

Evaluating the Equalization Program

Notes for the Expert Panel on Equalization and
Territorial Formula Financing

by

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1. Introduction

This paper summarizes one person's views about factors that should inform an evaluation of the Canadian equalization program and proposals for its reform. It is worth stressing at the outset that there is no unambiguously correct equalization system, and that is for various reasons. For one, the objectives and principles of equalization necessarily involve value judgments upon which reasonable people can disagree, although the force of this disagreement is diminished somewhat if one takes the constitutional commitment to equalization at its face value. For another, there is an inevitable conflict between the principles of equalization and other objectives of government, and the resolution of that conflict involves trading off different objectives. And, even if one can agree on the objectives, the manner of translating those objectives into a workable program also involves judgment.

Part of the purpose of this paper will be to set out as clearly as possible the nature of the objectives, trade-off and judgments involved. In the end, one must come to some informed opinion about the appropriate design of the system, and I shall not refrain from doing so. Others may well come to different conclusions.

I begin with an outline of the principles—both constitutional and economic—that determine the objectives of equalization. Then, as a benchmark, I outline what an equalization scheme that adhered fully to those principles might look like. Next, a series of conflicting principles, caveats and practical problems associated with adhering single-mindedly to the principles of equalization are discussed. Finally, some implications from this for advice to the Panel are presented.

2. The Principles

A necessary starting point is to state the principles that should inform the design of the equalization system. Fortunately, there is a relatively clear statement of these principles in the Canadian constitution. Section 36 of the *Constitution Act, 1982* states in full:

- (1) *Without altering the legislative authority of Parliament or of the provincial legislatures, or the rights of any of them with respect to the exercise of their legislative authority, Parliament and the legislatures, together with the government of Canada and the provincial governments, are committed to*
- a. promoting equal opportunities for the well-being of Canadians*
 - b. furthering economic development to reduce disparity in opportunities; and*
 - c. providing essential public services of reasonable quality to all Canadians.*
- (2) *Parliament and the government of Canada are committed to the principle of making equalization payments to ensure that provincial governments have sufficient revenues to provide reasonably comparable levels of public services at reasonably comparable levels of taxation.*

Both parts of section 36 are relevant for equalization and complement one another. Section 36(2) is specific to equalization, but section 36(1) reinforces role of equalization along with the system of social transfers (CHT and CST) as instruments for the promoting equality of opportunity, furthering economic development and providing essential public services of reasonable quality. Moreover, both the equalization system and the CHT/CST system are equalizing and can be thought of as contributing to the equalization objective in the broader sense.

There is some debate among legal experts about whether section 36 is justiciable, and as yet there has been no judicial rulings that would determine that. One view is that it is likely not justiciable in the sense of the courts being able to oblige the federal government to fulfill its responsibilities under section 36. On the other hand, others argue that it might be justiciable in the narrower sense of the courts declaring that the obligation is not being met. In any case, section 36 does serve to confer a moral and political obligation on the federal government to maintain an equalization program that abides by the principle of enabling the provinces to be able to provide reasonably comparable levels of public services at reasonably comparable levels of taxation.

As it turns out, the general principle set out in the constitution has its counterpart in the normative economic principles of equity and efficiency. This has been recognized in the

literature at least as far back as the 1950s and was enunciated in some detail in a well-known study by the Economic Council of Canada (1982) (which was written before the constitutional amendments introducing section 36 into the constitution). Although the formal economic arguments are somewhat technical, the basics are clear enough. In a decentralized setting, whether it be a federation or a unitary state with local fiscal responsibilities, sub-national jurisdictions will require different tax rates to provide comparable levels of public services. This entails that in the absence of equalizing transfers, otherwise comparable citizens will obtain different *net fiscal benefits* depending where they reside, where net fiscal benefits refer to the difference between the value of public services obtained and the amount of taxes paid by a given citizen.

From an efficiency point of view, the existence of these net fiscal benefit differentials will provide a purely fiscal incentive to reside in jurisdictions that can offer public services at lower tax rates. To the extent that the costs of provision are not different in two locations, any such fiscally induced migration will lead to an inefficient allocation of resources across jurisdictions. That is, persons will have an incentive to choose their location of residence not simply on the basis of earnings differences that reflect differences in productivity, but also on the basis of purely fiscal incentives. It is widely accepted that this fiscally induced migration is a potential source of inefficiency in a federation, but its quantitative importance has been disputed. The evidence on the responsiveness of migration to fiscal incentives is mixed, and the quantitative consequences for economic welfare are also in dispute. Indeed, on the basis of the evidence, it is unlikely that a strong case could be made for full equalization on the basis of efficiency considerations alone.

The more telling economic arguments for equalization are based on equity, but these are also the more controversial. They are probably also the real motivating factor behind section 36(2). In economic terms, the argument is one of horizontal equity, or ‘equal treatment of equals’: otherwise identical persons should be treated comparably by the public sector. This not a self-evident principle, especially in a federal setting, and involves a value judgment of some consequence. The principle is sometimes referred to as that of solidarity or social citizenship, terms that have to do with the commonality of treatment of all citizens of a nation. Its acceptance involves a consensus that persons in

comparable circumstances ought to expect relatively comparable treatment from the public sector no matter where they reside. Lesser forms of consensus are certainly possible: it may well be that social citizenship applies fully within provinces but only partially between them. The consensus concerning the extent of social solidarity reflects political realities, and we can think of the extent of the consensus as the political rationale for equalization. The case for equalization is very much tempered by the extent to which this principle is accepted.

The principles underlying equalization are not absolute. They come into conflict with other principles, so some judgment is necessary in order to resolve the conflict. For example, if it is costlier to provide public services in one location relative to another, there will be an equity-efficiency trade-off. Even within unitary states or within provinces, comparable services are not provided to urban and rural residents. In practice, we can often resolve this trade-off by observing how the provinces themselves trade off equity versus efficiency in providing services to urban and rural residents within their jurisdictions.

As well, full horizontal equity is not desirable even if the requisite consensus exists for social citizenship. That is because one of the essential features of federalism is the possibility of diversified behaviour under decentralized decision-making. Provincial governments will typically choose to provide different mixes of goods and services, and finance them by different means. This heterogeneous behaviour would make it virtually impossible for full horizontal equity to be achieved for all types of persons in all provinces. To attempt to do so would undo the effect of differential provincial policies and abrogate the benefits of decentralized decision-making in a federation.

The fact that full horizontal equity for all comparable citizens is unattainable would seem to undermine the basic rationale for equalization. However, there is a reasonable way to proceed that serves as a compromise between the benefits of decentralized decision-making and the ideal of equal treatment of equals (social citizenship), and it is a way that is effectively reflected in the wording of section 36(2). It involves using equalization payments to ensure that each provincial government has the *potential* to be able to provide reasonably comparable levels of public services at reasonably comparable levels

of taxation without compelling them to provide actually comparable services. This objective of equalizing provincial fiscal potential is referred to as *fiscal equity*.

This discussion should make it clear that there is no such thing as a perfect equalization system in a decentralized federation in which provinces have the right to apply their own fiscal priorities. Given that provinces will inevitably behave differently and that this is desirable, equalization cannot and should not be expected to equalize net fiscal benefits for all types of persons. The proposal that they should have the potential to do so seems like a reasonable compromise. But, given heterogeneous provincial behaviour, the meaning of equalizing the potential to provide reasonably comparable public services is ambiguous. Equalization is thus inevitably a compromise among various objectives. One purpose of this paper is to make clear what choices must be made in arriving at a suitable compromise. Given these caveats, including the value judgment that lies behind equalization, there is inherent ambiguity about the design of equalization.

Note for future purposes that fiscal equity is ultimately based on the equal treatment of individuals, not on equality of provinces per se. Moreover, fiscal equity and therefore equalization is concerned with equalizing the provision of public services to all citizens of a given type, not equalizing private incomes. That is the task of interpersonal tax-transfer system. The need for equalization arises from decentralization of fiscal responsibilities. The need for interpersonal redistribution does not.

3. Full Equalization

Having raised these cautious caveats about the inherent ambiguity of equalization, it is nonetheless worth asking the hypothetical question of what the equalization system might look like in general terms if the words ‘reasonably’ were removed from section 36(2) and the commitment were taken as an obligation. This will serve as a useful benchmark and help to inform us about the possible content of the word ‘reasonably’, and more generally of the inherent ambiguity of the equalization principle.

The first issue concerns what the standard for equalization should be. That is, what levels of public services ought the provinces to be able to provide at reasonably comparable tax rates? Among other things, that would determine the size of the equalization program.

There is no single answer to that critical question, but if one combines the economic and political rationales, a case can be made that the levels of public services to which all provinces should be equalized should be those that provinces actually choose to provide. This idea that equalization should be based on actual provincial behaviour and not some norm set separately is one that permeates the Canadian system and is one that we adopt as reasonable.

Next, it is useful to disaggregate the taxation side from the service level (expenditure) side. Suppose we assume initially that comparable levels of public services require equal per capita expenditures in all provinces. Then, full equalization can be achieved by equalizing the ability to raise revenues at comparable rates of taxation. This can best be done in a way that reflects the behaviour of provinces by using the RTS system, where tax bases and average tax rates used in the formula are based on those actually chosen by provinces. For the moment, suppose that ambiguities in applying the RTS have been resolved. Then, given actual provincial taxes, full equalization could be achieved by a net system of equalization in which all tax bases are included fully. All provinces would have the potential for providing the level of per capita expenditures that reflect those actually chosen. If net equalization were infeasible because of the inability to tax 'have provinces', the same outcome could be achieved by combining net equalization transfers with an equal per capita transfer of sufficient size such that the top province would no longer have negative entitlements on balance. (Thus, the system is what one might call a top-province standard.)

On the expenditure side, the principle of full equalization still applies, but things are more complicated for two reasons. First, expenditures are inherently more diverse and their output more difficult to measure than with revenues. That is, while it is relatively straightforward to understand what is meant by raising reasonably comparable revenues (a dollar is a dollar), it is not so easy to understand what is meant by reasonably comparable levels of public services, given that public service levels must somehow account for differences in types of output for different services as well as differences in quality for any one type of service. Second, the ability to provide common levels of public services will generally require different levels of spending both because needs differ and because service costs differ. Needs will differ because services typically target

certain demographic groups: school-age children for education, the elderly for health care, the long-term unemployed for welfare, the disabled for disability benefits, and so on. Costs will differ because of differences in local wage rates, transportation costs, economies of scale, and so on.

In principle, one can construct the analogue of the RTS system on the expenditure side if one ignores quality differences: relative need can be measured by the average national cost of providing services of given types to given groups of people. Differences in need will then be a consequence of different demographic characteristics alone. However, if the cost of providing a given service differs across location, it will generally no longer be desirable to provide comparable levels of public services. There will be an equity-efficiency trade-off. In other words, full expenditure equalization would not be called for. One way to approach this is to adopt what is referred to as a stratified approach. This involves stratifying provinces into comparable communities and calculating equalization entitlements so that these communities can provide comparable levels of public services. This method relies on actual provincial behaviour for resolving the equity-efficiency tradeoff involved in determining how service levels differ across different types of communities. Of course, if one province has systematically higher costs than another in all regions, this will not work. That is why a separate equalization regime is needed for the Territories. Such a scheme requires a judgment as to what level of public services is reasonable given the conflict between fiscal equity and the higher costs associated with providing comparable public services in the Territories. If the costs of services in the Territories were comparable to those in rural parts of some provinces, comparability could be defined in those terms. Otherwise, a judgment is necessarily involved.

The full equalization system is fairly demanding both on the revenue and the expenditure side, and the current system deviates from it in various ways. We turn next to a discussion of the many constraints that preclude full equalization.

4. Conflicts, Caveats and Feasibilities

As emphasized, there is no such thing as the correct equalization system. There are technical problems, economic constraints, constraints arising from the political or societal

consensus concerning the scope of fiscal equity, as well as conflicts with other objectives. In this section, we raise a series of issues that must be addressed in selecting an equalization system, and some of the considerations that go into making that selection. These issues help to inform us about the meaning of the adjective ‘reasonably’ in section 36(2).

4.1 Gross versus Net Equalization

The Canadian system is a gross system in which transfers are made to provinces with positive entitlements, but negative entitlements are not extracted from the others. The result is that while have-not provinces are equalized to a common standard, the have provinces end up with a higher fiscal capacity, thereby violating the principle of fiscal equity. As noted earlier, full equalization could still be achieved by a gross system, but it would effectively require moving all provinces up to the fiscal capacity of the top province. This would be an expensive proposition, especially given the extent of decentralization of revenues to the provinces. Full equalization systems that apply to all provinces are much easier to implement if there is a large vertical fiscal gap (as in the Australian case). As long as transfers to the provinces exceed the negative entitlements of the top provinces, the transfers could be adjusted so that the latter are effectively equalized down.

In this connection, the potential role of the CHT/CST system should be noted. They could in principle be integrated into the equalization system and used to extract negative entitlements from the have provinces. As it stands, these transfers are already equalizing in the broader sense: to the extent that they are equal per capita transfers financed from general revenues, they are fully equalizing on the revenue side. Whether they should also be used as a vehicle for addressing the failure of the equalization system to replicate a gross system is a matter of judgment. The insertion of the term ‘reasonably’ into section 36(2) in a sense leaves open to judgment how complete equalization should be.

The extent of equalization in the current system is effectively determined by the use of national average tax rates in the formula. (Per capita entitlements are the product of these tax rates and deviations of provincial bases from a national standard.) There is nothing

magic about using national average tax rates as the determining factors in a gross equalization system, even under a full ten-province standard. What the formula does is enable all have-not provinces to be able to raise the national average level of revenue, which is less than the have provinces can raise. Thus, horizontal balance is achieved among the have-not provinces at that level, but not between the have-nots and haves. Whether that satisfies the requirement of reasonable comparability is a matter of judgment: it certainly does not achieve full equalization.

The use of a higher standard would reduce the disparity between the have and have-not provinces. There are two slightly different ways that a higher standard could be achieved. One would be to use as the standard base something other than the five-province standard (which itself is difficult to rationalize on the basis of principle). The ten-province standard is a natural candidate, and would be the ideal standard under a net system. But in a gross system, it obviously results in under-equalization of the have-not provinces relative to the have ones. Higher standards would involve using the top n provinces, where n could be anything less than ten. Alternatively, the standard of equalization could be increased by augmenting entitlements by some means, such as proportionally or equal per capita. The point is that in the absence of full equalization on a net basis using a ten-province standard, the actual formula necessarily has an element of arbitrariness to it, and it is hard to say whether one formula is better than another.

A further point follows from this that has direct implications for the work of the Panel. This concerns the difference between a fully formula-based system where total entitlements are determined by the formula, and one where the total entitlement is chosen with discretion (as is being proposed by the new equalization guidelines under which the Panel seems to be working). In the former, a gross RTS system using national average tax rates would bring all have-not provinces up to national-average revenue-raising ability. In the latter, the outcome depends upon how the discretionary budget is balanced. There are two obvious ways of doing this. One is simply to adjust the entitlements of the have-not provinces proportionately up or down to achieve budget balance. Effectively, all have-not provinces would be equalized not to the national average, but to some fraction of the national average (less than or greater than one). The other way to proceed would be to retain the calculation of entitlements using national average tax rates, but to adjust

entitlements for the have-not provinces on an equal per capita basis. This method would be more favourable for the have-not provinces with the lowest revenue capacity if the discretionary limit is too low. It would retain the same horizontal balance among the have-not provinces as in the case where equalization entitlements were based on national average tax rates, but would exacerbate the vertical imbalance between the have and have-not provinces. For further discussion of the implementation of different standards, including that obtained by a fixed limit on aggregate payments, see the Addendum at the end of this paper.

A final related issue is whether the equalization system should be ‘over-arching’ in the sense that equalization entitlements of the have-not provinces are adjusted for any differential treatment they received in other transfer programs (transfers to provinces, that is). In principle, this might be reasonable, though it is not clear how important it is. Moreover, if one is going to think of equalization to the have-not provinces as including the effects of all transfer programs, it could be argued that this opens up the argument of adjusting these other transfers to take account of the negative entitlements of the have provinces under equalization.

4.2 Natural Resources

The equalization treatment of natural resources is arguably the most difficult issue to address given the extent to which resource revenues lead to significant fiscal disparities. Full equalization would equalize resource revenues fully: a dollar of resource revenues contributes the same to the financing of public services as a dollar of income tax revenue. Nonetheless, several arguments have been made for treating resource revenues preferentially for equalization purposes. The main ones are listed and discussed below. A reasonable perspective to take is to insist that any deviation from equal treatment of resource revenues with other revenue sources be convincingly justified. Moreover, due attention should be paid to the consequences of special treatment for resource-poor provinces.

Constitutional conflicts

It is argued that there is a fundamental conflict between the commitment in section 36(2) and the apparent provincial ownership of natural resources. The argument is that fully equalizing resource revenues is akin to confiscating property that rightfully belongs to the provinces, which is alleged to violate section 125 of the Constitution Act (*No Lands or Property belonging to Canada or any Province shall be liable to Taxation*). The weight of this argument is difficult to gauge. It is clear that there are many instances where the federal government does at least implicitly disregard the inviolability of provincial resource ownership. The current equalization system equalizes natural resources fully for the have-not provinces with the exception of those falling under the Atlantic Accords and any that might qualify for generic treatment. There have apparently been no legal or political roadblocks to doing that. In addition, the federal income tax system applies indiscriminately to the resource sector (although it could certainly be argued convincingly that tax provisions are overly generous in those sectors). Moreover, it is not entirely clear that making equalization conditional on a province's capacity to raise resource revenues does constitute an unjustifiable violation of property rights. One could argue that resources are no different from other provincial revenues in that regard. The provinces are after all also given the constitutional right to raise other direct tax revenues for their own purposes, and these revenues are presumably every bit as much part of their property as revenues from natural resources. In my view, the argument that natural resources deserve special treatment on the grounds that the provinces own them is not convincing.

Incentive arguments

Equalization entitlements for any revenue source—natural resources or otherwise—fall in proportion to a province's own tax base. To the extent that a province can influence its tax base, it will apparently have an incentive to do so. (It may also be able to affect the national average tax rate, but only if it has a large share of the tax base in question. That is the issue with which the generic formula was intended to deal.) For most revenue sources, tax bases can only indirectly be influenced by changes in tax rates. Although the economics literature on fiscal federalism has dwelt on this in some detail, it is not clear

that from a policy perspective it is of significance. Potentially more significant is that fact that provinces have some direct influence on the extraction of natural resources through their control of resource exploration and development. If resources revenues are fully equalized, roughly 100 percent of additional revenues will be taxed back. This would seem to be a deterrent to pursuing resource developments. To the extent that incentives are a real problem, it would constitute an argument against full equalization of resource revenues.

There are, however, a couple of counterarguments. For one, there is no evidence that equalization tax-backs have deterred provinces from pursuing resource development. On the contrary, even with apparently full tax-back, provinces have exploited their non-renewable resources to the fullest (oil in Sask., mining in Manitoba, etc.). Second, there is some argument about the validity of the tax-back argument on theoretical grounds. Once a resource deposit is discovered, it becomes potentially liable to equalization tax-back when the discovered resource is exploited. Then, it becomes only a question of when the resource is exploited and not if, and the tax-back has no incentive effect on that. Thus, one can argue that the importance of incentive effects has been overstated.

Average tax-back argument

Another argument arising from equalization tax-back recently proposed by Courchene (2004) is that resource revenues tend to have high *average* tax-back rates. The argument is that some resource revenues are concentrated in certain provinces. In these circumstances, equalization tax-backs from that source are concentrated in the province of origin. This gives rise to high average tax-back rates in the sense that equalizing that revenue source effectively causes entitlements to go down only in the province in which the resource is located. Courchene refers to that as confiscatory equalization. For revenue sources that are spread more evenly across provinces, equalizing them causes entitlements for any given provinces to fall by much less than 100 percent because other have-not provinces also have some of the revenue source.

The standing of this argument is debatable. Revenue sources that are unequally distributed have higher average tax-back rates by definition than those that are more evenly distributed. It seems rather perverse to argue that unequally distributed revenue

sources should not be equalized as much as evenly distributed ones because they have higher average-tax back rates. The marginal tax-back rate is the more relevant one. Under full equalization, it is roughly 100 percent for all revenue sources: an increment in *any* tax base in a have-not province is roughly fully taxed back. Any adverse effect that arises from this is an incentive effect and not a question of fairness.

Measurement issues

The RTS system is more difficult to apply for resource revenues than for many other revenue sources. In the case of sales, payrolls or income, the relative size of the tax base is a good indicator of the relative ability to raise revenues. This is not necessarily the case for resource revenues because of the way in which provinces design their tax and royalty schemes (or for property taxes, as we shall argue below). Roughly speaking, royalties are based on production or revenues rather than on profits. It may be more difficult for a province to impose royalties on revenues that have a high cost of extraction than those that have a low cost of extraction. (If so, this should be reflected in actual royalty rates across provinces.) If provinces had based their royalties on profitability, this would not be a problem since profits would be the base used for equalization. Measurement of revenue capacity should not be a problem for the sale of crown leases whose market value will be a direct reflection of the ability to raise revenues from that source.

To the extent that the tax capacity of natural resources is perceived to be a problem, one way to deal with it would be to stratify the resource base into elements whose costs of extraction are comparable. In a sense, this is what is done when natural resources are disaggregated into smaller categories. If this is not possible, a case can be made for reducing the extent of equalization below 100 percent, although this is not a perfect solution. An alternative remedy might be to construct an artificial base that does reflect the ability to raise revenues. For example, the cash flows from natural resource production are a reasonable indicator of the rents accruing in the sense that the present value of cash flows should be comparable to the present value of rents. However, this is not a perfect solution. For one thing, it violates the RTS principle that bases and rates should correspond with actual provincial practices. For another, while cash flows represent an ideal tax base for extracting rents from natural resources, they do not

actually measure the ability of provinces to obtain revenues from royalties that are not based on rents. Nonetheless, the use of rents would avoid the measurement problems of the existing system.

It might be worth noting at this point that similar types of measurement issues can arise with other tax bases as well. The property tax is a prime example. Differences in property values across provinces may not reflect differences in the ability to raise revenues. In fact, there is a systematic inverse correlation between average property values and property tax rates across communities. The consequences of this for equalization are discussed below. The same problem may well apply to other tax bases. It may be easier for high-income provinces to impose high excise tax rates on tobacco and alcohol than low-income provinces. Or, to take an extreme case, if provinces used poll taxes, the rates may well be higher in high-income provinces than in low-income provinces. To the extent that one thinks that this is a serious problem, one may be driven to a macro-type formula on the grounds that a macro indicator may be a better measure of ability to pay than actual tax bases. However, this seems to be an extreme reaction, since it is hard to deny that per capita tax base differences do reflect at least in part differences in the ability to raise revenues. Evidence for this is that higher-income provinces do not have systematically higher tax rates than lower-income provinces.

Cost of raising revenues

Courchene (2004) has also argued that the cost of raising revenues should be deducted from resource revenues before equalization. In principle, this is a reasonable request, but applying it selectively to resource revenues is problematic. There are costs associated with other major revenue sources as well. For example, one can think of the provision of education and health care as affecting incomes and consumption spending. There are also measurement problems. It would not be straightforward to attribute the accrued costs of generating resource revenues, and there would be obvious incentive problems with basing equalization on the actual costs that provinces incur. More generally, if costs of raising revenue are to be attributed, why not needs for public spending more generally? We return to that issue below. Given these measurement and conceptual problem, perhaps this could be thought of as just another argument for equalizing resources at less than 100

percent. That involves judging whether the cost of obtaining resource revenues are systematically more than the costs of obtaining other revenues, and that has still to be demonstrated.

Exhaustibility arguments

Boessenkoel (2001) has argued that resource revenues do not represent net fiscal capacity of the government because they are offset by a loss in the value of the underlying asset. This leads him to argue that natural resources ought not to be equalized at all, a position that may be found in the most recent election platform of the federal Conservative Party. This argument is parallel to the argument that the cost of obtaining resource revenues is neglected in the existing equalization system. It seems to be based on an analogy with financial accounting principles, whereby the costs of using depletable assets can be thought of as the extent of depletion in a given period, analogous to the costs of depreciable assets being depreciated. However, in the case of a firm, the depletion costs are a way of costing an asset whose acquisition involved a cash outlay up-front. In the case of natural resources owned by a province, these can be thought of as a gift of nature made available without cost to the province. In these circumstances, the rents obtained from using the resource, even if the resource is depleted in the process, represents a free source of funding for public services and ought to be treated as such. It seems hard to argue that if an entity gets a windfall gain, that windfall should not be taxed at least as heavily as earned income.

Federal affordability

An argument that presumably accounts for some of the history of preferential treatment of natural resources is that, unlike with other provincial revenue sources, the federal government does not have direct access to resource revenues. Given that natural resources are responsible for considerable fiscal disparities, this makes it expensive for the federal government to finance equalization out of its general revenues. This argument is one that cannot easily be evaluated from the point of view of principle. It is essentially one of budgetary affordability. Presumably the same argument could be applied more

generally to the equalization system as a whole. Once one moves away from the principle of full equalization, there is no natural place to stop.

It should be noted that applying this argument specifically to natural resources can be a bit misleading. The federal government can and does obtain a substantial share of public resource revenues. A recent federal discussion paper indicated that roughly 25 percent of public revenues from each of mineral wealth and oil and gas accrue to the federal government (Finance Canada, 2003). There is no reason in principle why the federal government could not increase that. Indeed, as documented in the Mintz Report (Finance Canada, 1998), the resource industries are among the most generously treated by the business tax system. For example, the federal government could obtain more resource revenues by revising the provision allowing for deductibility of provincial royalties and mining taxes. This is not to say that such a move would be politically feasible, only that the issue of affordability is not one of principle.

The upshot of this discussion is that there is no compelling case in principle for treating resources preferentially in the equalization system. On the other hand, one may be persuaded that attention should be paid to the provincial property rights argument. Even so, that does not lead to an explicit argument for a particular proportion of resource revenues that should be equalized because one is in the end trading off one principle against another. The Economic Council of Canada had argued that if full provincial ownership rights of natural resources were recognized by the equalization system, that would be compatible with equalizing roughly 30 percent of natural resource revenues (on the grounds that this was roughly the federal tax rate that should be paid on resource revenues implicitly owned, but not taxed, by provincial residents). They would regard this as the absolute lowest bound on preferential treatment. As argued above, that is a tenuous argument that treats provincial ownership of natural resource revenues differently from ownership of, say, income tax revenues, which are also 'owned' by the province. Moreover, one is always left with an unattractive consequence of giving preferential treatment to resource revenues. Among the have-not provinces, the endowments of natural resources vary. To give special treatment to resource industries puts at a disadvantage those provinces with relatively little natural resource wealth, which is a violation of fiscal equity and arguably the commitments in section 36.

4.3 Heterogeneous Provincial Tax Policies

The RTS approach relies on the use of a common tax base for determining entitlements. Moreover, it presumes that a single national average tax rate captures average provincial practices. However, if the provinces choose very different tax bases or if they use a multiple structure of rates, the application of the RTS becomes ambiguous, and solutions are necessarily arbitrary. Three general approaches might be taken. In the first, a representative tax base is defined that captures common features of those used by the provinces. Then, this tax base is used along with a national average tax rate to determine entitlements for all provinces. This approach is feasible if provincial bases are not too different, so that estimates of the size of the representative base in each province are possible, and if provincial rate structures do not vary much from proportionality.

For some tax bases, these conditions are not satisfied. Indeed, one of the purposes of decentralizing revenue-raising authority is to allow the provinces to select different tax policies. Provincial income tax systems have systematically progressive taxes, even if they have similar bases. It can be shown that, from the point of view of fiscal equity, too little equalization would occur for the have-not provinces if a single national average tax rate were applied to an aggregate personal income base. Natural resource tax/royalty regimes can vary from province to province and resource to resource. The two remaining approaches deal with these situations. One is to stratify the tax base to take account of the fact that different average provincial tax rates apply to different segments of the base. Thus, the income tax base is stratified into income classes and a different national average tax applied to each. Stratification is essentially equivalent to creating more revenue categories for the purpose of applying the RTS system. The natural resource bases are stratified according to type of resource. Stratification adds apparent complexity to the system in the sense of multiplying the number of revenue sources used in the equalization calculation, but improves its accuracy. I would argue that this added complexity is minimal. It does not add any complexity with respect to understanding the basic formula for the RTS since the same formula is applied to each stratum.

For some tax bases, there may be no natural way to stratify. An alternative approach for taking account of heterogeneity in provincial tax policy is to adopt a *systems approach*.

In this approach, entitlements are calculated separately for all provinces using each province's tax system. These are then aggregated by applying a weighted average of entitlements using as weights the share of national revenues collected in each province.

None of these solutions is perfect, reflecting the fact that there is no natural way to measure fiscal capacity when provincial tax systems are heterogeneous.

4.4 Heterogeneous Intra-Provincial Tax Policies: The Case of Property Taxes

Provinces may actually apply different tax policies in different regions within their jurisdictions. This would be the case, for example, when tax policies are decentralized to local levels. The main point in case is property taxes, which is one of the largest revenue sources and which raises conceptual issues in its own right. The property tax is otherwise well suited to the RTS approach. All provinces now impose property taxes on the basis of market values, with the rates typically differing for residential versus commercial or industrial property. Moreover, valuation techniques are very similar across provinces, so the prerequisite of a common base is satisfied for property taxes.

Two related issues complicate matters, which may explain why the RTS system has never been systematically and completely applied to property taxes. The first is that there is no uniform property tax rate within provinces: different rates apply across municipalities with tax rates tending to vary inversely with average property values. The second issue is whether property values reflect the ability to raise property tax revenues. The straight application of the RTS system using a single national average tax rate for a given class of property (e.g., residential, commercial, etc.) would be justified if raw property values reflected the ability to raise revenues. Whether that is the case depends on the source of the differences in property values.

Consider the case of residential property. Roughly speaking, there are three main sources of differential property values across communities. One is the size and quality of housing. If one community has higher-income taxpayers or larger families, or if its citizens have a taste for larger houses, property values will reflect that. Differences in property values for

this reason would reflect differences in the ability to raise revenues, exactly as communities with a higher proportion of smokers or drinkers would have greater ability to raise revenues from taxes on tobacco or alcohol. Another difference is the amenity value of housing. If houses have higher values because they are located in more attractive areas or because local amenities are nicer, residents are obtaining an offsetting value for the price they pay for their housing. They are effectively purchasing a higher quality product, akin to the purchase of expensive cars which affects the value of consumption sales. This too can be viewed as a source of differences in the ability to raise property tax revenues. The third source of differences in property values consists in pure scarcity. If properties are more expensive simply because land is scarcer where people must reside, there is no offsetting benefit associated with the higher property value. Higher property values reflect simply a higher cost of living. On fiscal equity grounds, this does not give rise to differences in the ability to raise revenues. Since it is difficult to know what proportion of property values is attributable to scarcity as opposed to reflecting benefits received by households, equalization becomes ambiguous. To the extent that one thinks scarcity is relevant, equalization on the basis of differences in property values should be reduced.

Higher property values might also give rise to more costly public service provision. It would be relevant to take this into consideration if equalization were also based on public expenditure requirements. But, to take this source of cost differential into account without taking other expenditure factors, such as wage costs or needs, into account would be arbitrary and would discriminate against provinces with lower relative property values.

There is no easy answer to the proper treatment of property taxes given that different rates apply across communities within provinces. Two approaches to equalization of property values might be considered reasonable to the extent that one viewed scarcity as a source of the differences. One is simply to apply the RTS system to the market values of properties, but to reduce these values according to some proportion deemed to reflect the importance of scarcity. Whether the same proportion should apply in all provinces is a matter of discretion. The federal government adopted this approach in its 2004 budget, but gave significant preferential treatment to British Columbia. Presumably the

justification for this was that scarcity was more important in that province than elsewhere, though the case was never made.

The alternative approach would be to adopt a stratified approach whereby communities of comparable property values are placed in the same category for the purpose of calculating entitlements. This would have the merit of reflecting the fact that provinces actually do have systematically different tax rates across communities of different sorts. On the other hand, if the differences across communities reflect differences in the quality of housing as opposed to scarcity, these would be undone by stratification. Put differently, if provinces had full property tax equalization systems across localities, the tendency for property tax rates to differ systematically with property values would not be as pronounced.

All of this discussion of the equalization of property tax revenues begs the question of whether equalization should encompass only provincial revenues used to finance provincial services, or whether local services is a necessary element of the equalization calculation. In fact, the distinction between local and provincial revenues and services is blurred. Many provinces have province-wide property tax systems, and provide substantial transfers to local governments. Some of the services provided by local governments in some provinces are provincial in nature, such as welfare services or education. And, provinces have more or less sophisticated systems of equalization among their local governments. These interdependencies, and particularly the responsibility of provinces for inter-locality equalization, lend support to the argument that equalization should be based on provincial and local fiscal capacities combined.

4.5 Needs and Costs

A literal reading of section 36(2) combined with the responsibilities set out in section 36(1) would suggest that in principle equalization should also take account of the expenditure side of provincial budgets. If the per capita expenditures required to provide comparable levels of public services differed systematically across provinces, one would like to take account of that to the extent that it is 'reasonable'. However, as mentioned above, equalization on the expenditure side is significantly more problematic than on the revenue side for a few reasons.

The main problem is that, unlike with revenue equalization, the notion of comparable levels of public services is inherently very difficult to measure. The reason is that services are provided by the public sector are extremely heterogeneous and can differ both by type and quality. Moreover, since they are provided free of charge, there is no market mechanism that could be used to attach values to them. In a federal system, it is to be expected that provinces will exercise their discretion to reflect the circumstances and preferences of their constituents, and this will result in different mixes of public services provided. At best, measures of public services will be based on the inputs that go into producing the public services, but not the quality of services provided. Moreover, the quality of services is likely to differ considerably across locations within a given province.

Another problem is that expenditures required to provide comparable levels of public services will depend both upon need and cost. In the case of need, the principles involved are relatively straightforward, at least setting aside quality and cost issues. Most public services are targeted at particular identifiable groups. If one can come up with an aggregate measure of the expenditures required to provide a common level of, say, education expenditures to school-age children, the analog of the RTS system could be applied. Expenditure needs for education would be the number of school-age children (possibly disaggregated further by age or other characteristics) multiplied by a national average cost of providing education services. The same principle could be applied to other major services, such as health care, social services, disability pensions, and so on. (In fact, in the case of transfer programs, the analogue of the RTS system is quite close, and a stronger case could be made for equalizing these as compared with public services.) However rough, incorporating needs into equalization to reflect differences in the demographic make-up of provincial populations could be done.

The problem is that the cost of providing given levels of public services (measured in terms of inputs, of course) will likely differ both across provinces and within. Wage costs will differ, and these will reflect both differences in the quality of labor used to provide public services and differences in the cost of living. Economies of scale will apply in urban areas, and costs of transportation will affect remote areas. Equalizing on the basis of these differences will be problematic, both because of measurement problems and

because of the fact that on efficiency grounds one will not necessarily want the same level of public services to be provided to all persons regardless of the costs. There will be an equity-efficiency tradeoff that will temper the extent of equalization that might be desired.

An option to deal with cost differences across types of communities would be to adopt the analogue of the stratified approach. Expenditure equalization would strive to equalize the costs of providing a given level of service to given demographic groups in comparable communities across provinces. This will, however, only be a compromise approach. Differences in quality will be ignored, and these quality differences may bear a close relation to the wage costs associated with providing public services. Stratification will partly undo these differences in quality.

Given these difficulties in equalizing on the expenditure side and the possibilities for measurement errors, it is natural to ask whether it is worth doing so. Proceeding piecemeal and equalizing only on the basis of only one factor, such as need or differences in wage costs, may well be misleading. It might be that need and costs considerations cancel out. Provinces with a high proportion of the population requiring public services may also have a lower cost of delivery. We have little evidence one way or the other, and unlike with revenue equalization, we have no prior expectations. In these circumstances, one can argue that expenditure equalization should not be a priority since it is bound to be incomplete and possibly even perverse.

4.6 Population as an Indicator of Need

Even without the explicit incorporation of needs and costs into the equalization formula, a revenue-based system must nonetheless implicitly use some benchmark for expenditure requirements. In the RTS system, the implicit assumption is that expenditure requirements are equal per capita. That is, under full revenue equalization each province would have the capacity to raise equal amounts of revenue per capita. There are some reasons why that presumption might be questioned.

The first is that the per capita costs of providing public services may vary systematically with the population level. There may be economies of scale because of the sizeable

amount of fixed costs associated with operating a government and managing its programs. Small provinces would then have higher per capita costs than larger provinces, at least as long as diseconomies of scale or higher wage costs do not offset that for larger provinces. Unfortunately, there is relatively little evidence on scale economies at the provincial level. Moreover, even if there were, it may not be reasonable to apply these cost-based arguments selectively without considering other elements of cost or need.

A second argument has been made by the recent Royal Commission on Renewing and Strengthening Our Place In Canada (2003). It suggested that provinces whose populations were declining faced costs of adjusting to lower population levels. Therefore, there should be a floor on reductions in equalization attributable to declining population. However, the symmetric argument should also apply. If other provinces experience an increase in population, this too requires an adjustment to changed levels of public service provision. Again, there is relatively little evidence on the effects of changes in population on the costs of adjusting public service levels. In these circumstances, a piecemeal accommodation for the alleged transitional costs of falling population is not justifiable.

A final argument concerns the relevant definition of a province's population for equalization purposes. A province may not be responsible for providing public services to all its residents. For example, many important public services provided to aboriginal Canadians may be financed by the federal government rather than the province. In principle, the equalization program should take account of this, which could be substantial for some provinces. Similarly, members of the Canadian Armed Forces may obtain many of their services from federally funded institutions, although quantitatively that will be of less importance than the case of aboriginals.

4.7 Debt, Assets and Infrastructure

The ability of provinces to provide comparable public services at comparable tax rates in any period depends not just on their ability to raise tax revenues, but also on their net asset situation. A province that, for whatever reason, has high per capita debt outstanding will also have higher debt service costs. It must impose higher tax rates on that account. Equivalently, provinces whose infrastructure is better maintained will have fewer

spending obligations on that account. A strict reading of section 36(1) might suggest that equalization should compensate for these differences just like it should compensate for differences in demographic composition. However, differences in debt are a result of provincial decisions, and accommodating their consequences through equalization adjustments raises profound implications concerning the principles underlying equalization.

An important principle at stake is that equalization should not be contingent on provincial behaviour. To the extent that it is, adverse incentives will arise which will result in provinces taking fiscal actions in part purely to affect their entitlements rather than for public policy reasons. In the case of debt, if equalization were responsive to the debt levels of provinces, the cost of accumulating debt would be reduced: provinces would be partly ‘bailed out’ from the consequences of their deficit spending. In effect, to the extent that have-not provinces believed that equalization would accommodate their debt, they would face a soft budget constraint. Of course, at any given point of time, the stock of debt is a result of past decisions that cannot be undone. So it might seem natural to treat bygones as bygones and recognize that high debt levels detract from being able to provide comparable public services. However, the problem is that there will then be an expectation that future debt will also be accommodated. To preserve the integrity of the equalization program, it is better to design it so that it is as independent of provincial decisions as possible. It may still be objected that current debt levels may reflect shortfalls in equalization in the past. If that could be documented to be the case—and that would be no simple matter—it is conceivable that one could argue in favour of some accommodation. But, that would have to be done on a systematic basis for all provinces, and it is far from obvious that it could be done in a fair and transparent way.

4.8 The Number of Revenue Sources

The current RTS system includes 33 separate revenue categories and covers virtually all revenues sources used to finance provincial and local public services. This multitude of sources may be viewed as a source of complexity, although as mentioned it is not clear how multiplying the number of sources makes the program more difficult for the public

to understand given that the same basic formula applies in each case. In fact, multiplying the number of sources reduces administrative complexity in the sense that it makes it easier to define and measure representative tax bases.

More generally, there are two issues involved in considering the preferred number of revenue sources. One concerns what revenue sources to include, and the other concerns aggregation of groups of sources.

The scope of coverage

Major revenue sources like income taxes, sales and excise taxes, property taxes, and payroll taxes are fairly obvious candidates for inclusion. A more problematic category involves user fees. To the extent that user fees are simply prices paid to acquire goods and services from the public sector rather than to finance public services, there is little purpose served by equalizing them. Put in terms of the principles of equalization, these revenues obtained by the province simply offset the need for public spending on a one-for-one basis. On the other hand, user fees whose proceeds go into general revenues and which do not give rise to offsetting expenditures can be viewed as pure revenue-raising or rationing devices and are candidates for equalization. They are analogous to excise taxes. Thus, fees for the acquisition of documents from the government (e.g., birth certificates) and public utility charges would be in the former category, while health care premiums, hunting and fishing licenses and park fees would be in the latter. The distinction between these two cases may not always be transparent. University and college fees are a case in point. Unlike health premiums, these fees are paid only by those attending a university or college, but there may not be a marginal cost associated with an additional student at a university. One might want to err on the side of including only those fees that are clearly pseudo-taxes in the interest of simplicity and transparency.

Another difficult category concerns gaming revenues of various sorts. There is little doubt that the proceeds from gaming are like taxes that go towards financing general expenditures (even though some of them are earmarked to charities and other such activities). In this case, the problem is that the base itself is subject to the discretion of provincial governments. If some provinces allow VLTs to varying extents, while others do not, how does one define the base in each province?

A final difficult category concerns subsidies. From an economic point of view, subsidies are simply negative taxes, so one might argue that they should be treated as such for equalization purposes. If so, they would give rise to negative entitlements for provinces with bases below the average (since the need for subsidies is lower). Creating a category for subsidies would, however, be difficult since there may not be a readily available representative base to which subsidies are applied: different provinces may subsidize very different things.

A particular category of subsidy that has received some attention is public hydroelectric utilities. Part of the rents of these firms is passed on to consumers in the form of lower prices. It has been argued that the magnitude of these dissipated rents is comparable to rents from oil and gas, but since they are not collected by the public sector they are not equalized. This is conceptually a difficult issue. The principle of the RTS approach might suggest that they should not be equalized. The RTS system is based on provincial practices, and if the provinces choose not to collect revenues from these public utilities, the representative national average tax rate would reflect that. On the other hand, the consumers in the provinces are presumably getting some benefit from the subsidized prices. In the case of firms, this would show up as an increase in income, which is subject to equalization so no inequities are involved. However, in the case of households, the subsidized prices yield a benefit that is not taxed, and to that extent equity is violated. One might argue that on those grounds, horizontal equity would require the benefit of these subsidies to households ought to be taken into account in the equalization system. There would be difficult measurement problems, both with respect to measuring the extent of the subsidy itself and with respect to measuring what part of it went to households.

Finally, the number of categories could be reduced simply by dropping some smaller ones and retaining the most important ones. This might be justified if smaller categories not only yield relatively little revenue, but also are treated very differently by different provinces.

Aggregation of tax bases

The number of tax bases could also be reduced by amalgamating related bases. Examples might be in the area of natural resources. It is not clear what would be gained by this, except in terms of notional simplicity, which as mentioned is debatable. Moreover, aggregation brings with it two additional problems. One is that it may be difficult to define a representative tax base to be applied to heterogeneous components of an aggregated base. If one is willing to violate the principle of using provincial practices as the basis for the RTS, a base such as cash flows could be used for resources, as discussed above. In fact, aggregation almost always compromises the principle underlying the RTS system that it should reflect the actual tax practices of the provinces. That is, aggregation requires not only that a common base be defined, but also that a national average tax rate be used. To the extent the provinces choose very different tax rates for different bases, aggregation will blur that distinction.

One other effect of aggregation that should be noted is that it will automatically reduce average tax-back rates. More generally, the more disaggregated are revenue sources used for equalization, the higher will average tax rates be for any given sources, since the more concentrated will be the shares of a disaggregated base amount provinces. This indicates that the concept of average tax-back rates is at least partly a statistical fiction.

In the extreme, aggregating will lead to a single base consisting of the sum of all revenue sources in the province. (There would be technical problems with aggregating all tax bases since some are defined in value terms, while others, such as excise tax bases, are in quantity terms. The latter would have to be converted to value terms.) This would be the most general form of a macro formula. When viewed in these terms, it is not clear what a macro formula would accomplish. By aggregating all tax bases into a single tax base for RTS purposes, the relative abilities to raise revenues from different tax bases would be obscured: a single common national average tax rate would be used despite the fact that provinces choose very different tax rates and rate structures for different tax bases. The simplicity achieved would be apparent only since the same basic RTS formula would still be used. There are other arguments used to promote a macro formula, which we defer until later.

4.9 Variability of Entitlements

While the main purpose of equalization as set out in section 36(2) is to foster fiscal equity among Canadians in different provinces, it has also been recognized as an insurance device whereby the federal government insures provinces against changes in their ability to raise revenues. Indeed, the formula would seem to incorporate an insurance element directly since a province's entitlements fall and rise with rises and falls in its tax bases. However, a province's entitlements also vary with the standard tax base—in which Ontario plays a dominant role—as well as with the national average tax rate. As studies have shown, the result is that equalization can actually cause provincial fiscal capacities to become more variable rather than less (Boothe, 2002; Boadway and Hayashi, 2004; Smart, 2004).

There are various ways to deal with this problem without compromising the fiscal equity role of equalization. One simple way, adopted in the 2004 federal budget is to apply a moving average to entitlements to smooth them out. This is a reasonable and effective response to the problem. A slightly more sophisticated approach that would retain the insurance property on a year-by-year basis would be to apply the moving average only to the standard tax base. However, since final entitlements are not reconciled in the year in which they are initially paid, it is not clear that attempting to insure provinces yearly is fruitful.

An extreme way of reducing variability in equalization is to fix the total amount of equalization entitlements and allow it to escalate at some predetermined rate. The procedure, which is part of the new regime, brings certainty to the federal government, but does not insure provinces against aggregate shocks that accrue to all provinces in a given year, but that might be insurable over time. Provinces are left to self-insure against those.

There are other problems with imposing a discretionary amount on total equalization entitlements. One is that the discretionary amount may not correspond with what would be required to finance a formula-based approach when the formula reflects the amount of equalization that might reasonably satisfy the commitment of section 36(2). On the other

hand, since there is no natural way to determine the appropriate extent of equalization, it is not clear that a formula-based amount is necessarily superior to a discretionary amount. The problem is more likely to be one of fitting a formula-based approach to horizontal balance into the straightjacket of a discretionary total.

The other problem with a discretionary approach, and arguably the more serious one, is that discretionary approaches always leave open the possibility of unexpected discretionary changes. The experience with social transfers is ample evidence of that. On the other hand, the ability of the federal government to change the amount of transfers unilaterally and subject to discretion is not at question. Moreover, the existence of a formula-based system has not precluded the federal government from making discretionary changes to various elements of the formula as the evidence of the past couple of years has made evident. Nonetheless, a formula-based approach does lend itself to transparency concerning the determination of entitlements.

5. Implications for the Panel's Advice

There is no single ideal equalization system. Reconciling the conflicting objectives, caveats and feasibility constraints just discussed with the objectives of section 36(2) requires judgments about the relative importance of alternative objectives, judgments about the feasibility of alternative approaches, and judgments about the importance of simplicity and political consensus. Nonetheless, some defensible proposals must be made, and the purpose of this section is to outline a broad approach that reflects my own judgments. The conceptual approach taken is to treat the commitment of section 36(2) as the ideal to which the equalization system should aspire, partly because this is enshrined in the constitution and partly because it accords with sound economic principles of fiscal equity and efficiency. Deviations from those principles must be reasonable and have convincing justification. Even then, the exact parameters of the system—such as the standard to which the have-not provinces should be equalized or the proportion of resources subject to equalization—necessarily remain open to discretion.

The following would be the key elements of my preferred equalization system.

Based on provincial fiscal choices

The application of section 36(2) requires that one have a view as to what are reasonably comparable levels of tax rates and public services. The obvious way to determine that is by appealing to actual provincial practices. The determination of reasonably comparable levels of taxation and reasonable comparable levels of public services should be based on the mix of tax sources and the levels of expenditures that the provinces actually choose for their residents. Provided these do not differ too much across provinces, this approach is feasible.

Revenue equalization should use the RTS approach

With respect to the revenue side, the RTS approach should be used since it is a reasonable means of determining the ability to raise revenues at reasonably comparable tax rates. The macro approach, which relies on a single indicator of fiscal capacity, does not accurately reflect the ability of provinces to raise revenues since it takes no account of the mix of tax bases facing provinces, and the differential ability to raise revenues from various sources. Perhaps most important, it cannot take account of the rate structures that provinces use in the income tax system.

In fact, the standard case for the macro approach misconstrues the purpose of equalization. The argument for equitable redistribution among provinces is based on an analogue with redistribution among individuals (Barro, 2002). The latter is based on the notion of ability-to-pay, whereby an index like income reflects an individual's ability-to-pay, or their well-being. No account is taken of the way in which the individual chooses to use that income. The macro approach imports the ability-to-pay concept to apply to inter-provincial redistribution. In my view, this is a false analogy. The ability-to-pay was devised to deal with vertical equity: how to redistribute fairly from better-off to less well-off individuals. Its role is to provide guidance for interpersonal redistribution. The purpose of equalization is not to achieve vertical equity. That is, it is not to redistribute private income. Instead, its purpose is to ensure that comparable public services can be provided to comparable persons in all provinces (i.e., horizontal or fiscal equity). For that purpose, an index of well-being is an inaccurate measure of the ability of provinces to

finance public spending. The RTS system is better suited to that task, despite the fact that it may be more complicated.

The same logic supporting the RTS system would also support both the comprehensive inclusion of all revenue sources and the ten-province standard. This will ensure that the equalization system give a broad indication of the ability of provinces to raise comparable levels of revenues. At the same time, there may be measurability considerations that support eliminating small revenue sources, especially if they are of relatively little import for the pattern of entitlements. And there may be measurability problems with major revenue sources, like natural resource revenues and property taxes, which must be resolved along the lines suggested earlier and discussed again below.

Expenditure equalization too ambitious

While full equalization would require both revenue and expenditure equalization, conceptual problems surrounding the latter imply that its accuracy is unreliable, and it is reasonable to exclude it. In principle, expenditure equalization entails taking account both of needs for various public services as well as their costs of provision. The latter will be affected not only by wage costs but also by economies of scale, transportation costs and costs associated with delivering public services in remote locations. More important, comparability of levels of public services necessarily involves estimation of the quality of such services, and that is notoriously difficult to achieve. In principle, these issues could be accommodated by taking a stratified approach. But, it is not clear that provincial regions could be stratified in such a way as to have truly comparable strata of service provision. There are simply too many dimensions along which communities differ. Moreover, provincial decisions about the detailed mix of public services to provide can be quite different (even though the broad budgetary costs might be comparable).

It may be that with further study, the methodology could be devised and perfected for equalizing expenditures, perhaps along the lines used in Australia. That kind of study may be well worth doing, either within the Department of Finance or in a permanent advisory commission, should one be set up. But, given our current state of knowledge, it would be premature to advocate expenditure equalization. If it were the case that the direction of effect of expenditure equalization was apparent a priori, a stronger case

might be made. But the direction of effect is not apparent. On the contrary, it might well be the case that needs and costs work in opposite directions. Given that and given the difficult problems of measurement and possible inaccuracies, not only would it be unwise to equalize on the basis of expenditures, it would also unwise to introduce expenditure equalization on a piecemeal basis, for example, using elements of needs or of costs. This may well result in entitlements for expenditure equalization going in the wrong direction.

The level of equalization

To what standard should the have-not provinces be equalized? This is one of the three most vexatious questions facing the system (the others being the issue of resource revenues and property taxes discussed below). A full equalization system would mimic a net system in which both the have-not provinces are equalized up and the haves equalized down, so that all provinces have the same ability to raise revenues. In principle, this could be accomplished by a gross system in which the size of federal-provincial transfers (the vertical fiscal gap) is large enough to ensure that negative entitlements to the have provinces do not reduce their transfers to zero. The current system in which equalization and the social transfers are combined could go some way toward that, but that would subvert the role of social transfers as a component of social policy, which can be taken as a reflection of the principles of section 36(1), the companion to section 36(2).

The current system accomplishes part of the task of full equalization by equalizing the have-not provinces up to a standard determined by applying national average provincial tax rates to five-province standard bases. A full net system would use national average tax rates and a ten-province standard, but under a gross system this would result in under-equalization from a full equalization point of view. It would equalize horizontally among the have-not provinces, but not between the haves and the have-nots. In fact, under a gross system, if one is not striving for full equalization, there is no natural level of equalization that is optimal. The national average seems convenient since it is easily understood and would be correct if it applied both the haves and the have-nots. But since it is not, it is little more than convenient.

One could argue that with a gross system, the standard of equalization should be higher than that achieved by applying a ten-province standard using national average tax rates.

One could adopt a smaller number of top provinces as a standard, or one could use a higher standard than national average tax rates. Either of these would reduce the vertical imbalance between the have and have-not provinces. How far one would want to go in that direction becomes a matter of judgment as to what amount of equalization is 'reasonable'. In any case, the current system of using a five-province standard is clearly inadequate if one thinks that equalization should be at least to a national average.

The fact is the choice of the level of equalization in a gross system is in the end a political choice and cannot be based on economic reasoning. Full equalization might entail an overall level of transfers, or vertical fiscal gap, that some would regard as too centralizing. In making that judgment, it is worth bearing one important factor in mind. Given the expenditure responsibilities of the provinces, which can be taken as immutable, the more decentralization there is on the revenue side, the greater will be revenue-raising disparities, and the less able will be the equalization system to deal with them. In that sense, there is an intimate connection between vertical and horizontal imbalance.

Natural resources

The problem of equalizing natural resources has been ongoing, and various approaches have been taken to dealing with it, none of which have involved absolutely full inclusion. Either a proportion of resources have been excluded (e.g., 50 percent), or resources have been fully included but the impact attenuated by adopting a five-province standard. At the same time, some ad hoc changes have been introduced to address particular cases. These include the generic solution, the offshore accords, and recent special provisions for Saskatchewan. The ceiling and floor provisions could also be viewed in part as addressing problems arising out of the volatility of resource revenues and their implications for either certain have-not provinces or the federal government. All of these special exceptions to the RTS tend to favour particular provinces.

It is hard to discern from this pattern any broad principles that can be taken to apply to natural resources. In particular, we do not learn very much about the problem of conflict between the commitment of section 36(2) and provincial ownership of resources. On the contrary, the current system is by and large designed as if section 36(2) takes precedence since 100 percent of resource revenues are equalized for the have-not provinces. It is true

that offshore oil and gas revenues are protected by a discretionary arrangement, but it is not clear that that constitutes a compromise between section 36(2) and provincial ownership: these resources are offshore so do not fall within the usual definition of provincially owned resources.

If resources are to be treated preferentially, it is important to be clear about the reason for preferential treatment. Two perspectives can be taken about this. One is that preferential treatment reflects a concern by the federal government for affordability. This seems to have been the motive behind moving to the five-province standard, and this is reinforced by the fact that, with the exception of the special deals, natural resources receive no preferential treatment among the have-not provinces. The second is that preferential treatment represents a view about provincial property rights over natural resources, or perhaps about incentive effects. In this case, preferential rules should extend to the have-not provinces. Depending on which view one takes, policy advice would differ.

Consider the latter first. If one takes the view that there is a case for preferential treatment of natural resources based on property rights or incentives, the appropriate remedy would be to reduce the proportion of resource revenues subject to equalization across the board. It is not at all clear what the appropriate proportion would be. Historically, there is a precedent for including 50 percent of natural resource revenues (although the motivation may well have been based on affordability rather than property rights). But, there is also a precedent for including 70 percent, as in the generic formula. Indeed, there is a precedent for including 100 percent as in the current system.

There are some problems with adopting an across-the-board reduction in the proportion of resources equalized. One is that it is not clear that provincial ownership of natural resources is any more compelling than provincial ownership of any of its tax bases. Nor is it clear that the incentive argument is compelling. Another is that special treatment of natural resources unfairly favours those have-not provinces that have abundant natural resources over those that do not. This could be partly, though not fully, addressed by calculating any preferential treatment 'below the line', that is, by calculating entitlements for all provinces as if resources were fully included, and then giving preferential treatment afterwards.

One suspects, however, that the real argument for preferential treatment is affordability by the federal government. If so, a more appropriate way to address the issue is by focusing on the level to which have-not provinces are equalized rather than giving special treatment for resources. That would at least maintain horizontal balance among have-not provinces at the expense of letting the vertical balance slip (especially to the extent that much of the affordability problem comes as a result of Alberta's oil and gas wealth).

In the absence of a compelling argument the other way, my preferred option would be as follows. Accepting that a gross system is the norm and that that is unlikely to be changed, the closest to a full equalization system we can achieve is to move to a ten-province standard and include all resources at 100 percent. That would ensure that all have-not provinces would be able to raise the national average level of revenues at national average tax rates. There might remain significant vertical imbalance between the have-nots as a whole and the haves. If that could be reduced, all the better, though that seems unlikely. The imbalance is mitigated to the extent that the federal government maintains its other main transfers, the CHT and CST, in an equal per capita form, which themselves constitute a limited form of net equalization.

There remains the problem of devising suitable measure of resource revenue bases for equalization purposes. That is an important issue, but probably a technical one that can be addressed by the relevant officials.

Some authors (e.g., Courchene, 1984) have suggested that a dual equalization system be devised consisting of a net system for natural resources, perhaps at a reduced rate, and a gross system for all other revenue sources. This would certainly deal with the affordability problem, at least assuming that the net system was in fact financed by contributions from the resource-rich provinces. But, problems would remain. It is by no means clear that all provinces would buy into such a system, at least unless the rate of resource equalization were quite small. Moreover, if the rate had to be lowered enough to make such a system voluntarily feasible, the rate of inclusion would likely to be too small from the broader point of view of fiscal equity and section 36(2). Also, given that only a proportion of resource rents would be equalized, the problem of horizontal imbalance

among the have-not provinces would remain: those with abundant resources would be favoured.

Discretion versus formula

Ideally, an equalization system should be based on a formula, although there is no way that a government can be committed to abiding by it. A formula does have the benefit of being transparent and open to scrutiny.

There have been two particular sorts of discretionary elements in recent years. One is the use of special provisions that affect the equalization treatment of particular provinces (whether implemented within the formal equalization system or not). Examples of this include the offshore agreements for Nova Scotia and Newfoundland and Labrador, both the offshore accords themselves and the more recent extraordinary deals, as well as special provisions in the recent federal budget that applied especially to British Columbia and Saskatchewan. Whatever the merits of these special deals might have been, they undermine the integrity of the equalization system by apparently favouring some have-not provinces at the expense of others. Ideally, these kinds of special deals should be avoided in favour of a formula-based approach.

The second type of discretionary element is the setting of a fixed limit on aggregate equalization entitlements. Fixing the size of the program has a couple of potential disadvantages. First, although the intent might be to bring certainty to the level of entitlements from a provincial perspective, it could actually have the opposite effect by increasing the possibility that the discretionary limit will be changed unexpectedly in response to short-run budgetary or political pressures. There are other preferable ways of reducing variability of entitlements under a formula-based system, such as using the moving average process that had recently been introduced.

Second, the discretionary amount will not typically correspond with the size of the program that would emanate from what might be regarded as a 'fair' program, such as a ten-province standard program at national average tax rates (or whatever standard is chosen as fair). Setting a discretionary limit would require the standard being set to fit the

amount of funding available, and that standard would have to change from year to year to fit the budget.

If the Panel must be bound by a discretionary limit, one possible approach is as follows. The standard could be fixed, and entitlements according to that standard calculated. These could then be scaled down to fit the budget. My preferred manner of scaling would be to use an equal per capita method. Thus, if the calculated entitlements were less than the standard—as seems likely to be the case if a full ten-province standard were chosen—entitlements of the have-not provinces would be scaled back on an equal per capita basis so that the budget is satisfied. This may well result in one or more provinces' entitlements falling to zero. This procedure retains horizontal balance among the have-not provinces when judged by the ten-province standard.

Debt service

The argument for taking debt service requirements into account in calculating equalization entitlements should be resisted. This would introduce adverse incentives into the program by reducing the costs of incurring debt. Moreover, it would involve introducing expenditure needs into the equalization system on a selective basis.

By the same token, equalization entitlements should not be conditioned on the provinces fiscal behaviour. Some observers have suggested making equalization payments conditional on paying down provincial debts. This would violate the values of decentralized decision-making in the Canadian federation in a way that is not justified by the usual spending power arguments.

Property taxes

The equalization of property taxes raises difficult issues of the measurability of revenue-raising capacity. Account should be taken of the fact that different tax rates apply across municipalities with different average property values. The difficulty arises because of the fact that the differences in average community property values can arise for very different reasons, some of which call for equalization, while others do not. Nonetheless, the use of a modified version of the RTS system is reasonable. Indeed, some provinces do so within their borders.

The system should use market value assessments for the base for both residential and business property taxes. These are the bases actually used by all provinces, and the methods of assessment are comparable. To deal with the fact that there is no uniform property tax rate within provinces, a stratified approach could be used. Communities could be stratified into categories according to their average property values and each stratum could be equalized by RTS methods. The Department of Finance has done some preliminary calculations along these lines and shown the method to be feasible.

If the stratified approach is considered to be too difficult to apply, a second-best method would be to use a variant of that introduced in the 2004 federal budget. Instead of stratifying, a single common base would be used for each of residential and commercial properties. However, only a proportion of market values would be used, presumably the same proportion in all provinces. This would be an imperfect way of taking account of the fact that a proportion of property values may be due to scarcity and therefore should not be equalized. Unfortunately, it is difficult to know what that proportion is, and how it might differ across provinces.

6. Final Remarks

It is worth stating once again that there is no unambiguously correct equalization system. Even the choice between the RTS approach and a macro alternative is judgmental. The RTS is far from perfect. In particular, there are instances in which tax bases actually used might not accurately reflect revenue-raising capacity, especially with respect to property taxes and resources. One can see why, on those grounds, one might opt for a macro system. However, a macro system is problematic since it fares even worse as an indicator of the relative ability of provinces to raise comparable amounts of taxation. In my view, the RTS approach is the best of the available alternatives provided it is suitably structured to account for measurability problems. (For more detail, see Boadway, 2002).

The issue of the extent of equalization is also a difficult one. As a purist, I would prefer the system to come as close to complete as possible. The current system is far from that. Moreover, it cannot come close to full equalization given the strictures on the permissible aggregate budget. In these circumstances, the system should be designed in a way that

does the most for those provinces least able to raise revenues, including those with no access to bountiful natural resources.

Finally, nothing has been said about the need for a permanent advisory commission. I am inclined to favour such a body, while recognizing that this is an institutional question that goes well beyond economics. The advantage of such a body would be to make the system more transparent to the public, and to subject to some public scrutiny changes in the system. The current system leads to decisions that are taken after consultations among governments, but with little public input. As well, decisions tend to be heavily influenced by current budgetary concerns with the result that longer-term implications of changes to federal transfers seem not to be given due weight. To be useful, the commission should advise on the entire system of federal-provincial fiscal arrangements, including the transfer system, tax harmonization and issues concerning both the social union and the economic union. Moreover, both levels of government should be represented.

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Addendum to

Evaluating the Equalization Program

The purpose of this Addendum is to explore the implications of alternative standards of equalization under the RTS. The following property of the RTS system facilitates the comparison of alternative standards:

Given the number of tax bases included in the RTS, moving from any one standard to another entails equal per capita changes in entitlements for all provinces.

To see this, consider the formula determining the per capita entitlements E_b^i and E_b^j from a given base b for any two provinces, i and j :

$$E_b^i = \bar{t}_b (\bar{B}_b - B_b^i), \quad E_b^j = \bar{t}_b (\bar{B}_b - B_b^j) \quad (1)$$

where B_b^i is the per capita tax base in province i , \bar{B}_b is the standard base and \bar{t}_b is the national average tax rate on base b . \bar{B}_b could be based, for example, on the five-province or the ten-province standard. Subtracting one entitlement from the other, we obtain:

$$E_b^i - E_b^j = \bar{t}_b (B_b^j - B_b^i) \quad (2)$$

Thus, the difference in per capita entitlements from this revenue source is independent of the standard used. Of course, this assumes that the same national average tax rates are used under each standard. The same principle applies for all revenue sources, so *the difference in aggregate per capita entitlements is independent of the standard used.*

This has some rather profound implications:

1. As one moves from the current five-province standard to a ten-province standard, per capita entitlements are adjusted by equal amounts for all provinces. In principle, this could go either way, though apparently per capita entitlements are higher under the ten-province standard.

2. As the standard goes up, per capita entitlements go up for all provinces, so some provinces will switch from being non-recipients to recipients.
3. Full equalization would be achieved by adopting a top-province standard, that is, an Alberta standard. In this case, the top province would receive a zero entitlement, and all others would be positive. This gross scheme of full equalization would entail a much higher standard to which provinces are equalized (about \$10,000 per capita) than a full net equalization scheme (about \$6,400 per capita). Since the gross scheme is funded from federal revenues while a net scheme is self-financing, full equalization under a gross scheme would require more federal tax room than a net equalization scheme to be fully equivalent.
4. If one adopted, say, an Ontario standard, Ontario would have a zero entitlement, and there would be some positive and some negative entitlement provinces.
5. In a gross scheme of equalization, anything less than a top-province standard would entail less than full equalization. In these circumstances, one could argue that there is nothing really special about a ten-province standard except that it equalizes all below-average provinces to the national average. Under a net system, the ten-province standard would entail full equalization, but that is not the case under a gross system.
6. Property (2) applies whatever revenue sources are included in the base, even if some are partially included. Of course, if one compares a system with all revenue sources included to one with less than full inclusion, differences will *not* be equal per capita. Thus, the choice of what revenue sources to include, unlike the choice of the standard, has real effects on differences in entitlements across provinces.
7. Note that increasing the standard has the same effect on entitlements as an increase in bloc transfers under the CHS/CST system. The difference is that in the latter case, the increases in transfers go to all provinces, while equal per capita increases from changes in the equalization standard only go to the recipient provinces. The implication of this is that one could move the equalization system closer to full equalization by a revenue-neutral reduction in bloc transfers

accompanied by an increase in the equalization standard. This seems to be an important property, especially where there are very wide disparities in entitlements.

8. If the total equalization entitlement is fixed, relative entitlements could be calculated by formula (2) and equal per capita adjustments made to satisfy the fixed sum. With a fixed sum, it makes little sense to talk about using a five-versus ten-province standard since they give the same relativities. Equivalently, the choice of the fixed sum is comparable to the choice of a standard under the RTS system.
9. Incentive effects will differ slightly under different standards, though the differences are likely to be very small. We can distinguish between base tax-back effects and rate tax-back effects:

- a. Base tax-back: This depends upon whether a province is in the standard or not. From (1), the effects of an increase in province i 's base on its entitlement for the two cases are as follows:

$$\frac{\Delta E_b^i}{\Delta B_b^i} = -\bar{t}_b \left(1 - \frac{P^i}{\bar{P}} \right) \text{ if } i \text{ is in the standard}$$

$$\frac{\Delta E_b^i}{\Delta B_b^i} = -\bar{t}_b \text{ if } i \text{ is not in the standard}$$

where P^i and \bar{P} are populations in province i and in the standard provinces. The differences in these will be negligible if P^i is small relative to \bar{P} .

- b. Rate tax-back: The effect of a change in province i 's tax rate on its entitlement is:

$$\frac{\Delta E_b^i}{\Delta t_b^i} = \frac{\Delta \bar{t}_b}{\Delta t_b^i} (\bar{B}_b - B_b^i)$$

The rate tax-back will be negligible if province i 's tax revenue is a relatively small proportion of national revenue for tax base b .