
Vertical Sharing and Horizontal Distribution of Federal-Provincial Transfers in Canada, 1983-2018

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PRÉCIS

Le Transfert canadien en matière de santé (TCS), le Transfert canadien en matière de programmes sociaux (TCPS) et le programme de péréquation sont les principaux piliers des transferts intergouvernementaux au Canada. Ces transferts visent à corriger les déséquilibres fiscaux verticaux et horizontaux qui se produisent au sein de la fédération canadienne. Cet article fournit un cadre pour la décomposition des transferts fédéraux en leurs composantes verticales et horizontales. L'analyse empirique porte sur la période de 1983 à 2018, qui est divisée en sept sous-périodes à des fins d'analyse. Les résultats pour la sous-période la plus récente, de 2015 à 2018, montrent que 1) les transferts verticaux, horizontaux et excédentaires comptent respectivement pour 74,85, 24,27 et 0,88 pour cent du total des transferts fédéraux; 2) les transferts fédéraux ont permis de corriger près de 77 pour cent des inégalités fiscales horizontales initiales; 3) le programme de péréquation est le principal canal de réduction des inégalités fiscales horizontales, comptant pour 85 pour cent du total des transferts horizontaux; et 4) le TCS et le TCPS sont effectivement devenus un canal pour les transferts verticaux, contribuant peu à la péréquation horizontale. Dans ce contexte, il existe un potentiel de réforme du système fédéral de transferts. L'auteur propose de réduire les déséquilibres fiscaux verticaux en transférant des points d'impôt aux provinces plutôt que de leur fournir des transferts à des fins particulières. Il soutient également qu'il faut réformer immédiatement le programme de stabilisation fiscale pour répondre aux préoccupations des provinces productrices de pétrole qui se retrouvent avec un manque à gagner en raison de la baisse des prix du pétrole.

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ABSTRACT

The Canada health transfer (CHT), the Canada social transfer (CST), and the equalization program are the main pillars of intergovernmental transfers in Canada. These transfers aim to address the vertical and horizontal fiscal imbalances that arise within the Canadian federation. This article provides a framework for the decomposition of federal transfers into their vertical and horizontal components. The empirical analysis is carried out for the period 1983-2018, which is divided into seven subperiods for analytical purposes. The results for the most recent subperiod, 2015-2018, show that (1) vertical, horizontal, and surplus transfers account for 74.85, 24.27, and 0.88 percent, respectively, of the total federal transfers; (2) the federal transfers addressed nearly 77 percent of the initial horizontal fiscal inequalities; (3) the equalization program is the primary channel for reducing horizontal fiscal inequalities, accounting for 85 percent of the total horizontal transfers; and (4) the CHT and CST have effectively become a channel for vertical transfers, contributing little toward horizontal equalization. In this context, there is potential for reform in the federal transfer system. The author suggests that vertical fiscal imbalances could be reduced by transferring tax points to provinces instead of providing specific-purpose transfers. The author also argues that immediate reforms are required in the fiscal stabilization program to address the concerns of oil-producing provinces that face a revenue shortfall because of the decline in oil prices.

KEYWORDS: FEDERALISM ■ FEDERAL-PROVINCIAL ■ INTERGOVERNMENTAL ■ REGIONAL ■ REDISTRIBUTION ■ PUBLIC FINANCE

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INTRODUCTION

Intergovernmental transfers from the federal to provincial governments have been a keystone of the Canadian federation. The federal government collects, on average, about 40 percent of the combined revenue receipts of the federal and provincial (including local)¹ governments but incurs about 30 percent of the combined expenditures. Correspondingly, the provincial governments collect only 60 percent of the combined revenue receipts but incur around 70 percent of the combined expenditures.² This mismatch in the revenue resources and expenditure burden between the two tiers of government is usually referred to as the vertical fiscal imbalance (VFI). The horizontal fiscal imbalance (HFI), on the other hand, refers to differences in the revenue capacity of various subnational governments, which usually originate from regional income inequalities. Lower-income provinces lack the capacity to generate per capita tax revenues comparable to those collected by richer provinces, owing to differences in their income levels and tax base. Unequal distribution of natural resources is another source of horizontal fiscal inequalities in Canada, since royalties from natural resource extraction and processing also form a part of provincial revenues.

To address these fiscal imbalances, the federal government provides financial support to the provinces through various channels. The Canada health transfer (CHT), the Canada social transfer (CST), and the equalization program are the main pillars of intergovernmental transfers in Canada, accounting for nearly 80 percent of the federal government's total transfers to provincial and territorial governments. Through the equalization program, the federal government provides transfers to provinces with a fiscal capacity below a standard/benchmark minimum, to augment their fiscal resources. The transfer mechanism for the CHT/CST is different from that for the equalization program; these transfers are allocated among all provinces on an equal per capita basis.

Although the concepts of VFI and HFI have been in use for several decades, to justify intergovernmental transfers, it is difficult to measure these imbalances in an unambiguous way. Several approaches to the definition of these concepts have been developed in the literature. One stream of thought builds on welfare economics and public-choice processes to provide a theoretical conceptualization of VFI and HFI.³ Another stream focuses on the observed fiscal imbalances between federal

1 Throughout this article, provincial finances are inclusive of local governments' finances.

2 Author's calculations based on data from Canada, Department of Finance, *Fiscal Reference Tables 2019* (Ottawa: Department of Finance, 2019). Intergovernmental transfers are netted out in the calculation of the respective shares of the two tiers of government. Federal expenditure is calculated net of the transfers to provinces, while on the revenue side, only own-revenue receipts of provinces (not accounting for federal transfers) are used.

3 See Walter Hettich and Stanley Winer, "Vertical Imbalance in the Fiscal Systems of Federal States" (1986) 19:4 *Canadian Journal of Economics* 745-65; and Bev Dahlby, *The Optimal Taxation Approach to Intergovernmental Grants*, Working Paper no. 2009-16 (Edmonton: University of Alberta, Department of Economics, 2019).

and subnational governments to develop measures of VFI that can be empirically quantified.⁴ Some policy makers opine that, in principle, there cannot be a VFI in Canada, since the provinces have access to essentially the same range of revenue sources as is available to the federal government.⁵ Also, it has been noted that while there are advantages in distinguishing between the amount of the vertical transfer and the amount of horizontal transfers, empirically it is often difficult to separate them.⁶ Grants provided to address vertical imbalances may be distributed in a way that assists some subnational governments more than others (depending on the distributional criteria employed).

This article contributes to the literature by developing a framework to separate the vertical and horizontal components of intergovernmental transfers. The framework presumes a hypothetical world in which federating units/provinces form a federation. The interprovincial mobility of tax bases can be a source of distortion in resource allocation and create challenges for income redistribution policies.⁷ To avoid such inefficiencies and realize economies of scale in taxation, provinces surrender certain fiscal space (measured as a tax point transfer) to the federal government in exchange for transfers of funds to fill the arising vertical fiscal gap. To address interprovincial fiscal disparities, the federating provinces also surrender additional fiscal space (again measured as a tax point transfer) that can be used by the federal government to undertake horizontal fiscal equalization. By comparing federal transfers to the richest/benchmark province with transfers to other provinces, it is possible to separate the vertical and horizontal components of the tax points that are used to fund those transfers.

This framework permits a comparison of the amount of horizontal transfers against the level of initial fiscal disparities among the federating units that might have prevailed in the absence of federation. The comparison can be used as an indicator of the quantum of horizontal disparities addressed through federal transfers. To be sure, the quantum of horizontal fiscal disparities to be addressed and the level of tax points transferred to the federal government for vertical/horizontal equalization need not be fixed forever. They are an outcome of the political, economic, and institutional characteristics of the federation in question that evolves over time.

4 G.C. Ruggeri, D. Van Wart, G.K. Robertson, and R. Howard, "Vertical Fiscal Imbalance and the Reallocation of Tax Fields in Canada" (1993) 19:2 *Canadian Public Policy* 194-215; Chris Matier, Lisa Wu, and Harriet Jackson, *Analysing Vertical Fiscal Imbalance in a Framework of Fiscal Sustainability*, Working Paper no. 01/23 (Ottawa: Department of Finance, 2001); and Jonathan Rodden and Erik Wibbels, "Beyond the Fiction of Federalism: Macroeconomic Management in Multi-Tiered Systems" (2002) 54:4 *World Politics* 494-531.

5 Advisory Panel on Fiscal Balances, *Reconciling the Irreconcilable: Addressing Canada's Fiscal Imbalance* (Ottawa: Council of the Federation, 2006), at 107-8.

6 J.S.H. Hunter, *Federalism and Fiscal Balance: A Comparative Study* (Canberra: Australian National University, Centre for Research on Federal Financial Relations, 1977), at 37.

7 Wallace E. Oates, "The Theory of Public Finance in a Federal System" (1968) 1:1 *Canadian Journal of Economics* 37-54, at 45.

The main advantage of the framework described in this article is that it compares the existing system of federal transfers with a counterfactual world, in which there is no federal government and taxing powers reside entirely with the provinces. The counterfactual can be considered as the “original position,” and can serve as an appropriate benchmark to measure the level of horizontal fiscal equalization achieved among provinces through federal transfers. However, given the rich literature in this domain, and the wide variations in the conceptual/measurement approaches taken by researchers to define fiscal imbalances, it is necessary to review those approaches in order to understand the advantages and disadvantages of the proposed framework.

The rest of the article is organized as follows. The next section provides a review of the existing approaches, followed by a discussion of the theoretical context for the proposed framework. The “Analytical Framework” section provides a method for decomposing the federal transfers into their vertical and horizontal components. The “Results” section applies this new framework to Canada’s federal-provincial transfers. The empirical analysis is carried out for the 1983–2018 fiscal years.⁸ The results show that the composition of the federal transfers has increasingly shifted toward the vertical component: from 53.4 percent during the 1983–1990 subperiod to 74.85 percent during 2015–2018. The quantum of horizontal deficiency has also declined substantially during the study period: from 0.5 percent to 0.23 percent of the aggregate provincial gross domestic product (GDP). The CHT and CST have become essentially a channel of vertical transfers, contributing little toward horizontal equalization. In the “Policy Discussion” section, I explore (1) the need for reforming the fiscal stabilization program to support provinces that rely on fossil-fuel extraction and face a revenue shortfall, and (2) the possibility of reducing the vertical fiscal gap by transferring tax points to provinces instead of providing specific-purpose transfers (the CHT and CST). The article ends with a brief concluding section. An appendix is included that provides a concise account of the historical evolution of federal-provincial fiscal transfers in Canada.

EXISTING CONCEPTS AND MEASUREMENTS

Ruggeri et al. note that VFI is conventionally defined as a mismatch between actual revenues and expenditures at different levels of government.⁹ There are some interesting theoretical works explaining the existence of VFI. Hettich and Winer develop a public-choice-based model where VFI arises because the impact of mobility costs on political choices differs across levels of government in a federation.¹⁰ They argue that a simple majority-based electoral system permits some voters to coerce others

8 The fiscal year for Canada’s federal and provincial governments runs from April 1 to March 31. Accordingly, the study period, 1983–2018, covers the fiscal years 1982–83 through 2017–18.

9 Ruggeri et al., *supra* note 4, at 198.

10 Hettich and Winer, *supra* note 3.

into paying a tax price greater than their marginal evaluation of the public goods. This argument is more applicable at the federal level than at the provincial level, where competition among provincial governments and greater mobility of the tax base serve as a check on tax rates.¹¹ These differences lead to a vertical imbalance, where the federal budget is too large relative to the Lindahl equilibrium.¹² Such vertical imbalances can be addressed by grants from the federal to the provincial level.

Another interesting approach is grounded in welfare economics. Dahlby uses optimal tax theory to define fiscal imbalances.¹³ Under this approach, fiscal imbalances occur when the marginal costs of public funds (MCPF) are not equalized between levels of government or across subnational governments. Fiscal capacity is defined as the ability of a government to raise revenues at a low MCPF. It depends not only on the size but also on the tax sensitivity of the government's tax base. The greater the tax sensitivity of the tax base, the lower will be a government's fiscal capacity, because its MCPF will be higher. As in Hettich and Winer's model, given that the tax bases of subnational governments are usually more mobile/tax-sensitive than those of the federal government, the optimal fiscal system will involve relatively high taxes at the federal level, requiring transfers to subnational governments to correct the vertical imbalances.

While these two approaches to VFI have an explicit theoretical foundation, they are not amenable to the empirical measurement of VFI.¹⁴ Empirical studies have focused on the mismatch between actual revenues and expenditures at the federal and subnational levels to quantify VFI. Rodden and Wibbels define VFI as the degree to which subnational spending is financed by revenue transfers from the federal government.¹⁵ On the same lines, a report on intergovernmental transfers published

11 Ruggeri et al., *supra* note 4, at 199, cite Wagner's argument that "[t]he national government is a fiscal monopolist, while state and local governments are fiscal competitors. As a result, majority coalitions will be better able to extract redistributive gains through budgetary expenditures at the national level than at the state-local level." (Richard Edward Wagner, *The Public Economy* [Chicago: Markham Publishing, 1973].)

12 The Lindahl equilibrium is considered as an ideal where unanimity is achieved among the voters on the tax-spending proposal. In this context, all possible expenditure proposals regarding federal and provincial goods are combined with all possible tax-sharing formulas and put up for a country-wide decision. Under the assumption of constant costs, the Lindahl equilibrium is the Pareto-efficient combination of public services and tax prices that receives unanimous consent. Hettich and Winer, *supra* note 3, at 749.

13 Dahlby, *supra* note 3.

14 After outlining their theoretical model, Hettich and Winer admit that VFI is "difficult to measure." Hettich and Winer, *supra* note 3, at 763. Similarly, on the elasticity of tax bases, which are crucial for applying the MCPF-based model, Dahlby mentions that "measuring fiscal capacity in a way that adjusts for the tax sensitivities of tax bases is difficult given our lack of knowledge about such sensitivities." Dahlby, *supra* note 3, at 24.

15 Rodden and Wibbels, *supra* note 4, at 505.

by the Organisation for Economic Co-operation and Development (OECD) defines VFI as “the difference between own tax revenue and own expenditure of a jurisdiction.”¹⁶ This measure has the virtue of being easy to calculate, and provides a useful indication of the actual level of VFI prevailing in a particular year in terms of inter-governmental fiscal flows.

Ruggeri et al. follow the conventional “mismatching” definition of VFI.¹⁷ However, rather than measuring VFI for a particular year—which they call a static approach—they focus on the structural imbalances arising from differential growth rates in the taxation powers and expenditure responsibilities of the two levels of government. To measure the dynamic VFI, Ruggeri et al. apply a three-stage process. First, they measure the income elasticity of tax revenues (E_T^F) and expenditures (E_X^F), where superscript F refers to the federal level. Similar elasticities are measured for the provincial level as well. Second, the federal structural imbalance is defined as $F = E_T^F - E_X^F$. A positive value of F indicates that federal revenues would grow at a faster rate than program spending. Similarly, the provincial structural imbalance is defined as $P = E_T^P - E_X^P$. Finally, the algebraic difference between the F and P is defined as an index of dynamic VFI such that $I = F - P$. Ruggeri et al. calculate that the built-in elasticity of the federal revenues exceeds the elasticity of the federal expenditures by 0.51 percentage points. On the other hand, E_T^P is 0.06 percentage points lower than E_X^P , resulting in a dynamic VFI of 0.57. Ruggeri et al. argue that the dynamic VFI would result in a divergent path for the deficit and debt-to-GDP ratios for the two levels of government, such that the federal indicators would turn into surpluses while the provinces would continue to face the pressures of rising deficits and debt.

Matier et al. follow a different route for measuring dynamic VFI, based on a fiscal sustainability framework.¹⁸ They calculate the primary fiscal balances (defined as revenue minus program spending) for the two levels of government from 2001 to 2041 by projecting expenditures and revenues at each level under various demographic and economic assumptions. For fiscal sustainability, the intertemporal budget constraint must be satisfied; this requires the present value of future primary balances to be equal to or more than the base-year level of net debt. If the base-year net debt is less than the present value of future primary balances for a particular level of government, that level of government has room to reduce taxes or increase program spending. Under this approach, VFI exists only if a government at one level has such fiscal room available while a government at the other level must increase taxes or reduce spending to attain fiscal sustainability. Matier et al. project primary balances for the two levels of government and show that in all but one of eight scenarios, both levels of government have fiscal room available to undertake additional

16 Hansjörg Blöchliger, Olaf Merk, Claire Charbit, and Lee Mizell, *Fiscal Equalisation in OECD Countries*, Working Paper no. 4 (Paris: OECD, 2007), at 8.

17 Ruggeri et al., *supra* note 4.

18 Matier et al., *supra* note 4.

program spending or tax cuts. On this basis, they conclude that no VFI could be detected (in seven out of eight scenarios).¹⁹

While these dynamic approaches are more formal than the static approach and provide a long-term structural perspective on fiscal imbalances, their results seem very sensitive to both model specifications and empirical assumptions. Further, the authors of both studies, while using the concept of dynamic VFI, include the existing federal transfers (at certain assumed growth rates) to reach their conclusion about the presence or magnitude of a VFI.²⁰ Hence, both studies admit the importance of the existing mechanism for federal-provincial transfers in addressing the VFI.

There is an interesting argument that led some policy makers to deny the existence of a VFI in Canada. For example, in 2005, an advisory panel reporting to the federal government contended that

[t]he Government does not believe in the existence of a fiscal imbalance between the federal and provincial governments in Canada. Both orders of government have access to all the major sources of tax revenues and have complete autonomy in setting their tax policies to address spending pressures related to their respective responsibilities.²¹

Essentially, proponents of this view argue that the provinces can simply raise their own tax rates if they feel that a VFI exists. However, Courchene disagrees with this view, arguing that there are international competitive limits to tax rates.²² Thus, provinces cannot meaningfully raise tax rates further unless the federal government reduces its rates. Further, if the provinces raise tax rates and the federal government does not simultaneously vacate the fiscal space, such measures to address the VFI will burden taxpayers. All these issues create practical constraints in using this route to address the VFI.

PROPOSED APPROACH

Discussing the issue of intergovernmental transfers, Bird observed:

Although all transfers from higher level to lower level governments help close the fiscal gap, it is useful to consider vertical fiscal balance in an accounting sense as achieved

19 In the eighth scenario, where VFI could be detected under the definition used by Matier et al., the health-spending growth rate is raised from the benchmark assumption of 1.5 percent to 2 percent (real per capita, per age group). It should also be noted that in six of the seven scenarios where, according to the authors, no VFI could be detected, the fiscal room available to the federal government is higher than that available at the provincial level—a result that may be considered to be a sign of fiscal imbalance in favour of the federal government under the approach of Ruggeri et al. However, under the definition followed by Matier et al., where both levels of government have fiscal room available, a difference in the amount of room does not qualify as a case of vertical fiscal imbalance.

20 Ruggeri et al., *supra* note 4; and Matier et al., *supra* note 4.

21 Advisory Panel on Fiscal Balances, *supra* note 5, at 107-8.

22 Thomas J. Courchene, “Variations on the Federalism Theme” (2006) 27:7 *Policy Options* 46-54.

when expenditures and revenues (including transfers) are balanced for the richest local government, measured in terms of *its capacity to raise resources on its own*. Fiscal gaps will still remain for all poorer local governments, but such gaps are better considered in relation to the problem of achieving horizontal fiscal balance within the local government sector.²³

While Bird provided an interesting way to conceptualize fiscal imbalances, he did not suggest a framework for empirically separating the vertical and horizontal components of the intergovernmental transfers. The framework proposed in this article builds on his argument by adding certain assumptions.²⁴ Federal transfers to the richest provincial government form the basis for measuring the vertical gap. The total of the province's own revenues and transfers by the federal government is considered as the norm of expenditure that the richest provincial government strives to achieve. It is assumed that, in the absence of fiscal interventions by the federal government through taxation and spending measures, the richest provincial government could have collected an amount equivalent to the prevailing federal transfers from its own tax base. For this, it would have to make additional tax effort over and above the effort applied to collect its existing own-revenues. Hypothetically, this is equivalent to the richest province surrendering fiscal space (tax points) to the federal government and the federal government returning it provided that the richest provincial government agrees on zero transfers. Obviously, the federal government collects more in tax revenues from the richest province than it transfers back. However, these additional taxes are transferred to other provinces to address their HFI and special needs.

Assume that the federal government collects taxes from the entire country at a roughly uniform tax effort. All provinces have surrendered some fiscal space to

23 Richard M. Bird, "Threading the Fiscal Labyrinth: Some Issues in Fiscal Decentralization" (1993) 46:2 *National Tax Journal* 207-27, at 218 (emphasis added).

24 Two similar frameworks have been applied previously in the Indian context. See C. Rangarajan and D.K. Srivastava, "Reforming India's Fiscal Transfer System: Resolving Vertical and Horizontal Imbalances" (2008) 43:23 *Economic & Political Weekly* 47-60; and Deepak Sethia, "Re-Examining Vertical Sharing and Horizontal Distribution of Fiscal Resources in India" (2018) 53:50 *Economic & Political Weekly* 41-49. Rangarajan and Srivastava consider per capita federal transfers to the richest Indian state (the equivalent of a province in Canada) as aimed at addressing the vertical imbalance, and presume a uniform vertical transfer for all states at a fixed absolute amount. However, Sethia argues that instead of presuming a uniform absolute amount for vertical transfers to all states, the hypothetical tax rate at which the richest state can collect transfers made to it should be uniformly applied to the tax base of other states to measure the vertical component for them. This vertical rate applied to the tax base of other states would provide lower revenues for those states than for the richest state. The gap attributable to regional variations in the tax base should ideally form part of the horizontal fiscal imbalance. The present article uses the same assumption. Further, while the two previous articles in the Indian context focus on the decomposition of federal transfers at the aggregate level, the present article extends the framework to decomposition at the individual transfer level as well and applies it in the Canadian context.

the federal government and, in return, receive vertical transfers. As part of the federal contract, provinces have surrendered additional fiscal space to enable the federal government to undertake transfers for horizontal fiscal equalization.²⁵ Transfers made to the richest province would allow identification of the vertical component of the overall fiscal space surrendered by the provinces. In the absence of vertical transfers by the federal government coupled with the return of vertical fiscal space to the provinces, other provincial governments could also use this vertical fiscal space. However, the additional taxes collected by them would be lower than the amount collected by the richest province, because the tax base of the latter is larger. The total of the additional taxes collected by all provincial governments from the hypothetically surrendered vertical fiscal space can be considered as the vertical component of the federal transfers. The remaining federal transfers can be considered to be meant for horizontal fiscal equalization or for addressing special needs.

This approach to measuring VFI leaves us with two sources of HFI. The first source arises from the existing differences in the own-revenue capacity of provincial governments at a representative tax rate,²⁶ which can be measured against the revenue capacity of the richest province. The second source arises from disparities in potential tax collection by provinces using the hypothetically surrendered vertical fiscal space. The gap in tax collection between the richest province and other provinces using the same vertical tax rate is due to the differences in their tax bases. Accordingly, it should be treated as part of the HFI.

For empirical analysis, I explicitly assume that the federal transfers aim first to address the vertical imbalance arising from the uneven assignment of fiscal powers and responsibilities between the federal and provincial governments. After addressing the vertical gap, the remaining transfers are meant to address the horizontal imbalances. The federal government may also provide certain provinces with transfers over and above the requirements for VFI and HFI, to meet special-need considerations. Thus, federal transfers are utilized to address VFI, HFI, and special-need considerations in that order.

The system of equalized tax point transfers that has been used in Canada provides interesting parallels to the proposed approach for separating tax points used for vertical and horizontal transfers. The equalization program that began in 1957 was created by separating tax rental payments (the vertical component) from the fiscal aid (the horizontal component) to provinces below a certain benchmark fiscal capacity. In 1941, to enable the federal government to finance the war effort, the provinces agreed to vacate the income tax and estate tax domains in return for cash

25 The tax points surrendered in exchange for vertical and horizontal transfers are over and above the fiscal space required for the federal government to meet its own expenditures on federally provided public goods (national defence, foreign affairs, etc.).

26 The idea of a representative tax rate in this context is similar to the one used in the equalization program, where own-revenues of a province for a particular tax base are measured at the average tax rate on that tax base across provinces. This method of calculating a province's entitlement to an equalization transfer is referred to as "the representative tax system" (RTS).

transfers from the federal government. Tombe argues that these cash grants had an implicit equalization component, since per capita transfers for provinces that accepted the deal were similar irrespective of the amount of the taxes collected from them under these tax heads.²⁷ Thus, the cash grants, although designed to compensate the provinces for their surrender of taxing powers, also contained an implicit redistribution element, correcting for both VFI and HFI.

In 1957, the horizontal component was made explicit by separating the vertical tax rental and horizontal equalization components. Each province participating in the tax rental agreement was provided with a portion of the three federally collected taxes—personal income tax (10 percent), corporate income tax (9 percent), and succession duties (50 percent)—that were generated in that province. Since the value of these vertical transfers was relatively lower for the less wealthy provinces, their transfers were topped up by a horizontal equalization amount to match a certain benchmark (the average of transfers given to the two richest provinces, Ontario and British Columbia). Any province that set up its own tax system would receive only the equalization payment, but it would be entitled to collect the vertical component on its own using the equivalent tax points vacated (returned) by the federal government.

Although this approach to equalization ended in 1967, tax point transfers were a central component of many federal transfer programs until 2015. Established programs financing (EPF), the Canada health and social transfer (CHST), and its two successors (the CST until 2008 and the CST until 2015) provided equal per capita support to provinces with a mix of equalized tax point transfers and cash transfers. Under tax point transfers, the federal government vacated 13.5 percent of the personal income tax and 1 percent of the corporate income tax that could be levied by the provinces to raise tax revenues, causing no net increase in burden for taxpayers. Since the revenues raised by the richest province using the same tax points would be higher than those collected by other provinces, the other provinces were provided with an additional cash payment—known as “associated equalization”—to equalize the tax point transfer.

In the proposed framework, when the richest province is considered as the benchmark, (returning) federal tax point transfers to provinces would be considered as a case of addressing the VFI, where provinces are being compensated on the derivation or source-of-revenue basis.²⁸ The cash transfers made to equalize the tax

27 Trevor Tombe, “‘Final and Unalterable’—But Up for Negotiation: Federal-Provincial Transfers in Canada,” *Finances of the Nation* feature (2018) 66:4 *Canadian Tax Journal* 871-917, at 882.

28 It may be the case that some provinces receive vertical cash transfers under a tax rental agreement on a derivation basis. In contrast, others use tax points or the federal abatement to collect the vertical component on their own. To maintain comparability across the provinces, the proposed framework considers the revenues raised by provinces using the tax points transferred as a part of the vertical component. Thus, the amount ceded by the federal government under the Quebec abatement would be considered as a part of the federal transfer to Quebec. (See the source notes to table 1 for details on the Quebec abatement.)

point transfers would be considered as horizontal transfers. By providing equalized tax point transfers, the federal government has separated out the vertical and horizontal components of what otherwise could have been an equal per capita transfer. The proposed approach clearly recognizes that the federal government does not engage in redistribution between regions via vertical transfers. That purpose is served by the horizontal component of the federal transfers.

There are some disadvantages of the proposed approach compared to the approaches described in the existing literature and reviewed in the previous section. The proposed measures of VFI and HFI are defined on the basis of the existing transfers and fiscal disparities among the provinces, rather than being derived from fundamental concerns such as elasticity of the tax-base or public-choice processes.

On the empirical side, the proposed approach does not focus on the long-term structural fiscal imbalances grounded in intertemporal budget constraints or a mismatch in the growth rates of expenditures and tax revenues of the federal and provincial governments. Thus, the proposed approach is not suitable for commenting on the controversial issue of whether the existing level of federal transfers fully reflects the transfers required to address the mismatch between the respective taxing powers and fiscal responsibilities assigned to the two tiers of government. (This issue gave rise to a heated debate that began in the late 1990s and continued until the global financial crisis in 2008, when the federal government was running large budget surpluses while provinces were facing deficits.) The proposed approach has the modest goal of decomposing the existing transfers into their vertical and horizontal components.

An interesting property of the proposed approach is that it keeps the relative measures of inequality in fiscal capacity unchanged, with or without including the tax point transfers (all measures that satisfy the scale invariance property, such as Gini, Theil, or the Schutz index). Tax point transfers to provinces to address the vertical imbalance will result in a uniform ratio for provincial revenues inclusive of a vertical component compared to provincial own-revenues without a vertical component. Following the notations used in the analytical framework in the present article (described in the next section), this ratio will be equal to $\left(\frac{a_v + a_r}{a_r}\right)$.²⁹ Uniform scaling up of the variable will keep the relative measures of inequality levels in fiscal capacity unchanged, with or without the vertical component.³⁰

29 Here a_v is the tax point transferred, and a_r is the representative tax rate on existing own-revenues.

30 To be sure, absolute measures of inequality—that is, measures satisfying translation invariance, such as variance or standard deviation—will increase after the vertical tax point transfer. Variance or standard deviation will remain unchanged only when per capita equal transfers are made, but such transfers would reduce horizontal imbalances in accordance with the relative measures of inequality. However, there is a reason to prefer relative measures of inequality compared to absolute measures of inequality. The proposed framework compares the federal transfers against the counterfactual of the “original position,” where there is no federal

In sum, the proposed approach considers the prevailing levels of federal transfers as an outcome of an evolving federal contract among the provinces and the federal government. Under that contract, provinces have surrendered part of their fiscal space to the federal government in order to address the twin issues of inefficiencies arising from the interprovincial mobility of tax bases and interprovincial fiscal disparities. Thus, the levels of vertical and horizontal transfers measured using this approach are implicitly being compared against the counterfactual world, in which there is no federal government and taxing powers reside entirely with the provinces. The latter can be considered as the “original position,”³¹ an appropriate benchmark to measure the level of horizontal fiscal equalization achieved among provinces through federal transfers.³² The original position is a purely hypothetical situation rather than one based on the actual historical state of affairs. The idea of the original position in the present context acts as an expository device that permits the separation of vertical and horizontal fiscal transfers. The theoretical approach discussed above is incorporated in the analytical framework presented below, both at an aggregate level and at the individual transfer level.

ANALYTICAL FRAMEWORK

Aggregate

In the framework discussed below, lower-case letters denote variables on a per capita basis, while the upper-case letters are used to denote variables at the provincial level by multiplying per capita values with the provincial population. Let the per capita provincial tax/revenue base be defined as y and provinces be denoted by subscript $i = 1 \dots n$, arranged in the ascending order of per capita revenue base. The provincial population can be denoted by N_1, N_2, \dots, N_n , where N_n denotes the population of the province with the richest per capita revenue base. The poorer provinces are able to collect less own-revenues compared to the richest province when both apply a representative tax rate. This horizontal fiscal inequality in per capita own-revenues for province i can be measured as

$$b_i^{or} = a_r(y_n - y_i), \quad (1)$$

government and taxing powers reside entirely with the provinces. In this scenario, the benchmark horizontal inequality would be the one measured by including the vertical tax point transfers. The relative measures of inequality are more suitable in this context, since they keep the observed fiscal inequalities in own-revenues comparable to the original position. (The term “original position” is borrowed from John Rawls, who used it in the context of social contract theory. See John Rawls, *A Theory of Justice* [Cambridge, MA: Belknap Press, 1971].)

31 See supra note 30.

32 It may be the case that legally, the size and interprovincial distribution of federal transfers are determined by the federal government. However, the framework presumes that they are a long-run outcome of the forces of conflict, cooperation, and intergovernmental negotiations.

where

b^{or} = horizontal fiscal inequalities in own-revenues on a per capita basis, and
 a_v = the representative own tax rate measured as the average tax rate across provinces.

The entire amount of federal transfers given to the richest province is meant to address the vertical imbalance, since the richest provincial government cannot have any horizontal fiscal gap. The richest provincial government could have collected this transferred amount from its own-revenue base at tax rate a_v . Thus,

$$t_n = v_n = a_v \cdot y_n, \quad (2)$$

where

t = per capita transfers received by a province;
 v = the per capita vertical fiscal gap that exactly equals the federal transfers received in the case of the richest province; and
 a_v = the vertical fiscal space that can be returned by the federal government to the richest provincial government in lieu of transfers.

The vertical fiscal gap for any other province i can be calculated as

$$v_i = a_v \cdot y_i. \quad (3)$$

Thus, a_v —the vertical rate component of fiscal transfers measured on the basis of transfers received by the richest province—forms the basis for calculating the vertical fiscal gap for all provinces. However, the vertical transfers received by any other province are obviously lower than the amount $a_v \cdot y_n$. The difference represents the horizontal fiscal disparity arising from the inability of a poorer province to raise the same amount of tax as the richest province when the federal government returns this vertical fiscal space to both the richest and other provinces in lieu of the vertical component of fiscal transfers. The horizontal fiscal gap induced as a result of the return of this fiscal space to provinces can be shown as

$$b_i^{ft} = a_v(y_n - y_i), \quad (4)$$

where

b_i^{ft} = the horizontal fiscal disparity attributable to differences in tax collection by provinces at the rate a_v ; and

superscript ft indicates that rather than being horizontal fiscal inequality attributable to differences in existing own-revenues of provinces, this component of horizontal fiscal inequality is caused by the return of vertical fiscal space in lieu of the vertical component of fiscal transfers (ft).

Thus, the overall horizontal fiscal gap (b) attributable to own revenues and the hypothetically returned vertical fiscal space from the federal government to provinces can be measured by adding equations 1 and 4; thus,

$$b_i = (a_r + a_v)(y_n - y_i). \quad (5)$$

For any province, i , the per capita transfer (t_i) can be decomposed into three components: a vertical component equal to the per capita revenue raised using fiscal space a_v ; horizontal equalization transfers to address the deficiency in fiscal capacity with respect to the revenue capacity of the richest province inclusive of the vertical fiscal space $[(a_r + a_v)y_n]$; and the surplus component, which reflects cost disabilities and other special-need considerations. Thus,

$$t_i = a_v y_i + (a_v + a_r)(y_n - y_i) + sur_i, \quad (6)$$

where

$a_v y_i$ reflects vertical transfers;

$(a_v + a_r)(y_n - y_i)$ represents horizontal equalization transfers; and

$sur_i > 0$ for provinces receiving additional transfers for cost/special-need considerations.

The provinces may be divided into two groups. For one group, the per capita recommended transfer consists of three components—vertical, horizontal, and special needs, as given above. For other provinces, after vertical transfers are taken out, the balance may fall short of horizontal equalization entitlement, and there is nothing left for special needs. Let the shortfall in such cases be def_i . Per capita transfers may then be expressed as

$$t_i = a_v y_i + (a_v + a_r)(y_n - y_i) - def_i. \quad (7)$$

In both cases, we can multiply the provincial-level per capita transfers by respective populations to get total transfers ($T_i = N_i t_i$) for every province. By adding the two sets of provinces (equations 6 and 7), we get the total transfers ($\sum_{i=1}^n T_i$) to all provinces as

$$\sum_{i=1}^n T_i = \sum N_i t_i = a_v \sum N_i y_i + [\sum N_i (a_v + a_r)(y_n - y_i) - \sum N_i def_i] + \sum N_i sur_i. \quad (8)$$

Here, $def_i > 0$ for provinces that get less than their horizontal equalization entitlement and $sur_i > 0$ for provinces that get more than their horizontal equalization entitlement. The total transfers can thus be divided into three components:

Vertical transfers (VT), expressed as

$$\sum VT_i = a_v \sum N_i y_i; \quad (9)$$

Horizontal equalization transfers (HT), expressed as

$$\sum HT_i = \sum N_i (a_v + a_r)(y_n - y_i) - \sum N_i def_i; \quad (10)$$

Surplus transfers for special-need/cost considerations (ST), expressed as

$$\sum ST_i = \sum N_i sur_i. \quad (11)$$

Individual shares of the three components in the total transfers can be obtained simply by dividing each component by T_i . HT_i is meant to address the horizontal fiscal gap of $H_i = N_i(a_v + a_r)(y_n - y_i)$, but for some provinces receiving less than this amount, there remains a shortfall of $N_i def_i$. The extent of initial horizontal fiscal inequalities addressed by the federal transfers can be calculated as HT_i/H_i .

Individual Transfers

In most federal countries, there exist multiple channels of intergovernmental transfers. In Canada, the CHT, CST, and equalization program are the main pillars of federal-provincial transfers. In addition to analyzing the overall impact of the federal transfers on the horizontal fiscal gap, it may be of interest to understand the contribution of individual fiscal transfer channels in addressing the horizontal fiscal disparities. The framework presented below can be used for this purpose.

Let the individual fiscal transfer channels be defined as $j = 1 \dots m$. The transfer provided to the richest province continues to form the basis for measuring the vertical component of any transfer channel. The richest province receives the amount $a_{vj}y_n$ on a per capita basis under transfer channel j . Thus, any province with income lower than that of the richest province should receive a per capita vertical transfer of $v_{ij} = a_{vj}y_i$ under the same channel, which obviously is lower than the amount $a_{vj}y_n$. Returning the fiscal space of a_{vj} from the federal to provincial governments, in lieu of the vertical component of this transfer channel, would result in an additional horizontal fiscal disparity of $a_{vj}(y_n - y_i)$ over and above the horizontal fiscal inequality of $a_r(y_n - y_i)$ in the existing per capita own-revenues as measured in equation 1. As shown in equation 12, after meeting the vertical requirement of $a_{vj}y_i$, the remaining transfer under channel j can be considered for addressing horizontal fiscal disparities or special needs.³³

$$bst_{ij} = t_{ij} - a_{vj}y_i, \quad (12)$$

where bst is equal to the horizontal equalization and surplus grant components.

The vertical requirement of all fiscal transfers $j = 1 \dots m$ for province i can be represented as

$$v_i = (a_{v1} + a_{v2} + a_{v3} \dots a_{vm})y_i = \sum_{j=1}^m v_{ij} = a_v y_i. \quad (13)$$

This is comparable to equation 2. Thus, the overall vertical fiscal space (a_v) surrendered by provinces equals the sum of the individual vertical space surrendered for each fiscal transfer channel. The size of the vertical transfer for any channel j across provinces can be measured as

33 In some cases, the amount received by a province under a particular channel (say channel 1) can be less than $a_{vj}y_i$. In such a case, following the sequence of priorities, bst from other channels is proportionately used first to meet the vertical gap left in transfer channel 1. Only the remaining bst is used for horizontal or surplus transfers.

$$\sum_{i=1}^n VT_{ij} = a_{vj} \sum_{i=1}^n N_i y_i. \quad (14)$$

The contribution of any channel in addressing the aggregate vertical imbalance across provinces can be measured as $\sum_{i=1}^n VT_{ij} / \sum_{i=1}^n VT_i$. The same approach can be followed for horizontal fiscal inequalities, where the sum of horizontal fiscal inequalities arising from all fiscal transfers is exactly the same as shown in equation 4:

$$b_j^{ft} = (a_{v1} + a_{v2} + a_{v3} \dots a_{vm})(y_n - y_i) = a_v(y_n - y_i). \quad (15)$$

As before, there will be two groups of provinces. For the provinces in one group, the transfers through all channels will exceed V_i and H_i —that is, $[\sum_{j=1}^m HST_{ij} > (H_i^{OR} + H_i^{FT})]$ —leaving the province with a surplus of $N_i sur_i$ for special needs. For other provinces, the balance after vertical transfers are taken out falls short of the equalization entitlement $[\sum_{j=1}^m HST_{ij} < (H_i^{OR} + H_i^{FT})]$, leaving an overall deficiency of $N_i def_i$.

To understand the contribution of each transfer channel in addressing the overall horizontal fiscal disparities and surplus for special needs, one needs to compare the equalizing and surplus grant components for each transfer channel (HST_{ij}) against the overall horizontal fiscal disparities (H_i). In the case of provinces with a shortfall, $HST_{ij} = HT_{ij}$ since there is no surplus element in the transfer. The contribution of each channel in addressing the horizontal fiscal disparities can be simply measured as

$$H_{ij}^B = \left(\frac{HST_{ij}}{H_i} \right) \times 100, \quad (16)$$

where H_{ij}^B equals the contribution of channel j in addressing horizontal fiscal disparities/improving the horizontal fiscal balance (H^B) for province i .

Further, the shortfall in meeting horizontal fiscal inequalities can be represented as

$$H_i^D = 100 - \sum_{j=1}^m H_{ij}^B = \left(\frac{N_i def_i}{H_i} \right) \times 100, \quad (17)$$

where H_i^D equals the deficiency/unmet horizontal fiscal inequalities as a percentage of H_i .

In the case of provinces with a surplus, $\sum_{j=1}^m HST_{ij} = H_i + N_i sur_i$. Thus, it is necessary to measure each channel's contribution toward eliminating horizontal fiscal disparities and augmenting the resources for special-need considerations. However, unlike the previous case for provinces with a deficiency of $N_i def_i$, it may not be desirable to calculate the HST_{ij} as a percentage of $H_i + N_i res_i$. This is because, while at the aggregate level all transfer channels taken together are able to eliminate the H_i , for some channels transfers received by the poorer provinces on a per capita basis might be lower than the transfers received by the richest province. In such a case, the transfer channel is not progressive enough to eliminate, by itself, the resulting b_{ij}^{ft} , since $t_{ij} < a_{vj} y_i + a_{vj} (y_n - y_i)$. Ideally, such channels should not be considered to be contributing to special needs.

On the other hand, if the amount of the per capita transfer under transfer channel j is exactly equal for all provinces, including the richest one (as it is, for example, currently under the CHT and CST), then such a transfer channel itself addresses the horizontal fiscal disparity arising from this particular channel. This is because here $t_{ij} = a_{vj}y_i + a_{vj}(y_n - y_i)$. Thus, only the transfer channels where $t_{ij} > a_{vj}y_i + a_{vj}(y_n - y_i)$ can be considered to be contributing toward sur_i .

The above discussion requires following a two-stage process for provinces receiving surplus ($N_i sur_i$) transfers. In the first stage, the contribution of all those channels where $t_{ij} \leq a_{vj}y_i + a_{vj}(y_n - y_i)$ is measured in relation to the reduction of H_i . For these channels, $HST_{ij} = HT_{ij}$. In the second stage, the contributions of channels where $t_{ij} > a_{vj}y_i + a_{vj}(y_n - y_i)$ are measured in relation to full elimination of the remaining H_i and the building of sur_i . For these channels, $HST_{ij} = HT_{ij} + ST_{ij}$.

The first stage can be represented as follows:

$$H_{ij}^{BNS} = \left(\frac{HST_{ij}^{NS}}{H_i} \right) \times 100 \text{ if } t_{ij} \leq a_{vj}y_i + a_{vj}(y_n - y_i);$$

that is, $bst_{ij} \leq a_{vj}(y_n - y_i)$, (18)

where H_{ij}^{BNS} equals the contribution of channel j in addressing horizontal fiscal disparities/improving the horizontal fiscal balance (H^B) for province i . Superscript NS indicates that channel j does not contribute to the surplus ($N_i sur_i$) for province i .

The second stage can be represented as follows:

$$H_{ij}^{BS} = \left(\frac{HST_{ij}^S}{H_i + N_i sur_i - \sum_{j=1}^m HT_{ij}^{NS}} \right) \times (100 - \sum_{j=1}^m H_{ij}^{BNS}) \text{ if } t_{ij} > a_{vj}y_i + a_{vj}(y_n - y_i). \quad (19)$$

Equation 19 differs from equation 18 in the following manner:

1. superscript NS is replaced with S , signifying that these channels contribute toward surplus;
2. in the denominator, $N_i sur_i$ is added while $\sum_{j=1}^m HT_{ij}^{NS}$ is deducted, because these channels (HST_{ij}^S) contribute toward eliminating the remaining H_i (after accounting for the contribution of $\sum_{j=1}^m HT_{ij}^{NS}$ and building $N_i sur_i$;³⁴ and
3. the multiplication is made by $(100 - \sum_{j=1}^m H_{ij}^{BNS})$ instead of 100.

Since both stages taken together eliminate entirely horizontal fiscal equalities and achieve full horizontal fiscal balance for the province,

$$\sum_{j=1}^m H_{ij}^{BNS} + \sum_{j=1}^m H_{ij}^{BS} = 100. \quad (20)$$

34 This implicitly assumes that for all the channels contributing toward $N_i sur_i$ for the given province, uniform fractions of HST_{ij}^S are devoted to eliminating H_i and building $N_i res_i$.

The contribution of the various channels in surplus building can be measured as

$$S_{ij} = \left(\frac{HST_{ij}^S}{H_i + N_i \text{sur}_i - \sum_{j=1}^m HT_{ij}^{NS}} \right) \times 100, \quad (21)$$

where $\sum S_{ij}$ equals 100.

Equation 21 is similar to equation 19 except for the multiplicative factor used. No deduction for $\sum_{j=1}^m H_{ij}^{BNS}$ is required since these channels (HST_{ij}^{NS}) do not contribute toward surplus. The federal government collects taxes from the richest province and transfers part of those revenues to the poorer regions. However, as Buchanan rightly argued, inter-area transfers do not represent outright subsidization of the poorer areas.³⁵ In a national economy, the citizens of low-income regions—who may be rich or poor at the individual level—have the “right” to be treated on an equal standing with their counterparts in the richer regions by the fiscal policy of the federal and subnational governments taken together. This is the argument underlying the horizontal equity enshrined in the Canadian constitution.³⁶ The decomposition of intergovernmental transfers considered in the framework presented above is concerned solely with the measuring vertical and horizontal components, and the extent of horizontal imbalances addressed. In the next section, I operationalize this framework by applying it to actual federal-provincial transfers in Canada between 1983 and 2018.

RESULTS

Operationalizing the framework described above begins with two basic steps: (1) measurement of provincial fiscal capacity and (2) identification of the benchmark province. Once these steps have been completed, transfers received by the benchmark province will be used to identify the vertical fiscal space surrendered by provinces to the federal government. Then, the fiscal capacity of the benchmark province (inclusive of the vertical component) will be compared with the fiscal capacity of other provinces to measure the horizontal fiscal inequalities.

Currently, there is one channel of federal transfers for which provincial fiscal capacities are explicitly measured, namely, equalization. The mechanism used to measure the fiscal capacity of a province involves the calculation of the amount of revenue that the province could raise by levying national average tax rates on a number of revenue sources covered under the program. The number of provincial revenue bases covered under the equalization program has varied over time. An alternative for measuring provincial fiscal capacity could be a macro approach (that is, a macroeconomic indicator-based approach) in which a broad indicator such as provincial GDP is used as a revenue base. This approach implicitly assumes that a

35 James M. Buchanan, “Federalism and Fiscal Equity” (1950) 40:4 *American Economic Review* 583-99, at 596.

36 Section 36(2) of the Constitution Act, 1982, being schedule B to the Canada Act 1982 (UK), 1982, c. 11.

uniform tax rate is applied to all types of income. However, in the real world, each dollar of income is not taxed at the same rate; for example, in a progressive taxation system, individuals at a higher income level can be taxed at a higher rate than lower income earners, and certain commodities/sectors may attract higher/lower tax rates. These considerations have led Canadian policy makers to use a tax-by-tax approach for measuring provincial fiscal capacity under the equalization program. However, the advantages of the macro approach lie in its simplicity and comparability over time. The macro approach also avoids the strong incentives for manipulating tax bases that are created under the existing tax-by-tax equalization program.³⁷ For these reasons, I use provincial GDP as an indicator of the revenue base.

This brings us to the next step, identifying the benchmark province. Alberta is the richest province in Canada in terms of income and fiscal capacity, largely owing to its abundant natural resource revenues. Alberta's per capita income in 2018 was \$78,600, and Alberta accounted for 11.6 percent of the aggregate provincial population. Ontario—the most industriously advanced province, with a per capita income of \$60,000—is the largest province in terms of population, accounting for 38.7 percent of the aggregate provincial total. Clearly, using Alberta, or the other, smaller oil-producing provinces of Saskatchewan and Newfoundland and Labrador, as the benchmark would significantly raise the comparison measure of fiscal capacity and, consequently, the horizontal fiscal inequalities for other provinces. In the past, the federal government has been concerned about limiting the impact of Alberta's huge oil revenues on the benchmark fiscal capacity under the equalization program. It has experimented with a 2-province, 5-province, and 10-province standard, with varying rates of inclusion of natural resource revenues. Choosing an appropriate benchmark is evidently not an easy task.

There has been an implicit “Ontario clause” operating in Canadian federalism. Because Ontario is the most populous province, and one of the richest, the notion that it could receive equalization transfers was considered politically and financially unacceptable. The equalization program was even adapted to prevent such an outcome under the 1977 equalization formula, when Ontario would otherwise have qualified as a “have not” province. It was only after the economic slowdown of 2008 that Ontario received equalization grants, for the years 2010 through 2019.

Another instance of the Ontario clause could be observed during the negotiations for the 2005 offshore accords with Newfoundland and Labrador and Nova Scotia, when the federal government wished to explicitly introduce an “Ontario ceiling.” Under this proposal, the two Atlantic provinces would be eligible for “revenue protection” under the accords provided “that no such additional payments result[ed] in the fiscal capacity of the province exceeding that of the province of Ontario.”³⁸

37 Tombe, *supra* note 27, at 916.

38 Canada, Department of Finance, A Letter from Ralph Goodale to the Premier, Government of Newfoundland and Labrador, October 24, 2004 (www.releases.gov.nl.ca/releases/2004/exec/oct24.pdf).

Taking these considerations into account, I have chosen Ontario as the benchmark province for measuring the vertical fiscal space surrendered by provinces and the horizontal fiscal inequalities for other provinces.

For the subsequent discussion, the time frame of 1983 to 2018 has been divided into seven subperiods of varying duration. From 1983 to 2004, except for some technical adjustments, the equalization program remained largely the same in its basic approach, using a 5-province standard. This time frame is divided into three subperiods of roughly equal duration in order to capture intertemporal trends. The “new framework” for the equalization program during the years 2005–2007 saw a significant departure from the representative tax system (RTS) approach; hence, those years are treated as a separate subperiod. Next is a two-year-long subperiod (2008–2009), when the equalization program returned to the RTS-based approach at the recommendation of the O’Brien expert panel.³⁹ During those years, Ontario remained a non-recipient province. While the RTS-based approach continued in the subsequent years, Ontario became a recipient of the equalization grants for the first time in 2010. The years 2010–2014 and 2015–2018 are treated as two separate subperiods. The practice of awarding an “associated equalization” grant was abolished during the second of those subperiods.

A more detailed account of the changes to the equalization program summarized above, and the evolution of federal-provincial transfers in Canada, is provided in the appendix to this article.

Decomposition at an Aggregate Level

Table 1 provides results at an aggregate level. Total transfers and other aggregates are shown as percentages of the provincial GDP. (Annual percentages are calculated first and then averaged over the subperiod.) The percentage composition of the total transfers for each of the vertical, horizontal, and surplus components (which together total 100 percent) is also shown. Finally, an important variable of interest—the extent of initial horizontal fiscal disparities/the horizontal requirement addressed by the horizontal transfer component—is shown in the last column.

The vertical requirement is calculated on the basis of transfers received by Ontario as a share of its GDP. The transfers received by any other province are first used to meet the vertical requirement. In certain cases, federal transfers received by the province as a share of its GDP are less than the transfers received by Ontario as a share of its GDP, leaving a vertical gap for the former. This has been the case for Alberta over most of the study period, and recently for Saskatchewan (since 2009), British Columbia (since 2012), and Newfoundland and Labrador (since 2013). The reason for Alberta having a vertical gap is obvious. It is the richest province, entitled to CHT/CST only, which are comparable across the provinces on a per capita basis.

39 Canada, Expert Panel on Equalization and Territorial Formula Financing, *Achieving a National Purpose: Putting Equalization Back on Track*, chaired by Al O’Brien (Ottawa: Department of Finance, May 2006) (herein referred to as “the O’Brien report”).

TABLE 1 Decomposition of Federal Transfers and Extent of Horizontal Equalization Achieved, 1983-2018

Fiscal years ^a	Percentage of GDP					Composition of transfers			Extent of equalization achieved ^c		
	Total transfers ^b	Vertical requirement	Vertical transfers	Vertical gap	Horizontal requirement	Horizontal transfers	Horizontal transfers	Vertical Surplus		Horizontal Surplus	
1983-1990	3.71	2.02	1.98	0.04	2.14	1.64	0.50	0.09	44.29	2.31	76.7
1991-1997	3.41	1.93	1.91	0.02	2.07	1.49	0.58	0.01	43.74	0.32	71.9
1998-2004	2.40	1.22	1.18	0.04	1.87	1.21	0.66	0.02	50.26	0.62	64.7
2005-2007	2.77	1.91	1.75	0.15	1.19	0.88	0.31	0.13	31.80	4.86	74.1
2008-2009	2.92	2.14	1.94	0.19	0.88	0.82	0.06	0.16	28.10	5.38	93.6
2010-2014	3.12	2.62	2.30	0.31	0.88	0.71	0.17	0.11	22.63	3.55	80.7
2015-2018	3.21	2.61	2.40	0.21	1.01	0.78	0.23	0.03	24.27	0.88	77.1

(Table 1 is concluded on the next page.)

TABLE 1 Concluded

GDP = gross domestic product.

- a The subperiods listed refer to fiscal year-ends; for example, 1983-1990 covers fiscal years 1982-83 through 1989-90.
- b Vertical transfers + horizontal transfers + surplus.
- c Horizontal transfers as a percentage of the horizontal requirement.

Sources: Author's calculations based on the following data sets. Transfers: Government of Canada, "Historical Transfer Tables: 1980 to Present." GDP: Statistics Canada table 36-10-0222-01 (formerly CANSIM 384-0038), "Gross Domestic Product, Expenditure-Based, Provincial and Territorial, Annual (x 1,000,000)," for 1980 to 2018. These are calendar-year data, whereas budget data are measured on a fiscal-year (April 1-March 31) basis. GDP data were converted to the fiscal-year basis by a weighted average (three-quarters of which covered April 1-December 31 of the calendar year and one-quarter January 1-March 31). The newly calculated fiscal-year basis GDP data were used to calculate the ratios. Population: Statistics Canada table 17-10-0009-01 (formerly CANSIM table 051-0005), "Population Estimates, Quarterly," for 1941 to 2019, by province (estimated population on October 1, annually). Own-revenues of provinces: Statistics Canada table 36-10-0477-01 (formerly CANSIM table 380-0080), "Revenue, Expenditure and Budgetary Balance—General Governments." The provincial revenues reported in these tables are inclusive of the amount collected by Quebec using tax points (in lieu of cash transfers) received from the federal government under alternative payments for standing programs (13.5 percentage points of federal income tax) and the youth allowances program (3 percentage points of federal income tax). Correspondingly, Quebecers receive an "abatement" of equivalent tax points when paying their federal taxes. To maintain comparability of own-revenues across provinces, amounts ceded (or vertical fiscal space returned) by the federal government under the Quebec abatement are deducted from Quebec's revenues. Those amounts are also considered to be part of the federal transfer to Quebec, to maintain comparability of federal transfers across provinces. For all provinces, royalty revenues are included in own-revenues at a 50 percent rate, in line with the recommendations of the O'Brien panel's report: Canada, Expert Panel on Equalization and Territorial Formula Financing, *Achieving a National Purpose: Putting Equalization Back on Track* (Ottawa: Department of Finance, May 2006). Local governments' revenues are considered to be part of provincial revenues. These revenues are taken into account under the equalization program as well.

Thus, the transfers received by Alberta will be less than the transfers received by Ontario, when measured as a share of GDP, leaving the former with a vertical gap.

As noted earlier, Ontario has been receiving equalization grants in recent years (from 2010 through 2019). During those years, Saskatchewan, British Columbia, and Newfoundland and Labrador received only CHT/CST.⁴⁰ Thus, the total grants received by these three provinces on a per capita basis have been lower than Ontario's levels. Further, the per capita GDP of these provinces either exceeded Ontario's level (in the case of Saskatchewan and Newfoundland and Labrador) or was close to it (in the case of British Columbia). A combination of these factors led to a vertical gap for these provinces. This is the reason why the vertical gap has been at its highest levels in recent years. Clearly, the vertical gap, shown here, is mainly a result of taking Ontario rather than Alberta as the benchmark province.

40 Newfoundland and Labrador also received grants under the offshore accord until 2012.

Total federal transfers to provinces were 3.71 percent of the aggregate provincial GDP in 1983-1990 and declined to 2.40 percent in 1998-2004. The decline in the transfers had both vertical and horizontal sources. At 1.22 percent of the provincial GDP, the vertical requirement was at its lowest level during 1998-2004. Since the vertical requirement is measured on the basis of the transfers received by Ontario, there must have been a decline in the CHST transfers—the only channel that provided transfers to Ontario in this period. The CHST transfers (or the sum of the Canada assistance program [CAP], EPF, and CHST) were indeed lowest in this time period, at 1.17 percent of the GDP of all provinces compared to an average of 2.14 percent of the provincial GDP during 1983-2018. On the horizontal front, at 0.66 percent of GDP, the deficiency was at its highest level, and the extent of horizontal fiscal equalization achieved fell to the lowest level in the entire study period (64.7 percent).

The rise in the vertical requirement since 2004 can be linked to developments in the funding of CHT/CST transfers following the bifurcation of the CHST. In 2004, the funding for the CHT was increased under the federal government's 10-year plan to strengthen health care, which included a base adjustment and an annual 6 percent escalator applicable until 2017. A similar annual escalator was introduced for the CST in 2008, set at 3 percent per year. These developments raised the amount of transfers received by Ontario. The slowdown in Ontario's economy compared to other provinces after 2004 and a reduction in tax rates by most provinces led to a fall in the benchmark fiscal capacity for equalization. This, coupled with faster economic growth in some equalization recipient provinces (Saskatchewan, Manitoba, and Newfoundland and Labrador) since 2004, further reduced the horizontal requirement. On the transfer side, the new framework and subsequent adoption of the O'Brien panel's recommendations increased the equalization transfers, compared to the amount that would have been transferred by following the earlier five-province standard. The rise in transfers under equalization and the CHT/CST combined with a falling level of horizontal fiscal requirement explains the improvement in the extent of horizontal fiscal equalization achieved during 2005-2009.

A further rise in the vertical component took place from 2010 onward, when Ontario became a recipient of equalization grants. The slowdown in Ontario's economy following the 2008 financial crisis also meant a further fall in the benchmark fiscal capacity. Thus, a larger share of the overall transfers to all provinces went toward addressing the vertical imbalance, reducing somewhat the horizontal component of the transfers. Surplus transfers increased substantially between 2005 and 2014 owing to a combination of larger equalization grants, rising transfers under the CHT/CST, and offshore agreements. I will explore this issue further in the next section, where I analyze province-level decomposition.

Decomposition by Province

Table 2 expands the results shown in table 1 using a broadly similar scheme of column headings. Since the vertical requirement is exactly the same for all the provinces (as a percentage of GDP), it is shown only once for each time period. A

separate column titled “Relative GDP” is added, showing provincial per capita GDP as a percentage of the per capita GDP for Ontario. The row containing numbers for “All provinces” essentially reproduces the numbers shown in table 1 for each subperiod.

The poorer provinces are expected to receive more transfers per capita, which, given their lower income levels, would translate into a higher transfer-GDP ratio. Transfers received by Prince Edward Island, Nova Scotia, and Newfoundland and Labrador (which had a lower per capita income than Ontario until 2005) corroborate that expectation. Given that the vertical requirement is the same across all provinces (as a percentage of GDP), higher transfers to the poorer provinces are largely used for horizontal requirements and surpluses, if any.

In 1983-1990, Saskatchewan was the province with the highest level of horizontal fiscal disparities even after accounting for the transfers. The deficiency, at 2.37 percent of provincial GDP, meant that the federal transfers addressed only 46.5 percent of the initial horizontal fiscal disparity. The province continued to face a horizontal deficiency until 2004, though the level of the deficiency declined to 1.58 percent of GDP during 1998-2004. Since 2006, Saskatchewan’s per capita income has exceeded Ontario’s, eliminating the need for horizontal transfers.

Newfoundland and Labrador received grants under offshore agreements from 2002 through 2012, the period in which the province received large surplus transfers from the federal government. Interestingly, the province’s per capita income exceeded Ontario’s from 2005 onward, yet its surplus transfers continued until 2012. Nova Scotia, the other beneficiary under offshore agreements, received surplus transfers only during 2007-2009. In fact, between 2005 and 2014, many provinces received large surplus transfers, a phenomenon caused by a combination of larger equalization transfers (initially under the new framework and subsequently the implementation of the O’Brien panel’s recommendations), higher transfers under the CHT/CST, and offshore agreements. During 2015-2018, Manitoba, New Brunswick, and Prince Edward Island received surplus transfers. On the other hand, Nova Scotia, Quebec, and British Columbia suffered from a horizontal fiscal deficiency in this period.

A surplus transfer essentially means that the recipient province has a higher fiscal capacity in per capita terms than Ontario after including the federal transfers. If a fiscal cap had been applied, as recommended by the O’Brien panel, Ontario’s fiscal capacity should have determined that cap in my framework. Some of the surpluses and deficiencies in the above results can be explained by the choice of provincial GDP instead of the revenue bases covered under the equalization program to determine the provincial tax base. For example, British Columbia’s per capita GDP has been consistently lower than Ontario’s, necessitating horizontal transfers to the province in the framework used here. However, British Columbia has substantial property tax revenues, which make it mostly ineligible for equalization grants. A shift from the existing RTS-based equalization program to a macro-indicator-based equalization program would eliminate the horizontal deficiencies and surpluses observed in my framework (the per capita equal amount under the CHT/CST would

TABLE 2 Decomposition of Federal Transfers by Province, 1983-2018

Province	Relative GDP	Percentage of GDP					Composition of transfers			Extent of equal- ization achieved		
		Total transfers	Vertical transfers	Vertical gap	Horizontal require- ment	Horizontal transfers	Deficiency	Surplus	Vertical		Horizontal	Surplus
Newfoundland and Labrador	58	13.19	2.02	0.00	13.14	11.16	1.97	0.00	15.34	84.66	0.00	85.0
Prince Edward Island	58	13.27	2.02	0.00	13.29	11.25	2.05	0.00	15.25	84.75	0.00	84.6
Nova Scotia	69	8.34	2.02	0.00	7.97	6.32	1.65	0.00	24.25	75.75	0.00	79.3
New Brunswick	66	9.87	2.02	0.00	9.10	7.85	1.25	0.00	20.50	79.50	0.00	86.2
Quebec	80	5.97	2.02	0.00	4.43	3.95	0.49	0.00	33.88	66.12	0.00	89.0
Ontario	100	2.02	2.02	0.00	0.00	0.00	0.00	0.00	100.00	0.00	0.00	na
Manitoba	81	5.88	2.02	0.00	4.29	3.85	0.43	0.00	34.42	65.58	0.00	89.9
Saskatchewan	82	4.08	2.02	0.00	4.42	2.06	2.37	0.00	49.60	50.40	0.00	46.5
Alberta	123	1.90	1.90	0.13	0.00	0.00	0.00	0.00	100.00	0.00	0.00	na
British Columbia	91	2.82	2.02	0.00	1.90	0.79	1.10	0.00	71.86	28.14	0.00	41.8
All provinces	91	3.71	1.98	0.04	2.14	1.64	0.50	0.09	53.40	44.29	2.31	76.7

1983-1990 (Vertical requirement: 2.02)
percent

(Table 2 is continued on the next page.)

TABLE 2 Continued

Province	Relative GDP	Percentage of GDP					Composition of transfers			Extent of equalization achieved		
		Total transfers	Vertical transfers	Vertical gap	Horizontal		Vertical	Horizontal	Surplus			
					requirement	transfers					Deficiency	Surplus
1991-1997 (Vertical requirement: 1.93) <i>percent</i>												
Newfoundland and Labrador	60.52	13.05	1.93	0.00	12.90	11.12	1.78	0.00	14.77	85.23	0.00	86.2
Prince Edward Island	64.17	11.09	1.93	0.00	11.06	9.16	1.90	0.00	17.39	82.61	0.00	82.8
Nova Scotia	70.85	8.38	1.93	0.00	8.15	6.46	1.69	0.00	23.00	77.00	0.00	79.2
New Brunswick	70.65	9.11	1.93	0.00	8.24	7.18	1.06	0.00	21.18	78.82	0.00	87.1
Quebec	81.32	5.33	1.93	0.00	4.54	3.40	1.14	0.00	36.20	63.80	0.00	74.8
Ontario	100.00	1.93	1.93	0.00	0.00	0.00	0.00	0.00	100.00	0.00	0.00	na
Manitoba	80.52	6.42	1.93	0.00	4.79	4.49	0.29	0.00	30.03	69.97	0.00	93.9
Saskatchewan	82.39	4.22	1.93	0.00	4.29	2.29	2.00	0.00	45.71	54.29	0.00	53.4
Alberta	109.71	1.84	1.84	0.09	0.00	0.00	0.00	0.00	100.00	0.00	0.00	na
British Columbia	93.09	2.15	1.93	0.00	1.47	0.22	1.25	0.00	89.81	10.19	0.00	14.8
All provinces	91.34	3.41	1.91	0.02	2.07	1.49	0.58	0.01	55.94	43.74	0.32	71.9

(Table 2 is continued on the next page.)

TABLE 2 Continued

Province	Relative GDP	Percentage of GDP					Composition of transfers			Extent of equalization achieved		
		Total transfers	Vertical transfers	Vertical gap	Horizontal requirement	Horizontal transfers	Deficiency	Surplus	Vertical		Horizontal	Surplus
Newfoundland and Labrador	70.73	10.05	1.22	0.00	8.08	8.08	0.00	0.75	12.13	80.40	7.47	100.0
Prince Edward Island	64.84	9.63	1.22	0.00	8.42	9.96	1.55	0.00	12.65	87.35	0.00	84.5
Nova Scotia	71.84	7.05	1.22	0.00	5.84	7.24	1.41	0.00	17.27	82.73	0.00	80.6
New Brunswick	72.30	7.72	1.22	0.00	6.50	7.04	0.54	0.00	15.79	84.21	0.00	92.3
Quebec	81.69	3.95	1.22	0.00	2.73	4.12	1.39	0.00	30.85	69.15	0.00	66.3
Ontario	100.00	1.22	1.22	0.00	0.00	0.00	0.00	0.00	100.00	0.00	0.00	na
Manitoba	79.87	5.39	1.22	0.00	4.17	4.62	0.45	0.00	22.61	77.39	0.00	90.3
Saskatchewan	87.12	2.37	1.22	0.00	1.15	2.73	1.58	0.00	51.49	48.51	0.00	42.0
Alberta	121.45	0.94	0.94	0.28	0.00	0.00	0.00	0.00	100.00	0.00	0.00	na
British Columbia	87.53	1.81	1.22	0.00	0.59	2.61	2.02	0.00	67.42	32.58	0.00	22.5
All provinces	92.70	2.40	1.18	0.04	1.21	1.87	0.66	0.02	49.12	50.26	0.62	64.7

(Table 2 is continued on the next page.)

1998-2004 (Vertical requirement: 1.22)

percent

TABLE 2 Continued

Province	Relative GDP	Percentage of GDP				Composition of transfers			Extent of equalization achieved			
		Total transfers	Vertical transfers	Vertical gap	Horizontal requirement	Vertical transfers	Horizontal transfers	Surplus				
Newfoundland and Labrador	100	6.57	1.91	0.00	0.65	0.65	0.00	4.02	28.98	9.92	61.10	100.0
Prince Edward Island	70	9.55	1.91	0.00	8.02	7.65	0.37	0.00	19.95	80.05	0.00	95.4
Nova Scotia	77	7.03	1.91	0.00	5.55	5.13	0.43	0.00	27.08	72.92	0.00	92.3
New Brunswick	78	7.99	1.91	0.00	5.30	5.30	0.00	0.79	23.83	66.26	9.91	100.0
Quebec	84	4.18	1.91	0.00	3.58	2.28	1.31	0.00	45.55	54.45	0.00	63.6
Ontario	100	1.91	1.91	0.00	0.00	0.00	0.00	0.00	100.00	0.00	0.00	na
Manitoba	84	6.18	1.91	0.00	3.51	3.51	0.00	0.77	30.81	56.74	12.45	100.0
Saskatchewan	101	2.84	1.91	0.00	0.12	0.12	0.00	0.81	67.05	4.37	28.58	100.0
Alberta	151	0.96	0.96	0.95	0.00	0.00	0.00	0.00	100.00	0.00	0.00	na
British Columbia	96	2.51	1.91	0.00	0.85	0.60	0.24	0.00	75.98	24.02	0.00	71.2
All provinces	99	2.77	1.75	0.15	1.19	0.88	0.31	0.13	63.35	31.80	4.86	74.1

(Table 2 is continued on the next page.)

TABLE 2 Continued

Province	Relative GDP	Percentage of GDP					Composition of transfers			Extent of equalization achieved		
		Total transfers	Vertical transfers	Vertical gap	Horizontal requirement	Horizontal transfers	Vertical	Horizontal	Surplus			
Newfoundland and Labrador	124	4.38	2.14	0.00	0.00	0.00	0.00	2.24	48.76	0.00	51.24	na
Prince Edward Island	73	9.51	2.14	0.00	7.01	7.01	0.00	0.37	22.46	73.70	3.84	100.0
Nova Scotia	79	7.20	2.14	0.00	4.88	4.88	0.00	0.19	29.67	67.72	2.60	100.0
New Brunswick	82	8.01	2.14	0.00	4.19	4.19	0.00	1.69	26.66	52.24	21.10	100.0
Quebec	86	4.96	2.14	0.00	3.11	2.83	0.28	0.00	43.05	56.95	0.00	90.9
Ontario	100	2.14	2.14	0.00	0.00	0.00	0.00	0.00	100.00	0.00	0.00	na
Manitoba	91	6.20	2.14	0.00	1.86	1.86	0.00	2.21	34.45	29.97	35.58	100.0
Saskatchewan	128	2.05	2.05	0.09	0.00	0.00	0.00	0.00	100.00	0.00	0.00	na
Alberta	164	1.07	1.07	1.07	0.00	0.00	0.00	0.00	100.00	0.00	0.00	na
British Columbia	99	2.25	2.14	0.00	0.10	0.10	0.00	0.02	94.75	4.37	0.88	100.0
All provinces	103	2.92	1.94	0.19	0.88	0.82	0.06	0.16	66.52	28.10	5.38	93.6

(Table 2 is continued on the next page.)

2008-2009 (Vertical requirement: 2.14)
percent

TABLE 2 Continued

Province	Relative GDP	Percentage of GDP					Composition of transfers			Extent of equalization achieved		
		Total transfers	Vertical transfers	Vertical gap	Horizontal requirement	Horizontal transfers	Vertical	Horizontal	Surplus			
Newfoundland and Labrador	120.13	3.15	2.62	0.00	0.00	0.00	0.00	0.54	82.95	0.00	17.05	na
Prince Edward Island	76.52	9.23	2.62	0.00	5.86	5.86	0.00	0.76	28.32	63.44	8.24	100.0
Nova Scotia	80.30	7.31	2.62	0.00	4.69	4.69	0.00	0.00	35.80	64.19	0.01	100.0
New Brunswick	82.94	8.05	2.62	0.00	3.93	3.93	0.00	1.50	32.48	48.84	18.68	100.0
Quebec	86.94	5.03	2.62	0.00	2.87	2.42	0.45	0.00	51.97	48.03	0.00	84.3
Ontario	100.00	2.62	2.62	0.00	0.00	0.00	0.00	0.00	100.00	0.00	0.00	na
Manitoba	92.99	5.91	2.62	0.00	1.44	1.44	0.00	1.85	44.25	24.43	31.32	100.0
Saskatchewan	136.97	1.72	1.72	0.90	0.00	0.00	0.00	0.00	100.00	0.00	0.00	na
Alberta	157.68	1.18	1.18	1.43	0.00	0.00	0.00	0.00	100.00	0.00	0.00	na
British Columbia	96.84	2.44	2.44	0.18	0.62	0.00	0.62	0.00	100.00	0.00	0.00	0.0
All provinces	103.18	3.12	2.30	0.31	0.88	0.71	0.17	0.11	73.83	22.63	3.55	80.7

2010-2014 (Vertical requirement: 2.14)
percent

(Table 2 is concluded on the next page.)

TABLE 2 Concluded

Province	Relative GDP	Percentage of GDP						Composition of transfers			Extent of equalization achieved	
		Total transfers	Vertical transfers	Vertical gap	Horizontal		Vertical	Horizontal	Surplus			
					requirement	transfers				Deficiency		Surplus
2015-2018 (Vertical requirement: 2.61) <i>percent</i>												
Newfoundland and Labrador	108	2.22	2.22	0.40	0.00	0.00	0.00	0.00	100.00	0.00	0.00	na
Prince Edward Island	76	9.01	2.61	0.00	6.19	6.19	0.00	0.21	29.01	68.66	2.33	100.0
Nova Scotia	78	7.37	2.61	0.00	5.59	4.76	0.83	0.00	35.46	64.54	0.00	85.1
New Brunswick	80	7.91	2.61	0.00	5.06	5.06	0.00	0.23	33.07	63.98	2.95	100.0
Quebec	86	5.26	2.61	0.00	3.23	2.64	0.59	0.00	49.74	50.26	0.00	81.8
Ontario	100	2.61	2.61	0.00	0.00	0.00	0.00	0.00	100.00	0.00	0.00	na
Manitoba	91	5.17	2.61	0.00	1.85	1.85	0.00	0.71	50.55	35.73	13.72	100.0
Saskatchewan	124	1.91	1.91	0.70	0.00	0.00	0.00	0.00	100.00	0.00	0.00	na
Alberta	141	1.71	1.71	0.91	0.00	0.00	0.00	0.00	100.00	0.00	0.00	na
British Columbia	96	2.40	2.40	0.21	0.77	0.00	0.77	0.00	100.00	0.00	0.00	0.0
All provinces	101	3.21	2.40	0.21	1.01	0.78	0.23	0.03	74.85	24.27	0.88	77.1

GDP = gross domestic product.

Note: When averaging the annual figures over a subperiod, it is possible that for a particular province, there were surpluses in some years, while other provinces had a horizontal deficiency. To avoid reporting a coexistence of surplus and deficit for the same province over a subperiod, in averaging surpluses are first used to cover the province's deficit (as a percentage of GDP). Since fiscal inequalities are a relatively longer-term issue, such an averaging of data helps in avoiding short-term fluctuations and focusing on the long-term trends for each province. However, this adjustment is not made for the row containing figures for all provinces, in order to retain details of the aggregate-level surpluses and deficiency. Thus, it is possible to have a scenario (as for the period 1983-1990 and 1991-1997) where no province is showing a surplus at the individual level, but at the aggregate level, a surplus is shown.

Source: Author's calculations using data sources cited for table 1. Relative GDP refers to the per capita GDP of a province as a percentage of the per capita GDP of Ontario.

have no impact on a province's horizontal deficiency/surplus), and may have its own set of winners and losers.

Decomposition by Transfers

Table 3 provides decomposition by different channels of federal transfers. As expected, the CHT and CST are the main channels for vertical transfers, while equalization plays a major role in horizontal transfers.⁴¹ Moreover, the role of equalization in addressing horizontal fiscal disparities has increased over the years. In 1983-1990, equalization grants accounting for 30.8 percent of the total transfers contributed to 67.1 percent of the horizontal transfers. In 2015-2018, equalization grants accounted for 26.8 percent of the total transfers but contributed to 85 percent of the horizontal transfers. With the entry of Ontario into the equalization recipient club in 2010, the role of equalization increased in the vertical transfers as well, where equalization contributed to 7 percent of the overall vertical grants during 2015-2018.

The overall assessment from table 3 suggests that the CHT and CST have essentially become channels for vertical transfers over the years. While the federal government has historically played an important role in equalizing the provincial resources to provide health-care and social services, today the presence of the CHT/CST is not contributing much in equalizing the resources across provinces for these national priorities. The role played by the federal government through the continuance of the CHT/CST is merely that of an agent to ensure that the provinces follow nationally accepted criteria/principles in providing these services. The provinces retain discretion with regard to other aspects of these expenditures.

POLICY DISCUSSION

In 2018, the federal government renewed the equalization program for the next five-year period. Non-recipient provinces, particularly resource-rich Alberta and Saskatchewan, were highly critical of the program. Both of those provinces were facing budgetary deficits as a result of the downturn in global oil prices, while some of the equalization recipient provinces (notably Quebec) were running budgetary surpluses. Provinces facing budgetary deficits are aggrieved that they do not have access to equalization funds when their economy is facing a slowdown. Seeking a change in the existing fiscal transfer arrangements, the Alberta government struck a "fair deal panel," which recommended that a referendum be held on abolishing equalization.⁴²

41 Until 2010, Ontario received grants under the CHT/CST only. However, for some of the provinces, the CHT/CST grants fell short of their vertical requirements. The framework explicitly assumes that any federal transfer is used to meet the vertical, horizontal, and surplus transfer requirements in this order. This explains why a portion of equalization, along with other grants, is shown under the vertical transfers category.

42 Alberta, Fair Deal Panel, *Report to Government*, submitted May 2020, at 18 (<https://open.alberta.ca/dataset/d8933f27-5f81-4cbb-97c1-f56b45b09a74/resource/d5836820-d81f-4042-b24e-b04e012f4cde/download/fair-deal-panel-report-to-government-may-2020.pdf>).

TABLE 3 Decomposition of Federal Transfers by Type of Transfer, 1983-2018

Fiscal years ^a	Percentage of GDP				Contribution of various channels			
	Total	Vertical	Hori- zontal	Surplus	Total	Vertical	Hori- zontal	Surplus
	<i>percent</i>							
1983-1990								
Equalization	1.14	0.00	1.10	0.04	30.8	nil	67.1	48.3
EPF + CAP	2.56	1.98	0.54	0.04	69.0	100.0	32.6	49.8
Others	0.01	0.00	0.00	0.00	0.2	nil	0.3	1.9
All	<u>3.71</u>	<u>1.98</u>	<u>1.64</u>	<u>0.09</u>	<u>100.0</u>	<u>100.0</u>	<u>100.0</u>	<u>100.0</u>
1991-1997								
Equalization	1.08	0.01	1.07	0.00	31.7	0.5	71.7	5.2
EPF + CAP/ CHST	2.30	1.87	0.42	0.00	67.4	98.3	28.1	31.2
Others	0.03	0.02	0.00	0.01	0.9	1.2	0.2	63.7
All	<u>3.41</u>	<u>1.91</u>	<u>1.49</u>	<u>0.01</u>	<u>100.0</u>	<u>100.0</u>	<u>100.0</u>	<u>100.0</u>
1998-2004								
Equalization	0.92	0.00	0.91	0.01	38.3	nil	75.2	77.6
CHST	1.47	1.17	0.30	0.00	61.0	99.1	24.5	8.5
Others	0.02	0.01	0.00	0.00	0.7	0.9	0.4	13.9
All	<u>2.40</u>	<u>1.18</u>	<u>1.21</u>	<u>0.02</u>	<u>100.0</u>	<u>100.0</u>	<u>100.0</u>	<u>100.0</u>
2005-2007								
Equalization	0.78	0.00	0.68	0.10	28.1	nil	76.8	75.5
CHT	1.29	1.15	0.13	0.01	46.6	65.7	14.4	8.2
CST	0.59	0.51	0.07	0.01	21.2	29.3	7.4	4.8
Others	0.11	0.09	0.01	0.02	4.1	5.0	1.3	11.5
All	<u>2.77</u>	<u>1.75</u>	<u>0.88</u>	<u>0.13</u>	<u>100.0</u>	<u>100.0</u>	<u>100.0</u>	<u>100.0</u>
2008-2009								
Equalization	0.82	0.00	0.70	0.12	28.1	0.2	85.3	75.2
CHT	1.38	1.29	0.08	0.01	47.3	66.4	10.1	4.9
CST	0.62	0.59	0.03	0.00	21.4	30.5	3.6	1.5
Others	0.09	0.06	0.01	0.03	3.2	3.0	0.9	18.4
All	<u>2.92</u>	<u>1.94</u>	<u>0.82</u>	<u>0.16</u>	<u>100.0</u>	<u>100.0</u>	<u>100.0</u>	<u>100.0</u>
2010-2014								
Equalization	0.85	0.19	0.58	0.09	27.3	8.2	81.7	77.6
CHT	1.54	1.47	0.07	0.00	49.4	63.8	9.4	2.8
CST	0.65	0.63	0.03	0.00	21.0	27.2	3.8	0.7
Others	0.07	0.02	0.04	0.02	2.4	0.8	5.1	18.9
All	<u>3.12</u>	<u>2.30</u>	<u>0.71</u>	<u>0.11</u>	<u>100.0</u>	<u>100.0</u>	<u>100.0</u>	<u>100.0</u>

(Table 3 is concluded on the next page.)

TABLE 3 Concluded

Fiscal years ^a	Percentage of GDP				Contribution of various channels			
	Total	Vertical	Hori- zontal	Surplus	Total	Vertical	Hori- zontal	Surplus
<i>percent</i>								
2015-2018								
Equalization	0.86	0.17	0.66	0.03	26.8	7.0	85.0	97.7
CHT	1.70	1.62	0.08	0.00	52.9	67.4	10.3	1.7
CST	0.64	0.61	0.03	0.00	20.0	25.5	3.9	0.6
Others	<u>0.01</u>	<u>0.00</u>	<u>0.01</u>	<u>0.00</u>	<u>0.3</u>	<u>0.1</u>	<u>0.8</u>	<u>nil</u>
All	<u>3.21</u>	<u>2.40</u>	<u>0.78</u>	<u>0.03</u>	<u>100.0</u>	<u>100.0</u>	<u>100.0</u>	<u>100.0</u>

CAP = Canada assistance program; CHST = Canada health and social transfer; CHT = Canada health transfer; CST = Canada social transfer; EPF = established programs financing; GDP = gross domestic product.

Note: “Others” includes grants under offshore agreements, total transfer protection, health-reform grants, wait-time reduction, and stabilization. Columns may not add because of rounding.

a The subperiods listed refer to fiscal year-ends; for example, 1983-1990 covers fiscal years 1982-83 through 1989-90.

Source: Author’s calculations using data sources cited for table 1.

While the concerns regarding the exclusion of some provinces from federal support at a time of economic slowdown are valid, criticism of the equalization program by non-recipient provinces in this context is misplaced. As discussed earlier, fiscal capacity instead of budgetary deficit should be the basis for providing transfers for horizontal fiscal equalization. Given its mandate, equalization cannot be the channel to support the two richest provinces. Complaints about the lack of adequate federal support when provincial revenues are falling because of temporary shocks should be directed at the federal stabilization program, which is supposed to protect provinces from substantial year-over-year declines in their revenues.

The current design of the fiscal stabilization program is not suitable for addressing the needs of resource-rich provinces. For example, when Alberta’s revenues dropped by \$9.2 billion over two years, in 2015-2016, the province received \$500 million in support under the stabilization program. The current program structure provides support to a province only if the year-over-year decline exceeds 5 percent in the case of non-resource revenues and 50 percent in the case of resource revenues, and the total support is capped at \$60 per capita (see the appendix to this article for details). It seems clear that this formula will result in inadequate support to the resource-rich provinces. However, given the inherent volatility of resource revenues, the long-to medium-term average of such revenues can be very different from the annual figures. Thus, compensating a province for a shortfall from the peak observed in the previous year might actually result in an overpayment of stabilization support.

Dahlby proposes that in addition to the deductible, a co-insurance component can also be included in the program, whereby the federal government will cover a certain portion of revenue loss over and above the deductible.⁴³ The payment should be made for a shortfall against the province's fiscal capacity over a five-year moving average rather than on the basis of a year-over-year decline. With these adjustments, Dahlby argues that the distinction between resource and non-resource revenues should be removed. Tombe argues that, in the short term, the 50 percent deductible for resource revenues should be maintained.⁴⁴ This is because covering reasonably expected volatility-induced losses through the stabilization program would dampen the incentive to save more revenues and to introduce more stable revenue sources such as, in Alberta's case, a sales tax. Tombe argues that the stabilization program, like equalization, should be linked to fiscal capacity or a macro-indicator in the long term. Both authors emphatically make a case for removal of the \$60 per capita limit. Clearly, reform in the stabilization program needs to be urgently pursued to address the pain felt by resource-rich provinces.

As shown in the previous section, the equalization program is the main channel through which interprovincial horizontal fiscal inequalities are addressed in Canada. The CHT and CST, for their part, have become a channel for vertical transfers and contribute little toward horizontal equalization. Provinces could raise the same amount through taxes if the fiscal space were returned to them. This creates a possibility of simplification in the federal transfer system, namely, reducing the vertical fiscal imbalance by transferring tax points to provinces instead of providing specific-purpose transfers.

Experience has shown that when faced with fiscal constraints owing to lower federal transfers, as occurred in the mid-1990s, the provinces have "compromised every provincial program except medicare, since gutting medicare would spell certain electoral defeat."⁴⁵ This negates the necessity that the federal government must label a particular domain while transferring funds under the CHT to ensure that provinces use that money for expenditure on health care. Transferring the tax points would provide an elastic revenue source to provinces that are shouldering rising health-care expenditures. Given that the provinces have a constitutional responsibility to provide social services, and the electoral importance of social-sector spending, a similar argument can be made for the CST. The revenue raised from the

43 Bev Dahlby, "Reforming the Federal Fiscal Stabilization Program" (2019) 12:18 *SPP Briefing Papers* [University of Calgary School of Public Policy] 1-20 (<https://doi.org/10.11575/spp.v12i0.68076>).

44 Trevor Tombe, "An (Overdue) Review of Canada's Fiscal Stabilization Program" (2020) 31 *IRPP Insight* [Montreal, Institute for Research on Public Policy] 1-25.

45 Thomas J. Courchene, "Hourglass Federalism—How the Feds Got the Provinces To Run Out of Money in a Decade of Liberal Budgets," *Policy Options*, April 1, 2004, at 15 (<http://irpp.org/wp-content/uploads/assets/po/budget-2004/courchene.pdf>).

proposed tax point transfers would be covered under the equalization program, addressing concerns of interprovincial inequity in fiscal resources.⁴⁶

In this context, the current ceiling on the growth of the aggregate equalization amount to be distributed among provinces, which is capped at the rate of growth in GDP, can create challenges. The purpose of a tax point transfer in lieu of the CHT and CST grants is to provide provinces with an elastic source of revenue, growing at a faster rate than GDP. Even without these considerations, the ceiling should be removed since it uncouples overall equalization support from the quantum of interprovincial fiscal disparities. Another challenge in shifting toward equalized tax point transfers in lieu of per capita equal social transfers could be a “transfer illusion.” A major source of dissatisfaction with the equalization program among the “have” provinces is that they do not receive anything, a complaint that cannot be made about the CHT and CST. For example, Saskatchewan’s premier argued in 2018 for a 50-50 formula for equalization: half of the collected money would be distributed in the same manner as it is now, while the other half would be distributed on a per capita basis. The premier admitted that “[t]his would not result in any huge windfalls to our province of Saskatchewan. Our province would receive about \$300 million, about 1.6 per cent of the total equalization pool—but we would receive something.”⁴⁷ Thus, to simplify the federal transfer system on the proposed lines, provinces would need to be convinced regarding the broad fiscal equivalence of an equalized tax point transfer and the existing per capita equal grants.

LIMITATIONS AND FUTURE DIRECTIONS

This article explores the vertical and horizontal composition of the federal transfers and their impact on addressing initial horizontal fiscal disparities between provinces. However, the federal government also incurs expenditures in making transfers to persons and other transfer payments, and other direct expenses. Except for spending on national public goods, such as national defence and foreign affairs, other direct expenditures by the federal government have implications for the provision of public services and welfare at the regional level. Thus, these programs can be brought within the ambit of analysis for addressing horizontal fiscal disparities. The framework outlined in this article can be applied to this broader coverage of federal transfers and spending, where the direct federal expenditure can be an additional channel to augment the existing federal-provincial transfers.

In this article, it is assumed that the burden of federal taxation as a percentage of GDP is uniform across the provinces. In practice, while the federal tax code (rates, brackets, exemptions, etc.) may be uniform across the nation, it may not

46 To be sure, when the tax point transfer is equalized on the basis of the 10-province standard fiscal capacity, provinces above the standard fiscal capacity will be able to collect more revenues than the equalized value of the tax point transfer for other provinces.

47 David Baxter, “Saskatchewan Premier Scott Moe Pitches New 50-50 Equalization Formula,” *Global News*, June 20, 2018.

translate into a uniform tax burden. Built-in progressivity in taxation, differential tax rates (and tax breaks) across sectors/regions/types of income/consumption, and differential compliance rates can translate into a differential tax burden across provinces. To incorporate these variations, one may possibly consider any provincial contribution lower than the average federal tax rate to be an additional channel of horizontal fiscal equalization, while a higher contribution than the average tax rate can be considered a negative horizontal transfer. Interestingly, this treatment of a geographically differential tax burden can be traced back to Buchanan's founding contribution on horizontal fiscal equalization, where, instead of federal transfers to provinces, the author preferred to use a differential federal tax code across provinces to address horizontal fiscal disparities.⁴⁸

In Canada, researchers have calculated federal fiscal balances at the provincial level by deducting federal transfers and direct expenditures from the federal taxes collected at the regional level.⁴⁹ Although such exercises involve certain assumptions regarding the regional incidence of federal taxes and spending, these studies improve our understanding of the role played by federal fiscal policy in provincial economies. As a first-cut attempt, the present article focuses only on federal-provincial transfers. The proposed framework can be expanded to incorporate other regionally relevant dimensions of federal fiscal policy.

48 Under this scheme, the federal tax rate would be lower in the poorer regions. The subnational governments in poorer regions, compared to those in richer regions, are able to provide a lower level of public services to their citizens, even when citizens in both regions may be facing similar tax rates/regimes. A lower federal tax rate in a poorer region would compensate its citizens for the lower level of public services provided by their subnational government and thus help in addressing horizontal fiscal inequity. The federal tax rate in the poorer regions should be lowered such that citizens at a similar income level in the rich and poorer regions face an identical combined federal-provincial fiscal residuum; that is, the benefits (expenditure) minus the burden (taxes) are identical for those citizens. This ensures horizontal fiscal equity. In Buchanan's view, the use of "geographically discriminatory taxation" for horizontal equalization is better than the federal transfers, since the former method abides by the principles of financial responsibility and state fiscal independence. Another major advantage of geographically discriminatory taxation is that "it allows the necessary inter-area transfer of funds to take place without any necessary increase in the total amount of federal revenue," an important consideration in the "era of big central government." However, Buchanan recognized that geographically discriminatory taxation will face challenges of constitutional legality and the phenomenon of "tax illusion," where individuals might be more elastic in their response to the differential tax burden compared to the differential benefits received from the government expenditure. Thus, federal transfers can be considered as the second-best alternative to achieve horizontal fiscal equity. See Buchanan, *supra* note 35, at 595-96.

49 See François Vaillancourt and Richard M. Bird, "The Interregional Incidence of Central Budgets in Federations: Some Evidence from Canada" (2007) 27:1 *Public Budgeting & Finance* 1-19; G.C. Ruggeri and Weiqiu Yu, "The Measurement of Interregional Redistribution" (2003) 31:4 *Public Finance Review* 392-412; Robert Mansell and Ronald Schlenker, "The Provincial Distribution of Federal Balances" (1995) 3 *Canadian Business Economics* 3-19; and Robert Mansell, Mukesh Khanal, and Trevor Tombe, "The Regional Distribution of Federal Fiscal Balances: Who Pays, Who Gets and Why It Matters" (2020) 13:14 *SPP Research Papers* [University of Calgary School of Public Policy] 1-38.

I have taken Ontario as the benchmark province for measuring the vertical fiscal space surrendered by provinces and the horizontal fiscal inequalities for other provinces—even though Alberta is the richest province owing to its natural resource endowment. The choice of tax base and the benchmark province can create more possible combinations for analysis. This article contributes to both the theory and the empirical analysis of the decomposition of federal transfers into their vertical and horizontal components. Researchers may use different benchmarks and tax base measures to explore the issue further.

CONCLUSION

The intergovernmental transfers provided by the federal government comprise both vertical and horizontal components, and sometimes surplus transfers as well. The framework presented in this article makes it possible to separate these components. Empirical analysis has been carried out using Ontario as the benchmark province throughout, and GDP as the revenue base for applying a representative tax rate. Over the study period, the composition of the federal transfers has increasingly shifted toward the vertical component, from 53.4 percent during 1983-1990 to 74.85 percent during 2015-2018. The quantum of horizontal deficiency has also declined substantially during this period, from 0.5 to 0.23 percent of the provincial GDP. These results are driven by a combination of factors, including an increase in the per capita income of some former equalization recipient provinces (Saskatchewan and Newfoundland and Labrador); a slowdown in Ontario's economy, bringing down the benchmark fiscal capacity; and a continuous rise in total federal transfers (as a percentage of GDP) since 2005.

The federal transfers should be seen as a system addressing fiscal imbalances and providing stability to provincial finances. The former purpose is served by the CHT, the CST, and the equalization program, while the latter purpose—particularly for the richer provinces—needs to be served by a reformed fiscal stabilization program. Since all three major federal transfers (the CHT, CST, and equalization) flow together into the general revenue funds of provincial governments, these programs should not be treated as separate silos. It is possible to reduce the vertical fiscal imbalance by transferring tax points to provinces instead of providing specific-purpose transfers. Simplification of the federal transfers on the proposed lines would improve the fiscal accountability of the provinces and save them from federal discretion and threats of possible cutbacks in health-care and social-sector funding. The proposed reform would also shift the focus of the fiscal transfer system to equalization—a constitutional responsibility of the federal government “to ensure that provincial governments have sufficient revenues to provide reasonably comparable levels of public services at reasonably comparable levels of taxation.”⁵⁰

50 Section 36(2) of the Constitution Act, *supra* note 36.

APPENDIX HISTORICAL EVOLUTION OF CANADIAN INTERGOVERNMENTAL FISCAL TRANSFERS SINCE THE SECOND WORLD WAR

The federal-provincial transfer system plays a vital role in addressing the impact of regional inequalities and regional business cycles on provincial finances. The Canada health transfer (CHT), the Canada social transfer (CST), and the equalization program are the main pillars of the redistribution/equalization policy. A fourth channel for transfers to the provinces, the federal stabilization program, is meant to address issues related to regional business cycles by protecting provinces from substantial year-over-year declines in their revenues. This appendix provides a brief overview of the history and design of these transfers.⁵¹

Equalization

Origin of the Representative Tax System Framework

Equalization emerged as a stand-alone program in 1957, though its origin can be traced back to the Second World War.⁵² In 1941, the provinces vacated income tax and estate tax domains in return for cash transfers from the federal government. These “tax rental” arrangements were created to enable the federal government to finance the war effort, but the arrangement continued in the post-war period. These cash grants had an implicit equalization component, since per capita transfers to the provinces that accepted the tax rental agreements were similar irrespective of the amount of taxes collected from them. However, Quebec, and later Ontario, considered the continuation of tax rental arrangements after the war as a

51 This overview heavily draws on the following publications: Daniel Béland, André Lecours, Gregory P. Marchildon, Hizhen Mou, and M. Rose Olfert, *Fiscal Federalism and Equalization Policy in Canada: Political and Economic Dimensions* (Toronto: University of Toronto Press, 2017); Tombe, *supra* note 27; Jim Feehan, “Canada’s Equalization Formula: Peering Inside the Black Box . . . and Beyond” (2014) 7:24 *SPP Research Papers* [University of Calgary School of Public Policy] 1-27; Richard M. Bird, “Policy Forum: Equalization and Canada’s Fiscal Constitution—The Tie That Binds?” (2018) 66:4 *Canadian Tax Journal* 847-69; the O’Brien report, *supra* note 39; Tombe, *supra* note 44; and Canada, Department of Finance, “History of Health and Social Transfers” (www.canada.ca/en/department-finance/programs/federal-transfers/history-health-social-transfers.html).

52 Even earlier, the report of the Rowell-Sirois commission, published in 1940, had recommended the introduction of equalization grants. See Canada, *Report of the Royal Commission on Dominion-Provincial Relations* (Ottawa: King’s Printer, 1940). The equalization program adopted in 1957 differed from the Rowell-Sirois proposal in two important aspects: (1) the commission had recommended the creation of an independent body, similar to the Common-Wealth Grant Commission in Australia, to determine the amount and distribution of transfers; and (2) the commission had recommended that the expenditure needs of the provinces, as well as their revenues, should be considered. However, the equalization formula adopted is determined by the federal government, and only the revenue side of the provinces is considered in determining the transfers. See Béland et al., *supra* note 51, at 17, for details on these differences.

sign of fiscal centralism. Quebec instituted its own corporate income tax system in 1947 and introduced a personal income tax in 1954. Quebec made it clear that “any trade-off of equalization for the federal occupation of the central tax sources . . . was impossible.”⁵³ Ontario agreed to join the 1952 tax rental arrangements for income tax; however, in 1955, it announced plans to set up its own corporate income tax.⁵⁴

The need to end the fiscal isolation of Quebec, to accommodate provinces’ insistence on their right to self-determination, and to provide a mechanism for fiscal redistribution outside the tax rental arrangements together triggered the creation of a formula-driven equalization program.⁵⁵ In 1957, the federal government separated its tax rental payment from the equalization component. Each province participating in the tax rental agreement was allocated a portion of the three federally collected taxes—personal income tax (10 percent), corporate income tax (9 percent), and succession duties (50 percent)—that were generated in that province. Since the value of these transfers was lower for the less wealthy provinces, their transfers were topped up by an “equalization amount” to match the average of transfers given to the two richest provinces (Ontario and British Columbia).⁵⁶ This equalization grant was made independent of the tax rental agreement. Thus, any province running its own tax system would not receive the tax rental payment, but it would be entitled to equalization grants for the deficiency measured against the two-province standard.

Since 1957, the equalization program has evolved in terms of the number of tax/revenue bases for which provincial fiscal capacities are equalized and the standard/benchmark fiscal capacity against which shortfalls are to be measured. Once these two choices have been made, the formula for determining the equalization amount is relatively straightforward. The fiscal capacity of a province for a given revenue base is measured not on the basis of actual revenue collected, but rather by calculating how much the province could collect if it applied a representative tax rate, which is usually the average tax rate applied by all provinces on the particular revenue base. The representative tax revenues collected from all tax bases covered under the equalization program are added together to calculate the province’s overall fiscal capacity. This overall fiscal capacity of a province is compared against the benchmark fiscal capacity to determine whether that province is eligible for equalization payments to meet the shortfall. This method for the calculation of equalization entitlement is known as the representative tax system (RTS).

In 1962, 50 percent of a province’s natural resource revenues were included as the fourth revenue base to be equalized. This share has varied in subsequent years, between 50 and 100 percent inclusion. In 1962, the benchmark was also shifted from the 2-province standard to a 10-province average. The number of tax/revenue

53 See Béland et al., *supra* note 51, at 18.

54 Tombe, *supra* note 27, at 881.

55 Béland et al., *supra* note 51, at 19.

56 Tombe, *supra* note 27, at 882.

bases to be equalized expanded to 27 by the late 1970s and 33 in the 1980s. However, it is the treatment of natural resource revenues that has been the most troublesome issue. In the words of Thomas Courchene, a leading expert on Canada's equalization program, treatment of resource revenues is "a theoretical and empirical minefield," and an issue that "one copes with rather than solves."⁵⁷ The "reforms" made to the equalization program were driven by the need to contain the impact of Alberta's huge oil revenues on the benchmark fiscal capacity, particularly after the two oil crises in the 1970s increased the revenues of oil-producing provinces.

An interesting situation arose in the late 1970s when the inclusion of the growing resource revenues in the equalization formula meant that Ontario would become eligible for equalization payments. To avoid labelling the most populous and one of the richest provinces as a "have not" province, a new federal law was introduced to ensure that a province would not be eligible for equalization if its per capita personal income was higher than the national average.⁵⁸ This intervention eliminated Ontario as a candidate for equalization payments. It was only after the economic slowdown of 2008 that Ontario received equalization grants, for the years 2010 through 2019.

From Constitutional Incorporation to the New Framework

The year 1982 was an important landmark in the history of equalization. Now equalization was embedded in section 36(2) the Canadian constitution, in the following words: "Parliament and the government of Canada are committed to the principle of making equalization payments to ensure that provincial governments have sufficient revenues to provide reasonably comparable levels of public services at reasonably comparable levels of taxation."⁵⁹ Among other major changes, the federal government replaced the 10-province standard with a 5-province standard (mainly to exclude Alberta), which reduced the cost of the program. This allowed the federal government to include 100 percent of resource revenues in the equalization formula. Further, for the first time, the growth rate of aggregate entitlements was capped to the growth rate in Canada's gross domestic product (GDP).⁶⁰

From 1982 to 2004, except for some technical adjustments, the program remained mostly the same in its basic approach. The principle of raising the provinces with weaker fiscal capacity to the benchmark fiscal capacity through equalization transfers may create certain undesirable incentives for recipient provinces. Any expansion of a province's own tax base will raise its fiscal capacity, leading to a decrease in its equalization entitlement (termed a "clawback"). To address these concerns, the federal

57 Thomas Courchene, quoted by James Feehan in Harvey Lazar, *Canadian Fiscal Arrangements: What Works, What Might Work Better* (Montreal and Kingston, ON: McGill-Queen's University Press, 2005), at 185.

58 B eland et al., supra note 51, at 23.

59 Supra note 36.

60 Tombe, supra note 27, at 899.

government entered into specific agreements with Nova Scotia (in 1982) and Newfoundland and Labrador (in 1985). These arrangements provided the two provinces with time-limited partial compensation for any reduction in equalization payments as a result of increasing revenues from offshore development.

The most significant departure from the RTS-based equalization mechanism occurred during 2005-2007. The aggregate equalization payments had started to decline under the formula-based system, from a peak of \$10.9 billion in 2001 to an expected level of \$8.9 billion in 2005. This was due to the combined impact of a slowdown in Ontario's economy and tax-rate reductions in several provinces, which reduced the benchmark against which shortfalls were to be determined.⁶¹

A "new framework" was announced in October 2004, which set a fixed pool of \$10 billion as the aggregate equalization payment for 2005, with a guaranteed growth rate of 3.5 percent per year. Equalization payments were distributed among provinces partly as a function of their past shares and partly on a per capita basis. In 2005, new offshore accords were signed with Newfoundland and Labrador and Nova Scotia, extending, until 2012, the protection against any reductions in equalization payments as a result of increased revenues from offshore development.

These changes broke the link between equalization payments and fluctuations in a province's relative fiscal capacity, to the extent that Newfoundland and Labrador had a higher fiscal capacity after equalization than Ontario (even without taking the offshore accord in account). Further, Quebec was left with a lower fiscal capacity (inclusive of an equalization payment) than would have occurred under the former system.⁶²

The O'Brien Report and the Current Framework

The federal government established an expert panel, chaired by Al O'Brien, to examine the overall system of equalization and territorial formula financing. The panel submitted two separate reports in 2006, one for equalization and the other for territorial financing. The panel's main recommendations on equalization still form (for the most part) the basis for equalization payments in effect today. The panel recommended a return to the RTS system with the 10-province standard for calculating equalization payments. All of the 33 revenue sources used in the previous formula were aggregated into five categories: personal income tax, business income tax, sales tax, property tax, and natural resource revenues.

Regarding natural resources, the panel agreed that the provinces should receive a net fiscal benefit from the development of these resources, but it also justified a reduction in equalization entitlement resulting from an increase in natural resource revenues. In the panel's words, "that's precisely how equalization is intended to work."⁶³ However, the panel recognized that there are public costs involved in

61 See the O'Brien report, *supra* note 39, at 23.

62 *Ibid.*, at 24-25.

63 *Ibid.*, at 55.

providing the infrastructure necessary to develop natural resources. Full inclusion may create disincentives for maximizing the potential of those resources. Thus, the panel coped with the difficult question of the treatment of natural resource revenues by including only 50 percent of such revenues in the calculation of a province's entitlement to equalization.

However, the panel recognized that the exclusion of half of a province's resource revenues could result in a situation where a recipient province (for example, British Columbia, Newfoundland and Labrador, or Saskatchewan) might have a higher fiscal capacity after equalization than a non-receiving province (such as Ontario). The panel recommended that a fiscal cap for equalization payments be implemented to ensure that no receiving province would have a fiscal capacity higher than that of the lowest non-receiving province. For the purpose of the fiscal cap, 100 percent of a province's resource revenues, along with any payment under an offshore accord, would be included in calculating a province's fiscal capacity.⁶⁴ Finally, the panel recommended using a three-year weighted moving average for revenue bases to smooth out year-over-year changes in the equalization grants.

The federal government implemented the recommendations of the expert panel in 2008, with certain modifications. The inclusion of resource revenues, along with the provision of the fiscal cap, meant a clawback for some provinces. To address this concern, the federal government announced in its 2007 budget that "all provinces will receive the greater of the equalization entitlements under the formula based on a 50-per-cent exclusion rate, and the amounts they would receive under the same formula based on full exclusion of all natural resource revenues,"⁶⁵ though the fiscal cap recommended by the panel was retained.⁶⁶ To avoid the impact of the fiscal cap on offshore agreements, Nova Scotia and Newfoundland and Labrador were given the option of remaining under the previous framework until the existing agreements expired.

The global financial market crisis in 2008 led to a decline in Ontario's manufacturing sector (particularly the automobile industry). In 2010, for the first time in the history of Canada's equalization program, the province received equalization transfers. This had two consequences. First, the sheer size of Ontario's population translated into a large increase in funding for the aggregate equalization transfers, with a greater share going to Ontario. The equalization transfers to Ontario increased from \$0.35 billion (out of \$14.2 billion for all provinces) in 2010 to peak at \$3.3 billion in 2013 (out of \$15.4 billion for all provinces). Second, with the transition of Ontario from a "have" to a "have not" province, British Columbia became the non-recipient province with the lowest fiscal capacity, which was to act as a fiscal cap. However, this cap was substantially higher than the level that prevailed in the earlier years, based on Ontario's fiscal capacity, resulting in a relatively lower clawback of

64 *Ibid.*, at 62.

65 Canada, Department of Finance, 2007 Budget, Budget Plan, March 19, 2007, at 114.

66 B eland et al., *supra* note 51, at 38.

equalization entitlement from the recipient provinces and a higher burden for the federal government.

The federal government took two steps to limit its burden for financing the equalization program. First, given Ontario's entry into the "have not" group, it modified the fiscal cap, setting it at the average fiscal capacity of the equalization-receiving provinces. Second, the total size of the equalization program was capped to increase at the growth rate of nominal GDP. Any excess of the formula-based aggregate equalization over the capped amount linked to GDP growth was to be eliminated by a reduction in the former by an equal per capita amount to keep the overall transfers within the ceiling of the latter. These two measures reduced the equalization bill by \$1.9 billion for 2010, compared to the calculation of equalization payments based on the approach followed in the 2007 budget.⁶⁷

An interesting twist came in 2019, when a decline in oil prices led to a decline in the benchmark fiscal capacity. This led to a situation where the formula-based aggregate payments were less than the aggregate equalization amount based on nominal GDP growth. The federal government chose to stick with the higher aggregate amount and raised the formula-based provincial entitlement upward. Thus, under the new scheme, the role of the formula for calculating the provincial fiscal gap has been limited to an allocator of a predetermined amount, not a determinant of that amount.

This brief review of the equalization program suggests that while the federal government has shown a sense of its commitment to alleviate interprovincial fiscal disparities, it has also been concerned about the cost of the program. Natural resource revenues are a very significant source of interprovincial fiscal disparities. While an increase in oil prices does not create a revenue gain for the federal government, the resulting interprovincial fiscal disparities increase the demand for equalization grants. This concern has motivated the federal government to "reform" the equalization program multiple times, either by excluding Alberta's revenues from the equalization benchmark or by reducing the inclusion rate.

Provinces are affected to varying degrees by these changes. In general, receiving provinces with substantial natural resource revenues but lower than average non-resource revenues (for example, Saskatchewan and British Columbia)⁶⁸ benefit if resource revenues are excluded from the program. The inclusion of resource revenues leads to a clawback of equalization dollars for such provinces. On the other hand, receiving provinces lacking resource revenues (for example, New Brunswick and Prince Edward Island) benefit by the inclusion of natural resource revenues because it enlarges the revenues to be equalized. The non-receiving provinces (for example, Alberta and typically Ontario and British Columbia) usually suffer from

67 Tombe, *supra* note 27, at 899.

68 During the study period of 1983-2018, Saskatchewan was a recipient of equalization transfers from 1987 to 2008 (excluding 2004), while British Columbia was a recipient from 2000 to 2007 (excluding 2001).

the inclusion of natural resources revenues because they have to pay taxes to the federal government without receiving equalization transfers. Clearly, as in the words of the O'Brien panel, the treatment of natural resource revenues under the equalization program is a "Canadian conundrum."⁶⁹

The CHT and CST

The evolution of the welfare state after the Great Depression and the Second World War increased expenditures on health, social assistance, and education programs. This led to fiscal imbalances, because the provinces' revenue capacity was inadequate to fund their rising expenditure responsibilities in the social sector. The federal assistance to meet these challenges has evolved over the years, from cost-sharing programs to block funding transfers. In the 1950s and 1960s, the federal government started to provide cost-sharing grants to provinces for social services programs. In 1966, the Canada assistance program (CAP) replaced four existing shared-cost programs in the social sector (old-age assistance, unemployment assistance, and assistance for blind persons and disabled persons). In 1977, the cost-sharing grants for health and post-secondary education were replaced by a block transfer called established programs financing (EPF).

Unlike the cost-sharing nature of CAP, under EPF the provinces received equal per capita support through a mix of cash and equalized tax points. The federal government vacated 13.5 percent of the personal income tax and 1 percent of the corporate income tax, which could now be levied by the provinces. Since wealthier provinces could collect more tax by levying the same tax rate, the federal government equalized the tax points on an ongoing basis, by providing higher cash transfers to less wealthy provinces through what was known as "associated equalization."⁷⁰ In 1984, funding under EPF was made conditional on respecting the five criteria of the newly enacted Canada Health Act (universality, accessibility, portability, comprehensiveness, and public administration).

In 1994, CAP and EPF were merged into a single block fund, the Canada health and social transfer (CHST). The provision of equal per capita support with a mix of an equalized tax point transfer and a cash transfer was continued on the lines of EPF. There was a drastic reduction in the outlay on the CHST program from \$18.5 billion in 1996 to \$12.5 billion in 1998, creating tensions between the federal and provincial governments. In 2004, the CHST was bifurcated into two new transfers, the CHT and the CST. Also, in the same year, the federal and provincial governments committed to a 10-year plan to strengthen health care, with the federal government agreeing to provide \$41.3 billion in support of this plan.⁷¹ This was operationalized by increases in funding for the CHT through a base adjustment and

69 O'Brien report, *supra* note 39, at 55.

70 *Ibid.*, at 47.

71 Canada, Department of Finance, 2005 Budget, Budget Plan, February 23, 2005, at 13.

an annual 6 percent escalator, which continued until 2017.⁷² Since then, the growth of the CHT has been linked to a three-year moving average of GDP growth, with a floor of 3 percent per year. A similar annual escalator was introduced for the CST in 2008, though at a lower rate of 3 percent per year.

The O'Brien panel's report suggested that equalization should be the primary vehicle for equalizing fiscal capacity. The presence of associated equalization to equalize the value of tax point transfers meant that a province that was ineligible for equalization could receive more in per capita cash transfers under the CHT and CST to compensate for the fact that it does not receive equalization funding for its share of the tax point transfer.⁷³ To address concerns about "back-door" equalization, the federal government proposed in its 2007 budget to shift to an equal per capita cash allocation for both the CST and the CHT when these programs came up for renewal.⁷⁴ The practice of equalizing tax point transfers through associated equalization, which was first introduced in 1977 under EPF, was replaced with an equal per capita cash transfer to all provinces under both the CST (in 2008) and the CHT (in 2015).

The Fiscal Stabilization Program

As in the case of the equalization program, the origin of the stabilization program can be traced back to the Second World War. The 1941 tax rental agreement had a built-in stabilization mechanism. The provinces agreed to vacate all income tax and succession duties. In return, the federal government provided fixed annual payments either equivalent to the tax yield for the provinces in 1941 or sufficient to service their debt. Thus, the fixed payment insulated the provinces from annual volatility (though fixed payments would deny provinces any gains as well). The federal government also provided protection for gasoline tax revenues, which were particularly at risk because of wartime rationing. The federal government agreed to fill the gap for provinces whose gas tax revenues fell below their 1940 level. Both the 1947 and 1952 tax rental arrangements guaranteed minimum payments to participating provinces.⁷⁵

Separation of equalization from the tax rental payment in 1957 also brought changes in the stabilization program. The program committed to stabilize the yield on income tax and succession duties at the rates determined by the federal government. If these revenues declined by more than 5 percent relative to the average for the previous two years, the federal government would fill the gap.⁷⁶ Subsequent changes in the program were expansion of the number of provincial tax bases covered, changes in the deductible rates, and the introduction of a per capita cap on the stabilization payment.

72 See Canada, Department of Finance, *supra* note 51.

73 O'Brien report, *supra* note 39, at 47.

74 2007 Budget, *supra* note 65, at 359.

75 Tombe, *supra* note 44, at 7.

76 See Tombe, *supra* note 44.

Today the stabilization program provides support to provinces facing a year-over-year decline on the following basis:

- If natural resource revenues are higher than in the previous year, the fiscal stabilization payment is the difference between the year-over-year reduction in total revenues and 5 percent of total revenues in the previous year.
- If natural resource revenues decline by more than 50 percent, the fiscal stabilization payment is equal to reductions in non-resource revenues and resource revenues in excess of 5 percent and 50 percent of the previous years' revenues from these sources.
- If natural resource revenues decline but by less than 50 percent of the previous year's revenues, the fiscal stabilization payment is the difference between the decline in non-resource revenues and 5 percent of the previous year's non-resource revenues.

The maximum fiscal stabilization payment to a province is subject to a cap of \$60 per capita, which was introduced in 1987. Clearly, the provision of a cap and the higher deductible of 50 percent effectively deny the stabilization support required to resource-rich provinces. For example, Alberta's annual revenues declined by nearly \$9.2 billion during the two-year period of 2016-2017, but the total stabilization payment received by the province was only \$500 million. Similarly, Saskatchewan's revenues fell by \$1.7 billion during the three-year period of 2015-2017, but the province received only \$20 million in stabilization.⁷⁷ Non-availability of effective federal support during the economic downturn has generated a lot of dissatisfaction among the resource-rich provinces toward the federal-provincial transfer arrangements. On the whole, the system of intergovernmental transfers has been able to support the poorer provinces to raise their level of public services. However, immediate reforms are required in the fiscal stabilization program to address the concerns of resource-rich provinces facing a revenue shortfall owing to a decline in commodity prices.

77 *Fiscal Reference Tables 2019*, supra note 2; and Government of Canada, "Historical Transfer Tables: 1980 to Present" (<https://open.canada.ca/data/en/dataset/4eeec1558-45b7-4484-9336-e692897d393f>).