REVISITING EQUALIZATION AGAIN: RTS VS MACRO APPROACHES*

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INTRODUCTION

Equalization is a very common policy instrument around the world. Virtually all federations have formal equalization systems, with the notable exception of the USA. Many unitary states with multi-level governments have sophisticated equalization systems, such as Japan, the Scandinavian countries, and South Africa. As well, forms of equalization exist between provinces and their local governments. The design of equalization systems differs according to circumstances. Many are based on some variant of a needs-based formula, especially in countries where sub-national governments have relatively limited revenue-raising ability and rely on the system of equalizing transfers to finance their expenditures. The Canadian case is relatively unique in basing equalization on revenue-raising capacity alone. Nonetheless, the principles on which the needs-based approaches are calculated parallels the logic of the representative tax system (RTS) approach. That is, entitlements are calculated according to the amount of money that would be required to finance the representative set of public services at a common set of costs, where the services are those actually provided by the provinces.

There is a large literature on equalization and its economic basis, much of which has been at least implicitly accepted by the academic fiscal federalism community, and which provides one cogent set of principles that are relevant for equalization policy. This literature goes back to the 1950s in the United States, and was developed in Canada first by John Graham in 1964, and in more detail by the work of the Economic Council of Canada culminating in their report entitled *Financing Confederation* in 1982. These principles are completely consistent with the commitment to equalization that is set out in Section 36 of the *Constitution Act*. This literature can and should also inform the debate on the RTS versus macro approaches to equalization. For whatever reason, it has been completely neglected in the background documentation provided for this conference, as well as by many of the recent commentators in the Canadian debate over equalization, including those by academic authors. In my view, the principles of equalization are sound, and ought to be the starting point for any debate about either reforming the RTS system or replacing it with a macro formula. I shall proceed by reiterating the principles, and then use them to draw implications for the choice between an RTS and a macro formula.[1]

* This paper represents reflections arising from reading the documentation circulated by Finance Canada for the meeting on RTS versus macro approaches to equalization to be held in Charlottetown in August, 2001. By way of caveat, these views were not solicited. The main purpose is to ensure that all views of equalization and its rationale are on the table for discussion.

[1] I apologize in advance for not making explicit reference to either the existing literature or to the documentation. Those involved in the debate will be familiar with the sources from which I draw my arguments, and also the ideas about the macro approach which are taken from the documentation provided. For those not familiar with the basic principles, I might refer you to either of the following two documents: Robin W. Boadway and Paul A.R. Hobson (eds.), *Equalization: Its Contribution to Canada's Economic and Fiscal Progress* (Kingston: John Deutsch Institute for the Study of Economic Policy, 1998), 255 pp.; and Robin W. Boadway, "Recent Developments in the Economics of Federalism," in Harvey Lazar (ed.), *Canada: The State of the Federation 1999-2000: Toward a New Mission Statement for Canadian Fiscal Federalism* (Kingston: Institute of Intergovernmental Relations, 2000), 41-78.

PRINCIPLES

It seems self-evident that a prerequisite to considering options for the design of equalization is to have a clear idea of the purpose of the program. This is especially important because some of the principles implicit in the suggestions that have been put on the table in the background documentation are, in my opinion, fundamentally misguided. The principles are also useful because they suggest an ideal equalization system that, although it may not itself be practicable, is useful as a benchmark for evaluating the RTS system and the macro alternatives. Let me proceed by first recounting the principles set out in the constitution, and then turn to the economic principles. The debate will presumably also be informed by arguments of political and institutional feasibility. These are better addressed by those better informed than I am. In any case, in my view, consideration of questions of principle ought not to be constrained by political feasibility. Rather, principles and economic ideals ought to inform the political process.

Many federations have components in their constitutions that guide the design of equalization (again, the USA being an exception). These can take on varying degrees of obligation. In the Canadian case, the constitution sets out principles to which equalization should conform, and these principles apparently have no more than political or moral force. That is, the courts cannot be relied on to enforce them. As is well known, Section 36(2) commits the federal government 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'. These constitutional principles are quite general, and are consistent with various types of equalization systems. But what is notable for our purposes is that they are fully compatible with the economic objectives of equalization. Indeed, if one were writing a constitutional principle based on the economic objectives, it would look very similar to Section 36(2).

The literature on equalization is reasonably large, and parts of it can be both technical and subtle. A brief encapsulated treatment will be presented here, although it may not do full justice to the underlying theory. In a unitary nation, in which all fiscal decisions are taken centrally, there is no need for inter-regional transfers. The central government provides comparable public services uniformly across the nation, and a common tax system applies. The case for equalization is based on the notion that fiscal decentralization, which is a central feature of federations, necessarily entails differential abilities of provincial governments to provide public goods and services at given tax rates. If this situation is uncorrected, the consequence is that different provinces will provide different levels of public services relative to their tax rates. It is worth stressing that it is the levels that are important for equalization rather than the mix. The mix of public services and of taxes across provinces will generally differ as well, reflecting specific local needs, preferences and circumstances, although there may be pressures for harmonization on both the expenditure and taxation fronts. The fact that different provinces take different choices with respect to the expenditure and tax mix may have some policy consequences for the fiscal arrangements. But it is differences in the levels of expenditures relative to tax rates that are of primary concern for equalization. They give rise to two complementary effects, one of whose importance involves a value judgment.

The first effect is so-called *fiscal inefficiency*, that is, the fact that individuals, firms, or economic activity more generally will have an incentive to locate in provinces that can provide given levels of public services at lower tax rates (or higher levels of public service at given tax rates). Technically speaking, the difference between the value of public services received and the taxes paid by a given individual is called the *net fiscal benefit* (NFB). Persons will have an incentive to move to provinces offering higher NFBs. Since differences in NFBs do not reflect productivity differences, such fiscally induced migration will result in a misallocation of resources across provinces. There has been some debate about the magnitude of the inefficiency resulting from fiscally induced migration, virtually all of it concentrating on labour mobility alone. Some have claimed that the order of magnitude of migration responses is simply not enough to generate significant welfare costs. On the other hand, recent unpublished work by Sam Wilson argues convincingly that once one properly accounts for the long-lasting effects of the migration decision, the efficiency costs of fiscally induced migration can be quite large. Some have also suggested that any NFB differences will be capitalized into the local land values of existing landowners rather than accruing to potential migrants. On the surface, it is plausible that some capitalization takes place especially if migration response is elastic, but there is very little evidence on this question. As it turns out, whether there is fiscally induced migration and what is its magnitude are not critical for the equalization debate because, to the extent that migration does not occur, the second effect kicks in.

The second effect is *fiscal inequity*. In my view, it is the more important effect, but also the more controversial and for that reason often discounted. Fiscal inequity is based on the well-established public finance norm of horizontal equity. This norm says that the public sector should treat equally individuals who are in equal circumstances. Fiscal equity is simply the application of this principle to a federal setting. The complicating factor is that now the public sector consists of both levels of government—federal and provincial. The fiscal equity principle is that individuals who reside in different regions but are otherwise identical should be treated comparably by the full public sector, provincial and federal taken together. Applying the principle of horizontal equity to a federal setting has a long history in the literature, and to my knowledge has not been adequately refuted either in the academic literature or in the Canadian policy debate. In fact, in the latter, it has often simply been ignored. Yet it has come to be accepted in international debates about decentralization, and its essence can be found in various federal constitutions.

The justification for fiscal equity is ultimately normative, but the case for it seems to me to be compelling. It is widely accepted that within a single jurisdiction, the principle of horizontal equity should apply: persons of a given real income level should be treated equally. It is also the case that federal tax, transfer and expenditure programs are based on the notion of fiscal equity. The main issue is whether it should also apply to provincial policies applying to otherwise equal persons in two different provinces. To me, the case for fiscal equity is based on the principle of equal treatment that goes to the heart of the meaning of citizenship in a nation. One is entitled as a citizen to be given equal consideration in the fiscal policies of the public sector. The expectation of equal treatment—fiscal equity—is one of the things that distinguishes a federation from an economic union of independent nations. From a technical perspective, fiscal equity is simply a consequence of the idea that all citizens should count equally in society's 'social welfare function'. Fiscal inequity applies whenever NFBs faced by individuals with given real income are different in two provinces. This will be the case when one province is able to provide a given level of public services to its residents at lower tax rates than another province.

It should be stressed that to those who accept it, fiscal equity is but one objective of public policy, alongside many others. As is typically the case in economic policy, objectives can be in conflict, so compromises are necessary. Fiscal equity is no exception, and it is important to identify those objectives with which it does and does not conflict. Unlike with other efficiency-equity trade-offs, fiscal equity does not conflict with fiscal efficiency: both depend on NFBs being equalized across jurisdictions. That is because fiscal equity is based on horizontal equity rather than vertical equity. What it does conflict with is the principle of federalism itself. Federalism is based on the notion that provinces should have discretion to take (among other decisions) fiscal decisions in the best interests of their citizens. While there may be some advantages to having a degree of harmonization of certain types of services and certain types of taxes, and there may be competitive and other pressures for harmonization, there is likely to be some diversity in the mix of public services and taxes chosen in practice. Moreover, this diversity is likely to be greater the more decentralized is the federation. In these circumstances, full fiscal equity (and full fiscal efficiency) is impossible to achieve. To force the kind of conformity that complete fiscal equity would require would conflict with the principle of federalism itself.

As in the case with other policy trade-offs, some compromise is needed between the principles of fiscal equity and federalism. One that seems reasonable, and that is embedded both in the Canadian fiscal federalism literature and in the constitution, is that fiscal equity should be achieved in potential terms, or, on average. That is, each province should have the capability to provide 'reasonably comparable levels of public services at reasonably comparable levels of taxation'. The more heterogeneous are the fiscal choices taken by provincial governments, the more rough the compromise and the more difficult is it to apply the notion of fiscal equity. Obviously, this is a rather vague prescription and other compromises are possible. But it seems to me to be a reasonable one, and one that is reasonably applicable in an equalization formula.

The ultimate source of fiscal inefficiency and fiscal inequity are NFB differences for like residents in two different provinces. In the literature, three main sources of NFB differentials have been identified, albeit with various caveats and assumptions involved. The first is differences in source-based tax revenues, like those from natural resources. Tax revenues on natural resources go into the general revenue pool and are available for financing public goods and services for the benefit of all provincial residents. The second are residence-based tax revenues, to the extent that, when combined with the services they finance, they are redistributive. Taken together, these two sources of NFB differentials cover all major tax sources. As a benchmark case, full equalization of per capita differences in tax revenues is called for under the following special set of circumstances: residence-based taxes are roughly proportional and public services are available to all residents on an equal per capita basis. In fact, while tax incidence studies show that residence-based taxes taken together may not be very different from proportional, some major public services are typically targeted to particular demographic groups. This can be accounted for in the equalization formula by introducing a needs component, as is done in many countries. The needs component is meant to reflect differences in demographic make-up alone, and not differences in cost of provision (which would compromise efficiency).

Several comments can be made about the equalization prescriptions that follow from these principles. First, technically speaking, exactly full equalization of tax revenues from all sources is only called for if residence-based taxes are in fact roughly proportional in their incidence, and the benefits of public services are equal per capita. For example, if one goes to the other extreme and supposes that all public goods and services are financed on a benefit basis, there would be no NFBs created by residence-based taxation, and therefore no need to equalize it. (On the other hand, if provincial taxes are progressive rather than proportional, more than full equalization of tax capacity is called for.) Source-based taxes, like resource revenues, should be equalized in any case.[2] Of course,

[2] It should be noted that there has been some debate in the literature about whether resource revenues ought to be fully equalized, given that they are 'owned' by the provincial government. The debate really has to do with the applicability of the fiscal equity principle, since fiscal efficiency clearly calls for full equalization. The argument is that since resources are part of the property rights of provincial residents, revenues from them should not be equally available residents of other provinces. One's real income ought to include one's share of resource revenues from one's own province. Clearly some judgment is involved. The Economic Council of Canada took an agnostic position on

under benefit taxation, economic inequality still persists in society: there will be high-average-income and low-average-income provinces. But, it is not the task of equalization to deal with that. That is because under benefit taxation, residence-based taxes will not generate NFB differences. Benefit taxation is obviously an extreme deviation from the benchmark case, and one that does not apply in practice. No doubt there are lesser deviations in practice from the so-called benchmark, but it seems like a reasonable working assumption for policy purposes.

Next, the equalization system that is called for might contain both revenue and needs components. The revenue component of equalization should be based on the taxing choices that provinces actually make, not on an abstract notion of tax capacity and a hypothetical standard of equalization meant to reflect some ideal level of public services. So, for example, if all provinces made the same choices, fiscal equity and efficiency would be achieved by basing equalization on those actual choices and not on some hypothetical notion of tax capacity. Complications obviously arise because provinces will take different choices, but that can be dealt with by using a representative set of choices to determine the revenue component of the transfer. Similarly, the needs component should be based on the representative set of public services that provinces do provide, rather than on some notion of the capacity to provide services (whatever that may mean). As with revenues, the fact that provinces choose different service mixes complicates matters, but the principles still dictate that it be actual behaviour that is relevant. In some countries, the equalization transfer is in fact based on some standard level of public services that are meant to be provided by the provinces or states. That is because these service levels are actually prescribed by the federal government, and the federal government provides the bulk of the financing for them. However, in the Canadian case, the degree of decentralization is such that it would be presumptuous of the federal government to set out standards to which provincial service levels should apply. Moreover, the principles set out in the constitution would seem to support the notion of equalization standards being based on the levels of public services that provinces actually choose rather than on some outside standard.

Third, as mentioned, the equalization system cannot literally fully offset NFB differences across provinces. One of the features of the benchmark scenario is that NFB differences between two provinces are identical for persons of all income classes. Thus, an ideal equalization transfer can be defined in per capita terms without ambiguity. However, in practice, NFB differentials will differ for different income groups. To undo them would not only be exceedingly complicated, but it would also negate the policy choices taken by the provinces, which, as we have said, would conflict with the notion of a federation. This is simply another dimension of the conflict between fiscal equity and federalism that informs the policy choice. The proposed resolution, and the one adopted by the RTS system, is to offset NFB differentials on average between two provinces.

Fourth, applying the equalization principle in practice is made difficult to the extent that provinces make different choices with respect to tax structures, tax mixes and tax rates. Clearly, much judgment is involved with choosing the representative tax system when there is no harmonization of tax bases. Moreover, choosing the standard to which provinces should be equalized is not obvious when provinces choose to provide very different levels of public services. Some compromises are inevitably necessary. The temptation to avoid using the RTS on this account is understandable, but runs the risk of throwing the baby out with the bath water. As a corollary, it should be noted that the complexity of the scheme and its cost to the federal government increase monotonically with

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this, by distinguishing two positions. One, called narrow-based horizontal equity, treated provincial resources as being property rights of existing residents, in which case only partial equalization was called for. Broad-based horizontal equity ignored the property rights issue and prescribed full equalization.

the extent of fiscal decentralization of the federation.

Fifth, equalization should apply in principle to both the have and the have-not provinces. Indeed, in some countries (e.g. Germany, Sweden) this is the practice. This does not literally require that the equalization system be a net one. As long as there is enough vertical fiscal imbalance in the system with the federal government transferring sufficient funds to all provinces, it could always structure them so that it effectively equalizes down the three have provinces, though it currently chooses not to do so. In assessing the performance of the system with respect to the constitutional principle, this should be borne in mind. As an aside, this also has implications for proposals to turn over tax points to the provinces in lieu of the CHST. Apart from the effect that this might have on tax harmonization, it would almost certainly put strains on the equalization system and call into question its future viability. The fact is that an equal per capita transfer system like the CHST financed out of federal tax revenues is a perfect revenue equalization system. Replacing it with tax points, except to the extent that they are fully equalized, would diminish equalization broadly defined in the Canadian federation.

Sixth, the theoretical prescription for equalization is framed in terms of equalizing actual per capita revenue differences across provinces. As is well known, any attempt to equalize actual revenues would run up against all sorts of familiar incentive problems. Incentive problems are simply unavoidable in any equalization system—RTS or macro. We return to the problem below.

Finally, many commentators have pointed out the complications that arise when it is recognized that there may be other federal programs that have an implicit equalizing effect. They suggest that the presence of these other programs might temper the case for equalization. In evaluating this argument, some comments are relevant. First, one should not include federal government programs that simply redistribute incomes from high- to low-income persons. It is undoubtedly true that these programs provide on net more benefits to have-not provinces than to have provinces. However, that is beside the point. Their purpose is not to redistribute among governments so as to enable governments to provide comparable public services. Rather, they are intended to provide higher incomes or more economic security to low-income persons regardless of where they reside. Second, some non-equalization transfers that favour one province over another can be interpreted as capturing an element of need that is missing in the equalization system. For example, the defunct Canada Assistance Plan was a transfer based on actual provincial expenditures on social assistance and services. Third, it is sometimes argued that equalization historically was a *quid pro quo* to the have-not provinces for the industrial policy benefits enjoyed by especially Ontario. Be that as it may, it is not now a particularly relevant argument, and does not affect the principles of equalization we have espoused above. Nonetheless, there may well be some remnants of policies that have some implicit equalization elements in them, such as regionally differentiated unemployment insurance.

WHAT EQUALIZATION IS NOT

It is also instructive to be explicit about what equalization is not intended to do, given that there seems to be some misconception in the documentation on macro formulas, and in the recent literature more generally. In particular, equalization is an instrument intended to enable provinces to provide comparable levels of public services at comparable levels of taxation if they so wish. It is not an instrument for redistributing from better-off to worse-off persons *per se* (through their governments). The need for equalization arises because NFBs are created through the redistributive budgetary policies of provincial governments and their differential access to source-based revenue sources. The need does not arise simply because there are high- and low-income provinces in the federation.

Put differently, equalization is motivated by horizontal equity (and fiscal efficiency) concerns, not by vertical equity ones. Indeed, the case for equalization is independent of the degree of vertical equity that society chooses to deliver through its public sector. Of course, if the provinces pursue more redistributive policies the extent of equalization should increase because NFB differentials are higher as a result, so the two are not unrelated. But the case for horizontal (fiscal) equity as such, and therefore for an equalization system, is not affected by disputes over how redistributive economic policy should be pursued, nor even about the standard equity-efficiency trade-offs that are involved.

This implies that one should not judge the equalization system according to how well it redistributes income. For example, the temptation to criticize equalization as a program that has as one of its effects the transferring of resources from low-income taxpayers in Ontario to high-income taxpayers in Newfoundland is quite misleading and beside the point. The program should really be judged according to how well it succeeds in achieving the objectives set out in the constitution.

This tendency to view equalization as a device for income redistribution leads to some further issues of interpretation. There is a tendency in some of the documentation to draw a comparison between the equalization system and the personal tax-transfer system by using notions of ability to pay and conceiving of the provincial budget constraint as analogous to an individual one. Indeed, macro approaches to equalization seem to be in part motivated by advocating the notion of Haig-Simons comprehensive income as a measure of the ability-to-pay of a province, and therefore using it as the basis for redistributing from one province to another. While it may well be the case that equalization entitlements are correlated with per capita incomes, the latter is not an appropriate basis for determining equalization entitlements. We return to this issue below. To repeat, redistribution objectives (vertical equity) in all their dimensions are achieved by a myriad of other policy instruments applied to individuals, including the tax-transfer system, the provision of public services, social insurance and other transfers.

A corollary of this line of argument is that equalizing some hypothetical notion of fiscal capacity is not the objective of equalization either. Thus, basing equalization on some hypothetical standard, or basing it on the results of a regression intended to measure the capacity of a province to raise revenues seems to me to be fundamentally misconceived. If one accepts the argument that the purpose of equalization is to undo the consequences of the NFBs created by fiscal decentralization, the relevant notion of revenue equalization is the RTS system based on actual tax practices of the provincial governments. This captures the potential NFBs of the current system.

ARGUMENTS AGAINST THE RTS SYSTEM

The RTS system is obviously far from perfect. It is necessarily an imperfect measure, given that NFB differences vary by type of taxpayer, that compromises must be made with respect to other objectives of fiscal federalism, and that there will be incentive effects. Therefore, it is natural to take a two-track approach of considering refinements to the existing system as well as considering alternatives. Evaluating the criticisms that have been levied at the RTS system, and considering whether the legitimate ones can be most satisfactorily addressed by moving to a macro formula can inform both of these tracks. In this section we consider the criticisms that have been levied against the RTS system. These have been well documented in the background papers.

Complexity

Opponents of the RTS system as well as many commentators and journalists in the national press often mention that the system is too complex.[3] There are two aspects to this

[3] Recent articles by Andrew Coyne in the *National Post* and Bruce Little in the *Globe and Mail* both pointedly parrot the complexity line, which seems unusual given their ability to see otherwise complicated economic issues in relatively simple terms.

argument. One is that the system is difficult for the public and political decision-makers to understand, and as a result it is not transparent. The other is that it is difficult to implement. The latter is dealt with in the next point. In my view, the argument that the current system is too complex for non-experts to understand is gratuitous. In fact, conceptually it is quite a simple program, based on a formula that is quite easy to understand. What is difficult about applying a national average tax rate to a provincial base and comparing the proceeds with what one obtains from applying a national average tax rate to some standard base (five-province, ten-province, or whatever)? The calculation itself is very simple. No, it is not the calculation of equalization entitlements that is difficult. Anyone who can add, subtract, multiply and divide can understand it. It may not be simple for experts in Finance Canada to define and measure representative tax bases, but one does not need to understand how to do that in order to evaluate the program.

Perhaps what people are really saying is that the effect of the program is difficult to understand. Or perhaps, it is the rationale for the program that is difficult to understand. But surely that is true of any public program including the simplest per capita or income-based transfers. Thus, I am inclined to discount the complexity issue as fundamentally self-serving.

Implementation Difficulties

Although the formula may be simple, the implementation is clearly not. Moreover, it is becoming more and more difficult as provinces become more and more self-sufficient and seek more and more tax sources. Several types of difficulties exist. First, even for well-defined statutory tax bases, if they differ across provinces, some compromise must be struck in defining the representative tax base. Since the compromise will differ from tax bases actually used, this presumably makes measurement for the various provinces a challenge. That is a problem for many tax bases, including broad ones like the sales tax. It is not clear what the solution to this problem is, given the objectives of the program. One might consider aggregating up the number of tax bases used in the formula, but that would not seem to resolve the problem and might even make the matter worse. The process of aggregation by itself cannot resolve complexity.

Next, there are cases where even statutory tax bases are not well defined. Apparently, many miscellaneous tax bases are in this category. In some of these cases, there are even questions as to whether the revenue source should be equalized. An example is user fees. To what extent should user fees be equalized? In principle, one could argue that they should not be equalized at all since they are really benefit taxes. But then perhaps there are instances in which it is difficult to distinguish user fees from taxes. Moreover, once one gets into the question of what taxes are benefit-based and what ones are more progressive, one gets into potentially murky territory. For example, some payroll taxes could be viewed as being in part benefit taxes, even though they are compulsory and may not be based clearly on actuarial principles.

Perhaps a more difficult problem is defining tax bases when some provinces use them and some provinces do not. Lotteries and gambling of other sorts provide increasing amounts of revenues to many governments. Yet, the legality of different forms of gambling (e.g., VLTs) can differ from province to province. In these circumstances, it is not clear how, if at all, these sources of revenues should be included. Similar problems exist when provinces choose different organizational forms for delivering some services or products. For example, electrical utilities could be provincially owned or they could be privatized. In the former case, profits might be much lower since the province might choose to provide electricity to its residents at prices below the full cost of production, thereby dissipating some potential rents.

A particularly difficult tax base is the property tax, to which the standard practice has apparently never been applied. It is not just that different provinces use different property evaluation techniques in determining property tax liabilities. There is also some issue as to the reasonability of applying the RTS methodology to property taxation even if all provinces used a common valuation procedure. Larger urban centers have relatively high per capita property values. Adopting the standard approach of applying a national average tax rate to actual property values to determine equalization entitlements would likely work in favour of provinces that are less urbanized. Whether this is justified is an open question. Higher property values also translate into higher costs of living, which itself feeds into real income comparisons between provinces.

A more general issue that has been raised from time to time in the past concerns the treatment of transfers to individuals. To an economist, transfers are simply negative taxes. They are in principle no different than benefits that are delivered through the tax system as tax expenditures (which do enter the equalization formula). There is therefore no apparent reason why transfers are not included in an equalization formula. In a system that included a needs component, transfers would almost certainly be included in the latter since many of them are targeted to identifiable demographic groups. So, perhaps the absence of transfers is really part and parcel of not including needs in the formula. In that case, it is less an implementation issue than an issue of policy.

These implementation issues are real ones, and certainly make the RTS system difficult to apply, more so as time goes by and the federation becomes more fiscally decentralized. They are also ones that have been on the issue agenda for some time, and there has been considerable expertise built up in Finance Canada to deal with them. The question is whether they are best dealt with by replacing the RTS system with one that seems to be less prone to measurement and implementation problems. That partly depends on the integrity of the replacement system in terms of achieving the objectives of the system, which according to us are outlined above.

RTS Bases as Fiscal Capacity Measures

One of the more persistent criticisms of the RTS system in the documentation is that actual bases, which are used in the RTS approach, do not measure fiscal capacity, and therefore are not suitable for equalization purposes. There are a number of variants of this argument, and in my view they are all based on the same misconception.

One variant is that tax bases reflect actual fiscal choices of governments and for that reason are unsuitable. Obviously, if one believes that equalization should be based on hypothetical fiscal capacity, that is a drawback. But, we have stressed above that potential fiscal capacity *per se* does not motivate equalization. Only to the extent that it leads to actual NFB differences is that the case. If provinces choose not to exploit their fiscal capacities, potential NFB differences will not emerge and there will be no need for equalization. More generally, the quest for a measure of fiscal capacity, whatever its use might be, is bound to be chimerical. There is no unambiguous measure of fiscal capacity, and certainly none that is of practical relevance. At best, fiscal capacity would be based on some notion of an optimal tax system. That is something that we have relatively little knowledge of, and that in any case governments do not likely use. As we have stressed above, it is the actual tax practices (fiscal choices) of provincial governments that are relevant, contrary to what some of the macro proponents espouse.

Along the same lines, the argument that the RTS system is deficient because it treats each tax base separately and ignores interaction effects is fallacious. The argument is based on the notion that the size of one tax base (e.g. income) affects the size of other tax bases (e.g. consumption, property), and this interdependency is ignored in the RTS system. Some authors argue that the only suitable way to take this into account is to use a behavioural response model, one that estimates statistically the dependence of tax revenues on all tax bases, as well perhaps as many other relevant factors. Apart from the fact that any such behavioural response model would likely be very difficult to estimate with any satisfactory degree of precision, it would also be inappropriate. The purpose of equalization is not to redistribute according to some hypothetical tax capacity measure, but to redistribute according to the

NFBs created by actual tax practices. The fact that the latter may be difficult to measure precisely does not justify searching for an alternative that is based on the wrong principles. Differences in tax capacity are only relevant to the extent that they give rise to differences in NFBs. The fact that the different tax bases that contribute to differences in NFBs are interdependent is irrelevant.

There is one dimension to the behavioural response model that is potentially relevant and that is the distinction between marginal and average tax rate responses. The RTS system calculates equalization entitlements by applying an average tax rate to each province's tax base, even though that average tax rate can be quite different from the tax rate actually used in the provinces. It can be argued that this gives a misleading impression of the revenue deficiency of a province. The problem arises because the RTS system implicitly treats tax bases as exogenous, whereas they are likely affected by tax rates themselves. There is no doubt that this is a drawback to the RTS system, and it is one that accounts for most of the major incentive problems recounted below. At the same time, it is likely to be a drawback to the suggested replacement for the RTS system as well. In principle, one could estimate the tax base response to tax rates. Indeed, one could contemplate that being a topic for ongoing review of the system. But it is fair to say that the current state of tax base (or revenue) response models is quite unsatisfactory. Much more research would have to be done to determine whether they can be developed to a level of being useful for policy purposes.

Independence from Residents' Choices

Another argument leveled against the RTS system is that the bases used reflect the consumption choices of provincial residents. For given income levels, consumption tax bases depend on the proportion of income consumed, cigarette tax sales depend on smoking choices, and so on. Now, it may be true that one might not want the tax-transfer system for individuals to be conditioned on actual consumption practices. That is, one might not want a person's tax liability to depend on their preferences, only on their real income. There is a growing literature on equality of opportunity that takes precisely that position. But this point is not relevant for equalization, and again reflects a tendency to think of the equalization system as an instrument for redistributing from high to low-income persons.

In fact, differences in consumer choice can be an important part of the equalization entitlement. Demographic make-up is a key determinant of household consumption choice. If a province is made up of a group of persons whose age and family structure is such that they consume little and save a lot, that will tend to reduce the NFB associated with a person living there as opposed to living in another province. There will be less per capita tax revenue available for financing provincial public services, and this should be reflected in the equalization entitlement. The same applies to different choices associated purely with preferences, although it is hard to imagine these being as important as differences in demographic make-up. If I live in a province heavily populated by smokers, and if cigarettes happen to be taxed more heavily than other goods (as is the case in all provinces), then I receive a net fiscal benefit simply on account of my province of residence (regardless of whether I am a smoker or not!).

Again the perceived problem with the equalization system reflecting consumer choice seems to be based on the notion that equalization should be aimed directly at equalizing incomes or fiscal capacities *per se*, rather than addressing the NFBs that these might give rise to. Evidence of this is the position taken by macro proponents that what is relevant for measuring fiscal capacity is income, which measures the ability to pay of the average provincial resident, regardless of how it is spent.

Independence from Fiscal Choices: Incentive Problems

It is argued that equalization should also be independent of the fiscal choices of provincial governments. We have taken the position that equalization should, in fact, be based on the tax and expenditure choices that are made by the provinces rather than on some hypothetical fiscal capacity measure that is independent of these. The reason is that actual fiscal choices are the source of the fiscal inequities and inefficiencies that are the ultimate rationale for equalization. However, there is one aspect of independence from fiscal choices that is highly relevant—that associated with incentives.

The incentive problem is well known and has received much treatment in the Canadian literature. There are two classes of incentive problems, reflecting the two variables that go into the equalization calculation—the national average tax rate and the tax base. To the extent that provinces can affect either variable, they can influence their equalization entitlement. This gives rise to the possibility of strategic behaviour, in one case the rate tax-back problem, and in the other the base tax-back problem.

The rate tax-back problem is of limited relevance. The opportunities for equalization receiving provinces to affect the national average tax rate for any given revenue source are very limited. A province can only exert a significant influence on the national average tax rate if its base constitutes a significant proportion of the national tax base. Where this occurs, one has a fairly standard incentive-equalization trade-off, which is satisfactorily mitigated by the generic tax-back solution. This certainly does not compromise the system to any significant degree.

The problem of base tax-back is much more serious. The integrity of the equalization system is based on tax bases being reasonably exogenous. Of course, tax bases by their nature are endogenous, and there are various ways that provinces can affect the size of their own tax bases. If tax bases are elastic, the choice of tax rate can affect the size of the base. Equalization-receiving provinces may have an incentive on this account to set artificially high tax rates, since a high proportion of the revenues they lose from the lower base will be offset by increased equalization transfers. The result could be inefficiency in the choice of rate structure, although it could be argued that this serves partly to offset tax competition effects that would otherwise cause the tax rate to be too low. The strength of this argument is difficult to assess. There is relatively little evidence that provinces behave in such a way, and in any case many of the major tax bases are relatively inelastic. Nonetheless, as with any incentive effect, it certainly cannot be discounted.

The more serious problem with endogenous bases is that in some cases they can be controlled directly by provincial governments. We have already mentioned the case of gambling and the fact that its very existence depends on provincial legality. The case of resources is undoubtedly the most difficult and controversial problem, since provinces have considerable direct control over the rate at which they develop these revenue sources. Tax-back rates under the existing RTS system can be very high, with the potential that there is significant financial disincentive for provinces to foster resource developments. There is no obvious solution to this problem, other than mitigating it by artificially reducing the tax-back rate, analogously with the generic solution.

In evaluating this problem of base tax-back arising from provincial control over resource tax bases, a couple of things should be borne in mind. One is that provinces cannot avoid the problem simply by not exploiting discovered natural resources. Resource deposits represent an asset that once discovered will eventually be exploited and enter the equalization system. The provincial choice is largely whether or not to postpone that eventuality. Seen this way, the disincentive associated with resource development is not as strong as if the equalization liability could be permanently reduced. The second is that the suggested macro alternative to the RTS system will face the same kind of incentive problems.[4]

[4] One merit of fiscal capacity approaches to equalization is that they are not necessarily based on actual tax bases, but on potential ones. Thus, if it were feasible, one might equalize resource revenues according to known deposits rather than actual rates of extraction. Of course, this does not make fiscal capacity the ideal method from the point of view of principles.

EVALUATING THE MACRO ALTERNATIVE

There are obviously many problems with the RTS program. The question is whether the best way to address those problems is to scrap the RTS system and replace it with a macro formula. In the process of considering the RTS system, we have already anticipated some of the effects of replacing it with a macro system as opposed to fixing what is wrong with it. Therefore, we can be brief in recounting the advantages and disadvantages of a macro-based equalization formula.

One advantage of the macro approach is alleged to be simplicity. It may be superficially the case that a formula based on differences in per capita income is simpler than one based on per capita differences in several tax bases. But, that is not very compelling. As mentioned above, there is nothing conceptually difficult about the existing system. Any difficulty arises from trying to understand the consequences of equalizing on the basis of differences in per capita income rather than on the basis of differences in per capita tax bases. As far as I can see, one is no simpler in that respect than the other.

The main claim for the macro formula put forward by its proponents is the supposed superiority of a macro measure such as income as an indicator of fiscal capacity. We have argued that this is a misplaced consideration. The purpose of equalization is not to redistribute from high to low-income provinces *per se*, nor to redistribute from high to low-fiscal capacity provinces. Rather it is to undo any fiscal inefficiencies and inequities that might be caused by the actual tax and spending practices of the provinces. This will be affected by differences in fiscal capacity, but will not be identical to it.

Even if we accept the rationale of the macro base that is should reflect ability to pay, it is not clear what macro base is the most suitable. There is an enormous disagreement in the tax policy literature over the relative merits of income versus consumption as the ideal tax base. Government policy itself is contradictory in this regard. Income used in the personal income tax base is in many ways closer to consumption, as has been amply demonstrated in the literature. Moreover, broad-based taxes are themselves a combination of those based on income (the income tax) and those based on consumption or its equivalent (sales and payroll taxes). There can hardly be a consensus with respect to the ideal macro indicator for ability to pay. As well, the case for GDP versus GNP (or, income versus production) macro measures is also anything but clear, and this can be relatively important at the provincial level.

In terms of the rationale for equalization that one finds in the literature, and that has been summarized above, the macro formula clearly fails to deliver. It ignores the fact that fiscal inefficiency and fiscal inequity are the products of the actual mix of taxes chosen by provincial governments. The actual tax practices adopted by provinces are in fact a key ingredient of the RTS approach, not only for calculating the entitlements base by base, but also for determining the standard to which the have-not provinces ought to be equalized, whether it be a national average standard or a five-province standard. In the end, the macro approach must involve not only a choice of macro base to be equalized, but also a standard of equalization. The latter can be arbitrarily chosen, but that would run the risk of violating the principles of Section 36 as well as the objective of equalization itself. More likely, it might be based on some notion of a national average macro tax rates, based on the revenues actually collected by provincial governments. Presumably these would be based on a fairly comprehensive set of tax revenues, and not just income tax revenues. (If not, the formula would be much too narrow to satisfy the purpose of equalization.) In the case where the revenues are comprehensive, the macro formula would simply amount to a highly aggregated version of the RTS.

Related to this latter point, one possible argument for a macro formula is associated with the argument that actual provincial tax policies should be irrelevant. This leads naturally to the view that the tax rate used for determining the size of equalization can be chosen according to how redistributive one wants the program to be. This decoupling of the equalization program from actual provincial practices has the consequence that the federal government can effectively control the size of the program by choosing the relevant tax rate to apply to the macro base. In my view, this would be an undesirable feature of the program because it would violate the spirit of Section 36 of the constitution.

Finally, the macro formula does not really avoid what is alleged to be another of the big deficiencies of the RTS, its effect on incentives. Precisely the same base tax-back problems arise with the macro base as with the RTS. Any increase in base will give rise to a reduction in equalization entitlement at the rate used for calculating equalization under a macro formula. It is not correct to say that because the macro base is broader, this effect is less: any increase in the base gives rise to a fall in entitlements in the two systems. The only possible difference that can arise is because there are different national average tax rates applied to the macro formula than to individual tax bases under the RTS (though on average they will be the same). Furthermore, the macro formula may not be able to accommodate specific instances of tax-back problems as readily as the RTS system can. That is, it may be more difficult to make exceptions for particular revenue sources that give rise to significant tax-back problems under a macro formula.

My summary of the case for and against the RTS may seem unduly harsh with respect to the merits of the macro proposal. My views are heavily influenced by what I view as the proper role of the equalization system as developed in the economics literature. While there may be legitimate objections to the value judgments underlying that literature, it seems to me that the onus is on the proponents of alternatives at least to deal with what is the accepted wisdom, and set out their objections to it. As it stands, they have basically ignored the existing rationale for equalization. I would certainly be very reluctant to sign on to the macro camp without seeing a full refutation of the conventional wisdom.