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Do international students and temporary foreign workers pay more than Canadian-born individuals in the rental market?

by Wendy Kei, Feng Hou and Haozhen Zhang

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Abstract

Amid growing concerns in Canada over housing affordability, questions have arisen about non-permanent residents' experience in the Canadian rental market. Some media sources have indicated that non-permanent residents are disproportionately affected by the ongoing housing crisis. This study uses data from the 2021 Census of Population to examine whether international students and temporary foreign workers face higher rental costs than the Canadian-born population (non-immigrants) and longer-term immigrants (those who were admitted more than five years preceding the census year). It also explores the factors contributing to disparities in rental expenses among these groups.

The study shows that, on average, international students paid 10% more in monthly rental costs per rental unit, while temporary foreign workers paid 21% more, compared with Canadian-born individuals living in the same urban area before adjusting for neighbourhood, dwelling and household characteristics. The differences in rental costs observed for temporary foreign workers relative to Canadian-born individuals dropped to 5% when comparing renters with similar household characteristics living in the same neighbourhood and in similar dwellings. The higher rental costs paid by international students within a given urban area (or neighbourhood) can be entirely accounted for by differences in dwelling characteristics, as international students were less likely than Canadian-born individuals to reside in subsidized housing and more likely to live in condominiums and newer buildings.

Keywords: international students, temporary foreign workers, rental cost, neighbourhood

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In recent years, rising concerns over housing affordability in Canada have stimulated interest in exploring non-permanent residents' experience in the Canadian rental market. For instance, media reports have suggested that international students are paying high shelter costs because of limited vacancies in certain specific geographical markets, potential discrimination against newcomers and obstacles in securing affordable housing (CBC News, 2022; Cooke and King, 2023; Rana, 2023, 2024; Triandafyllidou, 2023).

This article uses data from the 2021 Census of Population to examine the association between non-permanent resident type and rental costs in Canada.[1] The focus of this paper is to investigate whether international students and temporary foreign workers pay higher rent than the Canadian-born population (non-immigrants) and longer-term immigrants (those who were admitted more than five years preceding the census year). Because many asylum claimants (those who claimed refugee status in Canada) initially stay in shelters or other transitional accommodations provided by municipalities and non-profit organizations, their experience in the rental market may be different from that of other non-permanent residents. This article uses descriptive statistics and regression models to determine whether the discrepancies in rent paid by international students and temporary foreign workers are associated with their underrepresentation in less expensive housing markets or whether they pay more for similar rental units, compared with Canadian-born individuals and longer-term immigrants. The analysis was conducted at the dwelling level, focusing exclusively on rental dwellings in municipalities with international students and temporary foreign workers (see the "Data description" section for details on the study sample and measures).

On average, international students and temporary foreign workers tend to live in more expensive rental units than the Canadian-born population and longer-term immigrants

Table 1 shows the shelter costs and dwelling characteristics among renter households, by immigrant status. Shelter costs refer to monthly dwelling-related expenses, which include (where applicable) rent and costs of electricity, heat, water and other municipal services. In 2021, the average monthly shelter costs per rental unit were $1,440 for international students and $1,610 for temporary foreign workers. By comparison, the average shelter costs were $1,300 for asylum claimants, $1,510 for recent immigrants who were admitted within the five years preceding the census year, $1,330 for longer-term immigrants and $1,220 for Canadian-born respondents.

1. This study does not include earlier census cycles because the variable on non-permanent resident type is newly added to the 2021 Census of Population file.

Table 1

Shelter costs and dwelling and household characteristics of renter households in municipalities with international students and temporary foreign workers, by immigrant status, Canada, 2021

	International students	Temporary foreign workers	Asylum claimants	Recent immigrants	Longer-term immigrants	Canadian-born individuals
			2021 dollars			
Shelter costs[1]	1,440	1,610	1,300	1,510	1,330	1,220
Location			percent			
Toronto	17.7	24.7	30.8	29.8	34.7	10.5
Montréal	21.4	19.8	38.9	17.1	20.7	18.1
Vancouver	15.8	16.3	5.1	13.1	12.4	6.5
CMAs with a population of 1 million to 2 million	10.0	8.3	10.0	14.7	11.3	11.8
CMAs with a population of 500,000 to 1 million	11.8	7.9	6.3	8.4	7.4	8.1
Other CMAs	16.5	11.9	5.8	10.5	8.5	21.6
Not a CMA	6.9	11.1	3.1	6.5	5.1	23.5
Community and dwelling characteristics						
Percentage of newcomers in the municipality	11.4	11.2	11.8	11.3	11.2	7.7
Percentage of Canadian-born youth in the municipality	6.1	6.0	5.8	5.9	5.8	6.4
			mean			
Proximity to transit	0.09	0.08	0.07	0.07	0.07	0.05
Number of bedrooms	1.90	1.87	1.92	1.92	1.93	1.92
			percent			
Living downtown	25.8	22.3	8.0	16.4	13.3	11.7
Dwelling condition						
Regular maintenance needed	80.6	82.4	74.4	78.0	72.0	69.3
Minor repairs needed	15.5	14.3	18.6	17.3	20.8	23.3
Major repairs needed	3.8	3.3	6.9	4.7	7.1	7.4
Condominium	32.0	33.9	19.6	27.4	18.0	15.7
Subsidized housing	3.5	3.1	11.2	6.9	16.6	10.5
Structural type of dwelling						
Apartments	86.1	82.4	84.5	80.7	80.5	75.9
Other dwelling types	0.2	0.3	0.3	0.3	0.3	0.8
Detached or row houses	13.7	17.3	15.2	19.0	19.2	23.3
Dwelling built within 10 years	27.8	25.9	12.9	19.5	12.4	13.6
Household characteristics			mean			
Age of primary household maintainer	26.4	32.6	40.4	37.8	53.6	49.0
Household size	2.2	2.5	2.9	2.9	2.4	1.8
			percent			
Women	43.9	34.1	35.8	35.0	47.6	53.2
Population group						
Black	11.8	7.4	43.5	18.1	18.0	2.1
Chinese	20.7	8.0	1.2	4.4	6.2	0.8
South Asian	26.8	31.0	11.2	23.2	10.2	0.7
Other racialized groups	26.2	26.5	34.7	35.9	33.2	2.2
White	14.5	27.2	9.3	18.4	32.4	94.2
Recent renter	53.1	46.7	31.5	30.6	14.9	21.2

1. Shelter costs are rounded to the nearest 10.

Note: CMA stands for census metropolitan area.

Source: Statistics Canada, 2021 Census of Population.

Table 1 also presents group differences in selected community, dwelling and household characteristics that may be related to the gap in shelter costs by immigrant status.

The location of the dwelling unit could be an important explanatory factor. In 2021, 33.5% of international students and 41.0% of temporary foreign workers reported their place of residence to be in either the Toronto or Vancouver census metropolitan area (CMA), while 17.0% of the Canadian-born population reported living in one of these two CMAs (see Table 1). These two CMAs reported the highest average monthly rent amounts for a two-bedroom rental apartment in 2021 (Canada Mortgage and Housing Corporation, 2022).[2] Relative to the Canadian-born population, foreign-born respondents were also more likely to live in immigrant-dense municipalities (i.e., municipalities with a higher share of non-permanent residents and recent immigrants).

International students and temporary foreign workers were less likely to access subsidized housing.[3] In 2021, proportionately fewer international students (3.5%) and temporary foreign workers (3.1%) lived in subsidized housing, compared with Canadian-born individuals (10.5%) and longer-term immigrants (16.6%).[4]

The descriptive statistics indicate the possibility that international students and temporary foreign workers lived in dwellings with better conditions than their Canadian-born counterparts, and better conditions tend to be associated with higher shelter costs.[5] A relatively smaller proportion of international students (19.4%) and temporary foreign workers (17.6%) reported living in dwellings that needed major or minor repairs (i.e., beyond the need for regular maintenance). By comparison, 30.7% of Canadian-born respondents and 28.0% of longer-term immigrants indicated the need for major or minor repairs in their rental units.

A higher proportion of international students and temporary foreign workers lived in relatively new dwellings (built within 10 years) than the Canadian-born population and longer-term immigrants. The percentage of respondents living in condominiums was also higher for international students (32.0%) and temporary foreign workers (33.9%), compared with the Canadian-born population (15.7%) and longer-term immigrants (18.0%). Furthermore, international students and temporary foreign workers were more likely to live in the downtown area and close to transit systems than longer-term immigrants and Canadian-born respondents.

International students and temporary foreign workers also had different household characteristics, relative to longer-term immigrants and the Canadian-born population. Table 1 reveals that international students and temporary foreign workers were, on average, younger than all other immigrant status categories. In addition, international students and temporary foreign workers tended to reside in dwellings with a larger household size and were more likely to be recent renter households (households that lived

2. MacIsaac (2023) also shows that neighbourhood variations and rental costs are positively associated using a multivariate analysis.
3. Subsidized housing includes rent geared to income, social housing, public housing, government-assisted housing, non-profit housing, rent supplements and housing allowances. Each province has specific eligibility requirements. International students and temporary foreign workers may not be eligible for these subsidy options because certain provinces may allocate a higher priority to the eligible applicants with the greatest needs, such as seniors, low-income families with children and individuals with disabilities. Provinces generally require applicants to have lived in the province for at least one year and to have filed tax returns for income-testing requirements.
4. These results are similar to those computed by Randle et al. (2021) for recent immigrants using the 2018 Canadian Housing Survey. Randle et al. (2021) show that median shelter costs for recent immigrant households in rented dwellings without a subsidy ($1,180) were higher than the shelter costs for all households in rented dwellings without a subsidy ($1,010) and for recent immigrant households in rented dwellings with a subsidy ($860).
5. MacIsaac (2023) suggests that “location, duration of residence, dwelling type, the number of bedrooms and dwelling condition, as well as whether the dwelling is considered social and affordable housing all affect housing costs borne by renters” (p. 8).

in a different place one year ago), compared with the Canadian-born population. Previous studies (e.g., MacIsaac, 2023; Gorski, 2023) have shown that rental costs, on average, are higher for new renters.

The higher propensity to reside in more expensive rental markets primarily accounts for the higher shelter costs paid by international students and temporary foreign workers

This section of the article uses ordinary least squares regression models to examine whether group differences in shelter costs can be accounted for by group differences in community, dwelling and household characteristics. The estimations use the natural logarithmic transformation of shelter costs as the outcome, and the model coefficients can be interpreted approximately as a percentage change in monthly shelter costs when a particular explanatory variable increases by one unit, while holding other variables constant.[6] Table 2 illustrates the results for four different model estimations, where each specification incorporates CMA and census agglomeration (CA) fixed effects.

Model 1 in Table 2 initiates the analysis by regressing the natural logarithm of shelter costs on a categorical variable for the primary household maintainer's immigrant status, controlling only for CMA and CA fixed effects. Without accounting for dwelling, household and community-related characteristics, results indicate that, on average, international students paid 10% more in monthly shelter costs per rental unit, while temporary foreign workers paid 21% more, relative to the amount paid by the Canadian-born population if they resided in the same CMA or CA. Recent immigrants also paid more than Canadian-born renters, while asylum claimants paid similar amounts as Canadian-born renters.

Model 2 includes dwelling and community characteristics in addition to CMA and CA fixed effects to determine whether international students and temporary foreign workers faced higher shelter costs because of their relative concentration in certain rental market segments. Results show that international students, on average, did not pay higher rent than Canadian-born renters when similar dwellings were compared. However, temporary foreign workers still paid higher rent after controlling for dwelling- and community-related control variables, but the difference dropped by half. Similarly, recent immigrants paid higher rent than the Canadian-born population in similar dwelling types.

Further decomposition analysis reveals that the smaller shares of international students and temporary foreign workers living in subsidized housing and the larger shares living in condominiums and newer dwellings account for a large portion of their higher rental costs, relative to the Canadian-born population.

Model 3 further controls for some household-level characteristics. The results show that with similar community, dwelling and household characteristics, there was no difference in shelter costs between international students and the Canadian-born population, while the gap with the Canadian-born population remained at about 10% for temporary foreign workers, 9% for recent immigrants and 4% for asylum claimants.

6. The coefficients of interest provide the associations between shelter costs and immigrant status. To obtain the exact percentage change in shelter costs, one would need to take the exponential function of the coefficient, minus 1. For example, the coefficient 0.192 would give a percentage change of 21.2%, or 0.212. The rest of the section will express the values in terms of percentage changes.

Model 4 further controls for household size. This final model shows whether, on a per capita basis, non-permanent residents paid more for rental housing than the Canadian-born population and longer-term immigrants. The results indicate that international students and asylum claimants paid similar shelter costs per person as the Canadian-born population. Conversely, temporary foreign workers and recent immigrants still faced higher shelter costs per person after controlling for dwelling, community and household characteristics.

Table 2

Ordinary least squares regression models predicting shelter costs for rental units in municipalities with international students and temporary foreign workers, controlling for census metropolitan area and census agglomeration fixed effects, 2021

	Model 1		Model 2		Model 3		Model 4	
	coefficient	standard error	coefficient	standard error	coefficient	standard error	coefficient	standard error
Immigrant status (reference: Canadian-born individuals)								
International students	0.093 ***	0.003	-0.027 ***	0.003	0.000	0.003	-0.003	0.003
Temporary foreign workers	0.192 ***	0.003	0.080 ***	0.002	0.100 ***	0.002	0.084 ***	0.002
Asylum claimants	0.001	0.005	-0.009 *	0.004	0.038 ***	0.004	0.003	0.004
Recent immigrants	0.101 ***	0.002	0.043 ***	0.002	0.083 ***	0.002	0.048 ***	0.002
Longer-term immigrants	-0.068 ***	0.001	-0.037 ***	0.001	-0.004 **	0.001	-0.021 ***	0.001
Community and dwelling characteristics								
Percentage of newcomers in the municipality	...	...	0.007 ***	0.000	0.008 ***	0.000	0.008 ***	0.000
Percentage of Canadian-born youth in the municipality	...	...	0.017 ***	0.001	0.016 ***	0.001	0.017 ***	0.001
Proximity to transit	...	...	0.202 ***	0.008	0.193 ***	0.008	0.217 ***	0.008
Living downtown (reference: not living downtown)	...	...	0.062 ***	0.001	0.059 ***	0.001	0.064 ***	0.001
Dwelling condition (reference: major repairs needed)								
Regular maintenance needed	...	...	0.055 ***	0.002	0.044 ***	0.002	0.050 ***	0.002
Minor repairs needed	...	...	0.032 ***	0.002	0.027 ***	0.002	0.030 ***	0.002
Condominium (reference: not condominium)	...	...	0.123 ***	0.001	0.118 ***	0.001	0.120 ***	0.001
Subsidized housing (reference: not subsidized housing)	...	...	-0.612 ***	0.001	-0.605 ***	0.001	-0.609 ***	0.001
Dwelling type (reference: detached or row houses)								
Apartments	...	...	-0.117 ***	0.001	-0.116 ***	0.001	-0.104 ***	0.001
Other dwelling types	...	...	-0.136 ***	0.005	-0.136 ***	0.005	-0.125 ***	0.005
Dwelling built within 10 years (reference: older dwellings)	...	...	0.260 ***	0.001	0.246 ***	0.001	0.246 ***	0.001
Number of bedrooms	...	...	0.148 ***	0.000	0.151 ***	0.000	0.115 ***	0.001
Household characteristics								
Age of primary household maintainer	...	...	...	...	0.001 ***	0.000	0.001 ***	0.000
Women (reference: men)	...	...	...	...	-0.008 ***	0.001	-0.001	0.001
Population group (reference: White)								
Black	...	...	...	...	-0.099 ***	0.002	-0.115 ***	0.002
Chinese	...	...	...	...	-0.052 ***	0.002	-0.048 ***	0.002
South Asian	...	...	...	...	-0.064 ***	0.002	-0.093 ***	0.002
Other racialized groups	...	...	...	...	-0.035 ***	0.001	-0.058 ***	0.001
Recent renter household	...	...	...	...	0.119 ***	0.001	0.126 ***	0.001
Household size	...	...	...	...	...	...	0.054 ***	0.000
Census metropolitan area and census agglomeration fixed effects	Yes		Yes		Yes		Yes	
Model R squared	0.201		0.498		0.508		0.517	

... not applicable

* significantly different from reference category ($p < 0.05$)

** significantly different from reference category ($p < 0.01$)

*** significantly different from reference category ($p < 0.001$)

Source: Statistics Canada, 2021 Census of Population.

A potential shortcoming of the model estimates in Table 2 is that rental prices can vary considerably across different neighbourhoods within a large urban area. This variation could lead to higher average shelter costs for international students and temporary residents if they tend to reside in more expensive neighbourhoods. To account for this possibility, the model specifications in Table 3 adjust for neighbourhood fixed effects. These fixed effects include census tracts for CMAs and for CAs that have census tracts, and census subdivisions (also referred to as municipalities in this article) for remaining geographical regions.[7]

The results in Model 1 show that international students faced approximately 7% higher shelter costs, while temporary foreign workers faced about 16% higher costs, compared with the Canadian-born population in the same neighbourhood. These differences were less pronounced than those observed when controlling for CMA and CA fixed effects, as shown in Table 2, yet they remained statistically significant. The results for international students in subsequent models largely align with those in Table 2, except for Model 3, where international students paid less for shelter costs after controlling for similar community, dwelling and household characteristics. For temporary foreign workers, the difference in shelter costs was smaller in Table 3 than in Table 2, but still statistically significant.[8] When differences in neighbourhood, dwelling and household characteristics were adjusted for, temporary foreign workers still paid about 5% more than Canadian-born renters.

Interpreting these estimates with adjustments for neighbourhood fixed effects requires caution. It is plausible that international students and temporary foreign workers may cluster in specific neighbourhoods because of factors like housing availability or proximity to educational campuses (Mocanu and Tremacoldi-Rossi, 2023; Moraga et al., 2019).[9]

Overall, results from tables 1 to 3 imply that the higher shelter costs paid by international students were associated with their underrepresentation in less expensive rental markets. However, temporary foreign workers still faced higher shelter costs even after controlling for these rental market characteristics.

7. Model estimation results are similar to those in Table 2 if census subdivision fixed effects are included instead for all geographic regions.
8. Models 2 to 4 in Table 3 exclude four community-level variables included in Table 2. When the neighbourhood fixed effects are controlled for, the percentage of newcomers (non-permanent residents and recent immigrants) and the percentage of Canadian-born youth in the municipality are not statistically significant. Proximity to public transit and downtown location have different signs from those in Table 2, likely because of high correlation with the neighbourhood fixed effects. The exclusion of these four variables in Table 3 did not change the model R-squared values or the group differences in shelter costs by immigrant status.
9. For example, Mocanu and Tremacoldi-Rossi (2023) show that international students in the United States are located near their university campus; 70% of all students live within two miles of campus. If the model estimations include only the three largest CMAs (Montréal, Toronto and Vancouver), the gaps in rental costs for international students and temporary foreign workers, relative to Canadian-born renters, would be about 2 to 3 percentage points larger than those in Table 3, if only location, dwelling and community characteristics were controlled for. When household characteristics are further adjusted in models 3 and 4, the model results with only the three largest CMAs are similar to those in Table 3.

Table 3
Ordinary least squares regression models predicting shelter costs for rental units in municipalities with international students and temporary foreign workers, controlling for neighbourhood fixed effects, 2021

	Model 1		Model 2		Model 3		Model 4	
	coefficient	standard error	coefficient	standard error	coefficient	standard error	coefficient	standard error
Immigrant status (reference: Canadian-born individuals)								
International students	0.069 ***	0.003	-0.018 ***	0.003	-0.018 ***	0.003	-0.023 ***	0.003
Temporary foreign workers	0.145 ***	0.003	0.072 ***	0.002	0.066 ***	0.002	0.049 ***	0.002
Asylum claimants	0.058	0.005	0.049 ***	0.004	0.057 ***	0.004	0.024 ***	0.004
Recent immigrants	0.085 ***	0.002	0.048 ***	0.001	0.056 ***	0.002	0.022 ***	0.002
Longer-term immigrants	-0.044 ***	0.001	-0.024 ***	0.001	-0.011 ***	0.001	-0.027 ***	0.001
Dwelling characteristics								
Dwelling condition (reference: major repairs needed)								
Regular maintenance needed	...	...	0.038 ***	0.001	0.030 ***	0.001	0.036 ***	0.001
Minor repairs needed	...	...	0.021 ***	0.002	0.018 ***	0.002	0.020 ***	0.002
Condominium (reference: not condominium)	...	...	0.093 ***	0.001	0.089 ***	0.001	0.090 ***	0.001
Subsidized housing (reference: not subsidized housing)	...	...	-0.563 ***	0.001	-0.557 ***	0.001	-0.561 ***	0.001
Dwelling type (reference: detached or row houses)								
Apartments	...	...	-0.100 ***	0.001	-0.100 ***	0.001	-0.087 ***	0.001
Other dwelling types	...	...	-0.116 ***	0.005	-0.116 ***	0.005	-0.105 ***	0.005
Dwelling built within 10 years (reference: older dwellings)	...	...	0.229 ***	0.001	0.217 ***	0.001	0.217 ***	0.001
Number of bedrooms	...	...	0.155 ***	0.000	0.157 ***	0.000	0.120 ***	0.000
Household characteristics								
Age of primary household maintainer	...	...	...	...	0.001 ***	0.000	0.001 ***	0.000
Women (reference: men)	...	...	...	...	-0.010 ***	0.001	-0.003 ***	0.001
Population group (reference: White)								
Black	...	...	...	...	-0.037 ***	0.002	-0.050 ***	0.002
Chinese	...	...	...	...	-0.050 ***	0.002	-0.046 ***	0.002
South Asian	...	...	...	...	-0.011 ***	0.002	-0.035 ***	0.002
Other racialized groups	...	...	...	...	-0.016 ***	0.001	-0.037 ***	0.001
Recent renter household	...	...	...	...	0.107 ***	0.001	0.113 ***	0.001
Household size	...	...	...	...	...	...	0.055 ***	0.000
Neighbourhood fixed effects	Yes		Yes		Yes		Yes	
Model R squared	0.348		0.566		0.572		0.582	

... not applicable

*** significantly different from reference category ($p < 0.001$)

Source: Statistics Canada, 2021 Census of Population.

Summary

This article examined whether international students and temporary foreign workers experienced higher rental costs relative to the Canadian-born population and longer-term immigrants, using data from the 2021 Census of Population. This article also explored the factors that were associated with higher rental costs faced by these population groups. The study found that international students' higher shelter costs can be entirely accounted for by the characteristics of their housing because they were less likely to reside in subsidized housing and more likely to live in condominiums and newer dwellings within urban areas or neighbourhoods. However, even after controlling for neighbourhood, dwelling and household characteristics, the study found that temporary foreign workers still faced higher shelter costs, compared with their Canadian-born counterparts.

Data description

The data in this analysis are from the 2021 Census of Population. The analysis is conducted at the dwelling level because the information on shelter costs was collected at this level. This study includes only rental dwellings. To increase the comparability of shelter costs by immigrant status, the computations exclude municipalities that had no international students and temporary foreign workers. The study further excludes dwellings where the primary household maintainer was an Indigenous person, because very few non-permanent residents and immigrants reported their identity as Indigenous. The final sample includes 977,760 dwellings (unweighted counts).

The outcome variable is monthly shelter costs, which include—where applicable—rent and the costs of electricity, heat, water and other municipal services. The analysis is also replicated by using monthly rent as the outcome measure, and the results are broadly similar.

The focal variable is the immigrant status of the primary household maintainer in a dwelling, which refers to whether the individual is a non-immigrant (born in Canada), an immigrant or a non-permanent resident. This study then breaks down the non-permanent resident category into the international student, temporary foreign worker and asylum claimant subcategories, and the immigrant category into the recent immigrant and longer-term immigrant subcategories. International students are non-permanent residents who hold a study permit only, or who hold a work and study permit at the same time. Temporary foreign workers are non-permanent residents who hold a work permit only. Asylum claimants are non-permanent residents who have applied for refugee protection status in Canada and are waiting for a decision on their claim from the Immigration and Refugee Board of Canada. Recent immigrants are those who were admitted to Canada five years or less before the 2021 Census, and longer-term immigrants are those who were admitted to Canada more than five years preceding the 2021 Census.

Multivariate models are used to control for community, dwelling and household characteristics. In Table 2, community-level variables include detailed CMAs and CAs; percentage of newcomers (all non-permanent residents and recent immigrants) in the municipality's total population; percentage of Canadian-born youth (aged 18 to 24) in the municipality; proximity to public transit, which measures the closeness of a dwelling's neighbourhood to any source of public transportation within walking distance of 1 km and is a normalized index with values ranging from 0 to 1, where 0 indicates the lowest proximity and 1 the highest proximity (Statistics Canada, n.d.); and whether a dwelling is located in a city's downtown. Unlike Table 2, Table 3 includes neighbourhood fixed effects and excludes the following control variables: (1) percentage of newcomers in the municipality's total population, (2) percentage of Canadian-born youth in the municipality, (3) proximity to public transit and (4) whether a dwelling is located in the downtown of a city. The neighbourhood fixed effects include census tracts for CMAs and for CAs that have census tracts, and census subdivisions (municipalities) for remaining geographical regions.

Dwelling characteristics include dwelling condition (regular maintenance needed, minor repairs needed and major repairs needed), condominiums, subsidized housing, dwelling type (apartments, detached or row houses, and other dwelling types), period of construction (built within 10 years and older dwellings) and number of bedrooms.

Household characteristics include the primary household maintainer's age, gender, population group (Black, Chinese, South Asian, White and Other racialized groups), recency in the dwelling (lived in a different place one year ago, based on the "mobility status, one year" variable) and household size.[10]

10. See https://www12.statcan.gc.ca/census-recensement/2021/ref/dict/az/definition-eng.cfm?ID=pop111 for more information on the "population group" concept in the 2021 Census.

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