Short Term Rentals Registrations*

Exploring the property registrations in Toronto's 25 Wards.

Tayedza Allison Chikumbirike

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Short-term rentals have become increasingly popular, especially in major cities like Toronto where there are multiple opportunities for tourism. This report investigates the short-term rental registrations in Toronto's 25 wards to determine where one is more or less likely to find a short-term rental. With further investigation, this data could explore more on the characteristics of the 25 wards to help tenants and property owners determine where they would like to interact with short-term rentals.

Introduction

As digitization increased our access to various forms of media and technology, short-term rentals have become increasingly popular (Canada 2019). Short-term rentals refer to the rental of properties–apartments, rooms, houses–for a short period of time (Toronto, n.d.). The City of Toronto defines short-term as less than 28 days. These rentals are typically distributed on online platforms such as Airbnb as they make these properties more accessible to foreigners and local citizens. Furthermore, these platforms facilitate smoother connections as they easily connect potential tenants with property owners.

This data set is important to explore because we are able to gain a better understanding of information that may be valuable to tenants and property owners. This is a point of interest because the data provide insights into what residential areas are more or less popular with short-term rentals along with the characteristics of these various locations. I will be exploring if the data provided by The City of Toronto is sufficient enough for tenants and property owners to gauge a better understanding of residential areas with short-term rentals.

*Code and data are available at: insert URL here

Data

In order to explore more about the short-term rental properties that were registered in Toronto, I used a dataset from Open Data Toronto (Gelfand 2022). This data is a collection of all the rentals that are registered through the City of Toronto. It contains 6,509 different properties and each of these properties contains a unique property id, registration number, postal code, ward number, and ward name. Toronto has established 25 different wards which are indicated in the data. I was able to clean this raw data and extract relevant information for my analysis using **R** (R Core Team 2022), **dplyr** (R. F. Wickham Hadley and Müller 2023) **janitor** (Sam Firke [aut 2023), **tidyr** (H. Wickham and Girlich 2022) and **tidyverse** (H. Wickham et al. 2019).

The first step to cleaning the data was determining what columns I wanted to keep versus eliminate. I eliminated the unique property id and registration number because those are not recognizable forms of identification. Instead, I chose to keep the ward name, and postal code. Next, I used the **group_by** function to group all of the properties from the same ward together. This made the process of determining how many properties are in each ward easier once I applied the **count** function (R. F. Wickham Hadley and Müller 2023). Lastly, I removed all the properties that didn't specify a ward name as well as re-group properties from the same ward name but contained varying character spacing (H. Wickham and Girlich 2022).

Table 1: Number of Short Term Rental Registrations per Area

Ward Name	Number of Registered Properties
Beaches-East York	264
Davenport	412
Don Valley East	82
Don Valley North	143
Don Valley West	108
Eglinton-Lawrence	129
Etobicoke Centre	137
Etobicoke North	95
Etobicoke-Lakeshore	261
Humber River-Black Creek	102
Parkdale-High Park	315
Scarborough Centre	91
Scarborough North	50
Scarborough Southwest	162
Scarborough-Agincourt	85
Scarborough-Guildwood	85
Scarborough-Rouge Park	82
Spadina-Fort York	1759
St.Paul's	210
Toronto Centre	576
Toronto-Danforth	350
University-Rosedale	495
Willowdale	251
York Centre	115
York South-Weston	147

Table 1 was created using **knitr** once the dataset was cleaned (Xie 2023). This table shows the list of the 25 different wards in Toronto sorted in alphabetical order along with the number of rentals registered in that specific ward. Using **ggplot**, I created a flipped column graph which creates a visual aspect of the data thus making it easier to better understand which wards have more or fewer registrations (H. Wickham 2016).

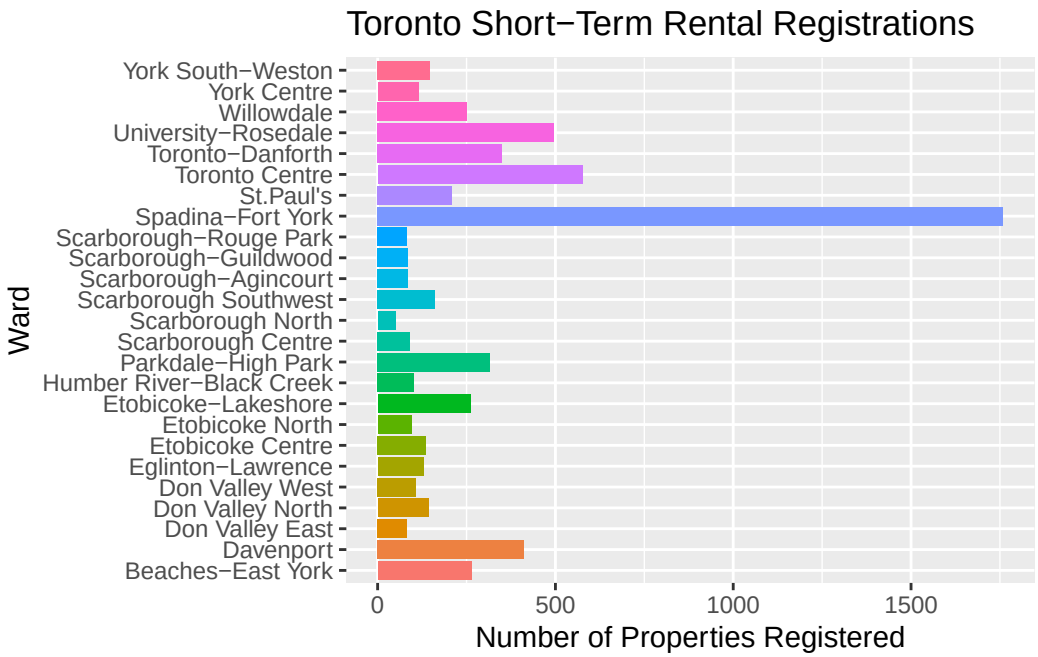

Figure 1: Graph of Short Term Rental Registrations per Ward

Results

Looking at Figure 1, we can see that ward Spadina-Fort York has the most short-term rental registrations with 1,759 properties. This is 1,183 more registrations than Toronto Center which is the ward with the second-highest amount of registrations at 576 properties. To better understand the distribution of properties, the pie chart below shows the number of registrations that the 5 largest wards had in comparison to the lower 20 wards. Those top five in descending order are Spadina-Fort York, Toronto Center, University-Rosedale, Davenport, and Toronto-Danforth.

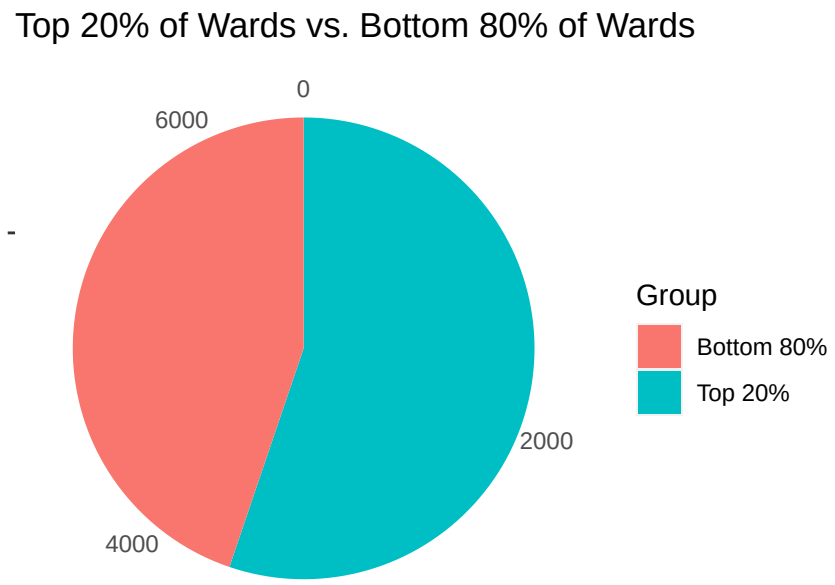

Figure 2: Registration comparison of the top 20% vs. the lower 80%

Looking at Figure 2, the five highest wards consisted of 3592 registered properties and the lower 20 wards consisted of 2914 registered properties. This information is useful to both tenants and property owners. By understanding this data, prospective tenants will be able to see which wards in Toronto are more likely to have short-term rental availability for them. Additionally, they are able to estimate how populated a specific area may be. This information is valuable to prospective property owners who are looking to rent out their properties. For example, they can consider registering a property in the top 20% of wards as they can conclude that those areas are fairly popular when it comes to short-term rentals. Furthermore, they can consider registering a property in the lower 80% of wards because they know that there aren't as many properties to compete with thus creating better access to prospective tenants.

Conclusion

Statistics gathered regarding short-term rental registrations in Toronto is extremely valuable to both tenants and property owners as they are provided with greater insights on where to purchase/ find potential properties that suit their needs. Considering that short-term rentals are becoming increasingly popular through the use of online platforms such as Airbnb, I think it is important to consider adding more information regarding the wards themselves. This could include exploring the wards in more depth by including information such as ward population.

This way prospective tenants and property owners better understand their short-term rental locations.

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