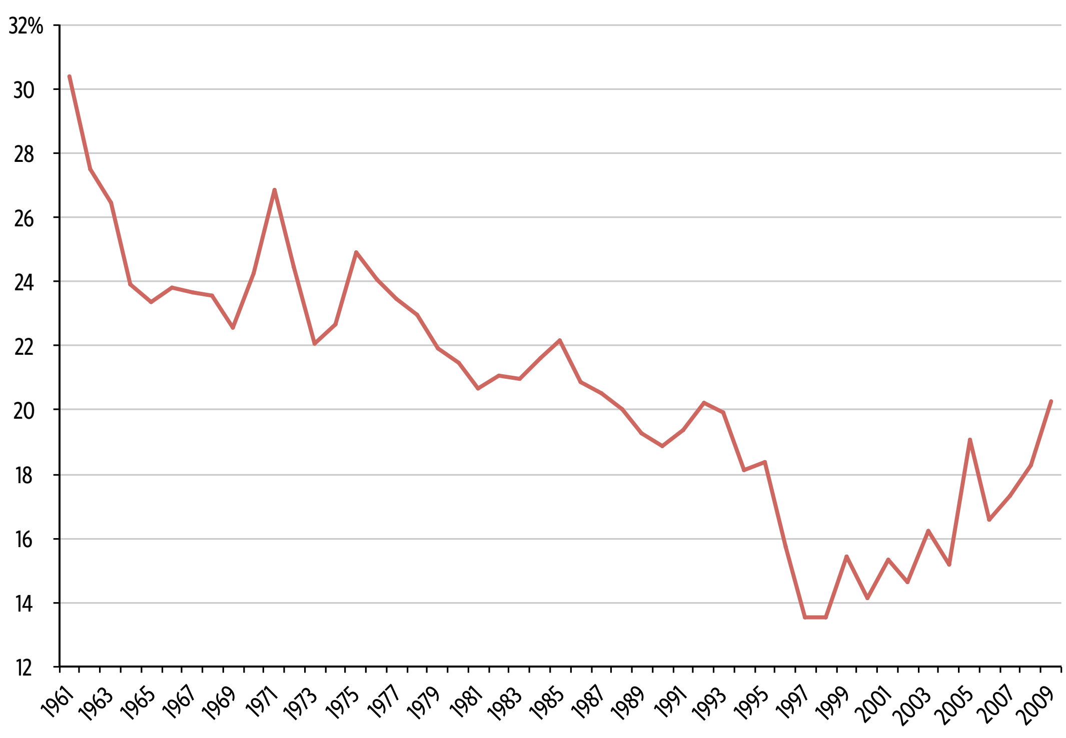
The importance of provincial and local governments in terms of revenue-raising also increased during the 1960s and 1970s. The own-source revenues of provincial and local governments as a share of total government revenues increased from 43 per cent at the start of the 1960s to 57 per cent at the end of the 1970s and to 60 per cent in 2009. Part of this increase resulted from coordinated federal reductions and provincial increases in personal income tax rates as part of the tax collection agreements of 1962 and the tax-point transfer agreement of 1977.[3]

Apart from those, however, there was no major coordinated realignment of taxation responsibilities between orders of government. Much of the shift that occurred in revenue-raising simply resulted from provincial decisions to occupy a greater share of the main tax bases in response to rapidly expanding expenditure programs, as well as federal tax reductions in the last decade or so.

The decentralization of taxation was accompanied by a decrease in the relative importance of federal transfers, as shown in Figure 2. The share of federal transfers in provincial revenues decreased from 30 per cent in 1961 to less than 14 per cent by the end of the 1990s, although it increased during the last decade to about 20 per cent in 2009. The quick increase at the end of the 1960s partly reflects the establishment of cost-sharing programs for healthcare, post-secondary education, and social assistance in 1966, combined with a rapid expansion of provincial expenditures in these areas. By the same token, part of the subsequent decrease in the relative importance of transfers resulted from a move away from cost-sharing programs in favour of block transfers in the 1970s (Lazar, St-Hilaire, and Tremblay 2004). As well, cash transfers were reduced in 1977 as part of the tax-point transfer agreement that shifted a portion of the income tax room to the provinces.

The steady decline of federal transfers as a share of provincial revenues continued until 1997 as a result of various measures, including a reform of the Equalization program in 1982 and reductions of the escalator for the block transfers under Established Programs Financing. Nonetheless, while all these reforms had a significant impact, the steady decrease in the relative importance of federal transfers between the end of the 1960s and the middle of the 1990s largely resulted from the rapid growth of provincial own-source revenues.

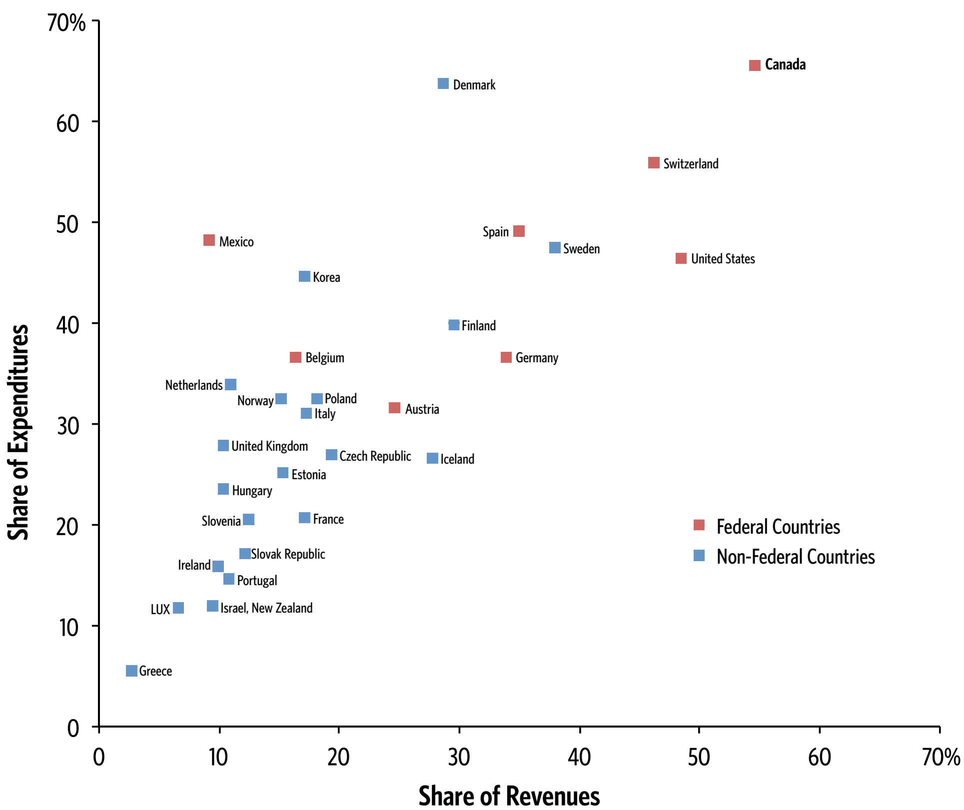
Figure 2 Federal government transfers as a percentage of provincial government revenues, 1961-2009



Source: Calculated using data from the National Economic and Financial Accounts, Statistics Canada, Table 380-0007.

As a result of the steady decentralization process experienced over the last five decades, sub-national government own-source revenues and expenditures as a share of total government revenues and expenditures is now highest in Canada compared to other OECD countries. This is illustrated in Figure 3. All OECD countries, including federal and non-federal countries, have more centralized revenue and expenditure structures than Canada. The extent of decentralization tends to be greater among federal countries. It is interesting, however, to note that a few non-federal countries (e.g. Denmark, Sweden, and Finland) are quite decentralized when compared to some federations.

Figure 3 OECD sub-national governments' own-source revenues and expenditures as a percentage of total government revenues and expenditures, 2008; 2009



Source: Constructed using data from the OECD Fiscal Decentralization Database
Note: 2008 data for South Korea and New Zealand; 2009 data for all other countries. Data for Australia was not included in the OECD Database.

It is clear from Figure 3 that most countries, including Canada, are relatively more decentralized on the expenditure side than on the revenue side, although the size of the vertical gap varies considerably across countries. Transfers to sub-national governments as a share of sub-national revenues—a measure of vertical fiscal gap[4]—was equal to 20 per cent in Canada in 2009, compared to 70 per cent in Belgium, 45 per cent in Spain, 39 per cent in Austria, 30 per cent in Switzerland, 21 per cent in the US, and 16 per cent in Germany (OECD 2008; 2009).

The extent of decentralization varies by tax base, as shown in Table 1. In terms of personal income taxation, decentralization is greater in Canada than in the US and Australia, but is slightly less than in Spain and considerably less than in Belgium, Germany, and Switzerland. Compared to OECD federations, however, Canada is relatively more decentralized in terms of corporate income taxation and consumption taxation. Only Germany and Switzerland have more decentralized corporate taxation than Canada. As for consumption taxation, decentralization is greater in Canada than in all other countries, except the US.[5]

Table 1 Percentage of central and consolidated state/local government tax revenues by type of tax in federal OECD countries, 2008

		PERSONAL INCOME TAXATION	CORPORATE INCOME TAXATION	CONSUMPTION TAXATION
Australia	Central	100.0	100.0	82.0
	State/Local	0.0	0.0	18.0
Austria	Central	73.5	73.4	73.1
	State/Local	26.5	26.6	26.9
Belgium	Central	52.8	100.0	91.6
	State/Local	47.2	0.0	8.4
Canada	Central	61.6	64.4	36.9
	State/Local	38.4	35.6	63.1
Germany	Central	43.2	27.0	64.2
	State/Local	56.8	73.0	35.8
Spain	Central	57.6	93.2	44.7
	State/Local	42.4	6.8	55.3
Switzerland	Central	18.2	46.9	92.7
	State/Local	81.8	53.1	7.3
United States	Central	78.7	80.6	14.0
	State/Local	21.3	19.4	86.0

Source: Computed using data from the OECD Fiscal Decentralization Database

In summary, the revenue-raising role of provinces has increased over time and taxation in Canada is now quite decentralized relative to OECD standards, especially corporate income taxation and consumption taxation. Moreover, the decentralization process occurred largely as an indirect consequence of expanding expenditure programs in areas of provincial jurisdiction and to a lesser extent because of federal tax reductions in recent years, rather than through some coordinated and principles-based realignment of taxation responsibilities between orders of government.

In order to face the spending pressures associated with population aging, the public sector will need to raise more revenues as a share of GDP in the future. Achieving this without compromising prosperity will require an efficient tax system. However, without any reform of fiscal arrangements, increased taxation will take place largely at the provincial level. It is not clear that this would necessarily be the right direction to take given the potential negative impact of further decentralization for taxation efficiency,as will be discussed in detail in the next section.[6] It is important to question whether the structure of taxation in the federation is optimal and to consider whether some realignment of taxation responsibilities would be desirable.

CHANGING THE VERTICAL ALLOCATION OF TAXATION SOME OPTIONS

There are several options for realigning taxation among the federal and provincial governments. Before discussing potential reforms though, it is important to mention the various objectives that might be pursued. These include:

- Improving the efficiency of the tax system in the federation
- Preserving an appropriate level of provincial autonomy
- Minimizing horizontal fiscal disparities and sustaining the ability of the federal government to achieve equalization objectives
- Improving the stability and predictability of transfers and of provincial revenues
- Maintaining accountability at both orders of government

Any reform will tend to raise conflicts between some of these objectives. Potential reform options will be discussed below with these objectives in mind. The discussion will focus on four taxation bases: corporate income taxation, personal income taxation, consumption taxation, and carbon taxation (or other forms of carbon-pricing mechanism). In each case, different potential reforms could be implemented to either centralize or decentralize the tax base.

However, given the current taxation structure in the Canadian federation and the set of objectives that might be pursued, the following four reform options will be discussed:

1. Centralization of corporate income taxation combined with a rules-based revenue-sharing system
2. Personal income tax-point transfer to provinces combined with some centralization of corporate income taxation
3. Expanded national value-added tax combined with a rules-based revenue-sharing system
4. National carbon-pricing system combined with a rules-based revenue-sharing system

These are discussed sequentially below. The discussion will focus only on the qualitative nature of potential reforms. Quantitatively, any of the above reforms could involve relatively small or relatively large tax centralization/decentralization. They could also be designed so as to have a positive, negative, or neutral effect on provincial total revenues. In some cases, an increased federal tax rate combined with revenue-sharing could leave provincial tax rates unchanged.

However, the discussion that follows will abstract from these issues. Its main purpose is simply to evaluate the advantages and disadvantages of different types of reforms, keeping in mind that any type of reform could be designed in ways that would improve the long-term fiscal sustainability of provinces in light of anticipated expenditure responsibilities.

ANY TYPE OF REFORM COULD BE DESIGNED IN WAYS THAT WOULD IMPROVE THE LONG-TERM FISCAL SUSTAINABILITY OF PROVINCES

1. Centralization of corporate income taxation combined with a rules-based revenue-sharing system

Relative to other OECD federations, provincial governments in Canada occupy a relatively high share of the corporate income tax room. In principle, a high degree of corporate tax decentralization raises various efficiency issues.[7] For instance, since the corporate tax base is highly mobile, a relatively high level of decentralization can lead to intense tax competition problems within the federation (Wilson 1999; Wildasin and Wilson 2004). In fact, corporate income is certainly the tax base for which tax competition problems are likely most severe. The incentives to attract firms and capital investment will tend to induce provincial governments to set inefficiently low tax rates and/or to give preferential treatment to particular types of firms and investments, or to firms in specific industries.[8] While strategic tax policy of this sort can be beneficial from the perspective of individual provinces, it is generally inefficient for the federation as a whole.

Apart from generating incentives for strategic tax policy-making, decentralization of corporate tax policy can distort the allocation of firms and capital across provinces if provincial tax bases and rates are not uniform. In practice, general corporate tax rates do vary substantially among provinces[9] and, although the definition of taxable income is set by the federal government, the type and size of provincial tax credits and deductions vary considerably. Interprovincial variations in tax bases and rates will also provide incentives for firms to engage in income shifting activities. Mintz and Smart (2004) found empirical evidence showing that income shifting in Canada had relatively large effects on the corporate tax bases of provinces.

These efficiency issues, among others, provide some justifications for centralizing the corporate income tax. One reform option that would mitigate these problems without compromising the ability of provincial governments to finance their expenditures would be to further centralize corporate income taxation at the federal level and adopt a rules-based revenue-sharing system with the provinces. In practice, this would involve increasing federal corporate income tax rates and simultaneously reducing, although not necessarily, provincial ones. With an appropriately designed revenue-sharing mechanism, such a reform could be made neutral with respect to the allocation of public funds among orders of government, if desired.

Under such arrangements, part of the federal corporate tax revenues would automatically be transferred to provinces according to specific rules. Many options would be available for determining how the revenues would be allocated among provinces (Rao 2007). Transfers to each province could be proportional to revenues collected in each province (i.e. shared on an origin basis). Alternatively, they could simply be transferred to provinces on an equal per capita basis. The sharing rule could also combine elements of both of these options.

There are a few important advantages of such a reform. First and foremost, there would be efficiency gains. More harmonized and coordinated corporate tax policies across provinces will tend to: lessen the efficiency costs of raising government revenues for the federation as a whole; improve the allocation of labour, capital, and firms between different activities and regions; increase aggregate productivity; and improve international competitiveness.

Second, it will reduce provincial fiscal disparities and pressure on the equalization system, at least if a portion of the federal revenues is shared with provinces on an equal per capita basis. In fact, given that the current Equalization system does not equalize the above-average fiscal capacities of wealthy provinces downwards, some tax centralization combined with equal per capita revenue sharing will tend to reduce fiscal disparities among provinces with above-average capacities, as well as between provinces that receive Equalization and those that do not. In other words, it would move the final allocation of revenues closer to what would be achieved under a net equalization system.

In addition to reducing 'structural' fiscal disparities between provinces, such a reform would tend to increase the predictability of provincial revenues by implicitly providing more complete insurance to provinces against unexpected and temporary variations to their corporate tax bases.[10]

The adoption of rules-based revenue-sharing arrangements would raise a number of issues about the decision-making process for future changes to tax rates, tax bases, and sharing rules. In principle, the federal government would be responsible for setting the tax rate and base. However, this could be done through negotiation with the provinces. It could also be set based on the recommendations of an independent commission. As for the portion of total federal corporate income tax revenues that would be shared with provinces, this would have to be determined initially through federal-provincial negotiation. The adoption of rules-based revenue-sharing of any form could make any future adjustment of tax rates and tax bases more difficult to implement. The introduction of such rigidities in tax policy is an important drawback of this type of reform.

The main disadvantage, though, is the reduced autonomy of provincial governments. Provinces would collectively exercise some influence over corporate taxation policy, but would individually lose the discretion to set their own policy, at least under full centralization. Provinces would certainly be reluctant to give up some autonomy over corporate tax policy, in particular Quebec and resource-rich provinces that access part of their resource wealth through the corporate income tax.

However, this could be compensated by efficiency gains and the fact that, with the adoption of a revenue-sharing system, a greater share of federal transfers would be determined by formal rules. These rules could considerably change the nature of the federal-provincial transfer system. In any case, asymmetric arrangements by which the degree of centralization would not be uniform in all provinces are feasible, although at the cost of reduced economic efficiency gains.

Another potential disadvantage of revenue-sharing arrangements is that it could, in the longer-run, distort federal tax policy decisions (Rao 2007). If the federal government supports the political costs of corporate tax rate increases but shares the revenues with the provinces, there may be some incentives to shift its tax structure away from the corporate income tax. Revenue-sharing may also reduce the federal government's interest to invest resources in tax administration and in measures to increase compliance. Finally, such a reform would increase the asymmetry between provincial expenditures and own-source revenues, which could be argued would reduce accountability.

Table 2 Costs and benefits of corporate tax centralization with rules-based revenue-sharing

Economic efficiency	Large efficiency gains: better harmonization, reduced tax competition, improved allocation of firms and capital, higher aggregate productivity
Provincial autonomy	Significant loss of provincial autonomy
Horizontal fiscal disparities	Lower disparities if part of the revenues are shared on equal per capita basis
Stability and predictability	Higher stability and predictability: better risk-sharing among provinces, reduced uncertainty about federal transfers
Accountability	Possibly reduced accountability: larger asymmetry between provincial own-source revenues and expenditures
Asymmetric arrangements?	Feasible, although at some economic efficiency cost

2. Personal income tax-point transfer to provinces combined with some centralization of corporate income taxation

The vertical allocation of taxation could also be changed through tax-point transfers to provinces, as recommended by the Drummond Report, among others. One reform option that would involve both provincial autonomy gains and economic efficiency gains would be to transfer personal income tax-points to provinces combined with some centralization of corporate tax policy. Again, this could entail full or partial centralization of corporate taxation. This reform would involve a reduction of federal personal income tax rates and a simultaneous and coordinated increase in provincial rates that would leave total rates unchanged.

The reform could be designed so as to be revenue-neutral, or not, for both orders of government. The reduced provincial autonomy over corporate tax policy would be compensated by greater occupation of the personal income tax field, which would improve the ability of provinces to achieve objectives of vertical equity and redistribution, among other things. Again, asymmetric arrangements across provinces would also be feasible here.

Changing the vertical allocation of the personal income tax room would raise additional efficiency issues. For instance, there are efficiency benefits from having as much harmonization as possible of personal income tax policy across provinces. Decentralization can have an impact on harmonization. Similarly as for capital, labour mobility can lead to personal income tax competition between governments, leading to various distortions in provincial tax policies (Wildasin 1991). Likewise, the lack of policy harmonization across provinces can generate an inefficient allocation of labour and lower productivity for the federation as a whole (Boadway and Flatters 1982).

In order to minimize problems associated with tax competition and inefficient allocation of labour, it is preferable to have a relatively important federal presence in the personal income tax field. Again, there is a clear trade-off between economic efficiency objectives and provincial autonomy. However, the case for maintaining sufficient provincial autonomy over personal income taxation is arguably stronger than in the case of corporate income taxation and consumption taxation, at least if provincial objectives of interpersonal equity and redistribution are viewed as having precedence over federal ones.[11] Personal income taxation is one of the main policy instruments available to redistribute among individuals. In order for provinces to achieve their redistributive objectives, it is important that they occupy a relatively large share of the tax room, especially if provincial objectives conflict with those of the federal government.

This reform could potentially reduce provincial fiscal disparities. If the reform is revenue-neutral for provincial governments taken as a whole, then provincial disparities would be reduced as long as there are greater disparities in provincial corporate tax bases than in personal income tax bases. Relative to corporate tax centralization combined with revenue sharing on an equal per capita basis, however, this reform would lead to greater fiscal disparities across provinces and greater pressure on the Equalization program. On the other hand, future federal corporate tax policy would not be constrained by the influence that provinces would likely exercise under a revenue-sharing system.

Note finally that having a more centralized corporate income tax system as well as a more decentralized personal income tax system might make integration of personal and corporate taxation more difficult. If so, this would be an additional efficiency issue that would need to be taken into account. Better integration of personal and corporate taxation would contribute to reducing distortions in the allocation of capital between the corporate and non-corporate sectors and, ultimately, increase productivity (Boadway and Kitchen 1999).

Table 3 Costs and benefits of a personal income tax-point transfer to provinces with corporate tax centralization

Economic efficiency	Efficiency loss if personal income tax transfer reduces harmonization and increases incentives for tax competition; large efficiency gains from corporate income tax centralization
Provincial autonomy	Moderate gain of provincial autonomy; increased ability to achieve own objectives of interpersonal redistribution
Horizontal fiscal disparities	Lower disparities if overall reform is revenue-neutral for provinces and if greater disparities exist in corporate income tax capacities than in provincial income tax capacities
Stability and predictability	Provincial revenues possibly more stable given greater variance in corporate income tax revenues than in personal income tax revenues
Accountability	Little effect on accountability if the transfer system remains unaffected
Asymmetric arrangements?	Feasible, although at some economic efficiency cost

3. Expanded national value-added tax combined with a rules-based revenue-sharing system

An important consumption taxation reform has recently taken place with the introduction of the Harmonized Sales Tax (HST) in Ontario (and temporarily in British Columbia). Harmonization had already taken place in the 1990s in Newfoundland and Labrador, Nova Scotia, New Brunswick, and Quebec. Nonetheless, additional steps could be taken to further harmonize consumption taxation across the federation. Before discussing reform options, however, it is useful to briefly mention some of the advantages and disadvantages of sales tax harmonization.[12]

Some of the most important benefits of adopting the HST are associated with the economic efficiency gains from replacing provincial retail sales taxes with value-added taxes (VAT) harmonized across levels of governments.[13] A VAT is generally viewed as a more efficient form of taxation than retail sales taxation for a number of reasons. First, business inputs are effectively untaxed under a VAT, which tends to increase investment and productivity.[14] A VAT is imposed on intermediate goods, but producers are given a refundable credit for the taxes paid on inputs.

REPLACING PROVINCIAL RETAIL SALES TAXES WITH A VAT WILL TEND TO INCREASE THE EFFICIENCY OF INTER-PROVINCIAL TRADE

Second, under a destination-based VAT, sales to buyers outside the country are zero-rated. That is, there is no tax imposed on goods that are exported and the seller receives a credit for taxes paid on inputs so that the full value of exported goods is tax-free. As a result, there is no competitive disadvantage for domestic firms relative to foreign firms. Since inter-provincial sales are also zero-rated under a VAT system, the price of goods that are traded between provinces is affected only by tax rates at destination. Therefore, replacing provincial retail sales taxes with a VAT will tend to increase the efficiency of inter-provincial trade (McLure 2000).

Third, the HST base is generally broader than that of retail sales taxes. Adopting a broader base reduces distortions in relative prices and in the allocation of resources across sectors, which also increases efficiency. And finally, because of the crediting mechanism, a VAT can be more difficult to evade than retail sales taxes (Keen and Smith 2007).

The main disadvantage of the HST is the reduced level of provincial autonomy. Under the HST, provincial governments have a more limited ability to define the tax base, although they can effectively set their own rate. There are redistributive effects that are also important. First, to the extent that part of the revenues from retail sales taxes are effectively levied on business inputs, the adoption of the HST may shift part of the burden from firms to consumers. However, this will ultimately depend on how the reduced taxation of business inputs is shifted to consumers through lower prices and to production factors through higher returns. Second, the broader tax base of the HST, which includes most services, will increase the burden on individuals for whom the consumption of these services is relatively important.

Given that several provinces have now adopted the HST, additional VAT reforms could be considered in the future. First, the provinces that still have retail sales taxes could adopt the HST (now unlikely in British Columbia in the short-term). That would generate efficiency gains within these provinces and would improve harmonization across the country.

Second, other options for how the HST revenues are shared and for how tax rates are set could be considered, especially if all provinces were to adopt the HST. The provincial share of HST revenues is currently transferred to provinces on an origin basis. The alternative would be to allocate revenues between provinces on an equal per capita basis (or by some combination of origin basis and equal per capita basis). Equal per capita transfers would work to reduce revenue disparities across provinces.

This option would be easier to implement if all provinces participated in the HST and if provinces had a restricted ability to set the tax rate. Indeed, a pure equal per capita sharing rule would be very difficult to implement if provinces retain discretion in setting tax rates. Therefore, moving to a pure equal per capita sharing rule would essentially require the adoption of a unique national VAT for which the base and rate would be set by the federal government, possibly subject to consultation or negotiation with the provinces, as proposed by Boadway (2006). This option would imply a high tax increase in Alberta where there is no provincial sales tax.

Alternative systems that would leave more autonomy to provinces are also possible. For example, a HST could be implemented across provinces with a minimum rate set by the federal government. The revenues generated from the federally-set rate, which would ideally be higher than the current GST rate, could be shared between the two orders of government with the provincial share allocated between provinces on an equal per capita basis. Provinces would then be free to impose surtaxes for which the revenues would be transferred back to provinces on an origin basis. This would leave the provinces with a fairly high level of autonomy since they would effectively set the total rate (subject to a minimum), while mitigating the effect of provincial autonomy on fiscal disparities across provinces, since a potentially large share of the revenues would be transferred on an equal per capita basis. In fact, provincial revenue disparities would lessen as the minimum rate set by the federal government rises.

This reform would reduce the problem of under-equalization between recipient and non-recipient provinces. Given that the total rate would be set by provinces, the accountability of provincial governments would arguably be maintained. However, relative to a uniform national VAT, such a system would involve some efficiency costs since tax rates would differ across provinces.[15] But this may be a reasonable compromise.

Table 4 Costs and benefits of an expanded national VAT with rules-based revenue-sharing

Economic efficiency	Efficiency gains from adopting a VAT harmonized across all provinces: positive effects on productivity, international competitiveness, and inter-provincial trade
Provincial autonomy	Moderate loss of provincial autonomy
Horizontal fiscal disparities	Lower disparities if part of the revenues are shared on equal per capita basis
Stability and predictability	Higher stability and predictability: better risk-sharing among provinces, reduced uncertainty about federal transfers
Accountability	Little effect on accountability if provinces are able to set the total tax rate
Asymmetric arrangements?	Preferably no: small benefits in terms of provincial autonomy, but potentially important economic efficiency cost

4. National carbon-pricing system combined with a rules-based revenue-sharing system

Finally, the overall vertical allocation of taxation could also be altered by adopting a national carbon-pricing system, possibly combined with a revenue-sharing mechanism between the federal and provincial governments. This would also change the total tax mix in the federation. Carbon-pricing revenues currently constitute a very small portion of government revenues but will surely grow, perhaps substantially, in the long-term.

Several provinces have started to adopt diverse carbon-pricing policies, which will be difficult to harmonize without greater federal involvement in this area (Boadway 2009). The lack of harmonization raises a number of problems for economic efficiency. For example, with decentralized and diverse carbon-pricing mechanisms it will be very difficult to achieve the import-export neutrality necessary to leave Canada's international competitiveness unaffected, as discussed by Courchene and Allan (2009). The lack of harmonization across provinces will also affect the pattern of inter-provincial trade and, ultimately, the allocation of capital across provinces. It will also create opportunities for carbon leakage between provinces. Finally, the long-term ability to achieve Canada's emission reduction commitments toward the international community could be compromised.

These issues provide a strong justification for a uniform carbon-pricing system across the federation. Achieving this will require that the federal government plays a leading role in designing and implementing the system given the diversity of provincial interests in this area. But it is also clear that provinces will only give up some of their autonomy if they are guaranteed a sizable share of the revenues. This is especially the case for the provinces that already occupy part of the carbon tax base.

It is unlikely that a national carbon-pricing system could be successfully implemented by the federal government if it is not accompanied by a rules-based revenue-sharing system with the provinces. Part of the revenues could be used to reduce other taxes, which would generate efficiency gains—the double-dividend argument—but there is no reason why reductions in other taxes should take place only at the federal level. In fact, it may be quite the opposite.

A national carbon-pricing system could take the form of a carbon tax or a cap-and-trade system.[16] The important issue, for the purpose of the current discussion, is how the revenues generated would be allocated between governments in the federation. Horizontally, there is a strong rationale for allocating the revenues across provinces on an equal per capita basis, rather than on an origin basis. A carbon tax (or a cap-and-trade system that generates revenues for the public sector) is an externality-correcting device that should play the dual role of inducing a reduction of emissions and compensating for the damages of emissions. Since the costs associated with climate change are not particularly concentrated in high-emissions provinces, the case for transferring revenues to provinces based on the origin of emissions is quite weak (Courchene and Allan 2008; 2009).

THE IMPORTANT ISSUE IS HOW THE REVENUES GENERATED FROM A CARBON-PRICING SYSTEM WOULD BE ALLOCATED BETWEEN GOVERNMENTS IN THE FEDERATION

For all practical purposes, the most sensible way to distribute the compensation for the cost of climate change across provinces is to do it on an equal per capita basis. Moreover, the level of the carbon tax that will induce the efficient level of emissions, from the perspective of the federation, is in principle equal to the marginal damages from carbon emissions. This implies that the appropriate compensation to provide will exactly exhaust the revenues generated by the tax. In turn, this means that none of the provincial share of revenues should be distributed across provinces on an origin basis.

If it is optimal to distribute the provincial share of carbon-pricing revenues across provinces on an equal per capita basis and if we assume that the revenues will be used to reduce other taxes, then the vertical allocation of revenues should be largely determined on the basis of taxation efficiency considerations. Since the efficiency cost of taxation tends to be higher at the provincial level, because of tax base mobility for instance, then most of the carbon-pricing revenues should be transferred to provinces. In other words, a highly centralized carbon-pricing policy along with a relatively high decentralization of the revenues will tend to maximize the size of the double-dividend.[17]

Finally, given the role of carbon-pricing as an externality-correcting instrument, asymmetric arrangements across provinces in this area would be much harder to defend than for other types of taxes. It would likely create efficiency problems and would give rise to difficult equity issues of the same nature as those seen at the international level.

Table 5 Costs and benefits of a national carbon-pricing system with rules-based revenue-sharing

Economic efficiency	Potentially large efficiency gains: harmonization across provinces could increase efficiency of inter-provincial trade, reduce opportunities for carbon leakage
Provincial autonomy	Limited effect on provincial autonomy given the role and nature of carbon-pricing
Horizontal fiscal disparities	Lower disparities if part of the revenues are shared on equal per capita basis
Stability and predictability	Higher stability and predictability: better risk-sharing among provinces, reduced uncertainty about federal transfers
Accountability	Little effect on accountability given the role and nature of carbon-pricing
Asymmetric arrangements?	No, given the externality-correcting role of carbon-pricing

CONCLUSION

The projected long-term fiscal positions of the federal and provincial governments, as well as the anticipated implications of population aging for fiscal sustainability, raise legitimate questions about the allocation of public funds in the Canadian federation. The provinces, in particular, are under increasing fiscal pressure and will need to find an extra $49 billion a year to keep up with growing expenditure demands.

This paper reviewed some of the advantages and disadvantages of potential reforms to the allocation of taxation among the federal and provincial governments, highlighting the trade-offs that arise between various objectives related to the efficiency of taxation in the federation, provincial autonomy and accountability, provincial fiscal disparities, and the stability and predictability of fiscal arrangements. Table A1, presented in the paper's Appendix, summarizes the discussion.

While there are good efficiency rationales for centralizing tax policy in the federation—in particular with respect to corporate taxation, consumption taxation, and carbon-pricing (which are all relatively decentralized in Canada compared to OECD standards)—the main drawback is that doing so would reduce provincial autonomy. However, the loss of provincial autonomy could potentially be compensated by greater decentralization of personal income taxation, or by simultaneously adopting rules-based revenue sharing mechanisms.

The latter option would increase the share of federal transfers that are determined by formal and negotiated rules, rather than at the discretion of the federal government. The exercise of federal discretion over the determination of transfers has been a source of tension in federal-provincial relations and, arguably, a restriction on provincial autonomy.

The federal government's intention to cap CHT growth at the GDP growth rate will create tensions in the federation and may well generate renewed interest for a broad reform of the transfer system. The reform options that involve the adoption of rules-based revenue-sharing mechanisms could be combined with a reduced CHT (or even the elimination of the CHT), which would move the country even further toward a rules-based transfer system. This could ease some tensions in the federation and could be done in a way that improves the long-term fiscal sustainability of provinces.

But even if provinces are reluctant to cede more tax room to the federal government, current fiscal pressures warrant consideration of all options. No path to fiscal sustainability will be free of hard choices. The provinces may have to be willing to make trade-offs and decide to give up some autonomy for greater efficiency, stability, and predictability. One thing is certain: in the search for an extra $49 billion a year, leave no stone unturned. MC

ENDNOTES

1. This estimate takes into account the estimated impact of demography on future program expenditures, among other things.
2. See Lazar, St-Hilaire, and Tremblay (2004) for more details on this, and more generally on the evolution of federal and provincial fiscal structures in the post-war period.
3. As part of the agreement on Established Programs Financing in 1977, the federal government reduced its tax rates on personal income by 13.5 percentage points and on corporate income by 1 percentage point. Provinces simultaneously increased their tax rates by equivalent amounts. The notional value of these tax-point transfers in 2012-13, for all provinces combined, is approximately $23.7 billion (Finance Canada 2011).
4. A vertical fiscal gap refers to the amount to which sub-national governments' expenditure responsibilities exceed their revenue raising capacities.
5. It should be noted that the extent of decentralization depends not only on the share of revenues received by sub-national governments, but also on which level of government sets the tax rate and defines the tax base. This brief overview of tax decentralization does not take this issue into account.
6. Broadly speaking, taxation imposes efficiency costs on the economy because it distorts consumption and production patterns, trade, investment decisions, the location of capital and businesses, and labour supply, for example. The smaller these costs, the greater is the efficiency of the tax system. Distortions will tend to be greater when the tax system has relatively large effects on the relative prices of goods, capital and labour, or when tax systems are not well harmonized across jurisdictions, among other factors.
7. A detailed discussion of the optimal assignment of corporate taxes can be found in Boadway and Shah (2009).
8. Calvlovic and Jackson (2003) and Hayashi and Boadway (2001) found empirical evidence of corporate income tax competition among Canadian provinces, while Devereux, Lockwood, and Redoano (2008) report evidence of competition over corporate tax rates among OECD countries. De Mooij and Enderveen (2003) and Mintz (2007) provide international empirical evidence indicating that the allocation of foreign investment is highly sensitive to differences in the effective taxation of capital.
9. In 2011, general provincial corporate income tax rates ranged from 10 per cent to 16 per cent, and those applying to small businesses from 0 per cent to 8 per cent.
10. See, for example, Persson and Tabellini (1996), Lockwood (1999), and Bordignon, Manasse, and Tabellini (2001) for analyses of the insurance benefits of tax centralization in federal settings.
11. See Banting and Boadway (2004) for a related discussion of federal versus provincial redistributive objectives, although in a different context.
12. In recent years, there have also been proposals to entirely decentralize general consumption taxation to provincial governments. Under this option, the federal government would eliminate the GST and HST so as to leave the entire general consumption tax room to the provinces. Provincial governments would be free to occupy the tax room as they see fit. Now that Ontario has adopted the HST, this option is somewhat improbable, at least in the short-term.
13. See Boadway (2006) for a discussion of the benefits of harmonized sales taxation in the Canadian context.

14. See Smart and Bird (2009) for a discussion of this issue and for supporting Canadian empirical evidence.
15. See McLure (2000) and Bird and Gendron (2000) for discussions of the problems generated by non-uniform VAT in federations.
16. See Courchene and Allan (2009) for an overview of the issues associated with various forms of carbon-pricing mechanisms in the Canadian context.
17. Note also that, if the receipt of carbon-pricing revenues leads provinces to reduce other taxes, there will also be reduced pressure on the Equalization system.

APPENDIX A
SUMMARY OF COSTS AND BENEFITS OF REFORM OPTIONS

	OPTION 1: CORPORATE TAX CENTRALIZATION WITH RULES-BASED REVENUE-SHARING	**OPTION 2:** PERSONAL INCOME TAX-POINT TRANSFER TO PROVINCES WITH CORPORATE TAX CENTRALIZATION	**OPTION 3:** EXPANDED NATIONAL VAT WITH RULES-BASED REVENUE-SHARING	**OPTION 4:** NATIONAL CARBON-PRICING SYSTEM WITH RULES-BASED REVENUE-SHARING
Economic efficiency	Large efficiency gains: better harmonization, reduced tax competition, improved allocation of firms and capital, higher aggregate productivity	Efficiency loss if personal income tax transfer reduces harmonization and increases incentives for tax competition; large efficiency gains from corporate income tax centralization	Efficiency gains from adopting VAT harmonized across all provinces: positive effects on productivity, international competitiveness, and inter-provincial trade	Potentially large efficiency gains: harmonization across provinces could increase efficiency of inter-provincial trade, reduce opportunities for carbon leakage
Provincial autonomy	Significant loss of provincial autonomy	Moderate gain of provincial autonomy; increased ability to achieve own objectives of interpersonal redistribution	Moderate loss of provincial autonomy	Limited effect on provincial autonomy given the role and nature of carbon-pricing
Horizontal fiscal disparities	Lower disparities if part of the revenues are shared on equal per capita basis	Lower disparities if overall reform is revenue-neutral for provinces and if greater disparities exist in corporate income tax capacities than in personal income tax capacities	Lower disparities if part of the revenues are shared on equal per capita basis	Lower disparities if part of the revenues are shared on equal per capita basis
Stability and predictability	Higher stability and predictability: better risk-sharing among provinces, reduced uncertainty about federal transfers	Provincial revenues possibly more stable given greater variance in corporate income tax revenues than in personal income tax revenues	Higher stability and predictability: better risk-sharing among provinces, reduced uncertainty about federal transfers	Higher stability and predictability: better risk-sharing among provinces, reduced uncertainty about federal transfers
Accountability	Possibly reduced accountability: larger asymmetry between provincial own-source revenues and expenditures	Little effect on accountability if the transfer system remains unaffected	Little effect on accountability if provinces are able to set the total tax rate	Little effect on accountability given the role and nature of carbon-pricing
Asymmetric arrangements?	Feasible, although at some economic efficiency cost	Feasible, although at some economic efficiency cost	Preferably no: small benefits in terms of provincial autonomy, but potentially important economic efficiency cost	No, given the externality-correcting role of carbon-pricing

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