

Providing Public Services in Remote Areas

Harry Kitchen and Enid Slack

December 18, 2001

Governing remote areas raises different issues than governance of urban areas because of the small size of the population, the lack of concentration of population, and the high cost of living. These characteristics mean that expenditures per capita are often much higher in remote areas than in urban areas. At the same time, the fiscal base tends to be smaller because property is not privately owned and levels of employment and income are low. Governance of remote areas raises questions about the ability of local governments to deliver services and the role of senior levels of government in funding and delivering local services. It also raises a more fundamental question of whether settlements in remote areas should be subsidized by senior levels of government or whether they should be abandoned.

The purpose of this paper is to review ways of providing services in remote areas. Part I outlines the characteristics of remote areas and raises issues around the role of local government. Part II reviews local government expenditures in remote communities and indicates how the characteristics of these areas affect the nature and magnitude of expenditures. Part III looks at the revenue sources of remote areas and how they are affected by the size and remoteness of these communities. Part IV presents and evaluates alternative government structures that can be used in remote areas (two-tier, one-tier, inter-municipal agreements, special purpose districts) and the role of senior levels of government).

I. Characteristics of Remote Areas

Although there are no universal characteristics of small or remote areas, there are some common themes.¹ Remote areas are characterized by geographic isolation and low population density. Communities tend to be sparsely populated and the distance between them is considerable. They are generally non-contiguous. Often, there is no publicly provided overland transportation system (roads and rail). Most municipalities in remote areas are subject to harsher climatic conditions than exist in the more populated and urbanized parts of the country. Many of these communities have higher unemployment rates (because of fewer job opportunities) and greater dependence on social service programs. As will be shown in sections II and III below, the combination of these factors contributes to higher per capita costs of public services and a smaller tax base.

¹ Dougherty, Michael John, Kenneth A. Klase, and Soo Geun Song. 1999. "The Needs and Financial Problems of Small and Rural Localities: The Case of West Virginia." *Public Budgeting and Finance*. Volume 19, Number 3, p. 18.

In some instances, remote communities are not organized into local government units (these are unincorporated areas). Any municipal functions that are required are generally provided by departments of senior levels of government (such as departments of northern affairs, transportation, natural resources, environment etc.) in return for a small tax payment.

In some remote communities, municipal institutions have been slow to form because the communities were entirely built and operated as company town-sites. In these cases, municipal services are provided by the companies for their employees. This phenomenon has been common in Russia where enterprises have provided services to their employees and their families that, in other places, are provided by local governments. For example, “enterprises build and support hospitals, construct and maintain housing, build and run kindergartens and preschools, and make ‘voluntary donations’ toward financing public transport and to extrabudgetary funds of subnational governments.”² Although the extent to which the funding of services by enterprises varies across Russia, almost all social expenditures are made by enterprises in single-enterprise, company towns.³

In the sparsely settled areas of a number of countries (Canada and Australia are good examples), communities are often characterized by a dual economy. On the one hand, there is the relatively stable native population that is engaged for the most part in either low-wage occupations (matching their generally low skill and educational levels), unemployed, engaged in low-paying traditional occupations (hunting and trapping) or in some combination of these activities. On the other hand, there is a highly mobile non-native population employed in remote communities whether full-time residents (like most government employees) or transitory workers (in mining and construction). In both cases, they are well paid, owing to the nature of their occupations (skill and educational levels) and as compensation for enduring harsh living conditions. The concentration of income at the upper and lower ends of the income scale is the direct consequence of an economy characterized by a dual labour market.

Municipal governments in remote areas have generally been confined to centres of population. Historically, these communities were established for a number of reasons. Some were based on a particular industry such as mining, forestry, agriculture, fishing, or oil; some were regional service centres which provided a range of private and public

² Wallich, Christine I. 1994. “Intergovernmental Fiscal Relations: Setting the Stage.” In Wallich, Christine, I. (ed) *Russia and the Challenge of Fiscal Federalism*. Washington, D. C.: The World Bank, p. 39.

³ *Ibid*, pp, 60-1. Wallich identifies some of the problems with this practice. First, it is a form of hidden taxation because enterprises are providing services rather than paying taxes and user fees for publicly provided services. Second, the provision of public services in this way does not allow local residents to reveal their preferences. Third, expenditures on public services place a burden on enterprises and put them at a disadvantage in the market economy. To the extent that these services are considered to be fringe benefits that are necessary to attract labour, however, the first and third points may be less relevant.

services to the surrounding population; some were centres of Aboriginal people; and some were created for national security reasons. The existence of communities in remote areas today reflects these historical reasons even though in some cases they are no longer valid. For example, companies may have shut down, regional service centres may have moved, and national security in remote areas may no longer be an issue. People continue to live in these communities, however.

The issue is not whether they should continue to live there but whether they should be subsidized. If a town loses the economic basis for its existence and there are no viable alternatives, it is not in the economic interest of senior levels of government to continue to subsidize these areas.⁴ These subsidies may prevent “ghost towns” from occurring, but they distort the allocation of resources. Although economic arguments would support the abandonment of these communities, political realities may keep them alive, however.

I.1 Small Communities in Russia

The significance of small communities in Russia is highlighted in Table 1 which shows the number of urban and rural settlements by size of population.

Table 1: Number of settlements by population size categories

Urban settlements (1999)			Rural settlements (1989)		
Number of residents	Number of settlements	% of total	Number of residents	Number of settlements	% of total
Less than 3,000	559	18.6	Less than 1,000	144,534	94.5
3,000 – 5,000	443	14.7	1,000 – 2,000	5,718	3.7
5,000 – 10,000	716	23.8	2,000 – 5,000	2,069	1.4
10,000 – 50,000	949	31.6	More than 5,000	601	0.4
50,000 – 100,000	174	5.8			
100,000 – 1,000,000	152	5.1			
More than 1,000,000	12	0.4			
Total	3,005	100.00	Total	152,922	100.0

Source: Russia Statistical Yearbook, Goskomotat, 1999 as cited in Kurlyandskaya, Galina, Yelena, Nikolayenko, and Natalia Golovanova. 2001. “Local Governments in the Russian Federation.” Paper prepared for the Local Government and Public Service Reform Initiative/Open Society Institute, Budapest, p. 60.

There are almost 145,000 rural settlements with a population of less than 1,000. There are many urban settlements with a population of less than 3,000.

⁴ Graham, John, F. 1963. *Fiscal Adjustment and Economic Development: A Case Study of Nova Scotia*. Toronto: University of Toronto Press, p. 146-7.

I.2 Local Government in Remote Areas

In terms of economic theory, the major role assigned to local governments is to provide goods and services within a particular geographic area to residents who are willing to pay for them.⁵ If the benefits of particular services are confined to local jurisdictions (the actions of one municipality have no effect on other municipalities), efficiency is enhanced because the mix and level of services can vary according to local preferences. It is argued that local officials are in a better position to respond to local tastes and preferences than are central government officials.⁶

A strong local government is one that is efficient and effective in the delivery of service, on the one hand, and accountable and responsive to its citizens on the other. Municipalities have to be small enough to provide access and large enough to be able to support a wide range of services in an efficient and effective way. If the municipality is too small (and remote) to deliver services effectively, however, then political access is meaningless. In particular, municipalities need an adequate tax base and qualified personnel.

Some small municipalities do not have a large enough tax base to be economically viable. In particular, they often cannot finance major capital expenditures such as road graders and fire equipment. Their limited debt capacity further inhibits their ability to make capital expenditures. Since the size of the population is small, these municipalities cannot take advantage of economies of scale in service provision. Furthermore, their remoteness prevents them from taking advantage of economies of scale by contracting out services to neighbouring municipalities or to the private sector. As a result, small communities in remote areas tend to concentrate on the provision of a few basic services.⁷

Inadequate resources also means small and remote communities may face administrative difficulties because they are unable to find suitably qualified full-time staff. These communities have limited training opportunities to develop and maintain qualified personnel.⁸ Some municipalities operate with a part-time staff; others operate with staff that are required to have a wide range of expertise – specialization is virtually

⁵ See Richard Bird and Enid Slack, 1993. *Urban Public Finance in Canada* 2nd edition (Toronto: John Wiley and Sons), p. 16 for a discussion of the role of local government.

⁶ The provision of local services does not mean that the municipality has to produce the goods and services themselves, however. Rather, the role of local government is to make decisions about which services to provide and how to provide them. Municipalities could, for example, contract out service delivery to another government or to the private sector. See David Osborne and Ted Gaebler, *Reinventing Government - How the Entrepreneurial Spirit is Transforming the Public Sector* (Reading, Mass.: Addison-Wesley Publishing Co. Inc.).

⁷ See Dougherty et al., *Supra*, p.18.

⁸ *Ibid*, p. 19

impossible.⁹ The lack of qualified staff limits the ability of elected officials to respond to the needs of their constituents.¹⁰ Some of these problems may be overcome, however, by contracting out to other governments or the private sector or by sharing expertise among municipalities, when required. Technology can also improve efficiency and provide easy access to needed expertise.

In terms of access and accountability, the lack of mobility of large segments of the population in remote communities brings into question the role of local government. If residents are not mobile, then they are unlikely to respond to taxes and expenditures by moving to other communities. To the extent that the efficiency of local government relies on it being responsive to local citizens, its role in remote areas is less significant than in urban areas.¹¹

II. Local Government Expenditures in Remote Areas

The role of local government in remote areas tends to be much weaker than in urban areas. Because of the vast distances involved, services such as police and fire protection are limited, garbage collection is non-existent, and land use planning is often performed by a senior level of government. Local services mainly comprise roads, sewer and water, garbage disposal, social services, and recreation.¹²

To illustrate the differences between per capita expenditures in remote areas and more populated areas, Table 2 compares population density and per capita costs of providing government services in Canada's three northern territories¹³ with the rest of Canada. This comparison is made for municipalities alone and for the consolidated territorial/municipal sector.¹⁴

⁹ Lack of expertise in public administration in small villages is mentioned as a problem in Russia. See Kurlyandskaya, Galina, Yelena Nikolayenko, and Natalia Golovanova. 2001. *Supra*, p. 14.

¹⁰ *County Government in Ontario*. 1989. Report to the Minister of Municipal Affairs.

¹¹ See Litvack, Jennie, Junaid Ahmad and Richard Bird. 1998. *Rethinking Decentralization in Developing Countries*. Washington, D.C.: The World Bank, p. 2 for a discussion of the limitations of "voice" and "exit" in smaller municipalities and rural areas in developing countries where mobility is limited.

¹² With respect to water and sewers in rural areas, public health considerations require that government regulate and monitor the quality of water from private systems. With respect to garbage disposal, there is also a need to ensure that garbage is transported to landfill sites.

¹³ Yukon, Northwest Territories, and Nunavut are the three territories that constitute Canada's north. They lie above the 60th parallel. The rest of Canada lies below the 60th parallel.

¹⁴ Municipal expenditures per capita indicate the level of spending made by municipalities alone. Consolidated municipal/territorial expenditures indicate the level of spending by both sectors

It is clear from Table 2 that the population density is much lower in the territories than in the rest of Canada and also that there is considerable variation across the territories. The variation in population density accounts for a considerable portion of the variation in per capita expenditures. For the municipal sector alone, the following differences are noted with respect to expenditures per capita:

- Municipal spending on all services is considerably higher in remote areas than in the rest of Canada (\$1,485 per capita) – 41 percent higher in the Yukon (\$2,092 per capita); 173 percent higher in the Northwest Territories (\$4,061 per capita); and 171 percent higher in Nunavut (\$4,030 per capita).
- General government expenditures are considerably higher in the north than in the rest of Canada. This can be attributed to a municipality's small size and its inability to take advantage of economies of scale in administration.
- Fire and police expenditures are lower in the north primarily because fire protection equipment is much less sophisticated than in more urbanized areas (no high rise buildings and a relatively small geographical area to cover). The response time cannot compare with that in urban areas because of the distances and there are no externalities because the properties are so far apart. Policing is almost always the responsibility of a senior level of government because of the economies of scale associated with it.
- Expenditures on roads, water and sewers are higher because of the harsh climatic conditions and terrain (tundra).
- Expenditures on recreation and culture are considerably higher in the north - almost every municipality has an ice arena and a variety of recreational programs.

When consolidated territorial/municipal per capita expenditures are compared for the remote areas with the rest of Canada, the following is noted:

- Municipal/territorial spending on all services (\$8,591 per capita) is substantially higher in remote areas – 129 percent higher in the Yukon (\$19,711 per capita); 188 percent higher in the Northwest Territories (\$24,751 per capita); and 224 percent higher in Nunavut (\$27,871 per capita).
- Administration expenditures are considerably higher in remote areas – by a factor of close to 10 or more.

combined. The latter measure is appropriate where service responsibility is split between two levels of government; for example, social services are a territorial responsibility in the Yukon and split between the municipal and territorial sector in the Northwest Territories and Nunavut.

- Expenditures on fire, police, transportation, water, sewers, solid waste, housing, and recreation are significantly higher in remote areas.
- Spending on education, health and social services exceeds those in more populated and urbanized areas by a considerable amount.

III. Local Revenues in Remote Areas

Under the benefit model of local government finance, charges should be levied to pay for services, wherever possible. Where user charges cannot be used because the benefits of a particular service are not confined to individual consumers but are confined within the municipal boundary, taxes that are borne by local residents are considered to be appropriate. These taxes allow individuals to express their demand for services where benefits are consumed collectively.

As noted in Section II, expenditures per capita are generally higher in remote areas than they are in other local communities. Indeed, they can even be higher in remote areas than in large metropolitan areas. Unlike large metropolitan areas, however, remote areas do not generally have sufficient capacity to finance these expenditures. To the extent that local governments in remote communities are responsible for delivering services, however, they require some local taxing authority to reinforce local autonomy and to promote accountability. Local governments in remote areas should, therefore, have access to revenue sources that can be exploited locally and they should be encouraged to exploit them as much as possible: “unless local governments are given some degrees of freedom, including the freedom to make mistakes for which they are accountable, the development of responsible and responsive local government will remain an unattainable mirage.”¹⁵

In theory, the sources of revenue available to local governments in remote areas are the same as local governments elsewhere. These include user fees, taxes (property, income, sales, fuel, and possibly poll taxes), and intergovernmental transfers. In reality, however, the characteristics of the tax base in remote areas restrict the use of many of these revenue sources and the high cost of services means that user fees are less likely to cover the full cost of service provision.

III.1 User Fees

User fees recover at least a portion, if not all, of the costs of some services in remote areas such as water and sewers. Although reliance on these fees varies across remote communities, the proportion of total local revenues attributed to user fees is higher in two

¹⁵ Bird, Richard, M. and Enid Slack. 1991. “Financing Local Government in OECD Countries: The Role of Local Taxes and User Charges.” In Owens, Jeffrey and Giorgio Panella (eds.) *Local Government: An International Perspective*, Amsterdam: North Holland, p.84

of three territories (NWT and Nunavut) than in the rest of Canada. This difference may be attributed to the higher cost of services for which user fees are charged in remote areas.

There are many advantages to charging user fees. First, they promote efficiency in the consumption of goods and services. Users know how much it costs to provide services and can make an informed choice about how much to consume. When consumers do not know the cost, they are likely to consume more or less than what is efficient. Second, user fees allow the government to know the quantity and quality of goods and services that people want. Without direct charging, there is no mechanism (except for voting every few years) for citizens to register their demand for local goods and services. Third, user fees satisfy the equity principle when equity is based on benefits-received. Each individual pays an amount that reflects the additional benefit they receive from a unit of the good or service.

Wherever possible, user fees should reflect the marginal cost of providing the service. A problem with charging the marginal cost in remote areas, however, is that costs can be significantly higher than in other communities. For example, the marginal cost of supplying water to people in remote areas is much higher than in urban areas. If the marginal cost is charged, some people might not be able to pay it and would likely leave these communities if they are not subsidized. In other words, charging a fee that reflects the true marginal cost of providing services to remote areas could reduce the number of people living there.

Subsidies provide an incentive to consume more water than is efficient. Furthermore, subsidies for water would benefit both low-income and high-income people who will not have to pay the full marginal cost. Although subsidizing the cost of services in remote areas is unlikely to result in an efficient level of service, it may nevertheless be justified to meet other objectives, for example, regional development, security, etc.

A problem with charging for services in remote areas concerns the cost of administration. It can be costly to determine the appropriate amount of the charge and costly to enforce it. If the administrative costs exceed the revenues collected, then user charges may not be worth it.

User fees are appropriate for recreational services in urban areas but may be less appropriate in remote areas. In remote areas, there are externalities associated with arenas and recreation centres because the benefits of these services extend beyond the users of the facilities. It could be argued, for example, that arenas and recreation centres provide a social service to the community, especially for youth, because there are few alternatives in remote communities. If full cost pricing is charged, those who would use the facility might engage in less socially acceptable activities. In other words, there are significant external benefits that call for at least some subsidization. Similarly, user fees for garbage (solid waste) may act as a disincentive for using the service and may encourage individuals to dispose of their garbage on land outside the municipal boundary.

III.2 Taxes

Where user charges cannot be applied because the benefits of a particular service are not confined to individual consumers but are confined within the municipal boundary, taxes that are borne by local residents are considered to be appropriate. These might include property taxes, local income taxes, consumption based taxes such as sales and fuel taxes, and poll taxes.

III.2.1 Property Taxes

As Table 3 shows, property taxes represent almost 54 percent of total revenues of local governments for Canada (\$776 per capita) as a whole. They only account for 5 percent in Nunavut (\$197 per capita), however, and 13.6 percent in the Northwest Territories (\$568 per capita). Property taxes are 44 percent of local government revenues in the Yukon (\$688 per capita). In some other countries with remote areas, property taxes are not important. For example, they are not used in Sweden and used only minimally in Finland and Norway.¹⁶

A tax on property is a good tax for municipalities. The tax base is immobile - only people move – therefore, taxing it is relatively efficient. As well, a local tax on all properties, owned or rented, is desirable to promote local autonomy, accountability, and fairness. If there are discrepancies in the size of the tax base across local communities in remote areas, these may be handled through an equalization grant (discussed in Part III).

Although it can be argued that local governments should be granted taxing authority to meet their expenditure requirements, it is difficult for some communities to levy a property tax because the tax base is limited relative to local needs. One reason is the lack of private ownership of properties in remote areas so that there are very few properties to tax. Furthermore, the value of properties in remote communities tends to be much lower than the value in urban areas and is often lower than the cost of construction.¹⁷ In eastern European countries, where the market for housing is just developing in cities, it may be impossible to assess market value for properties in remote areas. For this reason, an alternative assessment base may be required. One possibility could include assessment on the basis of unit value (based on the unit size and lot size).¹⁸

¹⁶ Source: OECD. 2000. *Revenue Statistics 1965-1999*. Paris: OECD, Tables 133 & 134.

¹⁷ A market value that is lower than the construction cost reflects the unwillingness of individuals to pay the price that covers the cost in these communities.

¹⁸ For a discussion of unit value assessment, see Slack, Enid, John LaFaver, and Ihor Shpak. 1998. "Property Tax in Ukraine: Third Attempt." In *Budget and Fiscal Review*. Second Quarter.

The proportion of property tax revenues levied on agricultural land, forests, mines, and pipelines is likely to be higher in remote areas than in urban areas. The nature of these properties requires different tax treatment than other commercial and industrial properties. For example, agricultural land and forests are often valued in current use rather than highest and best use; tax rates are often lower than for other properties; and in some countries, farm properties and forests are exempt from property taxation altogether.¹⁹ Mines and minerals are generally exempt except for surface land and office buildings not connected with the mining operation. Mineral resources are usually taxed on the basis of profits, acreage, or assessment of mineral values.²⁰ Pipelines are usually assessed on the basis of pipe length and diameter.

Pipeline properties, unlike other commercial and industrial properties, have extensive linear networks that are not specific to any one municipality. Pipelines pass through urban areas, rural areas, and remote areas and they receive limited services. Unlike the other special properties above, pipelines have less of a link to the communities they traverse and so there is no accountability at the municipal level for the taxes levied.

For properties owned by senior levels of government in remote communities, as elsewhere, payments in lieu of taxes are required from the senior level of government to pay for local services. Failure to make these payments means that these properties receive services without paying for them and this puts senior government properties at an advantage compared to other commercial and industrial properties. Furthermore, the costs of these services will have to be picked up by other properties through higher taxes.

Levying property taxes by municipal governments in remote areas does not mean that municipalities need to determine the assessment base. Assessment can be expensive and could be the responsibility of a senior level of government as it is in Canada and many other countries. A further advantage of centralizing the assessment function comes from the implementation of uniform assessment practices across all municipalities. Uniformity establishes a level playing field and permits municipalities to set their own tax rates to meet their financial and economic objectives.

In unincorporated communities in countries where property taxes are used, they have to be administered by a senior level of government because there is no local government. Tax proceeds are used to finance a portion of the costs of the limited number of services (for example, landfill sites and local roads) that are provided to residents of these areas.

III.2.2 Income Taxes

¹⁹ Slack, Enid. 2001. "Alternative Approaches to Taxing Land and Real Property." Washington, D.C.: The World Bank Institute, p. 21.

²⁰ Kitchen, Harry. 1992. *Property Taxation in Canada*. Toronto: Canadian Tax Foundation, p. 30.

A potential source of revenue for local governments in remote areas is an income tax. It would be far too costly for each local government in these areas to levy its own income tax; at most, they could piggyback onto the income tax base of a senior level of government. Rates may be uniform across all municipalities or they could vary by municipality. Uniform rates do not permit the same degree of local autonomy as locally determined rates.

Income taxes are the most important source of local tax revenue in a number of countries with remote communities. For example, income taxes account for 100 percent of all local tax revenue in Sweden, 96 percent of all local tax revenue in Finland, and 90 percent in Norway. In Canada and Australia, other countries with many remote municipalities, local income taxes are not used at all.²¹

Although local income taxes have advantages in large metropolitan areas,²² some of these advantages disappear in remote communities where there are problems around the more prevalence of a dual economy and more frequent worker mobility. In remote communities, many high income workers are employed in seasonal occupations – they live in the community during the work season and relocate to urban and less remote areas in the off-season. Imposition of an income tax by a remote municipality becomes problematic if the tax is based on place of permanent residency, as it is in many countries. The municipality where the worker earned his/her income and benefited from municipally-provided services for part of the year would not receive any tax revenue from this individual. A further impediment to levying income taxes in remote areas in developing countries arises from administrative and compliance problems.²³ Individuals in these countries have a history of never filing income tax returns.

One possible solution might be to implement a payroll tax on all employers and self-employed residents of the municipality with the tax revenues being retained by the municipality. This, however, also poses problems. The tax base would exclude higher income individuals who use municipal services but are not in the labour force (retired or voluntarily unemployed). Since the tax base would be smaller than the income tax base, tax rates would have to be higher to generate the same amount of tax revenue.

Furthermore, reliance on local income tax revenues to fund municipal services permits lower income individuals with no income tax liability to use these services at no cost. This creates the potential for over consumption and waste in the provision of public services.

²¹ OECD, 2000. *Supra*.

²² See Slack, Enid. 2001. "Fiscal Aspects of Governing Large Metropolitan Areas." Washington, D.C.: The World Bank, p.8.

²³ McClure, Charles, E. Jr. 2001. "The Tax Assignment Problem: Ruminations on How Theory and Practice Depend on History." *National Tax Journal*, Vol. LIV, No. 2, p. 346.

Finally, when local property taxes are compared with local income taxes for remote communities, the former is likely to produce a closer link between taxes paid by individuals and the use of municipal services funded by these taxes.²⁴ The closer this link, the greater the likelihood that some degree of local autonomy, accountability and efficiency will be achieved in service provision.

III.2.3 Consumption Based Taxes

There are two taxes that may be considered here – a general sales tax and more specifically, a municipal fuel tax.

a. General Sales Taxes²⁵

Reliance on a municipal sales tax tends not to be prevalent in countries with many remote areas, although it is used in several countries with relatively few communities in remote areas.²⁶ As with the income tax, the most feasible option would be to piggyback onto the sales tax of a more senior level of government. The tax rate could be uniform across all municipalities or it could be determined locally with the latter providing more local autonomy than the former.

The rationale for a municipal sales tax in remote areas may be stronger than for a municipal income tax mainly because the sales tax base is less mobile. Consumers in one municipality are unlikely to shop elsewhere to avoid the tax or tax differential because of distance and travel costs. Furthermore, it collects revenue from high income and low income earners, and from permanent residents and visitors alike. As long as this revenue is used to fund local services, a somewhat closer link may be formed between the consumers of local public services and payment for these services than exists under a local income tax. This link, however, is not likely to be as close as it would be under a property tax.

b. Fuel Taxes

Municipal fuel taxes are levied in some Canadian and U.S. municipalities.²⁷ Generally, these taxes are piggybacked onto state/provincial fuel taxes because the administrative costs of a

²⁴ This view is often not shared by individuals who purchase rural properties for vacation use and argue that they receive fewer services and therefore should pay lower taxes than permanent residents. Although this argument may have some merit on the basis of benefits-received, it is less defensible on the basis of ability-to-pay.

²⁵ Some countries permit municipalities to tax businesses (e.g. tourism facilities) through a crude gross receipts or categorical lump sum tax. This section only looks at taxes on consumers.

²⁶ OECD, 2000. *Supra*.

²⁷ See Slack, Enid. 2001. *Supra footnote 22*, p. 9.

local tax would be prohibitive. The greatest amount of local autonomy would be achieved where municipalities were permitted to set their own tax rate. The revenues generated from these taxes are often earmarked for local roads and transit services in those cities.

Since the vast majority of roads in remote communities do not extend beyond the boundaries of the community, a tax on fuel could be viewed as a tax on residents and businesses who benefit from the local road system. The tax would increase local autonomy and be fair in terms of the benefits-received principle. In addition, it might be more acceptable politically if the revenues are earmarked for funding local roads.

Earmarking taxes,²⁸ however, has supporters as well as critics. Those who support earmarking do so because it creates a link between the cost of a program and the tax rate necessary to fund it. Opponents argue that it can lead to rigidity in budgetary decisions and over-spending because of unwillingness to review periodically the relative benefits of spending on the earmarked service. In spite of this, political acceptance of earmarked taxes for roads in remote areas may be higher if funded from a local fuel tax than from the general property tax or some other tax.

A potential disadvantage of a local fuel tax in remote areas is the increased cost of fuel that might result from higher taxes. Fuel costs are already considerably higher than in more urbanized areas and an additional tax would likely raise them even further. Higher fuel taxes may serve to discourage businesses from locating in remote areas, although it is unlikely that business location in many of these communities is dependent on the price of fuel. Businesses are there because of a specific resource (mining, oil, logging) or because they serve the local market (delivery of oil to homes, building construction, operation of the few stores that serve the community). Distance from markets and cost of production, in reality, are simply too high to induce other firms or businesses to move to these areas.

III.2.4 Poll Taxes

The poll tax (or head tax) is a tax of a specific dollar value that is imposed on each individual. It bears no direct relationship to property values nor is it based on any concept of ability to pay. The local tax base is directly dependent on the number of residents in the community (usually adult residents only).

A poll tax is considered to be the most efficient tax that local governments could adopt because it is a fixed charge on all eligible taxpayers. Since a poll tax does not change the relative price of consumption or other types of activities, it does not provide an incentive for individuals to alter their behaviour to reduce the tax.

²⁸ For an extensive discussion and analysis of earmarking including reference to Russia, see Richard M. Bird (1997), "Analysis of Earmarked Taxes", *Tax Notes International*, at 2096-2116.

A poll tax (known as the community charge) was levied by local governments in Great Britain for a short time but was replaced by a property tax (council tax) in 1993.²⁹ It was very unpopular, however, because it was felt to be regressive (borne relatively more heavily by low-income households than high-income households) and because it was very costly to administer. Unlike property which is highly visible and in a fixed location, individual taxpayers were able to escape full reporting of the total number of taxable occupants.

Although the poll tax may not be appropriate in large urban areas for the reasons noted above, it may have some merit in remote areas. The lack of a sizable income, sales or property tax base combined with the importance of having some local taxing authority and accountability might justify a poll tax in remote communities. Furthermore, it may be more difficult to escape full reporting in a small community.

III.3 Intergovernmental Transfers

Communities in remote areas generally rely more heavily on federal and provincial/state transfers than do communities in urban areas. In Canada, for example, municipalities on average receive 18 percent of their revenues from provincial grants (see Table 3). This compares to 32 percent in the Yukon, 51 percent in the Northwest Territories, and 66 percent in Nunavut. The following sections provide three economic justifications for intergovernmental transfers: fiscal gap, externalities, and equity.

III.3.1 Fiscal Gap

When municipalities have inadequate revenues to meet their expenditure needs, there is said to be a fiscal imbalance. Fiscal imbalance occurs at the local level essentially because local revenue sources tend to grow more slowly than income over time, while local expenditures tend to grow more quickly. This is true in remote areas in the same way as in urban areas.

Fiscal imbalance can be addressed by increasing the sources of revenue at the local level or by reducing expenditure responsibilities. Although it has been argued that large metropolitan areas could be given access to more revenue sources,³⁰ this is unlikely to work as well for remote communities. Some increase in the use of user fees and property taxes or poll taxes may be appropriate, as argued above, but it is unlikely to be sufficient to eliminate the fiscal gap. This means either that the central government will have to take over functions from the local governments or provide unconditional grants.

²⁹ See King, David, N. 1988. "Accountability and Equity in British Local Finance – The Poll Tax." University of Stirling, Discussion Papers in Economics, Finance, and Investment.

³⁰ Slack, Enid. 2001 *Supra footnote 22*, p. 10.

The grants to reduce or eliminate the fiscal gap would be unconditional in the sense that the local government could spend the funds on any function or use them to reduce taxes. In other words, the trade-off between expenditures and taxes and among different types of expenditures would remain with the local government.

III.3.2 Externalities

Another rationale for central government transfers is externalities. Where services spill over municipal boundaries, there will be an under-allocation of resources to that service because the municipality providing the services would base its expenditure decisions only on the benefits captured within its jurisdiction. It would not take account of the benefits to those outside the jurisdiction.³¹

One way to provide an incentive to allocate more resources to the service generating the externality is a conditional, matching transfer from a senior level of government. It should be conditional in that it has to be spent on the service which generates the externality; it should be matching to reflect the extent of the externality.

This rationale for central government transfers is not as applicable to remote areas as it is for urban areas. By definition, remote communities are isolated and there is unlikely to be any spillover of service benefits to other jurisdictions -- they are simply too far away to enjoy the benefits.

III.3.3 Equity

Some municipalities are unable to provide an adequate level of service at reasonable tax rates.³² This may occur for three reasons: the costs of services may be higher, the need for services may be higher, and the tax base may be smaller. These three reasons are all relevant in remote areas.

Under these circumstances, an equalization grant which reflects both the fiscal capacity of the municipality and its expenditure needs, is appropriate. The definition and measurement of these two components presents a challenge, however. It is important to design the formula in a way that does not discourage municipalities from collecting own-source revenues nor from finding other ways of balancing their revenues and expenditures³³ (such as amalgamation of communities, establishing service boards to share costs, etc.).

³¹ Slack, Enid. 2001. *Supra footnote 22*, pp. 10-11.

³² Bird, Richard, M. and Enid Slack. 1993. *Supra*, pp. 117-138.

³³ Jorge Martinez-Vazquez and Jameson Boex (2001), *Russia's Transition to a New Federalism* (Washington: World Bank Institute), at 50.

Perhaps the best national (Commonwealth Government) to subnational (municipal) grant equalization scheme is the one used in Australia. In each state/territory, calculations are made for both standard expenditures and revenues. Standard expenditures are calculated for each of 20 municipal functions by taking the product of: ³⁴

- The council's relevant unit of need (such as population, number of households serviced, kilometres of roads, etc.);
- The standard cost per unit of need (usually the average cost of that service or function within the state);
- A discount factor (total expenditure on the function discounted by revenue received from specific grants and certain other sources);
- A disability factor (which compensates the council for factors beyond its control, such as socio-economic profile possibly expressed as a percent of the state average, physical terrain or isolation).

Within this basic framework, State to State differences may exist in the:

- measurement of disability factors;
- extent to which socio-economic characteristics are emphasized and measured;
- degree of community isolation or remoteness that is recognized;
- number of qualitative factors included in measuring a particular service; and
- weighting applied to improvements in local government's management practices and structural reform.

Standardized revenue for each municipality is obtained by multiplying the municipal tax base (property assessment) by the average (or implied) rate across all municipalities in the State. The difference between estimated expenditure needs and revenue potential is the basis for determining the municipality's share of equalization funds. The available funds, however, are generally less than the amount required to achieve full equalization.

In Australia, the Northern Territory (which contains the majority of remote areas and a high proportion of the Aboriginal population) is included in the overall Commonwealth equalization formula. Higher expenditures of remote areas are recognized and

³⁴ For more details, see Commonwealth Grants Commission. 2001. *Report on State Revenue Sharing Relativities*, ch. 12.

compensated in the equalization formula through the use of disability factors. For the Northern Territory, there are fewer categories of expenditures for which there is redistribution. Two categories – general administration and transportation – account for 90 percent of the total redistribution. One of the disability factors reflects the proportion of the population comprising Aboriginal people. In the Northern Territory, the Aboriginal factor accounts for one third of the funds that are redistributed (this is much higher than in the states); roads account for 39 percent of the funds.

In Canada, the federal government provides equalization grants to the provinces and territories who, in turn, use their own formulas to distribute funds to local governments. The federal grant to the territories is based on a different formula than the grant to the provinces. The box below compares these two formulas.

A Comparison of Federal-Provincial and Federal-Territorial Equalization Grants in Canada

The federal-provincial equalization grant compares the per capita tax yield at national average tax rates for each province with the average per capita tax yield at national average tax rates for five representative provinces, for each of 34 provincial and local revenue sources.

The federal-territorial equalization grant is based on 1992-3 expenditures in the territories escalated in line with the growth in total provincial and local government expenditures and population in each territory. The base amounts are reduced to take into account taxes levied. These reductions are adjusted to reflect the tax effort in each territory in 1987-88. The grants are then adjusted by two special factors: the catch-up factor is equal to the ratio of territorial fiscal capacity relative to actual collections and has been set at 1.40; the keep-up factor is the change in the provincial and local tax effort index for Canada since 1987-88.

A comparison of federal equalization grants to the provinces and the territories shows the following:

- Expenditures are explicitly included in the federal-territorial formula but are proxied by revenues per capita in the federal-provincial formula.
- No allowance is made for differential needs or costs in the federal-provincial formula.
- The tax rate in the provincial-territorial formula is fixed at a base year level whereas the national average tax rate in the federal-provincial formula changes each year.

IV. Design of Government Structure

There are a variety of options that may be considered for structuring municipal government in municipalities in remote areas. These include two tier; single tier for all services; inter-municipal agreements; special purpose districts; senior level of

government responsible for funding some municipal services; and increased reliance on grants.³⁵

Each of these options is evaluated according to its ability to achieve a number of criteria. These include: the capacity to benefit from economies of scale, the opportunity to internalize spillovers (external benefits and costs), the capacity for being accessible and accountable to citizens, the opportunity for citizens to satisfy local preferences, and the ability to fund expenditures in a fair and equitable manner.³⁶

It should be noted that the structure that may best satisfy these criteria in large metropolitan or urbanized areas where there are a number of contiguous municipalities (cities, towns, villages, and townships that are adjacent to each other) providing a wide range of services will likely differ from the structure that will meet the criteria in municipalities in remote areas. Municipalities in remote areas are generally far apart and deliver few services. Each of these structures is summarized below along with a discussion of their applicability to remote communities.

IV.1 Two Tier

A two-tier municipal structure is generally appropriate in large geographic and metropolitan areas where there are a number of contiguous municipalities responsible for a variety of municipal services

In two-tier structures, the upper tier is generally responsible for services that benefit the entire region/ district/area; that generate benefit or cost spillovers (externalities) across the entire area; that are primarily income redistributive (social services, social housing); that display economies of scale (water, sewer, and solid waste); and that are to be provided at uniform levels and standards across the entire area. For services that do not display these characteristics and where local responsiveness is important, responsibility generally rests with the local municipality.³⁷

Within a two-tier structure, each level of government has its own revenue base (local taxes and user charges). For lower-tier services, funding comes from a local revenue base that is contained within the local community. For upper-tier services, the revenue base encompasses the entire area. Grants from a senior level of government can also play a role.

³⁵ For a discussion of similar options for metropolitan areas, see Slack, Enid. 2001. *Supra* footnote 22.

³⁶ These criteria are explained in Slack, Enid. 2001. *Ibid.* pp. 13-15.

³⁷ An illustration of who should do what in a two-tier municipal structure based on an allocation according to these criteria is provided in Slack, Enid. 2001. *Ibid.*, Table 1.

In remote areas where municipalities are isolated from each other, distances are such that benefits or costs of services provided by one municipality are unlikely to spill over into adjacent municipalities. Similarly, distances between municipalities and their isolation from each other prevents them from benefiting from economies of scale in the provision of services whose costs per unit decline as the number of residents served increases. Hence, the rationale for a two-tier structure at the municipal level in remote areas is far less compelling than it is for larger metropolitan areas.

IV.2 Single Tier

In a single-tier structure, there is only one level of municipal government that is responsible for all municipal services. In almost every country, there are a number of single-tier municipalities – some exist in large metropolitan areas and some exist in small, isolated communities.

Although a single tier is one of a number of potentially viable options for large metropolitan or urbanized areas, it is almost certain to be the only feasible one for municipalities in remote areas. These municipalities are generally small and isolated from each other. This means that there are no externalities from services they provide and they cannot benefit from economies of scale. Hence, there is no apparent role for an upper-tier level of municipal government.

What differentiates large metropolitan or urbanized areas from small, rural, isolated municipalities in remote areas is the fiscal impact of their expenditure responsibilities. For example, higher per unit costs of service delivery are generally observed in the latter (see Table 2). As well, these municipalities almost always have a smaller and less diversified revenue base from which they can raise locally generated revenues. This combination of higher per unit costs and lower fiscal capacity raises the question of whether or not there are ways within this single tier structure that local services could be provided in a less costly fashion or whether they should be funded differently than larger metropolitan areas. Some of these options are considered below.

IV.3 Inter-Municipal Agreements

An inter-municipal agreement exists when one municipality agrees contractually to buy a service from another municipality, generally an adjacent municipality. These agreements may exist for a variety of services but are most common for water provision, fire and police protection, and maintenance of roads (snowploughing, in particular). They are used more frequently in small municipalities (villages and townships, for example) than in large municipalities (cities and towns). The rationale for entering an agreement is almost always cost savings - it is deemed to be less costly to buy a service from an adjacent municipality than it is to provide it on its own because it can achieve benefits from economies of scale.

Although these agreements have been used for a long time in many smaller contiguous municipalities, they are unlikely to work or be appropriate where municipalities, such as those in remote areas, are isolated from each other. A municipality is unlikely to benefit from buying services from other municipalities where distances between them are large.

IV.4 Special Purpose Districts

In areas where there are a number of contiguous municipalities, special purpose districts are used in some countries to provide a range of services for each municipality within the district. Although special purpose districts are not very common in Russia, there are some examples such as a specialized medical centre in the Gatchina Raion of the Leningrad Oblast which provides services to more than one municipality.³⁸

Service responsibilities of special purpose districts generally include those that generate externalities; benefit from economies of scale; are income redistributive; and for which district wide uniform standards are important. Where special purpose districts exist, they play the same role and perform the same functions as an upper-tier level of municipal government in a two-tier structure. They are less formal in terms of governing structure, however, because they generally have a board with members appointed from the different municipal councils. Even in metropolitan areas, there are issues of accountability around special districts. For reasons that are similar to the rejection of a two-tier structure for non-contiguous municipalities in remote areas, special purpose districts are also rejected as being appropriate and effective.

IV.5 Role for Senior Levels of Government

Given that municipalities in remote areas are unable to take advantage of economies of scale in service provision and given their smaller and less diversified tax base, one option is that senior levels of government provide local services instead of municipalities. Although this option could reduce local taxes and user fees, it would seriously hinder accountability because there would be no direct link between individual consumption of a service and payment for it. When individuals receive a service for which they are not taxed or charged a fee, there is an incentive for them to consume more than they would if they paid for it.³⁹

The provision of services by a senior level of government raises concerns about local responsiveness. It may be less appropriate for a senior level of government to provide services because it is further removed from local residents, making it difficult to

³⁸ Kurlyandskaya, Galina, Yelena Nikolayenko, and Natalia Golovanova. 2001. *Supra*, p. 29.

³⁹ For example, in rural communities in one Canadian province (Ontario), policing was provided by the provincial government at no charge until 1998. Failure to charge for policing provided an incentive to over-use the service.

determine the quality and quantity of output to provide in each municipality. Senior levels of government are likely to be less responsive and less accountable to local residents than a local government.

IV.5.1 Grants

A second option is for senior levels of government to provide grant assistance to communities in remote areas and have the municipalities deliver and fund local services themselves. If service provision is considerably more expensive (as shown in Table 2, for example) and considerably higher levels of financial assistance are required (as shown in Table 3), there is a question about the use of national or provincial/state resources to foster communities artificially in remote areas.⁴⁰ An important issue is whether communities that cannot survive in the absence of disproportionate senior government funding (when compared to other urban areas) should exist at all.

Arguments can be made for and against government subsidization of remote areas. If a municipality in a remote area is essential for the provision of an important public service such as national security, the ‘public good’ benefit of this service and the externalities associated with it may justify higher grant assistance from senior levels of government to keep these communities viable. If the existence of municipalities in remote areas does not provide “public good” benefits, there may be less justification for large subsidies to these communities. For example, in the case of a company town where the municipality’s existence is vital to the success of the company, justification for grant funding is less obvious.

The argument against subsidizing remote areas is based on efficiency. Reliance on grant funding reduces the incentive for residents of these municipalities to leave and move to areas where there are greater employment and educational opportunities. If national economic efficiency is an important objective, then encouraging mobility of labour out of remote areas may be more appropriate than providing subsidies which encourage them to stay. That is not to say that they should not remain in these communities but rather that there is no economic justification for higher subsidies. Politics sometimes leads to a different conclusion, however, because people form emotional attachments to communities and politicians are reluctant to move them even though the long term costs are high.

⁴⁰ The issue is not whether taxpayers in remote communities should be excluded from paying for municipal services. Clearly, they should pay at least some of the costs of services if accountability, fairness, and efficiency are to be achieved.

Table 2: Expenditures per capita – 2000 for municipal sector;
2000/01 for consolidated provincial/local or territorial/local sector

	Yukon		Northwest Territories		Nunavut		Rest of Canada	
	Municipal	Consolidated	Municipal	Consolidated	Municipal	Consolidated	Municipal	Consolidated
	\$	\$	\$	\$	\$	\$	\$	\$
General Administration	531	2,338	658	2,155	775	3,752	162	259
Protection	164	1,627	167	1,713	124	2,217	237	457
Transportation	383	2,811	675	2,790	562	1,968	295	482
Health	4	2,527	411	4,657	63	4,868	29	2,207
Social Services	0	2,404	88	1,758	203	1,556	188	1,305
Education	0	3,861	0	4,909	0	8,911	6	1,891
Resource Conservation	727	1,474	101	2,312	25	1,300	30	284
Environment	329	545	829	756	1,036	1,643	207	240
Recreation/Culture	560	1,141	811	943	643	950	164	220
Housing	1	659	91	1,749	444	2,394	38	94
Regional Planning	68	153	134	589	90	874	32	55
Debt Charges	24	130	57	368	11	278	89	962
Other	5	36	40	57	54	159	8	133
Total	2,092	19,711	4,061	24,751	4,030	27,871	1,485	8,591
Population	29,900		40,900		28,200		30,982,900	
Population per km ²	.063		.035		.015		5.63	

Source: Calculated from Statistics Canada data, Financial Management Systems (FMS), mimeograph, August 2001 Statistics Canada, CANSIM II, table 051-0001, and Statistics Canada, Natural Resources Canada, GeoAccess Division.

	Yukon		Northwest Territories		Nunavut		Rest of Canada	
	Municipal	Consolidated	Municipal	Consolidated	Municipal	Consolidated	Municipal	Consolidated
	\$	\$	\$	\$	\$	\$	\$	\$
Own Source Revenue	1,079	5,140	2,058	10,755	1,323	5,146	1,193	7,929
Income Taxes	0	1,396	0	4,054	0	636	0	2,201
Consumption Taxes	0	669	0	924	0	404	0	1,520
Property & Related Taxes	688	760	568	953	197	311	776	1,335
Other Taxes	18	189	23	250	5	61	18	506
Contributions to Soc. Ins.	0	202	0	394	0	224	0	262
User Fees	310	825	1,342	2,804	1,091	2,062	308	937
Investment Income	54	1,040	105	730	25	339	73	959
Other Revenues	11	59	20	649	5	1,109	17	141
Total Grants	504	13,439	2,104	14,243	2,537	21,208	255	1,021
Unconditional Grants	313	11,065	341	11,627	262	19,439	38	810
Conditional Grants	192	2,374	1,762	2,616	2,275	1,849	217	211
Federal	2	---	12	---	10	---	11	---
Provincial	190	---	1,751	---	2,265	---	206	---
All Revenues - Average	1,583	18,583	4,162	24,996	3,861	26,434	1,448	8,949

Source: Calculated from Statistics Canada data, Financial Management Systems (FMS), mimeograph, August 2001.