

URBAN FINDINGS

The Youthification of Tall Building Neighbourhoods: An Analysis of the Age Composition of Different Housing Market Segments

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Keywords: youthification, age, housing, cities, market segmentation

<https://doi.org/10.32866/001c.167540>

Findings

We segment the housing market into clusters using dwelling type, tenure, and number of rooms, and analyze the population age distribution of the clusters in Canadian cities. We find four clusters: owned single-detached houses, low-rise rented apartments, tall building rented apartments, and owned attached dwellings (townhouses, duplexes, and semi-detached). The tall building cluster shows the most pronounced differences in age, has the highest share of young adults and is the only cluster to see an increase in young adults over a 40-year period. Shares of older cohorts increased in the single-detached and attached clusters. We find evidence of youthification of tall building neighbourhoods as young adults are channelled into higher density neighbourhoods by structural pressures shaping cities.

1. QUESTIONS

The location of different age groups has important implications for the social composition of cities. Studies of young adults observe a “youthification” effect as young adults are more likely to live in higher density neighbourhoods and move out to suburbs as they age keeping the higher density neighbourhoods “forever young” (Moos 2016; Lee 2022; Lee et al. 2024). Youthification intersects with gentrification and studentification but also operates as its own process (Moos et al. 2019; Revington et al. 2023). Youthification has been primarily studied in North America but also increasingly in different international contexts (Cocheci and Mitrea 2018; Shani and Bar-Haim 2026).

Although it is common to study residential geographies, no prior study has examined the age composition of different housing market segments explicitly. The association with young adults can reveal the ways in which certain housing market segments may act as “mechanisms of youthification” (Ma et al. 2018; Revington 2022). We ask:

How is the housing market segmented into different types of clusters?

What is the age composition of different housing market clusters?

We hypothesize that there is clear differentiation in the age composition among the different segments of the housing market with tall building neighbourhoods containing the highest share of young adults. We anticipate

that findings will show the aging of the population in single-detached dwelling neighbourhoods and the youthification of tall building neighbourhoods.

2. METHODS

We use k-means cluster analysis to segment the housing market. A form of unsupervised machine learning, k-means cluster analysis categorizes data that are nearest to a defined centroid. The centroid is realigned and data re-categorized until the process reaches convergence (i.e., within-cluster variation is minimized). The number of clusters is defined by the user a priori. Four clusters are defined because they provide a good balance between minimizing within-cluster variation and producing meaningful and interpretable housing market segments.

We combine data spanning a 40-year period across Canada's 20 largest census metropolitan areas (CMAs). The cluster analysis combines the 1981, 1991, 2001, 2011, 2016, and 2021 census data at the census tract (CT) level. This provides a combined data set of 30,678 observations (i.e., CTs) as a basis to determine the segmentation of the housing market. We use eight variables capturing tenure, dwelling type and dwelling size. For tenure we differentiate the percentage owned versus rented dwellings in a tract. Dwelling type is categorized as single-detached, single-attached, apartment in a duplex, apartment in buildings with fewer than 5 storeys, and apartment in buildings with five or more storeys. For dwelling size, we use the average number of rooms. This approach to housing market segmentation is unique for focusing on dwelling stock characteristics not price, rent, or turnover as is sometimes done.

Variables are converted to z-scores for the cluster analysis. The z-scores are generated by comparing an individual CT's value on a specific variable to the average for that variable within the same CMA and census year. This is done to prevent creating clusters that are only found in one CMA or one census year. Finally, we identify the age composition of the different clusters in 2021 compared to 1981.

3. FINDINGS

As shown in [Table 1](#), the first cluster, Low-Rise, is characterized by a higher share of rented apartments in buildings that have fewer than five storeys and a lower average number of rooms. The second cluster, Single-Detached, is characterized by owned single-detached dwellings with a higher average number of rooms. The third cluster, Tall Building, is characterized by rented apartments in buildings that have five or more storeys and a lower average number of rooms. The fourth cluster, Attached, is characterized as attached dwellings including townhouses, semi-detached houses, and duplexes as defined by the Canadian census. The single-detached dwelling is the most

Table 1. Dwelling Characteristics of Housing Market Clusters

20 Largest CMA's	2021 (percent)					2021 / 1981 (ratio)				
	All CTs	Low-Rise	Single-Detached	Tall Building	Attached	All CTs	Low-Rise	Single-Detached	Tall Building	Attached
% Owned	63	46	84	35	73	1.17	1.04	1.02	1.46	1.08
% Rented	37	54	16	65	27	0.80	0.97	0.89	0.86	0.84
% Single detached house	43	25	74	7	42	0.94	0.71	0.94	0.45	0.84
% Single attached	14	10	10	6	30	1.05	0.74	1.29	0.68	1.18
% Duplex	6	12	5	2	4	1.18	1.34	2.07	0.69	1.16
% Apartment, less than 5 storeys	21	42	8	18	17	1.01	1.30	1.25	0.80	1.35
% Apartment, 5 or more storeys	16	11	2	67	7	1.06	1.11	0.75	1.33	0.86
Average number of rooms per dwelling	6	5	7	4	6	1.06	0.98	1.09	0.89	1.01
		0	Low - High	100			0.01	Low-High	2.00	

Calculated using Statistics Canada census data.

common dwelling type at 43 percent of all dwellings followed by apartments with fewer than 5 stories at 21 percent and apartments with five or more stories at 16 percent ([Table 1](#)).

The percent owning their dwelling is highest in the single-detached and attached clusters (84 and 73 percent respectively), and lowest in the low-rise and tall building apartment clusters (46 and 35 percent respectively). Our segmentation of the housing market shows the high degree of association between tall building neighbourhoods and renting, and single-detached dwelling neighbourhoods and owning.

[Table 2](#) shows the age composition of the 20 largest CMA's, and [Table 3](#) for the Toronto, Montreal, and Vancouver CMA's separately. The largest individual cohorts are the 25-34 and 35-44 year olds, followed closely by the 45-54 and 55-64 year olds. The smallest cohort are the 0-4 year olds.

The second to the fifth columns in [Tables 2](#) and [3](#) show the age composition of each of the housing market clusters. In all CMA's combined, the low-rise apartment cluster has relatively higher shares of young adults and lower shares of teenagers. This is similar across the three largest CMA's. The single-detached cluster is most like the average across all CTs but shows some higher relative values of children and middle-aged and older adults. Lowest are the 25-34 year olds in the single-detached cluster.

The tall building cluster shows the most pronounced differences in age composition compared to other clusters. The tall building cluster has relatively higher shares of 20-24 year olds and 25-34 year olds and lower shares of children. Across all 20 CMAs, the shares of 45 to 69 year olds are lower than the CT average but the share 70 years and over slightly higher.

The largest increase over time has occurred among the older cohorts with the aging of the population. Shares of older cohorts increased in the single-detached and attached clusters. The tall building cluster was the only cluster to see an increase in young adults 25–34 years of age between 1981 and 2021, although it was only a slight increase in magnitude. The cohorts aged 35 to 44 and 70 and older also increased within the tall building cluster.

There is a clear age structure visible in the housing market with the tall building segment most directly defined by young adults. There is a strong link between tenure and housing types, as single-detached dwellings are linked to ownership and taller building clusters to renting. We find evidence of youthification as young adults continue to be associated with the higher density dwelling types.

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ACKNOWLEDGMENTS

We would like to thank the participants at the American Association of Geographers conference in Detroit for comments on earlier drafts of this work. We acknowledge the financial support from the Canada Social Sciences and Humanities Research Council grant on high-rises led by Ute Lehrer at York University. We also thank the peer-reviewers for their helpful comments and careful review.

Submitted: April 15, 2026 AEST. Accepted: August 18, 2026 AEST. Published: August 25, 2026 AEST.

Table 2. Age Composition of Housing Market Clusters, 20 Largest CMAs

20 Largest CMAs	2021 (percent)					2021 / 1981 (ratio)				
	All CTs	Low- Rise	Single- Detached	Tall Building	Attached	All CTs	Low- Rise	Single- Detached	Tall Building	Attached
% Aged 0-4 years	5	5	5	4	5	0.74	0.82	0.67	0.84	0.66
% Aged 5-9 years	6	5	6	4	6	0.83	0.88	0.77	0.86	0.74
% Aged 10-14 years	6	5	7	3	6	0.78	0.74	0.77	0.72	0.74
% Aged 15-19 years	6	5	6	4	6	0.61	0.53	0.65	0.54	0.64
% Aged 20-24 years	6	7	6	8	6	0.63	0.59	0.72	0.66	0.67
% Aged 25-34 years	14	17	11	22	13	0.79	0.95	0.66	1.08	0.69
% Aged 35-44 years	14	14	13	15	14	1.09	1.27	0.91	1.31	1.01
% Aged 45-54 years	13	12	14	11	13	1.20	1.10	1.25	1.05	1.32
% Aged 55-64 years	13	13	15	11	13	1.48	1.28	1.73	1.09	1.85
% Aged 65-69 years	5	5	6	5	5	1.59	1.34	2.04	1.07	2.24
% Aged 70 years and over	12	12	12	13	11	1.95	1.71	2.56	1.31	3.06
		0	Low - High	100			0.01	Low-High	4.00	

Calculated using Statistics Canada census data.

Table 3. Age Composition of Housing Market Clusters, 3 Largest CMAs

Toronto CMA	2021 (percent)					2021 / 1981 (ratio)				
	All CTs	Low-Rise	Single-Detached	Tall Building	Attached	All CTs	Low-Rise	Single-Detached	Tall Building	Attached
% Aged 0-4 years	5	5	5	4	5	0.72	0.74	0.74	0.75	0.62
% Aged 5-9 years	5	5	6	4	6	0.79	0.79	0.81	0.80	0.68
% Aged 10-14 years	6	5	6	4	6	0.76	0.71	0.79	0.69	0.72
% Aged 15-19 years	6	5	7	4	6	0.65	0.57	0.67	0.56	0.70
% Aged 20-24 years	7	7	7	7	7	0.71	0.64	0.80	0.64	0.81
% Aged 25-34 years	15	16	12	23	13	0.83	0.88	0.78	1.08	0.71
% Aged 35-44 years	14	14	13	16	14	1.04	1.17	0.90	1.26	0.93
% Aged 45-54 years	14	13	15	12	14	1.18	1.14	1.13	1.07	1.35
% Aged 55-64 years	13	13	14	11	13	1.46	1.37	1.47	1.18	1.90
% Aged 65-69 years	5	5	5	4	5	1.55	1.45	1.70	1.19	2.15
% Aged 70 years and over	11	12	11	11	11	1.89	1.86	2.06	1.46	2.72
Montreal CMA	2021 (percent)					2021 / 1981 (ratio)				
	All CTs	Low-Rise	Single-Detached	Tall Building	Attached	All CTs	Low-Rise	Single-Detached	Tall Building	Attached
% Aged 0-4 years	5	5	5	4	5	0.79	0.93	0.61	1.11	0.74
% Aged 5-9 years	6	5	6	4	6	0.92	1.02	0.75	1.21	0.86
% Aged 10-14 years	6	5	7	3	6	0.83	0.79	0.79	0.91	0.78
% Aged 15-19 years	5	4	6	4	6	0.59	0.49	0.64	0.70	0.58
% Aged 20-24 years	6	7	5	9	5	0.60	0.57	0.67	0.89	0.59
% Aged 25-34 years	14	17	10	20	11	0.77	0.99	0.57	1.00	0.66
% Aged 35-44 years	14	15	14	14	13	1.05	1.26	0.85	1.17	0.91
% Aged 45-54 years	13	12	14	10	13	1.12	0.99	1.34	0.91	1.15

Toronto CMA		2021 (percent)				2021 / 1981 (ratio)				
years										
% Aged 55-64 years	13	12	15	11	14	1.44	1.14	2.24	0.88	1.64
% Aged 65-69 years	5	5	6	5	6	1.58	1.26	2.76	0.87	1.93
% Aged 70 years and over	13	12	12	16	15	2.19	1.86	3.82	1.26	2.93
Vancouver CMA		2021 (percent)				2021 / 1981 (ratio)				
Variable	All CTs	Low-Rise	Single-Detached	Tall Building	Attached	All CTs	Low-Rise	Single-Detached	Tall Building	Attached
% Aged 0-4 years	4	4	4	4	5	0.71	0.70	0.63	1.34	0.71
% Aged 5-9 years	5	4	5	3	6	0.78	0.79	0.73	1.23	0.81
% Aged 10-14 years	5	4	6	2	6	0.73	0.72	0.72	0.92	0.76
% Aged 15-19 years	5	5	6	3	6	0.64	0.60	0.69	0.61	0.64
% Aged 20-24 years	7	7	6	7	6	0.70	0.66	0.85	0.55	0.67
% Aged 25-34 years	16	18	11	25	14	0.85	0.93	0.68	1.09	0.71
% Aged 35-44 years	14	15	12	17	15	1.10	1.32	0.82	1.52	1.08
% Aged 45-54 years	13	13	14	12	14	1.25	1.27	1.26	1.13	1.32
% Aged 55-64 years	13	13	15	12	13	1.38	1.28	1.61	0.97	1.51
% Aged 65-69 years	5	5	6	5	5	1.36	1.17	1.77	0.83	1.67
% Aged 70 years and over	12	12	13	12	11	1.60	1.33	2.47	0.84	2.12
		0	Low - High	100			0.01	Low-High	4.00	

Calculated using Statistics Canada census data. Toronto n=1,222. Montreal n=986. Vancouver n=529.



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