

Cost of Living in Toronto*

Are low-income families able to survive financially here?

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This paper analyzes the living-cost data from low-income families living in Toronto, which is hosted publicly by the Open Data Toronto. It uses information on household income, expenses, government fiscal transfers and benefits to determine if low-income families are able to survive financially in Toronto. It was discovered that expenses exceeded income for most families (meaning low-income families were not able to make ends meet in Toronto), and rent, food costs were among the highest expenses. This finding is important as it shows cost disparity in expenses, and provide insights to fiscal policymakers on how to better support low-income families with their living costs.

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*Code and data are available at: <https://github.com/davidpxrk/cost-of-living-toronto>

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1 Introduction

Toronto is the biggest and the most populous city in Canada. As the fourth largest city in North America, Toronto serves as a catalyst when it comes to being an international hub for many businesses, arts, sports and diverse cultures, attracting people from all around the world to come to Toronto to study at some of the best institutions, work or even simply travel as a Tourist. More importantly, Toronto is the most diverse city in Canada, with many people of different cultures, backgrounds, ethnicity coexist, and bridge cultural gaps and create a unity.

While Toronto may seem like a perfect place to live, residents have said this to be far from the truth, with many struggling financially to meet ends, especially for those that come from a low income background. For example, according to the Daily Bread Food Bank, one in 10 people in Toronto relied on food banks in 2023, a huge increase from one in 20 from 2022 (CITATION HERE).

According to the City of Toronto, the threshold for LIM_AT (threshold to be considered low income) was \$26,503 for 1 person household, \$37,480 for two person household and \$53,005 for a four person household (CITATION, CITY OF TORONTO). 13.2% of Toronto's population fell under this category of low-income. Furthermore, Toronto continues to have a higher rate of low income than any other regions in the GTHA at 8.09% (CITATION HERE), highlighting an issue of income discrepancy.

This paper aims to analyze if low income families living in Toronto are financially able to survive. The analysis focuses on two different metrics; income (which includes income from employment, government benefits and transfers such as GST/HST credit, Canada Pension Plan and Canada Worker Benefits) and expense (which includes rent, childcare, food and transportation costs). The difference between income and expense can assess whether or not low-income families are able to survive, and can guide future policymakers on what areas of expenses the low-income families can get additional support.

The paper is organized as follows: Section 2 (Data) of this paper introduces the raw dataset of interest and some of the initial observations. Section 3 (Results) highlights some of the key insights that were derived from the data analysis. Section 4 (Discussion) discusses the observations from Section 3 and draws a conclusion from the findings. Finally, Section 5 (Conclusion) draws a brief summary of the key findings.

2 Data

This report uses the “About Cost of living in Toronto for low-income households” (CITATION HERE) dataset, which is published publicly by the Social Development, Finance & Administration of Toronto on City of Toronto’s Open Data Portal. This data contains information on income such as employment income, GST/HST credits, pension benefits and expenses such as rent, food, transportation costs for 11 different scenarios of a low-income household. The 11 different scenarios of low-income household were manually selected by the City of Toronto to reflect different household characteristics that can increase the reliance on social assistance, such as type of income, single-parent household, etc. A detailed explanation of this 11 household scenarios can be found in the Appendix. The dataset is also within a monthly time period (monthly income and monthly expenses)

The dataset was downloaded and analyzed using the R Programming Language (R Core Team 2022), opendatatoronto (CITATION HERE), knitr (CITATION HERE), tidyverse (CITATION HERE), here (CITATION), dplyr (CITATION) and sf (CITATION HERE).

2.1 Overview of the Dataset

The dataset published by Social Development, Finance & Administration of Toronto was last updated on August 2024 on an annual basis. However, the dataset uses price estimates from July 2022 - July 2023 for its income and expenses of the families. The variables chosen for this analysis were the 11 households, for each entry of the income and expense types. See Table 1 for an overview. It is noted that expenses and households 4 to 11 are not visible in the preview.

Category	Item	Household_1	Household_2	Household_3
Income	Income from Employment	0	2687	9575
Income	Basic Allowance	494	0	0
Income	Maximum Shelter Allowance	756	0	0
Income	Old Age Security/Guaranteed Income Supplement	0	0	0
Income	Ontario Guaranteed Annual Income System	0	0	0
Income	Canada Child Benefit	1235	1192	248

Table 1: Sample of the Income/Expenses of Low Income Households in Toronto

It is also to note that there were differing datasets based on different rent estimates. The dataset for rent prices using Toronto Regional Real Estate Board Market Rent was chosen. Furthermore, there were several entries in the dataset that were irrelevant, such as percentage of rent on income, which were filtered out.

2.2 Average Income of the 11 Households

Table 2 shows that income from employment was the major income source for all the 11 households in Toronto by a large margin, at approximately \$1603 per month. This number also falls shy below the “low-income” threshold set by the City of Toronto, which is approximately \$2208.5 (CITY OF TORONTO CITATION).

Type of Income	Average Income in \$
Income from Employment	1603
Basic Allowance	365
Maximum Shelter Allowance	337
Old Age Security/Guaranteed Income Supplement	157
Ontario Guaranteed Annual Income System	8
Canada Child Benefit	480

Table 2: Average Income of Low Income Households in Toronto

The numbers may not add up as they were rounded to the nearest whole number.

2.3 Average Expenses of the 11 Households

There is a huge price disparity between the expenses of the 11 families. The biggest expense was rent, at an average of \$3146 per month, followed by food costs at \$705. The huge cost rent highlights a need for further investigation and is discussed in Section 4. See Table 3 for an overview of the dataset.

Type of Expense	Average Expense in \$
Employment Insurance paid	24
Canada Pension Plan paid	81
Average Monthly Rent	3146
Food	705
Childcare	360
Transportation	460

Table 3: Average Expenses of Low Income Households in Toronto

2.4 Difference between Income and Expense

To better understand the relationship between the income and expenses of the 11 families, they were merged together into a single dataset. In addition to this, a variable for their difference was also created. See Table 4 for a preview of the dataset.

```
# A tibble: 11 x 23
  `Income 1` `Income 2` `Income 3` `Income 4` `Income 5` `Income 6` `Income 7`
    <dbl>      <dbl>      <dbl>      <dbl>      <dbl>      <dbl>      <dbl>
1         0        494        756         0         0        1235         78
2       2687         0         0         0         0        1192         78
3       9575         0         0         0         0         248          0
4         0        360        697         0         0        1235         78
5         0        343        390         0         0          0         26
6         0        706        522         0         0          0         32
7         0          0         0       1723         83          0         39
8         0       1409        821         0         0          0         51
9         0        706        522         0         0          0         32
10      2687         0         0         0         0       1375         78
11      2687         0         0         0         0          0         39
# i 16 more variables: `Income 8` <dbl>, `Income 9` <dbl>, `Expense 1` <dbl>,
#   `Expense 2` <dbl>, `Income 10` <dbl>, `Income 11` <dbl>,
#   `Total Income` <dbl>, `Expense 3` <dbl>, `Expense 4` <dbl>,
#   `Expense 5` <dbl>, `Expense 6` <dbl>, `Total Expenses` <dbl>,
#   `Remaining Funds` <dbl>, `Other 2` <dbl>, `Other 3` <dbl>, Household <chr>
```

Total Income	Total Expenses	Remaining Funds
2826	6782	-3956
4192	7245	-3053
9284	7245	2039
2588	5089	-2501
877	2670	-1793
1386	3109	-1723
2009	2963	-954
2450	4011	-1561
1426	3088	-1662
4330	6107	-1777
2793	3062	-269

Table 4: Average Expenses of Low Income Households in Toronto

3 Results

Figure 1 shows income and expense for each household. Overall, expenses exceed income for all households. Only one household had an income that exceed expenses.

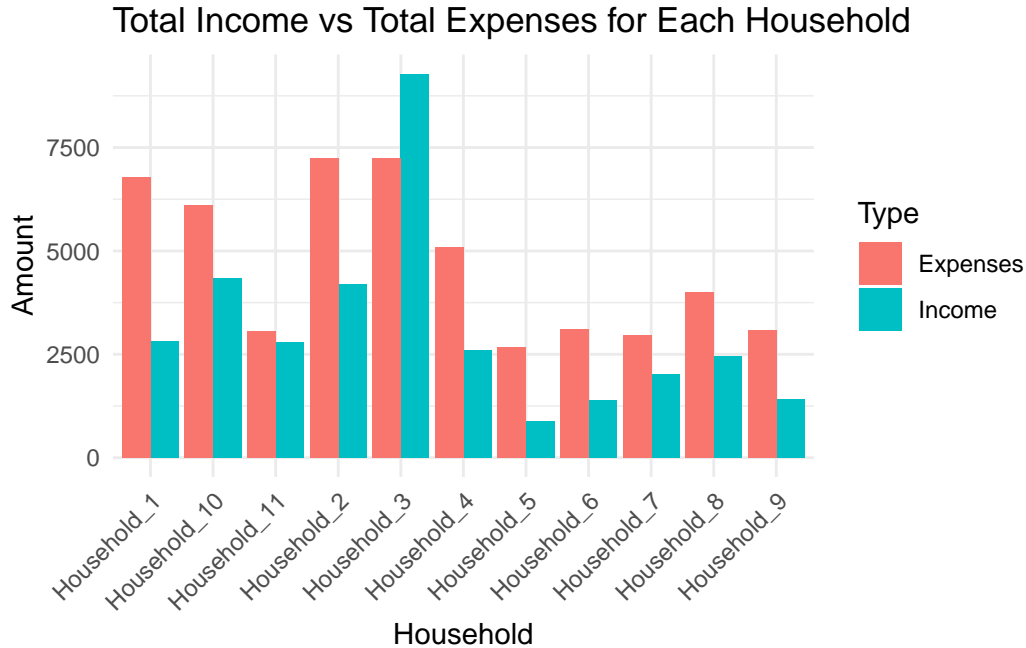


Figure 1: Figure 5: Average Expenses of Low Income Households in Toronto

Furthermore, Figure 2 gives us a better understanding of the spending behind the high expenses. Rent was by far the most expensive, comprising X% of the expenses.

```
# A tibble: 7 x 2
  `Type of Expense`      `Average Expense in $`
  <chr>                  <dbl>
1 Employment Insurance paid      24
2 Canada Pension Plan paid      81
3 Average Monthly Rent     3146
4 Food              705
5 Childcare        360
6 Transportation    460
7 Total          4670
```

Warning: Unknown or uninitialised column: `Type of Income`.
Unknown or uninitialised column: `Type of Income`.

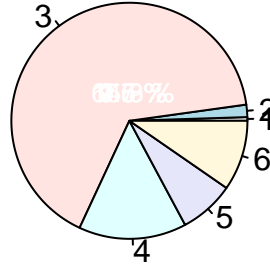


Figure 2: Figure 2: Average Expenses of Low Income Households in Toronto

4 Discussion

The tables and graphs above show that the expenses of these families exceed far of the income, suggesting they are not financially able to survive in Toronto. Furthermore, rent comprised X% of the total expenses, highlighting a need for policymakers to focus on housing prices. However, this raises the question, would providing more income to these families solve their financial issues? While giving more money to these families certainly help, but having more money does not necessarily mean these families are utilizing their funds in an efficient way. For example, rent could differ significantly in price if the household chooses to reside in a highly populated area and if the house contained more rooms. Furthermore, food prices can be significantly more if the families chose to eat out, rather than utilizing grocery stores.

Without context to this information, determining the efficiency of spending of the families is impossible. However, looking at the results suggest some inefficiencies in spending. For example, in Figure 3, the average rent was \$3146 per month for the 11 families, a big difference from the average rent for a one-bedroom condo of \$2,529 (Toronto Regional Estate Board, 2024). Expenses such as this could suggest that expenses could be correlated with poor financial decisions, however more research must be conducted to draw those conclusions.

5 Conclusion

In summary, expenses exceeded income for most of the 11 household scenarios generated by the City of Toronto, demonstrating low-income families may not be able to make ends meet financially. Furthermore, rent made up a significant portion of the families' expenses, guiding policymakers to focus on this area. Further research on consumer spending behavior could better explain the expenses behind the families.

6 Appendix

6.1 A.1 Detailed Information on the 11 Households

The 11 different scenarios of low-income household were manually selected by the City of Toronto to reflect different household characteristics that can increase the reliance on social assistance, such as type of income, single-parent household, etc. The structure of the 11 households is as follows:

Family 1:

7 Statement on LLMs

LLMs and other generative AI tools were not used in the making of this paper.

8 References

<https://www.toronto.ca/wp-content/uploads/2022/07/9877-City-Planning-2021-Census-Backgrounder-Families-Hhlds-Marital-Status-Income.pdf>

<https://www.dailybread.ca/wp-content/uploads/2023/11/DB-WhosHungryReport-2023-Digital.pdf>