

Surplus Recycling and the Canadian Federation

Addressing Horizontal and Vertical Fiscal Imbalances

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Executive Summary

Effective surplus-recycling mechanisms are essential in ensuring the internal stability and resilience of macro-economic systems because they keep the overall system in equilibrium. Put simply, an internal recycling method establishes an equilibrium between a region running a surplus and a region running a deficit by ensuring that some of the surplus is flowing back to the region in deficit.

For example, historically, the operation of the global macro-economic system under the gold standard was an effective surplus-recycling mechanism. Countries running balance-of-payments surpluses would experience inflows of gold that in turn will increase domestic wages and prices thereby eroding their balance-of-payments surplus by decreasing exports and increasing imports. Balance-of-payments-deficit countries would experience the opposite impacts, with the result that the system would re-equilibrate.

If internal recycling mechanisms are not functioning properly, as for example, in the Eurozone at the moment, economic crises can become exacerbated and cycles can emerge that are difficult to stop.

This study takes a close look at the effectiveness of Canada's surplus recycling mechanisms and finds them to be seriously wanting. Canada currently faces three challenges with regard to its fiscal and economic resilience and stability that are not being adequately addressed.

First, the equalization program, designed to ensure that fiscally weak provinces have access to revenues sufficient to provide reasonably comparable levels of public goods and services, is too generous to those provinces that have traditionally received equalization, but provides inadequate transfers to Ontario. Our analysis shows that once federal transfers have been distributed, Ontario has the lowest real purchasing power of provincial public goods and services of all provinces. Potential policy responses include changes to formula for calculating and allocating federal fiscal transfers, as well as changes to foundational programs such as Employment Insurance so that they work better in Ontario.

Second, the fiscal disparities between natural resource-rich provinces and other provinces are growing and these interprovincial imbalances are not being addressed adequately by existing mechanisms. This is creating the potential for

significant differences in the ability of different provinces to provide their residents with comparable levels of public services. Four potential policy tools are surveyed to respond to these challenges: the creation of a sovereign wealth fund, a revision of federal corporate taxes, a revenue-testing of federal-provincial transfers and the possibilities of taxing carbon emissions.

Third, an emerging fiscal challenge lies in the disparity between the provinces' responsibility for most of the open-ended and/or demand-driven programs whereas the federal government has been able to cap or reduce many of its spending commitments. This could result in significant under-investment by provinces in programs essential to their prosperity, such as infrastructure and education. Credible policy responses to this challenge would include an increase in federal funds transferred to the provinces or the transfer of some powers from provinces to the federal government.

Empirical evidence is presented to demonstrate the existence of each of these three problems and the failure of existing surplus recycling mechanisms to deal with them. Potential policy responses are surveyed. What emerges from this analysis is the relevance of the surplus recycling mechanism framework for understanding Canadian intergovernmental fiscal issues, the inadequacy of current arrangements to address these fiscal issues, and the existence of real – if politically challenging – policy tools to strengthen the Canadian economic and fiscal union.

Introduction

In his 2011 book, The Global Minotaur: America, the True Origins of the Financial Crisis and the Future of the World Economy, Yanis Varoufakis surveys much of the postwar economic history of western nations and, in the process, makes a convincing case that effective surplus-recycling mechanisms (SRMs) are essential for maintaining the internal stability and resiliency of macro-economic systems, whether unitary states, federations or formal international groupings such as the EU and the Eurozone.

While his analysis is insightful and important, the role of surplus-recycling mechanisms has long been centre-stage in ensuring international macroeconomic equilibrium. Arguably the most familiar SRM was the "rules of the game" under the gold standard or, more instructively, under the price-specie-flow mechanism.

Countries running balance-of-payments surpluses will experience inflows of gold (specie) that in turn will increase domestic wages and prices thereby eroding their balance-of-payments surplus by decreasing exports and increasing imports. Balance-of-payments-deficit countries will experience the opposite impacts, with the result that the system will re-equilibrate. However, if the balance-of-paymentssurplus countries sterilize the gold or specie inflow, then the surplus-recycling mechanism is stymied and the burden of adjustment is shifted to the deficit countries in the form of austerity or exchange-rate depreciation, both of which significantly increase the political and economic adjustment costs, and undermine the principles of the system.

By way of an ongoing example, Varoufakis argues that the euro version of a SRM likewise undermines the entire system. In effect, while Germany runs an overall balance-of-payments surplus with the other euro countries (especially those in the southern core), it invests these surpluses in the dollar area (including Asia), not in the euro area. This perpetuates the euro-related German surpluses and it effectively transfers the adjustment back on to the deficit countries, an adjustment that without access to exchange rate depreciation will almost certainly exacerbate the likelihood of recovery in the short term and may over the longer term even force the exit of these countries from the euro.

The US-China relationship presents another example, one where China's trade surpluses are indeed cycled back to the US but in a manner that has served to

What is a surplus recycling mechanism?

A well-defined surplus-recycling mechanism ensures that a part of the surplus (e.g. in the trade balance) of a country or region flows back to those countries or regions running a deficit. That way equilibrium in the economic system is restored.

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perpetuate the US fiscal and balance-of-payments challenge. Specifically, China has pegged its yuan to the greenback and in spite of its huge trade surplus with the US it has essentially maintained the peg. However, this requires China to become the buyer of last resort of any and all US treasury bills and bonds that, in turn, effectively removes the US budget constraint and serves to entice the US to defer setting its own fiscal house in order, even to the point where US indebtedness is now endangering its very economic future. Readers will recognize that China's approach is a modern version of reneging on the gold-standard "rules of the game."

With this as brief backdrop relating to the concept of surplus recycling, my ongoing research thrust, as reflected in my recent Working Paper (Courchene 2013), is to identify and assess the efficacy of Canada's surplus recycling mechanisms as they relate to governments (not to individuals) and in particular to assess the role that they play in ensuring interprovincial and federal-provincial fiscal and economic resilience and stability.

On the interprovincial front the focus will be on the performance of the constitutionally mandated equalization program designed to ensure that the fiscally weak provinces have access to revenues sufficient to mount reasonably comparable provincial levels of public goods and services. The key conclusion here will be that the equalization system is too generous to the traditional equalizationreceiving provinces (PEI, NS, NB, QB and MB) whereas it falls well short with respect to equalization-receiving Ontario.

The second surplus recycling system focuses on the fiscal disparity between those provinces receiving and those not receiving equalization. These fiscal differentials are astoundingly wide, to the point where the ongoing challenge is to ensure that the resource-rich provinces do not veer too far off in the direction of becoming tax havens and/or providers of vastly superior provincial public goods and services. However, simmering just below the surface are several complex and loaded policy issues: ensuring that a resource-based industrial strategy will benefit all of Canada, managing the so-called Dutch Disease, and stewarding resource revenues to ensure that they will benefit future as well as current generations, among others.

On the federal-provincial front the emerging fiscal challenge is that the provinces have responsibility for most of the open-ended and/or demand driven programs and these challenges will surely be exacerbated as Canada's population ages. In contrast, the federal government will not only soon be running surpluses but

as well will be able to cap or reduce many of its spending commitments. Here, surplus recycling needs to take the form of rethinking, indeed reworking, the allocation of money and power in the federation.

Dealing with these highly explosive issues will be challenging because they will affect provincial entitlements, will sometimes be zero-sum games, and often require empirical assessments that are both complex and controversial. Phrased differently, there can be no first-best solutions. As such, the policy recommendations cannot consist of doctrinaire remedies, but must of necessity take the form of a series of options or avenues for improving the operations of these macro-equilibrating mechanisms. Indeed, the primary contribution of the paper may well lie not in providing solutions but, rather, in shedding empirical and policy light on some existing inadequacies of the status quo in respect of the ability of these SRMs to provide the resilience and stability that the Canadian federation requires.

A final introductory note is in order. Most readers would view the subject matter of this paper as falling under the rubric of addressing vertical and horizontal fiscal imbalances rather than falling within a framework focusing on federal-provincial and interprovincial surplus recycling. My rationale for framing our federation's fiscal challenges in terms of surplus recycling mechanisms is that this serves to link the Canadian federal reality and challenges on the fiscal front with the emerging international (and especially European) literature on surplus recycling within and between nations.

Equalization I

Horizontal Equity Across the Receiving **Provinces**

Table 1 presents the 2012-13 snapshot of all-in provincial per-capita fiscal capacities. Row 1 contains the equalization-based measures of fiscal capacities and row 2 has the equalization payments pursuant to these data. The equalizationreceiving provinces are PE, NS, NB, QC, ON and MB. It is important at this juncture to stress that there is no direct transfer of revenues from the coffers of the rich provinces to the coffers of the poor provinces. Rather, equalization payments come from the federal government's consolidated revenue fund (CRF) to which similarly situated Canadians contribute equally. Therefore, while Alberta does not contribute to equalization, Albertans do. And so do Quebecers.

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This clarification aside, we now continue with the description and analysis of the data in Table 1. Since the equalization formula leading to the equalization payments in row 2 only takes account of 50% of energy royalties, row 3 adds in the other 50%. Then row 4 adds in Nova Scotia's transfers under the Offshore Accords. After incorporating the federal-provincial equal-per-capita cash transfers (CST/CHT) in row 6, the overall per capita fiscal capacities appear as row 7.1

The most significant recent equalization development has been the descent of Ontario (from 2009-10 to the present) into the ranks of the receiving provinces. This was due to several factors: the surge in energy revenues in the resource-rich provinces; the collapse of Ontario's manufacturing sector (on which more later); and the

shift from the five-province standard to the ten-province or national-average standard. This last factor, which was introduced as part of the O'Brien Report's recommendations, brought the energy tax bases of Alberta, Nova Scotia and Newfoundland and Labrador back into the equalization formula thereby increasing Ontario's relative disparity in terms of resource revenues and, more generally, increasing the equalization associated with each dollar of energy revenues. Indeed, equalization became progressively fiscally problematical since six provinces with over 70% of the population now receive equalization. Even though only 50% of energy revenues were subject to equalization, each additional energy dollar accruing to an energy rich province that did enter the formula would lead to an increase in equalization of 70 cents! Small wonder, then, that in the context of the 2008 surge in energy prices the federal government almost immediately put a cap on the growth of overall equalization: the total amount of equalization now grows in line with GDP growth and the role of the equalization formula is reduced to allocating this total across the recipient provinces.

With this as backdrop, the row 2 data reveal that Ontario received \$249 per capita in equalization. This represented 21% of total equalization (in dollar terms, \$3.261 billion of the \$15.423 billion equalization total). Given that there is now a cap on equalization that rises in line with GDP, as outlined above, the increase in Ontario's equalization from zero in 2008-09 to 21% in 2012-13 means that the traditional recipient provinces have seen major declines in their annual equalization entitlements (Nova Scotia is an exception if one includes its offshore payments). Not surprisingly, this had led to major concerns on the part of the traditional recipients, even to the point of pressing the federal government to prevent Ontario's entitlements from having a negative impact on their own entitlements.2,3

TABLE 1 The Anatomy of Provincial Finances, 2012-13, \$/capita

	NL	PE	NS	NB	QC	ON	МВ	SK	AB	вс	CAN
1. FISCAL CAPACITY (FROM EQUALIZATION)	8,444	4,711	5,501	5,097	6,036	6,840	5,721	8,466	11,351	7,453	7,174
2. EQUALIZATION	0	2,377	1,347	1,993	943	249	1,368	0	0	0	-
3. OTHER 50% OF RESOURCE REVENUES	2,663	2	164	54	188	9	73	1,420	1,379	339	-
4. OFFSHORE ACCORDS	-	-	155	-	-	-	-	-	-	-	-
5. SUB-TOTAL (1-4)	11,107	7,090	7,167	7,144	7,167	7,098	7,162	9,886	12,730	7,792	7,509
6. CHT/CST TRANSFERS	1,200	1,200	1,200	1,200	1,200	1,200	1,200	1,200	1,200	1,200	-
7. OVERALL FISCAL CAPACITY	12,307	8,290	8,367	8,344	8,367	8,298	8,362	11,086	13,930	8,992	8,709
8. PRICE/COST INDEX FOR PUBLIC GOODS/SERVICES	.969	.895	.934	.943	.959	1.020	.964	.976	1.089	.986	1.000
9. REAL DOLLAR FISCAL CAPACITY: ROW 7/ROW 8	12,700	9,263	8,955	8,848	8,725	8,135	8,674	11,359	12,792	9,117	-

^{1.} EQUALIZATION DATA ARE FROM DEPARTMENT OF FINANCE ESTIMATES (DECEMBER 16, 2011)

^{2.} ROW 8 INDEXES ARE CALCULATED FROM GUSEN (2012B, 7-8) AND ARE THE WEIGHTED AVERAGE OF THE PRICE/COST OF PROVINCIAL PUBLIC SERVICES FOR SIX CATEGORIES - WAGES AND SALARIES, TRANSFERS, CONSTRUCTION CONTRACTS, HEALTH CARE PURCHASES, CONSULTING SERVICES AND "OTHER".

Prior to continuing with the focus on the have–not provinces, an often-overlooked point merits airing, namely that equalization also benefits the richer provinces. Specifically, without the presence of an equalization program, there is no way that Canada would be as decentralized on the taxation front as we currently are, which clearly and hugely privileges the more prosperous provinces.4

Returning to Table 1, row 7 reveals that the all-in per capita fiscal capacities for the equalization receiving provinces are essentially equal, ranging from a low of \$8,290 per capita in PE to a high of \$8,367 in NS and QC. This contrasts with dramatically higher overall per capita fiscal capacities for the energy rich provinces – SK (\$11,086), NL (\$12,307) and AB (\$13,930). Later in the paper this divergence between equalization receiving and have provinces will be centrestage. However, the immediate interest is with the degree of horizontal fiscal equity across the equalization receiving provinces.

Calculating Post-Equalization Real Provincial **Purchasing Power**

The equalization principle in s. 36(2) of the Constitution Act, 1982 is not cast in terms of providing the receiving provinces with equal-per-capita revenues. Rather, the federal government is committed to 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." This being the case, the ability of the recipient provinces to provide comparable levels or bundles of public goods and services will obviously depend not only on provincial revenues but, as well, on the prices or costs of providing these bundles. In other words, my reading of 36(2) is that equalization is about providing comparable quantities of provincial public goods and services, i.e., about providing comparable real or *purchasing-power-corrected* bundles of provincial public goods and services.

Conveniently, Peter Gusen (2012a, 2012b) has provided the requisite data to construct an index of provincial prices/costs that can be utilized to derive real bundles of provincial public goods and services. These indices by province (with Canada equal to 1.00) appear as row 8 of Table 1. They are calculated as the prices/ costs of a weighted average of six categories of public goods and services: wages and salaries; transfers; construction contracts; heath care purchases; consulting services and a residual category referred to as "other." Row 9 is obtained by

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dividing row 7 by row 8 where the resulting values represent estimates of the real purchasing power of post-equalization aggregate provincial per capita revenues.

The results border on the astounding. Ontario, with \$8,135 per capita in real purchasing-power-revenues comes off as the most fiscal-capacity-deprived province, and by a considerable margin. The next closest are Manitoba with \$8,674 and Quebec with \$8,725. Lest one think that these are small differences, with a population in the neighbourhood of 13 million Ontario's near-\$600 per capita shortfall (in real terms) relative to Quebec means that it would take nearly eight billion dollars (of real purchasing power) to close the Ontario-Quebec gap. Moreover, non-equalization-receiving province British Columbia ends up with a lesser ability to provide per capita real quantities of public goods than does Prince Edward Island.5,6

By way of a further perspective on introducing prices/costs into the equalization calculations Wallace Oates (1983, 94-7), one of the leading experts on US federalism, rationalizes the absence in the US of an equalization program as follows. While it is certainly true that U.S. states with higher per capita incomes have the potential for having correspondingly higher per capita revenues, these differential state incomes will be reflected in (or in economists jargon, "capitalized" in) higher wages and rents that, in turn, will increase the costs/prices of producing state-level public goods and services. Similarly, lower income states will also have lower wages and rents so that they do not need the higher level of per capita revenues of the higher income and revenue states in order to provide comparable levels of public goods and services. In Oates' view, these income differentials will be more or less fully capitalized in terms of wages and prices, so that in the final analysis there may be little or nothing to equalize, as it were. Indeed, Oates goes as far as stating that the decision to have an equalization program in a federal system is more a matter of "taste" than of social or economic principles. My difficulty with this approach is that it assumes that there is full, or100%, capitalization, which is surely not the case. However, it is likewise surely not the case that there is zero capitalization, as is assumed in Canada's approach to equalization.

Cast in terms of the realpolitik of Canadian federalism, while it seems hard to argue with the proposition that provinces with higher wages and prices will need higher per capita revenues in order to provide the same effective level of public goods, the fact that five of the equalization receiving provinces are destined to see their

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equalization payments fall significantly under a real-purchasingpower model implies that it is highly unlikely that capitalization will ever see the light of legislative day. However, the reality that we are in effect over-equalizing to those provinces that have traditionally received equalization suggests the possibility of implementing some related policy adjustments. For example, when the formula-driven equalization exceeds the equalization cap, the federal government's approach (supported by the majority of equalization experts) is to reduce the per capita equalization entitlements for all recipient provinces until the total falls within the cap. This penalizes Ontario the most in percentage terms given that it had the lowest per capita entitlement. In the limit, this approach could remove Ontario from the recipient category. This is quite inappropriate given that Ontario already has the lowest real purchasing power in terms of provincial

public goods and services. My approach to this has always been to calculate the percentage allocation of equalization under an unconstrained model and then to apply these same provincial percentages to the allowable amount of equalization.

Along similar lines, since Manitoba and Quebec are much better off under the status quo than under a capitalization alternative, it seems appropriate to act on the many recommendations to bring hydro-electricity rents more fully and formally into the equalization calculations for these provinces. This may be an opportune time to do so since hydro rents are currently running at low levels. Somewhat further afield, the EI program might be reworked to ensure that similarly situated individuals, no matter where they reside, will be treated equally. This is particularly so since most of the preferential EI provisions apply in the traditional equalization-receiving provinces. In other words, let us strip the "equalizing components" out of national programs for citizens and leave the task of equalization to the equalization formula.

Equalization



Fiscal Imbalances Between Equalization Receiving and Resource-Rich Provinces

From row 7 of Table 1, and as already noted, the all-in fiscal capacities vary from roughly \$8,300 per capita for the six equalization-receiving provinces to \$8,992 for BC, \$11,086 for SK, \$12,307 for NL and \$13,930 for AB. These values for the energyrich/royalty-receiving provinces are dramatic, so much so that if they persist the outcome will surely be superior public goods and/or tax havens in the high-fiscalcapacity provinces.7 Moreover, and despite the current energy woes, the reality is that these royalties may well loom even larger in years ahead. For example, the Canadian Energy Research Institute (CERI) estimates that the oil sands in Alberta will lead to \$350 billion in provincial royalties over the next 25 years.8 CERI also notes that overall oil-sands-related Canadian tax revenues (excluding royalties) will increase by \$444 billion with 70% or \$322 billion flowing to the federal government and \$122 billion to the provinces (including Alberta) and municipalities.

A key reason why energy royalties pose such a challenge for the equalization program is that the federal government cannot constitutionally access provincial energy royalties/rents. Hence, any equalization payments driven by these energy royalties/rents must come out of the federal government's consolidated revenue fund which, in turn, means that the provinces' shares of this funding are not far off their population shares. For example, if an increase in economic activity in Saskatchewan led to an increase in its personal income tax revenues that, in turn, generated \$100 in increased equalization, the federal government would receive much more than this from the increase in its own PIT revenues from the same Saskatchewan residents (since the federal share of personal income tax revenues is roughly 60%). This generates a rough and ready degree of equity, since the province responsible for the rise in equalization is also the province where the federal government garners sufficient additional revenues to fund this increase. However, if the \$100 in additional equalization arises from an increase in Saskatchewan's energy royalties (which are off limits to the federal government) then the federal government would need to dip into its consolidated revenue fund

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for this amount. This means that Saskatchewan's residents' share of the financing of equalization arising from its royalties would be just over 3% (its population share) while Ontarians' share would be in the neighbourhood of 39%. Arguably, this is a most significant fiscal disconnect in the federation, one that is significantly enhanced if the energy-rich provinces then use these revenues to create tax havens, to provide superior provincial public goods or to engage in other provincebuilding initiatives.

Notwithstanding these fiscal challenges, the potential economic impact arising from Canada's resources sector is enormous and this has led influential policy leaders such as CIBC's Senior Vice-president and Vice-Chairman Jim Prentice in the direction of proposing a resource-based economic future or, in his words, "a hydrocarbon and hydro-electric industrial strategy" (Prentice 2011b). Elsewhere he refers to this resource-based strategy as an "energizing-infrastructure" opportunity as part of "Canada's 21st century nation-building" (Prentice 2011a). This twinning of fossil energy with hydro-electricity would bring Manitoba and Quebec under the resource-based industrial strategy umbrella. Moreover, by integrating hydropower with the less environmentally benign oil sands and by developing a corresponding green energy policy, the overall energy strategy would arguably be made more saleable both at home and abroad.

While I am onside with the prospect of Canada and Canadians reaping the economic rewards from donning the mantle of an energy superpower, I fear that the Achilles heel of a hydrocarbon/hydroelectric strategy may well be the implications on the fiscal and federal (indeed, fiscal-federalism) fronts. Or in terms of the theme of this paper, the failure to find ways to recycle (directly and/or indirectly) the resulting fiscal surpluses, inter-provincially and federalprovincially, could seriously complicate, even undermine, any national resourcebased industrial strategy.9 There are two seemingly unrelated, but actually closely intertwined, issues at play here.

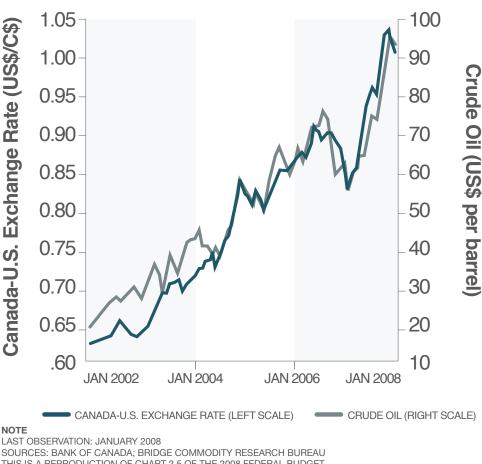
The first is that a ratcheting-up of resource royalties that dramatically and/or permanently increase the fiscal disparities between the resource-rich and the equalization-receiving provinces could lead to heightened economic challenges along tax-haven/superior-public-goods/province-building lines. By way of an illustrative aside in relation to the tax-haven issue, Canadians ought to be thankful that Albertans abhor sales taxes since this is the most benign form of

tax to eliminate because it has little impact on interprovincial factor flows. In sharp contrast, the interprovincial factor flows (including movement of corporate headquarters) would probably be quite dramatic were Alberta to have reduced its corporate income to zero rather than forgoing a sales tax. 10 Moreover, a zero corporate income tax (CIT) would cost less in terms of forgone revenues than does a zero provincial sales (i.e., roughly \$4 billion for the CIT vs. the earlier noted \$5-\$6 billion for a provincial sales tax, both evaluated at national-average tax rates). Perhaps Alberta recognized that the federal government would probably have responded in a countervailing fashion to a zero CIT¹¹ so this may have also served to tilt the Alberta government's preference in favour of sales tax relief.

The second issue falls under the general rubric of the "Dutch Disease", so named because Holland's exports of North Sea oil and gas appreciated its exchange rate to such a degree that this clobbered its manufacturing sector. Given the utter volatility of the energy prices, my presumption relating to the Canadian reality has long been that our currency area is too small for freely floating exchange rates to accommodate at the same time a world class manufacturing sector and a global energy powerhouse. Arguably, this is clear from Chart 1 that plots the rise in energy prices (in US dollars per barrel) and the value of the loonie (in US cents per Canadian dollar). The relationship is readily apparent: a rise in global energy prices generates export-driven resource income from, as well as inward foreign direct investment into, our energy patch, both of which will serve to appreciate the loonie. However, the near doubling of the loonie in Chart 1 (from 62 US cents in 2002 to just over 110 cents in 2008) represents very significant exchange-rate overshooting, i.e., well beyond the appreciation required to accommodate the increase in resource prices relative to the price of manufacturers. Although not shown in Chart 1, there was an earlier and equally rapid depreciation in the 1990s that also represented exchange-rate overshooting, this time on the downward side.

Writing in 1999 when the loonie was at or near its low-60-cent value, Richard Harris and I (Courchene and Harris, 1999) noted that in spite of the ongoing hitech boom, Canada's capital-labour ratios (for physical capital and human capital) were likely to fall with deleterious implications for future productivity and competitiveness. Specifically, since capital inputs (e.g., machinery and equipment) are typically priced in US dollars, the depreciated level of the loonie meant that capital enhancement was very expensive in terms of Canadian dollars. In turn, this meant that firms would likely meet the US demands for Canadian products by employing more labour rather than by investing in additional capital equipment, thereby serving to reduce the capital-labour ratio from where it otherwise would have been. And as readers will remember, this was also the time frame when the "brain drain" to the US was centre-stage, with the result that the ratio of human capital to overall labour was also falling, The decline in these human and physical capital-labour ratios was not good news for the trajectory of Canada's productivity relative to that of the US.

CHART 1 Canada-U.S. Exchange Rate and Crude Oil Price



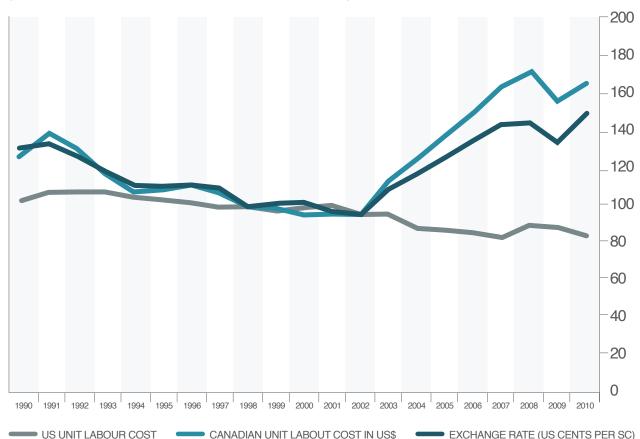
THIS IS A REPRODUCTION OF CHART 2.5 OF THE 2008 FEDERAL BUDGET.

Chart 2 provides some evidence on this score by focussing on the comparative trends in Canadian and US labour costs in manufacturing. The data in the chart are indexes with year 2002 = 100. The index of unit labour costs in the US (the bottom line in the chart from the perspective of 2008) fell to somewhere near 90 by 2010 from 100 in 2002. The line labelled "Exchange rate" presents the impact of the exchange rate appreciation on Canada's unit labour costs under the

assumption that all else is held constant. The top line then presents the actual index of Canada's unit labour costs in US dollars. This is obtained by adding to the exchange rate line the combined influence of lower Canadian productivity growth relative to Canadian wage growth. Overall, focusing on the top and bottom lines in the chart for year 2010, the deterioration of our comparative unit labour cost in US dollars relative to US comparative labour costs since 2002 exceeds 80%, considerably above the roughly mid-50% deterioration emanating from the exchange rate appreciation.

To be sure, there are also benefits associated with an appreciated loonie. Consumers are better off because imported products are less expensive and firms that rely on foreign inputs into their production processes are less expensive in Canadian dollars. Beyond this, more than the exchange rate and unit labour costs are at work in terms of the sharp decline in our manufacturing sector. Specifically, given that the major international markets for Canada's manufacturing outputs are US consumers and manufacturers, the wholesale offshoring and outsourcing of US manufacturing to China in order to take advantage of the inexpensive but

CHART 2 **Dutch Disease and Competitiveness** (Canada US Unit Labour Costs. Indexes: 2002=100)



efficient Chinese labour force clearly played a dominant role in the shrinking of the Canadian manufacturing sector. 12 Nonetheless, and in sharp contrast to the prevailing wisdom, my view has long been that the Bank of Canada should not have permitted swings in the loonie of anywhere near the magnitudes experienced recently. Indeed, even the Swiss monetary authorities, long viewed as the gold standard in the pantheon of central bankers, are now intervening in currency markets to limit the appreciation of the fabled Swiss franc relative to the euro.

The key message here is that the interactions among energy resources, provincial ownership, energy prices, and the gyrations in the international value of the loonie have the potential for generating significant regional and federal fiscal and economic challenges – challenges that are arguably unique to the Canadian federation. And foremost among the reasons for this uniqueness in comparison with similarly federal and resource-rich Australia is that their equalization regime ensures that no Australian state can end up with more than the national-average (per capita) revenue for any revenue source, much to the chagrin of the mineralrich Western Australia.

Given, therefore, that exchange-rate intervention is an economic non-starter and recentralization of taxation is a constitutional non-starter, we need to focus on various indirect options for addressing and/or recycling the surpluses/deficits associated with the fiscal disparities between the equalization receiving and the energy-rich provinces.

Prior to turning attention to selective indirect approaches to surplus recycling, it should be noted that there is one option that would qualify as a direct surplusrecycling mechanism, namely a direct transfer of royalties from one province to another. Not surprisingly, this option has arisen (implicitly, if not explicitly) in the context of the BC-Alberta stand-off over the Enbridge Northern Gateway Pipeline. Given that Alberta will pocket scores of billions in royalties while BC will be saddled with any environmental catastrophe, it is only natural that BC would be interested in securing a share of Alberta's royalty revenues and/or adequate compensation for any environmental disaster as the quid pro quo for the pipeline to proceed, all other factors being onside. This is an obvious example of the importance of having adequate surplus-recycling mechanisms in place in order to pave the way for the emergence of a comprehensive hydrocarbon and hydroelectric industrial strategy.

Focus is now directed to other options, not all in conflict with the interests of the

resource-rich provinces, which may serve the same purpose.

Options for Ameliorating Resource-Driven Interprovincial Fiscal Imbalances and the Dutch Disease¹³

STEWARDSHIP AND PROVINCIAL SOVEREIGN WEALTH FUNDS

In his insightful June 2012 Policy Options article "Reversing the Curse: Starting With Energy" David Emerson provides a principled perspective for addressing the implications arising from resource revenues and royalties for both the Dutch Disease and interprovincial fiscal equity. This principled perspective is stewardship:

Natural resources are long-term assets that belong to generations of Canadians now and into the future. Government leaders and decisionmakers have an implied custodial and stewardship responsibility to manage across the generations. In fiscal and economic terms, nonrenewable energy and natural resources are long-life, fixed assets that, when sold and monetized, should be reinvested in ways that will benefit Canadians over the long term. Pretending that resource revenue is just another form of operating revenue, to be spent on current consumption of public services, is an abrogation of this responsibility (2012, 53, emphasis added).

More recently (2013, 23) he elaborated as follows:

Our resource bounty has broken down the essential linkage between government spending and taxation that is at the heart of accountable democracy. We have pretended the income statement and the balance sheet are basically interchangeable. We sell assets and call the proceeds income.

This stewardship perspective points in the direction of PSWFs (provincial sovereign wealth funds), preferably along the lines of Norway's sovereign wealth fund. Fuelled by fossil energy revenues, Norway's fund is invested in international markets. This serves to offset Norway's energy related export earnings, thus ameliorating the tendency for the Norwegian currency (krone) to appreciate. PSWFs invested in international markets could play the same role – stewarding

energy related revenues for use by future generations and in the process reducing the magnitude of the Dutch Disease. Moreover, by reducing the degree to which the loonie would appreciate in the face of an increase in the international demand for and/or price of energy this would mean more Canadian dollars for any given level of exports, a gain for both energy exporters and governments alike. By way of a relevant aside the Canada Pension Plan investment fund probably plays a helpful incidental role in this regard since revenue maximization will likely involve purchasing foreign assets when the loonie is high and selling foreign assets when it is low, again other things equal.

Were Alberta to have introduced a sales tax and created a PSWF (or continued with the Heritage Fund), the current value of such a fund would be well in excess of a hundred billion dollars. Indeed, a further role for such a fund could be to stabilize the provinces overall revenues in the face of either revenue shortfalls or excesses. To be sure, a PSWF in the hundred-billion-plus area would likely create a challenge of its own to the federation.

Since the energy revenues placed in PSWFs would not enter provincial consolidated revenues for budgetary purposes and, therefore, would not be devoted to the provision of current public goods and services, these revenues should not enter the equalization formula. However, when funds are withdrawn from PSWFs and brought back into provincial consolidated revenue funds they would then enter the equalization formula. But current Canadian practice runs in the opposite direction – royalties entering the Heritage Fund are included in the equalization program and when they are brought back into the consolidated revenue fund they are exempt from inclusion in equalization (along with any interest earned along the way). This is another area where equalization needs rethinking and reworking.14

2 REDESIGNING FEDERAL CORPORATE PROFITS TAXES

While the federal government cannot directly access provincial royalties, it can alter its corporate taxation of the energy sector in ways that will increase its revenues from the sector. An obvious, albeit controversial, approach here would be to disallow deduction of a corporation's royalty payments to provincial governments in calculating its federal corporate taxes. This increase in federal tax revenues can be viewed as monies to help fund the equalization triggered

by these royalties. However, one likely result of this disallowance would be that the provinces would be put under pressure to reduce their royalty rates. On the other hand, the fact that energy firms can currently deduct provincial royalties in calculating federal corporate taxes allowed the provinces to set higher royalties in the first place.

An increasingly appealing alternative, in part because it is becoming more acceptable internationally, would be to convert the corporate tax system into a tax on rents. Boadway, Coulombe and Tremblay (2013) reflect on this proposal as follows:

A tax on rents would capture revenues for the public sector from rents or pure profits generated from all sources, including monopoly rents, resource rents, locational rents, and rents due to special advantages. A corporate tax based on rents would generate for the federal government a share of resource rents using a tax that is not explicitly discriminatory, and would contribute to the federal government's ability to address fiscal imbalances arising from natural resources.

The details relating to rent taxation would not only be intrinsically complex (e.g., estimating a normal, risk-adjusted rate of return that would be utilized to calculate the rent) but as well controversial in the federal-provincial, even constitutional context. It nonetheless merits mention because it represents an alternative approach to the rent issues associated with natural resources.

REVENUE-TESTING FEDERAL-PROVINCIAL TRANSFERS

Canada income-tests virtually all its transfers to persons – GIS, OAS, EI, CCTB (Canada Child Tax Benefit), welfare benefits, and probably others. The time has come to follow the lead of some other federations and to "revenue-test" the equalper-capita federal transfers to the provinces. In an earlier article (2010) I proposed that the CHT/CST combination be subject to revenue testing along the following lines. Using the all-in fiscal capacity as measured by row 5 of Table 1, if a province has a per capita all-in fiscal capacity above a certain threshold, say 115%, of the per capita national average of all-in fiscal capacity, then for each dollar per capita of a province's revenues above this threshold, the federal government would reduce its CHT/CST transfer by, say, 25 cents per capita. Given that the current value of the CHT/CST is roughly \$1,200 per capita (row 6 of Table 1 above), if a province has

an all-in fiscal capacity of \$4,800 per capita above the 115% per capita threshold, then its CHT/CST will fall to zero. The resulting CHT/CST clawbacks could then be redistributed to those provinces with per capita revenues below the threshold. Note that both the 25% claw-back rate and the 115% threshold are chosen for illustrative purposes only: others might prefer different rates.

This should not be viewed as a confiscation of royalties/revenues any more than a reduction in one's old age pension (OAS) due to an increase in earned income amounts to a confiscation of the earned income. Moreover, unlike the 100% clawbacks on the Guaranteed Income Supplement (GIS), a 25% revenue clawback is rather moderate. Indeed and as noted earlier, under the Australian Commonwealth Grants Commission approach, the clawback of revenues (say for Western Australia's large resource-related revenues) is effectively 100% once they exceed the all-state per capita average of resource-related revenues.

Intriguingly, this is not a novel proposal in that the CHT/CST has been subject to revenue testing. The precise details are arcane but, in general terms, provinces with high per capita revenues from the personal income tax and to a lesser degree the corporate income tax received smaller per capita CHT/CST transfers. The 2007o8 federal budget committed the federal government to ensuring that the CHT/CST would henceforth be equal per capita across the board for all provinces. Ontario has now been brought up to the other provinces' level¹⁵ and, as noted earlier, Alberta will get there in fiscal year 2014-15.

Thus the relevant message here is two-fold: i) revenue testing the federalprovincial cash transfers is not new, and ii) meaningful indirect surplus recycling requires that it be re-instated along the general lines outlined above.

PRICING CARBON EMISSIONS

Were the energy rich provinces to embark on carbon pricing via upstream or origin-based emission levies the resulting revenues would be huge and would exacerbate the already challenging differential fiscal capacities across provinces. In a Policy Options article John Allan and I (March 2008) argued that the preferred option would be a nationally run, destination-based (i.e., a final-consumptionbased) carbon tax regime. Among the reasons for this were: i) that the burden of CO_a affects all Canadians more or less equally; ii) the provinces cannot prevent "carbon leakage" because they cannot levy tariffs/taxes inter-provincially or

internationally on products produced under less stringent carbon-pricing regimes whereas the federal government can; and iii) while some of the revenues from a nationally run carbon tax should be devoted to R&D related to developing lowcarbon technologies and processes, the remaining revenues collected could (and for reasons elaborated in the next section, should) be distributed to the provinces on an equal per capita basis. We also recommended that the federal government should treat carbon taxation as it relates to international trade along the lines of the GST or value-added taxation, namely apply the carbon taxes to imports and provide carbon-tax rebates on exports.

Under such a scheme, carbon taxation would be export-import neutral, would stimulate low-carbon technologies, and would allocate the very substantial carbon-abatement revenues equally in per capita terms across provinces, thereby serving to ameliorate not only the existing interprovincial fiscal capacity differentials but as well addressing the looming imbalance in the division of money and power between the federal government and the provinces, to which the analysis now turns.

Federal-Provincial Surplus Recycling

The Division of Money and Power

The theme of this final section is that in this information age the existing distribution of money and power in the Canadian federation is increasingly untenable. The reason is straightforward: with an aging population all three of the open-ended or demand driven health expenditures – physicians and medical practitioners more generally, hospitals and pharmaceuticals – fall under provincial jurisdiction. Moreover, they have powerful political constituencies so that the provinces are literally forced to draw funding away from areas such as post-secondary education, or to allow significant privatization via rising tuition levels.

Phrased differently, the pressures on provincial dollars are to direct them toward financing relatively consumption-oriented activities at the expense of financing relatively investment-enhancing activities. 16 This is a disastrous economic strategy in an increasingly human capital and informatics era.

To be sure, the revenue-rich (i.e., resource-rich) provinces may be able to handle

this challenge, but they will likely do so in ways that create additional problems for the poorer provinces - by raising wages and/or enhancing coverage that will in turn put similar pressures on the other provinces and/or attract their health-care professionals.

In sharp contrast and in spite of ongoing deficits, not only is the federal government in the enviable position of having the most robust fiscal position of the G7 countries and seems certain to achieve budget balance by fiscal 2015-16 but, as well, its expenditure responsibilities are much more amenable to financial control than are the provincial expenditure responsibilities – it has increased the retirement age for OAS to 67, the EI program is currently running a surplus, the decade-long 6% escalation in the Canada Health Transfer will henceforth grow in line with a three year average of nominal GDP growth (subject to a 3% minimum), equalization is constrained to grow in line with nominal GDP, and so on. In other words, the federal government has been able, in varying degrees, to "close" the open-ended nature of many of its transfer and expenditure programs.

By way of recapitulating, it is convenient to draw upon earlier work with Tyler Meredith (Courchene and Meredith, 2012) that in turn draws on analysis by the former Parliamentary Budget Officer, Kevin Page (2012) relating to the implications of the reduction in the CHT escalator from 6% to the three-year average rate of growth of GDP (with a 3% minimum):

In general terms, over the longer time horizon the PBO forecasts a falling net-debt-to-GDP ratio for the federal government (and eventually a positive net asset position) whereas the all-province ratio will rise dramatically and unsustainably. In more detail, Page notes that over the longer term "provincial-territorial governments would need to raise revenue, reduce program spending or some combination of both (by \$49 billion in 2011-12 and increasing over time on line with nominal GDP) to achieve fiscal sustainability" whereas "the federal government could reduce revenue, increase program spending or some combination of both (by \$7 billion in 2011-12 and increasing over time in line with nominal GDP) while maintaining fiscal sustainability." (Courchene and Meredith, 2012, 26)

This juxtaposition of the provinces wrestling with rapidly expanding open-ended programs on the one hand and of the federal government not only strategically

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decreasing the demands on its consolidated revenue fund from potentially openended federal programs on the other hand is ample evidence of the failure of the federal-provincial surplus-recycling mechanism. In the words of the subtitle of this section the time has come to rethink the division of money and power in the federation.

The two polar solutions are clear: i) the federal government transfers more money to the provinces and/or ii) the provinces transfer some powers to the federal government. They are dealt with in turn. However, there is an obvious further option, namely having the beneficiaries of the provincial programs play a larger role in the funding of social spending. While the rapid rise in tuition fees for post-secondary education is a case in point, it runs against the information-era reality that human capital is essential to our collective economic future. The essay will conclude with a proposal for a version of user fees/co-payments for medical services, i.e., user fees that focus more on consumption and less on investment than is the case with the recent rapid escalation in tuition fees.

Transferring Money/Taxes Downward

The federal government would presumably view the recent reduction in the GST from 7% to 5% as a tax transfer to the provinces (albeit with no requirement that the provinces actually incorporate the two percentage points in their own sales tax regimes). However, I would argue that a better approach would have been to maintain the GST intact, but then to devolve the proceeds of the two GST percentage points to the provinces on a revenue-tested basis (as outlined above). This would not only begin to redress the faltering federal-provincial surplus-recycling mechanism but it would also and relatedly ensure that overall fiscal capacity levels across provinces would become more equitable. Students of fiscal federalism will recognize that this as a small-scale version of Australia's Commonwealth Grants Commission's approach to equalization. Given the federal government's continuing relative fiscal superiority, it should give serious consideration to a further cut in the GST by one percentage point allocated to the provinces on a revenue-tested basis.

Transferring Powers Upward

The opposite approach to federal-provincial surplus would be for the provinces to pass some of their open-ended expenditure responsibilities upward to the federal government. This is hardly a far-fetched alternative since the provinces, in their 2004 inaugural meeting of the Council of the Federation, voted unanimously to transfer the responsibility for pharmacare to the federal government. An integral component of the proposal was that Quebec would maintain its control over pharmacare replete with equivalent federal compensation.¹⁷ In the event, the federal government declined to accept the responsibility, among other reasons one presumes because the federal government had no intention of being saddled with an expanding and open-ended expenditure – that's the provinces' role!

However, if the offer is still on the table, the federal government might well reconsider. To be sure, there would need to be some agreement on the details of how to allocate responsibility for in-hospital drugs (which might remain with the provinces) and out-of-hospital drugs (which obviously would be the federal government's responsibility). On the positive side, the federal government holds the constitutional power over drug patents and generics so that a transfer of responsibility would mean that the federal government would now have to live with its own decisions on patents/generics. Beyond this, the federal government may have the capacity to mount some version of a national pharmacare plan, an initiative that would extend our public health coverage in the direction of European systems.

2 A GUARANTEED ANNUAL INCOME (GAI)

Canadian workers are migrating more frequently to where the jobs are. When they become unemployed in their new employment areas, they often return to their home provinces. For illustrative purposes only, assume that Saskatchewan is one's province for work and, say, New Brunswick is his/her province for welfare: Saskatchewan gets the taxes from work and New Brunswick bears the welfare costs of unemployment. This seems to be an inappropriate distribution of costs and benefits. Increasingly, events well beyond the control of the provinces are determining their economic fortunes, so that bearing the costs of citizen economic adjustment should not be the sole responsibility of the provinces.

Elsewhere (Policy Options, September, 2009) John Allan and I recommended that the federal government take over aspects the responsibility of the income-support component of welfare (but not the welfare services components). The context for this recommendation is that we now have a GAI (quaranteed annual income) for seniors, namely OAS/GIS, and an effective income support program for children in the form of the Canada Child Tax Benefit (again income-tested). Both of these are federally funded. All that is missing in terms of an overall GAI is some version of an income-tested GAI for adults. We addressed this issue in the context of a needed reform of the EI program so that one part of the funding could come from EI savings arising from making the entry and benefit structure identical across the country and moving both in the direction of insurance principles, i.e., ensuring that the short-term labour force attachment does not lead to long-term EI benefits. A second funding tranche could come from converting the federal personal credits under the personal income tax into refundable tax credits. Further tranches could come from the CST and/or the federal government's consolidated revenue fund.

A powerful and persuasive recent argument for a GAI (entitled *Scrapping* Welfare: The Case for Guaranteeing all Canadians an Income Above the Poverty Line) comes from the pen of Senator Hugh Segal (2012). Drawing on research by University of Manitoba's Evelyn Forget (2012) based on the MINCOME experiment in Manitoba (a version of a GAI) Segal notes (page 9):

[Evelyn Forget] found that while MINCOME was administered, hospital visits including work-related injuries, domestic abuse and mental health visits dropped by about 8.5%. By her calculations, an 8.5% drop in hospital visits alone would save taxpayers \$4 billion annually. If this were extrapolated to all healthcare spending (\$200 billion), the savings could amount to over \$17 billion. As well, Forget found that teenagers stayed in school and education enrolment surged. Young people no longer dropped out in order to contribute to the family finances.

Senator Segal concludes his article as follows (p.10):

In a mixed free market Canadian economy where enterprise, risk, diligence and hard work matter, equality of opportunity is essential if fairness about access to the economic mainstream is to be real for all. A guaranteed annual income would be a serious pillar of that opportunity, as important to us as

■ INCOME CONTINGENT REPAYMENT SYSTEMS FOR **5** FINANCING POST-SECONDARY EDUCATION

A final, but hardly exhaustive, candidate for uploading to the federal government is the financing of post-secondary education, and in particular a federal incomecontingent-repayment system for financing students' post-secondary education. Not only is human capital an increasingly important aspect of capital deepening in the information era but post-secondary education is one of the major provincial expenditure areas that is getting squeezed by the above noted open-ended and influential-political-constituency programs. Moreover, a federal governmentdriven loan program would enhance cross-province student mobility in terms of selecting a post-secondary institution. There are models in other countries that could help in the design of such a system. The essential component of such a system is that loan repayments in any period will relate to the student's earnings. Beyond this, some versions only require the repayment of actual loans and not the associated interest or, alternatively, embrace below-market rates of interest. Others have a maximum contribution length after which any remaining loan is forgiven.

An important issue here is that an income-contingent repayment system often tends to be viewed as a social policy measure when, progressively, it needs to be viewed as a human capital investment measure. More generally, society is far behind in terms of recognizing that human capital investment is as important as physical capital investment in driving our economic future and, relatedly, that the discourse associated with the former has to shift from a social-policy/subsidy rhetoric to an economic-policy/investment rhetoric.

Toward a Modest Privatization of the Funding for Health Care

To this point in the analysis of ameliorating the relative provincial fiscal shortfall, emphasis has been placed on either the provinces transferring powers upward or on the federal government transferring revenues downward. There is of course another adjustment avenue, namely having the provinces put their own fiscal houses in order. There are myriad of avenues that could be pursued, but the focus here will be directed only to one approach that is fully consistent with the thrust of foregoing analysis. Specifically, rather than dramatically raising tuition fees and thereby privatizing the cost of investment in human capital, why not move in the

direction of taxing the *consumption* of health care. While the range of alternatives is manifold - private insurance, parallel medicare systems, co-payments, medicare saving accounts and so on -- my long-standing favourite is a delayed user fee that is reconciled via the personal income tax system, and not at the time of treatment. This approach can embody both an incentive to remain healthy and the ability-topay principle. Drawing largely from an Ontario Economic Council position paper (1976), I summarized such a proposal as follows (Courchene, 1987):

... it would be quite feasible, with some adjustments to our current administrative and information system, to establish a given family's use of the health care system, as well as a dollar measure of the benefits received. These benefits, subject to a possible exemption and catastrophic limits, could be subjected to a form of income taxation. The whole process would be integrated with the income tax returns process in a manner such that the following conditions held:

- a) taxation and hence financing of health care would be related to the use and benefits received;
- b) the poor would avoid paying because taxation (of health benefits) can be geared to income, exemptions and other ability-to-pay criteria:
- c) ceilings would exist on the amount of taxation, thus building (income-related) catastrophic insurance features onto the system;
- d) averaging provisions would exist to permit a smoothing out of tax payments; and so on.

Of course, whether such a system is desirable must be judged in terms of a number of factors including ease and cost of administration and how well it permits the achievement of the social and economic objectives of [provincial] health policies.

A similar version could be applied to pharmaceutical expenditures, especially since in varying degrees such schemes currently exist for the elderly.

Summary

The underlying message in this section is that the provinces are facing progressively insatiable demands for greater spending in those areas that are not only demand-driven but as well have powerful political constituencies – medical practitioners, hospitals, and pharmacare among others. While those delivering the health services typically embody high-level human capital and embrace state-of-the-art technology, the reality is that the services themselves tend, with obvious exceptions, to be relatively consumption-oriented. Under the pressures of an aging population these expenditures will be, and already are, crowding out provincial spending in areas that are relatively more investment-related such as human-capital development and research, i.e., areas essential for success in the information era.

One way to rephrase this issue is to recognize that in the information arena some areas that fall under provincial jurisdiction are now in the national interest. This being the case, the federal government needs to be ready to upload aspects of these provincial-jurisdiction/national-interest areas and/or to work with the provinces to ensure that our economic future is not placed in jeopardy because the provinces have ended up with a larger share of overall federal-provincial expenditures in relation to their share of overall revenues. Intriguingly, this need not be a recipe for a division-of-powers tug of war because i) the provinces themselves may be desirous of uploading the program at issue (e.g., pharmacare) or ii) the area in question can be delivered via instruments under existing federal jurisdiction (e.g., a GAI or a devolution the GST percentage points to the provinces). In other areas, however, a pan-provincial proposal may be required, as is likely to be the case with a federal income-contingent-repayment initiative for financing students' post-secondary studies.

Conclusion

The conclusion of this essay is as straightforward as it is important. If effective surplus-recycling systems are essential to the stability and resilience of macroeconomic systems (including federations), as I believe they are, then the reality that Canada's surplus-recycling systems as they relate to interprovincial and federal-provincial fiscal imbalance are far from effective ought to be of major concern to our political leaders and to the Canadian policy community. In this context, the role of the above analysis was i) to present and to assess a range of options for rethinking and reworking two aspects of the existing horizontal imbalances (namely the imbalances among the equalization receiving provinces on the one hand and the imbalances between these provinces and the resourcerich provinces on the other) and ii) to address the emerging federal-provincial fiscal imbalance that is threatening to compromise our ability to compete in a progressively human-capital world. To date, these emerging imbalances need more attention than they have been receiving.

Endnotes

1 For fiscal year 2012-13 Alberta receives somewhat less than the \$1,200 per capita for the CHT/CST transfers, but will be brought up to the level of the other provinces from 2014-15 onward.

2 While the federal government has thus far not acted on this concern, as partial protection it did agree to introduce a TTP (Total Transfer Protection) program that ensures that a province's current federal transfers (CHT/CST, equalization and the prior year's TTP) are no lower than those in the prior year. The moneys associated with TTP are not factored into Table 1.

3 While Ontario as a province benefits from the equalization program, overall (i.e., Ontario plus Ontarians) it is not a net beneficiary since while the province receives 21% of total equalization (as noted earlier in the context of Table 1) Ontario's residents contribute roughly their population share (near 40%) to the financing of the program via their contributions to the federal government's consolidated revenue fund from which Equalization payments are financed. This will feature prominently in later sections of this paper.

4 This goes beyond the obvious reality that rich-provinces benefit because each provincial tax point raises more per capita revenues in rich provinces than in poor provinces, and especially so with a cap on equalization. In particular, there is a larger issue at play here. Before the advent of Quebec's personal income tax (PIT) in the mid 1950s, the provinces had no meaningful revenue-raising system. Therefore if they wanted a new program that was in provincial jurisdiction they had to ask the federal government to implement it for them – hence the early postwar amendments transferring responsibility for UI/EI and old age pensions to the federal government. However, the Quebec PIT and the associated equalized taxpoint transfers to the provinces provided the needed provincial revenue-raising systems with the result that, thanks to further federal PIT tax-point transfers, medicare, hospitals and post secondary education remained within provincial jurisdiction. And because the early versions of the equalization standard brought the poor provinces up the level of the average of the top two provinces they were more than willing to support tax decentralization. Moreover, as the later discussion of rows 8 and 9 of Table 1 will indicate, the benefits to the traditional equalization receiving provinces are much larger than meets the eye.

5 In an earlier paper (Courchene, 2010), I used an index of average weekly wages to deflate the 2010 equivalent of row 7 and British Columbia joined Ontario as the two most fiscally deprived provinces.

6 An obvious response to these data would be that one ought to take fiscal need into account. Thankfully Gusen (2012a, 2012b) has produced the most sophisticated estimates to date of a fiscal needs or "expenditure needs" approach to equalization. This approach takes prices/costs as well as physical needs (e.g., percent elderly) into account in calculating equalization. His results indicate that Ontario would qualify for the largest expenditure-needs equalization entitlement, accounting for about one-third of total expenditure-needs entitlements compared with just over one-fifth of 2012-13 actual equalization, as already noted.

7 Why is it then that Alberta, with its near \$14,000 per capita fiscal capacity, is currently running a substantial deficit? Apart from the sharp reduction in its expected energy revenues, three other reasons exist. The first is the lag in the equalization formula – a three-year average lagged two years. Thus, for fiscal year 2012-13 this means that the data entering the equalization formula are as follows --50% of the 2010-11 data, 25% of the 2009-10 data and 25% of the 2008-09 data. Hence, the high oil price of 2008 (including the spike to the \$150 per barrel) has a 25% weight in the Table 1 results. In this volatile world environment the equalization authorities should surely take steps to ensure that the formula embodies more up-to-date data. The second reason is that the data that do enter the formula relate to a province's fiscal capacity and not to its actual fiscal revenues. If a province opts not to tax one of its revenue sources, it still will be assigned its relevant fiscal capacity. This is especially relevant for Alberta – it obviously has a fiscal capacity for generating sales tax revenues, but it chooses not to levy such a tax. Thus the fiscal capacity data for Alberta in row 1 include what it could raise, not what it did raise from a provincial sales tax levied at national-average tax rates. Currently, the value of the sales tax entry (and, therefore the actual value of the foregone revenue) for Alberta is reported to be in the neighbourhood of \$5-to-\$6 billion. The third reason has already been alluded to, namely that Alberta has been moving in the direction of becoming both a tax haven (e.g., it has no provincial sales tax, as just noted, and it has the lowest or nearly the lowest personal income tax) and a provider of superior public goods. In terms of the latter, the Fraser Institute's Mark Milke points out that Alberta has some of the highest per capita program spending of any of the provinces, including paying its teachers 20% more than in other provinces (cited in Gerson (2012).

8 CERI estimates are sourced from the Government of Alberta web entry: http:// oilsands.alberta.ca/economicinvestment.html

9 A more comprehensive approach to the surplus-recycling challenge of an energy driven industrial strategy would embrace the demands/rights of the First Nations.

10 An anonymous referee pointed out that that the costs of a zero CIT in Alberta (or anywhere) might be very much higher to other provinces. This is so because firms can organize their corporate structures so as to shift profits to low-tax jurisdictions without changing where production takes place or even where head offices are located. While this might reduce the degree of head-office transfers it generates additional challenges.

11 This could take the form of a federally determined minimum overall (federal plus provincial) corporate tax rate, with allowable provincial abatements up to some maximum for provincial CITs. Provinces setting their provincial CITs below the abatement maximum would have higher federal CIT rates. (This is why a provincial CIT rate below the abatement level is unlikely.) Note that this in not in the way of a recommendation but rather is intended to provide an example of how the federal government could countervail a move by a province to reduce its CIT rate to zero.

12 As noted in the introduction to this paper, the US manufacturing has also been harmed by something akin to the Dutch Disease. The trigger for offshoring to China was the desire to take advantage of the cheap but efficient Chinese labour force. However, because the Chinese sterilized the inflow of dollars, the US dollar remained overvalued relative to the yuan and the downward manufacturing spiral continued. The recent shift toward "re-shoring" back to the US owes more to the dramatic rise in Chinese wages than to any appreciation of the yuan.

13 Much of what follows has its roots in the existing Canadian policy literature. The most recent contributions would include Boadway, Coulombe and Tremblay (2013) and Tremblay (2012).

14 The stewarding of resources for future generations should not be confined only to PSWFs. Some of the expenditures that fall under current consumption (such as education, research, infrastructure or perhaps even paying down provincial debt) also benefit future generations. Nonetheless, the case for PSWFs remains strong and the federal government should encourage provinces to develop them. Indeed, the federal government might consider providing incentives in this direction since PSWFs are also in the national interest.

15 While Ontario is a "have-not" province overall because of the role of energy revenues in the formula, it is actually a "have" province for personal income taxes.

16 To be sure, there are investment components to health-related expenditures and there are consumption components to higher education

17 Note that this corresponds exactly with the essence of s.94 of the Constitution which allows the common law provinces (i.e., all but Quebec) to transfer aspects of "property and civil rights" (which would include pharmacare) to the federal government.

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About the Mowat Centre

The Mowat Centre is an independent public policy research centre located at the School of Public Policy & Governance at the University of Toronto. The Mowat Centre is Ontario's non-partisan, evidence-based voice on public policy. It undertakes collaborative applied policy research, proposes innovative research-driven recommendations, and engages in public dialogue on Canada's most important national issues.

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Thomas J. Courchene was educated at the University of Saskatchewan (Honours BA, 1962) and Princeton University (Ph.D., 1967), with a post-doctoral year at the University of Chicago (1968-9). He is the author or editor of some 60 books and has published some 300 academic papers on a wide range of Canadian public policy issues. From 1992 until his retirement in 2012 Courchene held the Jarislowsky-Deutsch Professorship in Economics and Financial Policy at Queen's. He remains the Senior Scholar at the Institute for Research on Public Policy in Montreal. Thomas J. Courchene was Chair of the Ontario Economic Council from 1982 to 1985, has been a Senior Fellow of the C.D. Howe Institute (1980-99), is a Fellow of the Royal Society of Canada (elected 1981) and is a Past President (1991/92) of the Canadian Economics Association and of the North American Economics and Finance Association (2000-01). He has received Honorary Doctorates of Laws from the University of Western Ontario (1997), the University of Saskatchewan (1999), and the University of Regina (2007). He was inducted as an Officer in the Order of Canada in 1999.

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