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## **Holes in the Road to Consensus: The Infrastructure Deficit — How Much and Why?**

**By Jack M. Mintz and Tom Roberts**

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As urban Canadians struggle with congested traffic on roads and bridges, while dodging minefields of potholes, experts say that the country as a whole faces a substantial infrastructure deficit. According to some estimates, the deficit has reached \$57 billion, although that figure's accuracy is questionable. If a deficit indeed exists, the issue is why municipalities do so little about it. Their per capita real revenues are growing; however, they have been spending less on basic infrastructure. That anomaly reflects the priorities of municipalities rather than inadequate resources.

### Is There an Infrastructure Deficit?

Good reasons exist not to let our roads and other municipal infrastructure crumble. For example, lack of maintenance and resulting road deterioration increase accident risks and worsen traffic congestion when main routes are closed for major reconstruction. Inadequate capital infrastructure crimps a city's competitiveness and creates an obstacle to economic growth. According to a City of Toronto analysis of life cycles for major arterial roads, municipalities can save money over the long-term if they resurface roads at regular intervals rather than waiting until they have to be reconstructed (Brittain 2002).

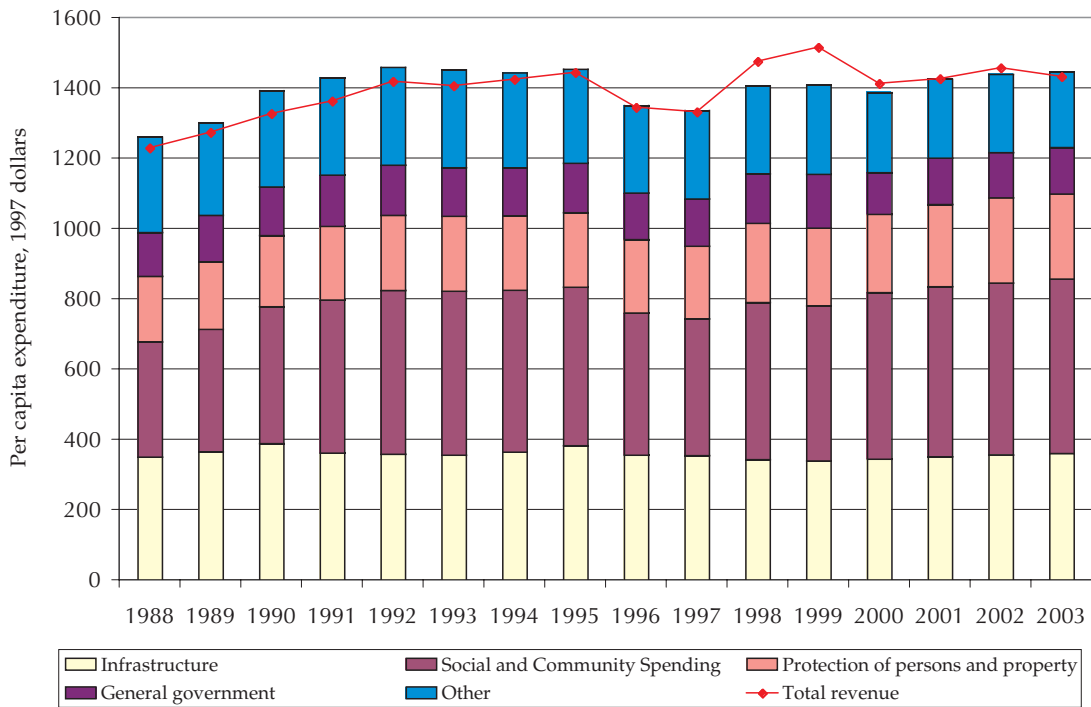
The main estimate of Canada's infrastructure deficit comes from a pair of studies involving the Federation of Canadian Municipalities (FCM). A 1985 FCM survey of city officials concluded that an estimated expenditure of \$791 per capita would be required to upgrade infrastructure to an "acceptable" level. That would have required a 6.75 percent increase over the total municipal budget in a 10-year period. Only a small number of officials said the current infrastructure was in need of "much repair", although 24 percent said they were dissatisfied with road conditions.

By 1996, the situation evolved into an "infrastructure crisis" when another McGill University-FCM study of city officials estimated a shortfall of \$1,484 per capita or, in 2004 dollars, \$1,202 for 1985 and \$1,602 for 1996. Those figures formed the basis for the FCM's and Canadian Society for Civil Engineers' (CSCE) straight-

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**Figure 1:** *Canada, Real Per Capita Municipal Expenditure*



line projections on the nation’s current and future infrastructure debt. Both studies recognized the lack of reliable data for many municipalities, and few respondents offered estimated cost figures in 1985. Recently, the Ontario Ministry of Public Infrastructure Renewal adopted Statistics Canada results (Harchaoui et al. 2003) on Canada’s national infrastructure and combined that with industry rules of thumb about capital depreciation to obtain the province’s infrastructure debt.

Only in the past few years has Statistics Canada assembled data on infrastructure age and life expectancy provided by Canadian municipalities. The average age of engineering structures, which include such basic elements as streets and highways, has increased from 14.1 years in the early 1970s to 17.5 years today. The average age of the capital stock, however, does not necessarily reflect inadequate infrastructure investment so much as the fact that Canada rapidly urbanized — with concomitant investment — in earlier decades.

### Do Spending Patterns Suggest That There Is a Deficit?

Expenditure trends from 1988 to 2003 in Figure 1 show real per capita municipal expenditure on infrastructure has increased to \$361 from \$351 per capita, compared to a sharper increase in real per capita municipal revenues to \$1,432 from \$1,229 per capita (all values in 1997 dollars). Breaking down infrastructure expenditures into roads and streets, parking, water purification and supply, and sewage collection shows that spending on roads and streets has declined more than in other categories — to \$181 from \$202 per capita. Many commentators conclude that this shrinkage has resulted in a shortfall.

To get an idea of the real shortfall of infrastructure it is essential to consider several factors to determine by how much spending should rise to keep up with

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the growing population and heavier usage that may occur with more economic growth. For one thing, public spending might decline because municipalities have privatized some operations. For another, as the population grows, the cost of some projects can be shared over a larger number of people. Thirdly, fewer large new infrastructure projects are required than in previous decades. As well, advances in civil engineering may improve the capacity to build appropriate infrastructure more economically. As a result, even a decline in infrastructure spending may not necessarily reflect a shortfall.

### Balancing Priorities

The downloading of social services by the Ontario government to municipalities is often blamed for an apparently growing mismatch between revenue sources and expenditure responsibilities in that province and the subsequent neglect of infrastructure. By placing the onus on other levels of government, Canadian municipalities in general can avoid dealing with trade-offs needed to make long-term investments, instead of reducing costs with more extensive contracting-out arrangements and tough expenditure decisions, or generating revenue with more user fees or property development charges.

A strong case has not been made for why infrastructure should get a larger share of public spending than it already does because there are no studies that convincingly say what amount of infrastructure would be ideal. Municipalities have the responsibility to meet infrastructure needs with appropriate priority-setting and the effective communication of long-term goals with residents, while still choosing the expenditures and investments that give the best return. Objective standards for measuring or defining good infrastructure may also help as benchmarks to understand trends that will evolve over the years. Ultimately, society collectively must determine the acceptable level of infrastructure investment across the whole spectrum of public expenditures, even if the road to agreement is a long and twisted one.

### References

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