Fraser Alert

May 2004
URBAN ISSUES SERIES

THE FRASER INSTITUTE

Market solutions to public policy problems

Share the Wealth:
Who Pays for Government Across Ontario?

" There is great interest in Canada ... on the topic of cities and their fiscal standing in our federal system."

Mark Mullins is the Director of Ontario Policy Studies at the Fraser Institute in Toronto and is a columnist with globeandmail.com.He has a doctorate in economics from the London School of Economics and was formerly a chief economist in the financial markets and a public policy consultant.

Main Conclusions

- **Greater Toronto Area (GTA) taxpayers pay out almost $24 billion more in taxes than they receive in government spending—a net tax burden equal to 11 percent of the GTA economy**
- **Most of this burden falls on the suburbs around Toronto, where the average household pays the equivalent of more than $17,000 in extra taxes**
- **Halton Region and York Region households—urban areas just west and north of Toronto—pay the most: up to $26,000 more in tax than in government services received. By comparison, Toronto households pay almost $9,500 in extra taxes.**
- **A minority of 9 Ontario counties are subsidizing the other 40. Twenty-one counties pay less tax than they receive in government services, with most found in the eastern and northern regions. Five counties effectively have most or all of their personal income taxes refunded in the form of an equivalent dollar value of services.**
- **The average Ontario household bears a net tax burden of over $4,500 to pay for transfers to other provinces through federal government taxation and spending programs**
- **The degree of regional net tax burden and its associated subsidy outflow rises with income—richer communities are generally subsidizing poorer communities**
- **Subsidy outflows also rise with population density, contrary to anti-development advocates' beliefs, showing that suburbia is paying more than its proportional share of government costs**

Introduction

There is great interest in Canada, and especially in Ontario recently, on the topic of cities and their fiscal standing in our federal system.

For example, the federal government has developed a “communities” agenda, formerly the “cities” agenda, and has committed to a GST tax exemption on inputs, infrastructure spending, and transferring gas tax revenues to local governments.

The provincial government is also active in this area, with a $90 million grant and loan extension to the City of Toronto to help the city balance its most recent annual budget. The Smart Growth program, introduced by the former provincial government in the late 1990s, also advocates more public capital investment and compact development for cities.[1]

The Toronto City Summit Alliance and the Toronto Board of Trade have been very active with a public campaign called “Enough of Not Enough.”[2] These groups argue that some portion of Toronto’s $9 billion in excess taxes should be recouped and spent on public transit, waterfront development, and social housing. The groups also want to establish new taxing authority for municipalities.

Finally, there is an active Canadian contribution to a worldwide debate on the costs and benefits of urbanization.[3] The fiscal aspect of this debate centres on whether a government subsidy for urban development exists that encourages excessive suburbanization.

A key question underlying these myriad policy actions and debates is whether urban areas pay their fair share of government costs. The argument from governments recently is that cities need more money. In partial opposition to this, anti-development advocates presume that suburban development does not pay its own way by covering all government costs.

This study estimates local tax and public spending flows in Ontario to add some clarity to the underlying issue of the comparative fiscal burden of urban, suburban, and rural areas.

The analysis takes overall government revenue and spending line items for Ontario and allocates them to the 49 provincial counties. From this, local net tax burden—a measure that compares revenues to total spending—is calculated.

A positive net burden indicates a fiscal outflow, with money leaving the region to be used elsewhere or to reduce government debt.[4]

The appendix outlines the research methodology and data sources.

Regional and County Results

Table 1 shows the estimated net tax burden results, splitting the province into six regions: Toronto, the suburban areas around Toronto (the 905 telephone area code), and the rest of the province north, south, east and west of the GTA.

The top portion of the table shows that almost half of Ontario’s population and personal income are in the GTA, with Toronto slightly smaller than the 905 area. Average household incomes are highest in the suburbs and lowest in the north. Population density rises in the expected way with the degree of urbanization.

The table shows that total estimated net outflows from the GTA are almost $24 billion. The 905-area portion of that outflow—almost $15 billion—is two-thirds higher than Toronto’s share, even though their populations and economies are of a similar size.

Table 1: Regional Results

	Toronto	*Other GTA*	*North*	*South*	*East*	*West*	*Ontario*
% of Ontario Population	22%	23%	11%	13%	16%	16%	100%
% of Ontario Personal Income	23%	25%	9%	12%	16%	15%	100%
Average Household Income	$72,088	$86,919	$56,883	$61,992	$66,264	$63,790	$69,645
Population per Square Kilometre	3,939	400	1	150	38	58	13
Net Tax Burden ($ billion):	$9.0	$14.8	-$0.0	$2.2	$0.7	$3.1	$29.7
Net Burden:							
$ per household	$9,497	$17,643	-$19	$3,926	$999	$4,406	$7,037
% of Average Household Income	13%	20%	-0%	6%	2%	7%	10%
% of Direct Personal Taxes	60%	93%	-0%	35%	8%	37%	50%

Note: Net tax burden amounts are annual averages for 1999 to 2001. All other data are for 2000.

At over $17,000 per household, the net tax burden for the 905-area is thus 85 percent higher than in Toronto, and seven times higher than in the rest of the province. The north actually sees a net inflow of funds.

As part of this, the GTA is essentially picking up a $4,500 tab per household for the rest of Ontario, since the average provincial net burden is just over $7,000 per household and taxpayers outside the GTA have an average net burden of just under $2,500.

The last line of table 1 shows that the net tax burden for the province is equivalent to the value of half of all federal and provincial income taxes. Some 93 percent of direct personal taxes in the 905-area are notionally dedicated to the financial outflow from that region.

Finally, net tax burden of almost $30 billion and the corresponding outflows of tax dollars for the entire province are equivalent to 6.9 percent of Ontario's GDP, a sizable annual transfer of taxpayer funds. The destination of these funds is discussed later in this Alert.

Table 2 shows the allocation results by county.

The counties with the largest fiscal outflows are either in the GTA or close to it.[5] Halton Region and York Region households—urban areas just west and north of Toronto—pay the most: up to $26,000 per household more in tax than they receive in government services. These two counties essentially have all of their personal income taxes eaten up by the financial outflow.

The northern counties have the greatest subsidy, with an average net inflow of $19 per household. This is actually an overall subsidy of just over $7,000, since these counties are not picking up the $7,037 net tax burden for the average household in Ontario (see table 1).

Eastern counties have the next highest subsidy, with average net taxes of just under $1,000 per household and an overall subsidy of $6,000.

The third column of table 2 shows that a minority of 9 Ontario counties are subsidizing the other 40, since these are the only ones above the Ontario average excess tax burden of $7,037. Twenty-one counties pay less tax than they receive in government services; most of them are in the eastern and northern regions.

"Finally, net tax burden of almost $30 billion and the corresponding outflows of tax dollars for the entire province are equivalent to 6.9 percent of Ontario's GDP, a sizable annual transfer of taxpayer funds."

Five counties effectively have most or all of their personal income taxes refunded, as seen in column five of the table.

Net Tax Burden, Income and Density

The ranking of counties in table 2 suggests that there is a positive relationship between the magnitude of net tax burden and both average incomes and population density. These correlations are shown visually in figures 1 and 2.

Figure 1 demonstrates that there is a very tight relationship between the net tax burden per household and average household income by county.[6] Part of this is by construction, as around 20 percent of revenues are allocated by county using shares of income.

However, the main reason stems from the distribution of federal and provincial personal income taxes, accounting for more than one-third of government revenues, which are highly progressive (meaning effective tax rates rise with income).

For example, Halton Region has the highest household income in Ontario and the highest effective personal income tax rate (at 24 percent). Manitoulin District has the lowest income and the lowest effective personal income tax rate (at 15 percent).

Thus, the degree of regional subsidy outflow rises with income—and richer communities are generally subsidizing poorer communities.

The one major exception is Ottawa, which has net fiscal outflows of only $3,900, compared to a prediction of over $13,000 based on that county's high average household income.[7]

The explanation for this discrepancy comes from Ottawa's massive 58 percent share of public administration salaries (a result of the concentration of federal public servants in the national capital region), which effectively recaptures a large portion of the tax paid by the region.

Table 2: Results by County

County	Region	Net Burden: $ per Household	Net Burden: % of Average Household Income	Net Burden: % of Direct Personal Taxes	Average Household Income	Population per Square Kilometre
Halton	GTA	$25,928	27%	107%	$99,435	388
York	GTA	$23,056	24%	104%	$98,477	414
Peel	GTA	$13,918	18%	86%	$80,059	796
Waterloo	S/W	$10,891	16%	78%	$70,691	320
Durham	GTA	$10,861	15%	71%	$74,491	201
Wellington	S/W	$10,034	15%	72%	$70,337	71
Toronto	GTA	$9,497	13%	60%	$72,088	3,939
Dufferin	S/W	$9,187	14%	68%	$69,585	34
Essex	W	$8,378	12%	61%	$70,512	203
Oxford	W	$4,580	7%	42%	$62,923	49
Ottawa-Carleton	E	$3,888	5%	22%	$80,526	279
Simcoe	N	$3,831	6%	33%	$63,007	78
Prescott Russell	E	$3,552	6%	34%	$60,889	38
Perth	W	$2,756	5%	26%	$62,679	33
Niagara	S	$2,617	5%	25%	$59,483	220
Lambton	W	$2,536	4%	22%	$61,566	42
Haldimand-Norfolk	S	$2,475	4%	25%	$57,777	36
Lanark	E	$1,941	3%	18%	$60,056	21
Kent	W	$1,871	3%	18%	$60,254	44
Middlesex	W	$1,696	3%	14%	$61,228	122
Elgin	W	$1,678	3%	17%	$58,299	43
Hamilton-Wentworth	S	$1,603	3%	14%	$60,547	439
Leeds Grenville	E	$1,524	3%	15%	$58,056	29
Brant	S	$1,500	3%	15%	$57,347	108
Cochrane	N	$812	1%	8%	$56,913	1
Northumberland	E	$612	1%	6%	$58,792	41
Thunder Bay	N	$406	1%	4%	$58,140	1
Sudbury Regional Municipality	N	$48	0%	1%	$58,177	46
Bruce	W	-$631	-1%	-6%	$58,266	15
Kenora	N	-$905	-2%	-10%	$55,699	0
Stormont, Dundas, Glengarry	E	-$1,072	-2%	-12%	$52,970	33
Hastings	E	-$1,332	-3%	-15%	$53,920	21
Rainy River	N	-$1,334	-3%	-15%	$53,427	1
Peterborough	E	-$1,607	-3%	-17%	$55,471	33
Renfrew	E	-$1,693	-3%	-19%	$54,345	13
Muskoka	N	-$2,669	-5%	-27%	$56,306	14
Victoria	E	-$2,706	-5%	-30%	$53,824	23
Huron	W	-$2,774	-5%	-33%	$53,236	18
Algoma	N	-$3,308	-7%	-40%	$51,469	2
Grey	W	-$3,330	-7%	-42%	$49,535	20
Nipissing	N	-$3,389	-7%	-41%	$50,106	5
Frontenac	E	-$3,665	-6%	-34%	$57,681	38
Sudbury District	N	-$3,683	-8%	-49%	$47,451	1
Prince Edward	E	-$3,777	-8%	-45%	$51,105	24
Lennox Addington	E	-$4,888	-10%	-57%	$52,302	14
Timiskaming	N	-$5,003	-11%	-67%	$47,477	3
Haliburton	E	-$5,586	-13%	-84%	$44,991	4
Parry Sound	N	-$5,604	-12%	-77%	$47,924	4
Manitoulin	N	-$6,233	-15%	-102%	$41,529	3

Note: Net tax burden amounts are annual averages for 1999 to 2001. All other data are for 2000. Regions are north, south, east and west of the GTA.

Figure 1: Net Tax Burden & Household Income

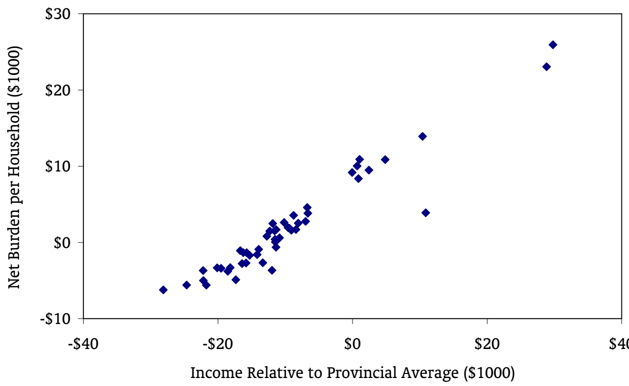
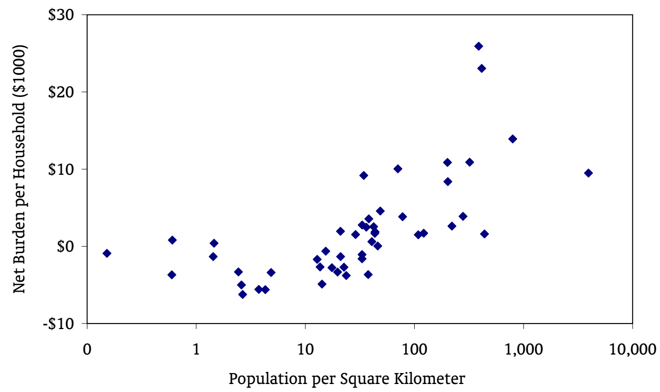


Figure 2: Net Tax Burden & Population Density



Notably, Toronto does not stand out from other counties in figure 1 regarding the size of its net burden compared to its high income. The actual outflow is just under $9,500 per household, compared to $8,500 predicted by Toronto's relatively high average household income.

The wisdom of this regional redistribution can be questioned.

One reason is that individuals with identical income in different counties will benefit unequally owing to net fiscal flows. This is a violation in spirit of a cardinal tax principal that argues for horizontal equity between people at the same income level.[8]

A second reason is seen in figure 1. There is a block of 18 counties in the southwest quadrant of the figure that have lower than average incomes and yet have significant net outflows. There is also a much weaker relationship between average household income and net tax burden for all of the counties seeing net inflows. Thus, redistribution is not applied in a perfectly consistent way across the province.

The relationship between net tax burden and population density is not as pronounced as that for income, but it is positive and statistically significant.[9] As figure 2 shows, net burden is always positive at densities above 38 people per square kilometre. Net burden is almost always negative at densities below 20 people per square kilometre, with only two exceptions that are close to a zero net burden.

Figure 2 and table 2 show that all of the GTA counties and those just to the west of them have relatively high net outflows relative to their population densities. Toronto's fiscal contribution, given its very high density (ten times higher than the rest of the GTA), is somewhat low relative to the suburban counties.

This suggests that the 905 area is paying at least its proportional share of government finances and perhaps more, notwithstanding the relatively high household incomes in those counties.

Further, it is difficult to sustain an argument that suburbanization is not covering its costs when aggregate excess taxes are almost $15 billion in the 905 area. And there is no support for the notion that taxpayers are subsidized more as one moves from the central city to the suburbs—exactly the opposite is true.

Thus, anti-development advocates are wrong to suggest that suburbanization is being encouraged through public finances.

Where Does the Outflow Go?

It is worth asking where the almost $30 billion net tax outflow from Ontario goes. To recap, this number includes the excess taxes paid through the federal, provincial, and local governments and the CPP.

Table 3 provides such estimates, using an assumption that the appropriate level of redistribution to other provinces should be based on their shares of the national economy.[10]

Thus, a province with a large population and a relatively high standard of living like Ontario would contribute the most to the federal government and the CPP—but no more than the province's share of nominal GDP.[11]

The table shows that the average Ontario household sends over $4,500 to other provinces through federal government taxation and spending programs. This is two-thirds of Ontario's total net tax burden, with an additional $2,000 per household allocated to the federal government's savings.

The other destinations are relatively minor. There is just under $300 per Ontario household in provincial government savings and just over $300 in foreign spending compared to revenues. It is also worth noting that the CPP surplus has almost no redistributive component for Ontario.[12]

Given the $4,500 redistribution to other provinces, counties in Ontario that have a lesser net tax burden per household would then have their federal redistribution subsidized by those counties with higher outflows.

Table 2 shows that only 10 counties have average household net outflows above the $4,500 level. Thus, these 10 are providing more than their proportional share of outflows to other provinces.

Table 3: Destinations of Ontario Net Tax Burden

	Net Burden		
	$ per Household	*$ Billion*	*% of Total*
Other Provinces via Feds	$4,550	$19.197	65%
Federal Government Savings	$1,989	$8.392	28%
CPP Savings	$452	$1.906	6%
Ontario Government Savings	$293	$1.236	4%
Other Provinces via CPP	$1	$0.003	0%
Local Government Savings	$87	$0.367	1%
Outside Canada	-$334	-$1.410	-5%
Ontario	$7,037	$29.691	100%

Note: Net tax burden amounts are annual averages for 1999 to 2001
Source: Author's calculations

Footnotes

1 See the various regional reports at www.smartgrowth.gov.on.ca.

2 See www.realtorontosolutions.ca.

3 Enid Slack, "Municipal Finance and the Pattern of Urban Growth," C.D. Howe Institute Commentary 160, February 2002 argues that denser GTA development could yield savings of "$1 billion annually over 25 years" compared to the existing development approach. "Driven to Action: A Citizen's Toolkit," David Suzuki Foundation, October 2003 asserts flatly that "building new infrastructure to support sprawl is bankrupting communities." There are innumerable American studies that debunk many of the myths around urban development, for example Samuel Staley, *The Sprawling of America: In Defense of the Dynamic City*, Policy Study no. 251, Reason Public Policy Institute, February 1999 at www.rppi.org, and Daniel Simmons and Ian Wyatt, "The Problems With Planning: A Free-Market Guide to Suburban Development & 'Urban Sprawl' Studies," Competitive Enterprise Institute, March 1999 at www.cei.org, but no apparent Canadian studies.

4 This Alert treats revenues and public spending in equivalent dollar terms. However, there is no reason to believe that governments deliver services to a high value-for-money standard. The degree of fiscal imbalance is therefore larger than it appears in this Alert. See Clemens *et al.*, "Government Failure in Canada, 1997-2004," Fraser Institute Public Policy Sources number 79, March 2004, for evidence on this point.

5 Note that Waterloo, Wellington, and Dufferin counties are placed in both the southern and western regions, owing to their location on the edge of those areas.

6 A statistical regression shows that average income accounts for 92 percent of the variation in net tax burden by county.

7 This prediction is based on the statistical relationship between household income and net tax burden across counties.

8 While horizontal tax equity refers strictly to tax treatment, it is still a discrepancy to tax people of similar income levels at the same rate but provide different levels of public services by region.

9 A statistical regression shows that population density accounts for 43 percent of the variation in net tax burden by county. Density is shown on a logarithmic scale in figure 2, so that the Toronto numbers can be shown more clearly.

10 See www.cric.ca/en_html/guide/equalization/equalization.html for a list of sources on federal government redistribution through the formal equalization system, one portion of net fiscal flows.

11 Using provincial shares of national tax revenues as an alternative measure for redistribution would make only a minor difference of $300 less per household to the $4,550 number listed in table 3. This would account for the degree of progressivity in the tax system. The use of population shares, similar to the approach taken with the distribution of the Canada Health and Social Transfer, would increase the per household redistribution by just over $100.

12 The provincial redistribution within the CPP runs only from Alberta (in surplus) to the other provinces outside Ontario (excluding of course Quebec). See Bill Robson, "A New Pension Deal for Alberta," Fraser Institute Public Policy Sources number 73, November 2003, for the outlines of a suggested separate Alberta Pension Plan.

13 See the Appendix of Toronto Board of Trade, *Strong City, Strong Nation: Securing Toronto's Contribution to Canada*, June 2002 at http://www.bot.com/assets/StaticAssets/Documents/PDF/StrongCityRpt.pdf.

Appendix

This study takes government revenue and spending information from Statistics Canada's provincial accounts for Ontario and allocates the data by geographical area.

The local areas used are the 49 Ontario census divisions, also referred to as counties. Every government sector is assessed: federal, provincial, local, and the Canada Pension Plan. The county totals are created by summing up the locally allocated tax and spending amounts.

The provincial accounts use a concept called net lending (net tax burden in this Alert) to represent the excess of total revenues over combined current and capital spending. At the provincial and county level, a positive net burden is equivalent to the amount transferred to other jurisdictions or saved by the government.

The net burden amounts are also presented per household. It is important to remember that this is an average for the county, with higher income households generally carrying a higher net tax burden balance and those with less paid tax generating a lower net amount.

County-level allocation factors are used to estimate each budgetary line item, as governments do not publish such information. This Alert generally follows and augments the methodology of a recent Toronto Board of Trade report.[13]

Federal and provincial line item revenues are allocated by county shares of personal income taxes, income by place of work, employment by place of work, after-tax income, households and population. The allocation data come from the 2001 Census and CCRA locality code statistics for the 2000 tax year.

Local revenues are allocated by the actual share of municipal revenues from the latest Municipal Financial Information report for 1997 from the Ontario Ministry of Municipal Affairs and Housing. Canada Pension Plan contributions and investment income are allocated by income and employment by place of work.

Federal and provincial spending on goods and services is allocated by public administration employee income, hospital and other health institutions spending, physician billings, school board spending by enrolment, and population. The data come from the 2001 Census, District Health Council reports, and the Ministry of Education. Financial Management System data from Statistics Canada are used to calculate weights for various detailed spending categories.

Federal and provincial line item transfers to persons and other governments are allocated by the county distribution of youth population, pension income, government transfers, after-tax income, unemployment, income and employment by place of work, institutional and physician health spending, school board spending, and population. Net capital spending is allocated by population.

Local expenditures are allocated by the actual share of municipal expenditures from the latest Municipal Financial Information report for 1997 from the Ontario Ministry of Municipal Affairs and Housing and the CCRA distribution of government transfers. Canada Pension Plan spending on goods and services and transfers are allocated by county population and pension income.

Table 4 shows the allocation measures used for each budget line item.

Table 4: Allocation Factors

Budget Line Item	*Allocation Factor*
FEDERAL GOVERNMENT	
Revenue:	
Direct taxes from persons	Federal personal income tax
Direct taxes from corporate and government business enterprises	Income by place of work
Direct taxes from non-residents (withholding taxes)	Federal personal income tax
Contributions to social insurance plans	Income by place of work
Indirect taxes	After-tax income
Other current transfers from persons	Federal personal income tax
Investment income	Employment by place of work
Current transfers from provincial governments	Population
Expenditure:	
Net current expenditure on goods and services	
Public administration	Public administration income
Other	Population
Current transfers to persons	
Family and youth allowances	Population 14 and under
Child Tax Benefit/Credit	Population 14 and under
Pensions, World Wars I and II	Pension income
War veterans' allowances	Pension income
Grants to aboriginal persons and organizations	Government personal transfers
Goods and services tax credit	After-tax income
Employment insurance benefits	Unemployment
Old age security payments	Pension income
Scholarships and research grants	Government personal transfers
Miscellaneous and other	Government personal transfers
Current transfers to business	Employment by place of work
Current transfers to provincial governments	
Canadian Health and Social Transfer	
Hospitals/Institutions/Physicians	Hospitals/Institutions/Physicians
Other CHST	Population
Other transfers	Population
Current transfers to local governments	Population
Interest on public debt	Population
Capital consumption allowances	Population
Net capital transfers	Population
Acquisition of non-financial capital	Population
PROVINCIAL GOVERNMENT	
Revenue:	
Direct taxes from persons	Provincial personal income tax
Direct taxes from corporate and government business enterprises	Income by place of work
Contributions to social insurance plans	Income by place of work
Indirect taxes	
Amusement tax	After-tax income
Corporation tax (not on profits)	Population
Gasoline tax	Households
Motor vehicle licences and permits	Households
Other licences, fees and permits	After-tax income
Miscellaneous taxes on natural resources	Population
Real property tax	Households
Retail sales tax (including liquor and tobacco)	After-tax income
Profits of liquor commissions	After-tax income
Gaming profits	After-tax income
Payroll taxes	Income by place of work
Miscellaneous	After-tax income

Budget Line Item	*Allocation Factor*
Other current transfers from persons	
Motor vehicle licences and permits	Households
Other	After-tax income
Investment income	Employment by place of work
Current transfers from federal government	Population
Current transfers from local governments	Population
Expenditure:	
Net current expenditure on goods and services	
Hospitals/Institutions/Physicians	Hospitals/Institutions/Physicians
School Boards (ex transfer to school corporations)	School boards by enrollment
Public administration	Public administration income
Other	Population
Current transfers to persons	
Workers' compensation benefits	Income by place of work
Grants to benevolent associations	Government personal transfers
Social assistance - income maintenance	Government personal transfers
Social assistance - other	Government personal transfers
Miscellaneous	Government personal transfers
Current transfers to business	Employment by place of work
Current transfers to federal government	Population
Current transfers to local governments	
School corporations	School boards by enrollment
General	Population
Interest on public debt	Population
Capital consumption allowances	Population
Net capital transfers	Population
Acquisition of non-financial capital	Population
LOCAL GOVERNMENT	
Revenue:	
Total revenue	Municipal revenues
Expenditure:	
Current transfers to persons	Government personal transfers
Other	Municipal expenditures
CANADA PENSION PLAN	
Revenue:	
Contributions to social insurance plans	Income by place of work
Investment income	Employment by place of work
Expenditure:	
Net current expenditure on goods and services	Population
Current transfers to persons	Pension income