

Local Finances and Fiscal Equalization Schemes in a Comparative Perspective:
Australia and Canada

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Local governments are responsible for delivering services that directly impact the quality of life in communities: clean water, sewage treatment and refuse collection, police and fire protection, roads and transit, recreation and cultural services, and more. In some cities, local governments are also responsible for education, health, and social services. If the benefits of particular services are confined to local jurisdictions (the actions of one municipality, for example, does not have an effect on other municipalities), efficiency is enhanced because the mix and level of services can vary according to local preferences. Local governments are thought to be in a better position to respond to local tastes and preferences than are other levels of government.

To pay for services, the traditional fiscal federalism literature prescribes user charges and a very limited tax base for local governments (Bird & Slack, 2013). The only good taxes are said to be those that are easy to administer locally, that are imposed mainly on local residents, and that do not raise problems of harmonization or competition either horizontally (between local governments) or vertically (between local and state or central governments). The property tax is appropriate for financing local services because property is immovable and there is some connection between the types of services at the local level and benefits to property values (Slack & Bird, 2014). Yet, local governments in many countries (notably Germany and the US) also have access to other taxes such as income taxes.

Local delivery and funding of services will mean that there will be differences in the ability of local governments to deliver services. Horizontal fiscal imbalance (HFI) refers to the difference in resources among governments at the same level: some municipalities are unable to provide an adequate level of service at reasonable tax rates whereas other municipalities can. This inability to provide an adequate level of service may occur because the costs of services are higher, the need for services is higher, and/or the tax base is smaller.

Needs and/or costs may be greater than the average because of geographic location, population density, or other factors. For example, wages and rents are usually higher in cities with high population density and the cost per unit to provide services increases with increasing population because of congestion (Fenge & Meier, 2001). Needs may be higher for municipalities with a high proportion of low-income households who require affordable housing and social services or for municipalities with high dependency ratios (the ratio of the non-working age population to the working age population).¹ Taxing capacity is also unevenly distributed across municipalities with the result that there will be disparities in the provision of local public services. To address horizontal fiscal imbalance, equalization grants based on expenditure needs and fiscal capacity allow those municipalities with small tax bases and greater costs and needs to be able to provide a comparable level of services by levying tax rates that are comparable to other jurisdictions.

This paper describes and evaluates state-local equalization transfers in Australia and Canada and determines if there are lessons for German municipalities. Because the context for local governments is so different in each of these countries, the first part describes local governments in Australia and Canada – what is the size of the local government sector? What do local governments spend money on? What revenues do they rely on? How do they differ from German local governments? The second part describes the state-local equalization model in Australia using the State of Victoria as an example, followed by the third part on provincial-local equalization in Canada with examples from two provinces -- Ontario and Nova Scotia. The fourth part considers the implications of state-local equalization grants in Australia and Canada for German municipalities. The fifth part provides a summary and conclusions.

It should be noted at the outset that local fiscal equalization in federal countries is more difficult to describe than federal-state equalization simply because municipalities in federal countries are governed by state and provincial government legislation so there are different equalization schemes in each jurisdiction. Moreover, notwithstanding the critical importance of

¹ Of course, expenditures per capita could be higher because of inefficient spending by some municipalities. If inefficiency is the reason for higher expenditures, then this inefficiency will also be rewarded by the grant. Measuring need can be difficult and requires considerable data (Kim & Lotz, 2008), as will be discussed further below.

local governments in people's lives, there is very little analysis of the impact of local fiscal equalization, especially in Canada and Australia.

1. Local Government Finance in Australia, Canada, and Germany

Australia, Canada, and Germany are all federal countries. The Australian federation comprises a federal (Commonwealth) government, six states (New South Wales, Victoria, Queensland, South Australia, Western Australia, and Tasmania), and two semi-autonomous federal territories (Northern Territory and Australian Capital Territory) and 565 local governments. Canada has a federal government, ten provinces and three territories, and approximately 3,750 local governments. Germany has a federal level, 16 states (Länder), and over 12,000 local governments.

Table 1 provides information on expenditures and taxes by level of government in the three countries. Although the information is from the same source, there are still some comparability problems. For example, local governments appear to be most significant in terms of expenditures in Canada but that is, in part, because local governments include school boards and Aboriginal governments. What is true, however, is that local governments in Australia do relatively little when compared to local governments in the other two countries. Local governments in Australia account for only 5 percent of total government expenditures whereas states account for 53 percent, and the federal government for 42 percent (Dollery, Kortt, & Grant, 2013). Provincial governments in Canada spend more per capita than state governments in Australia and Germany and the federal government in Australia spends more per capita than in the other two countries. In terms of taxes, local taxes represent a much larger proportion of total taxes in Germany and Canada than in Australia.

Table 1: Expenditures per Capita and Local Taxes in Three Countries, 2011

	Germany	Australia	Canada
Local government	2,523	1,011	3,151*
State government	4,160	6,831	8,650
Central government	9,613	12,625	6,890
Local taxes as % of total taxes	13.0	3.5	11.8

*Includes school boards and Aboriginal governments

Source: Calculated from IMF, Government Finance Statistics Yearbook, 2012

The breakdown of local government expenditures by category is only available for Australia and Germany, shown in Table 2. The main focus of local governments in Australia is on economic affairs of which expenditures on transportation account for 82 percent followed by general public services, and recreation and culture. Expenditures on health, education, and social services are minimal as are expenditures on public order and safety. In contrast, local governments in Germany spend almost one third of their expenditures on social protection. Expenditures on general public services, education, and economic affairs are the next largest expenditures.

Table 2: Distribution of Local Government Expenditures, Australia and Germany, 2011 (%)

	Germany	Australia
General public services	17.7	26.2
Public order and safety	3.2	2.3
Economic affairs	13.9	27.1
Environmental protection	5.1	12.2
Housing and community amenities	4.2	8.8
Health	1.8	1.0
Recreation and culture	6.6	16.8
Education	14.6	0.5
Social protection	32.9	5.1
Total	100.0	100.0

Source: Calculated from IMF, Government Finance Statistics Yearbook, 2012

Because there is no breakdown of local government expenditures by function for Canada for 2011, Table 3 provides a breakdown for the largest province, Ontario.² The major local government expenditures are for transportation (roads and transit) and protection (mainly police and fire protection) followed by social services. Ontario is unique in Canada in that social service costs are shared between the provincial and local governments. In the rest of Canada, the bulk of social service expenditures are funded at the provincial level. Environmental services (water, sewerage, and waste collection and disposal) are also a significant local government responsibility. Education is not included under local government as it is delivered by school boards.

Table 3: Municipal Expenditures: Ontario, Canada 2011

	\$ (CAD) per capita	%
General government	154	5.3
Protection	506	17.3
Transportation	643	22.0
Environmental	420	14.4
Health	150	5.1
Social services	494	16.9
Social housing	176	6.0
Recreation and culture	11	0.4
Planning & development	62	2.1
Other	23	0.8
Total expenditures	2,922	100.0

Source: Ontario Ministry of Municipal Affairs and Housing, Financial Information Returns

In terms of revenues, local governments in all three countries rely on taxes for between 36 and 38 percent of total local revenues but that is where the similarity ends. Municipalities in Australia and Canada rely much more heavily on property taxes than German municipalities (see Table 4). Indeed, the property tax is the only tax for local governments in Australia and accounts for most of the local taxes in Canada. Germany is quite different in this respect since its reliance on property taxes is very low and its use of income taxes (mainly on businesses) is high (Burgi, 2009). Moreover, unlike state governments which do not have autonomy to set tax rates, local

² In the process of moving to the GFS (Government Finance Statistics) system of reporting, Statistics Canada temporarily suspended the publication of data on local government expenditures in 2008.

governments in Germany have the ability to set tax rates on both business taxes and the property tax, resulting in significant variations in tax rates across the country (Feld & Von Hagen, 2007). In terms of grants from other levels of government, dependency in Canada is much higher than in the other two countries. This finding reflects that school board funding is included under Canadian local governments but also that conditional transfers are paid to municipalities for social services in the largest province (Ontario). Other revenues include user fees but, without a breakdown of this revenue category, it is difficult to compare the reliance on fees at the local level in the three countries. Information for Australia, however, indicates that user fees account for almost 25 percent of local government revenues (Australian Bureau of Statistics, 2014). For municipalities in Ontario, Canada, user fees account for 19 percent of local government revenues.

Table 4: Distribution of Local Government Revenues, 2011 (%)

	Germany	Australia	Canada
Taxes	37.9	37.0	36.4
Taxes on income, profits and capital gains	30.3	0.0	0.0
- Individuals	14.5	0.0	0.0
- Corporations	15.8	0.0	0.0
Taxes on payroll and workforce	0.0	0.0	0.0
Taxes on property	5.1	37.0	35.5
Taxes on goods and services	2.5	0.0	0.9
Other taxes	0.0	0.0	0.0
Grants	35.5	16.8	47.1
Other revenue	26.6	46.2	16.6
Total revenue	100.0	100.0	100.0

Source: Calculated from IMF, Government Finance Statistics Yearbook, 2012

2. State-Local Equalization in Australia

Horizontal (and vertical) fiscal imbalance has historically been handled in Australia through intergovernmental transfers. The Commonwealth government provides the funding for intergovernmental transfers to local governments under the *Local Government (Financial Assistance) Act, 1995*. The funding is provided to the state governments on the understanding that these grants will be passed onto local governments (Department of Infrastructure, 2012). The distribution of grants is performed by state-based Local Government Grants Commissions.

Although each state has its own local government grants commission, they are required to follow a set of national principles.

The Commonwealth government determines the overall amount of the financial assistance grants (general purpose and local roads grants) for the country as a whole. A formula is used to distribute grants to the states that takes into account changes in inflation and population so that the value of the grant is maintained in real per capita terms. The local government grants commissions make recommendations to their respective ministers on the grant allocation and the local government ministers' recommendations are forwarded to the responsible Commonwealth Minister for Local Government who approves grant payments subject to meeting all legislative requirements. Financial assistance grants can only be paid to states and territories that have local government grant commissions.

General purpose grants are allocated on the basis of the principles of horizontal equalization and an assessment of the ability of local governments to raise revenues from property taxes (rates). Local roads grants are separate grants designed to help local authorities pay for the cost of maintaining roads, even though the grants are unconditional. The underlying objective of the two grants is to improve the capacity of local governments to provide an equitable level of services and increase the efficiency and effectiveness of local government (Dollery, Kortt, & Grant, 2013).

The National Principles for allocating grants to local governments are the following (State Government of Victoria, 2012):

- Horizontal equalization: Each local government body has to be able to function by reasonable effort, at a standard not lower than the average standard of other local governing bodies in the State or Territory.
- Effort neutrality: Individual local government expenditure and revenue decisions will not have an impact on the grant amount.
- Minimum grant: The minimum grant in any year is no less than it would be entitled to if 30 percent of the total amount the state/territory grants were distributed on a per capita basis.
- Other grant support: Other grant support to local governments should be taken into account when assessing expenditure needs.

- Aboriginal peoples and Torres Strait Islanders: The grant should be allocated in a way that recognizes the needs of Aboriginal peoples and Torres Strait Islanders residing in their jurisdiction.
- Council amalgamations: If two local authorities amalgamate, their grant entitlements for the next four years should be equal to the total that would have been provided to each of them separately if they had not amalgamated.

For the local roads grant, National Principles dictate that the grant should be allocated on the basis of the relative need for road expenditures to preserve road assets. In assessing need, factors such as length, type, and use of the road should be considered.

Allocations under the equalization component are calculated on the basis of detailed expenditure need and revenue capacity measures weighted by a broad range of indicators to account for differences in local conditions (known as “disabilities” or “cost adjustors”). All municipalities in a state receive grants but poor, small, and rural municipalities receive more on a per capita basis than larger, urban municipalities.

Expenditure needs are defined as “differential costs, relative to standard, that a council needs to provide a standard level of service” (Worthington & Dollery, 2000, p. 30). The basic concept behind calculating expenditure needs is disability -- an influence beyond the local government’s control that results in it having to spend more money per capita than the standard. In other words, a disability is an exogenous factor that influences the cost of providing services.

Of course, one of the challenges with calculating disabilities is determining which are truly exogenous and which are within the control of local governments (Reschovsky, 2007). To do this, the commissions use a factor assessment method. First, they determine which expenditure categories should be used to calculate relative expenditure need. Second, they settle on which disabilities are relevant to each expenditure category. Disability can be related to demand (influences that stem from socioeconomic characteristics such as age, sex, income levels, percentage of the population that is Aboriginal) or cost (such as economies of scale, dispersion of population, etc.). Guidelines are used to determine which disabilities apply to each expenditure category.

The different disabilities are combined to estimate an overall disability factor for each local government and the overall disability factor is used to estimate the standardized expenditure which is calculated as the number of units (usually measured by population) multiplied by the

standard cost per unit (usually the average state expenditure) and the disability factor (a measure of the local government's disadvantage which is measured by the underlying factors that may lead councils to spend more per capita (or less) than the state average).

Revenue needs are defined as the “differential revenues a council would raise if the standardized revenue effort was applied to its revenue base (Worthington & Dollery, 2000, p. 30).” Revenue capacity is calculated by a standardized property tax rate multiplied by the municipality's assessment base averaged over three years. Revenue capacity can also include standardized revenues from user fees and charges. Disabilities can be applied to the standard revenue to account for differences among municipalities that are beyond their control. Examples of disabilities might include household income or socioeconomic measures.

A separate road grant is calculated by the road length multiplied by the standardized asset preservation cost multiplied by a cost adjustor factor which includes freight travel volumes, climate, availability of pavement materials, sub-grade conditions, and higher-cost strategic routes.

State of Victoria

The State of Victoria provides one example of how the equalization formula is applied in practice. In the formula used by the Local Government Grants Commission, expenditure need is based on nine expenditure categories which together account for virtually all local government operating expenditures: governance, family and community services, aged and disabled services, recreation and culture, waste management, local roads and bridges, traffic and street management, environment and protection services, and business and economic services. Costs are adjusted for each expenditure category by one or more of 14 weighted indicators that reflect local conditions -- number of aged pensioners, environmental risk, Indigenous population, urban roads, language, population density, population dispersion, population growth, population under 6 years, regional significance, remoteness, scale, socioeconomic, and tourism. For example, expenditures on aged and disabled services are adjusted by population aged over 60 plus recipients of disability support pensions. Waste management expenditures are adjusted by the number of dwellings. Each cost adjustor is weighted because some impact more on costs than others.

With respect to revenue-raising capacity, the standardized revenue in the State of Victoria is calculated by multiplying the valuation base (capital improved value) by the average tax rate across all Victorian councils over the last three years. Payments in lieu of property taxes paid on facilities such as power stations and airports are included in standardized revenue so that all councils are treated equitably (State Government of Victoria, 2012). Revenue-raising capacity is calculated separately for each property class – residential, commercial/industrial/other, and farm – using a three-year average of valuation data.³ Revenue-raising capacity from user fees and charges is also included in the calculation of standardized revenues. A set of revenue adjustors are used to allocate general purpose grants to reflect differences among local governments and take account of factors that impact their relative capacity to raise revenues from user fees and charges. The five revenue adjustors are: household income, socio-economic, tourism, value of development, and commercial valuations.

Comments on the Australian Local Equalization System

Some of the issues around the Australian local equalization formula have been discussed in the literature (see, for example, (Dollery, Kortt, & Grant, 2013) and (Worthington & Dollery, 2000). Perhaps the most common criticism of the Australian system is the complexity that it entails, especially with respect to the determination of expenditure need. As noted above, the formula starts with a measure of the standard expenditure per capita which is usually taken to be the average expenditure per capita in the state. The complexity arises in trying to determine those factors, beyond the control of local governments, which result in them having to spend more or less than the standard amount. These so-called disability factors or cost adjustors can become very detailed and complicated. This complexity reduces transparency for both local councils and the public. At the same time, the formula has been criticized for being “somewhat crude, imprecise, and subjective” because the procedure involves a detailed analysis of local budgets but, at the end of the day, provides a fairly subjective assessment of relative need (Shah, 1996, p. 103). Notwithstanding the complexity of the formula, it only applies to operating expenditures;

³The Commission in Victoria constrains increases in each local government’s assessed revenue capacity to improve grant stability. The constraint for each local government is set at the statewide average increase in standardized revenue adjusted by the local government’s own rate of population growth to reflect the growth in the property tax base (State Government of Victoria, 2012).

capital expenditures are not included in the measure of expenditure need and yet many local governments face enormous challenges in meeting infrastructure needs.

On the revenue side, questions have been raised about the use of property values as the measure of revenue-raising capacity because of differences in the way in which property taxes are levied in different jurisdictions. In particular, different methods are used for assessing property— in some states, property taxes are levied on the unimproved capital, in others on gross rental value, and in others on capital improved value. Revenue-raising capacity may also depend on other characteristics of the property tax such as the use of minimum tax rates, concessions for pensioners, the use of differential tax rates by property class, and rate pegging (limits on property tax revenues). In some states, these factors are taken into account – of course, increasing the complexity of the formula – but, in other states they are not.

Some studies have been done of the impact of equalization grants in Australia on efficiency but the findings are not conclusive (Dollery, Kortt, & Grant, 2013). On the one hand, it has been argued that the grant does not reward or penalize councils with different levels of efficiency because the principal goal of the grant is equalization not efficiency, the term “reasonable effort” in the legislation refers to tax effort and not reasonable efforts to achieve expenditure efficiency, and “effort neutrality” in the legislation means that local governments should not be able to influence the grant. On the other hand, it has been argued that the equalization grants may reduce the efficiency of local governments because they provide the largest per capita grants to local governments who are experiencing revenue-raising difficulties and who face high expenditure needs (Dollery, Kortt, & Grant, 2013).⁴ Nevertheless, it has also been argued that councils that are cost effective may be rewarded through unit cost adjustments up to the standard.

The use of local government expenditure to estimate a state’s standard cost masks the impact that several efficient or inefficient councils have on grant allocation (Dollery, Kortt, & Grant,

⁴One study of local equalization grants in New South Wales estimated the impact of equalization grants on technical and scale efficiency for library services, waste management, and planning and regulatory services (Worthington & Dollery, 2000). Their findings suggest that, irrespective of effort neutrality, grants may exert a negative influence on efficiency because of minimum grant requirements and the failure to calculate non-positive disabilities. A minimum grant means that some local governments receive expenditure allowances in excess of notional requirements, thus promoting inefficient behaviour. Inefficiency may also arise from a council only having a small number of individual disabilities (less than the state standard), implying a relatively low grant. The weighting system applied to individual disabilities combined with the process of averaging used to calculate an overall disability factor, limits the positive effect of individual disabilities on grant income. They also found that the influence of grants on efficiency varies significantly across local governments and across functions.

2013). For example, an efficient local government would mean a lower standard cost for that function putting strong pressure on councils to improve efficiency to the state standard. If the overall standard is broadly inefficient, meaning a higher standard cost, however, the incentive for councils to remove inefficiency is reduced.

3. Provincial-Local Equalization in Canada

Under the Constitution, local governments are creatures of the provinces. In terms of provincial-local equalization, this means that equalization grants are different in each province. Most provinces provide some form of equalization grants to municipalities but these do not generally constitute the major component of grants – in most provinces, the majority of provincial-local transfers are conditional.⁵

Seven Canadian provinces provide general purpose equalization grants to municipalities. In only two provinces (Nova Scotia and New Brunswick) does the equalization grant formula recognize both expenditure needs and fiscal capacity; the other provinces only take account of fiscal capacity. In Nova Scotia, equalization grants include expenditure needs for only a few categories of expenditures -- police, fire, water and sewers – and omit expenditures such as parks, culture, and recreation. The two provinces that include measures of expenditure need in the grant formula differentiate their equalization grants by classes of municipalities because of wide divergences in expenditures and revenue-raising capacities of different types of municipalities.⁶ This paper considers two different equalization programs in Canada – Nova Scotia and Ontario.

Nova Scotia

Under Nova Scotia's equalization program, each municipality receives an entitlement that is determined by a formula that reflects the community's expenditure need and its ability to

⁵ In contrast to federal-provincial transfers in Canada, most provincial-municipal grants are conditional. Although conditional grants are warranted to internalize externalities, it has been argued in the Canadian context that provincial-municipal grants are designed to finance specific services at levels and standards that are set by the province to achieve provincial objectives of control over the expenditure and taxing decisions of local governments (Slack, 2010).

⁶ Without these groupings, expenditure levels and revenue-raising capacity would over-emphasize fiscal needs and fiscal capacity, respectively, in the formula owing to the significantly higher expenditure levels and tax base in the largest cities.

pay.⁷ The formula is applied separately to two classes of communities – Class I which consists of regional municipalities and towns (the larger municipalities) and Class II which comprises mainly county and district municipalities (smaller municipalities).⁸ Since 2002, there have been two additional features to grant – the Foundation Grant which is an unconditional lump sum amount and the Top-Up Grant that can be paid to a community to ensure that the equalization grant is not less than what it received in 2001-2 or an amount determined by the Minister.

The equalization entitlement is determined by a formula as the difference between the “standard expenditure” for the community and its corresponding “standard revenue.” Standard expenditures do not include all municipal expenditures but rather are limited to expenditures on police protection, fire protection, transportation services (excluding public transit and operating grants from the provincial government for public works), and 50 percent of expenditures on environmental services.⁹ Standard revenue is determined by multiplying the standard property tax rate by the uniform assessed value of property. The standard tax rate is calculated by the aggregate standard expenditure divided by the aggregate uniform assessment. It represents the value of the tax rate that if applied to the aggregate uniform assessed value would in theory generate sufficient revenues to cover the standard expenditure. Uniform assessment (after adjusting for certain exemptions) is the assessed value of all residential and commercial property for tax purposes including grants in lieu of taxes and payments made by utilities with respect to taxes. Assessment is not weighted to reflect differential tax rates between residential and commercial assessment.¹⁰

Equalization in Nova Scotia is not fully funded so municipalities only receive a prorated share of the total grant pool available. The total entitlement is estimated by summing the positive entitlements for both classes of municipalities and substituting zero for any negative entitlements.

⁷ The information on equalization grants in Nova Scotia comes from the *Municipal Grants Act* and (Locke, 2011).

⁸ Prior to 2002, there were four classes: regional governments, large towns, small towns, and rural communities and districts.

⁹ Expenditures not included in the formula include: general government services, protective services other than fire and police, public transit services, public health and welfare, environmental development, recreation and culture, fiscal services.

¹⁰ The tax rate on commercial properties is generally twice the rate as on residential properties.

Comments on Nova Scotia local equalization

Although the Nova Scotia equalization program is a fairly standard equalization program, some problems with its implementation have been identified. First, it only equalizes over less than half of municipal expenditures. It is not clear how these expenditures were chosen but one possibility is that they are non-discretionary in the sense that councils have little discretion over the levels of service and that these are the services that are essential to the functioning of municipalities (Locke, 2011). By including only some categories of expenditure, an incentive is created to use accounting practices to manipulate expenditure categories and the distribution of equalization entitlements.

Second, the grant pool is determined independently of the value of total entitlements so municipalities only receive a fraction of total entitlements. The consequence of scaling back the grant entitlements in this way is that recipient municipalities are left with standardized revenues per dwelling unit that are unequal to standardized expenditures per dwelling unit. Third, the formula does not weight commercial property more heavily even though a higher proportion of commercial property means greater ability to pay. Simply stated, one dollar of commercial assessment means a municipality has a greater ability to pay for services than one dollar of residential assessment. Yet the formula does not take account of this difference. Fourth, unlike the application of the Australian model of equalization in some states, the formula does not include user fees for services in standard revenues. To avoid distortions, all revenues should be included (Otter, 2008). Fifth, the provision that a municipality cannot receive fewer grants than it did in the previous year means that a municipality that no longer needs equalization will still receive it. By extension, it also means that those municipalities which are entitled to equalization will receive less than the formula would dictate.

Ontario

The Ontario Municipal Partnership Fund (OMPF) is the main transfer payment to municipalities in the Province of Ontario. In 2013, the Province re-designed OMPF and reduced the transfer to

reflect the ongoing uploading that was taking place as part of the Provincial-Municipal Fiscal and Service Delivery Review (PMFSDR) agreement with municipalities.¹¹

As part of the OMPF, there are five grants, all of which are unconditional: Assessment Equalization Grant, Northern Communities Grant, Rural Communities Grant, Northern and Rural Fiscal Circumstances Grant, and Transitional Assistance. In all cases, the grants go to rural and northern (sparsely populated) municipalities only. The two grants of interest from an equalization perspective are the Assessment Equalization Grant and the Northern and Rural Fiscal Circumstances Grant. The Assessment Equalization Grant provides funding to municipalities with a limited property tax base because of low property values or limited non-residential assessment. The grant to each eligible municipality is determined by a total assessment differential (i.e., the total municipal assessment below the median per-household threshold of \$245,000) which is calculated for each municipality. Every \$10,000 increment in a municipality's total assessment differential results in an additional \$39.60 in funding. This is a fairly straightforward fiscal capacity equalization grant; there is no component to reflect expenditure needs.

For 2014, OMPF was re-designed with three underlying objectives: (i) to continue to provide support to municipalities with a limited tax base, (ii) to recognize the challenges faced by northern and rural municipalities while targeting funding to those with more challenging fiscal circumstances, and (iii) to provide transitional assistance to municipalities. Transitional assistance is provided so that municipalities in the north receive at least 90 percent of their 2013 allocation and municipalities in other parts of the province receive at least 85 percent. These minimum funding levels are enhanced up to 100 percent for eligible municipalities with more challenging fiscal conditions. To this end, the Province has designed a municipal fiscal circumstances index (MFCI) to determine which northern and rural municipalities face more challenging fiscal circumstances. Thus, the northern and rural MFCI measures a municipality's fiscal circumstances (or fiscal health) relative to other northern and rural municipalities in the province.

The indicators include primary indicators (weighted assessment per household and median household income) and secondary indicators (average annual change in assessment i.e.

¹¹ In 1998, there was a major downloading of expenditures to municipalities in Ontario. More recently, the provincial government has uploaded many of the services that had previously been downloaded. For a more detailed discussion and analysis, see (Bird, Slack, & Tassonyi, 2012).

new construction, employment rate, ratio of working age to dependent population, and percent of population above low-income threshold). The MFCI is measured on a scale from 0 to 10; a lower index corresponds to relatively positive fiscal circumstances; a higher index corresponds to challenging fiscal circumstances. For municipalities with an MFCI of 9 or more, funding levels are maintained at 2013 levels.

The MFCI is determined as follows:

- Indicator score – each primary and secondary indicator scored based on its relationship to the median for northern and rural communities
- Average indicator score – an average indicator score is calculated on the basis of the average of both the primary and secondary indicators (in other words, the two primary indicators are weighted at 50 percent and the four secondary indicators are weighted at 50 percent)
- MFCI – the index reflects a municipality’s fiscal circumstances relative other northern and rural municipalities in the province and is based on the relative results of each municipality’s average indicator score. The MFCI is measured on a scale from 0 to 10.

Comments on Ontario local equalization grants

Although the MFCI only provides information on the municipal fiscal condition of northern and rural municipalities in Ontario, it has some positive features. First, it includes a small number of variables over which municipalities have no direct control. Second, it captures their ability to make expenditures through variables such as weighted assessment and median income as well as their need to make expenditures through variables such as percentage of the population above the low-income threshold, dependency ratios, and employment rate. These measures do not, however, reflect all of the pressures on municipalities such as the deteriorating state of infrastructure.

Unlike the German and Australian equalization systems, the grant is only available to northern and rural municipalities. Although large cities receive conditional funding for specific services, they receive no unconditional funding from the province. To some extent, this makes sense because they have greater fiscal capacity than smaller cities. One could argue, however,

that they also have greater fiscal needs and should be given more fiscal autonomy to meet those needs.

4. Implications of Local Equalization in Australia and Canada for German Municipalities

Before looking at the implications of the equalization systems in Australia and Canada for German municipalities, a brief description of the German local equalization system is provided. As in Australia and Canada, local equalization in Germany is vertical in the sense that the distribution of funds is conducted by the state governments and the funds are paid to local governments by the state governments.¹²

Although there are variations among the Lander, local equalization is generally determined by a formula that takes account of expenditure needs and revenue-raising capacity. The assessment of expenditure need starts with population and then applies a weighting factor which increases with population size. In North Rhine-Westfalia, for example, weights vary from 1.0 for municipalities with 25,000 people to 1.57 for municipalities with more than 634,000 people (Buettner & Holm-Hadulla, 2008). On the revenue side, the major taxes (local business taxes, property taxes, and share of personal income tax and value added tax) are included in the measure of fiscal capacity. The equalization system ranks all municipalities that are entitled to equalization grants according to the ratio of fiscal capacity to fiscal need – the lower the ratio, the higher the equalization grant. Where fiscal needs are less than or equal to fiscal capacity, no grant is received.

Implications of state-local equalization grants in Australia and Canada for German municipalities may be somewhat limited for the reasons noted at the outset -- German municipalities depend heavily on business income taxes and, to a limited extent, on property taxes, whereas Australian and Canadian municipalities rely almost exclusively on relatively stable property taxes. Moreover, German local governments have the ability to set their own tax

¹² Horizontal equalization is when the distribution of grant funds is undertaken by the local government units through transfers from local governments with high fiscal capacity to local governments with low fiscal capacity (Dafflon, 2007). Under horizontal equalization, there will be a disincentive to raise taxes because local governments can only keep a portion of what they raise and the rest is distributed to other local governments. Where tax rates are set locally, there is a disincentive to raise rates. Where tax rates are set centrally, rates of tax collection may be low (Smart, 2007).

rates (on business income and property taxes) and the average statutory rate for the business tax tends to be very high (Buettner & Holm-Hadulla, 2008). Nevertheless, some issues in the context of Australia and Canada may have implications for German local governments.

Formula-Based Transfers: Simple and Transparent?

In all three countries, formula-based transfers are used for local equalization following the rule that a good transfer system should distribute funds to local governments on the basis of a formula rather than being discretionary or negotiated (Smart, 2007). Using a formula may mean there are several factors used to distribute the grant. Nevertheless, it should be as simple and transparent as possible. In the case of the Australian state-local equalization systems, the effort expended to determine expenditure need and revenue-raising capacity using factors that cannot be manipulated by local governments has resulted in a very complicated formula that is difficult for governments and citizens to understand or replicate. In an effort to get it right, the resulting complexity has reduced the transparency of the grant system.

Local Grants Commissions: Are They Needed?

The use of local grants commissions for distributing grants is unique in Australia. The stated advantage of independent commissions is that there is less likely to be political interference in the determination of grant amounts. On the other hand, it has been argued that decisions on the standard of equalization should not be divorced from politics (Shah, 2007). Moreover, this type of institutional arrangement runs into agency problems. For example, an independent agency faces the continuous need to justify its existence and seek broader mandates to expand its scope. This type of mission creep can go unchecked because politicians do not want to be seen to be reigning them in (Shah, 2007). An independent agency also faces powerful incentives to seek complex solutions to simple problems because it means more of their services will be needed. Finally, citizen oversight of these commissions is difficult because the more complex the distribution formula, the less likely citizens will be able to evaluate them.

In summary, it has been argued that the higher transactions costs associated with grants commissions are unlikely to result in better outcomes. They do not foster consensus building on issues such as the equalization standard. The size of the grant pool and the distribution of funds are determined independently of the equalization standard (Shah, 2007). Yet, independent grants

commissions are often recommended by academics and think tanks. Perhaps it is because it means more work for them. It is also often recommended by politicians perhaps because they can avoid the tough decisions around distribution and blame the commission for undesirable outcomes.

Differentiating among Municipalities: Does Size Matter?

In terms of equalization grants, tax revenues are disproportionately higher in large cities compared to small municipalities so equalization tends to systematically redistribute from large cities to small.¹³ But there are exceptions, such as Germany where local fiscal equalization results in more funds going to large municipalities than small municipalities because of the way in which population estimates are weighted. The underlying assumption is that greater population density results in higher per capita fiscal need. Local equalization compensates for urban agglomeration costs such as diseconomies of scale (Otter, 2008). Fenge and Meier argue, on the other hand, that subsidizing the higher cost of public services in larger cities encourages excess agglomeration and results in welfare losses (Fenge & Meier, 2001). Yet, others argue that preferential treatment of large cities in equalization systems might be justified on efficiency grounds (Buettner & Holm-Hadulla, 2008).

In Australia, the disabilities (or weighting factors) take account of different sized municipalities at least to some extent. In the Canadian context, however, large cities in Ontario do not receive any equalization funding but rather all of the funding goes to rural and northern (smaller) municipalities. In Nova Scotia, municipalities are grouped so that cities and towns are equalized against each other rather than against all municipalities in the province.

Grouping municipalities to reflect similar circumstances (for example, municipalities could be grouped by population size, urban versus rural, by expenditures or revenues) makes sense because including metropolitan areas with smaller local governments tends to understate fiscal needs and overstate fiscal capacity in metropolitan areas (Shah, 2013). Presumably, special

¹³ A review of empirical studies on intergovernmental transfers in twelve countries found that local governments with a larger population received significantly lower per capita grants than other local governments (Boex & Martinez-Vasquez, 2004). The 12 countries are Argentina, Australia, Brazil, Indonesia, Israel, Japan, Mexico, Nigeria, the Russian Federation, Tanzania, Uganda, and the United States. In the Australian case, only specific-purpose grants for education, health, and welfare were included and not equalization grants.

design features could overcome this bias against metropolitan areas without grouping municipalities.

Although in most countries large cities and metropolitan areas are seldom treated very differently than other local governments (Bahl, 2010), in practice their expenditures are often both much higher and different in nature. Moreover, in principle their greater ability to pay and other unique characteristics suggest that big cities should generally have more ‘fiscal autonomy’ than other areas in terms of being more responsible both for delivering local services and for levying and collecting the revenues to pay for such services (Bird & Slack, 2013). In other words, perhaps they do not need equalization. But this may only be true where local governments are levying property taxes and not business income taxes as is the case in German municipalities.

Expenditure Need and Fiscal Capacity: How Should They be Measured?

Estimating expenditure need faces major methodological challenges, in particular separating actual expenditures into the portion attributable to the costs of the service versus local preferences regarding levels of service provision or inefficiencies (Chernick & Reschovsky, 2013). Actual expenditures are not recommended for the equalization formula because they ignore differences in local tastes and preferences as well as differences in needs, costs, and fiscal capacity. Equalizing actual expenditures would discourage revenue-raising efforts and local expenditure restraint because those with the highest expenditures and lowest tax rates would receive the largest transfers.

One approach to get at expenditure needs that has been used for education and health is to estimate cost functions that trace the relationships between expenditures, outcome measures (e.g. gains in student academic performance), and a set of characteristics of each local government (including characteristics of its residents). Where public sector output data are not available, an alternative statistical approach is to estimate reduced form expenditure equations as a way to identify cost factors and determine the expenditure needs of local governments.¹⁴The estimated

¹⁴ One problem with using expenditure equations to measure the costs of local services results from the difficulty of isolating variables that have an impact on costs from variables that indicate differences in public good preferences or demands. As (Chernick & Reschovsky, 2013) note, for example, poverty rates are a cost factor which tend to raise expenditure levels, but high poverty rates are also likely to imply more constrained fiscal resources.

coefficients from a cost function or an expenditure function can then be used to construct a cost index which summarizes in a single number the amount of money each jurisdiction needs to provide a standard or average level of public services, relative to the amount of money needed to provide the same public services in a local government with average costs (Chernick & Reschovsky, 2013).¹⁵

Regression equations are not generally used to determine expenditure need in equalization formulas. Rather, expenditure need is measured using standard expenditures per capita. In Nova Scotia, for example, expenditure need is measured for a selected group of expenditures using the average expenditure per group as the standard. In the Australian example, a very detailed list of disabilities (cost adjustors) is used to reflect differences from the average based on external factors. Indicators are intended to be outside of local government control so they cannot be manipulated. The problem with these measures, however, is that they are subjective.

Measuring revenue capacity is much easier than measuring expenditure need. As with expenditures, it is not advisable to include actual revenues in the equalization formula. The reason is to avoid creating an incentive to reduce revenues to increase the size of the grant. Tax bases are generally used as the measure of fiscal capacity even though it is recognized that they are not completely exogenous because municipalities can take actions to increase the size of their tax base.

Although it is important to include all revenues in the measure of fiscal capacity, few of the examples in this paper do that. In the Canadian examples, only measures of the property tax base are used to measure fiscal capacity. In Australia, other revenues such as user fees are also included in the measure of fiscal capacity in some states (e.g. New South Wales) but not all. In Germany, only the major taxes are included in the measure of fiscal capacity (Otter, 2008).

¹⁵ A study of the fiscal health of Ontario cities ran a reduced form equation for the 30 largest cities and found that higher per capita incomes and dependency ratios put increased pressure on municipal expenditures and higher per capita property assessment (the municipal tax base) provides capacity to finance relatively more spending (Slack, Tassonyi, & Grad, 2013). An empirical study of expenditure needs in 100 Spanish municipalities in the province of Barcelona in 1996 concluded that needs are a function of number of daily visitors, tourists, employees, immigrants, and poor people plus the population dispersion (Sole-Olle, 2010).

Fiscal Effort: In or Out?

In each of the three countries, fiscal effort was not explicitly introduced into the equalization formula but rather a representative tax system (RTS) approach is used. In Australia, for example, local transfers are allocated on the basis that a state average local tax rate is applied. Local governments that levy above average tax rates are not penalized and those that levy below average tax rates are not rewarded. Using this approach permits donor governments to attempt to distinguish objectively between those local governments that are providing inadequate public services because of inefficient governance from those that provide poor levels of service because they have poor fiscal health (Chernick & Reschovsky, 2013).

If tax bases are sensitive to tax rates, the measure of fiscal capacity will overstate capacity in low tax areas and underestimate the effort needed to increase tax rates because the base will decline if tax rates increase.¹⁶ Moreover, placing too much weight on fiscal effort will penalize poorer local governments where it is more difficult to increase tax rates by a given percentage. As (Smart, 2007) notes, the reason for equalization in the first place is that their tax base is weak and not that tax rates are too low.

Transfers should be designed so that the amount received is not larger when local fiscal effort is weaker or smaller when it is stronger (Smart, 2007). Moreover, local governments need to have the freedom and the responsibility to impose some significant taxes on their own (Smart, 2007). The more closely spending and taxing decisions are linked by being made by the same body at the same time, the better government will function in its role as a service provider (Bird & Slack, 2013). Experience suggests that people are more careful spending their own money (taxes they have to raise) than spending someone else's money (transfers) so transfers need to be supplemented by local contributions. Grants can weaken accountability because the link is broken between those who benefit from local public services and those who pay for them.

Incentive Effects: Other Impacts of Equalization Transfers?

Fiscal equalization is designed to ensure that local governments can deliver a standard level of services by levying a standard tax rate. But, it will also have other impacts as well. For

¹⁶ One study for Canada, in the Province of New Brunswick, found the elasticity of a municipality's tax base (the property tax) with respect to its own tax rate to be less than one (Brett & Tardif, 2008). This finding suggests that it is economically feasible for municipal governments to raise additional revenue through increased property taxes.

example, because grants are inversely related to fiscal capacity, they can discourage local governments from increasing the size of their tax base -- a local government that increases its tax capacity will inevitably receive fewer grants (Blochliger & Petzold, 2009). Grants may thus undermine the willingness on the part of local governments to strengthen the tax base and thereby prolong, rather than eliminate, fiscal disparities.

Unconditional transfers will have an impact on municipal tax rates. In the case of German municipalities, for example, it has been argued that business tax rates are high because the transfers provide incentives to increase tax rates (Buettner & Holm-Hadulla, 2008).¹⁷ The revenue consequences of a change in the local tax base are partially compensated by the transfer so if a municipality raises its tax rate and the base falls, it will get more grants. Simply put, the disincentive to tax mobile capital due to a negative effect on the tax base is compensated by an increase in transfers. Equalization transfers reduce the marginal cost of levying business income taxes.¹⁸

Transfers can also have an impact on local government expenditures. Empirical studies suggest that an unconditional transfer will stimulate municipal government expenditures more than an increase in private income – known as the flypaper effect (Dahlby & Ergete, 2012). A lump sum transfer has both an income effect and a price effect because it allows the recipient government to reduce its tax rate and lower the marginal cost of public funds while still providing the same level of public services (Dahlby & Ergete, 2012). The reduction in tax price provides an additional incentive to increase spending, which increases more than in response to an increase in private income.¹⁹

An empirical study of municipalities in Bavaria from 1995 to 2008 found that unconditional grants (in this case equalization grants) increase public spending and more so in smaller jurisdictions than larger jurisdictions (Buettner & Fabritz, 2011). The reason for the

¹⁷ The average business tax rate is 13 percent (Buettner & Holm-Hadulla, 2008).

¹⁸ A study of Canadian municipalities in the Province of New Brunswick, however, found that municipalities increased their tax rates to make up for the decrease in equalization funding from the provincial government (Brett & Tardif, 2008). By extension, it would be expected that they would lower their tax rates if transfers increased. This result was found, in part because they also estimated that the elasticity of the property tax base with respect to the tax rate was less than one.

¹⁹ The conventional analysis of the impact of lump sum grants on local spending assumed there was only an income effect because it assumed that local expenditures were financed from non-distortionary taxes (Dahlby & Ergete, 2012).

difference in expenditure response is that smaller municipalities (which have only a small share of the country's resources) have a higher marginal cost of funds than large municipalities and thus a stronger response to changes in grants.

There may also be other effects from equalization transfers. If municipalities raise taxes on mobile bases (e.g. business incomes), mobile firms will move to other jurisdictions contributing to an increase in revenue for these other jurisdictions. If a local government only considers its losses (and not gains to other jurisdictions) it will set taxes inefficiently low. Fiscal equalization may induce a more efficient tax policy (Buettner & Holm-Hadulla, 2008). However, the large degree of redistribution may be a problem because taxing mobile capital not only changes the interregional allocation but also lowers demand for capital in the economy. Therefore, an almost complete redistribution might over-subsidize taxation in the sense that it refunds tax-induced reductions in the tax base that reflect a reduction in capital supply (Buettner & Holm-Hadulla, 2008).

Finally, although equalization transfers can be justified on equity grounds, they should not discourage municipalities from collecting their own revenues or finding other ways of balancing their budget such as through municipal amalgamations within a region (Slack & Bird, 2012). Furthermore, transfers should also not discourage municipalities from charging the right price for services: “the basic task in transfer design is thus to get the prices ‘right’ in the public sector – right, that is, in the sense of making local governments fully accountable – at least at the margin of decision-making – to both their citizens and, where appropriate, to higher levels of government” (Bird & Smart, 2002, p. 899). There is no incentive to use proper pricing when grants cover a large proportion of municipal expenditures. Efficient service delivery requires that those responsible for providing services have a clear mandate, adequate resources, and sufficient flexibility to make decisions and are accountable for the decisions they make (Bird & Vaillancourt, 1998).

Insurance against Economic Shocks: Moral Hazard?

Given the revenue sources available to German local governments and the autonomy they have to set tax rates, the need for local equalization is probably greater in Germany than in the other two countries: the more tax autonomy local governments have, the greater will be the disparities and the greater the need for equalization (Blochliger & Petzold, 2009). Transfers in

general may induce governments to raise less stable taxes (such as a business income tax) rather than the property tax (Smart, 1998). It has been suggested that one of the reasons that German municipalities are able to levy volatile business taxes is because of state-local fiscal equalization transfers (Buettner & Holm-Hadulla, 2008).

Equalization transfers not only reduce the marginal cost of levying business income taxes where there is high mobility but they also provide protection against revenue fluctuations that are inherent in taxes that are sensitive to the business cycle (Otter, 2008). Since local economic circumstances can change quickly, fiscal equalization provides insurance against future economic shocks but they can also create a moral hazard problem because they provide an incentive for local governments to pursue overly risky policies (Sole-Olle, 2010). A comparison of the impact of equalization in German and US municipalities, for example, suggests that intergovernmental transfers rise by only 13 cents in present value terms in the US if revenue declines by one dollar compared to the German case where it rises by 34 cents (Buettner, 2007). These results point to the moral hazard effect of equalization – the greater the reliance on equalization grants in Germany might provide an incentive to municipalities to levy more highly volatile business taxes rather than stable property taxes as used by municipalities in the US.

Studies have also been done on the impact of equalization grants on softening the budget constraint, especially in the context federal-state grants.²⁰ Grants provide an incentive for recipient governments to run excessive deficits, knowing that a federal or state government will come to their rescue and bail them out. Local governments are generally not permitted to run operating deficits but still they are less likely to make the necessary adjustments in the face of a possible deficit (e.g. increase taxes or reduce expenditures) if they think they will receive grants from another level of government.

5. Summary and Conclusion

Australia, Canada, and Germany all have local equalization programs. In Germany and Australia and some provinces in Canada, the state/provincial government provides equalization transfers to

²⁰ See, for example (Rodden, 2005), on the impact of equalization grants from the federal government to German states.

municipalities that are based on expenditure need and fiscal capacity. Because the context for local governments is so different in each of these countries, however, it is difficult to draw too many conclusions from the Australian and Canadian experiences for Germany. Most significant is the difference in tax raising powers of municipalities in Germany compared to the other countries. Australian and Canadian municipalities rely almost exclusively on property taxes (a fairly stable source of revenue) whereas German municipalities rely more heavily on business income taxes (a more volatile revenue source). As noted earlier, it has been argued that equalization transfers to German municipalities give them an incentive to levy more highly volatile taxes because the grant provides insurance against economic shocks.

In each country, transfers are distributed to municipalities on the basis of a formula. In an attempt to determine expenditure needs and fiscal capacity differences across municipalities, however, the formulas in most cases have become highly complex. As one author notes, it is all too easy to turn a simple formula into a complicated one that can be manipulated by donor and recipient governments by introducing too many refinements (Smart, 2007). All three countries could improve the transparency of their grants by simplifying their formulas.

The state-local equalization transfers differ in terms of which municipalities receive the transfers. In Ontario, Canada, for example, the equalization program provides limited assistance only to small and northern municipalities and not to towns and cities. In Australia, transfers are not limited to the type or location of municipalities. In Germany, the grant is biased towards the larger cities. It was argued earlier that, although expenditure needs may be higher in large municipalities, they have greater ability to pay and should generally have more fiscal autonomy than other areas in terms of delivering services and raising revenues. It could thus be argued that they have less need for equalization, at least where they rely almost exclusively on stable property tax revenues.

Although the main purpose of equalization transfers in each country is to allow municipalities to provide a standard level of service by levying a standard tax rate, they do have other impacts. Few empirical studies in Canada and Australia address these impacts but the broader literature (some of it in Germany) identifies some of them – grants may reduce the incentive of municipalities to increase the size of their tax base because it will result in less grant funding. Grants will have an impact on municipal tax rates and expenditures but that impact may

depend on the size of the municipality, the type of taxes it levies, and other factors. In designing an equalization transfer, the incentives it creates should be taken into account. Equalization grants should not discourage municipalities from collecting their own revenues or finding other ways to balance their budget.

Finally, it is worth noting how little empirical work has actually been done on state-local equalization transfers when compared to federal-provincial transfers. Since, arguably this is a subject that affects the lives of people more directly than much of what other levels of governments do, there seems to be a need to do much more serious work on local fiscal issues in general and state-local equalization in particular.

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