Municipal Infrastructure Investment & Financial Sustainability

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Lindsay Allison
The presentation will discuss 5 themes

1. Characterizing the challenge
2. Infrastructure
3. Infrastructure intensity
4. Fiscal capacity
5. Tying it all together
A Question of Characterization
The structure of Ontario municipalities

Ontario
(444 municipalities)

Single-tier
(173)

City (18)
Town (23)
Township (87)
Municipality (21)
Village (5)
Separated City (14)
Separated Town (4)
Separated Township (1)

Upper-tier
(30)

Regional Municipality (6)
District (1)

Lower-tier
(241)

Within Regions
(+ District)
City (14)
Town (21)
Township (13)
Municipality (1)

Within Counties
City (4)
Town (41)
Township (105)
Municipality (36)

Source: AMO and Ontario Ministry of Finance
A question of characterization

- How you characterize the problem will directly affect the solution(s) you look for

- The infrastructure challenges of most municipalities may not be the same as the infrastructure challenges that face most residents
The population is increasingly urbanizing

Source: Statistics Canada

Share of Ontario's Population in Population Centres (%)

<table>
<thead>
<tr>
<th>Year</th>
<th>1851</th>
<th>1901</th>
<th>1951</th>
<th>2011</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>14</td>
<td>43</td>
<td>71</td>
<td>86</td>
</tr>
</tbody>
</table>

Year
There are 444 municipalities and sixty per cent of municipalities have a population below ten thousand.

Municipalities by Population (000’s)

- Less than 5: 42%
- 5-10: 18%
- 10-15: 10%
- 15-25: 9%
- 25-50: 6%
- 50-100: 7%
- Over 100: 8%

Source: Population, 2015, Ontario Ministry of Finance
Most of the population lives in 15 large urban areas.

Population Distribution in CMAs and CAs

Large Urban Areas 81%

Smaller Urban Areas 9%

Remainder 10%

Large urban area = CMA (Census Metropolitan Area);
Smaller urban area = CA (Census Agglomeration)

Source: Population, 2015, Ontario Ministry of Finance
How do you characterize the challenges?

• Is it by:
  • Municipal population size
  • Geography
  • Something else?

• We analyzed the data and found the most relevant way cut across population size and geography; we characterized the challenges by the rate of population growth.
Past is future: if you have been growing, you are likely to keep growing

Sources: Projected population growth from Ontario Ministry of Finance; Historic population growth from Statistics Canada
Infrastructure
In the last half century, there has been a dramatic shift in responsibility for public infrastructure

<table>
<thead>
<tr>
<th>Share</th>
<th>1961</th>
<th>2014</th>
</tr>
</thead>
<tbody>
<tr>
<td>Federal</td>
<td>28%</td>
<td>15%</td>
</tr>
<tr>
<td>Provincial</td>
<td>36%</td>
<td>26%</td>
</tr>
<tr>
<td>Local</td>
<td>36%</td>
<td>59%</td>
</tr>
</tbody>
</table>

Sources: StatsCan, CANSIM Table 031-0005: Flows and stocks of fixed non-residential capital, by industry and asset, Canada, provinces and territories, annual.
Municipalities have a lot of infrastructure – and it is more valuable than you might think

Municipal Tangible Capital Assets (excl. Land)

$ billion

<table>
<thead>
<tr>
<th></th>
<th>Book Value</th>
<th>Estimated Replacement Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Book Value</td>
<td>168</td>
<td></td>
</tr>
<tr>
<td>Estimated Value</td>
<td>266</td>
<td></td>
</tr>
</tbody>
</table>

Sources: TCA total cost, 2013, FIR; NRBCPI and CPI, Statistics Canada
Two-thirds of Ontario municipal capital assets are for roads, water, and wastewater.
The distribution of municipal tangible capital assets matches the population distribution

2013 Ontario Municipal TCA Distribution by Geography*

- Central Ontario: 61%
- Southwest Ontario: 18%
- Northeast Ontario: 4%
- Northwest Ontario: 2%


- Central Ontario: 60%
- Southwest Ontario: 19%
- Northeast Ontario: 4%
- Northwest Ontario: 1%

* Based on the historical cost in the relevant FIR schedule
** Based on Ontario Ministry of Finance estimates
Growing municipalities own the vast majority of capital assets

Ontario Municipal TCA (excl. land) by Growth Profile

- Fast-Growing: 38%
- Growing: 40%
- Stable: 18%
- Declining: 4%
Municipal infrastructure investment is picking up

Municipal Capital Investment

$ billion

Source: Financial Information Return (FIR)
And the higher the population growth, the higher the capital investment

**Capital Expenditure Per Household (2009-2013)**

- Single-tiers
- Two-tiers

**Municipal Growth Profile**

Note: Two-tiers are lower tier municipalities plus corresponding regions or counties pro-rated by population.
The municipal capital asset base grew at a fairly consistent pace.
But municipal capital investment is not keeping up with the pace of amortization

Data sources: FIR and MPAC

Note: 2010 was a year of significant stimulus spending

Data sources: FIR and MPAC
Municipalities with less growth often face the added challenge of managing aging assets

Percentage of Tangible Capital Assets Amortized

Municipal Growth Profile

- Declining: 45% (2009), 47% (2013)
- Stable: 42% (2009), 45% (2013)
- Growing: 42% (2009), 44% (2013)
- Fast-Growing: 39% (2009), 40% (2013)
- Municipal Average: 42% (2009), 44% (2013)
Infrastructure Intensity
Infrastructure intensity defined

• Infrastructure intensity represents the level of Total Capital Assets (TCA) municipalities have on a per household basis

• An Infrastructure Intensity Index (III) was created by comparing a municipality with its peers within the same municipal structure
More than a quarter of Ontario municipalities have high or very high infrastructure intensity.

**Number of Municipalities by Infrastructure Intensity Index**

- **Very High**: 7%
- **High**: 21%
- **Moderate**: 39%
- **Low**: 33%

**Infrastructure Intensity Index**

<table>
<thead>
<tr>
<th>Infrastructure Intensity Index</th>
<th>Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>Low</td>
<td>Less than 0.75</td>
</tr>
<tr>
<td>Moderate</td>
<td>Between 0.75 and 1.25</td>
</tr>
<tr>
<td>High</td>
<td>Between 1.25 and 2</td>
</tr>
<tr>
<td>Very High</td>
<td>Greater than 2</td>
</tr>
</tbody>
</table>
And nearly a quarter of the population live in municipalities with high or very high infrastructure intensity.

**Percentage of Population by Infrastructure Intensity Index**

- **Very High** 2%
- **High** 20%
- **Moderate** 55%
- **Low** 23%

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<tr>
<th>Infrastructure Intensity Index</th>
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Fiscal Capacity
Property taxes represent the largest revenue source for Ontario municipalities.

Revenue Sources as Percentages of Total Revenues (2009 – 2013 Average)

- Property Tax: 45%
- Transfer Payments: 27%
- User Fees and Service Charges: 15%
- Other Revenues: 10%
- Development Charges: 1%
Central Ontario, driven by the GTA, leads in average household income

Average Household Income by Geography

Note: Household income is based on the 2011 National Household Survey
Household income rises with population growth rates

Average Household Income by Growth Profile

<table>
<thead>
<tr>
<th>Growth Profile</th>
<th>Average Household Income ($'000)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Declining</td>
<td>$68</td>
</tr>
<tr>
<td>Stable</td>
<td>$73</td>
</tr>
<tr>
<td>Growing</td>
<td>$79</td>
</tr>
<tr>
<td>Fast-Growing</td>
<td>$93</td>
</tr>
<tr>
<td>Municipal Average</td>
<td>$86</td>
</tr>
</tbody>
</table>
Residential property tax relative to household income was the highest in Central Ontario driven by the GTA.

Residential Property Tax per Household to Average Household Income

Note: Two-tiers are lower tier municipalities plus corresponding regions or counties pro-rated by population.
The tax burden seemed to be higher in growing municipalities than in declining ones.

Property Tax per Household to Average Household Income (2009-2013 Average)

Note: Two-tiers are lower tier municipalities plus corresponding regions or counties pro-rated by population.
The average weighted assessment in large and growing municipalities was significantly greater than that in small and declining municipalities.

**Weighted Assessment per Household (2013)**

Note: Two-tiers are lower tier municipalities plus corresponding regions or counties pro-rated by population.
Small and declining municipalities had much lower assessment growth

Assessment Growth (2009 - 2013 Total)

Note: Two-tiers are lower tier municipalities plus corresponding regions or counties pro-rated by population
Small and declining municipalities also had higher tax arrears

**Tax Receivables as a Percentage of Tax Levies**

*(2009 - 2013 Average)*
Defining Fiscal Capacity

- Fiscal capacity is a municipality’s ability to generate revenue to meet current and future needs

- A fiscal capacity index (FCI) was constructed to measure a municipality’s ability to raise own-source revenues

- The index takes into consideration municipalities’ assessment base and tax payers’ ability to pay
The vast majority of Ontario municipalities have low or moderate fiscal capacity.

Percentage of Municipalities by Fiscal Capacity Index

<table>
<thead>
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<tbody>
<tr>
<td>Low</td>
<td>Less than 0.7</td>
</tr>
<tr>
<td>Moderate</td>
<td>Between 0.7 and 1.0</td>
</tr>
<tr>
<td>High</td>
<td>Above 1.0</td>
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More than half of the population live in municipalities with a high fiscal capacity.

Percentage of Population by Fiscal Capacity Index

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Growing municipalities tend to have more fiscal capacity

**Municipal Growth Profile**

Sources: Fiscal capacity = Weighted average assessment per household, 2013, FIR; Household, 2013, MPAC; population, 2009-2013, Ontario Ministry of Finance
Tying it All Together
Step 1: assess the fiscal capacity and infrastructure intensity

- **Fiscal Capacity** (assessment per household)
  - High
  - Low to moderate

- **Infrastructure Intensity** (infrastructure per household)
  - Low to moderate
  - High

- **The fortunate few**
  - Fiscal strategy is critical

- **The unfortunate zone**
  - Fiscal strategy is critical
Overall, 38 percent of Ontario municipalities fall in the unfortunate zone.

Note: Percentages in quadrant labels indicate proportion of municipalities in each quadrant.
But only 17 percent of the Ontario population live in municipalities that fall in the unfortunate zone.

Note: Percentages in quadrant labels indicate proportion of total Ontario population in each quadrant.
Most of the municipalities in the GTA have above average fiscal capacity.

Note: Percentages in quadrant labels indicate proportion of municipalities in each quadrant.
Non-GTA municipalities are widely dispersed

Note: Percentages in quadrant labels indicate proportion of municipalities in each quadrant.
Almost all fast-growing municipalities have above average fiscal capacity.
Most growing municipalities have above average fiscal capacity.
Most stable municipalities have below average fiscal capacity.

Fiscal Capacity vs. Infrastructure Intensity

Fiscal Strategy is Critical (44%)

Fortunate Zone (19%)

Ontario Average

Fiscal Strategy is Critical (10%)

Unfortunate Zone (27%)

Fiscal Capacity ($'000)

Infrastructure Intensity ($'000)
Most declining municipalities have below average fiscal capacity and widely varying levels of infrastructure intensity.
Thank You