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Expenditure-Based Equalization Transfers

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1. Introduction

Intergovernmental transfers are a major source of revenue for sub-national (regional and local) governments (hereafter SNG), representing 60 percent of their total revenue for developing countries and 33 percent for OECD countries (Shah, 2004). The continued and even growing decentralization observed in many countries calls for a better understanding of the design, role and impact of fiscal transfers. Prominent among the objectives commonly attributed to intergovernmental fiscal transfers is 'equalization' although exactly what this term means is often rather obscure and may differ from country to country or even over time within any one country. Our focus in this paper is specifically on those transfers specifically labeled as equalization transfers and in particular on the question of the extent to which and the method by which differences in expenditure 'needs' can and should be formally incorporated into such transfers.

The paper is divided into three main sections. In the first section, we set out briefly the standard theoretical case for both a general equalization transfer and for the incorporation of expenditure needs as a key factor in the design of such transfers and discuss how this case may be implemented. In the second section, we review how and to what extent expenditure factors are actually incorporated in a few selected equalization schemes around the world. Finally, in the last section we consider critically the relevance of assessing differentials in expenditure needs in determining equalization transfers. In

[1] We thank Philippe Wingender for his excellent contributions to this paper.

effect, in the first section we discuss why it may be argued that such 'needs' should be taken into account in principle. In the second section, we show that some countries actually do so in practice in varying ways and to varying extents. In the final section, however, we focus specifically on the circumstances in which it seems advisable to take needs into account in the design of the general equalization formula, and ask whether the game is worth the candle. Our aim is to set forth in brief compass some general guidelines that may be useful to the many countries currently facing the need to establish sounder intergovernmental fiscal transfer systems in order to ensure that the outcome of decentralization is broadly economically and socially beneficial.[2]

2. Equalization and Expenditure Needs

The Theoretical Case for Equalization

Following Buchanan's seminal paper (1950), an important body of work developed on the use of equalization transfers to correct the equity and efficiency distortions that (from a certain perspective) may be considered inherent to a decentralized governmental structure.[3] We do not purport to review this literature in depth.[4] Rather, we shall simply set out in this section the main concepts relevant to the aim of this paper. Initially, as did Buchanan (1950), we focus on fiscal capacity alone, introducing expenditure needs considerations subsequently.

With respect to equity, the central aim of an equalization transfer is to enable SNG with different abilities to raise revenues to provide comparable levels of services with comparable levels of own-taxes. The taxable capacity of SNG depends both on the tax bases open to them and on the territorial distribution of those bases (e.g. natural resources). Since no country is completely uniform a fundamental characteristic of a decentralized state is that SNG have different fiscal capacities and are hence unable to provide the same level of public services at the same tax rates. Since a 'poorer' SNG in the sense of an area with a smaller (per capita) tax base will raise less revenue at a given tax rate than a 'richer' SNG, two identical individuals living in these two different SNGs will not receive the same level of public services even though they pay the same amount of tax. Alternatively, to obtain the same level of services, the SNG must impose different tax burdens. Decentralization thus fails to produce horizontal equity in the sense of treating 'equals' equally (Boadway, 2001). Horizontal equity in this sense is of course a normative objective that rests on value judgments that may not be accepted by all. The underlying assumption is that two people who are otherwise equal but live in different regions of the same country are to be considered 'equal' -- even though they live in different regions. We shall return to this point.

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[2] The importance of good transfer design is evident from any review of transfer systems around the world: see, for example, Slukhai (2003) on transition countries and International Symposium (2001) on Asian countries.

[3] See for example Scott (1952), Courchene (1978) and Boadway and Flatters (1982).

[4] Boadway (2004) provides an excellent recent survey of this literature.

A more comprehensive approach to horizontal equity utilizes the concept of net fiscal benefit (NFB) or the difference between taxes paid and public services received (Boadway, 2001). The NFB approach is superior to focusing on tax rates alone because it allows for different levels of taxation and public services in different SNG according to the preferences of voters. Fiscal or horizontal equity in the sense discussed above requires that NFBs be the same for similar individuals across all SNG jurisdictions. SNG A may impose higher tax rates than SNG B, but if A also provides a correspondingly higher level of public service NFBs may still be equal for similar individuals in both regions.

Boadway (2004, p. 215) recognizes that for this case for horizontal equity to be applicable to a country with heterogeneous regions, and particularly to a federal country, "requires a consensus that social citizenship or solidarity among all citizens apply with equal force nationwide as opposed to being region-specific." The theoretical equalization literature simply assumes that this condition holds: that is, that not only are governments at all levels benevolent but also the correct standard for judging decentralization is how closely it replicates the outcomes of a (benevolent) unitary state. Indeed, the principal theoretical rationale for equalization is that it is necessary precisely for this purpose, although this aim is often obscured by the emphasis many authors place on the unconditional nature of equalization transfers and hence the freedom of SNG to deviate in practice from national uniformity. As we discuss below, the usual RTS equalization are unconditional, thus permitting such regional differences. Nonetheless, it should be clearly understood that the basic rationale for equalization schemes is to enable SNG to replicate the outcomes of a unitary state – if they choose to do so.

Those who have a different view of what a federal state is supposed to be may perhaps be less enthusiastic about the need for equalization. While many countries have implicitly or explicitly set minimum national standards of revenue and public service and have established equalization schemes as one means of obtaining this objective, the United States conspicuously has no such scheme. Presumably, this is not an oversight but a deliberate policy choice, perhaps reflecting deep philosophical and political differences between the 'exceptional country' and much of the rest of the world.

On the other hand, contrary to the way it is sometimes viewed by American analysts (e.g. Oakland, 1994), equalization is not concerned at all with vertical equity between persons. It is also not, as noted by Buchanan (1950, p.596), in any sense a "charitable contribution from the rich to the poor […] or subsidy from the citizens of the more favored regions."[5] On the contrary, the purpose of equalization is simply to make sure that the fiscal structure is as neutral as possible regarding the place of residence not only to achieve horizontal equity as discussed above but also to improve the efficiency of resource allocation.

[5] Nor is equalization intended to rectify regional 'imbalances' or elminate regional disparities, which is just as well since it can be argued (Courchene, 1978) that equalization is more likely to perpetuate than to reduce such disparities.

Since labor and capital respond to market incentives and fiscal balance when making location decisions, difference in the ability of SNG to provide equal levels of public services at equal tax rates provide an incentive for migration to the area providing higher NFB. Economic efficiency, however, requires that people and economic resources be distributed according to their private productivity and not to their expected NFB. Equalization must therefore be designed in such a way as to eliminate fiscally induced migration which would result in a misallocation of economic resources. To ensure that economic resources migrate in response to market incentives and not fiscal balance, SNG should, it is argued, be able to provide similar services at comparable levels of taxation. Equalization transfers thus provide one of those rare instances in public economics where equity and efficiency considerations coincide (Shah, 1994). Although the fiscal efficiency of equalization in this sense is debatable,[6] Wilson (2003) offers some interesting recent empirical evidence of the efficiency cost of fiscally induced migration.[7]

Implementing the Theory

Taxonomically, one may distinguish between implicit and explicit equalization, gross and net equalization, and vertical and horizontal equalization. Although there is a large literature both on the extent to which transfers in general, even those not explicitly intended to do so, equalize, we shall not consider such 'implicit' equalization further here. Of course, implicitly even an equal per capita transfer is equalizing since revenues are not raised equally across all regions.[8] Similarly, many targeted grants such as the US Medicare program that distributes grants to states on the basis of two equally weighted factors (per capita income and per capita spending) may be equalizing to some extent. For example, Laurent and Vaillancourt(2003) found a small negative correlation between per capita state product (or income) and such transfers. Here, however, we focus on explicit equalization schemes, consisting of formula-based unconditional redistributive transfers among governments.

A gross scheme is one that, so to speak, 'levels up' in the sense that SNG below some target (a national norm, the national average, the top SNG, or some percentage of one of these) are brought up to the level of the target. In contrast, under a net scheme better-off SNG are also 'levelled down' to the target, usually through horizontal equalization. A horizontal scheme thus implies transfers between SNG, while a vertical scheme implies transfers from the central government.[9] In principle, the same equalization result can be produced by either approach, but a horizontal scheme requires much more political cohesiveness between regions and may therefore be more difficult to implement in a country with heterogeneous regions. Such a system may also create undesirable disincentives for SNG tax effort. On the other hand, a vertical scheme requires the central government to occupy a larger share of tax room than its expenditures

[6] See, for example, Petchey (2004).
[7] Watson (1986) is an earlier examination of the same issue.
[8] Martinez-Vazquez (2002) and Boadway (2003, p.258) consider that the equal per capita feature of Canada's main social transfer (the CHST) … "is implicitly a perfect system of equalization" and Laurent and Vaillancourt (2003) find a negative relationship between per capita income and CHST transfers for Canada.
[9] We do not discuss the problems of how such transfers are financed (see Musgrave 1961).

might require, which can itself raise important political issues, although at the same time it may facilitate the harmonization of taxes, internalize fiscal externalities and ensure that central attempts to influence regional government behavior through conditional grants take place, as it were, on a 'level playing field' (Boadway, 2004). Of course, especially in developing countries in which SNG have only limited capacity to collect taxes in any case, a vertical scheme might be the only feasible approach (Vaillancourt, 2001).

Many other issues need to be decided in implementing any equalization transfer. For example, the size of the total 'pool' to be distributed under any equalization scheme may be determined in various ways. It may be set annually as part of the normal budgetary process, as in many developing countries. It may be determined as some given proportion of central revenues (e.g. Argentina), or on the basis of central collections of one or more particular taxes (e.g. Australia, Germany), or it may, as in Canada, be paid out of general central revenues but with the amount paid determined by a formula driven by other factors such as the level of SNG revenues, the growth of GDP or the relative differences between the taxable capacities of SNG. Equalization can be implemented either by direct central transfers or by some form of tax sharing (Dafflon and Vaillancourt, 2003). The amount distributed to different SNG may be determined on the basis of expenditure differentials and/or fiscal capacity and perhaps also fiscal effort, or it may simply fill budget gaps (as in some countries of the former Soviet Union and Eastern Europe). Although our focus in this paper is on the role of expenditure equalization, we shall first outline briefly how fiscal capacity is commonly handled in equalization schemes.

Fiscal capacity

The fiscal capacity of an SNG is defined by its ability to raise revenues from its own tax bases. Assuming that 'own' tax bases are clearly defined, as Shah (1994) and Martinez-Vazquez and Boex (2001) demonstrate a number of methods may be employed to determine fiscal capacity in this sense.[10] Perhaps the simplest to implement are measures based on current or past years' revenue collections. Unfortunately, such measures raise serious problems. While potential ability to raise revenue is not directly affected by tax rates,[11] fiscal effort and taxpayer compliance and actual revenues are affected. Using current revenue collection as a measure of fiscal capacity provides SNG with an obvious incentive to impose lower tax rates or to make less effort to collect taxes in order to receive higher equalization grants. Although using past collections would seem to alleviate this problem there remains a problem of time-inconsistency since SNG may (reasonably) expect that current increases in revenues obtained by increasing rates or collection effort will reduce future transfers.

[10]It is by no means always clear what is an 'own' tax base: is it a tax administered by an SNG? Or one whose rate and/or base is determined by the SNG? Or simply one the proceeds of which accrue to the SNG? All possible combinations of these characteristics exist somewhere: where is the line to be drawn? For helpful though not conclusive discussions of these points, see OECD (1998) and Ebel and Yilmaz (2003).

[11] Indirectly, tax potential may in turn be affected since labor supply and financial decisions can be affected by tax rates.

Alternatively, such macroeconomic indicators as income or output may be used to measure fiscal capacity. Although difficult to obtain at the local level in most countries, such data, however imperfect, are often available at the regional level. But this does not necessarily imply that macro measures of fiscal capacity are good indicators. The measured personal income in a given SNG, for example, may be a reasonable measure of the average ability of its residents, it may not be an accurate indication of the ability of the SNG to impose taxes – for example, because SNG may be prohibited from levying personal income taxes. Gross Regional Product (GRP) is a more comprehensive measure, representing the value of goods and services produced within a region and hence the incomes received by the owners of the economic resources (land, labor, natural resources and capital) used in the region regardless of where they may live. But the composition of GRP is also clearly relevant since some economic sectors (e.g. mining) are easier to tax than others (e.g. agriculture). Similarly, informal activity is more difficult to tax than manufacturing activity, particularly in large enterprises. SNG with identical GRP may thus have substantial differences in taxable capacity even in the unlikely circumstance that they are fully empowered to levy all possible taxes.

A third possible approach is what is called the representative tax system (RTS), which measures the amount of revenue that could be raised by an SNG if it used 'standard' tax bases and 'standard' (usually average) tax rates. Obviously, to use this approach information on tax bases and tax revenues for every region is needed. The equalization entitlement for a region is determined by the sum for all tax sources of the following formula:

$$E_{x,i} = POP_x \cdot t_{na,i} \cdot [PCTB_{na,i} - PCTB_{x,i}]$$

where $E_{x,i}$ is the equalization entitlement of region x for a revenue source i, POP_x is the population of region x, $t_{na,i}$ is the national average tax rate of revenue source i, $PCTB_{na,i}$ and $PCTB_{x,i}$ are the per capita tax base of revenue source i for the national equalization target and region x respectively. This formula may be adjusted to equalize according to a predetermined standard (median, arithmetic mean or other norm).

In theory, the RTS approach appears to provide a complete and accurate method to measure the fiscal capacity of SNG. It may, as in Canada, be broadened to include non-tax revenues (user fees, royalties). Provided the tax base information is appropriate and all SNG are equally able to exploit all their 'assigned' tax bases freely – matters that are not always easy to determine in practice – this approach, although very data intensive, seems clearly superior to either the macroeconomic or actual revenue approaches to measuring fiscal capacity for purposes of equalization.

Expenditure Differentials

The fiscal capacity of SNG, however, deals only with the last term on the right side of the net fiscal benefit equation:

NFB = public services received- taxes paid

Equalizing NFBs requires not only adjustments to ensure equivalent revenue-raising capacity but also further adjustments to ensure that the provision of equivalent public services requires the same expenditure in different SNG. If two regions have the same fiscal (potential) capacity but differ in terms of expenditure 'requirements', the NFBs of residents' will be lower in the region in which public services are more expensive. Expenditure differences in providing public services reflect two factors: cost differences and need differences.[12]

- Cost differences are differences in the cost per unit of a 'standardized' public service. They may arise from climatic or geographic features, density or distance factors, or differences in labor cost across regions. Costs should be calculated using real (not nominal) private sector wages for equivalent inputs and not on the basis of public sector wages which may reflect such political factors as the government's political philosophy or the relative strength of workers unions (Courchene, 1998).
- Need differences -- differences in the number of units of standardized service required per capita -- usually arise owing to demographic reasons such as the age structure of the population and different participation rates in social programs by persons of different ages.

Three questions arise with respect to implementing equalization schemes incorporating expenditure differentials: how are 'standardized' expenditures determined? How are needs differentials measured? How are cost differentials measured? We shall take these up in reverse order, leaving for later discussion the key question of whether such differentials should be taken into account at all.

Many different ways of establishing cost differences have been proposed. Some make intuitive sense: climate (snowfall, heavy rain), population density/urbanization, frequency of natural disasters (floods, earthquakes), location (remote location), topography (mountainous or desert regions). Others are perhaps less obvious such as the proportion of land occupied by public infrastructure (e.g. national parks), fuel costs, and indicators of development level, both general (e.g. electricity consumption, number of telephone lines) and related to particular public services (road length and condition,

[12] Boadway and Hobson (1993) p.92. Note that this distinction is not always clear. For example, if there are ten snow storms (10cm) per year in region A and five (20cm) in region B, leaving in total the same amount (100cm) of snow on the ground, then if there is a fixed and a variable cost to each snow removal operation A will incur higher expenditure even if the marginal cost of an additional cm is the same in both regions. Does A have higher costs or greater need (more storms)?

environment and wildlife preservation services, irrigation and drainage, coastal services, fire protection, etc.).

Similarly, among the plausible factors related to needs differences are such things as the share in the total population of such dependent populations as infants, elders (health care) and school age children, the share of population with special needs irrespective of their age such as new immigrants (language skills, acquisition, integration into society) or less developed groups (e.g. aboriginal population). Many other factors presumably related to need are found in equalization schemes around the world: poverty indicators, single parent families, illiteracy, infant mortality, life expectancy, elementary school enrollment rate, public transit, female labor force participation rate, population, unemployment rate, social assistance payments, corrective services, number of drug-addicts, etc.[13] Of course, to a considerable extent the relevance of many of these indicators depends on the role SNG play in delivering public services. For instance, if it is the central government or the private sector that provides health care the share of infants or elders may not be relevant in determining transfers.

Broadly, expenditure needs may be measured in three ways (Martinez-Vazquez and Boex, 2001). One method is to estimate the cost of providing a standardized set of public services. To do so requires, first, that someone – usually the central government but possibly an intergovernmental body – determines what services are to be included and what 'standards' are to be met. Secondly, considerable effort is required to obtain the necessary detailed data, involving as a rule both field visits and considerable knowledge of the price of inputs and the factors affecting the scope of the services to be provided. Even when such complex methods are used to assess expenditure differentials, as in the case of Australia, some analysts have characterized the results as "somewhat crude, imprecise and subjective" (Shah, 1996, p. 103).

A simpler alternative is to rely on historical expenditure patterns and use observed average costs for various expenditures. Two problems arise with this approach. First, as in the case of many transitional countries emerging from a history of central planning 'norms', past observed expenditures on particular activities may not reflect current policy objectives. Secondly, expenditures that seem the same in the data may in fact be quite different. For example, expenditure on education can be broken down by level (primary, secondary, etc.) and then within levels by inputs such as salaries, books, etc. How can one interpret the fact that books in SNG A are 20 percent more expensive than books in SNG B even though both jurisdictions buy the same number of books for the same number of pupils? Is it because A overspends on fancier books (perhaps because it tries harder to keep up with new pedagogical approaches) or is it because A may be teaching to a different language group and thus face higher unit costs for otherwise identical books? Of course, as with all these approaches, the emphasis in this approach is entirely on inputs and not on outputs, and the relation between inputs (better books, higher-paid and perhaps more qualified teachers) and outputs (better educated students) is seldom well understood.

[13] For examples, see Shah (1996, p.103), Ma (1997, p.11) and Bird (1986, p.144).

A third possible approach is to set out a representative expenditure system (RES) analogous to the RTS on the revenue side. Shah (1996) proposes a five-step way to determine such a system:

1. Disaggregate SNG expenditures into major functional categories such as health services, education, transportation and communication, etc.
2. Determine the influence on spending levels of cost and need indicators such as those listed above through regression analysis. This step is critical and difficult, requiring thorough understanding of not only of differences in service areas, populations and local needs but also of the objectives of public policy and the production functions (input-output relationships) of public services. As discussed further below, it is also critical to understanding possible strategic behaviors of recipient governments (Shah, 1994, Petchey, 2004).
3. Establish the per capita standardized expenditure of SNG for each category, employing national average values ($PCSE_{x,I}$) for the fiscal capacity indicators. What this procedure does is establish how much an SNG would spend, given its needs and costs profile, for each specific expenditure category if it had 'average' revenue. Since the weight of each factor was obtained empirically through regression analysis using data on all regions, in principle this method thus has the advantage of requiring objective standards.
4. Estimate the standardized per capita national expenditure ($PCSE_{na,i}$) for each category by evaluating the regression results at national mean values for all variables.
5. Using the equation below in the same way as RTS, the equalization grant each SNG is entitled to can then be calculated:.

   i. $EE_{x,i} = POP_x \cdot [PCSE_{x,i} - PCSE_{na,i}]$

   $EE_{x,i}$ represents the equalization entitlement of region x for the spending category i, POP_x is the population of region x and $PCSE_{x,i}$ and $PCSE_{na,i}$ are the per capita standardized expenditure for region x and at national average for spending category i.

In principle, then, to ensure that NFBs are equal across regions not only the resources potentially available to finance public services but also the cost of providing those services must be taken into account. A comprehensive equalization scheme should, it seems, clearly include both fiscal capacity and expenditure differential measures. Before considering how meaningful this conclusion actually is for countries concerned with developing a system of equalization transfers, however, we shall first review briefly the practices followed in a few selected countries to illustrate the extent to which expenditure differentials are actually taken into account in real-world equalization schemes.

3. Expenditure-based Equalization in Practice

We do not attempt here to present a complete picture of equalization systems around the world. For example, we focus on the national level, neglecting sub-national entities such as American or Indian states or Canadian or Pakistani provinces that are as large as many countries and that frequently engage in more or less generalized needs-based equalization in areas such as school finance (American states) or general expenditures (some Pakistani provinces). Moreover, we cover only six selected countries -- of various sizes, developed and less developed, with decentralized units that vary considerably in strength, and with varied institutional arrangements governing intergovernmental relations and of various sizes. Even this limited sample, however, probably represents fairly well most of the key ways in which expenditure factors are taken into account in practice.[14] Even with respect to these countries the account presented here is very condensed and focused on only a few points of particular interest in the present context.[15] Tables 1 and 2 set out the main points that emerge from this brief survey. Table 1 summarizes some key features of the equalization systems compared, and Table 2 depicts the expenditure factors taken into account in these systems. The balance of this section discusses briefly each of the six selected countries in turn. We turn to the lessons we draw from this brief survey in the final section of the paper.

Australia

Australia is characterized by a large vertical imbalance between revenues and expenditures at the national and SNG levels. The central government has control over all major revenue sources and collects 70 percent of total public sector revenues but is responsible for only 50 percent of total government's expenditures. In contrast, the state governments, while spending almost 45 percent of total expenditures, only have control on 25 percent of revenues (Craig, 1997). Unsurprisingly, transfers from the center to the six states and two territories account for nearly 40 percent of SNG revenue in this highly centralized federation.

Transfers from the center to the states take two broad forms, conditional grants called Special Purpose Payments (SPP) and a formal equalization program administered by the Commonwealth Grants Commission (CGC) that currently consists of an unconditional grant and a grant intended specifically for provincial health care services (HCG). About half of all transfers to the states are SPP intended to achieve national policy objectives, mainly for education and health care, in areas of state expenditure.

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[14] For much more information, on many more countries, see, among others, Shah (1994a), Ahmad (1997), Ter-Minassian (1997), and Bird and Tarasov (2004).

[15] There is of course a huge literature on each of these countries – only a few items of which are cited here –as well as a good deal of ongoing work which we make no attempt to summarize. To illustrate : we are aware of several recent studies on various aspects of equalization in China (Bahl and Martinez-Vazquez, 2003; Wong, 2003). For an earlier analysis of the Chinese case by one of the present authors, see Bird and Chen (1998).

The principle underlying the general purpose grants within the equalization program is that "State Governments should receive funding from the Commonwealth such that, if each made the same effort to raise revenue from its own sources and operated at the same level of efficiency, each would have the capacity to provide services at the same standard" (CGC, 2004, p. 4). The CGC, established in 1933 as a permanent and independent authority, every five years determines state equalization entitlements employing a very comprehensive approach using 18 revenue and 41 expenditure categories (Rye and Searle, 1997). Since, as seen in Table 2, Australia has by far the most developed expenditure-based system, we include in Table 3 a full list of these categories (equivalent to those set out in the first step suggested by Shah (1996) and discussed earlier). The expenditure requirements of different states are estimated both on the basis of spending patterns and a variety of factors. Among what may be labeled the 'disability' factors used to determine states 'relativities' are the proportion of population in the 5-15 age group, government school enrolment, non-government school enrolment, per capita demand for in-patient hospital services, and the unemployment rate. Among the cost factors are the proportion of population living in remote areas, the proportion of indigenous people, wages and salaries paid, and a building price index.

A major change was made in the Australian system in 2000, when the total distributive pool was set as the amount of the Goods and Services Tax (a VAT) collected in the previous year, plus an amount determined by the central government specifically for health care services (HCG).

Brazil

Brazil is exceptional in Latin America in the extent to which it is a decentralized federation in terms of the size, tax autonomy, and expenditure share of its SNG. It is also exceptional among federal states in the extent to which it operates a 'federal' fiscal system with respect not only to federal-state relations but also to federal-local relations. Its 5000 municipalities and 27 state governments play a very important role both in collecting revenue and in delivering public services. Two constitutionally-based transfers from the federal level to the state and municipal levels respectively are the heart of its intergovernmental fiscal system.

Under the *Fundo de Participacao dos Estados* (FPE) the federal government distributes 21.5 percent of net revenues of the three main federal taxes, the personal and corporate income taxes and its (limited) VAT to the states, with 85 percent of the funds designated specifically for the three poorer regions of the country (the North, Northeast and Center West). Within each group of regions (the three mentioned plus the wealthier South and Southeast regions), 95 percent of the FPE funds are allocated on an equal per capita basis and a measure of per capita income (macro indicator) and 5 percent on the basis of geographic area (cost) (World Bank, 2002).

A second very important revenue-sharing arrangement is the *Fundo de Participacao dos Municipios* (FPM). This transfer consists of 22.5 percent of net revenues of the same three federal taxes. The main allocation criterion is population, with

10 percent of the funds distributed to state capitals based on their share of the combined population of all state capitals and the remaining 90 percent to the rest of the municipalities. Of this 90 percent, 86.4 percent is allocated to states on the basis of their share of national population and then divided among municipalities according to a scale in which a minimum share is provided to small localities (population less than 10,188) and a maximum to cities with a population over 156,216. The final 3.6 percent of the FPM is distributed to the larger municipalities just mentioned, taking into account both population and per capita income.[16]

In addition, two other grants are intended to achieve some degree of equalization. The FUNDEF, a fund created to finance SNG spending on education, provides earmarked grants to states and municipalities intended to reduce disparities across states in wages and salaries, capital outlays, and operations and maintenance. The second program, the SUS, is a transfer aimed at financing health care provided at the municipal level. Based on cost differentials measured by past budget allocations on a per capita basis, it is earmarked for specific programs such as basic and preventive health care, pre-natal care, oral hygiene and immunization. The SUS has been used in recent years to increase budget allocations for poorer regions (Afonso, 2000, and Afonso and de Mello, 2000).

Although Brazil has no formal equalization for either fiscal capacity or expenditure differential, the net effect of the system described above is to achieve a substantial degree of equalization among states (World Bank, 2002).

China

The disparities found among China's 27 provinces and autonomous regions and 4 large municipalities are among the largest in the world (Ma, 1997). It is thus not surprising that among the objectives of a major Tax Sharing System (TSS) reform in 1994 were simpler and economically more appropriate revenue and expenditure assignments, the reduction of the perverse incentives for SNG arising from the previous system of intergovernmental finance, and more equalization among the highly diverse regions (Zhang and Martinez-Vazquez, 2003).[17] Although not a federation, China has developed a complex system of intergovernmental transfers in its attempt to achieve these goals.

At present, equalization transfers represent only 20 percent of central government transfers to the provinces, with most transfers being derivation-based VAT payments. In total, China has nine equalization transfers, with the most important (80 percent of total) consisting of pre-tax sharing system grants, transitory period grants, equalization grants for minority regions, and grants for increasing wages of civil servants.

The pre-TSS transfers were determined by the gap between the revenues and expenditure requirements of a province measured in a base year. Such transfers may flow

[16] In addition to the FPM, states are required to share 25 percent of their own broad-based VAT with municipalities, although largely on a derivation basis.
[17] The balance of this section is based largely on Zhang and Martinez-Vazquez (2003).

from or to the center depending on the deficit or the surplus of the provincial governments. Although there are obvious problems with this 'gap-filling' approach, Zhang and Martinez-Vazquez (2003, p.22) consider the pre-TSS grants to be the most equalizing transfers in the present system. To a considerable extent, of course, this result reflects the relatively equalizing nature of the pre-TSS system of intergovernmental finance.

The transitory period grants, unlike the pre-TSS grants, grew steadily from 1995 to 2001, although their total amount is determined annually on an ad hoc basis by the central government. Once determined, however, the grant[18] is allocated by formula relying on a measure of 'standard' provincial revenue and expenditure multiplied by a provincial coefficient. Fiscal capacity is determined using an RTS approach with 13 different revenue sources, taking into account also such factors as tax rebates, other general-purpose grants and remittances to the central government.[19] Similarly, on the spending side, a detailed RES approach is used with 12 expenditure categories.

Spending in the first seven categories -- government administration, agriculture, forestry and irrigation, culture and sports, education, health care, and 'other" -- is determined by using measures of personnel and office expenditures. Personnel expenditures are based on a 'standard' number of civil servants and a standard per capita salary for a given sector in a given region. The standard number of civil servants for a specific category is determined (by the central government) on the basis of population, agricultural population, number of government units, number of students, area of residential districts, number of districts and counties, and area of arable land. Per capita salary is determined by the average local per capita salaries at different government levels (province, prefecture and county). Similarly, 'office' expenditures depend on measures of standard expenditure for fuel, maintenance of vehicles, heating and other office expenses. Fuel and maintenance expenditures are determined by number of vehicles, fuel consumption per vehicle per year, unit fuel price, annual actual maintenance expenditure (determined by ratio of sub-quality roads on total length of roads and a vehicle damage coefficient), plateau area and road condition adjustment coefficients. Standard expenditure for heating depends upon the number of civil servants, standard per capita heating expenditure of the region (one of five groups of regions divided according to the average daily temperature of the capital cities in each region).

For the other five expenditure categories included in the transitory period grants -- urban maintenance and construction, social security and welfare, grain risk fund, and agricultural support -- the main variables used to determine standard expenditure requirements are urban population, area of completed urban zones, number of urban vehicles, real local expenditure for urban maintenance and construction, urban road distribution.

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[18] There are actually two grants, a general and a special grant, with the latter based on the higher costs of providing public services to minority regions, border areas, and counties considered as revolutionary and civil war areas.

[19] It should be noted, however, that in almost all cases the rates and bases of SNG taxes in China are set centrally and uniformly.

A special grant for minority regions (designated areas within particular provinces) was created in 2000, allocated in part by the same measures of standardized revenues, expenditures and provincial coefficients and in part by the growth rate of the central share of the VAT.[20]

Finally, although the grants for increasing standard wages of civil servants are obviously conditional in nature they too are equalizing since they are directed to the western provinces (among the poorest in the country). This transfer, motivated by the (nationally-mandated) 2001 wage increases granted civil servants, is based on the number or civil servants in each region times the mandated salary increases. The same regional coefficients, varying from 20 to 80 percent, are used, with minority regions benefiting from an additional 5 percentage points.

Germany

In Germany, all major tax sources (personal income tax, corporate income tax and VAT) are shared by the central and state governments. The extensive influence of the central government and the strong cohesion among the states on policy, legislation and tax issues characterize what has been called the "unitary German federation" (Spahn and Fottinger, 1997, p. 226). Germany's constitution commits all levels of government to "the establishment of equal living conditions in the federal territory" (Article 72 II GG), which is much stronger than the requirement for some 'minimum level' or 'same standard' of public services found in federations such as Canada (and implicit in the theory of equalization set out earlier). Germany also provides the clearest federal example of a horizontal equalization scheme, the *Finanzausgleich*.[21] First introduced in 1951 to compensate some states for "special burdens" with respect to refugees, harbor maintenance and so on, since 1955 this scheme has been enshrined in Article 107 of the Constitution in 1955 to equalize the fiscal capacity of the states (Ma, 1997).

Actually, three different transfer programs serve equalization purposes in Germany. The first program is based on the VAT, of which 49.5 percent goes to the states, with 75 percent distributed on a per capita basis and the remaining 25 percent distributed to states with below-average per capita personal and corporate income tax and local business tax revenues. These transfers are intended to raise the tax capacity of the receiving states to 92 percent of the national average.

The second program is the *Finanzausgleich* under which the sum of payments received by below-average states is always equal to the sum of disbursements of the above-average states. An "equalization yardstick" is defined by taking the average tax revenue per capita weighted by a population density factor, adding 50 percent of a standardized measure of municipal revenue and allowing for "special burdens" for some northern states. The population density factor is graduated between 1.0 and 1.3, with the city-states of Bremen, Hamburg and Berlin being given a 1.35 factor. Interestingly, while

[20] For a detailed treatment of China's complex fiscal treatment of its 'minority' regions, see Wong (2003).
[21] Denmark provides an example of such a system in a unitary state (Lotz, 1997).

Australia considers remote and scarcely populated regions to be more demanding in terms of expenditure requirements, Germany's *Finanzausgleich* favors highly populated areas. The special burden compensation is a lump-sum correction with the only important category being the provision of harbor services. In short, the equalization yardstick is a fiscal capacity indicator accounting for two expenditure differential factors. The yardstick is compared to the actual financial situation of each state and the difference is equalized down in progressive steps for above-average states and compensated up to 95 percent of national average for the poorer states.

The third equalization program consists of supplementary federal grants given to financially weak states, both eastern and western, to ensure they reach at least 99.5 percent of the national average fiscal capacity. Other special grants (for many purposes) complete Germany's transfers system, making it the most equalizing system found in federal countries – although one that has often been criticized for penalizing fiscal effort in rich states and encouraging fiscal irresponsibility in poorer states (Spahn and Franz, 2000).

India

In India, intergovernmental fiscal transfers have been used since 1919 to correct vertical and horizontal imbalances. India's transfer system now consists of three programs: those established by the Finance Commission, grants and loans for state development plans authorized by the Planning Commission, and a set of 220 specific purpose transfers from various central ministries to the states (Rao, 2004).

For over 50 years, Finance Commissions have been responsible for determining state budgetary requirements and suggesting methods of revenue distribution every five years. The Eleventh Finance Commission reported in April 2000, and the tax devolution arrangements and unconditional gap-filling grants it recommended accounted for 65 percent of total intergovernmental transfers in 2001-02. For the 2000-05 period, the distributive pool has been set at 29.5 percent of net proceeds of total central taxes (Rao, 2004).

Equalization transfers are formula-based using fiscal capacity, expenditure differential and fiscal effort indices: 10 percent is based on population (equal per capita), 62.5 percent on income per capita (macro), 7.5 percent on area, thus favoring lower density regions (cost), 7.5 percent on an index of infrastructure, and 12.5 percent on 'tax effort' and 'fiscal discipline.' The remaining 10 percent of the Finance Commission's transfers are given on the basis on projected budgetary gaps and have, unsurprisingly, often been criticized for encouraging fiscal irresponsibility (Ma, 1997).

The second set of transfers, representing 30 percent of total transfers, are determined by the Planning Commission and consist of two programs. 30 percent of these funds are intended for the 'special category' states (eleven mountainous states of the north and northeast) and intended to provide assistance for specific projects and plans submitted by the states and approved by the federal government. The other 70 percent go

to the major states, 30 percent as grants and 70 percent as loans. These funds are distributed 60 percent based on population, 25 percent on income per capita, 7.5 percent on fiscal performance (tax effort, fiscal management, national objectives), and 7.5 percent on 'special problems' (e.g. population control, literacy, land reform, etc.) (needs).

The final 5 percent of transfers consists of the 220 specific purpose grants mentioned earlier. On the whole, India's complex system, while it may be criticized as providing some undesirable incentives with respect to the fiscal management of the states, appears both to have been significantly equalizing and on the whole to have contributed to achieving a degree of cohesiveness in a large and diverse country

Switzerland

Swiss cantons enjoy a high degree of autonomy for both historical and political reasons. With important variations among the 26 cantons in terms of population, language, religion, size, geography and economic activity, Switzerland, although a small country in terms of population, is among the most decentralized federations. Equalization programs have been incorporated in the constitution since 1958 though without any explicit objective to ensure a minimum or standard level of service provision among the different cantons. Rather, the very pragmatic objective has been "to render cantonal disparities politically acceptable so that remaining differences do not endanger the cohesion of the Confederation" (Dafflon, 2004, p. 15).

Equalization accounts for 10 percent of cantonal revenues and is accomplished through three broad programs. The first consists of a variety of federal conditional grants to cantons. About a third of the many cantonal expenditure categories that benefit from federal aid have an equalizing component. These equalizing transfers, representing 20 percent of federal expenditure and 15 percent of cantonal revenue, are based on a financial capacity index that is computed using both fiscal capacity and expenditure differential indicators. Three revenue-raising capacity indicators are used: national income per canton (macro) – 30 percent, tax revenue per capita for both canton and municipalities (RTS) – 30 percent, and a tax effort or burden index (RTS) – 20 percent. Two expenditure differential indicators are employed: proportion of agricultural land in mountainous regions (cost) – 10 percent, and population density (need) – 10 percent. As in Australia and India, but in contrast to Germany, cantons with low population density benefit from equalization transfers, since it is thought that cantons with higher population density reap economies of scale in the provision of public services.

The second equalization scheme is a revenue sharing arrangement between the Confederation and the cantons under which 30 percent of the federal direct tax (income, corporate profits and capital) is distributed among cantons, 17 percent on a derivation basis and 13 percent using the financial capacity index. In addition, cantons receive 10 percent of the federal withholding tax (5 percent on a per capita basis and 5 percent on the financial capacity index), 12 percent of custom duties on motor fuel (of which 42 percent is equalized) and 2/3 of the Swiss National Bank's profit (5/8 on a per capita basis and 3/8 equalized).

Finally, the third equalization scheme relates to cantonal contributions to social security expenditures. Contributions to the three federal programs (old-age and survivors insurance (AVS), disabled pension scheme are (AI) and family allowance in agriculture (AFA)) are scaled using a modified version of the financial capacity index.

Following a decade of negotiation between the Cantons and the Federation, equalization in Switzerland is about to undergo a major reform, assuming the new equalization law succeeds in the referendum required to make the necessary constitutional changes. Among other features, the new system introduces new formulas with respect to both the expenditure and revenue sides of equalization, employing an RTS approach to fiscal capacity and using socio-demographic indicators as well as geographic factors on the expenditure side (Dafflon, 2004).

4. Expenditure Equalization: Evaluation

While it is difficult, and perhaps dangerous, to generalize on the basis of this selective review of equalization systems in a few countries around the world, three conclusions seem to emerge from the review in the previous section:

1. The theoretical logic of equalization set out in the first section does not appear to have had much impact on actual equalization systems. Why?
2. Only Australia, of the countries considered here, appears to have adopted the apparently most logical RES approach to equalizing expenditure. Why?
3. Many countries seem to take equalization into account in a variety of 'case-specific' ways such as special allowances for particular regions. Should this approach be considered a supplement to or a replacement for more formal expenditure-based equalization schemes?

We argue in this section that it is not surprising that neither the logic of expenditure equalization nor the practice of RES has had so little impact in practice and that the simpler and more pragmatic approach to equalization observed in most countries is not only understandable but desirable.

Why Is No One Listening?

Recall the question we raised earlier: why should the outcome of a unitary state be the desired one? Of course, in many countries in the past – and indeed in many even today -- the general shape of the state has in effect been imposed by a small elite. Still, in democratic countries such as Spain or Belgium, it is clear that there have been decisive moves towards increased decentralization in the last 25 years or so either with (Belgium) or without (Spain) a formal move towards federalism.[22] Presumably, democracies can

[22] For recent detailed examinations of these two cases, see Bayenet and de Bruycker (2003) and Garcia-Mila and McGuire (2003), as well as the briefer discussion in Bird and Tarasov (2004).

also choose to move towards centralization, implicitly or explicitly. It thus does not seem to us unreasonable to assume that at least in a democracy an observed high degree of decentralization is in a real sense the result of choice. When resources are reasonably free to move within a country, observed differences in economic well-being between regions and thus in levels of public services can, equally reasonably, be assumed to be desired at least to some extent by their residents. Some such differences, for example, may well be compensated in various less visible ways – for example, by differences in social capital (family ties, community support) access to 'free' natural resources (fishing, hunting, better climate) and the value of fixed assets (paid-up ancestral houses). Of course, if additional funds to make life even better are freely obtainable from a benevolent central government, the residents of 'disadvantaged' regions will certainly accept them. But it is not at all as clear as the standard theory of equalization asserts that this is the only decent way to run a federal state.

Even in countries that are neither federal nor democratic, path dependence often rules. Conditionality, for example, is not consistent with the theoretical case for equalization, but it is not surprising to find, as Slukhai (2003, p.9) notes with respect to transition countries in eastern Europe that "…the state treats equalization transfers as an element of its influence over local governments." In China, for example, much of what is called 'equalization' is really aimed at ensuring that central government objectives (salary increases) are met. Similar policies may be found in many developing countries, perhaps particularly those coming from a central-planning tradition and/or those fearing regional separatism in one form or another. They are also common in developed countries when it comes to state-local (as opposed to federal-state) relations. He who pays the piper frequently wants to call the tune and can, in most cases, do so regardless of the name of the transfer payment.

Economists may be frustrated when those in power seem not to listen to their good and well-founded advice. Politicians succeed, however, by listening to those who matter with respect to keeping them in power, a group unlikely to include many academic economists. Even in established federal democracies, the level and structure of transfers can often be best understood as the outcome of prolonged political negotiation between contending (and in some sense equally 'sovereign') governments – negotiation that in part no doubt reflects what Breton and Scott (1978) called the differing 'span of concern' to which governments with different territorial jurisdictions properly respond. It may still be useful in some respects to compare the resulting system against a 'baseline' (unitary state) comparison as the theory of equalization in effect does: but there is no presumption that this baseline case sets a relevant normative standard.

Why Does No One Do it Right?

The question posed in the title to this sub-section may seem both unnecessary and wrong. The question seems unnecessary since, if as just argued almost no one is doing 'it' – equalization – for the reasons assumed in the theoretical discussion, then it seems unnecessary to consider how it might be done 'right' if anyone wanted to do it. On the other hand, Australia does appear to come close to doing 'it', so the question seems

wrong. We suggest, however, first, that even if countries wish to equalize in the sense assumed in the theory, that the Australian 'model' is unlikely to provide a useful guideline for both conceptual and practical reasons, and, second, that even if this model were to be followed, its results would be unlikely to accord with the theoretical objective.

Since Petchey and Levtchenkova (2004) essentially deal with the second of these points, we shall comment here only on the first. Almost all who have studied the RTS-RES approach have agreed on two points: first, it is formally the most satisfactory way to meet the normative objectives of the theoretical equalization model, and, second, that it is only difficult and costly to obtain the necessary data (in a form that all parties agree is satisfactory) especially for expenditures. While we continue to think that the RTS approach is, on the whole, nonetheless probably still the best way to deal with the revenue side of the equation,[23] on balance we think that it is unlikely to be worth the cost of introducing a parallel RES system in most countries.

In federal countries, as Bird (1986) shows with respect to Switzerland, for example, experience tells us that, so to speak, formula follows function. That is, what is important is not that the formula used for equalization purposes is 'correct' but that the results of applying it are politically viable. When the results produced by any particular formula become sufficiently unsatisfactory from the perspective of any significant political actors, the formula gets changed. Introducing still more elements in the formula on the expenditure may be a useful way to, as it were, reduce the annual political turmoil about who gets what by confusing everyone as to what exactly is going on, but those who think are losing out are unlikely to stay confused for very long. Equalization transfers may be an essential element of federal 'glue' in some countries but in the long run, in this as in other aspects, transparency should trump complexity when it comes to such central political elements of the intergovernmental fiscal system.

In more centralized countries, however, in which transfers are essentially one of the tools used by the central government to get its objectives achieved in a situation in which, for whatever reason, important activities (e.g. health and education) are in the hands of SNG, then an RES approach may sometimes make more sense. Instead of a variety of conditional grants on the U.S. model, with different degrees of equalization from grant to grant, a country might choose to have a more uniform equalization system focused on the provision of uniform national standards in some key areas both to achieve national objectives and also to ensure in effect a more 'level playing field' for other transfers intended to induce specific actions by recipient governments.[24]

Pragmatism and Asymmetry

On the whole, however, while expenditure-based equalization is more likely to find a welcome in unitary than in (truly) federal countries, even in such countries, many of the purported objectives of such policies can be more simply achieved by special 'regional' transfers rather than by attempting to incorporate a variety of complex factors

[23] For discussion of problems with this approach, see Bird and Slack (1990) and Smart (1998).
[24] This is more or less the schema laid out for Colombia by Bird and Fiszbein (1998).

in a 'general' equalization scheme. Some instances of such 'special' transfers were mentioned in the countries surveyed above. It is not hard to find others. In Canada, for example, not only is there a separate formula for the three sparsely-populated northern territories but unlike the case with the provincial equalization system this formula incorporates substantial 'expenditure' elements in recognition of the extreme cost and need differentials between the territorities and the provinces. Many other countries to some degree or other incorporate similar factors in their financing arrangements for 'special states' such as border areas or those inhabited by minority populations. In the name of transparency, such 'asymmetric' arrangements often seem superior to attempts to incorporate every region, no matter how different, in a uniform formula.

A possible argument against the approach we suggest – essentially, deciding what a transfer system is supposed to do and then doing it as clearly and simply as possible - is what may perhaps be called the 'universality' argument. Those concerned primarily to direct more resources to the poor and deserving may think this can best be achieved by establishing an elaborate general transfer system that churns huge amounts of money around the system, much of which ends up where it started, in the name of channeling a relatively small additional amount to those who (some think) need it. We are not sympathetic to this approach. Fools are doubtless born every minute and some of them no doubt become politicians. However, politicians who do not understand who gets what are unlikely to be long in office, and if they and their constituents do not support regional redistribution trickery is unlikely to make it more sustainable.

Table 1: Equalization Transfers in Six Countries

Country	Number of regions	Number of equalization programs	Distributive pool	Fiscal capacity categories	Expenditure differential categories	Fiscal effort
Australia	8	1	Federal VAT	18 (RTS)	41	No
Germany	16	3	Federal VAT Horizontal sharing Supplementary federal grants from general revenue	3 (RTS) 3 (RTS) Variable	- 2 -	No
Switzerland	26	3	Federal conditional grants from general revenue FDT, withholding tax, custom duties (petrol and motor fuel) and National Bank's benefit Cantonal contributions to social security	3 (RTS and macro) 3 3	2 2 2	Yes
China	31	9	Gap-filling (general revenue) Determined as hoc by the central government Central VAT General revenue Other programs	- 13 (RTS) 13 (RTS) -	- 12 12 1 (number of civil servants)	No
India	35	3	Total central taxes General revenue Specific purpose grants (general revenue)	2 (RTS and macro) plus gap-filling 2	2 2	Yes
Brazil	27	2	Federal personal and corporate income tax and VAT For states For municipalities	 - -	 2 1	No

Compilation by the author

Table 2: Expenditure Factors in Equalization Schemes

Disability factors	Australia	China	Germany	India	Switzerland	Brazil
Needs-based factors						
Population (equal per capita)	●	●	●	●	●	●
Inverse of population share	●					
Population density			●			
Population dispersion	●			●	●	
Ratio of specific age groups to total population	●					
Sex	●					
Population control measures				●		
Low-income households and individuals	●					
Social security beneficiaries	●					
Low official language fluency	●					
Non official language background	●					
Number of students	●	●				
Literacy rate				●		
Humanitarian immigrants	●					
Number of general practitioners						
Indigenous or minority population	●	●				
Urban population	●		●			
Remote population	●					
Agricultural population		●				
Cost-based factors						
Geographic area (mountainous, desert, arable, etc.)	●	●		●	●	●
Temperature, rainfall, soil, etc.	●	●		●		
Natural hazards	●					

Border, revolutionary or civil war areas		●			
Road length	●	●			
Proportion of unpaved or sub-quality roads	●	●			
Sinuosity factor of regional roads	●				
Deck area of bridges, culverts and tunnels	●				
Harbor services			●		
Number of government units		●			
Number of districts, counties and municipalities		●			●
Average salaries (public) by occupation		●			
Average salaries (non-public) by occupation	●				
Average effective rent rates	●				
Number of government vehicles		●			
Fuel consumption per vehicle per year		●			
Unit fuel price		●			
Vehicle damage coefficient		●			
Regional standard per capita heating expenditure		●			
Proportion of electricity and cost by plant type (hydro, steam, internal combustion, etc.)	●				
Average price of a three minute phone call	●				
Price of Internet connection	●				
Average price of transporting 50 kg of goods by freight	●				
Average price of a one-way economy fare plane ticket (intra-regional travel)	●				
Number of business locations	●				
Number of residential dwellings	●	●			
Number of first home owners	●				
Number of national park visitors	●				

Compilation by the authors

Table 3: Categories employed in Australian Equalization Grants, 2004

Revenues:

1) Payroll Tax
2) Land Revenue
3) Stamp Duty on Conveyances
4) Financial Transaction Taxes
5) Stamp Duty on Shares and Marketable Securities
6) Gambling Taxation
7) Insurance Taxation
8) Heavy Vehicle Registration Fees and Taxes
9) Other Vehicle Registration Fees and Taxes
10) Stamp Duty on Motor Vehicle Registration and Transfers
11) Driver's Licence Fees
12) Revenue Replacement Payments – Petroleum
13) Revenue Replacement Payments – Tobacco
14) Revenue Replacement Payments – Alcohol
15) Other Taxes
16) Interest Earnings
17) Mining Revenue
18) Contributions by Trading Enterprises

Expenditures:

1) Pre-school Education
2) Government Primary Education
3) Non-government Primary Education
4) Government Secondary Education
5) Non-government Secondary Education
6) Vocational Education and Training
7) Higher Education
8) Transport of Rural School Children
9) Hospitals
10) Nursing Homes
11) Mental Health
12) Community Health
13) Public Health
14) Police
15) Administration of Justice
16) Corrective Services
17) Public Safety and Emergency Services
18) Family and Child Welfare
19) Aged and Disabled Welfare
20) Other Welfare
21) Housing
22) Electricity and Gas
23) Water Supply and Sewerage
24) Freight
25) Non-urban Passenger Transport
26) Other Trading Enterprises
27) Other Concessions
28) Culture and Recreation
29) National Parks and Wildlife Services
30) Aboriginal Community Services
31) Superannuation
32) Other General Public Services
33) Primary Industry
34) Mining, Fuel and Energy
35) Tourism
36) Manufacturing and Other Industry
37) Roads
38) Urban Transit
39) Debt Charges
40) Depreciation
41) Regulatory and Other Services

Source: CGC (2004, p. 343)

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