

Appendix 2: Optimal Transit Fares in Small and Mid-Sized Cities

A Comparative Empirical Analysis

[2.1] Introduction

The earlier theoretical analysis in this report established a normative framework for how transit fares should be set, drawing on principles from public finance and welfare economics. Concepts such as club goods, merit goods, equity, efficiency, and Ramsey pricing—though perhaps unfamiliar to many readers—provide the economic foundation for understanding government decisions about public transit funding and pricing. But do Canadian cities set fares in line with these principles? Does Saskatoon? The short answer is partly, but not entirely.

To answer this question more fully, this section investigates how Canadian cities actually set public transit fares, applying statistical and econometric techniques to a cross-sectional dataset of 24 Canadian cities (population 100,000 to 800,000) without light rail systems. This empirical analysis draws primarily on data from the Canadian Urban Transit Association (CUTA) for the year 2023.

The analysis reveals substantial cross-city variation in transit fares, costs, ridership, and subsidization levels. Cities with higher direct per capita municipal subsidies tend to exhibit higher per capita ridership, while the subsidy rate as a share of costs does not guarantee higher usage and, in some cases, is negatively associated with ridership. Investment in higher-quality or more extensive service, as reflected in higher operating costs per capita, is also strongly linked to higher ridership. Conversely, higher fare levels are only weakly associated with lower ridership, with the relationship not statistically significant in this sample. As expected, systems with higher cost recovery ratios require lower subsidy rates.

Overall, the results highlight the complexity of optimizing transit fares and subsidies: while greater municipal investment can promote higher ridership, the effectiveness of subsidy policies depends on both the level of support and how resources are allocated to enhance service quality. This complexity underscores the practical challenge of translating public finance theory into real-world fare policy.

[2.2] Approach and Methods

2.2.1 Overview

The approach and methods used in this analysis are shaped by both external events and data constraints. Notably, recent transit statistics are heavily influenced by the COVID-19 pandemic. Ridership across Canada fell by more than 80% at the peak of the pandemic, and as of 2023, remains roughly 15% below pre-pandemic (2019) levels (Statistics Canada, 2025). These disruptions

render time-series analysis infeasible for 2020–2022, making a cross-sectional analysis for 2023 the most appropriate approach.

Another significant challenge is the lack of standardized, publicly available data on transit fares and ridership for Canadian systems, particularly among mid-sized cities. While Statistics Canada provides limited data for a handful of agencies, many cities publish little or no detailed fare or ridership information, and reporting standards are inconsistent. CUTA compiles more comprehensive data via member surveys, but these are not always public and are subject to reporting gaps. Despite these limitations, this analysis leverages the most complete and recent CUTA data available to test how well public finance theory aligns with actual fare-setting practices in Canadian cities.

2.2.2 Sample Selection

Given the caveats described in the overview subsection, the comparative analysis in this section draws on data from 24 Canadian cities that reported transit statistics to CUTA for 2023. The sample was selected to provide a consistent, comparable set of mid-sized Canadian transit systems. Inclusion criteria were as follows:

- Minimum municipal population of 100,000 residents;
- No light rail system (to avoid mode-mix effects);
- Municipal autonomy over transit operations (city-run, not region- or province-run); and
- Exclusion of province-wide systems operated by a provincial government, even if they have local branches.

Using these criteria means British Columbia cities are excluded from the analysis since they have a provincially operated transit (albeit with local branches). It also means the two major prairie cities of Calgary and Edmonton are excluded from the analysis given their light rail systems. The criteria also means that the sample is dominated by Ontario and Quebec based cities.

Table 1 in the results and discussion section provides a summary of key transit finance and performance variables for these cities.

2.2.3 Data and Key Variables

The primary data source is CUTA's Canadian Conventional Transit Statistics 2023 Operating Data, the most comprehensive dataset for studying Canadian transit funding. It contains city/agency data on ridership (linked trips), revenue, expenditures, and key performance indicators. Where appropriate, CUTA variables were adjusted for this analysis (e.g., using municipal population rather than service population for per capita calculations), and several new variables were created to enhance the empirical analysis. A summary of key variables is provided in Appendix 2A.

2.2.4 Descriptive and Comparative Analysis

The empirical section begins with summary statistics and visualizations (bar and lollipop charts) illustrating the range and distribution of key transit finance indicators—such as cost recovery, municipal subsidy rates, average fares, and cost per trip—across the selected cities (see Appendix 2B). This comparative analysis highlights both similarities and outliers, providing a broad overview of the transit finance landscape in Canadian mid-sized cities.

2.2.5 Exploring Relationships Among Variables

The next step explores relationships among core variables—fare levels, ridership, subsidy rates, and operating costs—using scatter plots, Pearson correlations, and simple linear regressions. This stage investigates, for example, whether higher municipal subsidies are associated with greater ridership, or whether higher fares correspond to higher cost recovery.

2.2.6 Data Management and Statistical Analysis

All data management and statistical analysis were conducted in the R programming language, using open-source packages including dplyr (data wrangling), ggplot2 (visualization), janitor (data tidying), and car (regression diagnostics). Results from correlation and regression analyses are reported as descriptive measures of association. Given the sample size and cross-sectional nature of the data, findings should be interpreted as exploratory and illustrative, not as formal tests of economic hypotheses.

2.2.7 Use of Artificial Intelligence

This analysis was supported using ChatGPT mini 03 model. Use was limited to reviewing R code and making suggested improvements to address coding errors. It was also used to review text for grammar and clarity.

The following sections present the main empirical findings, integrating tables and visualizations to illustrate patterns and exceptions, and interpreting results in the context of public finance theory and real-world fare policy.

[2.3] Results and Discussion

2.3.1 Descriptive Results

Table 1 summarizes key transit finance and performance indicators for 23 Canadian cities in 2023.¹ For each variable, the table includes the number of observations (N), enhancing transparency and highlighting gaps in data reporting. These gaps most often appear for variables requiring detailed breakdowns—such as discounted ridership and fare type shares—which are unavailable for some cities, especially smaller or Atlantic systems. Aside from those points, several observations about the descriptive data can be made:

- City size and ridership intensity remain highly varied. Municipal populations span from 100,844 to 815,599 (mean \approx 341,700), and total ridership ranges from just over 2 million to more than 45 million trips annually. With a mean annual ridership of 15.5 million but a very large standard deviation (SD), system scale and usage intensity differ widely across the sample.
- Per capita ridership demonstrates diversity in transit use. Cities record between 12 and 66 annual trips per capita (mean 39.0), reflecting differences in network reach, city form, and the relative importance of transit.
- Discounted fares are a large and consistent share of use. Among 20 reporting cities, discounted (concession) ridership averages about 20 trips per capita per year (range: 4–32.5), and the *discounted ridership share* is just over 50% on average (range: 23–72%). This reveals the extent to which discounted fares (including seniors, students, and low-income groups) are a core part of transit use.
- Cost and fare indicators highlight wide variation.
 - Direct operating expenses per capita range from \$104 to \$438 (mean \$225).
 - Average adult cash fare is \$3.41, but the average fare paid per trip is just \$1.78, confirming that most users benefit from fare discounts or passes.
 - Monthly and senior passes show broad ranges, with senior pass data available for only 19 systems (reflecting limited or non-standard senior fare policies in some places).
- Funding structure continues to emphasize municipal support.
 - Passenger revenues per capita (mean \approx \$70) are consistently outstripped by municipal operating contributions (mean \approx \$143).

¹ Note: N refers to the number of cities reporting each variable and SD refers to the standard deviation, which is a statistical measure that quantifies the amount of variation or dispersion of a set of data values. It indicates how spread out the data points are from the mean (average) value.

- The *revenue-cost ratio* averages only 33%, reinforcing the system’s reliance on public funding rather than farebox revenues.
- Municipal subsidy rates cluster around 60%–62% for most cities, while provincial subsidy rates (mean 7.3%, but N=18) remain secondary. Provincial funding, when present, tends to reduce municipal contributions but is not universally available.
- Ridership composition and frequency variables add further context.
 - Adult ridership share (mean 51.5%) and senior share (mean 5.7%) are only reported by 21 and 20 cities, respectively, so results should be interpreted cautiously.
 - High frequency route share (number of routes <16 minutes headway) is a new metric, averaging 22.8% but varying widely (0%–69%), suggesting substantial differences in service intensity.
- System efficiency and cost per trip differ markedly. Cost per trip spans from \$3.11 to over \$10, with a mean of \$6.02. This reflects the diversity of network size, urban form, service patterns, and cost structures in Canadian mid-sized cities.

These descriptive results reflect the heterogeneity of the Canadian mid-sized transit landscape. There is no single or dominant “model”, as cities vary in usage rates, fare structures, the balance of full-fare and discounted trips, and the blend of municipal/provincial subsidies. Importantly, the dominance of discounted fares and heavy municipal subsidization reflect longstanding public finance principles: transit is treated as a club/merit good with accessibility, affordability, and equity goals, not a full cost commercial utility.

Persistent data limitations—especially on the breakdown of passenger types and frequency of high-service routes—highlight ongoing challenges for comparative research. As a result, while these descriptive results provide a robust snapshot of Canadian practice, they should be interpreted as indicative, not definitive.

Table 1

Descriptive Statistics for Key Transit Variables - Canadian Cities (2023)						
Source: CUTA Conventional Transit Statistics (2023), Author Calculations						
Variable	N	Mean	Median	SD	Min	Max
Municipal Population	23	341,749	239,236	223,334	100,844	815,599
Total Ridership	23	15,483,015	10,285,051	14,180,654	2,173,833	45,075,142
Total Ridership per Capita	23	39.03	41.25	15.06	12.27	66.38
Total Discounted Ridership	20	7,287,393	6,872,435	5,215,714	800,090	17,823,738
Discounted Ridership per Capita	20	20.38	20.21	8.26	3.96	32.51
Total Operating Expense per Capita (\$)	23	\$242.08	\$209.69	\$116.49	\$106.59	\$544.86
Direct Operating Expense per Capita (\$)	23	\$225.16	\$201.58	\$99.32	\$103.81	\$437.81
Adult Cash Fare (\$)	23	\$3.41	\$3.25	\$0.49	\$2.50	\$4.50
Adult Monthly Pass (\$)	23	\$98.71	\$94.50	\$19.88	\$70.00	\$141.25
Senior Monthly Pass (\$)	19	\$54.70	\$56.00	\$11.34	\$29.00	\$72.00
Average Fare (\$)	23	\$1.78	\$1.71	\$0.44	\$0.94	\$2.70
Passenger Revenues per Capita (\$)	23	\$69.70	\$64.09	\$34.41	\$27.38	\$159.65
Operating Revenues per Capita (\$)	23	\$73.68	\$65.74	\$36.29	\$30.32	\$164.04
Municipal Operating Contribution per Capita (\$)	23	\$143.46	\$119.31	\$71.54	\$63.57	\$327.29
Cost per Trip (\$)	23	\$6.02	\$6.06	\$1.73	\$3.11	\$10.42
Municipal Subsidy Rate (%)	23	60.6%	62.1%	11.9%	35.5%	83.7%
Provincial Subsidy Rate (%)	18	7.3%	6.0%	6.8%	0.3%	25.4%
Revenue-Cost Ratio (%)	23	33.1%	31.5%	9.0%	14.5%	56.3%
Adult Ridership Share (%)	21	51.5%	48.8%	16.6%	28.1%	90.0%
Senior Ridership Share (%)	20	5.7%	5.1%	4.3%	1.5%	21.4%
Discounted Ridership Share (%)	20	50.5%	53.8%	14.4%	23.4%	71.9%
High Frequency Route Share (%)	23	22.8%	19.8%	16.3%	0.0%	68.8%

2.3.2 Comparative Results

The next step in the analysis disaggregates a dozen key transit finance and performance variables to provide a comparative perspective across 23 Canadian cities. The results are displayed in a series of bar and lollipop charts (see Appendix 2B), with each chart highlighting Saskatoon relative to other sample cities. This approach enables a clear visual comparison of Saskatoon's position within the broader landscape of Canadian mid-sized cities. Key findings from this analysis include:

- Ridership per Capita (Figure 2B-1): Quebec City remains the outlier, leading the sample with the highest annual ridership per capita (66.4). Most cities, including Saskatoon, cluster in the 40–45 range, while several smaller cities fall below 20. This demonstrates large differences in transit market penetration.
- Discounted Ridership per Capita (Figures 2B-2): There is substantial variation in the usage of discounted fares, with several cities—particularly university ones and those with strong student/senior programs—showing much higher discounted ridership per capita. Saskatoon sits near the sample median, but below the major university cities.
- Operating Expenses per Capita (Figures 2B-3): Quebec City, Longueuil, and Gatineau report the highest operating expenses per capita (often above \$400), reflecting larger, more frequent networks. Saskatoon is mid-pack, indicative of moderate service intensity.
- Fare prices (Figures 2B-4, 2B-5, and 2B-6): Monthly pass prices for adults and seniors, as well as adult cash fares, vary widely. Saskatoon's adult pass price is well below the median, while its senior pass price is among the lowest—reflecting local policy choices. Average fares are substantially below cash fares everywhere, showing the widespread impact of discount products. Saskatoon and Regina have among the lowest fares in the sample.
- Cost per trip (Figures 2B-7) Cost per linked trip varies widely across cities, with Oakville leading the way at over \$10 per trip. Saskatoon has one of the lowest costs per trip (\$3.78) sitting well below the median.
- Passenger Revenues per Capita (Figure 2B-8) Cities with higher ridership and higher fares generally achieve higher passenger revenue per capita. Saskatoon generates among the least passenger revenues per capita at \$44.
- Municipal Operating Contribution (Figures 2B-9 and 2B-10) The municipal operating contribution (or subsidy) remains the primary funding source for most cities. Per capita subsidy levels are lower in most Ontario and Quebec cities are

often due to direct provincial subsidies.² Saskatoon sits near the median at approximately \$118 per person. In terms of contribution or subsidization rates, most cities cover about 60–70% of direct operating costs through municipal subsidies. Saskatoon’s rate is close to the sample average, but toward the higher end. Again, some cities have lower subsidy rates because of direct provincial operating subsidies for public transit.

- Discounted Trip Rates (Figure 2B-11): The proportion of discounted trips shows large variation across cities. Generally, larger cities (London is the exception) tend to have a lower share of discounted trips. Saskatoon sits in the middle of the pack with over half (56%) of its trips being the discounted variety.
- High Frequency Route Share (Figure 2B-12): There is significant variation in the share of high-frequency routes (less than 16 minutes). While some cities like Hamilton and Winnipeg offer a high proportion of frequent service, many, including Saskatoon, have a relatively low share of high-frequency routes.

Overall, these comparative results reveal that Saskatoon typically ranks near the sample median across most indicators, but with distinctive local policy choices (such as a low senior pass price and modest high-frequency service share) that set it apart. While the results offer some context about key public transit finance statistics at a point in time, they do not fully explain the relationships among key variables. For example, do higher municipal contributions increase ridership levels? If so, by how much? Exploring these relationships in greater detail provides further insight into the diversity of transit finance practices across Canadian cities. The next section addresses this question.

[2.3.3] Relationship Results:

The next step in the analysis explores the relationships among key variables to provide insight into how one variable may influence another. While important outcome measures—such as transit ridership—are shaped by a complex interplay of factors, this section is limited to bivariate (two-variable) analysis due to data and time constraints.

The following summarizes the core empirical relationships between key transit finance variables, based on the bivariate analyses presented in Appendix 2C via scatter plots. Most of the outcome variables are focused on transit ridership per capita. For each, we highlight both the statistical direction and strength of the association, with Saskatoon’s position emphasized for context.

² For example, Ontario provides funding to municipalities through its Gas Tax program, about \$380 million in 2023/24 fiscal year. The funding can be used to expand service hours, increase routes, purchase new vehicles and improve accessibility to increase transit ridership.

<https://news.ontario.ca/en/backgrounder/1004453/2023-24-gas-tax-funding-by-municipality>

- Average Fare and Ridership Per Capita (Figure 2C-1): There is no statistically significant relationship between average fare levels and ridership per capita among Canadian mid-sized cities ($r = -0.03$, $p = 0.88$).³ This result suggests that, within this sample and time period, fare levels alone do not account for substantial differences in transit usage intensity.
- Municipal Subsidy Rate and Ridership per Capita (Figure 2C-2): A moderate, statistically significant negative correlation is found between the municipal subsidy rate and ridership per capita ($r = -0.53$, $p < 0.05$). This is somewhat counterintuitive but may reflect that cities with higher subsidy rates tend to have lower ridership, possibly due to smaller systems or less fare revenue rather than higher levels of support.
- Municipal Subsidy Per Capita vs. Ridership per Capita (Figure 2C-3) Conversely, there is a moderate, statistically significant positive relationship between the absolute level of municipal operating subsidy per capita and ridership per capita ($r = 0.53$, $p < 0.05$). This finding supports the idea that greater municipal investment is associated with higher system usage.
- Discounted Fare Share vs. Ridership per Capita (Figure 2C-4): The share of discounted/concession trips is not significantly associated with overall ridership per capita ($r = -0.04$, $p = 0.86$). This suggests that offering more discounted trips does not, by itself, guarantee higher overall ridership.
- Share of High Frequency Routes vs. Ridership per Capita (Figure 2C-5): The share of high-frequency routes (routes with <16 minute headways) has a weak, statistically insignificant positive relationship with ridership per capita ($r = 0.14$, $p = 0.52$). This may indicate that frequency is one of many contributing factors, but on its own, it is not decisive at the cross-sectional level.
- Direct Operating Expense per Capita vs. Ridership per Capita (Figure 2C-6): A strong, statistically significant positive relationship is observed between direct operating expenses per capita and ridership per capita ($r = 0.79$, $p < 0.001$). This provides strong evidence that higher investment in service is closely linked to higher usage.
- Share of High Frequency Routes vs. Passenger Revenue per Capita (Figure 2C-7): There is a weak positive but not statistically significant relationship between the share of high-frequency routes and passenger revenue per capita ($r = 0.27$, $p = 0.22$).

³ The “r” statistic refers to the Pearson correlation coefficient. A value of r closer to 1 (or -1) indicates a strong relationship between the two variables, while a value closer to 0 indicates a weak relationship. Statistical significance is assessed using the p -value, with a threshold of 0.05 (corresponding to 95% confidence). Results with $p < 0.05$ are considered statistically significant.

- Discounted Ridership and Municipal Subsidies (Figures 2C-8 and 2C-9): There is a moderate positive relationship between discounted ridership per capita and municipal operating contributions per capita ($r = 0.46$, $p = 0.04$) suggesting that higher subsidies may enable greater provision of discounted fares. Similarly, there is a moderate positive correlation between discounted ridership per capita and the municipal subsidy rate ($r = 0.41$, $p = 0.09$), though not statistically significant at the 0.05 level.

These results underscore that “optimal” transit funding is not simply a function of raising or lowering fares or subsidies in isolation. Rather, the absolute level of municipal investment and operating costs per resident are much more closely associated with ridership than fare levels or subsidy rates alone. Cities with higher municipal per capita investment and direct service expenditures tend to achieve higher ridership, while fare levels and discounting strategies alone are not strongly associated with usage. Offering a greater share of discounted trips does not, on its own, result in higher overall ridership, highlighting the need to consider broader policy and service factors.

[2.4] Summarizing the results – A Public Finance Perspective

Analyzing the empirical results through a public finance lens yields several clear observations. With respect to both efficiency and equity, most Canadian cities set transit fares well below full cost recovery. This practice reflects the treatment of public transit as a club or merit good—consistent with the notion that transit should be subsidized to promote access, reduce congestion, and generate broader social benefits.

The analysis demonstrates that public investment and service quality—rather than fare structure alone—are the strongest determinants of ridership. While existing fare and subsidy practices broadly align with public finance theory (i.e., supporting goods with positive externalities and distributional benefits), the lack of targeting in subsidy design—particularly universal senior discounts regardless of income—raises questions about both efficiency and equity. This is especially relevant given that seniors now have the lowest poverty rates among major age groups.

To better align practice with the dual objectives of efficiency and (vertical) equity, cities should consider transitioning toward income-tested or needs-based subsidies, especially for seniors and low-income riders, rather than broad age-based discounts. Overall, these findings highlight that while fare policy and cost recovery are important, optimizing transit systems for both social benefit and fiscal sustainability requires a more nuanced, targeted approach to subsidy design.

Appendix 2A: Variable Definitions⁴

A. General indicators

Municipal Population — Total resident population of the municipality (not service-area population).

Total Ridership (Linked Trips) — One-way passenger trips in 2023 as defined by the Canadian Urban Transit Association (CUTA)

Total Ridership per Capita — Linked trips divided by municipal population.

B. Costs (per resident unless noted)

Total Operating Expense per Capita (\$) — Total operating expenses divided by municipal population.

Direct Operating Expense per Capita (\$) — Direct service costs (excludes overhead) divided by the municipal population.

C. Fares and revenues

Adult Cash Fare (\$) — Posted single-ride adult cash fare (2023).

Adult Monthly Pass (\$) — Posted monthly adult pass price.

Senior Monthly Pass (\$) — Posted monthly senior pass price.

Average Fare (\$) — Passenger revenue divided by total linked trips (effective price per trip).

Passenger Revenues per Capita (\$) — Passenger (fare/ticket) revenues divided by the municipal population.

Operating Revenues per Capita (\$) — All operating revenues (including non-fares and subsidies) divided by the municipal population.

D. Subsidies and funding

Municipal Operating Contribution per Capita (\$) — Municipal operating support divided by the municipal population.

Municipal Operating Contribution (\$) — Absolute municipal operating support not covered by other sources of funding

Municipal Subsidy Rate (%) — Municipal contribution divided by direct operating expenses multiplied by 100.

Provincial Operating Contribution (\$) — Provincial operating support to the transit agency.

⁴ Several of these variables and their definitions are adapted from CUTA's Canadian Conventional Transit Statistics 2023 Operating Data.

Provincial Subsidy Rate (%) — Provincial operating contribution divided by the operating expense multiplied by 100.

E. Performance and efficiency

Cost per Trip (\$) — Direct operating expense divided by total linked trips.

Revenue–Cost Ratio (%) — Operating revenues divided by direct operating costs multiplied by 100 (i.e., farebox recovery).

High-Frequency Route Share (%) — Share of fixed routes with scheduled headways <16 minutes during weekday daytime: (number of <16-minute routes divided by total fixed routes) multiplied by 100.

F. Ridership

Adult Ridership Share (%) — Share of linked trips by adult riders.

Senior Ridership Share (%) — Share of linked trips by seniors.

Discounted (Concession) Ridership (Trips) — Annual linked trips taken at discounted/concession fares (sum across concession categories as defined by the agency).

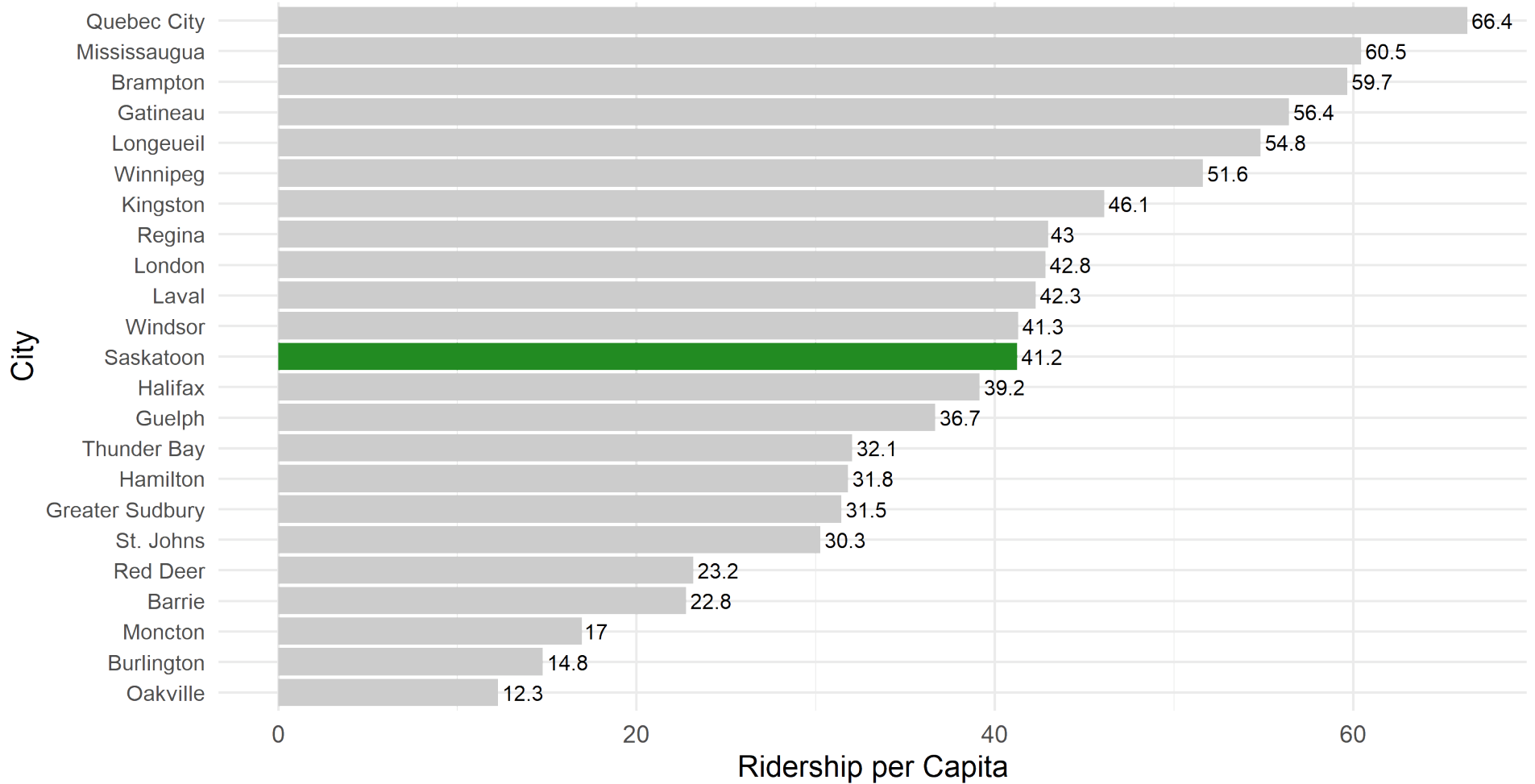
Discounted Ridership per Capita — Discounted (concession) trips divided by the municipal population.

Discounted Ridership Share (%) — Discounted trips divided by total linked trips multiplied by 100.

Appendix 2B: Comparative Plots of Transit Variables

Figure 2B-1: Transit Ridership per Capita by City (2023)

Ridership = Total Linked Trips / Municipal Population

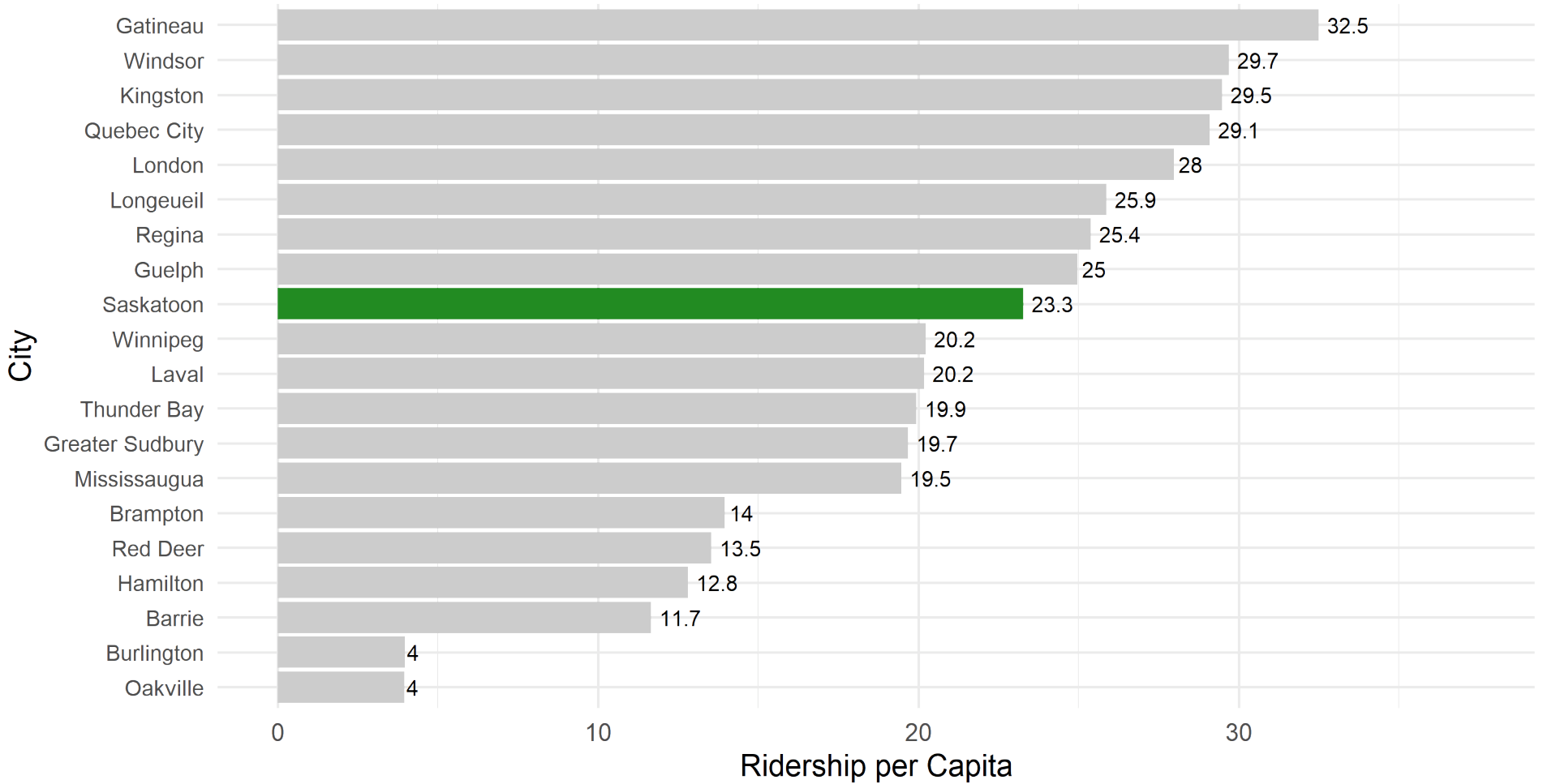


Source: CUTA Conventional Transit Statistics (2023), Author Calculations

Figure 2B-2: Discounted Ridership per Capita by City (2023)

Discounted Ridership = Concession Linked Trips / Municipal Population

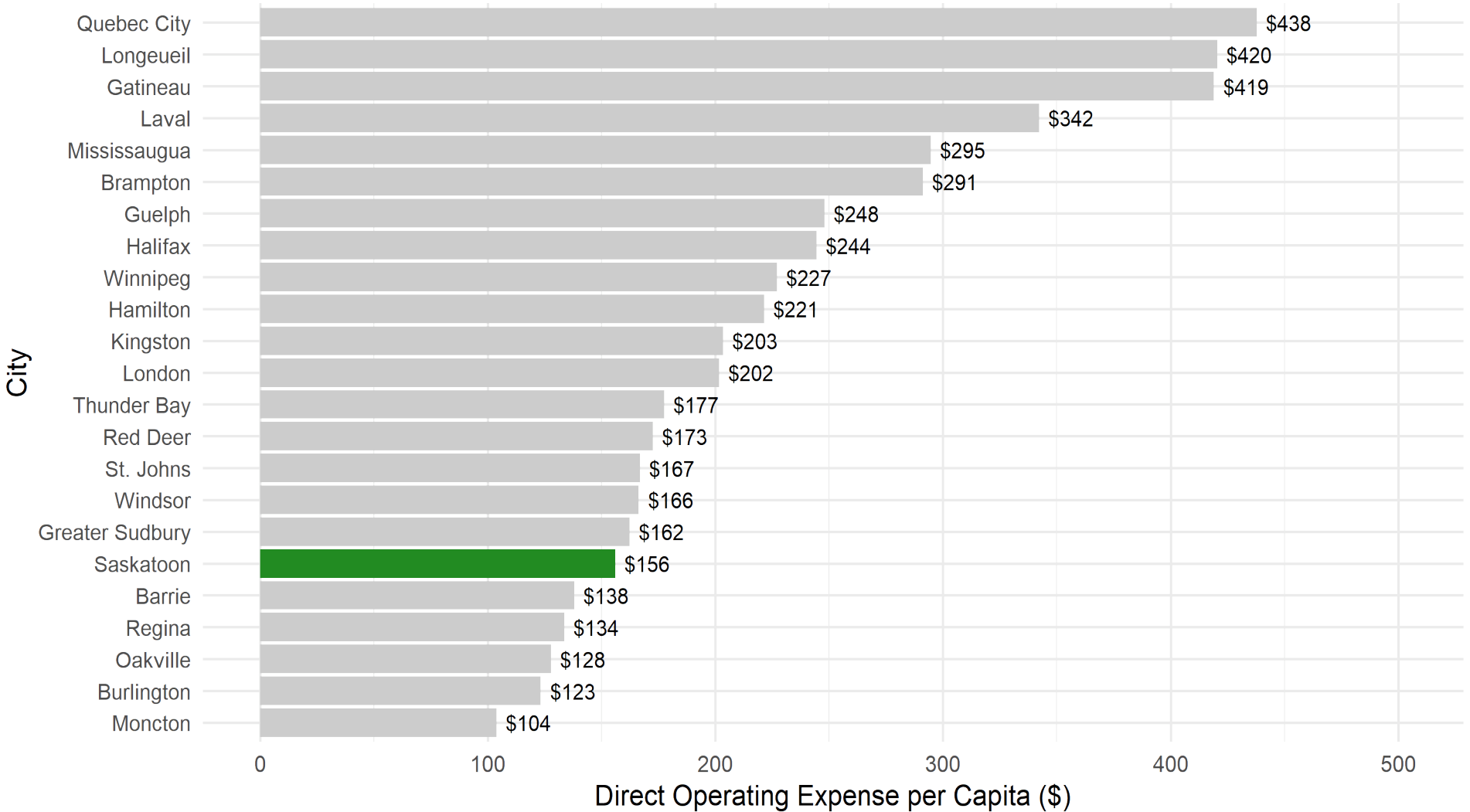
Note: Burlington and Oakville fully subsidize seniors, so their values appear low.



Source: CUTA Conventional Transit Statistics (2023), Author Calculations

Figure 2B-3: Direct Operating Expense per Capita by City (2023)

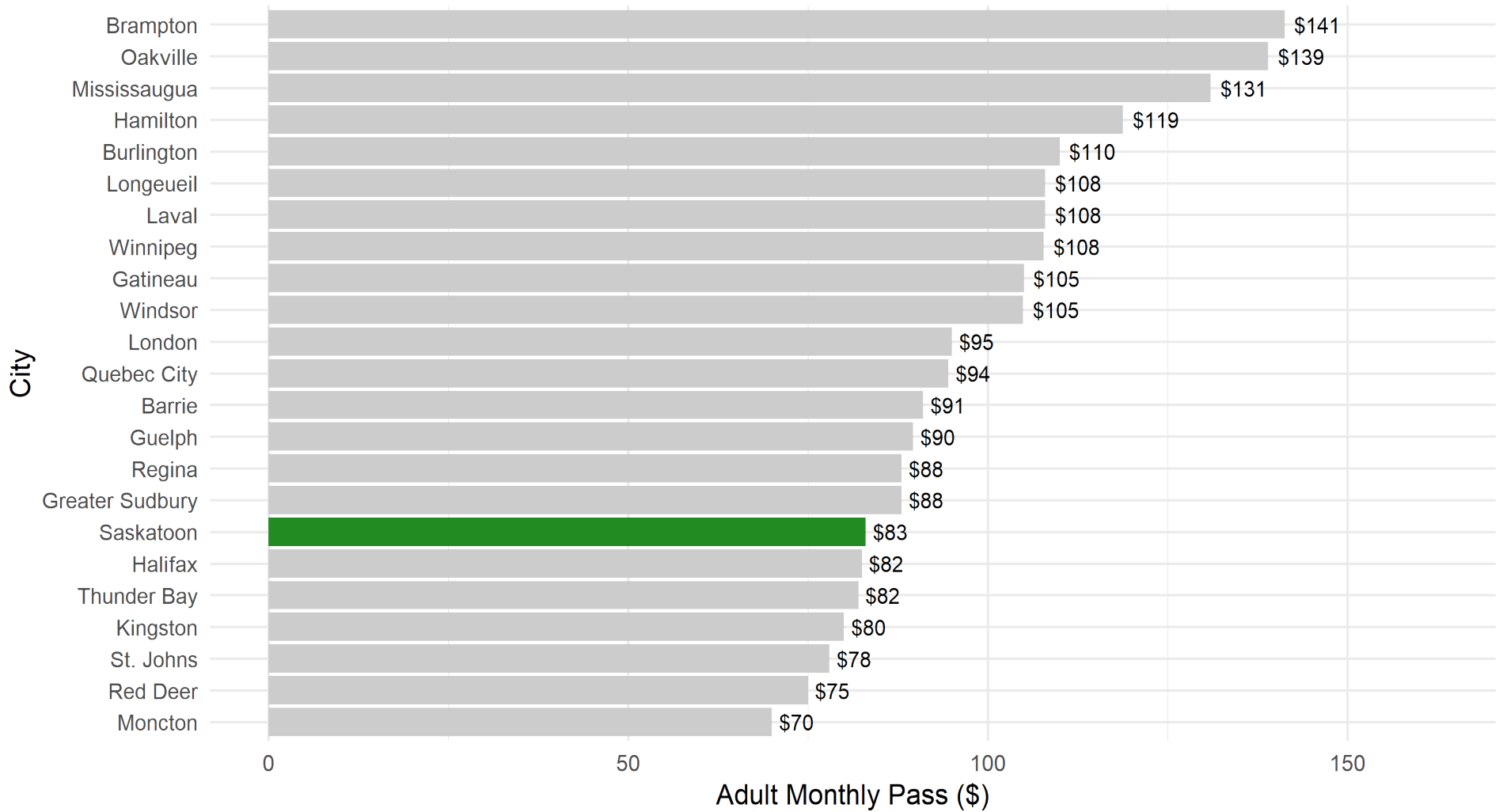
Direct Operating Expense per Capita = Direct Operating Expense / Municipal Population



Source: CUTA Conventional Transit Statistics (2023), Author Calculations

Figure 2B-4: Adult Monthly Pass Price by City (2023)

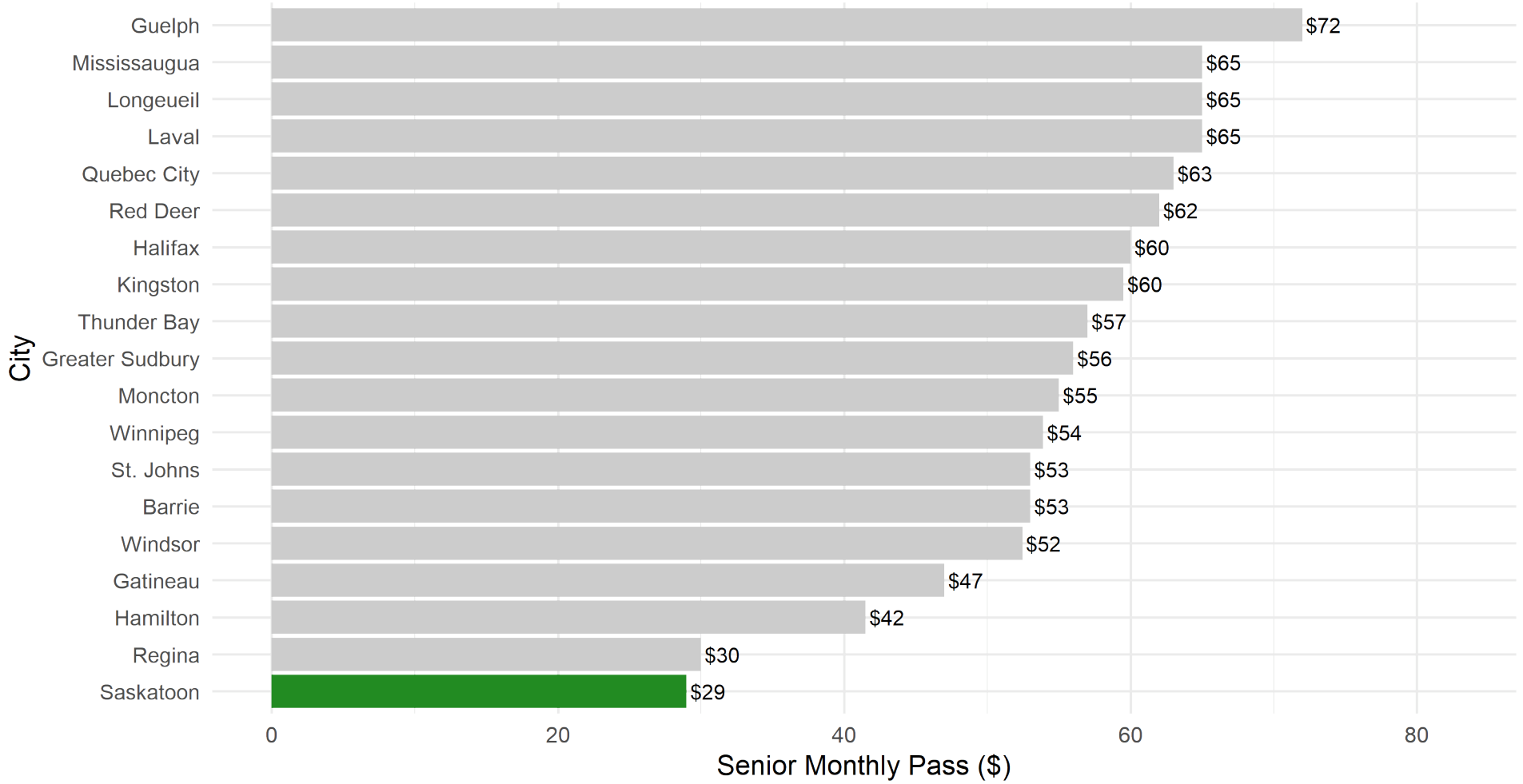
Published Adult Monthly Pass Fare



Source: CUTA Conventional Transit Statistics (2023), Author Calculations

Figure 2B-5: Senior Monthly Pass Price by City (2023)

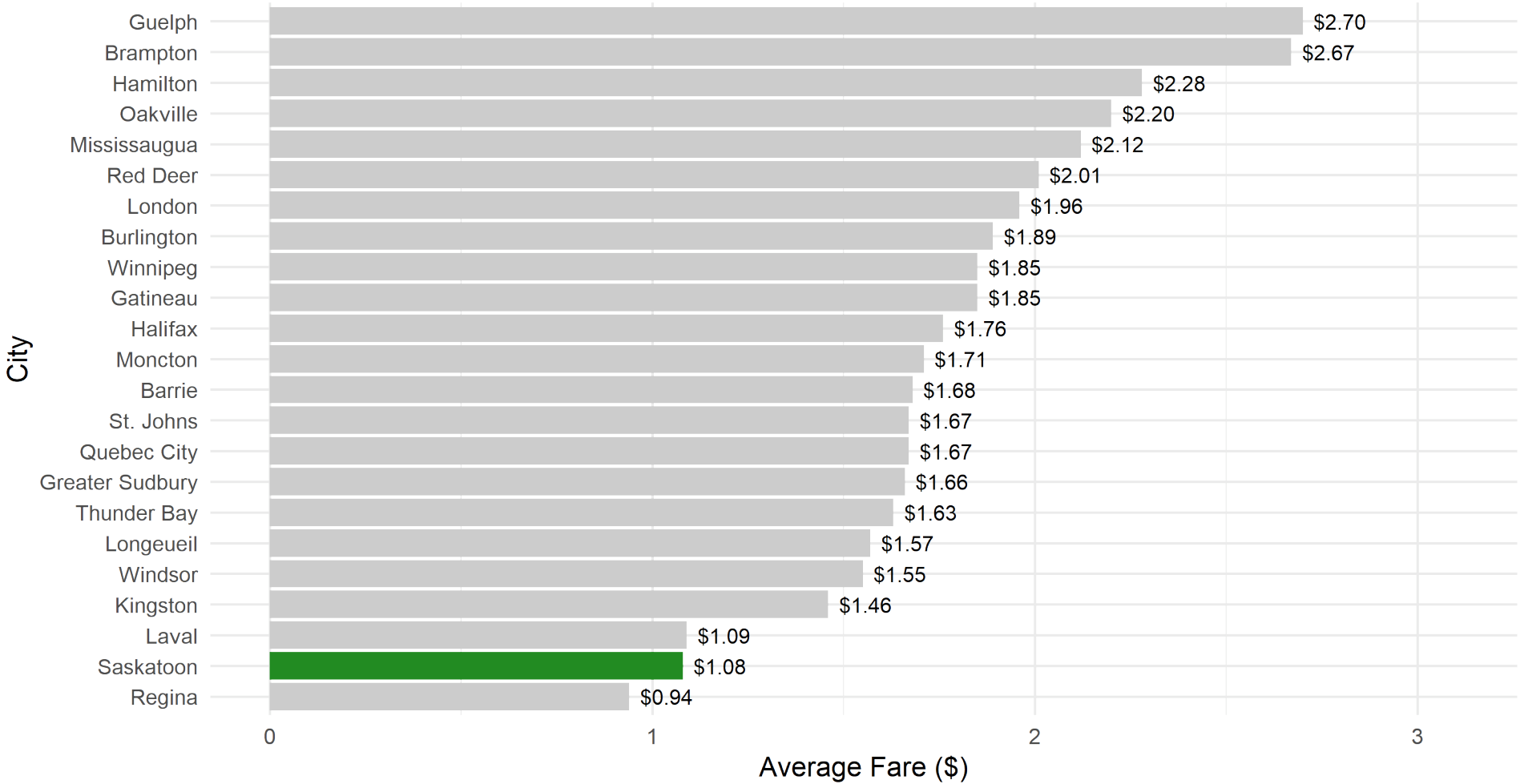
Published Senior Monthly Pass Fare



Source: CUTA Conventional Transit Statistics (2023), Author Calculations

Figure 2B-6: Average Fare by City (2023)

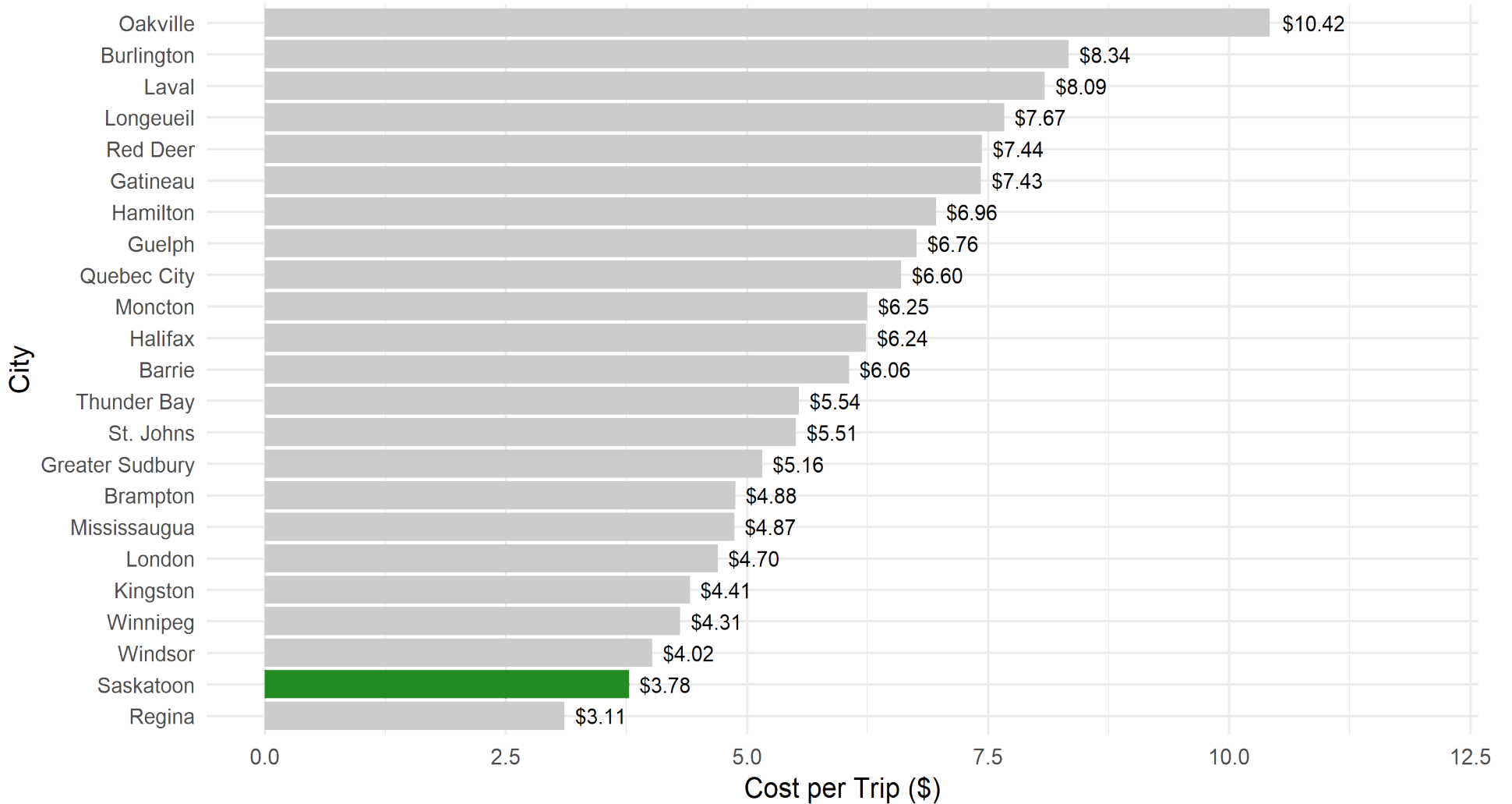
Average Fare = Total Passenger Revenue / Total Linked Trips



Source: CUTA Conventional Transit Statistics (2023), Author Calculations

Figure 2B-7: Transit Cost per Trip by City (2023)

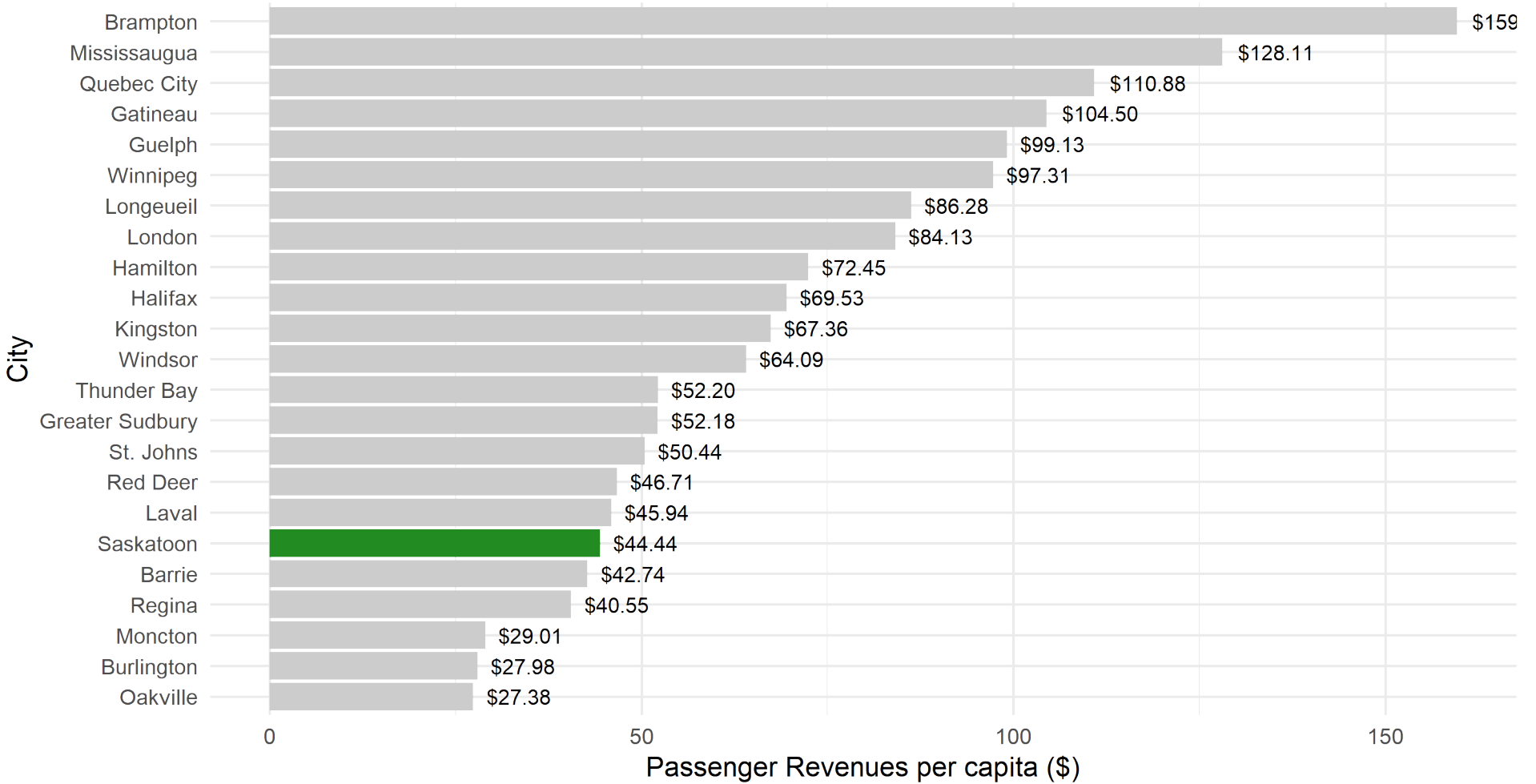
Cost per Trip = Direct Operating Expenses / Total Linked Trips



Source: CUTA Conventional Transit Statistics (2023), Author Calculations

Figure 2B-8: Passenger Revenues Per Person, by City (2023)

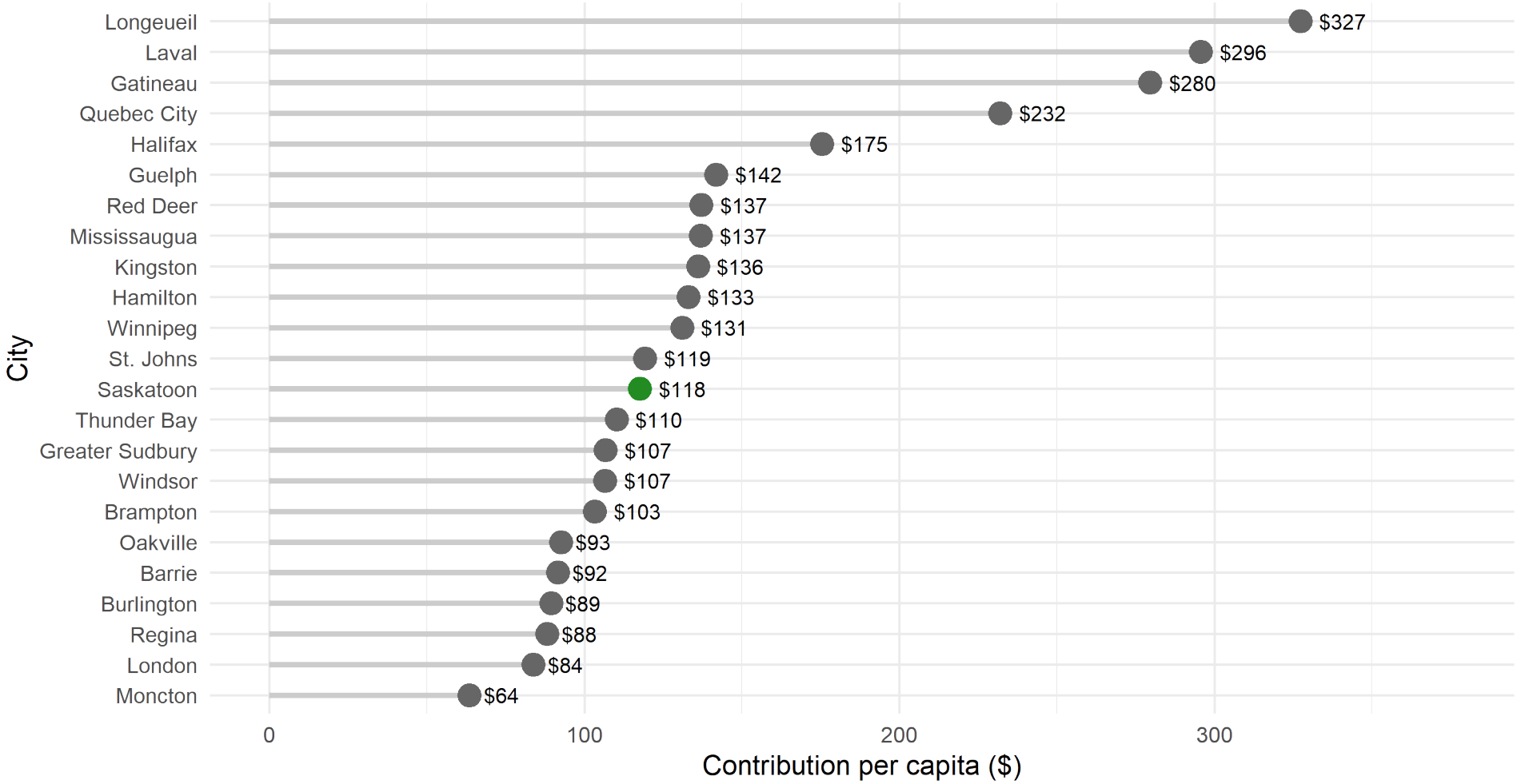
Passenger Revenues / Municipal Population



Source: CUTA Conventional Transit Statistics (2023), Author Calculations

Figure 2B-9: Municipal Operating Contribution Per Person by City (2023)

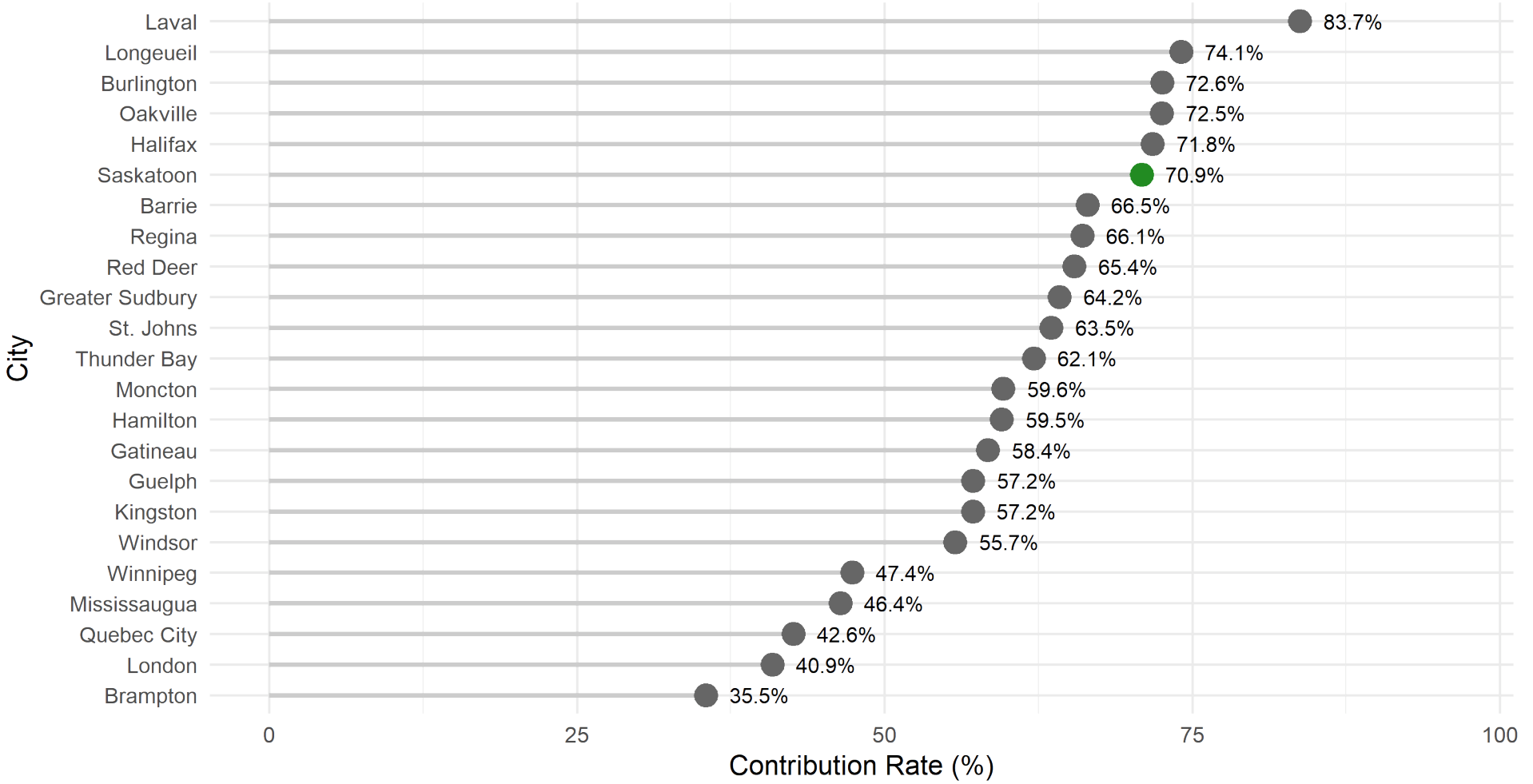
Municipal Operating Contribution / Municipal Population



Source: CUTA Conventional Transit Statistics (2023), Author Calculations

Figure 2B-10: Municipal Operating Contribution Rate (2023)

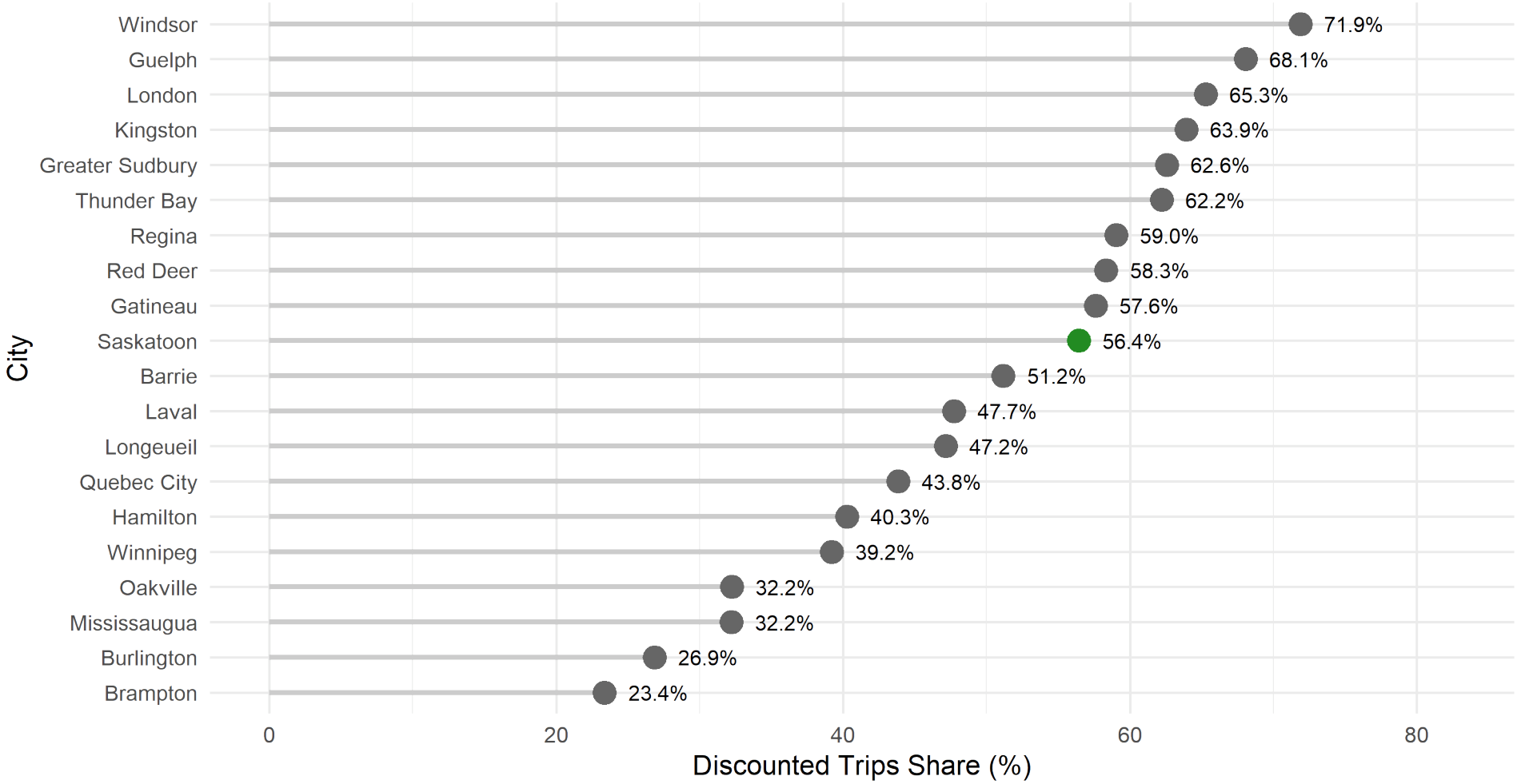
Municipal Operating Contribution as Share of Operating Expenditures



Source: CUTA Conventional Transit Statistics (2023), Author Calculations

Figure 2B-11: Discounted Trips Share by City (2023)

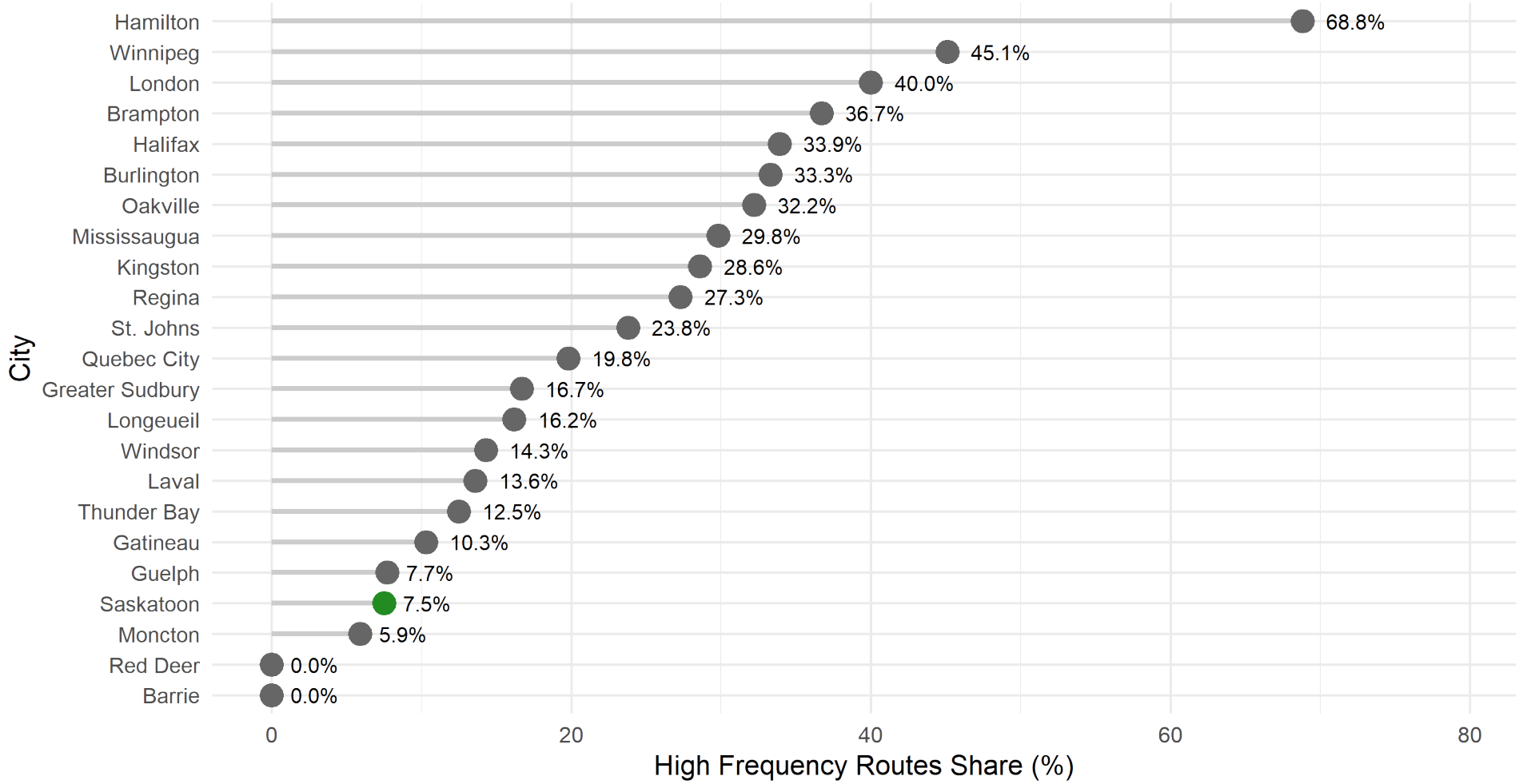
Discounted Trips as a share of Total Linked Trips



Source: CUTA Conventional Transit Statistics (2023), Author Calculations

Figure 2B-12: High Frequency Routes Share by City (2023)

Number of Routes < 16 mins as share of Total Weekday Fixed Routes

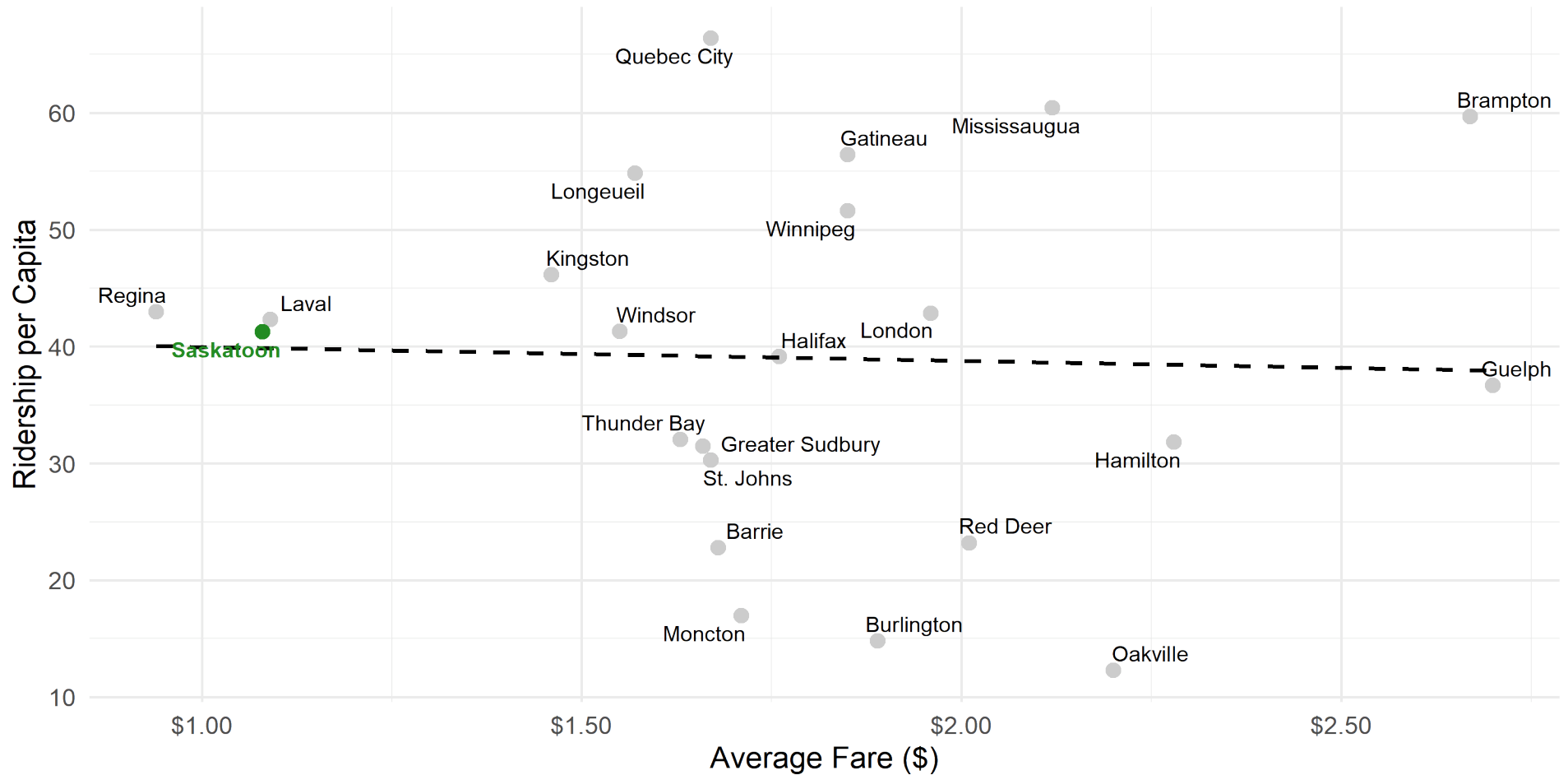


Source: CUTA Conventional Transit Statistics (2023), Author Calculations

Appendix 2C: Scatter Plots of Transit Variable Relationships

Figure 2C-1: Average Fare vs. Ridership per Capita by City (2023)

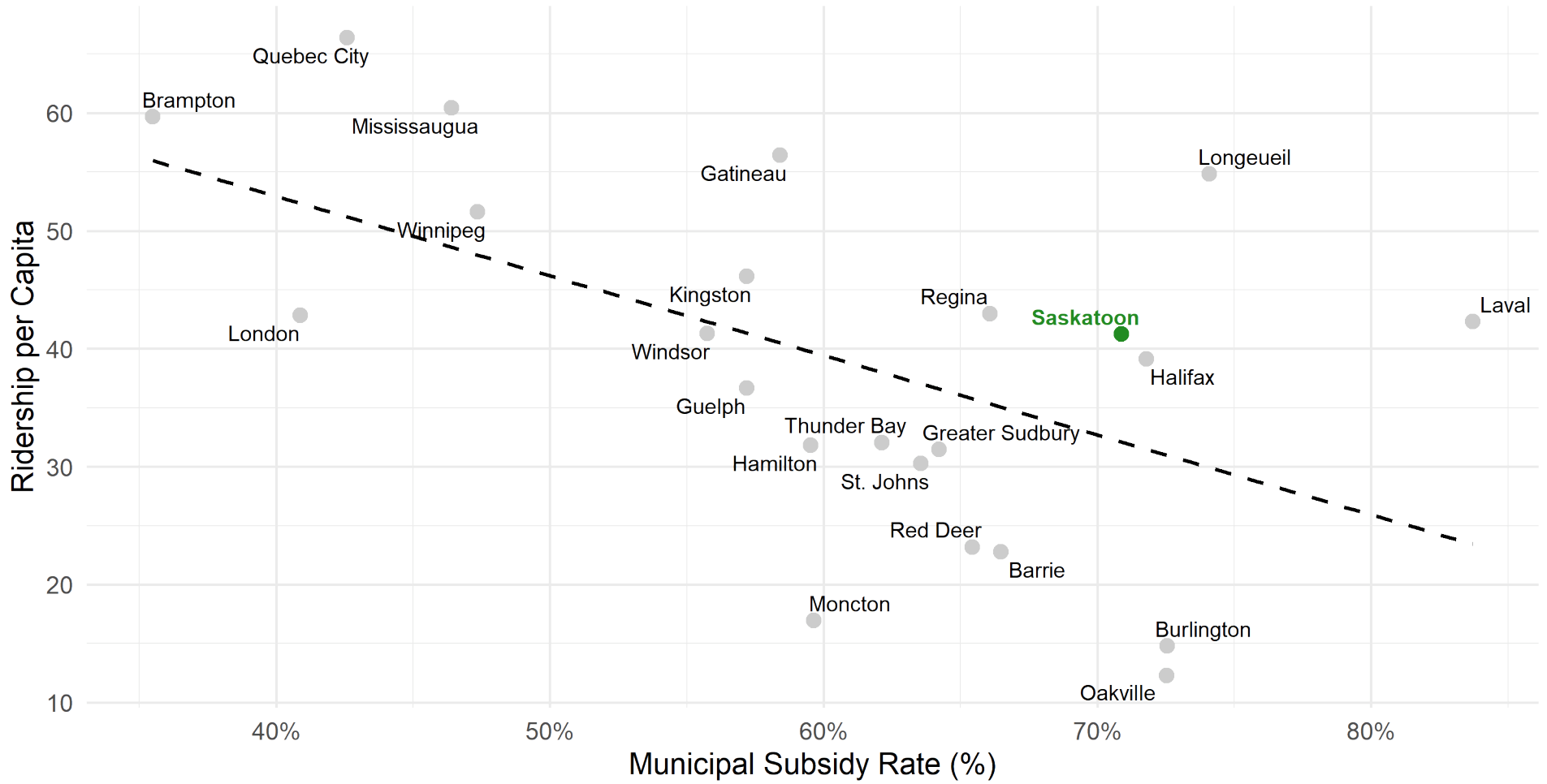
Relationship between Average Fare and Ridership



Source: CUTA Conventional Transit Statistics (2023), Author Calculations

Figure 2C-2: Municipal Subsidy Rate vs. Transit Ridership per Capita (2023)

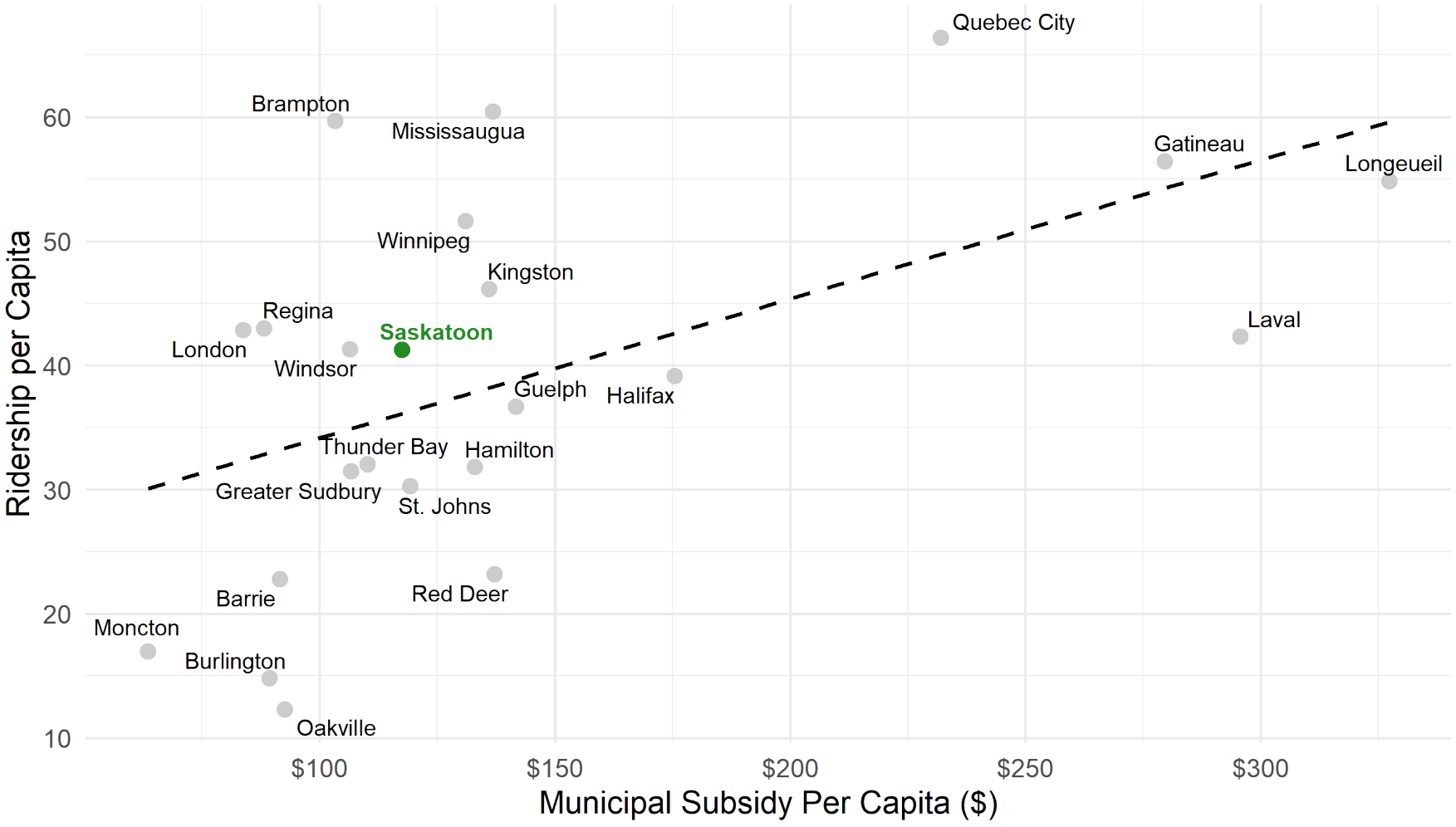
Relationship between Ridership and Subsidy Rates



Source: CUTA Conventional Transit Statistics (2023), Author Calculations

Figure 2C-3: Municipal Subsidy Per Capita vs. Ridership per Capita (2023)

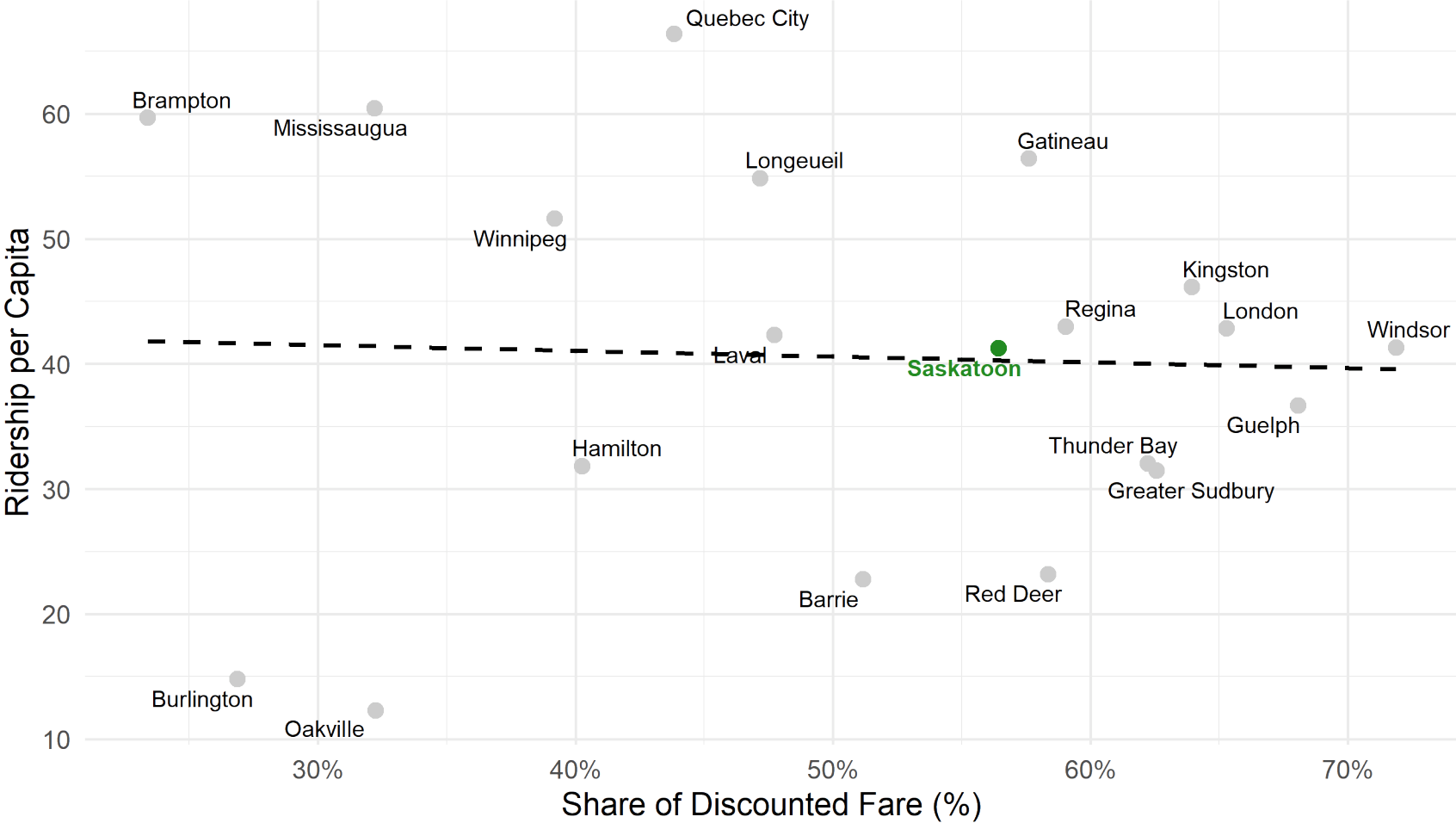
Relationship between Ridership and Subsidy Levels



Source: CUTA Conventional Transit Statistics (2023), Author Calculations

Figure 2C-4: Discounted Fare Rates vs. Ridership per Capita (2023)

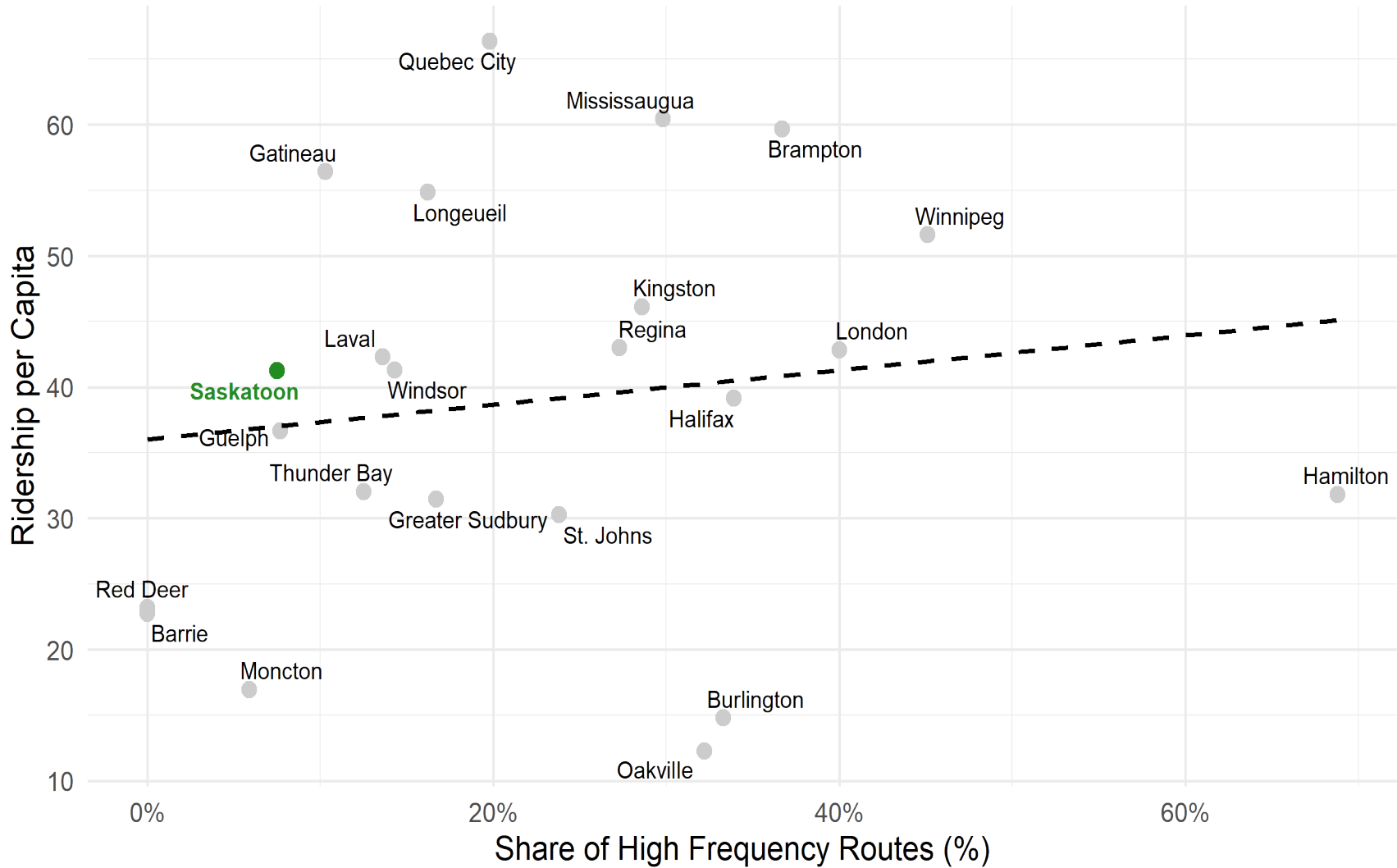
Relationship between Ridership and Discounted Fare Rates



Source: CUTA Conventional Transit Statistics (2023), Author Calculations

Figure 2C-5: Share of High Frequency Routes vs. Ridership per Capita (2023)

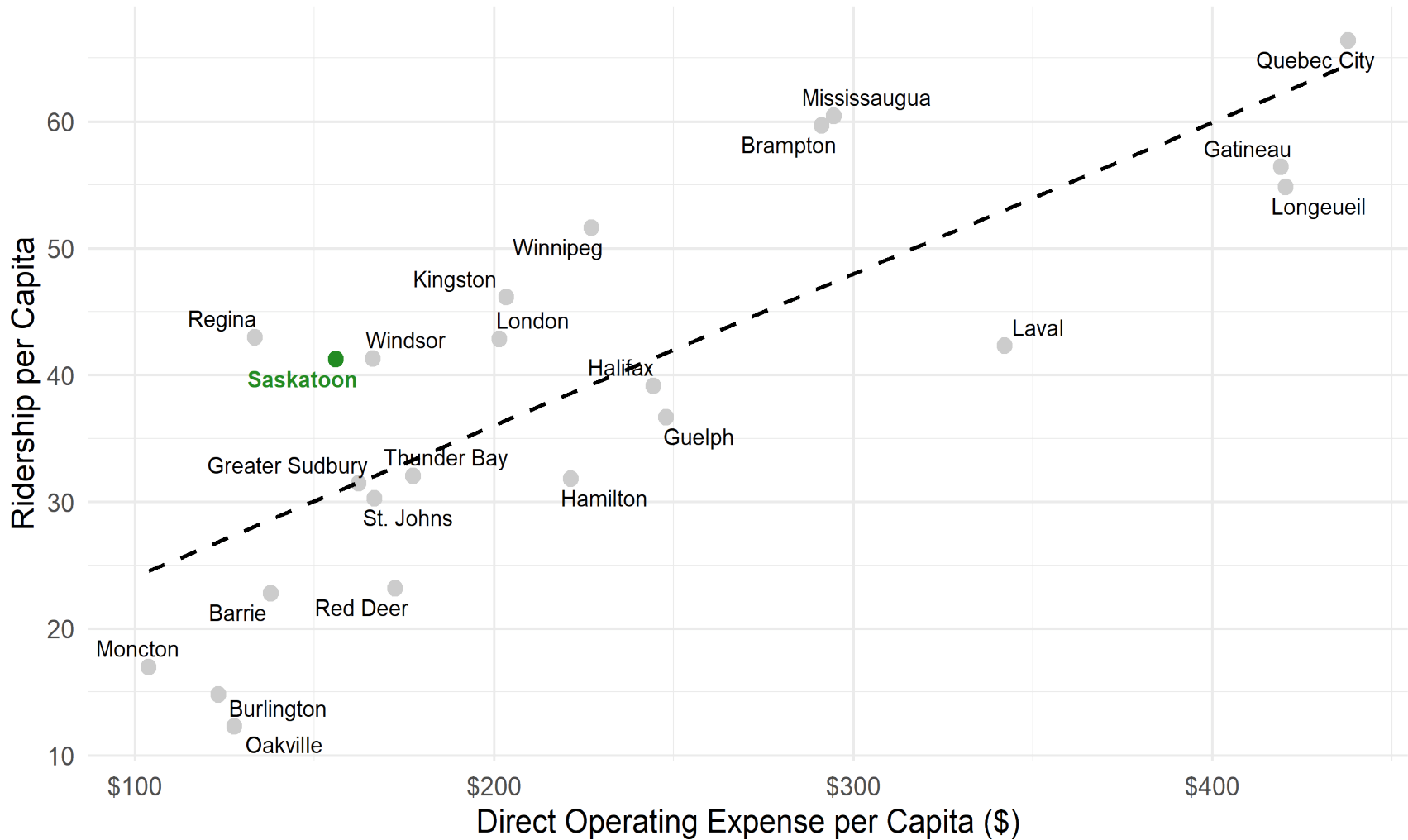
Relationship between Ridership and High Frequency Route Share



Source: CUTA Conventional Transit Statistics (2023), Author Calculations

Figure 2C-6: Direct Op. Expense per Capita vs. Ridership per Capita (2023)

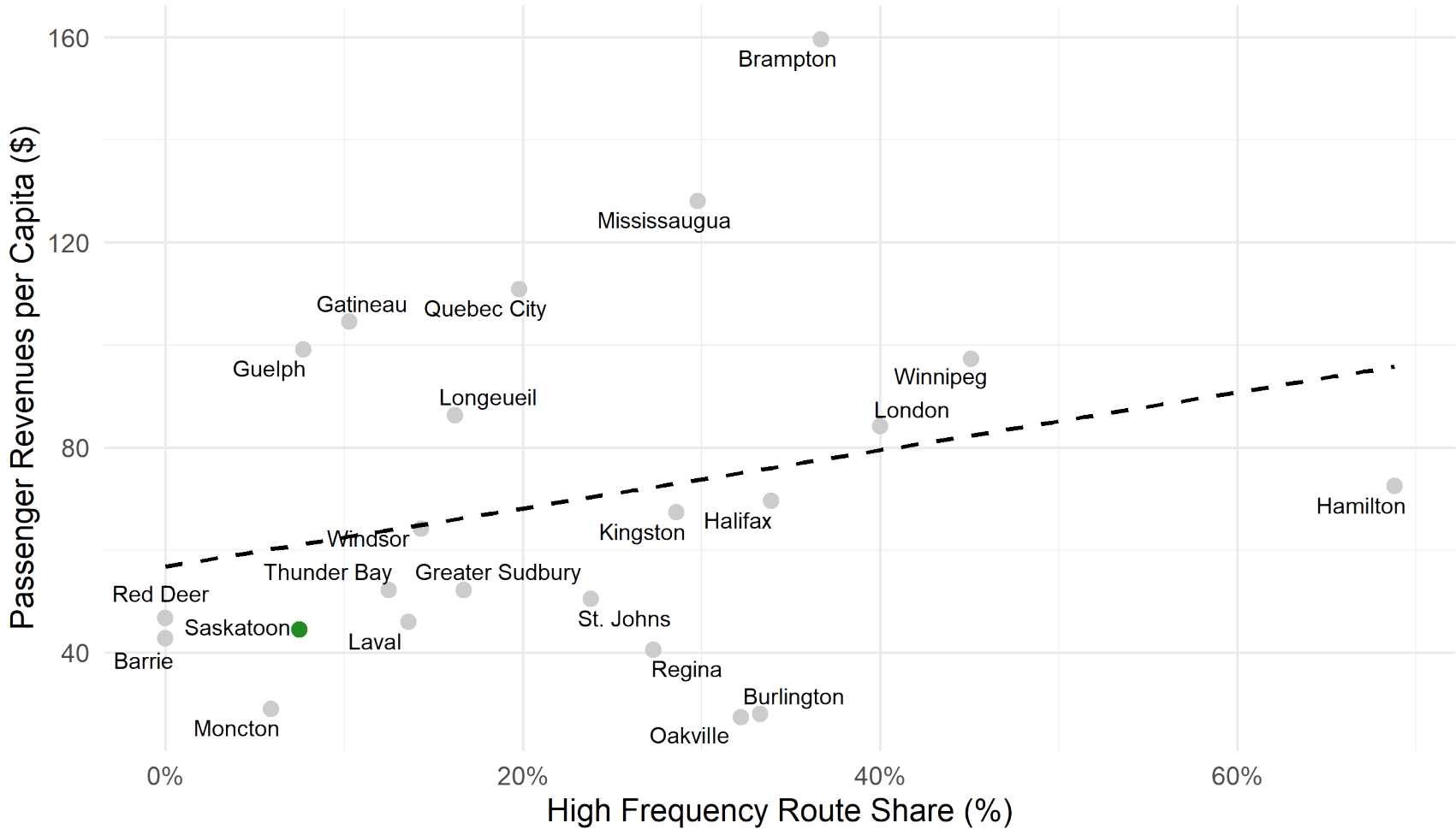
Relationship between Ridership and Direct Operating Costs



Source: CUTA Conventional Transit Statistics (2023), Author Calculations

Figure 2C-7: High Frequency Route Share vs. Passenger Revenues per Capita (2023)

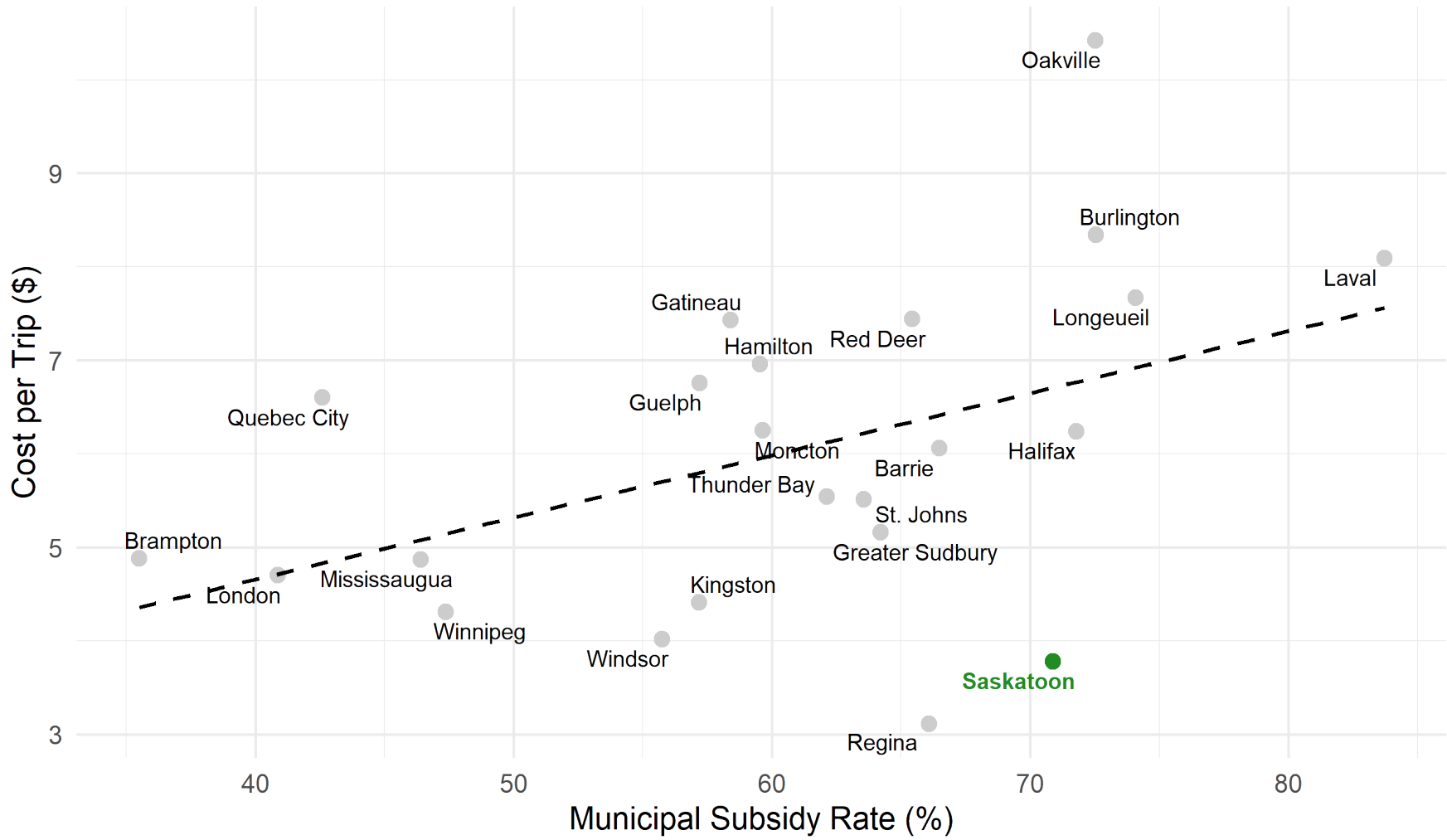
Relationship between Higher Frequency and Passenger Revenue



Source: CUTA Conventional Transit Statistics (2023), Author Calculations

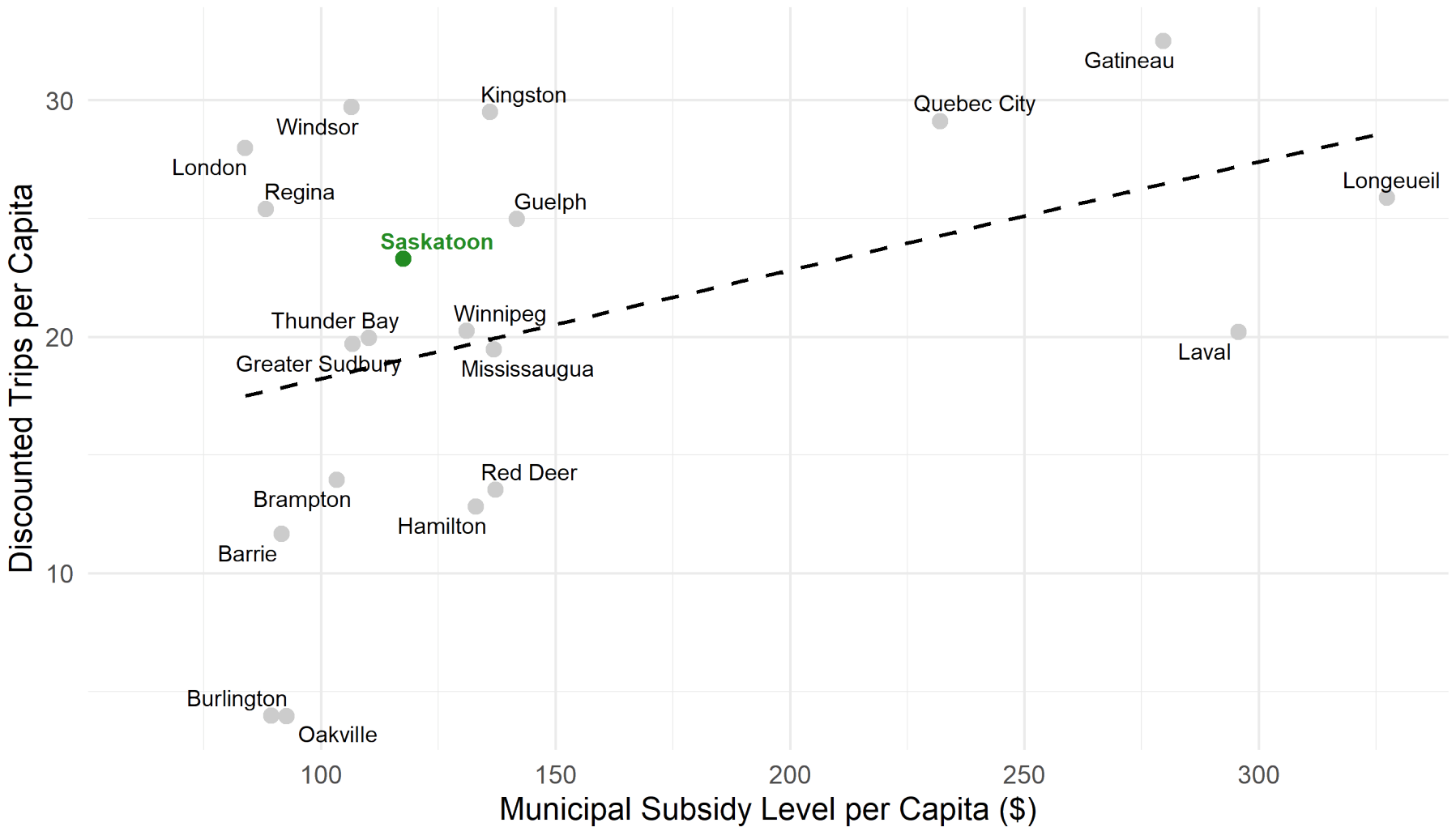
Figure 2C-8: Subsidy Rate vs. Cost per Trip (2023)

Relationship between Municipal subsidy rate and cost per trip



Source: CUTA Conventional Transit Statistics (2023), Author Calculations

Figure 2C-9: Municipal Subsidy per Capita vs. Discounted Trips per Capita (2023)
 Relationship between Municipal Subsidies and Discounted Trips



Source: CUTA Conventional Transit Statistics (2023), Author Calculations