TAKING OFF THE SHACKLES:

EQUALIZATION AND THE DEVELOPMENT OF NONRENEWABLE RESOURCES IN ATLANTIC CANADA

KENNETH J. BOESSENKOOL

The AIMS Equalization Papers (PAPER #2)
& The AIMS Oil and Gas Papers (PAPER #1)

Brian Lee Crowley, Series Editor

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Atlantic Institute for Market Studies

Where Tomorrow's Public Policy Begins Today

The Atlantic Institute for Market Studies (AIMS) is an independent, non-partisan, social and economic policy think tank based in Halifax. The Institute was founded by a group of Atlantic Canadians to broaden the debate about the realistic options available to build our economy.

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b) investigating and analysing the full range of options for public and private sector responses to the issues identified and to act as a catalyst for informed debate on those options, with a particular focus on strategies for overcoming Atlantic Canada's economic challenges in terms of regional disparities

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TABLE OF CONTENTS

	Foreword	iv
	About the Author	v
	Executive Summary	vi
Section 1	Introduction	1
Section 2	The Problem	3
Section 3	The Context	6
Section 4	Some Options	12
Section 5	The Way Forward	17
Section 6	The Proposal in Practice	18
Section 7	A Note on the Politics of the Proposal	23
Section 8	Conclusion	24
Appendix A:	The Mechanics of Equalization	25
Appendix B:	Equalization and Nonrenewable Resources: A Look Back	26
Appendix C:	The Proposal's Impact on Provincial Offshore Revenues	30
References		33

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Foreword

At a time when energy prices are high, shortages are emerging in Canada's major US markets, and the Prime Minister has responded favourably to American requests to speed up the development of new energy supplies, the picture is very positive for the newly emerging offshore oil and gas industry in Atlantic Canada. Within a few years, Newfoundland is projected to be producing around 40 percent of Canada's conventional oil, while a natural gas pipeline, possibly the first of several, already connects Nova Scotia with New England.

Yet, as Kenneth J. Boessenkool shows with calm but devastating precision in this paper, Canada's equalization system constitutes an important obstacle to the timely and appropriate development of this resource. The provinces are indispensable partners in the development of "the offshore", and yet the clawback provisions of the equalization system act as a disincentive to equalization-receiving provinces to move from reliance on federal transfers to reliance on "own source" revenues, including the revenues that a rapid flowering of the oil and gas industry could provide.

Mr. Boessenkool not only lays bare the mechanisms that power this disincentive effect, but also shows how a modest reform of equalization could eliminate it altogether, at least with respect to natural resources. The effect would be positive in almost every sense: less well-off provinces would both develop their own economies and reduce their reliance on federal transfers, while the cost to Ottawa, and to taxpayers, of equalization would be reduced. At a time when governments are already preparing the ground for the next five-year renegotiation of equalization, this paper could hardly come at a more propitious moment.

This is also a paper which brings together several themes which AIMS has identified as strategically vital in its efforts to contribute to the quality of debate about public policy in Atlantic Canada. Indeed this paper is the second in its new series on equalization (and it echoes some of the themes adumbrated in the first paper, *Equalization: Milestone or Millstone?* by Roland T. Martin), and the first in our equally new series, *The AIMS Oil and Gas Papers*. We expect to be publishing further contributions by some of Canada's leading authorities on public policy in these vital areas in the coming months.

Brian Lee Crowley, President
Atlantic Institute for Market Studies
Editor of The AIMS Oil and Gas Papers as well as of
The AIMS Equalization Papers

About the Author

Kenneth J. Boessenkool is the President of Sidicus Consulting Ltd., an economic and public policy consulting firm. Ken has published extensively on public policy issues including papers on federal-provincial transfers, provincial welfare, the tax treatment of the family and monetary policy. His opinion pieces have appeared in the Calgary Herald, the Edmonton Journal, the Ottawa Citizen, the National Post and the Globe and Mail. He was formerly a policy advisor to the Provincial Treasurer of Alberta, a policy analyst at the C.D. Howe Institute and an economic policy advisor to an opposition party in Ottawa. Ken currently resides in Airdrie, Alberta, with his wife and three daughters.

Executive Summary

After decades of below-par economic development, the Atlantic provinces currently find themselves in an enviable position. The development of natural resources — primarily oil and gas but also other minerals — is creating an environment in which economic growth in the region could well outstrip that of the rest of the country.

Unfortunately, things are not that simple.

Unlike Alberta when oil was discovered there, the Atlantic provinces are seeing little of the reward from developing nonrenewable natural resources. The reason is that the equalization program can strip up to 100 percent of any new provincial revenues from natural resources. Thus, the perverse incentives of the program shackle economic policy in the Atlantic provinces.

These shackles must be removed. Ottawa's response has been to let the Atlantic provinces keep 30 percent of revenues from offshore nonrenewable resources. But more is needed. A much better approach would be to remove all nonrenewable resource revenues from the equalization formula.

The reasons for doing so are at least three. First and most important, this change would eliminate the taxback on nonrenewable resource revenues. Second, including these revenues within equalization makes little economic sense. They are not annual income; they are the transfer of a stock of wealth from one form to another, generating no increase in wealth. Further, the economic activity that follows the exploitation of natural resources is a sure-fire way to drive up other prices, such as wages and housing prices, which are already captured in the equalization formula. Removing nonrenewable natural resources from equalization would end this double counting.

This change would provide the Atlantic provinces with the incentive to rely on natural resources development as a centrepiece of their economic strategy in place of pleading for larger transfers from equalization. Gone would be the days when an Atlantic province might forfeit a nickel mine, a gas development, or an oil deposit because the revenues would only be taxed back by the equalization program.
Removing nonrenewable natural resources from the equalization formula would require the Atlantic provinces to accept small decreases in their current equalization entitlements — smaller than the recent increases in equalization payments and nothing that a modest transition mechanism could not fix — but leave the region much stronger in the long run.

Taking off the shackles would make Atlantic Canadians the big winners as provincial policy in the region shifted away from dependence on Ottawa toward greater self-reliance. Indeed, the interregional economic gap would shrink, and all Canadians would benefit.

SECTION 1
INTRODUCTION

The shackles on payments from the federal equalization program are discouraging the recipient provinces from moving toward greater self-sufficiency.

That statement may seem a logical contradiction at first glance. The program exists to provide the less wealthy provinces with funds to bring their revenues up to a standard, or common level. In fiscal 1999/2000, payments totalling $10.9 billion went to seven "have-not" provinces (all the provinces except British Columbia, Alberta and Ontario). Surely the very existence of the program and the amounts of money involved demonstrate Canadians' willingness to share across provincial boundaries. Yet equalization payments can work against provinces' economic best interests. The reason is that the formula for determining those payments punishes the recipients for responsible development of their nonrenewable resources: any increase in revenue from those resources is taxed back from a province's equalization entitlement by as much as 100 percent.[1] As a result, recipient provinces have little incentive to reduce their reliance on equalization in favour of developing provincial resources.

At a time when fiscal policy is moving away from penal taxation and high marginal tax rates (not to mention the reduction of welfare traps), such treatment of natural resources is peculiar. This paper seeks ways to eliminate the anomaly and move the equalization program away from the equivalent of high marginal tax rates on provincial revenues and from the incentive trap that this treatment produces for recipient provinces. These problems are particularly acute for the Atlantic provinces, which could, with the right incentives and development, depend less on federal transfers and more on revenues from burgeoning natural resource industries.

Before taking a look at some reform options, I elaborate on the problems of natural resources within equalization and summarize the constitutionality and economics of the resource question. I then proceed to evaluate the status quo and four reform options. In particular, I consider Courchene's (1994) provincial negative income tax, Boothe's (1998) macro formula, Courchene and Copplestone's (1980) two-tier scheme, and my own proposal to eliminate nonrenewable resources from the equalization formula.

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[1] Literally speaking, *taxed back* is an incorrect phrase in this context. Ottawa cannot and does not "tax" the provinces on any revenue they receive, even from a federal program. But the equalization formula and provincial programs may interact in a way so much resembling a tax that many commentators find convenience in terms such as *taxback* (or *clawback*) and *marginal tax rate* for the rate at which transfer dollars are lost when federal programs and provincial programs influence each other. Herein, I follow this frequent usage.

I conclude that the economic arguments persuasively suggest that nonrenewable resource revenues have no place in the equalization program. This conclusion stems from the nature of these revenues. They are more like proceeds from the sale of a capital asset than they are like annual revenues, and hence only a small portion of them should be equalized. Further, the fact that the rents from natural resource extraction are capitalized in other prices, such as housing and wages, that are captured in the equalization formula, means that excluding those rents from the formula would make sense from an economic point of view.

Removing nonrenewable resources from the equalization formula would protect the federal treasury from swings in equalization forced by swings in the prices of those resources, particularly oil and gas. It would align the program with economic imperatives. Most important, it would remove the shackles that are retarding development of nonrenewable resources in recipient provinces. In short, it would allow provincial governments and their populations to reap the full rewards from making nonrenewable resources a key source of provincial economic development.

The final sections of the paper lay out the mechanics of my proposal, deal with the transitional issues, and offer some reflections on the politics involved. A conclusion summarizes the benefits of the proposal.

SECTION 2
THE PROBLEM

The equalization program makes payments to the provinces whose measured ability to raise revenues (their *fiscal capacity)* is less than a standardized ability to raise revenues. The formula measures the per capita fiscal capacity of each province on the basis of each of 33 different revenue sources. It then takes the difference between that fiscal capacity and the capacity as measured by the average of five provinces (Alberta and the four Atlantic provinces are excluded).

Ottawa sums these differences to come up with a per capita entitlement for each province. Provinces whose total measured fiscal capacity (the pluses and minuses across the 33 different tax bases) is above the five-province standard receive nothing, and provinces below the standard receive a per capita payment. In 1999/2000, these calculations produced a maximum payment of $2,120 per person in Newfoundland and a low of $397 per person in Saskatchewan. Equalization makes up a fifth to a quarter of provincial revenues in Atlantic Canada, while three provinces (British Columbia, Alberta and Ontario) receive no equalization payments at all. (Appendix A provides a more technical description of equalization's workings.)

Of the 33 revenue bases used in the equalization formula, 11 are directly related to nonrenewable resources and 10 of them to oil and gas ("new oil," "old oil," "heavy oil," "mined oil," "third-tier oil," "heavy third-tier oil," and, just in case something was missed, "other oil," as well as two categories of "offshore" oil and gas, and "natural gas"). The 11th category is "other mineral resource revenues."
The formula's treatment of natural resources, particularly oil and gas, poses two problems: one from Ottawa's viewpoint and the other from the provinces'.

The View from Ottawa

In a seminal book, *Social Canada in the Millennium*, Courchene notes that Ottawa's approach to nonrenewable resources has been to "downplay the role of resource revenues in the equalization formula" (1994, 302). The federal government has done so because volatile oil and gas prices have produced large swings in the cost of the equalization program.

A look through the history of equalization from 1957 through the 1980s demonstrates that to escape the implications of rising oil prices for the total cost of the program, Ottawa made many changes — from fully equalizing natural resources across all provinces to excluding them from the formula altogether (see Appendix B).

During the early 1970s, for example, Alberta was part of the equalization standard. Large increases in the price of oil, mostly located in Alberta, raised equalization entitlements significantly. Even Ontario, the country's second richest province, fell below the standard; it would have become eligible for payments for the first time had Ottawa not changed the standard. Without the removal of Alberta from the standard, the cost of the program would have exceeded the federal government's ability to finance it.

Today, with oil prices testing historic highs, the estimates of adding Alberta to the equalization standard in 2000/01 are pegged at $3 billion to $4 billion, an increase of a third of the present cost of the program.

Shifts in natural resource prices have another perverse impact on the workings of equalization. Even if it is Alberta's oil and gas revenues that are raising entitlements, it is Ontario that bears the brunt of the higher costs because, as the largest province, it contributes the most to Ottawa's general revenues (out of which equalization is funded).

In summary, the problem with natural resources from Ottawa's point of view is that swings in the prices of these resources, particularly oil and gas, produce commensurate swings in the cost of the program.

The View from the Recipient Provinces

At the core of the problem from the recipients' point of view is the concept of *taxback*. When developers discover and exploit nonrenewable resources in a province that receives equalization payments and the government of that province taxes the proceeds, these revenue increases are taxed back via a reduction in equalization payments. Recipient provinces therefore face a perverse incentive to prefer continued reliance on equalization revenues over the greater self-sufficiency that would come from the full development of their nonrenewable resources.

Equalization taxes back rising provincial own-source revenues in two ways: changes in the provincial tax base, and changes in the provincial tax rate.[2]

The base taxback occurs whenever the value of a province's base increases. If corporate income rises in Newfoundland, its equalization entitlement falls because its capacity to raise corporate income tax (CIT) has increased. How much equalization falls depends on the tax rate on corporate income. If the provincial tax rate equals the national average rate, then its equalization payment falls by the amount by which its provincial revenues rise (a 100 percent taxback). If the provincial tax rate is half of the national average rate, the taxback is 200 percent, and if the provincial rate is double the national average rate, the taxback is 50 percent.[3]

[2] I thank the federal Department of Finance for a clear explanation of these effects.

[3] Notice that the incentives here are perverse in themselves. They encourage provinces to set their tax rates above the national average rate, even if there are other reasons not to do so.

The rate taxback is less straightforward. Equalization entitlements in all but a few instances do not move much in response to changes in provincial tax rates. If a tax base is available to all or most provinces, then the use of a national average tax rate means that changes in a particular province's rate has a small impact on the amount of equalization it receives.

Those "few instances" are critical, however. Changes in provincial tax rates can have a large impact on equalization entitlements if a province has a substantial portion of the country's *total* base for that revenue source. In the extreme, if a recipient province has 100 percent of a particular base, changes to its tax rate result in a one-for-one change in the national average tax rate, and every dollar that the province raises in revenue is taxed back dollar for dollar by the equalization formula.

For example, offshore nonrenewable resources, available for provincial taxation, were discovered in Nova Scotia and Newfoundland in the 1980s. As a result of the unique nature of these revenue sources, two new revenue categories (one for Nova Scotia offshore resources and one for Newfoundland offshore resources) were introduced into the equalization formula.

The creation of these tax bases in the equalization formula meant that rate changes in the taxes these provinces levied on revenue from offshore resources would directly affect their revenue capacity. If Nova Scotia levied a $1 per barrel tax, its fiscal capacity measure would be $1 per barrel, and its equalization entitlement would be reduced by $1 for each barrel extracted. If it chose to levy a $2 per barrel tax, its entitlement would be lowered by $2 for every barrel extracted. (These taxbacks were lowered to less than 100 percent by the "generic solution" of 1993 and the earlier bilateral accords both discussed below.)

Clearly, recipient provinces face little incentive to levy taxes on their nonrenewable resources when the equalization formula effectively taxes back all or much of the gains. In fact, these circumstances give provinces an incentive to rely on federal equalization, rather than revenue from nonrenewable resources. The result is that provinces become shackled to equalization revenues, rather than moving toward greater independence through the development of lucrative natural resources.

SECTION 3: THE CONTEXT

Any treatment of natural resources within the equalization formula must satisfy two criteria. First, it must protect the total cost of the program from the price swings of natural resources, particularly oil and gas. Second, it must minimize the incentives of recipient provinces to rely on equalization payments over revenues from natural resources, primarily by reducing or eliminating the taxback on those revenues.

I turn now to the broad question of the principles and guidelines for the treatment of nonrenewable resource revenues within equalization. I begin with a brief look at the Constitution, asking what basis it provides for equalizing them. I then turn to the economics of that equalization.

The Constitutional Dilemma

The Canadian Constitution arguably speaks with a forked tongue on the subject of nonrenewable resources within equalization. Section 36, which contains the equalization clause, supports their inclusion in the formula, while Sections 92 and 125, which reference the ownership of nonrenewable resources, argue against their inclusion. Further muddling the case is the fact that most of the resource development in question — oil and gas off the shores of Nova Scotia and Newfoundland — is not easily classified as a *provincial* natural resource.

The Equalization Clause

The Canadian Constitution contains an explicit paragraph on equalization, Section 36(2). It requires the federal government to redistribute enough revenue so that all provinces can offer "reasonably comparable" services at "reasonably comparable" levels of taxation.

The presence of nonrenewable resources within a province — in particular, the ability to collect royalties from those resources — means that it can provide services at a lower level of taxation than other provinces. Alberta, for example, has oil and gas revenues exceeding those available to other provinces. This endowment allows it to provide services to its population by taxing other sources of revenue at a comparatively lower rate than other provinces and relying on revenues from the nonrenewable resources to make up the difference. Since the equalization clause requires that comparable services be provided at comparable levels of taxation, the presence of these nonrenewable resources in Alberta should be taken into account in calculating equalization entitlements for provinces without a similar endowment. On this view, equalization revenues should flow to provinces without resource endowments so that they

can provide reasonably comparable services at tax rates on nonresource-based revenue sources that are comparable to the tax rates on those sources in endowed provinces (see Usher 1995, esp. 67ff).

Provincial Ownership of Nonrenewable Resources

Other sections of the Constitution put the ownership of, and legislative power over, nonrenewable resources exclusively with the provinces. Section 92A, in particular, restricts the right to make laws regarding nonrenewable resources to the provinces.[4] Clause 4 of the same section grants to the provinces the power of direct taxation of natural resources to the provinces.[5] Section 125 strengthens this provision by stipulating that lands belonging to a province (which include nonrenewable resources) are not to be taxed.[6]

The Constitution, Usher concludes (1995, 75-76) gives the provinces ownership of the tree (Section 92A(1)) as well as entitlement to its fruit (Sections 92A(4) and 125). Ottawa therefore has questionable jurisdiction over redistributing these resources across the country through equalization.

Thus, the Constitution appears to contradict itself on the issue of nonrenewable resources. The equalization clause favours the redistribution of revenue from them, while the exclusive right to their ownership and taxation argues against such redistribution.

Offshore Oil and Gas

Further confusing matters is the fact that the current pressure to reform the equalization program's treatment of natural resources is largely the result of the discovery of offshore oil and gas off the coasts of Newfoundland and Nova Scotia. There is a broad legal consensus that these offshore resources do

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[4] *In each province, the legislature may exclusively make laws in relation to*

> *(a) exploration for non-renewable resources in the province;*
>
> *(b) development, conservation and management of non-renewable resources and forestry resources in the province, including laws in relation to the rate of primary production therefrom.*

The older Section 109 says much the same thing:

> *All Lands, Mines, Minerals, and Royalties belonging to the several Provinces of Canada, Nova Scotia, and New Brunswick at the Union, and all Sums then due or payable for such Lands, Mines, Minerals, or Royalties, shall belong to the several Provinces of Ontario, Quebec, Nova Scotia, and New Brunswick in which the same are situate or arise, subject to any Trusts existing in respect thereof, and to any Interest other than that of the Province in the same.*

[5] Specifically, it states:

In each province, the legislature may make laws in relation to the raising of money by any mode or system of taxation in respect of

> *(a) nonrenewable resources and forestry resources in the province and the primary production therefrom.*

A number of reviewers point out that the taxation of gas and diesel is an obvious counterpoint to this argument; however, these products are refined and not strictly natural resources in their own right. Ottawa does not directly levy royalties on nonrenewable resources as such.

[6] The section says

> *No lands or property belonging to Canada or any Province shall be liable to Taxation.*

not belong to the coastal provinces but to Ottawa. Despite this legal interpretation, the federal government has granted these provinces de facto rights over these resources by allowing Newfoundland and Nova Scotia to tax them and by including them in the equalization formula. Ottawa calls these items *shared revenues* to indicate its legal ownership.

Recent discoveries, though potentially good news for the other Atlantic provinces and Quebec, may further confuse the situation. Experts now widely recognize that the entire St. Lawrence basin has major hydrocarbon deposits that will likely affect New Brunswick, Prince Edward Island, and Quebec, perhaps in unexpected ways. Exploration is already ongoing in much of the offshore area and even onshore in New Brunswick. And the promise of new finds is not restricted to oil and gas; the nickel in Voisey's Bay, Newfoundland, is a huge deposit awaiting development. Yet overall, the Constitution does not provide clear guidance on how to treat nonrenewable resource revenues.

The Economic Case

Fortunately, the economic case is clearer. The argument is in two strands. The first is that nonrenewable resource revenues are incorrectly thought of as income. Rather, they should be treated as capital assets. Second, as a result of the capitalization of resource rents in things such as wages and other prices, the benefits of nonrenewable resource endowments would be accounted for in any equalization formula even if it did not specifically include these resources.

Royalties as a Capital Asset

Resource revenues differ from revenues from other sources inasmuch as the underlying tax base is nonrenewable. Royalties from nonrenewable resources are not properly revenues. They are the transfer of a stock of wealth from one form to another, without generation of any increase in wealth. In accounting terms, one can think of income and sales taxes as streams of income for the taxing jurisdiction, while the exploitation of nonrenewable resources is more appropriately thought of as the sale of a capital asset.

This argument holds only for *nonrenewable* resources. If a resource is renewable, its exploitation is less clearly treated as a sale of a capital asset. Consider the difference between oil or gas extraction and forestry. The former resources are nonrenewable — their extraction today means they cannot be extracted tomorrow. In contrast, harvest from the forestry today does not preclude harvest sometime down the road if an adequate reforestation program is in place. Within the accounting classification, forestry revenues fall somewhere between annual income and the sale of a nonrenewable resource. In fact, an adequate reforestation program results in annual revenues reflecting the long-term sustainability of that resource.

Treating resource extraction as a sale of a capital asset means that the full amount of revenue derived from that activity should not be included as current provincial revenues. The better argument is for partial inclusion. Further, the closer the resource is to a nonrenewable resource, the smaller the portion that should be included.

Treating nonrenewable resource revenues as sales of capital assets is more than an arcane theoretical construct. The Alberta Heritage Savings Trust fund was at least partly motivated by the desire to spread the proceeds from the sale of oil over a number of generations of Albertans. Accordingly, a portion of the revenue from this sale was set aside so its benefits could be spread over a long period of time. Alaska has done a similar thing with the Alaska Providence Fund, which sets aside portions of royalty revenues out of which state residents are paid an annual stipend (which can be thought of as the resulting stream of revenue).

A similar argument was behind a recently implemented Alberta law requiring 75 percent of all unbudgeted surpluses to be applied to the debt. Since Alberta budgets are based on conservative estimates for the price of oil and gas, unbudgeted surpluses most commonly arise because of an increase in the prices of oil and nonrenewable gas. By law, three-quarters of these surpluses must be used to benefit future generations by paying down Alberta's provincial debt.

Ottawa should not, therefore, view Newfoundland's and Nova Scotia's revenues resulting from the discovery and exploitation of oil and gas as current income for these provinces but as the proceeds from sale of a capital asset whose benefits should be spread over a much longer period of time — say, 25 or 50 years,[7] which implies an appropriate taxback in the order of 2 to 4 percent. Fully taxing back the revenues from these sources effectively strips away a capital asset from the provincial government without giving it the benefit of its use for the long-term benefit of its citizens.[8]

Capitalization

The second strand of the economic argument is that the rents from the extraction of natural resources are effectively capitalized in other prices in the wider economy, a second-order effect that is reflected in growing provincial nonresource revenues, such as income and sales taxes, which reduce equalization entitlements.

This capitalization argument is the primary reason the United States has no equivalent to Canada's equalization program despite wide variations in fiscal capacities across states. The predominant US view is that differences in fiscal capacities across states are capitalized in wages and other prices such as property values (Oates 1972).

According to this argument, differences in fiscal capacity between, say, New York and Mississippi are offset by the higher cost of delivering services in the former. While New York has a richer tax base, it must provide its public services at local costs. On the other hand, although Mississippi has a weaker revenue base, its government enjoys a lower wage and cost environment in which to provide services. If the differences in fiscal capacity are fully capitalized, redistributing money from New York to

[7] Whether oil or gas revenues should be spread over 25 or 50 years (or more — once the resource is gone, it is gone) is obviously a value judgement.

[8] I obviously take the view that the de facto treatment of natural resources outweighs the legal consensus on ownership.

Mississippi would distort the economic adjustment process and be inefficient. Oates concludes, therefore, that equalization is a matter of taste rather than of principle.[9]

Canadians may not wish to go as far as the US model in assuming full capitalization (the equalization clause in our Constitution suggests that we do not). The case for capitalization of nonrenewable resource rents is stronger, however, than the case for complete capitalization of fiscal capacities across provinces. The discovery of nonrenewable resources within a province is a sure-fire way of boosting consumer prices, wages and property values. And since personal income taxes, property taxes, and sales taxes are part of the equalization program, explicitly including nonrenewable resources is unnecessary. Indeed, doing so amounts to double counting.

This view receives empirical support from the experience in Alberta over the past few decades. Oil prices have been a key driver of both wages and housing prices there. (Although oil prices are much more volatile than either wages or housing prices, any sustained movement in the former has a noticeable impact on the latter in Alberta — see Chart 1). This impact has become gradually muted over the past two decades, as oil has become a much less significant driver of the Alberta economy over that period.[10]

In brief, movements in the prices of other tax bases reflect the additional fiscal capacity that results from the discovery and exploitation of nonrenewable resources. And since these other tax bases are included in the equalization formula, natural resource revenues do not need to be.

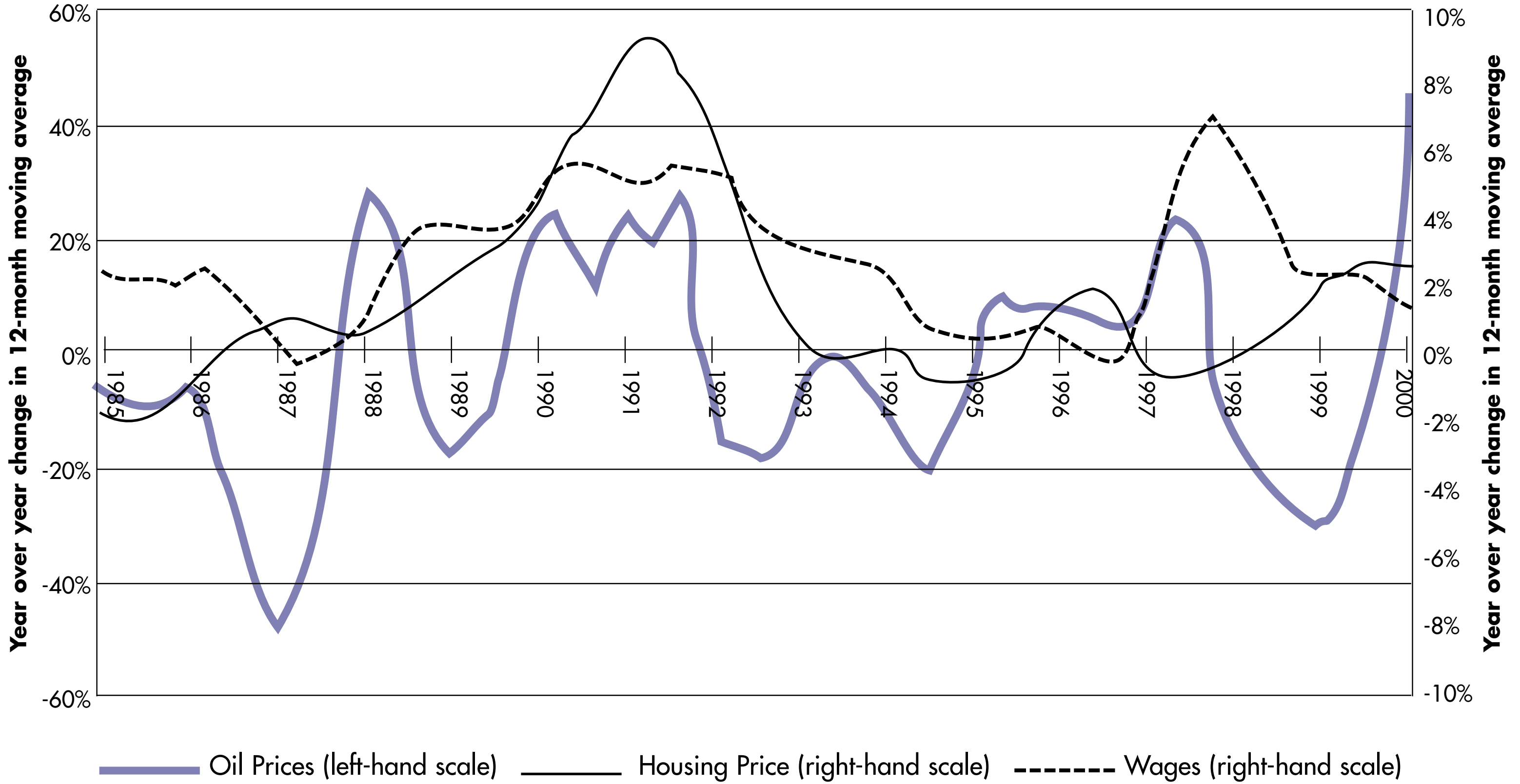
Summary of Economic Case

The first strand of the economic argument says that only a small portion of nonrenewable resource revenues (say, 2 to 4 percent) should be treated as annual revenue. The second strand is that the capitalization of resource rents in other prices, such as wages and housing prices, takes at least partial account of the rents arising from the discovery and exploitation of nonrenewable resources.

When we put these two strands together, we can argue that the small portion of the resource revenues that might legitimately be included in equalization may well be accounted for by the capitalization of resource rents in other prices. An equalization program that excluded nonrenewable resources altogether could, therefore, adequately reflect the additional fiscal capacity that comes from the discovery and exploitation of natural resources.

[9] Courchene provides another example (1994, 108). He points out that the European Union originally contemplated equalizing its member nations up to only 65 percent in the late 1970s and omitted the idea altogether in the 1990s.
[10] For example, in 1985 oil revenues made up 60 percent of all CIT revenues in Alberta; by 2000, this share had dropped to well under 20 percent (Alberta 2000).

Chart 1: Capitalization of Oil Prices in Wages and Housing Price, Alberta, 1985-2000



SECTION 4: SOME OPTIONS

I have argued that three criteria should guide the treatment of natural resources within equalization. First, it should protect Ottawa's bottom line from shifts in the prices of oil and gas. Second, it should minimize the taxback of equalization entitlements provinces face when revenues from natural resources increase. Finally, the portion of natural resource revenue that should be equalized is probably very small, if not zero.

I now evaluate the status quo and three reform options put forward to deal with natural resources within equalization. Some of these proposals, such as Courchene's (1994) provincial negative income tax proposal and Boothe's (1998) macro formula, come from broader reform proposals that also address the nonrenewable resource question while Courchene and Copplestone's (1980) two-tier scheme is designed specifically to deal with the resource question.

The Status Quo

The current equalization program uses a five-province standard and effectively protects the federal government from rapid escalation in equalization costs due to resource revenues, primarily because Alberta is excluded from that standard. Also, Ottawa has capped the total cost of the program at $10 billion annually.[11]

With respect to the incentives facing provinces, Ottawa and two provinces (Nova Scotia and Newfoundland) struck bilateral accords in the 1980s protecting these provinces' equalization payments over a 10-year and 12-year period respectively (see Appendix B for a more complete summary). These accords, which technically operate outside the equalization program, slowly ratchet up the taxback on nonrenewable resource revenues, ensuring that bringing offshore production on stream does not slap a province with a sudden, sharp falloff in equalization payments but also that those payments will eventually drop to reflect the greater streams from nonrenewable resources.

In the early 1990s, other provinces wanted to generalize the treatment of Atlantic offshore revenues for their own revenue bases. As a result, in 1993 Ottawa and the provinces negotiated a *generic solution*, which operates when a province owns at least 70 percent of a tax base: the taxback rate on that revenue source is capped at 70 percent, giving provinces a slightly better incentive to levy appropriate taxes on

[11] Though that ceiling was temporarily lifted for 1999/2000.

those bases. Thus, Nova Scotia and Newfoundland, each with a unique class of potential offshore resources, face a maximum 70 percent taxback of those revenues.

Overall, the status quo gets a passing grade on only one of our three criteria: the five-province formula has been effective in preventing the cost of the program from escalating due to rising oil and gas prices. However, the current program punishes recipient provinces by taxing back 70 percent of offshore petroleum revenues and even higher percentages for other resource revenues. For example, the estimated taxback for revenue from Voisey's Bay nickel is in the 90 percent range, a rate that informed sources blame for Newfoundland's not having encouraged investment in and development of this huge nonrenewable resource deposit in the poorest province in the country.

Another downside of the current treatment is that the five-province standard does not really respect section 36(2) of the Constitution, which implicitly talks about fiscal capacities in all provinces whereas the current formula excludes half the provinces with a fifth of the Canadian population.

Courchene's Provincial Negative Income Tax

In 1994, Courchene proposed that the equalization formula move to a 10-province standard, but that provinces get 70 percent of the difference between their own fiscal capacity and the national average, rather than 100 percent as in the current equalization program. A province with a fiscal capacity of 80 percent of the national average would receive 70 percent of the gap — that is, it would be brought up to 94 percent of the national fiscal capacity. A province with 90 percent of the national average would be brought up to 97 percent of the national fiscal capacity.

The negative income tax proposal would put a 70 percent taxback on any increase in fiscal capacity. Thus, if a province, such as Newfoundland or Nova Scotia, saw its nonrenewable resources developed with spin-off benefits on other parts of its economy (for example, higher personal incomes), that province would see 70 percent of its increase in fiscal capacity taxed back through lower equalization entitlements. This proposal would limit Ottawa's exposure to changing fiscal capacities in the provinces: total payments would only increase by 70 percent of any swings in the underlying tax bases.

Courchene's provincial negative income tax faces difficulties on all three criteria. Including 70 percent of natural resources in a formula that includes Alberta would still produce wide swings in the equalization standard. Moving to a full 10-province standard with full equalization of natural resources would boost the program cost by $3 billion to $4 billion, and the provincial negative income tax would reduce this swing by only a quarter (to $2.25 billion to $3 billion). The taxback would be slightly better than the status quo — moving from taxbacks between 70 and 100 percent to a still-punishing 70 percent taxback. Finally, the proposal still includes too large a portion of natural resources within the equalization formula, given the economic analysis above.

Boothe's Macro Formula

In a C.D. Howe Benefactor's Lecture, Paul Boothe (1998) laid out a self-described "radical proposal for reform" of equalization. While the full scope of the proposal is beyond what is required here, of relevance is Boothe's scheme to redistribute revenues across provinces based on a "macro" formula.[12] Rather than comparing provincial fiscal capacities using the representative tax system, this formula would redistribute money based on differences in a macroeconomic measurement across provinces.

After considering a number of macro variables, including personal income and smoothed gross domestic product (GDP), Boothe opts for a five-year moving average of an adjusted measure of personal income.[13] As he notes, "an important characteristic of [adjusted personal income] is that it does not explicitly include natural resource revenue" and as such is not susceptible to swings in the price or exploitation of nonrenewable resources (1998, 49). Boothe finds that his macro proxy for fiscal capacity would enable the use of an all-province standard.

The macro formula would minimize the impact in recipient provinces of taxing provincial resources since the taxback would occur only when adjusted personal income rose as a consequence. Thus, any taxback would likely operate with a slight lag and not in direct proportion to provincial revenues from nonrenewable resources.

The Boothe macro formula would, therefore, improve the view both from recipient provinces with nonrenewable resource revenues and from Ottawa. The difficulty is that the formula would require a significant departure from the status quo. In order to make his macro formula work, Boothe proposes to transfer significant amounts of tax room to provinces and takes the total net interprovincial redistribution across a number of federal programs.

A macro formula also requires a large degree of arbitrariness. In the specific case, Boothe's formula would equalize up to 32 percent of adjusted personal income. This arbitrary number would be subject to federal gaming in the future as Ottawa would be tempted to use the equalization program to offset the impacts of changes to other programs by moving the target percentage up or down.

[12] Boothe advocates combining the provincial impact of a number of major federal transfers (equalization, the Canada Health and Social Transfer, and the regional components of unemployment insurance). He then proposes increasing the fiscal capacity of all provinces (via a transfer of tax points) up to the amount of the weakest province. The remaining differences in fiscal capacity would then be equalized by the use of an interprovincial revenue-sharing scheme driven by the macro formula described in the text.

[13] He subtracts federal direct taxes, the GST, provincial-local transfers to persons, and changes to farm inventories, all items outside the normal sources of revenue for provinces. He also uses a five-year average to enhance stability.

Courchene and Copplestone's Two-Tier Scheme

Historically, Ottawa has limited resource revenues' influence on equalization either by only partially equalizing these revenues or by eliminating Alberta from the standard. As an alternative, Courchene and Copplestone (1980) propose a two-tier equalization program. The first tier, run by Ottawa, would include all nonresource revenues. The second tier would be an interprovincial revenue-sharing pool meant to equalize provincial resource revenues. Provinces with a relatively large share of per capita nonrenewable resource revenue would contribute a portion of this excess to the pool, while provinces with lower per capita resource revenue would draw out an equivalent portion. The pool would be run by the provinces and would be self-financing.

Provinces would contribute only a portion of any excess over the national average into the pool. Courchene and Copplestone propose that provinces with excess per capita fiscal capacity contribute 20 to 30 percent of that excess into the pool, with deficient provinces collecting the same 20 to 30 percent out of it.[14] (A similar type of equalization exists in Germany, which uses an inter-*Lander* sharing pool to equalize all revenues. Provinces with fiscal capacity above the standard contribute to the pool, while those below draw out of it. The dynamics are quite different, however, as the central government sets the rules for the inter-*Lander* pool.)

Courchene (1994) cites several advantages to this pooling proposal.[15] First, it is a net scheme: surplus provinces would pay directly while deficient provinces collected. A dollar flowing through the scheme would reduce the disparities between provinces more than a dollar flowing through the existing equalization program, for which Ottawa pays with revenues collected from all provinces, including the recipient provinces.

Second, there would be a closer match between a province that triggers an equalization entitlement and the provinces that pay for it. This situation would be quite different from the status quo. Under the existing system, if Alberta was part of the standard, its nonrenewable resource revenues would drive up the standard for all recipients, but most of the money to pay for these entitlements would come from Ontario taxpayers.

Overall, this proposal comes closer than the others to meeting the three criteria. First, Ottawa's books would be completely protected from shifts in oil and gas prices. Second, the taxback on natural resource revenues would be reduced significantly — to 20 or 30 percent. Finally, a portion of those revenues much smaller than at present would be included in the formula, thus respecting the economic case.

[14] With an all-province standard the program could use the same percentage for contributions and withdrawals.

[15] I borrow heavily and liberally from Courchene (1994, 302—303) for the subsequent description of the scheme.

Courchene and Copplestone's scheme would, however, encounter some problems in practice. The biggest impediment to a revenue-sharing pool would likely be its enforcement. All the provinces would have to agree to be governed by such a formula. Whether they would ever concur on their own is difficult to tell, but it is worth noting that the German scheme works well because of the more centralized nature of the country, whose constitution mandates the inter-*Lander* sharing pool. Recipient provinces in Canada might be less willing to put their fates in the hands of contributing provinces. A substantial portion of the money for the pool would come from a single province, Alberta. In addition, given the relative lack of natural resources in Ontario, it would likely become a recipient province — an odd outcome given that it has the highest level of personal income in Canada.

SECTION 5 THE WAY FORWARD

The preceding analysis points to a solution to the treatment of nonrenewable resources within equalization that is both simple and elegant: namely, eliminating these tax bases from the formula. Doing so would vastly simplify the program as 11 of the 33 current tax bases would disappear. Equalization would also end up better aligned with the economic analysis presented earlier.

Protecting Ottawa's Books

Eliminating nonrenewable resources from equalization would protect the program from the wild swings it would experience if nonrenewable resource tax bases were fully equalized using a 10-province standard. It would improve on the existing program, which crudely excludes a large portion of natural resources by omitting Alberta from the equalization standard.

Returning to a 10-Province Standard

Removing nonrenewable resource revenue would also allow the equalization program to reflect all provinces' fiscal capacity, rather than just five provinces' as the current standard does. Because nonrenewable resources in Alberta would no longer produce large swings in the program costs, it could be returned to the standard.[16] So could the Atlantic provinces. A 10-province standard would be truer to the spirit of Section 36 of the Constitution than the five-province standard.

Removing the Shackles

Finally, eliminating nonrenewable resources from the equalization formula would eliminate the shackles of the taxback under which recipient provinces lose up to 100 percent of nonrenewable resource revenue via a reduction in equalization entitlements. Thus, recipient provinces would have greater incentives to develop their nonrenewable resources. The resulting economic benefits of doing so would be reflected in the equalization entitlements only as their economies improved — as reflected in wages and other tax bases. This is as it should be. These provincial governments should not be shackled by the equalization program the minute nonrenewable resource exploitation begins; rather, their equalization entitlements should fall only as the second-order effects of this exploitation produce stronger provincial economies.

[16] Although smaller and more appropriate swings would be captured due to capitalization.

SECTION 6
THE PROPOSAL IN PRACTICE

The proposal outlined above has essentially two elements: moving to a 10-province standard, and eliminating resource tax bases from the formula. Notice that I am discussing removing only *nonrenewable* resource revenues. Forestry revenues, which are from *renewable* resources, would continue in the formula. Putting these changes in place would be manageable, especially if the new program included some transitional measures and all parties kept some political facts in mind.

Mechanics

If a 10-province standard had been in place without the removal of resource revenues, per capita equalization entitlements in 1999 would have been higher by $121 (because the addition of Alberta to the standard would have outweighed the impact of adding the Atlantic provinces).

The effect would have been quite different, however, if the removal of nonrenewable resource tax bases from the formula had accompanied the change to a 10-province standard. Average entitlements would have dropped by $70 per capita. However, payments to recipient provinces would not necessarily have fallen by $70 per capita because the fiscal capacity of each province would also have changed, depending on its endowment of nonrenewable resources.

Had my proposal been in place, what would it have meant for recipient provinces? Table 1 sets out some answers for 1999/2000. The presence of offshore oil and gas revenues in Newfoundland would have resulted in a very small reduction in its per capita payment — only $6 (row 6 of Table 1). Under the existing formula, offshore oil, gas, and other mineral revenues pull down that province's entitlement by $64 per capita. Under the new formula, Newfoundland's measured fiscal capacity, as well as the standard fiscal capacity, would have fallen, producing a relatively small reduction in entitlements.

The remaining Atlantic provinces, as well as Quebec and Manitoba, would have seen a drop in their per capita entitlement by between $44 and $69. The most pronounced impact of the proposal would have been for Saskatchewan, where the per capita entitlement would have more than doubled as a result of eliminating its current oil, nonrenewable gas, and potash revenues.[17]

[17] The biggest per capita adjustment in entitlements would have been for Alberta, which would have seen a fall in its measured fiscal capacity of $1,355. As a nonrecipient province, however, it would have felt no impact.

When these reductions are put up against total provincial revenues (row 7 of Table 1), the total dollar impact on all provinces except Saskatchewan would have been modest. In Quebec, Manitoba, and the Atlantic provinces, the changes would have been about 1 percent of the provincial budgets, except in Newfoundland, where they would have been even smaller (row 8 of Table 1). The only big change would have been Saskatchewan, which would have seen a 9 percent increase in provincial revenue.

From Ottawa's perspective, the total cost of the program would have dropped by a modest $33 million (because the increase for Saskatchewan would have been partly offset by decreases for all other recipients).

Another appeal of my proposal is that it would significantly simplify the program. Removing nonrenewable resources would eliminate hundreds of calculations and make the program somewhat easier for the average Canadian to comprehend. And no new information would have to be gathered or estimated.

Table 1: Equalization Entitlements with and without Nonrenewable Resources, 1999/2000

	NFLD	PEI	NS	NB	QUE	MAN	SASK	Total
Present 5-Province Standard, Nonrenewable Resource Revenue Included								
1. 1997/98 actual per capita entitlement ($)	1,971	1,744	1,393	1,474	650	927	191	
2. 1999/2000 actual per capita payment ($)	2,120	1,809	1,408	1,542	742	1,018	398	
3. Total equalization payment ($ millions)	1,147	249	1,321	1,163	5,452	1,162	408	10,902
10-Province Standard, Nonrenewable Resource Revenue Excluded								
4. Revised per capita entitlement ($)	2,113	1,740	1,341	1,497	679	974	972	
5. Revised total equalization payment ($ millions)[a]	1,143	239	1,259	1,129	4,989	1,112	997	10,868
6. Change in per capita payment ($)	-6	-69	-67	-45	-63	-44	574	
7. Change in total payment ($ millions)	-3	-9	-63	-34	-463	-50	589	-33
8. Change in provincial revenues (%)	0	-1	-1	-1	-1	-1	9	

[a] Calculations assume permanent lifting of the $10 billion cap on total equalization payment.

Source: Canada, Department of Finance; author calculations.

Transition

Would these changes be manageable for equalization recipients?

One way to put these potential changes in perspective is to summarize the historic characteristics of equalization payments to the affected provinces. Per capita equalization entitlements have fluctuated wildly in the past two decades. The average annual change in entitlements has been more than $75 for Newfoundland and New Brunswick, around $60 for Manitoba and Saskatchewan, and $30 for Quebec (Boessenkool 1998, 14). Thus, historical changes have been within the range contemplated here.

Looking at more recent trends puts modest proposed decreases in an even more flattering light. Equalization recipients have benefited from recent disparities in growth between Ontario and the other provinces in the current five-province standard. When, as has been happening, growth in Ontario significantly outstrips growth in the recipient provinces, the result is an increase in the standardized fiscal capacity (heavily weighted by Ontario) but less growth in a recipient's fiscal capacity. Since entitlements are calculated on the basis of the difference between these two numbers, growth in Ontario that is higher than in recipient provinces significantly boosts equalization payments.[18] In 1995, for example, Ontario's gross domestic product grew by 5.0 percent, while that of the rest of the country rose by only 3.5 percent. As a result, per capita equalization entitlements grew in Newfoundland by $112, in Prince Edward Island by $117, in Nova Scotia by $184, and in New Brunswick by $119 (Boessenkool 1998, 14). These one-year increases were larger than the reductions proposed here.

From 1997/98 to 1999/2000, equalization payments increased in every province (compare rows 1 and 2 of Table 1). As a result, removing natural resources from equalization in 1999/2000 would have left all the recipient provinces except Prince Edward Island with larger entitlements than they received in 1997/98 (compare rows 1 and 4 of Table 1).

A final consideration is the benefit that would come to the resource-rich Atlantic provinces over the medium term if this proposal were implemented. Under the status quo, Newfoundland and Nova Scotia see 70 percent of all revenues from offshore oil and gas offset by a reduction in equalization payments. Table 1 reflects my proposal's medium-term impact for Newfoundland, which would lose only $6 per capita. The reason is that its current entitlement reduction from nonrenewable resources — $64 per capita — would disappear once those resources were removed from the formula. And the effect would continue in coming years as Terra Nova and Hibernia moved toward capacity production. Once these two projects reached their expected output, Newfoundland would receive twice as much revenue from offshore renewable resources than it would under the generic solution that taxes back 70 percent of all these revenues from offshore petroleum (see Appendix C for a three-year forecast of my proposal's impact on Newfoundland).

[18] These provinces have experienced a perverse result, as no change has occurred in their ability to provide services; in fact, their tax revenues may have increased, albeit not by as much as Ontario's.

In Nova Scotia, my proposal would produce similar benefits, although the royalty structure proposed for gas from Sable Offshore Energy Inc. (SOE) (see Appendix C) is such that it would take a little longer for the province to recoup the $63 million reduction in equalization payments shown in Table 1.

If and when the province sees the coming online of some of its other gas projects (such as the Deep Panuke field, which is thought to be a major world-class find), it could expect much greater net rewards from not having the revenues subject to equalization. But that day would probably be further away than the three years reflected in Appendix C.

A bigger hurdle to my proposal than that posed by reductions in Newfoundland's and Nova Scotia's entitlements would be the objections of recipient provinces that do not now have nonrenewable natural resource developments with revenues that could offset losses in equalization payments.

New Brunswick, Prince Edward Island, Quebec and Manitoba would all see reductions in entitlements of between $44 and $69 per capita. It is worth pointing out, however, that Ottawa lifted the $10 billion equalization ceiling for 1999/2000 so the recipient provinces are receiving, collectively, $0.9 billion more than was budgeted at the beginning of that fiscal year. This amount works out to a per capita increase of $75 in all recipient provinces — a rise larger than the reduction in any one province contemplated here.

However, as already noted, New Brunswick, Prince Edward Island and parts of Quebec fall within the St. Lawrence basin, which experts believe has major hydrocarbon potential. These provinces are already talking about trying to obtain offshore equalization regimes like those of Newfoundland and Nova Scotia. My proposal would guarantee a better deal automatically.

Nonetheless, recipient provinces have been hostile to program reforms that require any reduction in entitlements, even in the short term. A possible transition measure would be for Ottawa to guarantee the present level of payments until entitlements under the new formula met the current amounts.[19] This catch-up should not take more than two or three years, given the forecast continued gap in growth between Ontario and the provinces that are not rich in resources. As long as growth in Alberta and Ontario continues to outstrip that in the recipient provinces as a whole, equalization entitlements are likely to continue to rise.

A final hurdle would be the shift in equalization dollars between Quebec and Saskatchewan, with the latter on the receiving end. The extra money going to Saskatchewan would be justified because it has faced a 100 percent taxback on oil and gas revenues over the last few years, and the new formula would correct for those anomalies. And although Quebec's entitlement under the new formula would be lower than under the status quo, the fact remains that it would be higher than just a couple of years ago.

[19] As Appendix B notes, such a guarantee was given in 1967 to minimize the impact of equalization changes made in that year.

Indeed, the reductions contemplated here are smaller than the increase in entitlements going to Quebec as a result of lifting the $10 billion equalization ceiling. Ottawa has not formally eliminated this ceiling for future years, though it is widely expected to do so.[20] Consider, however, that Quebec would be better off under my proposal with no ceiling than under the status quo with a continuation of the $10 billion ceiling.

In summary, the changes to equalization entitlements illustrated in Table 1 are manageable and defensible, and they suggest even better outcomes down the line as the East develops more and more of its nonrenewable resources, including the deposits being discovered. However, given the recipient provinces' reluctance to agree to any reduction in their entitlements, Ottawa could agree that no province's payments would fall below the level calculated for 1999/2000, no matter what the new formula yielded. The cost of doing so would be marginal because growth in Ontario and Alberta is forecast to continue to be stronger than that in recipient provinces, producing increased entitlements across the board.

[20] This expectation seems reasonable. Thus, my calculations (see Table 1 and Appendix C) assume Ottawa does permanently lift the $10 billion overall ceiling on equalization payments.

SECTION 7
A NOTE ON THE POLITICS OF THE PROPOSAL

The equalization program is subject to quinquennial reviews, during which all the provinces and Ottawa together look at the program, make any agreed-on changes, and ratify it for another five years.[21] Thus, proposing any changes that lack broad support across provinces seems a pointless exercise.

Removing nonrenewable resources from the equalization formula would likely receive support from both ends of the country. Newfoundland and Nova Scotia have an obvious interest in detaching equalization from nonrenewable resource development, particularly as oil and gas production ramps in the next few years. On the other side of the country, the western provinces, particularly Alberta, have an equally obvious interest in any move that would result in the provinces' having greater autonomy over their natural resources.

At the centre, Ontario would not likely oppose the proposal as its impact on that province would be minimal. A bigger hurdle might be Quebec, New Brunswick, and Prince Edward Island, which would face reductions from the new formula without the compensation of greater ability to tax existing developments of nonrenewable resources. Consider, however, the pull of four counterweights. First, the changes would represent only 1 percent of provincial revenues. Second, that for every province (except Prince Edward Island), the payments would increase over what was received only two years ago. Third, the decrease from the status quo would be smaller than the recent increase due to the lifting of the $10 billion equalization caps. Fourth, it is now widely accepted that the St. Lawrence basin is one of North America's last remaining major hydrocarbon bearing basins. Quebec, New Brunswick, and Prince Edward Island are all clamouring to negotiate offshore agreements with Ottawa in case oil and gas are found within "their" waters, and onshore drilling going on right now in New Brunswick. The whole eastern end of the country may soon be seeing important oil and gas revenues in the foreseeable future. If these counterweights are not enough, Ottawa could offer a transition mechanism, with Ottawa guaranteeing payments at the old level until the new formula caught up to those amounts.

Given support from East and West and no or mild resistance from the centre, Ottawa is unlikely to oppose the proposal. It would mean little to the federal government's bottom line; it would continue to protect the federal balance sheet from the vagaries of the price of nonrenewable resources, particularly oil and gas; and it means a substantial simplification of the program — an intergovernmental hat trick not often seen in the arcane world of Canada's intergovernmental relations.

[21] These five-year reviews have not prevented Ottawa and the provinces from agreeing to changes at other times (see Appendix B).

SECTION 8
CONCLUSION

Natural resources may well become the key to the economic development of the entire Atlantic region. Yet, the Atlantic provinces have little incentive to use those resources as the lynchpin of development because the equalization formula taxes back natural resource revenues from recipient provinces by up to 100 percent. Although the treatment of offshore nonrenewable resources has been eased to a 70 percent taxback, it still hampers provincial economic development in Newfoundland and Nova Scotia.

The case for removing revenues from nonrenewable resources, such as oil and gas, from the equalization formula also makes sense from a purely economic view. Royalties from these resources are not property revenues. They are the transfer of a stock of wealth from one form to another, generating no increase in wealth. Further, rents from natural resources drive up prices in the wider economy — wages and housing prices, for example — which are captured in the equalization formula. Indeed, the current formula double counts the fiscal capacity that comes with resource extraction.

The economic case points to a solution to the developmental problem — namely, to exclude nonrenewable resource revenues from the equalization formula. If this change were introduced along with a move to a 10-province equalization standard, any reductions to entitlements would amount to 1 percent or less of provincial revenues and be well within the range of historical fluctuations of actual equalization payments.

Removing nonrenewable resources from equalization would allow the provinces of Newfoundland and Nova Scotia — and potentially the rest of Atlantic Canada, as well as Quebec — to put oil and gas at the centre of their economic development strategy. These provincial governments would enjoy increased revenue from their own resources, thereby reducing their reliance on Ottawa. This move toward self-sufficiency would not only benefit these provinces but also strengthen the country as the developmental gaps between provinces narrowed.

APPENDIX A: THE MECHANICS OF EQUALIZATION

The equalization program gives each province access to the amount of revenue that it would receive if it levied a national average tax rate on a standardized tax base comprising 33 different revenue sources. Understanding this brief summary requires understanding some key concepts.

First, equalization is based not on the amount of revenue a province actually raises, but on the amount each could *potentially* raise *if* it levied a national average tax rate on a standardized base. In technical terms, the comparison is of fiscal capacities rather than fiscal performances.

Second, the *standardized bases* are hypothetical constructs. For each of the 33 revenue sources, the program measures an economic variable that closely approximates what is actually taxed. For some revenue sources, officials use a financial measure, such as total dollars of payroll or total business income. For other revenue sources, they use a non-monetary measure: for example, the number of cigarettes sold for cigarette taxes, the number of registrations for noncommercial vehicle registration revenues, and the number of litres of alcoholic beverages sold.

Third, a *national average tax rate* is the sum of actual revenues for a particular revenue category in all provinces divided by the total standardized base for that category in all provinces.*

Fourth, together the national average tax rate and the standardized base make up what is called a *representative tax system (RTS)*, in which the 33 revenue sources are individually compared.

Fifth, a province's *total equalization entitlement* is the sum of its per capita deficiency or excess in each of the revenue sources. This deficiency or excess is calculated by comparing the province's *per capita fiscal capacity* — the amount produced by applying the national average tax rate to the province's own per capita standardized base — with the *standardized fiscal capacity*, which is the amount produced by applying the national average tax rate to the per capita standardized base in *five provinces* (British Columbia, Saskatchewan, Manitoba, Ontario, and Quebec). Per capita amounts are derived by dividing by the relevant population — the population in a particular province for a provincial fiscal capacity, and the population in the five provinces for the standardized fiscal capacity.

* For revenue sources with a financial measure, this rate is a percentage. For the other bases, it is dollars per unit of the respective base.

APPENDIX B: EQUALIZATION AND NONRENEWABLE RESOURCES: A LOOK BACK

Equalization was born in 1957.[22] In its initial incarnation, the program brought the per capita yield of three standard provincial taxes — the personal income tax (PIT), the corporate income tax (CIT), and succession duties[23] — up to the weighted average per capita yield of such taxes in the two provinces with the highest per capita yields (Ontario and British Columbia). Nonrenewable resource revenues did not directly influence the program.[24] Although not specifically part of equalization but intended as a complement, special Atlantic provinces adjustment grants totalling $25 million were added in 1958.

1962—1966: The 50-Percent Solution

Nonrenewable resources entered the equalization formula in 1962 when 50 percent of the three-year average of revenues from them were equalized to the national average. This change had two notable features. First, only half of all such revenues were included, limiting Ottawa's exposure to shifts in the prices of nonrenewable resources. Second, equalization was up to the national average fiscal capacity, rather than to the top two provinces.

The latter arrangement lasted only until 1964. In that year, Ottawa returned to the top-two-provinces standard. Additional grants, to the Atlantic provinces, totalling $35 million per year, continued during this period.

1967—1974: The Representative Tax System

The 1967 equalization renewal greatly increased the complexity of the program and brought the formula closer to what it is today. First, the program expanded to 16 revenue sources. Second, in contrast to the previous decade, when actual revenues were equalized, the 1967 formula was changed so that the Representative Tax System (RTS) — standardized bases and national average rates as explained in Appendix A — became the basis for calculation. Third, the new formula used an all-provinces RTS. This move to a 10-province standard reduced Ottawa's exposure to shifts in the economic fortunes of only the top two provinces.

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[22] Specifically, a PIT equivalent to 10 percent (13 percent from 1958 on) of federal personal income tax collections in the province, less old age security tax; a corporation profits tax of 9 percent; and a succession duty equivalent to 50 percent of federal duties in the province, based on a three-year average of assessments.

[23] My recounting of the historical record borrows heavily and liberally from Canadian Tax Foundation 1983, ch 10.

[24] Such resources did, of course, have a secondary influence on other tax bases. See the main text.

To ensure that no province was worse off under the new formula, transitional arrangements, including special payments to the Atlantic provinces, rounded out the 1967 changes.

The 1972 review produced more modest changes — the addition of three more revenue sources — and the formula was amended in 1973 to add an additional revenue source and in 1975 to deal with rising oil prices.

1975-1976: "Basic" vs. "Additional" Resource Equalization

Rising oil prices in the mid-1970s put a severe strain on the treatment of nonrenewable resource revenues within the equalization program. Ottawa redefined oil and gas revenues to distinguish between "basic" and "additional" revenues. *"Basic" revenues*, defined as the actual revenues in 1973/74 adjusted for volume increases, were to be equalized in full. But only a third of additional revenues, defined as the difference between actual and "basic" revenues, were included in the equalization formula.

The creation of the "basic" revenue category ensured that payments to recipient provinces would not fall, while the "additional" category protected Ottawa from skyrocketing costs as oil prices surged upward. Indeed, one can usefully view the "basic" component as dealing with volume while the "additional" component dealt with price; Ottawa was willing to equalize fiscal capacities that resulted from the changes in the volume of oil produced but not from the escalating price of oil.

1977: The 50-Percent Solution with a Cap

The 1977 review increased the number of revenue sources again, this time to 29, eight of which related to nonrenewable resource revenues. The treatment of these revenues changed again: only half of them were subject to equalization. In addition, Ottawa decreed that equalization payments in respect of nonrenewable resource revenues could not exceed a third of total equalization transfers.

Again, these changes were primarily motivated by Ottawa's attempt to limit the total cost of the program.

1978: More Caps and the Ontario Rule

The 1977 rules only lasted one year. In 1978, further increases in the price of oil threatened to make Ontario a recipient of equalization payments. Because of that province's large population, even a small per capita payment to it would produce a substantial drain on the federal treasury. The provinces agreed that equalization entitlements for certain nonrenewable resource revenue sources would be reduced by half for 1977/78 and by three-quarters for 1978/79, after which these sources would be removed from the formula. In the event that these amendments did not prevent Ontario from becoming a recipient, a further provision stated that provinces with a per capita income above the national average could not receive equalization payments.

1981: A Parliamentary Proposal

In 1981, the federal government undertook a parliamentary review of all federal-provincial fiscal arrangements, including equalization, transfers to provinces for health, education and welfare, and the

tax collection agreements, which specified the split of taxation sources between Ottawa and the provinces. The review recommended limiting the influence of nonrenewable resources on equalization payments, though it provided little guidance on how that might be accomplished.

In November 1981, Ottawa tabled a set of proposals that included returning to full equalization of all revenue sources (including all nonrenewable resources) and changing the standard to Ontario alone (that is, provinces would have their revenues equalized up to the per capita level in Ontario). The latter proposal would ensure that Ontario would not receive equalization. In addition, since very little oil or gas was produced there, the change would vastly reduce the impact of nonrenewable resource revenues on equalization entitlements. A final wrinkle was a proposal to limit the growth of total expenditures under equalization to the growth in the economy.

Although none of these proposals was adopted in the form it was made, they laid the foundation for subsequent negotiations with the provinces. They revealed Ottawa's desire to return to a formula-driven program, while limiting its fiscal exposure by making Ontario the standard and by tying growth in equalization expenditures to the growth in the economy.[25]

1982: The Five-Province Solution

The federal-provincial negotiations produced reforms that saw the equalization standard move from a ten- to a five-province standard, removing the Atlantic provinces, and Alberta (each of the two had 9.2 percent of the total population in 1981). This shift limited the impact of nonrenewable resource revenues on the equalization standard because Alberta had the lion's share of such revenues. In addition, the list of revenue sources was increased to 33, and new minimum and maximum payments were specified. The most important minimum specified how much a province's entitlement could fall; the base to be used was its fiscal capacity — the further that was from the standard, the less its entitlement was permitted to decrease in any given year.[26] Ottawa also specified that growth in the total cost of the program could not be faster than the growth in the economy.

The five-province standard tax base and the national average tax rate have lasted from 1982 to the present. They have effectively protected Ottawa from rapid escalation in the cost of equalization due to resource revenues, primarily by excluding Alberta from the standard.

1980s: Bilateral Agreements

In the mid-1980s, the focus of reforms shifted from impact of equalization on Ottawa's bottom line to

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[25] In fact, this provision would have caused equalization to shrink as a portion of federal revenues because the latter revenues generally grow faster than the economy due to the progressivity of the personal income tax system.

[26] A province with fiscal capacity less than 70 percent of the standard was guaranteed that its equalization payment would be at least 95 percent of the previous year's payment. Provinces with fiscal capacity of 70 to 75 percent of the standard would be guaranteed a payment at least 90 percent of the previous years. Other provinces were guaranteed 85 percent of the previous year's payment.

its impact on provincial incentives. Although the 1982 reforms improved the view from Ottawa, they did little to address the taxback problems in recipient provinces. The taxback had not been a major issue[27] until the discovery of oil and gas off the east coast during the 1980s. This discovery brought Ottawa and the provinces involved (Nova Scotia and Newfoundland) together for bilateral negotiations on how to treat revenues from offshore oil. This tack was new for Ottawa: it was dealing directly with the provinces affected rather than negotiating with all 10 provinces. These bilateral deals ("accords") operate outside the equalization formula. The only change made to it was the creation of a separate revenue category for offshore nonrenewable resources.

In 1985, Ottawa and Newfoundland signed the Canada-Newfoundland Accord. It was a bilateral agreement that protected Newfoundland from large reductions in equalization entitlements that would otherwise result from any economic growth that occurred during the subsequent 12 years. The protection was meant to shield the province from drops in equalization payments that resulted from the development of newly discovered natural resources.

The following year, Ottawa and Nova Scotia signed the Canada-Nova Scotia Offshore Accord. It protected Nova Scotia's equalization entitlements for 10 years. In contrast to the agreement with Newfoundland, the Nova Scotia Accord protected only equalization entitlements arising from offshore revenues. Nova Scotia would be able to shelter 90 percent of offshore oil revenues in the first year, 80 percent in the second year, and so on. In the 10th year, Nova Scotia would face a 100 percent taxback on these revenues.

The Newfoundland and Nova Scotia Accords ratcheted up the taxback on nonrenewable resource revenues over 10 or 12 years. The ratchets ensured that over time these provinces' equalization payments would drop to reflect the greater revenue streams from nonrenewable resources.

1990s: The Generic Taxback

In the early 1990s, other provinces wanted to generalize the treatment of Atlantic offshore revenues for their own revenue bases. Saskatchewan, for example, has nearly all the potash in Canada and, therefore, faced a huge taxback on revenues from it. In 1993, Ottawa and the provinces negotiated a "generic solution" that operates in cases where a province owns at least 70 percent of a tax base. The taxback rate on that revenue source is capped at 70 percent, giving provinces a slightly better incentive to levy appropriate taxes on such bases.

The generic solution has been applied to four bases: Saskatchewan potash, Quebec asbestos, Newfoundland offshore oil and gas, and Nova Scotia offshore oil and gas. (Newfoundland and Nova Scotia have the option of choosing whichever taxback solution they wish to apply in any fiscal year — they can take the result of their bilateral accords or the result of the generic taxback.)

[27] Saskatchewan would likely take exception to this characterization because it has seen its equalization entitlement drop precipitously as a result of the development of the province's nonrenewable resources, particularly potash, oil, and gas.

APPENDIX C: THE PROPOSAL'S IMPACT ON PROVINCIAL OFFSHORE REVENUES

The current arrangements with Newfoundland and Nova Scotia combine all revenues — including royalties and corporate income tax (CIT) — from offshore oil and gas activity and subject them to a 70 percent taxback rate. Under the proposal outlined in the main text, the full amount of royalties from offshore nonrenewable resources would be outside the equalization formula, but the CIT generated by offshore activity would be part of the business tax base, resulting in lower equalization entitlements related to that activity.

Newfoundland

Newfoundland has two revenue streams that are accorded the offshore treatment: from Hibernia and from Terra Nova. Hibernia has a royalty structure that rises and falls with the price of oil. This fluctuation makes any forecast very dependent on the expected price of oil. Terra Nova has a more stable royalty structure, with production expected to ramp up in the fourth quarter of 2001 and be at full by 2003. The price of the grade of oil being produced is forecast to stay between US$28 and US$30 per barrel until the end of 2002.[28] Corporate income tax from these two projects is also difficult to forecast, being dependent on large historical write-downs. Estimates provided to me privately range from $50 to $200 million annually, with a likely amount near C$100 million.

With these values, total offshore revenues can be forecast at C$98 million in 2001 rising to C$180 million in 2003 (see Table C.1). Under the current rules, Newfoundland can retain only 30 percent of these revenues or C$29 million in 2001 and C$54 million in 2003. If nonrenewable resources were removed from the equalization formula and the CIT from these sources added to other CIT revenue, the net revenues flowing to Newfoundland would be C$48 million in 2001, rising to C$80 million in 2003.

[28] According to the Energy Information Administration, which publishes official energy statistics for the US federal government. See www.eia.doe.gov/emeu/steo/pub/4tab.html at 2001/03/22.

Table C.1: Newfoundland Offshore Revenue, Estimated, 2001–2003

	2001	2002	2003
		($ millions)	
Hibernia royalties	40	40	40
Terra Nova royalties	8	32	40
CIT[a]	50	100	100
Total	98	172	180
Current net to Newfoundland	29	52	54
Proposed net to Newfoundland	48	72	80

[a] Generated by these offshore activities.

Source: Author's calculations with data from Atlantic Institute for Market Studies.

Nova Scotia

SOEI is the primary source of revenues from nonrenewable offshore resources for Nova Scotia.[29] Future contracts for gas in early March 2001 suggested a net-back (after transportation costs) price for gas of US$4.65 per MMBtu in 2001, US$4.05 in 2002, and US$3.80 in 2003. These amounts suggest total revenues from SOEI of approximately C$1.5 billion in 2001, C$1.3b in 2002, and C$1.2b in 2003.

The royalty rate is to be 1 percent of total revenues in 2001 and 2002, rising to 2 percent at the beginning of 2003 and likely to 5 percent at midyear. The result would be royalty revenues of $15 million in 2001 rising to $42 million in 2003 (see Table C.2). It is much more difficult to estimate the CIT revenues. A guesstimate is $10 million to $15 million.

[29] Notice that the projections discussed here and summarized in Table C.2 are only for three years and thus focus on Sable Offshore, ignoring some other gas finds that will enter production relatively soon. Informed sources say they are so large that they will exceed the current pipeline's capacity relatively soon.

Table C.2: Nova Scotia Offshore Revenue, Estimated, 2001–2003

	2001	2002	2003
		($ millions)	
Total revenue from SOEI	1,479	1,288	1,208
Royalties at 1%, 1%, 2/5%[a]	15	13	42
CIT[b]	10	15	15
Total	25	28	57
Current net to Nova Scotia	7	8	17
Proposed net to Nova Scotia	15	13	42

[a] In 2003, the royalty rate will rise to 2 percent, on its way to 5 percent. To simplify calculations, I assumed that each rate will be applicable for six months of the year and production even throughout that period.

[b] Generated by the offshore activity.

Source: Author's calculations with data from Atlantic Institute for Market Studies.

Under the status quo, Nova Scotia would keep $7 million in 2001, and $17 million in 2003. If non-renewable resources were excluded from equalization, the net revenues to the province would be $15 million in 2001 and $42 million in 2003.

In summary, removing natural resources from the equalization formula would mean that Newfoundland and Nova Scotia would see net revenues from the Atlantic offshore nonrenewable resources that were much higher than they would be under the status quo. In the long run, this would mean that the Atlantic Provinces could reduce their reliance on equalization by making natural resource development a centrepiece of their economic development strategy.

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