Social Housing in Toronto*

Investigating Status from Waiting Lists and Their Social Implications

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April 22, 2024

This paper investigates household composition dynamics in social housing applications in Toronto from Q1 2019 to Q4 2023. Analyzing application data, the study examines patterns in households applying for housing assistance, focusing on those with and without dependents. Findings reveal fluctuating trends, highlighting the challenges faced by families in accessing stable and affordable housing in Toronto. By understanding these dynamics, policymakers can develop targeted interventions to promote housing equity and stability for vulnerable families in the city, contributing to ongoing efforts to address housing affordability and access issues in Toronto.

1 Introduction

Access to stable and affordable housing is a fundamental aspect of societal well-being, yet disparities persist in housing outcomes across different demographic groups. This paper investigates the dynamics of household composition in social housing applications in Toronto and its implications for housing policy and practice. Analyzing social housing application data from Q1 2019 to Q4 2023 within Toronto's housing landscape, the study focuses on the patterns and fluctuations in households applying for housing assistance, particularly those with and without dependents. The analysis highlights the diverse challenges faced by families in accessing stable and affordable housing in Toronto, emphasizing the dynamic nature of family dynamics and economic circumstances over time.

By recognizing the unique needs of households with dependents and understanding the socioeconomic drivers of housing disparities in Toronto, policymakers and housing providers can develop targeted interventions to promote housing equity and stability for vulnerable families in the city. Through evidence-based policy interventions and a deeper understanding of household composition in social housing, this paper aims to contribute to the ongoing discourse on housing

*Code and data are available at: LINK.

affordability, access, and equity in Toronto, striving towards inclusive and sustainable housing solutions for all members of Toronto's diverse community.

2 Data Sourcing

This data is sourced from Open Data Toronto, a public platform that offers a wide array of datasets relevant to various aspects of urban life, including housing, transportation, public health, and more. This initiative allows researchers, policymakers, and the general public to access and utilize city-managed data in an effort to foster transparency, drive innovation, and facilitate informed decision-making. Utilizing such open data platforms ensures that the information is not only readily available but also consistently updated and maintained according to government standards. This approach helps in compiling comprehensive and reliable datasets that are crucial for conducting thorough analyses, like the study of housing application trends, thereby contributing to more effective urban planning and policy development.

The data in this post was compiled using open source statistical programming language R R Core Team (2023). It uses functionalists such as janitor and ggplot2. Finally, the cleaned data is saved as a CSV file in the specified "analysis_data" directory. This allows access to the cleaned data set for further analysis or reporting. Using write.csv with line name = FALSE ensures the output file is neat.

#Data Cleaning

To clean the data for better analysis processing, unnecessary columns such as how many bedrooms are in the social housing units and the repetitive column 'total application' were removed. We use the function 'janitor' to achieve intended data cleaning.

Figure 1:

Table 1: Data Overview

id	quarter_year	new_reactivated	cancelled	inactive_carried_forward	total_active_waiting_list	no_dependents	dependents	dependents_with_seniors
1	Q1 2019	6181	522	4138	102049	38044	28223	35782
2	Q2 2019	5085	805	25297	78796	29171	21081	28544
3	Q3 2019	5434	767	6817	77024	28442	20665	27917
4	Q4 2019	5151	872	6708	75191	27521	20202	27468
5	Q1 2020	6067	471	4049	78500	29115	21059	28326

id	quarter_year	new_reactivated	housed	inactive_cancelled	total_active_waiting_list	household_no_dependents	household_with_dependents	seniors
6	Q2 2020	3678	497	694	78683	29183	21141	28359

The above Table 1 is an overview of the data. It simulates the first 6 lines of all columns to give the readers an idea of what the data looks like. The complete data consists of 9 columns/variables and 20 lines/quarters of years from quarter 1 2019 to quarter 4 2023.

3 Results

The dataset "Centralized Waitlist for Social Housing" provides detailed information on the activities related to the social housing waitlist in Toronto for various quarters starting from Q1 2019. It includes data on new/reactivated applications, the number of households housed, inactive/cancelled applications, and the total active waiting list. Additionally, it breaks down the waiting list by household type (e.g., no dependents, with dependents, seniors).

Figure 2:

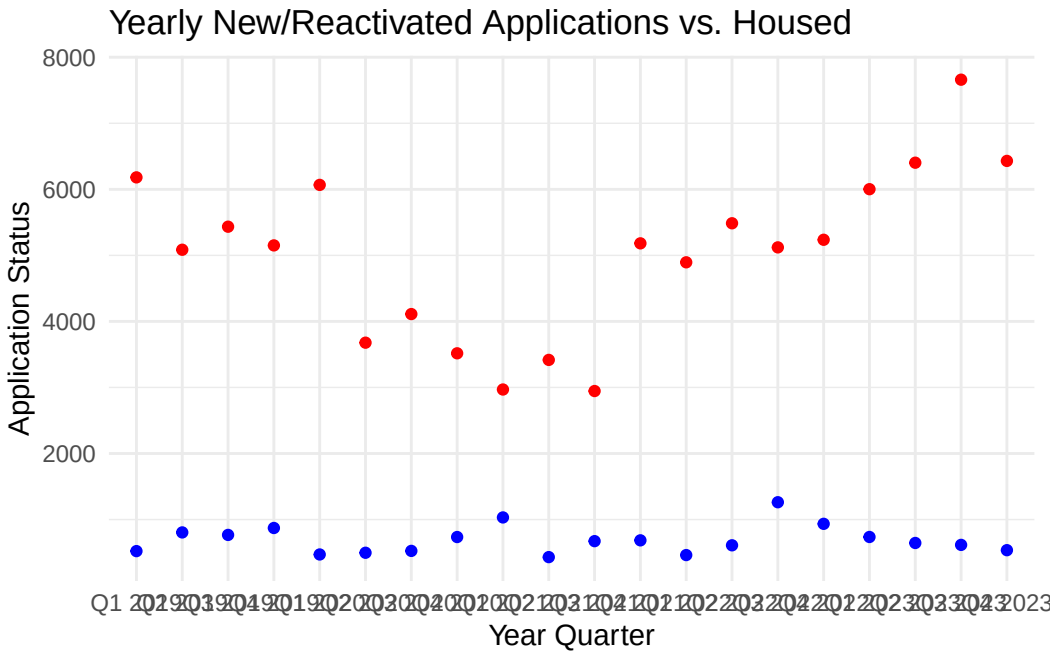

Figure 1: Yearly New/Reactivated Applications vs. Housed

The dot plot Figure 1 illustrates the dynamic interplay between demand and supply within Toronto's social housing sector from Q1 2019 to Q4 2023. The red dots signify the number of yearly new or reactivated applications for social housing, while the blue dots illustrate the number of households that were successfully housed each year. A striking feature of the plot is the consistent positioning of the red dots well above the blue dots, which clearly indicates that every year, the number of new or reactivated applications far exceeds the number of households that are actually housed.

A specific observation is that the number of households housed—indicated by the blue dots—remains relatively low and consistent over time, suggesting a steady capacity or rate at which the housing sector is able to accommodate applicants. In contrast, the number of new or reactivated applications represented by the red dots shows more variability, with certain years experiencing higher peaks. This variability could reflect economic cycles, changes in housing policy, or other societal factors that influence the number of individuals seeking social housing. The peaks could correspond to economic downturns or policy changes that either increase the availability of social housing or change the criteria for application, resulting in more people applying.

The consistent gap between the red and blue dots underscores a significant challenge within the social housing system: the demand for housing assistance consistently outstrips supply. This suggests that despite the efforts to house individuals and families in need, there remains a substantial number of applicants who are left on the waiting list, potentially leading to prolonged periods of housing insecurity and uncertainty for a considerable number of residents. For policymakers and social planners, this graph is a call to action, indicating the need to increase the availability of social housing, streamline the application process, or explore alternative housing solutions to bridge the gap between application and accommodation. The social implications are profound, as housing stability is closely tied to other areas of well-being, including employment, education, and mental health. Therefore, the insights from this graph are vital for informing a more strategic and compassionate response to housing needs in Toronto.

Figure 3:

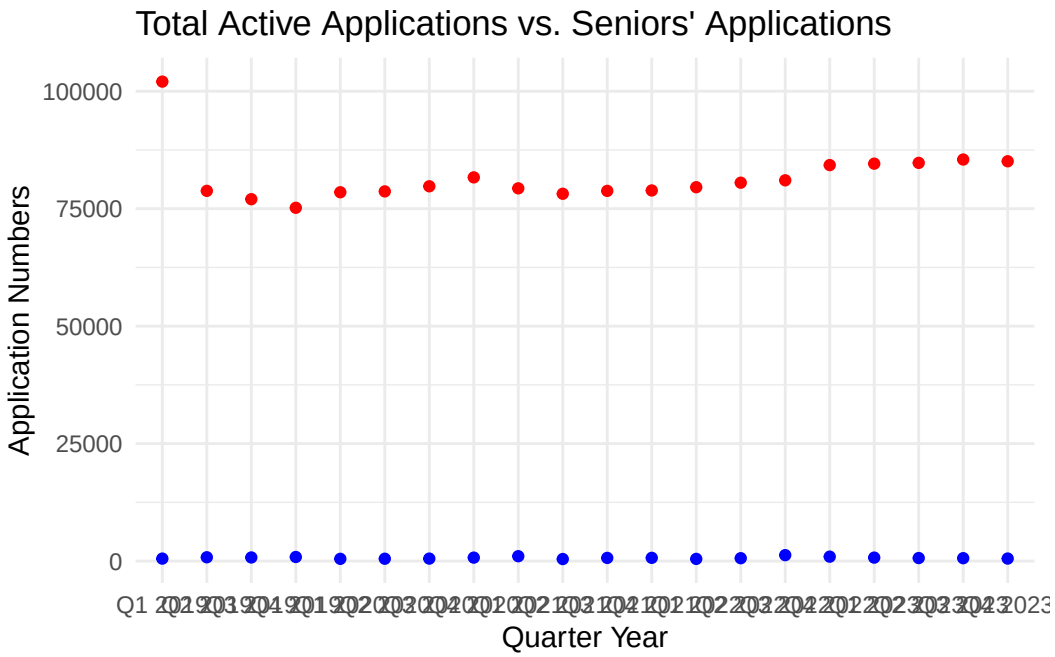

Figure 2: Total Active Applications vs. Seniors Applications

The dot plot Figure 2 comparing total active applications to seniors' applications from Q1 2019 to Q4 2023 provides valuable insights into the demographics of individuals seeking social housing assistance and the overall trends in application numbers over time. The red dots at the top of the graph represent the total active applications, which appear to hold steady at a high level throughout the entire period. In contrast, the blue dots at the bottom of the graph depict seniors' applications for social housing, which are significantly lower in number compared to the total applications and remain consistent over time.

Specifically, the graph shows a persistent gap between the total number of applications and the number attributed to seniors, indicating that seniors are a smaller, consistent group within the overall pool of applicants. The fact that the number of seniors' applications is much lower than the total might suggest that the social housing system is either not as utilized by seniors or that there are not enough seniors applying or qualifying for social housing within the reporting periods. This could point to a need for more targeted outreach or specialized housing policies that cater to the elderly population's specific requirements.

The high and stable total application numbers highlight the ongoing demand for social housing and suggest that this demand is not significantly driven by seniors but by other demographic groups. The constancy of the total applications suggests that the issue of housing insecurity is widespread and persists over time, reflecting systemic issues within the housing market or broader socio-economic challenges in Toronto. For social policymakers, these consistent figures

could indicate a need for sustained or increased investment in social housing to keep pace with demand and address the long-term needs of the city's diverse population.

Figure 4:

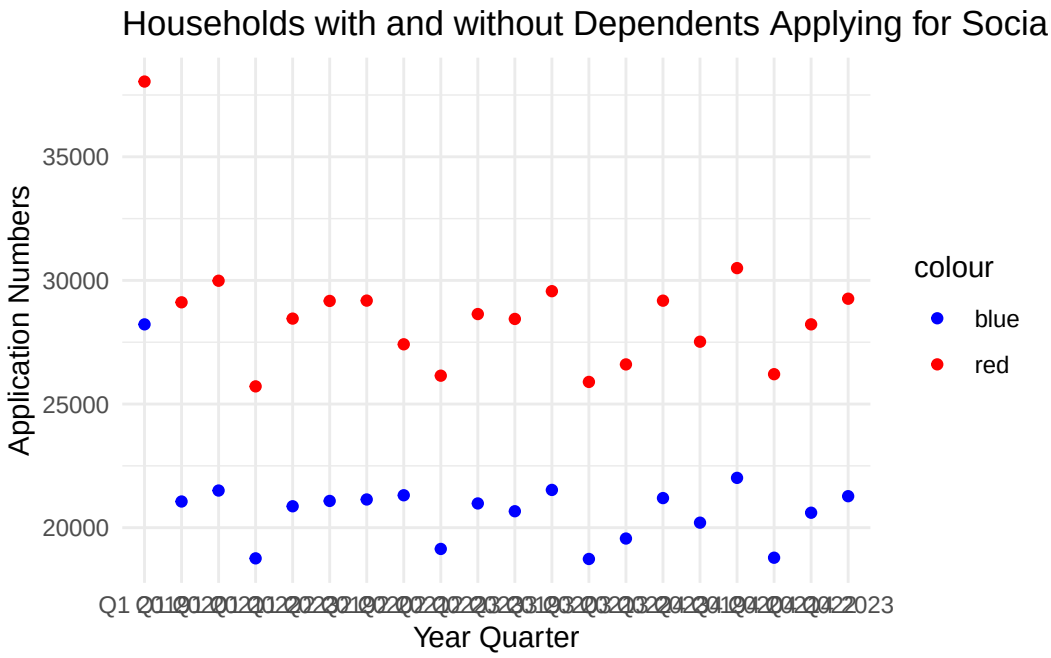

Figure 3: Households with and without Dependents Applying for Social Housing

The dot plot Figure 3 comparing households with and without dependents applying for social housing from Q1 2019 to Q4 2023 provides valuable insights into the composition of applicants and potential variations in housing needs among different household types over time. Red dots, representing households with dependents, show more pronounced fluctuations when compared to blue dots, which symbolize households without dependents. This suggests a higher degree of instability or variability in housing needs among families, which could be a reflection of the social and economic volatility that impacts families more intensely than individuals. The red dots peak and trough more dramatically, signaling times when families are perhaps feeling the economic squeeze—times when social support becomes even more critical. From the graph, we observe fluctuations in both the number of households with and without dependents applying for social housing throughout the observed period. Interestingly, the number of households with dependents appears to fluctuate more prominently compared to households without dependents, as indicated by the greater variability in the dashed line representing households with dependents.

This variation in the number of applications from households with dependents may reflect changes in family dynamics, economic conditions, or social factors affecting household com-

position and housing stability. For instance, economic downturns or changes in family circumstances could lead to fluctuations in the number of households with dependents seeking social housing support. Understanding these dynamics is crucial for policymakers and housing providers to tailor their programs and services effectively to meet the diverse needs of households with different compositions. It highlights the importance of considering family size, structure, and specific needs when designing housing assistance programs and allocating resources to address housing insecurity and promote housing stability for vulnerable populations.

Furthermore, the steadier trend seen with individuals without dependents could point to different social implications. While perhaps not as acutely affected by economic shifts, this group still requires attention to ensure that the available social housing meets their needs, which may differ significantly from those of families. This data prompts a deeper consideration of how social housing is allocated and managed, suggesting a need for programs that are sensitive to the nuances of household composition. Policies must be nuanced and empathetic, ensuring equity not just in housing provision but in the opportunity for all citizens to live with dignity and security. Such social housing strategies become foundational to building a resilient society where every individual, family, or household can weather economic storms without the risk of homelessness or displacement. Further analysis of the underlying factors driving fluctuations in applications from households with and without dependents may provide valuable insights into broader socio-economic trends and challenges affecting housing affordability, access, and stability for families in need. Such insights can inform evidence-based policy interventions and targeted strategies aimed at addressing housing disparities and promoting equitable access to affordable and suitable housing for all households, regardless of their composition.

Figure 5:

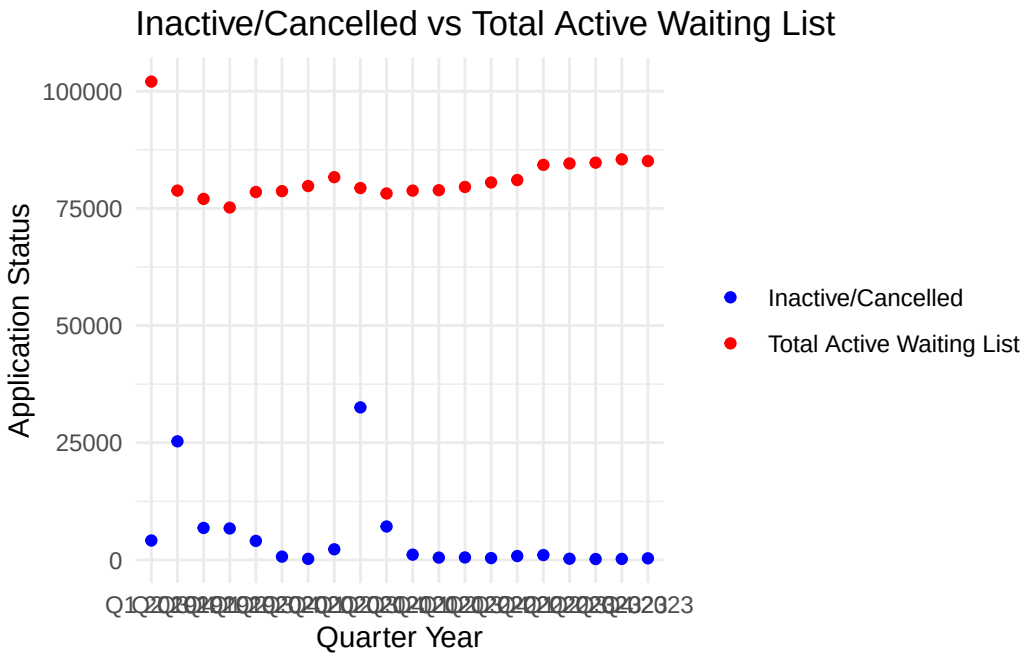

Figure 4: Inactive/Cancelled vs Total Active Waiting List

The dot plot Figure 4 visualizes the relationship between inactive/cancelled applications and the total applications on the waiting list in Toronto's social housing sector from Q1 2019 through Q4 2023. This dot plot visualizes two data points related to social housing applications over several quarters from Q1 2019 to Q4 2023. The red dots represent the total number of active applications on the waiting list, while the blue dots signify the number of applications that have been either canceled or marked as inactive. Observing the graph specifically, the red dots are positioned at a high level consistently across the timeline, indicating a stable and significant demand for social housing, as the active waiting list numbers are quite high and do not show dramatic changes over time. On the other hand, the blue dots are much lower on the graph, which shows that the number of inactive or canceled applications is significantly less than the total number of active applications. However, despite being lower, the blue dots are not negligible, suggesting that there is still a considerable number of applications that are removed from the waiting list for various reasons. This is especially the case in Q2 2019 and Q1 2021, where a significantly larger-than-average numbers of applications were cancelled or became inactive.

The distance between the red and blue dots suggests a discrepancy between the number of people seeking housing and those who leave the system without being housed. This gap may highlight inefficiencies or barriers within the social housing system that result in applicants dropping out or being removed from the list. The stability in the number of active applications suggests a persistent need for social housing, while the presence of inactive or canceled

applications could point to potential improvements in the system to better retain and service applicants.

From a policy perspective, this graph calls attention to the potential for improving the housing allocation process to decrease the number of inactive/canceled applications and better meet the housing needs represented by the consistently high active waiting list. It could also indicate the need to examine the reasons behind the cancellations and inactivity, as addressing these could lead to higher efficiency within the social housing system and increased satisfaction among applicants.

4 Discussion

4.1 First discussion point

The observed dynamics in social housing demand and supply, as evidenced by the fluctuating patterns in application rates and the persistent gap between new entries and households housed, underscore the complex interplay of socio-economic factors influencing housing access and affordability. Research by Desmond and Desmond and Kimbro (2015) highlights the intricate relationship between housing instability and poverty, wherein marginalized communities often face challenges in accessing stable and affordable housing options. Moreover, studies by Fitzpatrick et al. (2019) emphasize the role of structural inequalities and systemic barriers in perpetuating housing disparities, particularly among vulnerable populations such as seniors and single individuals. The phenomenon of fluctuating waiting list trends and demographic compositions may be attributed to various factors, including inadequate affordable housing stock, rising housing costs, and limited access to supportive services and resources. Additionally, the complexities of managing waiting lists and addressing changing applicant circumstances further contribute to the observed variations in social housing demand. Effective policy interventions aimed at addressing housing inequities and enhancing housing affordability are crucial in mitigating these challenges and ensuring equitable access to housing for all members of society Desmond and Kimbro (2015), Fitzpatrick et al. (2019).

4.2 Second discussion point

The visualization of total active applications versus seniors' applications from Q1 2019 to Q4 2023 sheds light on the significant representation of seniors within the social housing applicant pool. The observation that seniors comprise at least one-third of the total applications underscores the pronounced housing needs among older adults within the community. Research by Morrow-Howell, Galucia, and Swinford (2016) emphasizes the growing demographic shift towards an aging population and the subsequent implications for housing demand, particularly among low-income seniors. Furthermore, studies by Burholt and Windle (2006) highlight the multifaceted challenges faced by older adults in accessing suitable housing options, including

financial constraints, physical health limitations, and social isolation. The substantial presence of seniors within the applicant pool suggests a pressing need for targeted interventions and policy measures to address the unique housing needs of this vulnerable demographic group Morrow-Howell, Galucia, and Swinford (2016); Burholt and Windle (2006).

Moreover, the high proportion of seniors' applications relative to the total applicant pool underscores the importance of incorporating age-specific considerations into housing policy and program development. Research by Butler and Rob (n.d.) emphasizes the significance of age-in-place initiatives and supportive housing models tailored to the needs of older adults, facilitating aging in community settings and promoting independence and well-being. Additionally, studies by Gonyea, Kemeny, and Mitchell (2017) highlight the benefits of integrated housing and service programs for seniors, addressing both housing and health-related needs and enhancing overall quality of life. The findings from the visualization underscore the imperative for comprehensive housing strategies that prioritize the housing security and dignity of seniors while addressing broader societal challenges related to aging and housing inequities Butler and Rob (n.d.); Gonyea, Kemeny, and Mitchell (2017).

4.3 Third discussion point

The analysis of the line plot comparing households with and without dependents applying for social housing sheds light on the complex interplay of socio-economic factors influencing housing needs and family structures. The observed fluctuations in applications from households with dependents suggest dynamic changes in family dynamics and economic circumstances over time. Research by Clampet-Lundquist, Massey, and South (2011) emphasizes the importance of considering household composition in housing policy and interventions, as households with dependents often face unique challenges in accessing stable and affordable housing. For instance, fluctuations in applications from households with dependents may reflect changes in employment opportunities, income levels, or housing affordability, which impact family decision-making regarding housing choices and stability.

Moreover, studies by Murdie and Teixeira (2019) highlight the role of socio-economic factors and policy interventions in shaping housing outcomes for families, particularly those with children. The greater variability observed in applications from households with dependents compared to those without dependents underscores the diverse and evolving needs of families in the social housing system. Understanding these dynamics is essential for policymakers and housing providers to develop targeted interventions and support services that address the specific needs of families with dependents and promote housing equity for all members of society.

In summary, the analysis of household compositions in social housing applications offers valuable insights into the nuanced challenges and vulnerabilities faced by families in accessing stable and affordable housing. By recognizing the unique needs of households with dependents and implementing evidence-based policy interventions, policymakers can work towards

reducing housing disparities and promoting housing stability for vulnerable families in need Clampet-Lundquist, Massey, and South (2011); Murdie and Teixeira (2019).

4.4 Weaknesses and next steps

One potential weakness in the data and its processing pertains to the level of details and completeness of the data collected. The dataset only provides aggregated numbers for new/reactivated applications, housed individuals, inactive/cancelled applications, and the total active waiting list, segmented by quarter and year. Such aggregation may obscure underlying patterns or anomalies that could be important for more detailed analysis. For instance, without data on the reasons for application cancellations or the demographic details of applicants, it's difficult to pinpoint specific challenges or needs within the housing system. Furthermore, if the dataset lacks consistent data collection methods across quarters or contains missing data for certain quarters, this could lead to skewed analyses and unreliable conclusions.

Regarding the processing and visualization aspect in R, while the script effectively generates a comparative line plot, it does not incorporate any statistical analysis to assess trends or significant changes over time. The choice to display only two metrics (inactive/cancelled and total active waiting list) might oversimplify the complex dynamics of housing needs and availability. Additionally, the plot assumes that the viewer will understand the implications of the data trends without providing contextual aids such as confidence intervals, which could inform the viewer about the variability or certainty of the plotted trends. The visualization might benefit from a multi-dimensional approach, perhaps including other relevant metrics or employing different types of visualizations to provide a more comprehensive view of the data. This would allow stakeholders to make more informed decisions based on a clearer understanding of all influencing factors.

To enhance our understanding and analysis of the housing data, the next steps should involve increasing the detail level and expanding the scope of data collected. This could include gathering demographic information about applicants, such as age, income, and family size, as well as reasons for application cancellations or reactivations. Implementing more advanced statistical techniques to identify trends and correlations over time would also be beneficial. Additionally, integrating geographic data could help identify regional disparities and specific areas of need. These efforts would not only provide a more comprehensive view of the housing situation but also aid in tailoring housing policies and interventions to better meet the specific needs of different populations.

5 Conclusion

This study has provided critical insights into the complex dynamics of household composition within Toronto's social housing applications from Q1 2019 to Q4 2023. By closely analyzing

the data trends, the research highlights the significant challenges that families, particularly those with dependents, face in accessing stable and affordable housing. The findings underscore a marked inconsistency between the demand for social housing and the availability of accommodations, reflecting a substantial gap that persists despite varying applications rates. This persistent discrepancy indicates that current housing policies and resources may not adequately address the needs of the most vulnerable populations. As such, the study calls for a deeper and more nuanced understanding of these trends to facilitate the development of targeted policy interventions aimed at promoting housing equity and stability for families in Toronto. These efforts are crucial for not only improving living conditions but also for ensuring that housing policies evolve in alignment with the changing demographics and economic realities of the community.

Moving forward, the paper suggests several avenues for further research and policy development. It emphasizes the importance of enhancing data collection processes to capture more granular, demographic-specific information that can inform more effective housing strategies. Additionally, there is a strong recommendation for integrating adaptive policies that can swiftly respond to the fluctuations in housing demand and the specific circumstances of applicants. Such policies should focus on reducing waiting times, optimizing resource allocation, and improving the overall responsiveness of housing services. By addressing these critical issues, Toronto can make significant strides towards reducing housing inequities and ensuring that all residents have access to adequate and affordable housing. This comprehensive approach will not only address the immediate needs but also contribute to the long-term sustainability and resilience of the city's housing system.

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