HOUSING RESEARCH REPORT

Socio-economic Inequalities in Housing Issues: Measurement and Beyond

Canada

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Socio-economic Inequalities in Housing Issues: Measurement and Beyond

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Executive Summary

This study puts forward novel measures of poverty-related housing affordability indicators. We design measures akin to the Foster, Greer, and Thorbecke (1984) metric and speak to prevalence, depth and the severity of housing issues related to affordability, hardship, and housing-induced poverty. We adopt the concentration index and the shortfall index in analyzing the socio-economic inequalities of housing issues between different vulnerable groups and follow the decomposition method in Firpo, Fortin, and Lemieux (2018) to identify the proportions of the inequalities that are attributable to the endowment effect and to the structural effect as well as the contribution of each characteristic of the household. We offer insights into the socio-economic inequalities in housing issues in Canada with the use of the 2012 to 2016 Canadian Income Survey (CIS) files.

Résumé

Cette étude propose de nouvelles mesures des indicateurs d'abordabilité des logements en lien avec la pauvreté. Nous concevons des mesures analogues à celle de Foster, Greer et Thorbecke (1984) et nous traitons de la fréquence, de l'ampleur et de la gravité des problèmes liés à l'abordabilité, aux difficultés de logement et à la pauvreté due au logement. Nous adoptons l'indice de concentration et l'indice d'insuffisance pour analyser les inégalités socio-économiques dans les enjeux du logement entre différents groupes vulnérables et adoptons la méthode de décomposition de Firpo, Fortin, et Lemieux (2018) pour déterminer les proportions des inégalités qui sont attribuables à l'effet de dotation et à l'effet structurel ainsi que la contribution de chacune des caractéristiques du ménage. Nous offrons des données sur les inégalités socio-économiques dans les questions de logement au Canada basées sur les données de l'Enquête canadienne sur le revenu (ECR) des années 2012 à 2016.

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1 Introduction

Based on the 2016 Census, almost one fourth of Canadian households lived in dwellings with shelter costs that were not considered affordable, that is the households spent 30% or more of their average income on shelter costs.[1] Housing affordability problems are not evenly distributed among the population. In fact, considerable evidence indicates the existence of inequalities in housing outcomes between groups of differing socio-economic status. For instance, renters are more likely to experience affordability problems—Hulchanski and Shapcott (2004) documented that homeowners had at least twice the income of renters and substantially more wealth. Of all households who spent 30% or more of their income on shelter costs, about 700,000 households (or 63%) were renters.[2] Furthermore, there was a high prevalence of housing affordability problems among seniors living alone, residents of large cities, women and immigrants in 2010.[3]

Affordability problems discussed thus far used the 30% rule of thumb, or the 30% shelter-cost-to-income ratio (STIR), as the housing affordability measure. This ratio approach is considered one of the most widely used housing affordability indicators in both Canada and the U.S., and though its simplicity warrants recognition, there is no theoretical or logical foundation for the ratio that is used (Stone, 2006).

Principal flaws of the ratio approach are well documented. For example, Hancock (1993) observes that a relatively poor household who consumes very little of either housing or other goods can still have housing costs that are affordable. Simply put, it fails to acknowledge differences in income level that constitute the actual

[1]The shelter costs herein include mortgage payments, rent, the cost of electricity, heat, water, and other municipal services, property taxes, and condominium fees.

[2]Canadian Housing Observer: CMHC (2015).

[3]Statistics Canada publication 82-229-X.

dollar amount of the 30%. Furthermore, it is unclear how the ratio approach should be adapted for households of different sizes and compositions and for different geographical regions.

In this study, we propose two novel classes of housing issue indicators: the first being a class of affordability issue indicators based on the traditional rule of thumb and the residual income approach (Stone, 2006) and the second being a class of housing-induced poverty indicators. In particular, our definition of housing problem measures is akin to the Foster, Greer, and Thorbecke (1984) (FGT) distribution-sensitive indices, focusing on the existing notion of affordability issues (the golden rule of thumb), non-shelter hardship (or hardship) and housing-induced poverty. We put forward indices, applying these housing issue indicators to the most widely used measures in the socio-economic inequality literature—the concentration index and the shortfall index.[4] These measures enable us to describe socio-economic inequality not only in housing issue status (or prevalence) but also in its depth and severity. It is worth noting that we deliberately include the rule-of-thumb affordability threshold in our analysis by means of comparison.

The hardship indicator and the housing-induced poverty indicator apply the residual income approach's definition of housing affordability issues (Stone, 2006)—a household is considered to have affordability problems if it is unable to purchase a minimally acceptable basket of non-shelter goods after having paid all the housing expenditures. We use the non-shelter portion of the Market Basket Measure (MBM), Canada's official poverty line, which measures the cost of a specified basket of goods and services representing a modest, basic standard of living as the proxy for a mini-

[4]This index was originally labelled "achievement" index by Wagstaff (2002) in the context of socio-economic health inequality. However, since housing issues are "bad," we will refer to these indices as "shortfall" indices.

mally acceptable basket of non-shelter goods. The MBM will be discussed in detail in a later section.

Our objective is to measure the distribution of housing issues and analyze socio-economic inequalities in the distribution of housing issues.[5] Specifically, we decompose differences in the distribution of housing issues of various socio-economic and demographic groups. We follow the decomposition method in Firpo, Fortin, and Lemieux (2018), Firpo, Fortin, and Lemieux (2009), and Fortin, Lemieux, and Firpo (2011) by replacing dependent variables with the recentered influence function (RIF) of the statistic of interest in a regression and subsequently apply a Blinder-Oaxaca (or Oaxaca-Blinder) type decomposition.[6]

A few key contributions of this study merit attention. First, this study is the first to bring together two distinct literatures—the inequality literature and the housing literature—to shed light on the issue of socio-economic inequality in housing affordability issues, housing hardship and housing-induced poverty. Second, this study adds to the theoretical literature of policy impact analysis by extending the work of Heckley, Gerdtham, and Kjellsson (2016) to derive the RIF for the shortfall index.[7] The RIF is useful particularly for a decomposition because it allows any statistic to be expressed as a mean, which implies that any simple standard mean regression tools would be appropriated in linking individual characteristics to a statistic.[8]

We exploit the Canadian Income Survey (CIS) from 2012 to 2016 to empirically estimate the aforementioned indices and decompose socio-economic inequalities in

[5]We refer to the term housing issues as any combination of the affordability problem, the housing hardship problem and the housing-induced poverty problem.

[6]We discuss the RIF in detail in Section 2.

[7]See Essama-Nssah and Lambert (2012) for a detailed discussion of how influence functions may be used to assess impacts of public policy as well as a catalogue of influence functions and the associated RIF.

[8]See Fortin, Lemieux, and Firpo (2011) for RIF regression methods.

housing affordability issues, housing hardship and housing-induced poverty by immigrant status, urban/rural area status, senior status, marital status, single-parent status, and housing tenure status. We provide results and discuss indices addressing the prevalence, depth and severity of housing problems.

This study is organized as follows. Section 2 describes housing issue indicators and the methodology applied in the regression analysis and decomposition. Section 3 provides a summary of the data used in this study, section 4 discusses the socio-economic housing inequalities in Canada, and section 5 concludes.

2 Measuring socio-economic disparities in housing issues

2.1 Housing issue indicators

Before assessing socio-economic disparities in housing issues, one needs to define a housing issue indicator at the individual household level. For mathematical consistency, in this report, we focus on cardinal ratio-scale indicators.[9] We construct two class of indicators, the first being a class of affordability issue indicators and the second a class of housing-induced poverty indicators.

2.1.1 Affordability issue indicator

We consider that a household faces an affordability issue if it spends more than 30% of its gross income on housing.[10] Let y_i and h_i represent the total income and housing expenditure of household i, respectively. We can define, for household i, the following

[9] See Makdissi and Yazbeck (2014) and Makdissi and Yazbeck (2017) for issues related to non-ratio-scale variables.

[10] Given the many disadvantages of the 30% threshold discussed thus far, we include this measure to understand the marginal impact of the indicator.

affordability issue indicator:

$$a_i(\alpha) = \begin{cases} \left(\frac{h_i}{y_i} - 0.3\right)^{\alpha} & \text{if } \frac{h_i}{y_i} \geq 0.3 \\ 0 & \text{if } \frac{h_i}{y_i} < 0.3 \end{cases}, \tag{1}$$

where $\alpha \in \{0, 1, 2\}$ is a parameter of aversion to affordability issues. The structure of this indicator is reminiscent of the Foster, Greer, and Thorbecke (1984) individual contributions to aggregate poverty. We follow Bilger, Kruger, and Finkelstein (2017) and use these individual contributions to look at socio-economic disparities in the distribution of housing issues. When $\alpha = 0$, $a_i(\alpha)$ becomes a binary variable taking a value of one if the household spends 30% or more of its income on housing and a value of 0 otherwise. When $\alpha = 1$, $a_i(\alpha)$ accounts for the depth of the housing issue. However, a marginal change in the proportion of income allocated to housing has the same marginal impact regardless of the distance from the 30% threshold. When $\alpha = 2$, $a_i(\alpha)$ also takes into account the severity of the issue, that is, the impact of a marginal change in the proportion of income allocated to housing increases with the depth of the housing issue.[11]

2.1.2 Housing-induced poverty indicator

The objective of this indicator is to give a picture of housing-induced poverty. This indicator will be based on the Market Basket Measure (MBM) that became Canada's official poverty line in August 2018. There are two advantages in using the MBM. The first is that it is adjusted to account for price differentials between Canada's regions. The second is that, by construction, it is possible to evaluate its non-shelter component, NSMBM. The reason for splitting the measure in two components lies in the transaction costs associated with a change in housing consumption, making this

[11] This is related to the idea that one has to account for health levels in addition of income ranks when comparing socio-economic health inequalities. This issue was pointed out by Makdissi and Yazbeck (2016), who propose a different solution.

component of the basket stickier than other components. The average rental cost in a region may allow a household to be out of poverty; however, because there is a variability in the distribution of rental prices, if for some reason this household was not able to secure a shelter at the average rental price, it may well end up in poverty although its income is above the MBM of the region. The same phenomenon can also have an impact on the intensity of the poverty level of a poor household. This is exactly the information the person in charge of designing housing policy is interested in.

Let the individual contribution to total poverty be:

$$p_i(\alpha) = \begin{cases} \left(\frac{MBM - y_i}{MBM}\right)^{\alpha} & \text{if } y_i \leq MBM \\ 0 & \text{if } y_i > MBM \end{cases} . \tag{2}$$

This indicator, $p_i(\alpha)$, is the contribution of a household to poverty. Even if housing policy may and should be influenced by concerns about poverty, overall poverty is an issue that is broader in context. The first step in building an indicator that may be useful for the design of a housing policy is to consider the impact of shelter expenses on the residual income (leftover income after shelter expenses that can be spent on other goods). We define the household's residual income as $r_i = y_i - h_i$. This allows us to evaluate a household's individual contribution to the total non-shelter hardship:

$$ns_i(\alpha) = \begin{cases} \left(\frac{NSMBM - r_i}{NSMBM}\right)^{\alpha} & \text{if } r_i \leq NSMBM \\ 0 & \text{if } r_i > NSMBM \end{cases} . \tag{3}$$

This indicator, $ns_i(\alpha)$, gives the contribution of a household to non-shelter hardship. Although useful in the design of housing policy, this information is incomplete since it does not allow for distinction between a household for which the contribution to non-shelter hardship is due to a general lack of income and a household for which the contribution is induced by its shelter spending. We need an additional indicator

that would capture the change of the contribution to total poverty that is induced by shelter costs. Using these two indicators, $p_i(\alpha)$ and $ns_i(\alpha)$, it is possible to build an indicator of housing-induced poverty:

$$hp_i(\alpha) = \begin{cases} ns_i(\alpha) - p_i(\alpha) & \text{if } ns_i(\alpha) \geq p_i(\alpha) \\ 0 & \text{if } ns_i(\alpha) < p_i(\alpha) \end{cases} . \tag{4}$$

For the remainder of this paper, we are interested in both non-shelter hardship, $ns_i(\alpha)$ and housing-induced poverty $hp_i(\alpha)$.[12] As for α, it can be interpreted as a parameter of aversion to poverty, hence $p_i(\alpha)$, $ns_i(\alpha)$ and $hp_i(\alpha)$ have similar properties to $a_i(\alpha)$.

2.2 Social indicators of housing issues

The first aggregate view of affordability issues, non-shelter hardship and housing-induced poverty in society may be obtained by looking at the average value of these indicators in the population: $\overline{a}(\alpha)$, $\overline{ns}(\alpha)$ and $\overline{hp}(\alpha)$. When $\alpha = 0$, these three indicators ($\overline{a}(0)$, $\overline{ns}(0)$ and $\overline{hp}(0)$) simply give the proportion of the population experiencing affordability issues, non-shelter hardship and housing-induced poverty. Also note that when $\alpha = 1$ or 2, it is important to consider the average values of housing issues in the overall population of interest and not just the average values of housing issues among households with housing issues. To illustrate this point, consider the following situation. Imagine a social situation with a subgroup of 10 households experiencing affordability issues in a population of 20 households (i.e. $\overline{a}(0) = 0.5$). Also, assume that the average affordability issue among these 10 households is 0.2. This would yield an average affordability $\overline{a}(1) = 0.2 \times 0.5 = 0.1$. Now imagine that nothing changes among these 10 households but that an additional household, i, in the 10 remaining households starts experiencing affordability issues with $a_i(1) = 0.05$. This would lead to a lower average affordability issue among households with affordability

[12] Note that we use the terms non-shelter hardship and hardship interchangeably.

issues $[(0.2 \times 10 + 0.05)/11 = 0.1864 < 0.2]$ but a higher average of poverty issues among the population $[\overline{a}(1) = (0.2 \times 10 + 0.05)/20 = 0.1025 > 0.1]$. As this clearly constitutes an increase in affordability issues, we clearly want the index to increase following this kind of change. A similar logic could be constructed for $\overline{a}(2)$.

At first glance, using the average may appear as the only reasonable choice. However, a social observer may be concerned with socio-economic disparities in the distribution of housing issues. For instance, assume that household i spends 50% of its income on housing. If we are interested in affordability issues in terms of depth, this yields $a_i(1) = 0.20$. If an analyst considers the average value of the indicator, he or she implicitly assigns a social weight of $1/N$ to this observation. This means that the contribution of this household to social affordability issues is $0.20/N$ regardless of this household's rank in the income distribution. A social observer may be more concerned with an affordability issue at the 5^{th} percentile of the income distribution, where it is probably a real burden on the household's living standard, than at the 45^{th} percentile (of the income distribution), where it may be more linked to a stronger preference of the household for housing spending. When an analyst considers this kind of ethical judgment, he or she is concerned with socio-economic inequalities (disparities) in affordability issues.

Assume that we have N households in our population and that these households are ranked according to their total income, the poorest household being household at rank $1/N$ and the richest one at rank 1. A useful graphical representation of the distribution of housing issues by socio-economic status is the concentration curve. As illustrated in figure 1, the concentration curve displays the cumulative percentage of total housing issues associated with socio-economic ranks 0 to 1. It is similar to the well-known Lorenz curve of income except that the variable we are cumulating

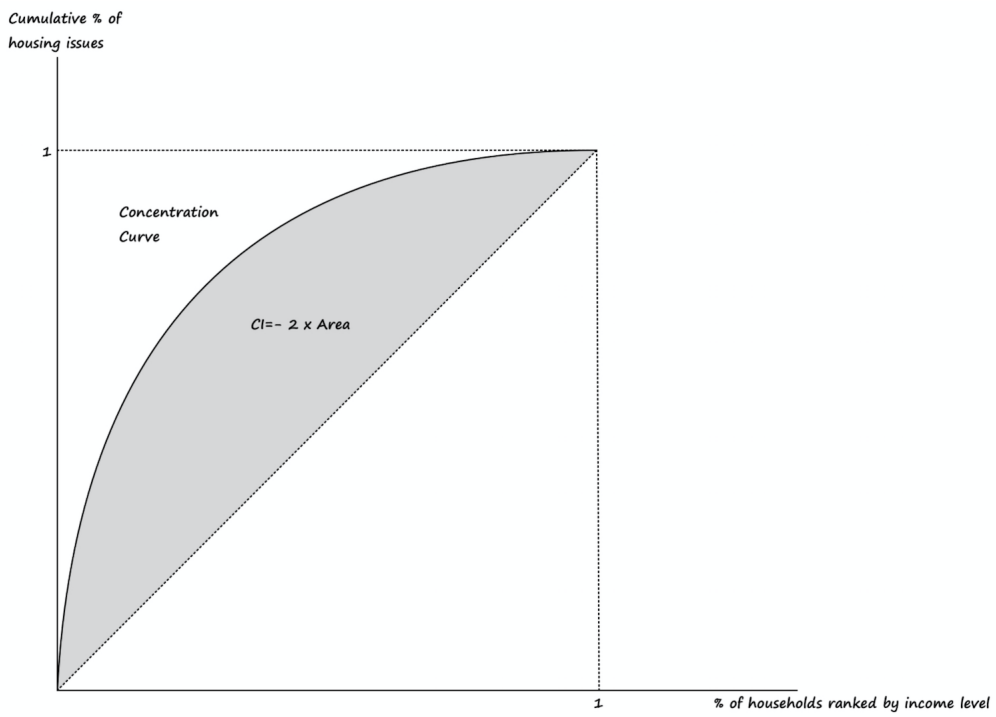

Figure 1: Concentration curve of housing issues

on the y-axis is different from income. For this reason, the concentration curve can be located below or above the diagonal representing perfect socio-economic equality. The well-known Gini index of inequality is defined as twice the area between the Lorenz curve and the line of perfect equality. A similar index, the concentration index, CI, can be derived from the concentration curve. It is also equal to twice the area between the line of perfect equality and the concentration curve when this curve is located below the diagonal and is equal to -2 times this area if the concentration curve is located above the 45-degree line (as in figure 1). The concentration index takes values between -1 and 1. If it is negative, it indicates that the housing issue is more concentrated among poorer households. The more negative it is, the more socio-economic disparities there are in the housing issue of interest. We will compute this concentration index for affordability issues, $CI_{a,\alpha}$, for non-shelter hardship, $CI_{ns,\alpha}$,

and for housing-induced poverty, $CI_{hp,\alpha}$. As pointed out in O'Donnell et al. (2007), this index can be easily estimated by

$$CI_h = \frac{2 \times COV(h, \widehat{F}_y)}{\overline{h}}, \tag{5}$$

where h can be any housing issue indicator, that is, affordability issues, $a(\alpha)$, non-shelter hardship, $ns(\alpha)$, or housing-induced poverty, $hp(\alpha)$, $\overline{h}$ is the expected value of h, and $\widehat{F}_y$ is the natural estimator of the cumulative distribution of income F_y. This natural estimator of the distribution of income is given by $\widehat{F}(y_i) = N^{-1} \cdot \sum_{j=1}^{N} \mathbb{1}(y_j \leq y_i)$.

As pointed out by Wagstaff (2002) in the context of the literature of socio-economic health inequality, a relative inequality index always give an incomplete picture. For instance, one could decrease everyone's housing issue by 10% and this would leave the relative index unchanged. Wagstaff (2002) builds on the income inequality literature and proposes an index of health achievement, A, that depends positively on the average health status and negatively on the value of the health concentration index. In the context of housing issues, this index would be a shortfall index. This shortfall index is denoted by $S_{a,\alpha}$ for affordability issues, by $S_{ns,\alpha}$ for non-shelter hardship and by $S_{hp,\alpha}$ for housing-induced poverty. This index can be easily estimated by

$$S_h = \overline{h}(1 - CI_h). \tag{6}$$

Inspection of equation (6) indicates that the shortfall index increases with an increase in the average housing issue, $\overline{h}$, an increase in socio-economic disparities[13] or an increase in both.

[13]Since the closer CI is to -1, the more socio-economic disparities there are in the society.

2.3 Regression analysis and decomposition

From a policy evaluation perspective, it may be interesting to decompose differences in the values of any of our indices between two demographic groups or two periods of time. In the spirit of the standard Blinder-Oaxaca decomposition, our interest is to assess what proportion of change is due to a change in the distribution of some characteristics of the population (endowment effect) and what proportion is due to a changes in the returns to these characteristics (structural effect).

These decompositions are based on the comparisons of the two actual distributions with counterfactual distributions. In order to perform such decompositions, the analyst relies on regression methods. In the usual Oaxaca-Blinder context, the interest is to decompose the difference in the unconditional average outcome into these two components. A standard regression ($E[Y|X]$) is then the appropriate model. Since we have a distributional concern, we are also interested in decomposing the differences in other functions, $\theta(F_{h,y})$, of the joint distribution of income and housing issues, $F_{h,y}$. These functions are the indices presented in section 2.2.

There are two main approaches in the economics literature to model these decompositions when one is interested in an index of a univariate cumulative distribution of an outcome variable y (for example, the distribution of income). The first type of approach builds on Machado and Mata (2005) and Chernozhukov, Fernández-Val, and Melly (2013) and consists of estimating a model of the conditional cumulative distribution $F_{y|x}$ and then plugging the model $F_y(y) = \int F_{y|x}(y|x)\mathrm{d}F_x(x)$ into the functional $\theta(F_y)$. This approach has the advantage of using a single model of the distribution.

The second approach, proposed by Firpo, Fortin, and Lemieux (2009) consists of estimating a model of the conditional expectation of a recentered influence function

(RIF) of the index of interest. This is the approach we chose to adopt in this paper. We describes the RIF in detail below.

2.3.1 Recentered influence function

The idea underlying this approach is relatively easy to understand. The indices we are using in this paper are functions of the joint distribution of income ranks (F_y) and an indicator of housing issues (a, ns or hp). Let us assume for now that we are interested in socio-economic disparities in housing issues, CI_h. This index is a function of the joint distribution, G_{h,F_y}, of an affordability indicator h and of income ranks, F_y. The influence function of observation i, $IF(h_i, F_y(y_i); CI_h, G)$, represents the effect on CI_h of an infinitesimal contamination of G at point mass $(h_i, F_y(y_i))$. In order to derive formally this influence function, consider the Dirac distribution function with a degenerate probability mass at $(h_i, F_y(y_i))$:

$$\delta(h_0, F_y(y_0)) = \begin{cases} 0 & \text{if } h(\alpha) < h_0(\alpha) \text{ or } F_y(y) < F_y(y_0) \\ 1 & \text{if } h(\alpha) \geq h_0(\alpha) \text{ and } F_y(y) \geq F_y(y_0) \end{cases} . \tag{7}$$

Also consider M, a mixture of distribution G and δ, $M = (1-t)G+t\delta$. The influence function is given by

$$IF(h_i, F_y(y_i); CI_h, G) = \lim_{t \to 0} \frac{CI_h(M) - CI_h(G)}{t} = \frac{\partial}{\partial t} CI_h\left([1-t]G + t\delta\right)\Big|_{t=0} . \tag{8}$$

It is essentially the derivative of CI_h, which measures the marginal impact of a small perturbation in the joint distribution function G on CI_h. One property of the influence function is that $\mathrm{E}[IF(h_i, F_y(y_i); CI_h, G)] = \int_0^\infty \int_0^1 IF(h, F_y; CI_h, G) \mathrm{d}G_{h,F_y}(h, F) = 0$. Firpo, Fortin, and Lemieux (2009) exploit this property and propose to add back the value of the index to the influence function to generate a recentered influence function

$$RIF(a_i(\alpha), F_y(y_i); CI_h, G) = CI_h + IF(h_i F_y(y_i); CI_h, G). \tag{9}$$

Since $\mathrm{E}[IF(h_i, F_y(y_i); CI_h, G)] = 0$, the expected value of this recentered influence function is equal to the index, that is, $\mathrm{E}[RIF(h_i, F_y(y_i); CI_h, G)] = CI_h$. Since $\mathrm{E}[RIF(h_i, F_y(y_i); CI_h, G)] = CI_h$ and $IF(h_i, F_y(y_i); CI_h, G)$ is the directional derivative of CI_h, equation (9) is the leading two terms of a Von Mises (1947) linear approximation of CI_h.

Assume now that we have distribution $F_x(x)$ of a vector of covariates x. By the law of iterated expectations, the index, CI_h, can be rewritten in terms of the conditional expectations of the recentered influence function

$$CI_h = \mathrm{E}[RIF(a, F_y; CI_h, G)] = \int \mathrm{E}[RIF(h, F_y; CI_h, G)|x]\mathrm{d}F_x(x). \quad (10)$$

Similarly, we can derive results for shortfall indices:

$$S_h = \mathrm{E}[RIF(a, F_y; S_h, G)] = \int \mathrm{E}[RIF(h, F_y; S_h, G)|x]\mathrm{d}F_x(x). \quad (11)$$

One advantage of this approach is that once one has derived the mathematical expression for the RIF, the estimation of the model is based on a simple regression framework and is thus very easy to implement. The cost of adopting this approach is that we need a different econometric model for each index. However, since Heckley, Gerdtham, and Kjellsson (2016) have derived the expression of the IF for the health concentration index in a bivariate context, we can use their result to derive an expression of IF for $IF(h_i, F_y(y_i); CI_h, G)$:

$$\begin{aligned} IF(h_i, F_y(y_i); CI_h, G) &= -\frac{h_i}{\overline{h}^2} 2COV(h, F_Y) \quad (12) \\ &\quad + \frac{1}{\overline{h}} \left[-2COV(h, F_Y) + \overline{h} - h_i + 2h_i F_Y(y_i) - 2\frac{1}{N}\sum_{j=1}^{N} h_j \mathbb{1}(y_j \leq y_i) \right], \end{aligned}$$

The last term on the right-hand side of the above equation is just the point estimate of the generalized concentration curve of h (that is, the concentration curve of h times

the expected value of h).

The literature has not derived expression for other influence functions for the health achievement index, which is the counterpart of our shortfall index. However, since $S_h = \overline{h}(1 - CI_h)$, it is relatively straightforward to derive the IF for this index using the expression of the influence function of the concentration index:

$$IF(h_i, F_y(y_i); S_h, G) = (1 - CI_h)(h_i - \overline{h}) - \overline{h} \cdot IF(h_i, F_y(y_i); CI_h, G). \tag{13}$$

Adding the value of the indices to these expression gives us the RIFs:

$$\begin{aligned} RIF(h_i, F_y(y_i); CI_h, G) &= -\frac{h_i}{\overline{h}^2} 2COV(h, F_Y) \\ &\quad + \frac{1}{\overline{h}} \left[\overline{h} - h_i + 2h_i F_Y(y_i) - 2\frac{1}{N} \sum_{j=1}^{N} h_j \mathbb{1}(y_j \leq y_i) \right], \end{aligned} \tag{14}$$

and

$$RIF(h_i, F_y(y_i); S_h, G) = (1 - CI_h)h_i - \overline{h} \cdot IF(h_i, F_y(y_i); CI_h, G). \tag{15}$$

2.3.2 Using RIF regressions to decompose changes in the value of an index

Assume that we want to estimate a regression model of the concentration index of housing issues (a similar logic can be applied to the shortfall index). Also assume that we adopt an ordinary least square (OLS) regression model for our recentered influence function:

$$RIF(h_i, F_y(y_i); CI_h, G) = x_i\beta + \varepsilon_i, \tag{16}$$

where ε_i are independent and identically distributed with mean 0. Let $\widehat{\beta}$ be the estimated vector of coefficients. The value of the index is given by

$$CI_h = \mathrm{E}[RIF(a, F_y; CI_h, G)] = \overline{x}\widehat{\beta}. \tag{17}$$

Consider that we are interested in decomposing the difference in the concentration index of a housing issue between two populations: $CI_h^1 - CI_h^0$. This difference can be rewritten as

$$CI_h^1 - CI_h^0 = \overline{x}_1\widehat{\beta}_1 - \overline{x}_0\widehat{\beta}_0. \tag{18}$$

We impose the conditional independence (ignorability) assumption, that is, we assume that the distribution of unobserved characteristics ε conditional on the observables x is the same in both populations. This assumption allows us to allocate the difference $CI_h^1 - CI_h^0$ to:

1. the difference in the distribution of observed characteristics x (*endowment effect*), and

2. the difference in returns to characteristics: β (*structural effect*).

The difference can thus be rewritten as:

$$CI_h^1 - CI_h^0 = \overline{x}_1(\widehat{\beta}_1 - \widehat{\beta}_0) + (\overline{x}_1 - \overline{x}_0)\widehat{\beta}_0. \tag{19}$$

The first term on the right-hand side of the equation is called the structural effect and the second term, the endowment effect. It is common to consider the endowment effect as the explained part of the difference and the structural effect as the unexplained part. These two effects can further be decomposed to account for each one of the observed characteristics. Assume that we have $m-1$ characteristics, the structural effect can be rewritten as

$$\overline{x}_1(\widehat{\beta}_1 - \widehat{\beta}_0) = \widehat{\beta}_{11} - \widehat{\beta}_{10} + \sum_{k=2}^{m} \overline{x}_{k1}(\widehat{\beta}_{k1} - \widehat{\beta}_{k0}), \tag{20}$$

where $\widehat{\beta}_{k1}$ and $\widehat{\beta}_{k0}$ for $k = 1, ..., m$ are the kth element of $\widehat{\beta}$ for group 1 and 0, respectively, and $\overline{x}_{k1}$ represent the kth element of $\overline{x}_1$. The structural effect associated

with covariate k is given by $\overline{x}_{k1}(\widehat{\beta}_{k1} - \widehat{\beta}_{k0})$. The endowment effect can be rewritten as

$$(\overline{x}_1 - \overline{x}_0)\widehat{\beta}_0 = \sum_{k=2}^{m}(\overline{x}_{k1} - \overline{x}_{k0})\widehat{\beta}_{k0}, \tag{21}$$

and the endowment effect associated with covariate k is given by $(\overline{x}_{k1} - \overline{x}_{k0})\widehat{\beta}_0$.

3 Data

3.1 Canadian Income Survey (CIS)

The data used in this study is Statistics Canada's confidential microdata files—the Canadian Income Survey (CIS) from 2012 to 2016. The CIS is an annual cross-sectional survey containing information on labour market activity, income and income sources of Canadians (linked with tax data), individual and household characteristics, and characteristics and costs of housing.

The survey targets all individuals in Canada, with the exception of residents of Yukon, the Northwest Territories and Nunavut, residents of institutions, persons living on reserves and other Aboriginal settlements in the provinces and members of the Canadian Forces living in military camps. Overall, these exclusions amount to less than 3 % of the population.

We exclude from our analysis farm households, households whose major income earners are under the age of 25, households whose major income earners are identified as a full-time student, households reporting negative annual shelter costs or negative total gross household income. We place an income restriction on households such that households identified as having housing problems cannot have a gross income above the median income of their province for that year. Furthermore, households whose disposable income is negative because of capital/investment losses or households whose residual income is negative because of an extremely high shelter cost

(above the 99th percentile of the average shelter cost in their region for that year) are not considered to be experiencing any of the housing problems. After these restrictions, we have approximately 380 households with affordability issues having STIR>1. For these households, we normalize the STIR to be equal to 1.

The first caveat in the CIS is the lack of information surrounding the topic of subsidized housing.[14] Researchers can only observe if the household pays "reduced" rent, and the reasons for such cases include family, employer and government—the amount subsidized is unknown. It is also often the case that the household is unaware that the rent paid is being subsidized, and a reliable figure cannot be calculated.[15] It would be tremendously beneficial for policy makers to focus the analysis on the subsidized renter population when more information becomes available in the future.

Another caveat in the CIS is the lack of information related to the duration of housing tenure. One cannot observe how long the household has been renting or owning the dwelling, and this information would be crucial in understanding the different levels of affordability issue depth. The cost of owning a house is typically higher at the beginning of the ownership than at the later stage.

The final sample size contains 133,230 households. Table 1 gives summary statistics of the three indicators. Table 2 and table 3 present summary statistics of household and dwelling characteristics, respectively.

Table 1 shows the average values of the status, depth and severity of each of the three indicators, that is, hardship, affordability isues, and housing-induced poverty. In all cases, the average values of the indicators appear to be unchanged over the period of the study. For instance, about 16% of Canadian households are considered to be in hardship over the period of the study. Among this population, the depth

[14] In fact, such information does not exist in any of the national surveys from Statistics Canada.
[15] Typically, the subsidies are paid directly to the landlords, not the renters.

Table 1: Expected value: hardship, affordability issues and housing-induced poverty indicators

			Year		
Indicators	**2012**	**2013**	**2014**	**2015**	**2016**
Hardship					
Status ($\alpha = 0$)	0.1635	0.1585	0.1512	0.1684	0.1622
	(0.0025)	(0.0025)	(0.0024)	(0.0024)	(0.0023)
Depth ($\alpha = 1$)	0.0781	0.0750	0.0713	0.0817	0.0796
	(0.0015)	(0.0015)	(0.0014)	(0.0015)	(0.0015)
Severity ($\alpha = 2$)	0.0553	0.0527	0.0502	0.0582	0.0571
	(0.0013)	(0.0013)	(0.0013)	(0.0013)	(0.0013)
Affordability issues					
Status ($\alpha = 0$)	0.1748	0.1716	0.1721	0.1812	0.1765
	(0.0025)	(0.0026)	(0.0026)	(0.0025)	(0.0024)
Depth ($\alpha = 1$)	0.0362	0.0343	0.0330	0.0383	0.0365
	(0.0008)	(0.0008)	(0.0008)	(0.0008)	(0.0008)
Severity ($\alpha = 2$)	0.0151	0.0140	0.0142	0.0175	0.0161
	(0.0005)	(0.0005)	(0.0004)	(0.0005)	(0.0005)
Housing-induced poverty					
Status ($\alpha = 0$)	0.0549	0.0558	0.0543	0.0593	0.0580
	(0.0015)	(0.0016)	(0.0015)	(0.0015)	(0.0015)
Depth ($\alpha = 1$)	0.0435	0.0412	0.0393	0.0455	0.0460
	(0.0009)	(0.0009)	(0.0009)	(0.0009)	(0.0009)
Severity ($\alpha = 2$)	0.0377	0.0348	0.0331	0.0389	0.0393
	(0.0009)	(0.0009)	(0.0009)	(0.0009)	(0.0009)

Data source: Canadian Income Survey, 2012-2016.
Bootstrap standard errors in parentheses

of the hardship is about 8 % relative to the poverty line, the non-shelter MBM. The severity of the hardship where more weight is placed on the more severe poverty cases appears to be relatively stable during the 2012 to 2016 period.

Table 2 summarizes the household characteristics of our samples. It is worth noting that the disposable income presented in this table is unique. The said variable is an income concept developed by Employment and Social Development Canada (ESDC) specifically for comparing against the MBM thresholds. It measures the amount of income available to purchase goods and services, derived by deducting income taxes and non-discretionary spending from total income.[16] About 24% of the households in the sample identify the major income earner of the household as being an immigrant with approximately seven years since the time of migration. The majority of the households are located in an urban area and are in Quebec or Ontario.

In terms of dwelling characteristics, table 3 shows the average annual shelter cost of Canadian households is about $14,000. About 30% are renters, about 40% are homeowners with a mortgage, and about 32% are homeowners without a mortgage. Most households live in a single-detached house (about 60%), and about one fourth live in an apartment.

3.2 Market Basket Measure (MBM)

The concept of the MBM was pioneered by ESDC. The MBM is a measure of low income based on the cost of a specified basket of goods and services representing a modest, basic standard of living. In other words, it brings forward the notion of basic needs.

[16]Non-discretionary expenditures include employment insurance premiums, Canada Pension Plan and Quebec Pension Plan contributions, registered pension plan contributions, union dues and professional membership dues and malpractice liability insurance premiums, child care expenses incurred in order to hold a paid job, support payments paid, public health insurance premiums and direct medical expenses, including private insurance premiums.

Table 2: Summary statistics: household characteristics

Variables	**Mean**	**(SE)**
Disposable income ($)	67,286	(237.10)
Immigrant	0.2423	(0.0013)
Years since migration	6.7816	(0.0447)
Male MJIE household	0.5969	(0.0014)
Urban	0.8058	(0.0014)
Age group		
25-34	0.1810	(0.0016)
35-44	0.1861	(0.0017)
45-54	0.2056	(0.0017)
55-64	0.1903	(0.0015)
65-74	0.1348	(0.0013)
75+	0.1021	(0.0012)
Marital status		
Married/common-law MJIE household	0.6093	(0.0021)
Single MJIE household	0.1780	(0.0017)
Separated/divorced/widowed MJIE household	0.2127	(0.0017)
Single parent		
Single mother MJIE household	0.0260	(0.0006)
Single father MJIE household	0.0066	(0.0003)
Highest level of education		
Less than high school	0.1508	(0.0015)
High school or partial post-secondary school	0.2269	(0.0018)
Non-university post-secondary certificate	0.3202	(0.0019)
University	0.3022	(0.0020)
Province		
Newfoundland and Labrador	0.0162	(0.0003)
Prince Edward Island	0.0042	(0.0001)
Nova Scotia	0.0289	(0.0004)
New Brunswick	0.0232	(0.0003)
Quebec	0.2560	(0.0019)
Ontario	0.3757	(0.0022)
Manitoba	0.0334	(0.0004)
Saskatchewan	0.0283	(0.0004)
Alberta	0.1031	(0.0012)
British Columbia	0.1310	(0.0014)
Year		
2012	0.1955	(0.0017)
2013	0.1962	(0.0017)
2014	0.1994	(0.0017)
2015	0.2025	(0.0017)
2016	0.2064	(0.0017)

Data source: Canadian Income Survey, 2012-2016.
Bootstrap standard errors in parentheses
MJIE = major income earner

Table 3: Summary statistics: dwelling characteristics

Variables	**Mean**	**(SE)**
Annual shelter cost ($)	13,977	(45.88)
Dwelling suitable	0.9584	(0.0011)
Number of bedrooms	2.7952	(0.0054)
Tenure		
Renter	0.2890	(0.0020)
Owner with mortgage	0.3955	(0.0021)
Owner without mortgage	0.3155	(0.0019)
Repair requirement		
Major repairs needed	0.0664	(0.0010)
Minor repairs needed	0.2094	(0.0017)
Only regular maintenance needed	0.7242	(0.0019)
Dwelling type		
Single-detached house	0.5817	(0.0022)
Double, row, duplex	0.1501	(0.0016)
Apartment	0.2500	(0.0020)
Other	0.0182	(0.0005)

Data source: Canadian Income Survey 2012-2016.
Bootstrap standard errors in parentheses

The MBM is sensitive to geographical variations in cost; notably, it is calculated for 19 specific communities and 30 population centre size and province combinations. Indeed, the MBM threshold recognizes differences in the cost of the basket between similar-sized communities in different provinces and between different geographical regions within provinces.

The costs included in the basket are costs of food, clothing, footwear, transportation, shelter and other expenses for a reference family of two adults aged 25 to 49 and two children aged 9 and 13. To adjust the threshold for different family size, the square root equivalence scale is applied.[17]

Typically, the MBM threshold is compared with a household's disposable income, which reflects an actual capability to purchase these goods and services (rather than gross income). The threshold can be further broken down into different components

[17]https://www12.statcan.gc.ca/census-recensement/2016/ref/dict/pop165-eng.cfm

of the basket (food, clothing, transportation, shelter and other expenses), the aspect we exploit in our definition of hardship and housing-induced poverty. A complete annual MBM thresholds table can be retrieved from Statistics Canada website[18].

4 Housing inequalities in Canada

Decomposition results can be found in appendixes A, B and C. Regression results are also available upon request.

4.1 Immigrants versus non-immigrants

Inspection of the results in table A1 indicates that, compared to non-immigrants, immigrants have significantly higher average incidence ($\alpha = 0$), depth ($\alpha = 1$) and severity ($\alpha = 2$) of non-shelter hardship and affordability issues. Immigrants also have higher depth ($\alpha = 1$) and severity ($\alpha = 2$) of housing-induced poverty. This last result is worth discussing. Not having a higher incidence of housing-induced poverty but having higher depth and severity means the following. The proportion of immigrants who are housing-induced poor is the same as for non-immigrants. However, since their average depth and severity are significantly higher, this means that the immigrants who are impacted by housing-induced poverty suffer a larger increase in their poverty gap and severity than non-immigrants who are affected by housing-induced poverty. The result can potentially be explained by the heterogeneity of the types of immigrants, that is, economic immigrants, family immigrants, refugees, etc., and also of migrant origins. However, this information is not available in the current data set, and a separate investigation should be conducted in the future.

When we look at the decomposition of these differences, the endowment effect suggests that immigrants have a distribution of demographic characteristics (correlates)

[18]Table: 11-10-0230-01 (formerly CANSIM 206-0093)

that would yield lower values for all these indices. Unfortunately, the structural effect is larger and of opposite value. This means that, despite having more favourable demographic characteristics, the return to these characteristics is lower for immigrants. To better understand the source of this difference, we need to take a look at the detailed decomposition. The variable that has the strongest significant effect is the difference in the returns of owning a house with a mortgage between immigrants and non-immigrants. This may indicate that immigrants face higher credit costs when obtaining a mortgage. These higher costs may be linked to differences in credit risk assessment or with the mortgage life insurance components. Nevertheless, it is also possible that an immigrant who recently arrived in Canada faces a much high cost of owning a home than a non-immigrant person who bought the house a decade ago. The analysis can benefit from having information in relation to the duration of homeownership, which is currently unavailable in the CIS (and other Statistics Canada surveys).

Table B1 displays the RIF regressions for concentration indices. If we consider non-shelter hardship, immigrants have a higher level of socio-economic disparities in the incidence ($\alpha = 0$) of non-shelter hardship and affordability issues. If we decompose the difference for non-shelter hardship, we observe that the endowment effect would work in favour of immigrants, but once again, the strong structural effect is unfavourable. The same decomposition for affordability issues indicates that both effects work in the same direction but with a stronger structural effect. In both cases, it is the difference in the returns of homeownership with a mortgage that seems to be the correlates with a statistically significant effect working in the same direction as the total structural effect. If we consider the depth ($\alpha = 1$) and severity ($\alpha = 2$) of non-shelter hardship and affordability issues, socio-economic disparities

are lower among immigrants. The decomposition indicates that the endowment effect would have been unfavourable to immigrants. However, in this case, the structural effect works in their favour. A more detailed decomposition does not allow for the identification of any correlates with a significant effect.

The fact that immigrants have higher average but lower socio-economic disparities in depth ($\alpha = 1$) and severity ($\alpha = 2$) of non-shelter hardship and affordability issues merits a clarification. In such a case, a lower level of socio-economic disparities does not mean that the situation of immigrants is better but that the distribution of the burden among socio-economic classes of immigrants is more equal. In such a case, there is an arbitrage to be made between a higher average and a lower level of socio-economic disparities. The shortfall indices below allow us to perform this arbitrage.

If we turn our attention to socio-economic disparities in housing-induced poverty, immigrants have statistically significantly lower socio-economic disparities in depth ($\alpha = 1$) and severity ($\alpha = 2$) of housing-induced poverty. Decomposing this difference indicates that the distribution of correlates seems to be unfavourable to immigrants with a positive and statistically significant endowment effect. The structural effect that is stronger and in opposite direction explains the statistically significant negative difference. The detailed decomposition does not allow us to pin down this structural effect to any correlate.

Table C1 displays the results of the analysis for the shortfall index. We have seen that immigrants have significantly higher average non-shelter hardship (for $\alpha = 0, 1$ and 2), higher housing-induced poverty (for $\alpha = 1$ and 2) and higher degree of affordability issues (for $\alpha = 0, 1$ and 2). However, when we look at socio-economic disparities, in some cases, immigrants have a lower level of disparities than non-immigrants. In situations like this one, using the shortfall index allows us to perform

an arbitrage between these two effects, since it accounts simultaneously for socio-economic disparities and the average effect. The shortfall index points qualitatively to the same conclusion as the average effect, that is, that immigrants have significantly a higher shortfall in non-shelter hardship (for $\alpha = 0, 1$ and 2), a higher shortfall in housing-induced poverty (for $\alpha = 1$ and 2) and a higher shortfall in the incidence ($\alpha = 0$) of affordability issues. The decomposition exercise gives qualitatively the same conclusions, that is, that the higher level of shortfall is explained by the structural effect since the distribution of correlates would have favoured immigrants. The detailed decomposition highlights again the role of the difference in the returns in homeownership for immigrants.[19]

4.2 Urban versus rural areas

Inspection of the results in table A2 indicates that, compared to rural areas, urban areas have significant higher average non-shelter hardship (for $\alpha = 0, 1$ and 2), higher housing-induced poverty (for $\alpha = 0, 1$ and 2) and higher affordability issues (for $\alpha = 0, 1$ and 2). The difference is explained largely by the endowment effect, with the two strongest effects being home tenure and immigrant status. Surprisingly, the structural effect (that is, the difference in returns to characteristics) does not have any significant impact in explaining the higher level of housing issues in urban areas. The only difference is the incidence of non-shelter hardship where the structural effect has a significant impact. However, it is in the opposite direction and decreases the overall incidence.

Table B2 displays the result for the concentration index. socio-economic disparities in the incidence ($\alpha = 0$) of non-shelter hardship, affordability issues and

[19]The decomposition results could be affected if the ignorability assumption is not met. In particular, we could be underestimating the level of these poverty-related measures among the immigrant population.

housing-induced poverty are significantly higher in urban areas. However, there are also significantly lower socio-economic disparities in depth ($\alpha = 1$) of non-shelter hardship in urban areas. The higher levels of socio-economic disparities in housing issues are mostly explained by the endowment effect. The main socio-demographic characteristics underlying this explanation are once again immigrant status and home tenure. In the case of incidence of affordability issues, the structural effect also plays a smaller role. Differences in returns to age, marital status and homeownership are significant. As for the lower level of socio-economic disparities in depth of non-shelter hardship, the endowment effect's principal driver is immigrant status (that seems favourable for this index). The structural effect also plays a role in reducing the difference between urban and rural areas. This means that the difference in returns to characteristics would yield a lower level of socio-economic disparities in urban areas if it were not more than compensated by the endowment effect. The only significant variable for this structural effect is the difference in the returns of homeownership without a mortgage.

The results for shortfall indices are given in table C2. Compared to rural areas, urban areas have significantly higher shortfalls in non-shelter hardship, affordability issues and housing-induced poverty (for $\alpha = 0, 1$ and 2). Most of these differences rely on the endowment effect. Differences in the immigrant status and home tenure distributions between these areas are once again the main drivers. It is also worth noting that the structural effect plays a role in reducing the difference between urban and rural areas in the shortfall in the incidence ($\alpha = 0$) of non-shelter hardship and affordability issues. In the case of non-shelter hardship, it reduces the difference. However, in the case of affordability issues, it works in the same direction.[20]

[20]For results pertaining to the decomposition between urban and rural households, the ignorability assumption could be violated if there is a selection into moving to urban areas, for example,

4.3 Seniors versus non-seniors

The situation of seniors (age 65 and above) compared to the rest of the Canadian population depends on the individual indicator of housing issue selected. The results in table A3 indicate that seniors have a lower average incidence ($\alpha = 0$) of non-shelter hardship than the rest of the Canadian population. However, if we look at the average incidence ($\alpha = 0$) of affordability issues and housing-induced poverty, the situation is reversed, with seniors facing a higher average incidence of these two types of housing issues. However, seniors have a lower average depth ($\alpha = 1$) of non-shelter hardship and affordability issues and a lower average severity ($\alpha = 2$) of non-shelter hardship, affordability issues and housing-induced poverty. These results are aligned with what we observe for income poverty among seniors compared to other demographic groups.[21] These results indicate that, despite having a higher incidence of affordability issues and housing-induced poverty, seniors seem to be more concentrated near the threshold than the rest of the population. They are less prone to face larger hardship gaps. This is also consistent with Makdissi, Therrien, and Wodon (2006), who find that transfers to seniors are the most important source of poverty reduction in Canada, and with Audet and Makdissi (2009), who explain that transfers to seniors have historically been indexed to inflation even during the period of austerity. There are many potential explanations for this fact. The most reasonable economic explanation is that transfers to seniors do not have the cost of reduced incentives to work that transfers to the rest of the population may have, hence making these programs less costly to implement.

When decomposing the differences between seniors and the rest of the population,

more able individuals move to urban areas to benefit from the labour market. In such a case, it is possible that the poverty-related measures are underestimated for the urban households.

[21] See Makdissi and Groleau (2002) among others.

we see that these differences are mainly explained by the structural effect, that is returns to demographic characteristics, principally education and home tenure. The endowment effect plays a role in the average incidence ($\alpha = 0$) of non-shelter hardship, affordability issues and housing-induced poverty. In all these cases, it reduces the differences between seniors and the rest of the Canadian population.

Table B3 displays the results for socio-economic disparities in housing issues. Seniors have significantly higher socio-economic disparities in the incidence ($\alpha = 0$) of housing-induced poverty. However, if we look at the other indicators, the results are reversed. Seniors have lower levels of socio-economic disparities in the incidence ($\alpha = 0$) of non-shelter hardship and affordability issues, in the depth ($\alpha = 1$) of non-shelter hardship, affordability issues and housing-induced poverty and in the severity ($\alpha = 2$) of non-shelter hardship and affordability issues. When decomposing these differences, the structural effect plays a role in all these results. Once again, this is consistent with the fact that the two demographic groups have very different returns to their characteristics, one group being composed of a larger proportion of retirees. The endowment effect reinforces the structural effect in explaining the differences in socio-economic disparities in the incidence of affordability issues and, the depth ($\alpha = 1$) and severity ($\alpha = 2$) of non-shelter hardship and housing-induced poverty. For differences in socio-economic disparities in the incidence of non-shelter hardship and housing-induced poverty, the endowment effect reduces the differences without offsetting the structural effect.

The shortfalls in housing issues are displayed in table C3. Seniors have a higher level of shortfalls in the incidence ($\alpha = 0$) of housing-induced poverty. However, they have lower shortfalls in the incidence ($\alpha = 0$) of non-shelter hardship, lower shortfalls in the depth ($\alpha = 1$) and severity ($\alpha = 2$) of non-shelter hardship, affordability

issues and housing-induced poverty. Decomposing these differences indicates that, in almost all cases, except for the shortfall in the depth of housing-induced poverty, the structural effect explains the differences. The endowment effect plays a counterbalancing role in the incidence of all three housing issues. As for the difference in the shortfall in the depth of housing-induced poverty, the main contributing correlate is the difference in homeownership without a mortgage between the two demographic groups.

4.4 Couples versus non-couples

Table A4 displays the results for the average housing issues among non-couples versus couples. Non-couples have higher average incidence ($\alpha = 0$), depth ($\alpha = 1$) and severity ($\alpha = 2$) of non-shelter hardship, affordability issues and housing-induced poverty. When decomposing the difference, both the endowment and structural effects add to the difference, but the structural effect explains a larger proportion of the difference. The two correlates with the most impact are the differences in the distributions of returns to age and renter status. For age, the difference in returns (structural effect) seems to capture a larger share, and for the renter status, it is the difference in the distribution of the correlate that explains the larger share.

Table B4 displays the socio-economic disparities results. The results indicate that non-couples have more socio-economic disparities in the incidence ($\alpha = 0$) of non-shelter hardship, affordability issues and housing-induced poverty. However, when looking at the depth ($\alpha = 1$) and severity ($\alpha = 2$), the results are reversed; couples have higher socio-economic disparities in average non-shelter hardship, affordability issues and housing-induced poverty.

The decomposition exercise shows that both the endowment and structural effects

work in the same direction and that they are statistically significant. The structural effect explains more of the difference than the endowment effect. The differences in the age and renter status distributions are the two most important variables for the endowment effect. As for the structural effect, it seems that the only important variable in most cases is the difference in returns to age.

Shortfall indices in table C4 reconcile the results on average and socio-economic disparities. When accounting for both aspects at the same time, non-couples have a higher level of shortfall in the incidence ($\alpha = 0$), depth ($\alpha = 1$) and severity ($\alpha = 2$) of non-shelter hardship, affordability issues and housing-induced poverty. When we decompose the difference, both the endowment and structural effects work in the same direction. The structural effect explains a larger share of the difference. The two correlates with the largest impact are again age and renter status for the endowment effect. In that case, the renter status distribution has a slightly stronger effect. For the structural effect, age has the strongest impact.[22]

4.5 Single mothers versus single fathers

Since non-couples face higher averages and shortfalls in housing issues, it is worth looking at how single mothers and single fathers compare. Table A5 displays the average impacts. Single mothers have higher average incidence ($\alpha = 0$), depth ($\alpha = 1$) and severity ($\alpha = 2$) of non-shelter hardship than single fathers. In terms of affordability issues, single mothers have higher average incidence ($\alpha = 0$) and depth ($\alpha = 1$) compared to single fathers. If we look at housing-induced poverty, the only

[22]Results pertaining to the decomposition between single and couple populations can be affected if the ignorability assumption is violated. For example, it is possible that individuals with preferable characteristics are selected for the marriage market. This marriage premium among men is studied in the context of labour market outcome differentials between single and married men in Ginther and Zavodny (2001). In such a case, the preferable unobserved characteristics of the married population can lead to an underestimation of poverty-related measures among the married households.

statistically significant result is for depth ($\alpha = 1$). In this case, single mothers also have a higher average than single fathers, but the result is less statistically significant. The decomposition produces statistically significant results for the average incidence ($\alpha = 0$) and depth ($\alpha = 1$) of non-shelter hardship and for the average incidence ($\alpha = 0$) of affordability issues. In all these cases, both the endowment and structural effects work in the same direction. The structural effect explains a larger share of the difference. However, decomposing this effect in more detail does not produce any significant results for individual correlates. The detailed decomposition of the endowment effect indicates that the two main correlates are the age distribution and the renter status distribution.

Table B5 displays the results for socio-economic disparities. Single mothers have higher levels of socio-economic disparities than single fathers in the incidence ($\alpha = 0$) of non-shelter hardship. For the incidence ($\alpha = 0$) of affordability issues, the difference is insignificant. Single fathers have higher levels of socio-economic disparities in all other indicators. As we already pointed out for non-immigrants, this does not mean that single fathers are more deprived. However, it means that, among single fathers, the burden of these housing issues is more unequally distributed along socio-economic classes. In such cases, the shortfall index offers an arbitrage between a lower average and a higher level of socio-economic disparities.

When decomposing these differences, the structural effect is statistically significant only for socio-economic disparities in the incidence ($\alpha = 0$) of non-shelter hardship and the depth ($\alpha = 1$) and severity ($\alpha = 2$) of affordability issues. In these cases, it also explains a larger share of the difference. However, a more detailed decomposition does not produce statistically significant results for correlates. The endowment effect explains most of the other differences. A detailed decomposition

indicates that the age distribution is the correlate with the most significant impact, followed by the renter status distribution.

Shortfall indices are displayed in table C5. Single mothers have higher shortfalls than single fathers in the incidence ($\alpha = 0$) of non-shelter hardship and affordability issues and in the depth ($\alpha = 1$) of non-shelter hardship. They also have a less statistically significant difference in the depth ($\alpha = 1$) of affordability issues. When decomposing these differences, the structural effect is statistically significant for the shortfalls in the incidence ($\alpha = 0$) of non-shelter hardship and affordability issues. In these two cases, it also explains a larger share of the difference. However, a more detailed decomposition does not produce statistically significant results for correlates. As for the endowment effect, it is statistically significant for the shortfalls in the incidence ($\alpha = 0$) of non-shelter hardship and affordability issues and for the shortfall in the depth ($\alpha = 1$) of non-shelter hardship. A more detailed decomposition indicates that the age distribution has more impact on the differences for non-shelter hardship. Its impact is not statistically significant for incidence ($\alpha = 0$) of affordability issues. The distribution of renters has a significant impact on the differences in the shortfalls in the incidence ($\alpha = 0$) of non-shelter hardship and affordability issues and in the depth ($\alpha = 1$) of non-shelter hardship.

4.6 Owners versus renters

Since home tenure appears as an important correlate in many of the decompositions, it is worth ending this section by looking at the differences between homeowners and renters. Table A6 displays the average impact of the housing issue indicators. For all housing issue indicators, the average impact is lower among homeowners. All the decompositions produce statistically significant endowment and structural effects. In

all cases, both impacts work in the same direction and the structural effect is stronger. The differences in the age and marital status distributions are the two most important correlates for the endowment and structural effects.

The results for socio-economic disparities in housing issues displayed in table B6 are different. Although homeowners have lower socio-economic disparities in the incidence ($\alpha = 0$) of non-shelter hardship, affordability issues and housing-induced poverty, they have higher levels of socio-economic disparities in the depth ($\alpha = 1$) and severity ($\alpha = 2$) of these housing issues. Detailed decompositions provide statistically significant endowment and structural effects, both working in the same direction, for socio-economic disparities in all indicators, except for the depth ($\alpha = 1$) and severity ($\alpha = 2$) of affordability issues. In all the other cases, age, marital status and education are the important correlates of the endowment effect. For the structural effect, age is the most important correlate. For socio-economic disparities in the depth ($\alpha = 1$) of affordability issues, the decomposition produces a statistically significant endowment effect. The most important correlate in this case is the difference in the age distribution.

Table C6 displays the result for shortfalls in housing issues. Homeowners have lower levels of shortfalls in all housing issue indicators. The decomposition leads to statistically significant endowment and structural effects, both working in the same direction. The structural effect is larger in all these cases. Age, marital status and education are the important correlates in all endowment effects and in most structural effects.[23]

[23]It is possible that the ignorability assumption is violated for the decomposition between owners and renters. For example, homeowners might possess unobserved characteristics that are favourable to the labour market (beyond education), which implies that the poverty could be underestimated for the homeowners.

5 Conclusion

The purpose of our study is twofold. First, we put forward new measures of housing issue indicators. Consistent with the poverty literature, we define housing problem measures along the line of the Foster, Greer and Thorbecke (FGT) distribution-sensitive indices for the incidence, depth and severity of housing problems. We focus on housing issues related to affordability, hardship and housing-induced poverty and apply the concept of the concentration and shortfall indices from the inequality literature to speak to socio-economic inequalities (of housing problems) in Canada.

Second, we illustrate socio-economic inequalities of housing issues for various populations, including immigrants, seniors, renters, lone parents, and singles. We identify how much of the disparities in the indicators and indices between two populations are attributable to differences in distributions of characteristics (endowment effect) and how much are attributable to the differences in returns to those characteristics (structural effect). Following the decomposition method in Firpo, Fortin, and Lemieux (2018), Firpo, Fortin, and Lemieux (2009), and Fortin, Lemieux, and Firpo (2011), we speak to the contribution of each covariate to the endowment and structural components.

This study also contributes to the theoretical literature of policy impact analysis. Specifically, this study adds to the literature by deriving the (recentered) influence function (RIF) for the shortfall index, extending the work of Heckley, Gerdtham, and Kjellsson (2016).

We have many compelling findings. In comparison to the non-immigrant population, immigrants on average face more severe housing issues—this finding is true when we consider the incidence, depth, and severity of the hardship and affordability issues. In terms of housing-induced poverty, immigrants suffer a larger poverty

gap and severity than non-immigrants. We also find evidence that points to a potentially higher cost of borrowing faced by immigrants, that is, the large structural effects that are significantly accounted for by the difference in the returns of owning a house between the two populations. In addition, the socio-economic inequalities in the incidence of hardship and affordability issues are unfavourable for the immigrant population, though the inequalities are reversed when we consider the depth and severity of the hardship and affordability issues. This implies that there is a higher prevalence of non-shelter hardship at the lower end of the income distribution for the immigrant population but that the problems related to the depth and severity of hardship (and housing-induced poverty) are more pronounced at the lower end of the income distribution for the non-immigrant population. The differences in the measures of housing problems and inequalities can be largely attributed to the structural effects where the detailed decomposition highlights the role of the difference in the return of being a homeowner for immigrants. The results using the shortfall index confirms our findings above.

For all measures considered in this study, we find that households in urban areas experience more housing-related problems relative to households in rural areas. In terms of socio-economic inequalities, although households in urban areas tend to have a higher incidence of hardship, affordability issues and housing-induced poverty than households in rural areas, they face lower levels of socio-economic disparities when we consider the depth of the non-shelter hardship. These higher levels of socio-economic disparities between urban and rural areas are explained by the endowment effect, where immigrant status and home tenure account for much of the gap.

Next, the situation of seniors age 65 and above depends on the individual indicator. For instance, we find that seniors have a lower incidence of hardship but a

higher incidence of affordability problems and housing-induced poverty. Nevertheless, seniors have lower average depth and severity in all the non-shelter hardship and the affordability indicators. This finding speaks to the fact that seniors are much more likely to be concentrated near the threshold than the rest of the population. The decomposition results demonstrate that the differences between seniors and the rest of the population can be explained mainly by the structural effects, specifically education and home tenure. The results for socio-economic inequalities show that the only inequalities unfavourable to the senior population is in the incidence of housing-induced poverty. Again, we find the structural effects to be the linchpin in explaining the differences in the socio-economic disparities between the two populations. A similar conclusion is reached when we consider the shortfall index.

On average, non-couples appear to face substantially higher incidence, depth and severity of all the indicators than couples. The decomposition shows that the gaps between the two populations are explained largely by the structural effect, where the difference in returns to age and the difference in the renter status distribution account for larger shares of the differences. The socio-economic inequalities in the incidence of housing issues are more pronounced for non-couples; however, the situation is reversed when we contemplate the depth and severity of the housing issues. We find that the structural effect explains more of the differences and that it can largely be attributed to the differences in the age and renter status distributions. When accounting for both the average and socio-economic inequalities, the shortfall indices illustrate a more critical situation among non-couple households—they appear to face higher levels of shortfalls in incidence, depth and severity of the three indicators.

A more narrow lens is placed on the lone-parent population. We uncover that single mothers are generally worse off than single fathers in terms of the average

incidence, depth and severity of housing issues. A detailed decomposition highlights the importance of the age and homeownership status in the endowment effect, which underlines the potential role policy makers can play in alleviating the situation for single mothers. In terms of socio-economic disparities, except for the incidence of hardship and affordability issues, single fathers face higher levels of inequalities in all other indicators, implying that the onus of these housing issues are more unequally distributed along socio-economic classes.

When we compare the average measures of housing problems between homeowners and renters, we find that homeowners fare better than renters in terms of the incidence, depth and severity of non-shelter hardship, affordability issues and housing-induced poverty. The differences in the age and marital status distributions are the two most important correlates for both the endowment and structural effects. Moreover, renters have higher levels of socio-economic inequalities in the incidence of hardship, affordability issues, and housing-induced poverty, but the socio-economic inequalities in the depth and severity of these indicators are more pronounced among homeowners. We find that age, marital status and education are the important correlates for the endowment effect and that age is the most important correlate for the structural effect.

The methodology and findings in this study provide a natural guide to future research. First, the indicators and indices introduced in this study can be directly applied in defining target rules and identifying subpopulations of interest. Thus, policy makers can choose to focus on reducing one or more of the indices illustrated. Second, the structural difference in returns to homeownership (which, in part, explains the relatively high level of housing problems among immigrants) between immigrants and non-immigrants uncovered in this study warrants its own investigation.

When it comes to mortgages, immigrants face a tougher battle than their Canadian counterparts, ranging from learning about the new country's market, to establishing credit, to meeting more stringent borrowing requirements. More research will be necessary to refine and further elaborate on the reasons behind our findings. Lastly, given recent changes in Canadian housing policy, such as a mortgage rate stress test now applied to all insured mortgages, new mortgage rules and new taxes, another interesting avenue for future research will be to investigate if these changes resulted in a causal impact on our proposed indices.

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Appendix A Decomposition of the expected values of housing indicators

Table A1: Decomposition of the expected values of housing indicators: immigrants versus non-immigrants

	Non-Shelter Hardship			**Affordability Issues**			**Housing-Induced Poverty**		
	α=0	α=1	α=2	α=0	α=1	α=2	α=0	α=1	α=2
Non-immigrant	0.1504	0.0715	0.0505	0.1908	0.0425	0.0190	0.0546	0.0399	0.0338
	(0.0014)	(0.0009)	(0.0008)	(0.0016)	(0.0006)	(0.0004)	(0.0009)	(0.0006)	(0.0006)
Immigrant	0.1933	0.0949	0.0681	0.2650	0.0640	0.0296	0.0624	0.0534	0.0461
	(0.0068)	(0.0044)	(0.0040)	(0.0074)	(0.0029)	(0.0019)	(0.0042)	(0.0027)	(0.0028)
Difference	−0.0429***	−0.0233***	−0.0176***	−0.0742***	−0.0215***	−0.0106***	−0.0078	−0.0135***	−0.0123***
Endowment effect	0.0161***	0.0084***	0.0059***	−0.0014	0.0013	0.0009*	0.0056***	0.0035***	0.0029***
Structural effect	−0.0590***	−0.0318***	−0.0235***	−0.0728***	−0.0228***	−0.0115***	−0.0134**	−0.0170***	−0.0152***
ENDOWMENT									
Age	−0.0055***	−0.0039***	−0.0030***	−0.0010*	−0.0014***	−0.0009***	0.0028***	−0.0002	−0.0009***
Age squared	0.0051***	0.0038***	0.0030***	−0.0003	0.0011***	0.0008***	−0.0036***	−0.0001	0.0008**
Male	−0.0005	−0.0002	−0.0001	−0.0005*	−0.0001*	0.0000*	−0.0002*	−0.0001*	−0.0001*
Rural	0.0024***	0.0005	0.0003	−0.0004	−0.0001	0.0000	0.0007*	0.0001	0.0000
Marital status									
Married/common-law	0.0063***	0.0040***	0.0032***	0.0084***	0.0026***	0.0013***	0.0021***	0.0021***	0.0020***
Single	0.0032***	0.0024***	0.0019***	0.0040***	0.0015***	0.0008***	0.0002	0.0010***	0.0011***
Separated	0.0005***	0.0002**	0.0001**	0.0007***	0.0001***	0.0001**	0.0004***	0.0002***	0.0001***
Education									
Less than HS	0.0021***	0.0007***	0.0004***	0.0015***	0.0003***	0.0001***	0.0006***	0.0004***	0.0002***
HS or partial PSE	0.0001	0.0001*	0.0001	0.0003***	0.0001*	0.0000*	−0.0001	0.0001*	0.0001*
Non-uni PSE	−0.0020***	−0.0008***	−0.0005***	−0.0014***	−0.0004***	−0.0002***	−0.0004**	−0.0004***	−0.0003***
University	0.0074***	0.0028***	0.0015***	0.0070***	0.0013***	0.0004***	0.0018***	0.0015***	0.0011***
Home tenure									
Renter	−0.0021**	−0.0009**	−0.0006**	−0.0019***	−0.0004***	−0.0002***	−0.0006***	−0.0004***	−0.0003***
Owner with mortgage	0.0000	0.0000	0.0000	−0.0001	0.0000	0.0000	−0.0001	0.0000	0.0000
Owner without mortgage	−0.0020***	−0.0009***	−0.0006***	−0.0029***	−0.0006***	−0.0003***	−0.0012***	−0.0007***	−0.0005***
Dwelling characteristics									
Dwelling suitable	0.0027**	0.0029***	0.0026***	0.0060***	0.0025***	0.0014***	0.0026***	0.0019***	0.0017***
Number of bedrooms	0.0009**	0.0005**	0.0004**	0.0007***	0.0002***	0.0001**	−0.0001	0.0001**	0.0002**
Major repairs needed	0.0003**	0.0002**	0.0001**	0.0003***	0.0001***	0.0000**	0.0000	0.0001***	0.0001***
Minor repairs needed	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Only regular maintenance	0.0003*	0.0001*	0.0001	0.0003**	0.0001*	0.0000*	0.0000	0.0001*	0.0001*
Single-detached house	−0.0009	−0.0001	0.0000	−0.0014**	−0.0002	0.0000	−0.0010***	−0.0004	−0.0002
Double, row	0.0008**	0.0006***	0.0004**	0.0003	0.0004***	0.0002**	0.0003	0.0004***	0.0003***

Table A1 – Continued from previous page

	Non-Shelter Hardship			Affordability Issues			Housing-Induced Poverty		
	α=0	α=1	α=2	α=0	α=1	α=2	α=0	α=1	α=2
Apartment	−0.0006	−0.0001	0.0000	−0.0025***	−0.0003	−0.0001	−0.0003	−0.0001	−0.0001
Other	0.0002	0.0001	0.0001	−0.0001	0.0001	0.0000	0.0001*	0.0001*	0.0001
Province									
N.L.	0.0005***	0.0002**	0.0000	−0.0001	0.0000	0.0000*	0.0001	0.0000	0.0000
P.E.I.	0.0001***	0.0000	0.0000	−0.0001*	0.0000***	0.0000***	0.0000	0.0000	0.0000*
N.S.	0.0006***	0.0002*	0.0000	0.0001	0.0000	0.0000	0.0002	0.0000	0.0000
N.B.	0.0007***	0.0001	−0.0001	−0.0004***	−0.0002***	−0.0001***	0.0002**	0.0000	−0.0001**
Que.	−0.0036***	−0.0018***	−0.0014***	−0.0062***	−0.0014***	−0.0006***	0.0004	−0.0005**	−0.0005**
Ont.	0.0005	−0.0011**	−0.0013***	−0.0099***	−0.0027***	−0.0014***	0.0006	−0.0009***	−0.0011***
Man.	−0.0002***	−0.0001***	−0.0001	−0.0002***	0.0000**	0.0000	0.0000*	0.0000**	0.0000*
Sask.	−0.0004***	−0.0001*	−0.0001	0.0001	0.0000	0.0000	−0.0001	−0.0001	0.0000
Alta.	−0.0005**	−0.0001**	−0.0001	0.0001	0.0000	0.0000	−0.0001**	−0.0001**	0.0000
B.C.	−0.0005*	−0.0009***	−0.0009***	−0.0020***	−0.0009***	−0.0005***	0.0002	−0.0006***	−0.0007***
STRUCTURAL									
Age	0.0494	0.0361	−0.0025	0.1935	−0.0122	−0.0245	−0.1148	0.0131	0.0099
Age squared	−0.0006	−0.0076	0.0094	−0.0853	0.0087	0.0128	0.0824	0.0004	−0.0005
Male	0.0109	0.0087*	0.0073*	0.0127	0.0048	0.0033	−0.0056	0.0023	0.0029
Rural	0.0071	−0.0098	−0.0093	0.0103	−0.0057	−0.0031	0.0041	−0.0044	−0.0052
Marital status									
Married/common-law	−0.0191***	−0.0051	−0.0010	−0.0200*	0.0000	0.0007	−0.0042	−0.0029	−0.0006
Single	0.0066***	0.0024*	0.0010	0.0047	0.0001	−0.0004	−0.0004	0.0009	0.0006
Separated	−0.0037	−0.0020	−0.0011	−0.0008	−0.0002	0.0003	0.0019	−0.0005	−0.0008
Education									
Less than HS	0.0026	0.0022*	0.0017*	0.0022	0.0005	0.0004	−0.0016	0.0005	0.0009
HS or partial PSE	−0.0041*	−0.0029*	−0.0024*	−0.0035	−0.0021	−0.0015	0.0008	−0.0019	−0.0020
Non-uni PSE	0.0037	0.0015	0.0014	0.0033	0.0021	0.0014	0.0022	0.0006	0.0006
University	−0.0050	−0.0032	−0.0026	−0.0043	−0.0008	−0.0003	0.0003	0.0009	0.0002
Home tenure									
Renter	0.0060*	0.0055**	0.0046**	0.0131**	0.0043*	0.0020	0.0072**	0.0056**	0.0051**
Owner with mortgage	−0.0127***	−0.0089***	−0.0068***	−0.0246***	−0.0083***	−0.0039**	−0.0093**	−0.0102***	−0.0086***
Owner without mortgage	0.0036	0.0012	0.0005	0.0055	0.0020	0.0009	−0.0002	0.0021	0.0014
Dwelling characteristics									
Dwelling suitable	−0.0223	−0.0038	−0.0014	−0.0200	−0.0097	−0.0044	−0.0360**	−0.0077	−0.0010
Number of bedrooms	−0.0140	0.0011	0.0039	−0.0020	−0.0061	−0.0024	−0.0162	−0.0089	−0.0056
Major repairs needed	0.0011	0.0012*	0.0011*	0.0002	0.0004	0.0003	−0.0006	0.0003	0.0005
Minor repairs needed	0.0014	0.0005	0.0005	0.0010	0.0008	0.0006	0.0010	0.0006	0.0005

Table A1 – Continued from previous page

	Non-Shelter Hardship			Affordability Issues			Housing-Induced Poverty		
	α=0	α=1	α=2	α=0	α=1	α=2	α=0	α=1	α=2
Only regular maintenance	−0.0180**	−0.0155***	−0.0145***	−0.0052	−0.0080*	−0.0056*	0.0039	−0.0050	−0.0082*
Single-detached house	0.0011	−0.0017	−0.0014	0.0081	0.0004	−0.0001	0.0068	0.0015	0.0004
Double, row	−0.0033	−0.0015	−0.0009	−0.0023	−0.0009	−0.0003	−0.0020	−0.0013	−0.0010
Apartment	−0.0136***	−0.0067**	−0.0046*	−0.0152*	−0.0052*	−0.0024	−0.0041	−0.0043	−0.0036
Other	0.0006*	0.0003*	0.0002	0.0005	0.0002	0.0001	0.0001	0.0002	0.0002
Province									
N.L.	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
P.E.I.	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
N.S.	0.0000	0.0000	0.0000	−0.0001	0.0000	0.0000	−0.0001	0.0000	0.0000
N.B.	−0.0003*	−0.0003**	−0.0002**	−0.0002	−0.0001	−0.0001	0.0000	−0.0001	−0.0001
Que.	−0.0051*	−0.0037**	−0.0029*	−0.0004	−0.0013	−0.0009	−0.0022	−0.0019	−0.0019
Ont.	−0.0094	−0.0053	−0.0026	−0.0120	−0.0040	−0.0016	0.0002	−0.0023	−0.0015
Man.	0.0008*	0.0004*	0.0003*	0.0007	0.0002	0.0001	0.0000	0.0001	0.0002
Sask.	0.0004	0.0002	0.0002	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001
Alta.	0.0002	−0.0001	0.0000	−0.0009	−0.0002	−0.0001	−0.0003	0.0004	0.0003
B.C.	0.0014	0.0001	0.0003	0.0007	−0.0003	−0.0002	0.0022	−0.0004	−0.0002
Constant	−0.0244	−0.0152	−0.0016	−0.1324	0.0176	0.0171	0.0710	0.0053	0.0017
N	113,230	113,230	113,230	113,230	113,230	113,230	113,230	113,230	113,230

Data source: Canadian Income Survey 2012-2016.
*$p < .05$; **$p < .01$; ***$p < .001$
All decompositions control for year of interview fixed effects.
Bootstrap standard errors are estimated using Statistics Canada's 1,000 bootstrap replicate weights.

Table A2: Decomposition of the expected values of housing indicators: urban versus rural

	Non-Shelter Hardship			**Affordability Issues**			**Housing-Induced Poverty**		
	α=0	α=1	α=2	α=0	α=1	α=2	α=0	α=1	α=2
Urban	0.1683	0.0818	0.0583	0.2242	0.0516	0.0232	0.0587	0.0459	0.0393
	(0.0020)	(0.0013)	(0.0012)	(0.0022)	(0.0008)	(0.0005)	(0.0013)	(0.0008)	(0.0008)
Rural	0.1286	0.0573	0.0396	0.1421	0.0313	0.0143	0.0469	0.0313	0.0259
	(0.0020)	(0.0013)	(0.0012)	(0.0021)	(0.0008)	(0.0005)	(0.0012)	(0.0008)	(0.0008)
Difference	0.0396***	0.0245***	0.0187***	0.0821***	0.0203***	0.0090***	0.0118***	0.0146***	0.0134***
Endowment effect	0.0540***	0.0274***	0.0201***	0.0791***	0.0193***	0.0090***	0.0165***	0.0152***	0.0134***
Structural effect	−0.0143***	−0.0029	−0.0014	0.0030	0.0010	0.0000	−0.0047*	−0.0006	0.0000
ENDOWMENT									
Age	−0.0111***	−0.0081***	−0.0063***	−0.0023*	−0.0029***	−0.0019***	0.0061***	−0.0004	−0.0019***
Age squared	0.0080***	0.0063***	0.0049***	−0.0009	0.0018***	0.0014***	−0.0065***	−0.0002	0.0012***
Male	0.0035***	0.0012***	0.0006***	0.0036***	0.0007***	0.0002***	0.0012***	0.0008***	0.0005***
Immigrant status									
Immigrant	0.0265***	0.0158***	0.0120***	0.0319***	0.0105***	0.0056***	0.0033**	0.0075***	0.0073***
Years since migration	−0.0172***	−0.0130***	−0.0104***	−0.0209***	−0.0080***	−0.0047***	0.0035	−0.0047***	−0.0054***
Years since mig squared	0.0038*	0.0042***	0.0035***	0.0050**	0.0024***	0.0016**	−0.0035***	0.0010	0.0015*
Marital status									
Married/common-law	0.0085***	0.0053***	0.0042***	0.0112***	0.0034***	0.0018***	0.0028***	0.0028***	0.0027***
Single (never married)	0.0034***	0.0025***	0.0020***	0.0042***	0.0015***	0.0008***	0.0003	0.0011***	0.0012***
Separated/ divorced/wid	0.0011***	0.0005***	0.0004***	0.0017***	0.0004***	0.0002***	0.0009***	0.0004***	0.0003***
Education									
Less than HS	−0.0045***	−0.0016***	−0.0009***	−0.0034***	−0.0007***	−0.0002***	−0.0013***	−0.0008***	−0.0005***
HS or partial PSE	0.0000	0.0000	0.0000	−0.0001	0.0000	0.0000	0.0000	0.0000	0.0000
Non-uni PSE	0.0014***	0.0006***	0.0003**	0.0009***	0.0003***	0.0001**	0.0003**	0.0003***	0.0002**
University	−0.0075***	−0.0029***	−0.0017***	−0.0072***	−0.0014***	−0.0005***	−0.0018***	−0.0015***	−0.0012***
Home tenure									
Renter	0.0235***	0.0099***	0.0063***	0.0212***	0.0047***	0.0019***	0.0066***	0.0047***	0.0037***
Owner with mortgage	0.0013***	0.0003	0.0000	−0.0034***	−0.0007***	−0.0003***	−0.0021***	−0.0010***	−0.0007***
Owner without mortgage	0.0124***	0.0056***	0.0039***	0.0184***	0.0039***	0.0016***	0.0074***	0.0044***	0.0034***
Dwelling characteristics									
Dwelling suitable	−0.0013***	−0.0012***	−0.0011***	−0.0026***	−0.0010***	−0.0006***	−0.0010***	−0.0008***	−0.0007***
Number of bedrooms	0.0061***	0.0037***	0.0028***	0.0050***	0.0014***	0.0007***	−0.0003	0.0010***	0.0012***

Table A2 – Continued from previous page

	Non-Shelter Hardship			Affordability Issues			Housing-Induced Poverty		
	α=0	α=1	α=2	α=0	α=1	α=2	α=0	α=1	α=2
Majo repairs needed	−0.0008***	−0.0004***	−0.0003***	−0.0007***	−0.0002***	−0.0001***	−0.0001	−0.0002***	−0.0002***
Minor repairs needed	0.0002**	0.0001*	0.0001*	0.0002**	0.0001**	0.0000*	0.0001	0.0001**	0.0001**
Only regular maintenance	−0.0010***	−0.0005***	−0.0004***	−0.0010***	−0.0002***	−0.0001***	0.0000	−0.0002***	−0.0002***
Single-detached house	0.0016	−0.0001	−0.0004	0.0031*	0.0003	0.0000	0.0026***	0.0008	0.0003
Double, row, duplex	−0.0017**	−0.0011***	−0.0009**	−0.0007	−0.0007***	−0.0004**	−0.0006	−0.0007***	−0.0007***
Apartment	0.0012	−0.0001	−0.0003	0.0066***	0.0006	0.0001	0.0006	0.0002	0.0002
Other	−0.0003	−0.0002	−0.0002	0.0002	−0.0001	−0.0001	−0.0002*	−0.0002*	−0.0001
Province									
N.L.	−0.0007***	−0.0002**	−0.0001	0.0001	0.0001	0.0001*	−0.0001	−0.0001	0.0000
P.E.I.	−0.0002***	0.0000	0.0000	0.0001*	0.0001***	0.0000***	0.0000	0.0000	0.0000*
N.S.	−0.0012***	−0.0003*	−0.0001	−0.0001	0.0001	0.0001	−0.0003	−0.0001	0.0000
N.B.	−0.0012***	−0.0001	0.0001	0.0007***	0.0004***	0.0002***	−0.0004**	0.0001	0.0002**
Que.	0.0009***	0.0004***	0.0003***	0.0016***	0.0003***	0.0002***	−0.0001	0.0001*	0.0001**
Ont.	0.0000	0.0006**	0.0007***	0.0046***	0.0013***	0.0006***	−0.0002	0.0004***	0.0005***
Man.	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Sask.	0.0002***	0.0001**	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000*	0.0000
Alta.	−0.0014***	−0.0004***	−0.0001	0.0003	0.0001	0.0001*	−0.0003***	−0.0002***	−0.0001
B.C.	0.0006**	0.0009***	0.0009***	0.0020***	0.0009***	0.0005***	−0.0001	0.0006***	0.0007***
STRUCTURAL									
Age	0.0327	0.0235	0.0227	−0.2768***	−0.0201	−0.0042	−0.1083*	−0.0518	−0.0189
Age squared	−0.0010	−0.0002	−0.0023	0.1822***	0.0226	0.0088	0.0639**	0.0383*	0.0185
Male	0.0014	0.0024	0.0018	−0.0077	−0.0018	−0.0007	−0.0046	0.0002	0.0012
Immigrant status									
Immigrant	0.0013	0.0023	0.0025	0.0027	0.0019	0.0015	−0.0024	−0.0004	0.0003
Years since migration	−0.0055	−0.0079	−0.0073	−0.0062	−0.0060*	−0.0040*	0.0043	−0.0005	−0.0017
Years since mig squared	0.0034	0.0043	0.0037	0.0027	0.0033*	0.0021	−0.0020	−0.0001	0.0005
Marital status									
Married/common-law	0.0156***	0.0061*	0.0040	0.0051	0.0005	0.0005	0.0018	0.0021	0.0018
Single (never married)	−0.0016	−0.0006	−0.0003	−0.0019	0.0000	0.0002	−0.0002	0.0000	0.0001
Separated/ divorced/wid	−0.0020	−0.0008	−0.0007	0.0013	−0.0001	−0.0004	−0.0002	−0.0006	−0.0006
Education									
Less than HS	0.0036**	0.0009	0.0003	0.0020	0.0003	−0.0001	0.0019*	0.0007	0.0005
HS or partial PSE	0.0011	0.0014	0.0013	0.0007	0.0011*	0.0008*	−0.0005	0.0008	0.0009

Table A2 – Continued from previous page

	Non-Shelter Hardship			Affordability Issues			Housing-Induced Poverty		
	α=0	α=1	α=2	α=0	α=1	α=2	α=0	α=1	α=2
Non-uni PSE	−0.0043*	−0.0012	−0.0009	−0.0015	−0.0008	−0.0003	−0.0039***	−0.0011	−0.0006
University	−0.0027*	−0.0017*	−0.0010	−0.0019	−0.0008	−0.0004	0.0005	−0.0009*	−0.0010*
Home tenure									
Renter	−0.0011	−0.0002	0.0003	0.0024	0.0010	0.0006	−0.0013	−0.0003	0.0001
Owner with mortgage	0.0050	0.0026	0.0015	0.0025	0.0011	0.0005	0.0030*	0.0027**	0.0018
Owner without mortgage	−0.0018	−0.0021	−0.0022	−0.0080***	−0.0035***	−0.0018***	0.0005	−0.0018*	−0.0018**
Dwelling characteristics									
Dwelling suitable	0.0511	0.0206	0.0121	0.0269	0.0162*	0.0073*	0.0304*	0.0137	0.0077
Number of bedrooms	−0.0067	−0.0156*	−0.0149**	−0.0053	−0.0063	−0.0044	0.0110*	−0.0021	−0.0050
Major repairs needed	−0.0003	0.0004	0.0004	0.0007	0.0003	0.0001	−0.0005	0.0004	0.0005*
Minor repairs needed	−0.0012	−0.0022*	−0.0020*	−0.0024	−0.0013*	−0.0008*	0.0004	−0.0013**	−0.0016**
Only regular maintenance	0.0067	0.0030	0.0028	0.0009	0.0017	0.0013	0.0027	0.0001	0.0007
Single-detached house	0.0001	−0.0007	0.0000	−0.0090	−0.0012	−0.0005	0.0016	−0.0012	−0.0010
Double, row, duplex	−0.0026*	−0.0013	−0.0009	−0.0020*	−0.0009*	−0.0004	−0.0008	−0.0004	−0.0002
Apartment	−0.0008	−0.0009	−0.0010	0.0004	−0.0006	−0.0005	−0.0005	−0.0010	−0.0010
Other	0.0013*	0.0007*	0.0006	0.0005	0.0004**	0.0003*	0.0005*	0.0005**	0.0004*
Province									
N.L.	0.0003	0.0002	0.0001	0.0001	0.0001	0.0000	0.0001	0.0000	0.0000
P.E.I.	0.0002	0.0001	0.0001	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
N.S.	−0.0004	0.0001	0.0001	0.0000	0.0001	0.0000	−0.0006*	0.0001	0.0001
N.B.	0.0001	−0.0001	0.0000	0.0001	−0.0001	0.0000	0.0004	−0.0001	−0.0001
Que.	−0.0064**	−0.0030*	−0.0022*	−0.0080***	−0.0014*	−0.0006	0.0016	−0.0009	−0.0013*
Ont.	0.0052*	0.0005	−0.0004	0.0007	0.0001	−0.0002	−0.0004	0.0001	0.0001
Man.	−0.0006	−0.0002	0.0000	−0.0001	0.0000	0.0000	−0.0001	0.0000	0.0000
Sask.	0.0000	0.0000	0.0000	0.0009***	0.0002**	0.0001*	0.0001	0.0000	0.0000
Alta.	−0.0004	−0.0004	−0.0004	−0.0004	−0.0002	−0.0001	0.0001	−0.0003	−0.0003
B.C.	−0.0004	−0.0002	−0.0001	−0.0004	0.0000	0.0000	−0.0005	0.0000	0.0002
Constant	−0.1039*	−0.0329	−0.0191	0.1021*	−0.0045	−0.0046	−0.0030	0.0040	−0.0003
N	113,230	113,230	113,230	113,230	113,230	113,230	113,230	113,230	113,230

Data source: Canadian Income Survey 2012-2016.
*$p < .05$; **$p < .01$; ***$p < .001$
All decompositions control for year of interview fixed effects.
Bootstrap standard errors are estimated using Statistics Canada's 1,000 bootstrap replicate weights.

Table A3: Decomposition of the expected values of housing indicators: age 65+ versus below age 65

	Non-Shelter Hardship			**Affordability Issues**			**Housing-Induced Poverty**		
	α=0	α=1	α=2	α=0	α=1	α=2	α=0	α=1	α=2
Below age 65	0.1658	0.0860	0.0625	0.2020	0.0500	0.0236	0.0452	0.0436	0.0397
	(0.0020)	(0.0013)	(0.0012)	(0.0021)	(0.0008)	(0.0005)	(0.0011)	(0.0008)	(0.0008)
Age 65 and above	0.1462	0.0517	0.0320	0.2285	0.0411	0.0156	0.0893	0.0418	0.0281
	(0.0025)	(0.0013)	(0.0011)	(0.0029)	(0.0009)	(0.0005)	(0.0020)	(0.0011)	(0.0010)
Difference	0.0196***	0.0343***	0.0306***	−0.0265***	0.0089***	0.0080***	−0.0440***	0.0019	0.0117***
Endowment effect	−0.0107***	−0.0045*	−0.0022	0.0291***	0.0038***	0.0012	0.0133***	0.0059***	0.0034**
Structural effect	0.0303***	0.0387***	0.0328***	−0.0556***	0.0051**	0.0068***	−0.0573***	−0.0040*	0.0083***
ENDOWMENT									
Male	−0.0036***	−0.0012***	−0.0006***	−0.0037***	−0.0007***	−0.0002**	−0.0013***	−0.0008***	−0.0005***
Rural	−0.0003**	−0.0001	0.0000	0.0001	0.0000	0.0000	−0.0001	0.0000	0.0000
Immigrant status									
Immigrant	−0.0024***	−0.0014***	−0.0011***	−0.0031***	−0.0010***	−0.0005***	−0.0004*	−0.0007***	−0.0007***
Years since migration	0.0176***	0.0140***	0.0114***	0.0284***	0.0098***	0.0056***	−0.0027	0.0064**	0.0067**
Years since mig squared	−0.0043	−0.0078*	−0.0069*	−0.0135*	−0.0057*	−0.0037*	0.0062*	−0.0030	−0.0038
Marital status									
Married/common-law	−0.0096***	−0.0059***	−0.0047***	−0.0128***	−0.0039***	−0.0020***	−0.0033***	−0.0032***	−0.0030***
Single (never married)	0.0055***	0.0042***	0.0034***	0.0072***	0.0026***	0.0014***	0.0001	0.0017***	0.0019***
Separated/ divorced/wid	−0.0099***	−0.0047***	−0.0037***	−0.0138***	−0.0034***	−0.0016***	−0.0069***	−0.0036***	−0.0028***
Education									
Less than HS	−0.0159***	−0.0058***	−0.0033***	−0.0125***	−0.0027***	−0.0009***	−0.0052***	−0.0031***	−0.0022***
HS or partial PSE	0.0001	0.0001	0.0000	0.0002**	0.0000*	0.0000*	0.0000	0.0000*	0.0000*
Non-uni PSE	−0.0020***	−0.0008***	−0.0005***	−0.0014***	−0.0004***	−0.0002***	−0.0005***	−0.0004***	−0.0003***
University	−0.0066***	−0.0026***	−0.0015***	−0.0066***	−0.0013***	−0.0005***	−0.0018***	−0.0015***	−0.0011***
Home tenure									
Renter	0.0031***	0.0013***	0.0008***	0.0028***	0.0006***	0.0002***	0.0009***	0.0006***	0.0005***
Owner with mortgage	−0.0072***	−0.0023***	−0.0007	0.0140***	0.0025***	0.0009***	0.0092***	0.0039***	0.0025***
Owner without mortgage	0.0347***	0.0149***	0.0101***	0.0533***	0.0107***	0.0042***	0.0218***	0.0125***	0.0091***
Dwelling characteristics									
Dwelling suitable	−0.0023***	−0.0021***	−0.0019***	−0.0043***	−0.0017***	−0.0010***	−0.0017***	−0.0013***	−0.0012***
Number of bedrooms	−0.0064***	−0.0039***	−0.0030***	−0.0053***	−0.0015***	−0.0008***	0.0002	−0.0011***	−0.0014***
Major repairs needed	0.0003***	0.0002**	0.0001**	0.0003***	0.0001***	0.0000***	0.0000	0.0001***	0.0001***

Table A3 – Continued from previous page

	Non-Shelter Hardship			Affordability Issues			Housing-Induced Poverty		
	α=0	α=1	α=2	α=0	α=1	α=2	α=0	α=1	α=2
Minor repairs needed	−0.0004**	−0.0003**	−0.0002**	−0.0004**	−0.0002**	−0.0001*	−0.0002*	−0.0002***	−0.0002**
Only regular maintenance	0.0013***	0.0007***	0.0005***	0.0012***	0.0003***	0.0001***	0.0000	0.0003***	0.0003***
Single-detached house	−0.0001	0.0000	0.0000	−0.0003*	0.0000	0.0000	−0.0003***	−0.0001	0.0000
Double, row, duplex	−0.0005***	−0.0004***	−0.0003**	−0.0003	−0.0002***	−0.0001***	−0.0002*	−0.0002***	−0.0002***
Apartment	−0.0003	0.0000	0.0000	−0.0015***	−0.0002	0.0000	−0.0002	−0.0001	−0.0001
Other	−0.0001	−0.0001	−0.0001	0.0001	0.0000	0.0000	−0.0001	−0.0001*	0.0000
Province									
N.L.	0.0000***	0.0000**	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
P.E.I.	0.0000***	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
N.S.	−0.0001***	0.0000**	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
N.B.	−0.0001***	0.0000	0.0000	0.0001*	0.0000***	0.0000**	0.0000*	0.0000	0.0000*
Que.	0.0004***	0.0002***	0.0001***	0.0007***	0.0002***	0.0001***	0.0000	0.0000*	0.0001*
Ont.	0.0000	0.0001*	0.0001*	0.0005**	0.0001**	0.0001**	0.0000	0.0000*	0.0001*
Man.	0.0000**	0.0000*	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Sask.	0.0000**	0.0000*	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Alta.	−0.0015***	−0.0005***	−0.0002*	0.0002	0.0001	0.0000	−0.0003***	−0.0002***	−0.0001*
B.C.	−0.0001*	−0.0002***	−0.0002***	−0.0003***	−0.0002***	−0.0001***	0.0000	−0.0001***	−0.0001***
STRUCTURAL									
Male	−0.0219***	−0.0081**	−0.0045*	−0.0105*	−0.0020	−0.0005	0.0054	−0.0016	−0.0028
Rural	0.0029	0.0068	0.0056	0.0225**	0.0063*	0.0029	0.0017	0.0064*	0.0044
Immigrant status									
Immigrant	−0.0430**	−0.0163	−0.0126	−0.0188	−0.0069	−0.0046	0.0095	−0.0018	−0.0041
Years since migration	0.0806**	0.0285	0.0216	0.0326	0.0100	0.0058	−0.0001	0.0064	0.0078
Years since mig squared	−0.0401**	−0.0127	−0.0091	−0.0154	−0.0037	−0.0016	−0.0075	−0.0052	−0.0044
Marital status									
Married/common-law	−0.0171***	−0.0227***	−0.0206***	−0.0248***	−0.0127***	−0.0079***	0.0000	−0.0085***	−0.0108***
Single (never married)	−0.0001	0.0006	0.0005	0.0039***	0.0009**	0.0005*	0.0028***	0.0006	0.0003
Separated/ divorced/wid	0.0061*	0.0056***	0.0052***	−0.0004	0.0019*	0.0015**	−0.0048**	0.0017	0.0028**
Education									
Less than HS	0.0111***	0.0064***	0.0041***	0.0080***	0.0022***	0.0009*	−0.0040***	0.0013*	0.0019**
HS or partial PSE	0.0013	0.0004	0.0004	−0.0009	0.0002	0.0002	0.0011	0.0009	0.0007
Non-uni PSE	−0.0046**	−0.0031***	−0.0023**	−0.0030	−0.0009	−0.0006	0.0026**	−0.0006	−0.0011*
University	−0.0114***	−0.0062***	−0.0040***	−0.0065***	−0.0024***	−0.0010**	0.0024**	−0.0020***	−0.0023***

Table A3 – Continued from previous page

	Non-Shelter Hardship			Affordability Issues			Housing-Induced Poverty		
	α=0	α=1	α=2	α=0	α=1	α=2	α=0	α=1	α=2
Home tenure									
Renter	−0.0058**	0.0046***	0.0052***	−0.0121***	0.0000	0.0008	−0.0153***	−0.0016	0.0015
Owner with mortgage	−0.0113***	−0.0068***	−0.0051***	−0.0175***	−0.0053***	−0.0026***	−0.0055***	−0.0045***	−0.0039***
Owner without mortgage	0.0391***	0.0128***	0.0073***	0.0605***	0.0140***	0.0058***	0.0339***	0.0138***	0.0083***
Dwelling characteristics									
Dwelling suitable	−0.0889*	0.0019	0.0111	−0.1055*	−0.0115	0.0031	−0.1184***	−0.0210	−0.0028
Number of bedrooms	−0.0133	−0.0238***	−0.0210**	−0.0345**	−0.0142***	−0.0073**	0.0171**	−0.0022	−0.0066
Major repairs needed	0.0020***	0.0013***	0.0010***	0.0013*	0.0005*	0.0002	0.0005	0.0007**	0.0007***
Minor repairs needed	−0.0026*	−0.0012	−0.0010	−0.0021	−0.0003	−0.0001	−0.0003	−0.0005	−0.0006
Only regular maintenance	−0.0133**	−0.0104***	−0.0081***	−0.0075	−0.0048**	−0.0022*	−0.0043	−0.0065***	−0.0063***
Single-detached house	0.0016	0.0062*	0.0064**	0.0164***	0.0055***	0.0031**	0.0052*	0.0057**	0.0055**
Double, row, duplex	0.0014	0.0007	0.0005	0.0024	0.0010*	0.0005	0.0029***	0.0015**	0.0010*
Apartment	0.0020	0.0033	0.0026	−0.0084**	0.0010	0.0008	−0.0010	0.0027*	0.0029*
Other	−0.0004	−0.0006**	−0.0005**	−0.0003	−0.0004***	−0.0003**	−0.0006*	−0.0007***	−0.0006***
Province									
N.L.	−0.0004*	0.0001	0.0001*	0.0002	0.0000	0.0000	−0.0003*	0.0000	0.0001
P.E.I.	−0.0002*	0.0000	0.0000	0.0001	0.0000	0.0000	0.0001*	0.0000	0.0000
N.S.	0.0002	0.0003*	0.0002*	−0.0001	0.0002*	0.0001	0.0003	0.0002**	0.0002**
N.B.	−0.0002	−0.0001	−0.0001	−0.0005*	−0.0002*	−0.0001*	0.0001	−0.0001*	−0.0001
Que.	−0.0023	−0.0044***	−0.0043***	−0.0046**	−0.0028***	−0.0018***	−0.0080***	−0.0027***	−0.0026***
Ont.	0.0166***	0.0060***	0.0041***	0.0025	0.0027**	0.0019***	0.0052***	0.0047***	0.0035***
Man.	0.0006*	0.0000	−0.0001	0.0000	−0.0001	0.0000	0.0000	−0.0001	−0.0001
Sask.	−0.0001	−0.0002	−0.0002*	−0.0004	−0.0001	−0.0001	−0.0001	0.0000	−0.0001
Alta.	0.0000	−0.0011*	−0.0008*	−0.0007	−0.0006*	−0.0003	−0.0009	−0.0008*	−0.0007*
B.C.	0.0025*	0.0017*	0.0017**	0.0029*	0.0013**	0.0009**	0.0021**	0.0009	0.0010*
Constant	0.1394**	0.0694**	0.0495*	0.0657	0.0262*	0.0086	0.0209	0.0089	0.0155
N	113,230	113,230	113,230	113,230	113,230	113,230	113,230	113,230	113,230

Data source: Canadian Income Survey 2012-2016.
*$p < .05$; **$p < .01$; ***$p < .001$
All decompositions control for year of interview fixed effects.
Bootstrap standard errors are estimated using Statistics Canada's 1,000 bootstrap replicate weights.

Table A4: Decomposition of the expected values of housing indicators: couple versus non-couple

	Non-Shelter Hardship			**Affordability Issues**			**Housing-Induced Poverty**		
	α=0	α=1	α=2	α=0	α=1	α=2	α=0	α=1	α=2
Non-couple	0.2779	0.1378	0.0991	0.3470	0.0838	0.0385	0.0947	0.0750	0.0649
	(0.0031)	(0.0021)	(0.0020)	(0.0033)	(0.0014)	(0.0009)	(0.0020)	(0.0013)	(0.0014)
Couple	0.0857	0.0383	0.0263	0.1201	0.0246	0.0107	0.0320	0.0227	0.0187
	(0.0016)	(0.0010)	(0.0008)	(0.0018)	(0.0006)	(0.0004)	(0.0010)	(0.0006)	(0.0006)
Difference	0.1921***	0.0995***	0.0728***	0.2269***	0.0591***	0.0277***	0.0627***	0.0523***	0.0462***
Endowment effect	0.0790***	0.0293***	0.0168***	0.0774***	0.0134***	0.0045***	0.0249***	0.0150***	0.0109***
Structural effect	0.1132***	0.0701***	0.0560***	0.1495***	0.0457***	0.0233***	0.0378***	0.0373***	0.0352***
ENDOWMENT									
Age	0.0258***	0.0185***	0.0143***	0.0048*	0.0065***	0.0043***	−0.0139***	0.0008	0.0042***
Age squared	−0.0298***	−0.0233***	−0.0183***	0.0033	−0.0068***	−0.0050***	0.0242***	0.0008	−0.0045***
Male	0.0131***	0.0040***	0.0018**	0.0135***	0.0023***	0.0007**	0.0050***	0.0028***	0.0018***
Rural	−0.0010***	−0.0002	−0.0001	0.0002	0.0001	0.0000	−0.0003*	0.0000	0.0000
Immigrant status									
Immigrant	−0.0092***	−0.0054***	−0.0041***	−0.0111***	−0.0036***	−0.0019***	−0.0013**	−0.0026***	−0.0025***
Years since migration	0.0011	0.0008	0.0007	0.0013**	0.0005**	0.0003*	−0.0002	0.0003*	0.0003*
Years since mig squared	0.0006	0.0007**	0.0006**	0.0009*	0.0004**	0.0003**	−0.0006**	0.0002	0.0003*
Education									
Less than HS	0.0054***	0.0019***	0.0010***	0.0040***	0.0008***	0.0002***	0.0015***	0.0009***	0.0006***
HS or partial PSE	0.0002	0.0002*	0.0001*	0.0005***	0.0001**	0.0001**	−0.0001	0.0001*	0.0001*
Non-uni PSE	0.0002*	0.0001*	0.0001*	0.0002**	0.0000**	0.0000*	0.0000*	0.0000**	0.0000*
University	0.0053***	0.0020***	0.0011***	0.0051***	0.0010***	0.0003***	0.0013***	0.0011***	0.0008***
Home tenure									
Renter	0.0352***	0.0148***	0.0094***	0.0318***	0.0070***	0.0029***	0.0099***	0.0070***	0.0055***
Owner with mortgage	0.0041***	0.0010*	0.0000	−0.0105***	−0.0020***	−0.0008***	−0.0068***	−0.0030***	−0.0021***
Owner without mortgage	0.0058***	0.0026***	0.0018***	0.0087***	0.0018***	0.0008***	0.0036***	0.0021***	0.0016***
Dwelling characteristics									
Dwelling suitable	0.0006***	0.0006***	0.0005***	0.0012***	0.0005***	0.0003***	0.0005***	0.0004***	0.0003***
Number of bedrooms	0.0177***	0.0109***	0.0083***	0.0147***	0.0041***	0.0021***	−0.0012	0.0029***	0.0036***
Major repairs needed	0.0007***	0.0004***	0.0003***	0.0007***	0.0002***	0.0001***	0.0001	0.0002***	0.0002***
Minor repairs needed	−0.0001*	−0.0001*	−0.0001*	−0.0001*	0.0000*	0.0000*	0.0000	0.0000**	0.0000*
Only regular maintenance	0.0008***	0.0004***	0.0003***	0.0007***	0.0002***	0.0001***	0.0000	0.0002***	0.0002***
Single-detached house	0.0016	0.0000	−0.0003	0.0029*	0.0003	0.0000	0.0024***	0.0008	0.0003
Double, row, duplex	−0.0005**	−0.0003**	−0.0002**	−0.0002	−0.0002***	−0.0001**	−0.0002	−0.0002***	−0.0002***

Table A4 – Continued from previous page

	Non-Shelter Hardship			Affordability Issues			Housing-Induced Poverty		
	α=0	α=1	α=2	α=0	α=1	α=2	α=0	α=1	α=2
Apartment	0.0015	0.0001	−0.0002	0.0074***	0.0008	0.0001	0.0005	0.0002	0.0003
Other	0.0002	0.0001	0.0001	−0.0001	0.0001	0.0000	0.0001*	0.0001*	0.0001
Province									
N.L.	−0.0001***	0.0000**	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
P.E.I.	0.0000**	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
N.S .	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
N.B.	−0.0001***	0.0000	0.0000	0.0000	0.0000*	0.0000*	0.0000	0.0000	0.0000
Que.	−0.0009***	−0.0004***	−0.0003***	−0.0016***	−0.0003***	−0.0002***	0.0001	−0.0001*	−0.0001**
Ont.	0.0000	−0.0001**	−0.0001***	−0.0010***	−0.0003***	−0.0001***	0.0000	−0.0001***	−0.0001***
Man.	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Sask.	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Alta.	0.0007***	0.0002***	0.0001	−0.0001	0.0000	0.0000*	0.0002***	0.0001***	0.0000
B.C.	0.0001	0.0001*	0.0001*	0.0002*	0.0001*	0.0001*	0.0000	0.0001*	0.0001*
STRUCTURAL									
Age	0.7140***	0.4137***	0.2830***	0.3614***	0.1321***	0.0644***	−0.1902***	0.0527	0.0890**
Age squared	−0.3686***	−0.2383***	−0.1688***	−0.1793***	−0.0760***	−0.0391***	0.1531***	−0.0223	−0.0521**
Male	0.0288***	0.0266***	0.0237***	0.0259***	0.0148***	0.0096***	−0.0044	0.0088***	0.0117***
Rural	0.0320**	0.0055	0.0024	−0.0054	−0.0036	−0.0013	0.0088	0.0015	0.0001
Immigrant status									
Immigrant	−0.0124	−0.0022	0.0010	−0.0254***	−0.0030	−0.0001	−0.0036	−0.0038	−0.0020
Years since migration	0.0147	0.0018	−0.0013	0.0212	0.0034	0.0006	−0.0003	0.0013	0.0011
Years since mig squared	−0.0046	0.0011	0.0018	−0.0022	−0.0002	0.0000	0.0001	0.0011	0.0008
Education									
Less than HS	0.0068***	0.0029***	0.0016*	0.0037**	0.0010*	0.0004	0.0014	0.0015**	0.0013**
HS or partial PSE	0.0021	0.0014	0.0009	0.0017	0.0003	0.0000	−0.0006	0.0003	0.0003
Non-uni PSE	−0.0028	−0.0021	−0.0015	−0.0007	−0.0006	−0.0001	−0.0001	−0.0013	−0.0011
University	−0.0114***	−0.0046***	−0.0024*	−0.0072***	−0.0014	−0.0004	−0.0016	−0.0017*	−0.0015
Home tenure									
Renter	0.0218***	0.0093***	0.0052***	0.0140***	0.0041***	0.0013*	0.0062***	0.0043***	0.0028**
Owner with mortgage	0.0000	0.0019	0.0032*	0.0174***	0.0040***	0.0021***	0.0129***	0.0074***	0.0060***
Owner without mortgage	−0.0252***	−0.0127***	−0.0092***	−0.0323***	−0.0085***	−0.0035***	−0.0188***	−0.0120***	−0.0090***
Dwelling characteristics									
Dwelling suitable	0.1288***	0.0742***	0.0615***	0.1205***	0.0412***	0.0241***	0.0412***	0.0296***	0.0324***
Number of bedrooms	−0.0829***	−0.0531***	−0.0407***	−0.0490***	−0.0233***	−0.0136***	0.0117	−0.0174***	−0.0213***
Major repairs needed	0.0019**	0.0014***	0.0011**	0.0013	0.0006*	0.0004*	−0.0003	0.0004	0.0006*
Minor repairs needed	−0.0009	−0.0007	−0.0006	−0.0016	−0.0003	−0.0003	−0.0007	−0.0003	−0.0003

Table A4 – Continued from previous page

	Non-Shelter Hardship			Affordability Issues			Housing-Induced Poverty		
	α=0	α=1	α=2	α=0	α=1	α=2	α=0	α=1	α=2
Only regular maintenance	−0.0166***	−0.0115***	−0.0094***	−0.0077	−0.0054**	−0.0033**	0.0056*	−0.0027	−0.0047**
Single-detached house	0.0028	0.0046	0.0041	−0.0049	0.0012	0.0012	−0.0065**	0.0000	0.0014
Double, row, duplex	−0.0011	−0.0009	−0.0007	−0.0022	−0.0008	−0.0003	−0.0020*	−0.0012*	−0.0010
Apartment	−0.0076**	−0.0072***	−0.0062***	−0.0037	−0.0036***	−0.0021**	0.0008	−0.0034**	−0.0038***
Other	0.0005	0.0004*	0.0003	0.0006*	0.0003*	0.0001	0.0004*	0.0004**	0.0003*
Province									
N.L.	0.0009***	0.0003**	0.0001	0.0003	0.0000	0.0000	0.0000	0.0002*	0.0001
P.E.I.	0.0000	0.0000	−0.0001	−0.0001	−0.0001**	0.0000**	0.0000	0.0000	0.0000
N.S.	0.0007*	0.0004*	0.0003	0.0007*	0.0002	0.0000	0.0001	0.0002	0.0002
N.B.	0.0008**	0.0001	−0.0001	−0.0002	−0.0003***	−0.0002***	0.0002	−0.0001	−0.0001
Que.	−0.0068***	−0.0035**	−0.0028**	−0.0087***	−0.0021**	−0.0011*	0.0027*	−0.0003	−0.0007
Ont.	−0.0026	0.0001	0.0011	0.0048	0.0031**	0.0020**	−0.0019	−0.0006	0.0001
Man.	−0.0011***	−0.0004*	−0.0002	−0.0007*	−0.0002	0.0000	−0.0002	−0.0002*	−0.0002
Sask.	−0.0008**	−0.0005**	−0.0003*	−0.0001	−0.0001	0.0000	0.0002	−0.0002	−0.0002
Alta.	−0.0036***	−0.0007	0.0002	0.0015	0.0011**	0.0007**	0.0004	−0.0002	−0.0001
B.C.	0.0006	0.0023**	0.0024**	0.0032*	0.0021***	0.0012**	−0.0018*	0.0013*	0.0018**
Constant	−0.2950***	−0.1393***	−0.0938***	−0.0972*	−0.0346	−0.0195	0.0252	−0.0057	−0.0166
N	113,230	113,230	113,230	113,230	113,230	113,230	113,230	113,230	113,230

Data source: Canadian Income Survey 2012-2016.
*$p < .05$; **$p < .01$; ***$p < .001$
All decompositions control for year of interview fixed effects.
Bootstrap standard errors are estimated using Statistics Canada's 1,000 bootstrap replicate weights.

Table A5: Decomposition of the expected values of housing indicators: single mother versus single father

	Non-Shelter Hardship			**Affordability Issues**			**Housing-Induced Poverty**		
	α=0	α=1	α=2	α=0	α=1	α=2	α=0	α=1	α=2
Single mother	0.3874	0.1599	0.1003	0.3644	0.0669	0.0263	0.0982	0.0725	0.0577
	(0.0112)	(0.0066)	(0.0057)	(0.0073)	(0.0022)	(0.0013)	(0.0045)	(0.0022)	(0.0023)
Single father	0.2187	0.1024	0.0683	0.2486	0.0527	0.0222	0.0858	0.0608	0.0511
	(0.0144)	(0.0085)	(0.0072)	(0.0123)	(0.0040)	(0.0024)	(0.0080)	(0.0042)	(0.0043)
Difference	0.1686***	0.0575***	0.0319**	0.1158***	0.0142**	0.0040	0.0124	0.0118*	0.0067
Endowment effect	0.0607***	0.0180**	0.0076	0.0331***	0.0059***	0.0019	0.0060	0.0064***	0.0055**
Structural effect	0.1079***	0.0395**	0.0243*	0.0827***	0.0084	0.0021	0.0064	0.0053	0.0012
ENDOWMENT									
Age	0.1785***	0.0540*	0.0230	0.0595**	0.0138	0.0041	0.0272	0.0237**	0.0193*
Age squared	−0.1655***	−0.0516*	−0.0230	−0.0467*	−0.0124	−0.0040	−0.0201	−0.0201**	−0.0173*
Rural	−0.0017	−0.0001	0.0001	0.0018	0.0005	0.0002	−0.0012	−0.0001	0.0000
Immigrant status									
Immigrant	0.0228*	0.0123*	0.0098*	0.0093**	0.0026*	0.0015*	0.0015	0.0018*	0.0022*
Years since migration	−0.0231	−0.0136	−0.0109	−0.0064	−0.0017	−0.0012	−0.0003	−0.0003	−0.0010
Years since mig squared	0.0059	0.0038	0.0030	0.0011	0.0003	0.0002	0.0000	0.0000	0.0001
Education									
Less than HS	−0.0010	−0.0003	−0.0001	−0.0018*	−0.0004	−0.0002	0.0006	−0.0002	−0.0003
HS or partial PSE	−0.0001	−0.0001	−0.0001	−0.0009	−0.0002	0.0000	−0.0002	−0.0002	−0.0001
Non-uni PSE	−0.0006	−0.0005	−0.0004	−0.0005	−0.0002	−0.0001	0.0004	−0.0001	−0.0001
University	0.0004	0.0001	0.0000	−0.0024*	−0.0004	−0.0001	−0.0003	−0.0005*	−0.0003
Home tenure									
Renter	0.0261***	0.0110***	0.0067***	0.0205***	0.0041***	0.0017***	0.0024*	0.0049***	0.0045***
Owner with mortgage	0.0062*	0.0012	−0.0005	−0.0112***	−0.0015**	−0.0004	−0.0090***	−0.0027***	−0.0014**
Owner without mortgage	0.0025	0.0013	0.0010	0.0017	0.0003	0.0001	0.0006	0.0004	0.0003
Dwelling characteristics									
Dwelling suitable	−0.0069*	−0.0033*	−0.0022	−0.0032**	−0.0008**	−0.0004*	−0.0011*	−0.0009**	−0.0007*
Number of bedrooms	0.0063*	0.0026	0.0016	0.0030*	0.0002	0.0001	0.0002	−0.0002	−0.0002
Major repairs needed	0.0002	0.0000	0.0000	0.0006	0.0001	0.0000	0.0000	0.0001	0.0001
Minor repairs needed	0.0000	−0.0001	−0.0001	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Only regular maintenance	0.0010	0.0000	−0.0002	0.0001	0.0000	0.0000	−0.0003	0.0000	0.0000
Single-detached house	−0.0053	−0.0041*	−0.0033*	−0.0037*	−0.0011*	−0.0006	−0.0009	−0.0014**	−0.0013*
Double, row, duplex	0.0015	−0.0011	−0.0011	−0.0036**	−0.0010*	−0.0004	0.0011	−0.0013**	−0.0013**
Apartment	0.0018	0.0012	0.0009	0.0005	0.0002	0.0001	−0.0002	0.0003	0.0002

Table A5 – Continued from previous page

	Non-Shelter Hardship			Affordability Issues			Housing-Induced Poverty		
	α=0	α=1	α=2	α=0	α=1	α=2	α=0	α=1	α=2
Other	0.0004	0.0002	0.0001	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Province									
N.L.	0.0008*	0.0003	0.0001	0.0010	0.0000	−0.0001	−0.0002	0.0002	0.0001
P.E.I.	0.0000	−0.0001	0.0000	−0.0001	−0.0001	0.0000	0.0002	−0.0001	−0.0001
N.S.	0.0001	0.0000	0.0000	0.0004	0.0001	0.0000	0.0003	0.0003	0.0003
N.B .	0.0000	0.0000	0.0000	−0.0012	−0.0003	−0.0002	0.0003	−0.0001	−0.0001
Que.	0.0099**	0.0049*	0.0034*	0.0138***	0.0033***	0.0015***	0.0049***	0.0031***	0.0029***
Ont.	−0.0022	−0.0009	−0.0006	0.0016*	0.0002	0.0000	0.0000	−0.0002	−0.0002
Man.	0.0001	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Sask.	0.0000	0.0000	0.0000	0.0008	0.0003	0.0002	0.0000	0.0002	0.0002
Alta.	0.0027	0.0010	0.0006	−0.0006	−0.0001	−0.0001	0.0001	0.0000	0.0000
B.C.	−0.0001	−0.0002	−0.0002	−0.0004	−0.0002	−0.0001	−0.0001	−0.0001	−0.0001
STRUCTURAL									
Age	−0.9133	0.0315	0.2277	0.7084	0.1281	0.1250	−0.0363	−0.1227	0.0279
Age squared	0.2773	−0.1247	−0.1851	−0.4075	−0.0887	−0.0744	0.0597	0.0439	−0.0378
Rural	0.0300	−0.0117	−0.0328	0.0250	−0.0069	−0.0070	0.0024	−0.0082	−0.0219
Immigrant status									
Immigrant	−0.0198	−0.0214	−0.0179	−0.0046	0.0029	0.0031	0.0063	0.0004	−0.0007
Years since migration	0.0553	0.0425	0.0341	0.0063	−0.0057	−0.0067	−0.0035	−0.0002	−0.0010
Years since mig squared	−0.0343	−0.0241	−0.0203	0.0003	0.0028	0.0033	−0.0010	−0.0015	−0.0005
Education									
Less than HS	0.0075	−0.0038	−0.0052	0.0010	−0.0002	−0.0006	−0.0011	0.0012	0.0002
HS or partial PSE	0.0037	0.0028	0.0022	0.0074	0.0002	−0.0005	0.0031	0.0021	0.0018
Non-uni PSE	−0.0327**	−0.0069	−0.0013	−0.0090	−0.0017	0.0003	−0.0015	−0.0062*	−0.0047
University	0.0000	0.0095	0.0099	−0.0034	0.0010	0.0012	0.0001	−0.0005	0.0006
Home tenure									
Renter	0.0329*	0.0074	0.0010	0.0049	−0.0023	−0.0017	0.0044	−0.0013	−0.0030
Owner with mortgage	−0.0160	−0.0017	0.0027	0.0198	0.0035	0.0013	0.0037	0.0025	0.0015
Owner without mortgage	−0.0059	−0.0019	−0.0010	−0.0054*	−0.0001	0.0002	−0.0019	−0.0002	0.0005
Dwelling characteristics									
Dwelling suitable	0.0700	0.0267	0.0095	−0.0306	−0.0127	−0.0102	−0.0148	−0.0148	−0.0154
Number of bedrooms	−0.1069	−0.0432	−0.0383	−0.1110*	−0.0098	−0.0047	0.0124	0.0100	0.0033
Major repairs needed	−0.0053	−0.0024	−0.0010	−0.0057	−0.0005	0.0002	−0.0048*	−0.0014	−0.0009
Minor repairs needed	0.0049	0.0005	−0.0022	0.0061	−0.0010	−0.0015	0.0068	0.0007	−0.0011
Only regular maintenance	0.0226	0.0146	0.0120	0.0247	0.0055	0.0022	0.0171	0.0081	0.0082

Table A5 – Continued from previous page

	Non-Shelter Hardship			Affordability Issues			Housing-Induced Poverty		
	α=0	α=1	α=2	α=0	α=1	α=2	α=0	α=1	α=2
Single-detached house	0.0147	0.0058	0.0071	0.0276	0.0006	0.0003	0.0032	0.0004	−0.0015
Double, row, duplex	−0.0056	−0.0065	−0.0049	−0.0028	−0.0009	−0.0004	−0.0023	−0.0006	−0.0007
Apartment	−0.0166	−0.0051	−0.0040	0.0009	−0.0005	−0.0002	−0.0013	−0.0010	−0.0015
Other	0.0015	0.0009	0.0006	−0.0009	0.0002	0.0001	0.0004	0.0002	0.0004
Province									
N.L.	−0.0002	−0.0005	−0.0004	−0.0010	−0.0003	0.0000	0.0004	−0.0003	−0.0005
P.E.I.	−0.0006	0.0001	0.0001	0.0023	0.0009*	0.0005*	−0.0027	0.0004	0.0007*
N.S.	−0.0030	−0.0021	−0.0021	−0.0020	−0.0019	−0.0014	0.0000	−0.0005	−0.0011
N.B.	0.0031	0.0022*	0.0016*	−0.0021	0.0003	0.0003	−0.0016	0.0012	0.0016*
Que.	0.0199	0.0046	0.0013	−0.0061	−0.0040	−0.0026	0.0083	0.0021	0.0002
Ont.	0.0265	0.0039	−0.0008	−0.0021	−0.0027	−0.0019	0.0026	−0.0019	−0.0017
Man.	−0.0010	−0.0014	−0.0013	−0.0004	−0.0007	−0.0001	0.0022	−0.0016	−0.0015
Sask.	−0.0007	−0.0010	−0.0008	−0.0020	−0.0010	−0.0007	0.0025	−0.0011	−0.0016
Alta.	0.0036	0.0011	0.0006	0.0045	0.0021	0.0011	0.0028	0.0012	0.0013
B.C.	0.0093	0.0065	0.0062	0.0042	0.0030	0.0021*	0.0000	0.0004	0.0012
Constant	0.6870	0.1373	0.0271	−0.1643	−0.0008	−0.0241	−0.0591	0.0945	0.0490
N	5,540	5,540	5,540	5,540	5,540	5,540	5,540	5,540	5,540

Data source: Canadian Income Survey 2012-2016.
$^*p < .05; ^{**}p < .01; ^{***}p < .001$
All decompositions control for year of interview fixed effects.
Bootstrap standard errors are estimated using Statistics Canada's 1,000 bootstrap replicate weights.

Table A6: Decomposition of the expected values of housing indicators: renter versus owner

	Non-Shelter Hardship			**Affordability Issues**			**Housing-Induced Poverty**		
	α=0	α=1	α=2	α=0	α=1	α=2	α=0	α=1	α=2
Owner	0.0870	0.0441	0.0328	0.1097	0.0222	0.0097	0.0338	0.0209	0.0169
	(0.0014)	(0.0009)	(0.0009)	(0.0011)	(0.0003)	(0.0002)	(0.0006)	(0.0003)	(0.0003)
Renter	0.3422	0.1585	0.1086	0.3685	0.0764	0.0320	0.1133	0.0772	0.0619
	(0.0045)	(0.0029)	(0.0026)	(0.0028)	(0.0010)	(0.0006)	(0.0019)	(0.0010)	(0.0010)
Difference	−0.2552***	−0.1144***	−0.0757***	−0.2587***	−0.0541***	−0.0223***	−0.0795***	−0.0563***	−0.0450***
Endowment effect	−0.0750***	−0.0379***	−0.0271***	−0.0976***	−0.0195***	−0.0080***	−0.0273***	−0.0177***	−0.0145***
Structural effect	−0.1801***	−0.0764***	−0.0486***	−0.1611***	−0.0346***	−0.0143***	−0.0523***	−0.0386***	−0.0306***
ENDOWMENT									
Age	0.0261***	0.0194***	0.0150***	−0.0025*	0.0020***	0.0015***	−0.0118***	−0.0011**	0.0012**
Age squared	−0.0211***	−0.0162***	−0.0126***	0.0018*	−0.0013***	−0.0010***	0.0083***	0.0007*	−0.0009**
Male	−0.0057***	−0.0019***	−0.0009***	−0.0080***	−0.0015***	−0.0006***	−0.0027***	−0.0018***	−0.0013***
Rural	0.0021***	0.0005	0.0003	−0.0027***	−0.0006***	−0.0002*	0.0002	−0.0002	−0.0002
Immigrant status									
Immigrant	−0.0022**	−0.0013**	−0.0010**	−0.0021***	−0.0006***	−0.0003***	−0.0004***	−0.0005***	−0.0004***
Years since migration	−0.0072***	−0.0054***	−0.0043***	−0.0040***	−0.0011***	−0.0006***	0.0000	−0.0008***	−0.0009***
Years since mig squared	0.0026*	0.0028***	0.0023***	0.0012*	0.0004*	0.0003*	−0.0007*	0.0002	0.0004
Marital status									
Married/ common-law	−0.0265***	−0.0166***	−0.0132***	−0.0316***	−0.0081***	−0.0039***	−0.0080***	−0.0072***	−0.0064***
Single (never married)	−0.0097***	−0.0074***	−0.0059***	−0.0081***	−0.0028***	−0.0014***	0.0006*	−0.0018***	−0.0022***
Separated/ divorced/wid	−0.0042***	−0.0018***	−0.0014***	−0.0076***	−0.0014***	−0.0006***	−0.0042***	−0.0017***	−0.0011***
Education									
Less than HS	−0.0060***	−0.0021***	−0.0012***	−0.0050***	−0.0010***	−0.0004***	−0.0017***	−0.0011***	−0.0008***
HS or partial PSE	−0.0002	−0.0002*	−0.0001*	−0.0004***	−0.0001**	0.0000*	0.0000	−0.0001**	−0.0001*
Non-uni PSE	−0.0008***	−0.0003***	−0.0002**	−0.0005***	−0.0001***	−0.0001***	−0.0001*	−0.0001***	−0.0001***
University	−0.0047***	−0.0018***	−0.0011***	−0.0047***	−0.0008***	−0.0003***	−0.0015***	−0.0010***	−0.0007***
Dwelling characteristics									
Dwelling suitable	0.0023***	0.0021***	0.0019***	0.0031***	0.0010***	0.0005***	0.0015***	0.0009***	0.0008***
Major repairs needed	0.0002	0.0001	0.0001	0.0002***	0.0001***	0.0000***	0.0000*	0.0001***	0.0001***
Minor repairs needed	−0.0001	0.0000	0.0000	−0.0002***	−0.0001***	0.0000***	−0.0001*	−0.0001***	−0.0001***
Only regular maintenance	0.0003*	0.0002*	0.0001*	0.0007***	0.0002***	0.0001***	0.0001*	0.0001***	0.0002***
Single-detached house	−0.0107***	−0.0045**	−0.0029*	−0.0124***	−0.0025***	−0.0010**	−0.0043***	−0.0021***	−0.0017**
Double, row, duplex	0.0008**	0.0005***	0.0004**	0.0000	0.0005***	0.0003***	0.0002	0.0004***	0.0004***

Table A6 – Continued from previous page

	Non-Shelter Hardship			Affordability Issues			Housing-Induced Poverty		
	α=0	α=1	α=2	α=0	α=1	α=2	α=0	α=1	α=2
Apartment	−0.0116***	−0.0049**	−0.0032	−0.0179***	−0.0022**	−0.0006	−0.0027*	−0.0008	−0.0008
Other	0.0000	0.0000	0.0000	−0.0001*	0.0000	0.0000*	0.0000	0.0000*	0.0000*
Province									
N.L.	0.0001***	0.0000*	0.0000	−0.0001	0.0000*	0.0000**	0.0000	0.0000	0.0000
P.E.I.	0.0000*	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
N.S.	0.0001***	0.0000*	0.0000	0.0001**	0.0000	0.0000	0.0001*	0.0000**	0.0000*
N.B.	0.0002***	0.0000	0.0000	−0.0001	−0.0001***	0.0000***	0.0001***	0.0000	0.0000
Que.	0.0019***	0.0009***	0.0007***	0.0026***	0.0006***	0.0003***	−0.0003*	0.0002***	0.0002***
Ont.	0.0000	0.0002**	0.0002**	0.0010***	0.0002***	0.0001***	−0.0001	0.0000	0.0000*
Man.	−0.0001***	0.0000**	0.0000	0.0001*	0.0000	0.0000	0.0000*	0.0000*	0.0000
Sask.	−0.0001***	−0.0001**	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000*	0.0000
Alta.	−0.0010***	−0.0003***	−0.0001*	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
B.C.	0.0000	0.0001	0.0001	−0.0001*	−0.0001*	0.0000*	0.0000	0.0000*	−0.0001*
STRUCTURAL									
Age	−0.2728**	−0.2422***	−0.1533**	0.2768***	0.0699***	0.0443***	0.5998***	0.1594***	0.0697**
Age squared	0.1045*	0.1234***	0.0803**	−0.2837***	−0.0595***	−0.0316***	−0.4194***	−0.1174***	−0.0538***
Male	0.0401***	0.0121***	0.0047	0.0376***	0.0069***	0.0023**	0.0147***	0.0095***	0.0065***
Rural	−0.0057	0.0163	0.0187*	0.0746***	0.0226***	0.0105***	0.0032	0.0108**	0.0123***
Immigrant status									
Immigrant	0.0050	0.0035	0.0025	0.0103***	0.0031**	0.0013*	0.0025	0.0024**	0.0017
Years since migration	0.0046	0.0103	0.0091	0.0000	0.0006	0.0003	0.0019	0.0015	0.0018
Years since mig squared	−0.0050	−0.0083	−0.0068	−0.0039	−0.0018	−0.0008	−0.0015	−0.0019	−0.0019
Marital status									
Married/ common-law	0.0272***	0.0128***	0.0075***	0.0167***	0.0048***	0.0016***	0.0051***	0.0052***	0.0039***
Single (never married)	−0.0094***	−0.0044***	−0.0020	−0.0075***	−0.0020***	−0.0006*	−0.0006	−0.0020***	−0.0016***
Separated/ divorced/wid	−0.0053**	−0.0021	−0.0018	−0.0031*	−0.0008	−0.0004	−0.0044***	−0.0014*	−0.0008
Education									
Less than HS	−0.0137***	−0.0046***	−0.0020*	−0.0096***	−0.0015***	−0.0003	−0.0015	−0.0022***	−0.0017***
HS or partial PSE	−0.0018	−0.0007	−0.0003	−0.0019	−0.0001	0.0001	0.0002	0.0000	0.0002
Non-uni PSE	0.0129***	0.0068***	0.0049***	0.0075***	0.0025***	0.0011***	0.0010	0.0021***	0.0018***
University	0.0115***	0.0019	−0.0009	0.0065***	0.0000	−0.0005	0.0006	0.0009*	0.0003
Dwelling characteristics									
Dwelling suitable	−0.0192	−0.0181	−0.0158	−0.0070	−0.0062	−0.0039	−0.0181*	−0.0072*	−0.0051
Major repairs needed	−0.0002	−0.0002	−0.0001	0.0000	−0.0001	0.0000	0.0009**	0.0000	−0.0002
Minor repairs needed	−0.0021	−0.0004	0.0000	0.0014	0.0006	0.0003	−0.0001	0.0002	0.0003

Table A6 – Continued from previous page

	Non-Shelter Hardship			Affordability Issues			Housing-Induced Poverty		
	α=0	α=1	α=2	α=0	α=1	α=2	α=0	α=1	α=2
Only regular maintenance	0.0096	0.0038	0.0016	−0.0049	−0.0014	−0.0013	−0.0091***	−0.0005	0.0007
Single-detached house	0.0018	−0.0013	−0.0020	−0.0104***	−0.0025**	−0.0011*	−0.0007	−0.0011	−0.0012
Double, row, duplex	0.0056**	0.0062***	0.0055***	0.0097***	0.0042***	0.0021***	0.0039***	0.0048***	0.0043***
Apartment	0.0140**	0.0128***	0.0115***	0.0287***	0.0099***	0.0050***	0.0144***	0.0111***	0.0094***
Other	−0.0012**	−0.0010***	−0.0008**	−0.0020***	−0.0009***	−0.0005***	−0.0010***	−0.0011***	−0.0010***
Province									
N.L.	−0.0011***	−0.0006***	−0.0003**	−0.0012*	−0.0002	0.0000	0.0000	−0.0006***	−0.0004**
P.E.I.	−0.0001	0.0000	0.0000	0.0015***	0.0005***	0.0002***	0.0005	0.0002	0.0003*
N.S .	−0.0004	−0.0004	−0.0003	−0.0018**	−0.0005*	−0.0002	0.0009*	−0.0004	−0.0007**
N.B.	−0.0006	0.0000	0.0001	0.0013*	0.0008***	0.0004**	0.0000	0.0003	0.0004*
Que.	0.0176***	0.0096***	0.0074***	0.0153***	0.0030***	0.0014***	−0.0033***	0.0013**	0.0018***
Ont.	0.0047	0.0036	0.0028	−0.0021	−0.0001	0.0001	0.0020	0.0023***	0.0022***
Man.	0.0006	−0.0001	−0.0003	0.0008	−0.0006	−0.0005**	−0.0001	0.0005	0.0000
Sask.	−0.0001	0.0001	0.0000	−0.0033***	−0.0007**	−0.0004*	−0.0015**	−0.0004	−0.0003
Alta.	0.0071***	0.0024**	0.0010	−0.0002	−0.0004	−0.0003	−0.0003	0.0003	0.0003
B.C.	−0.0023	−0.0019	−0.0020*	−0.0034***	−0.0012***	−0.0005*	−0.0001	−0.0008*	−0.0010**
Constant	−0.1062*	−0.0156	−0.0177	−0.3033***	−0.0831***	−0.0423***	−0.2420***	−0.1142***	−0.0791***
N	113,230	113,230	113,230	113,230	113,230	113,230	113,230	113,230	113,230

Data source: Canadian Income Survey 2012-2016.
*$p < .05$; **$p < .01$; ***$p < .001$
All decompositions control for year of interview fixed effects.
Bootstrap standard errors are estimated using Statistics Canada's 1,000 bootstrap replicate weights.

Appendix B Decomposition of concentration index-based indicators

Table B1: Decomposition of Concentration Index-based indicators: immigrants versus non-immigrants

	Non-Shelter Hardship			**Affordability Issues**			**Housing-Induced Poverty**		
	α=0	α=1	α=2	α=0	α=1	α=2	α=0	α=1	α=2
Non-immigrant	−0.4710	−0.8330	−0.8539	−0.4772	−0.7719	−0.8411	−0.1322	−0.7588	−0.8083
	(0.0038)	(0.0024)	(0.0029)	(0.0036)	(0.0028)	(0.0030)	(0.0022)	(0.0034)	(0.0037)
Immigrant	−0.5622	−0.7869	−0.8169	−0.5891	−0.7093	−0.7864	−0.1199	−0.6898	−0.7563
	(0.0161)	(0.0093)	(0.0107)	(0.0150)	(0.0109)	(0.0123)	(0.0087)	(0.0134)	(0.0138)
Difference	0.0912***	−0.0461***	−0.0370***	0.1119***	−0.0626***	−0.0546***	−0.0123	−0.0689***	−0.0520***
Endowment effect	−0.0388***	0.0117***	0.0093***	0.0175***	0.0058*	0.0030	−0.0043*	0.0215***	0.0161***
Structural effect	0.1300***	−0.0579***	−0.0462***	0.0944***	−0.0684***	−0.0577***	−0.0080	−0.0905***	−0.0681***
ENDOWMENT									
Age	0.0193***	0.0060***	0.0071***	0.0115***	0.0118***	0.0118***	−0.0075***	0.0051**	0.0065***
Age squared	−0.0187***	−0.0073***	−0.0084***	−0.0094***	−0.0142***	−0.0141***	0.0096***	−0.0064***	−0.0080***
Male	0.0012*	−0.0004*	−0.0003*	0.0008*	−0.0006*	−0.0005*	0.0002*	−0.0005*	−0.0003*
Rural	−0.0038**	0.0038***	0.0033**	0.0082***	0.0062***	0.0043***	0.0008	0.0063***	0.0051**
Marital status									
Married/common-law	−0.0152***	0.0059***	0.0054***	−0.0117***	0.0063***	0.0044***	−0.0018***	0.0089***	0.0076***
Single (never married)	−0.0087***	0.0016***	0.0013*	−0.0058***	0.0019***	0.0010	0.0012***	0.0032***	0.0024**
Separated/ divorced/wid	−0.0008***	0.0007***	0.0007***	−0.0009***	0.0008***	0.0006***	−0.0006***	0.0010***	0.0009***
Education									
Less than HS	−0.0050***	0.0018***	0.0016***	−0.0018***	0.0023***	0.0018***	−0.0003	0.0028***	0.0022***
HS or partial PSE	−0.0002	0.0002	0.0002	−0.0003	0.0001	0.0001	0.0002	0.0001	0.0001
Non-uni PSE	0.0054***	−0.0010**	−0.0009*	0.0027***	−0.0008	−0.0008	0.0005	−0.0013*	−0.0011*
University	−0.0165***	0.0080***	0.0074***	−0.0057***	0.0104***	0.0082***	0.0006	0.0119***	0.0095***
Home tenure									
Renter	0.0055***	−0.0009***	−0.0006**	0.0044***	−0.0007***	−0.0008***	0.0009***	−0.0011***	−0.0008**
Owner with mortgage	−0.0001	−0.0001	−0.0001	0.0001	−0.0001	−0.0001	0.0001	0.0000	−0.0001
Owner without mortgage	0.0049***	−0.0016***	−0.0014***	0.0054***	−0.0021***	−0.0019***	0.0024***	−0.0016***	−0.0015***
Dwelling characteristics									
Dwelling suitable	−0.0080***	−0.0001	−0.0004	−0.0127***	−0.0025**	−0.0031**	−0.0066***	−0.0007	0.0001
Number of bedrooms	−0.0024***	0.0002	0.0001	−0.0014***	−0.0002	−0.0004*	0.0005**	0.0007**	0.0005*
Major repairs needed	−0.0008***	0.0002**	0.0002*	−0.0005***	0.0002*	0.0001	0.0001	0.0003**	0.0002*
Minor repairs needed	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Only regular maintenance	−0.0007**	0.0001*	0.0001	−0.0004**	0.0001	0.0000	0.0001*	0.0002*	0.0001

Table B1 – Continued from previous page

	Non-Shelter Hardship			Affordability Issues			Housing-Induced Poverty		
	α=0	α=1	α=2	α=0	α=1	α=2	α=0	α=1	α=2
Single-detached house	−0.0003	−0.0059***	−0.0066***	−0.0034**	−0.0085***	−0.0080***	0.0004	−0.0091***	−0.0090***
Double, row, duplex	−0.0016**	0.0016**	0.0018**	−0.0006	0.0013**	0.0022***	−0.0001	0.0021**	0.0024**
Apartment	0.0017	0.0001	0.0001	0.0029**	−0.0018	−0.0007	0.0010	0.0008	0.0009
Other	−0.0001	0.0011***	0.0012**	0.0007*	0.0010***	0.0014***	0.0001	0.0017***	0.0017**
Province									
N.L.	−0.0014***	0.0003**	0.0003*	0.0006*	0.0005***	0.0006***	0.0001	0.0007***	0.0006**
P.E.I.	−0.0003***	0.0000	0.0000	0.0002*	0.0000	0.0000	0.0000	0.0001	0.0000
N.S.	−0.0016***	0.0003	0.0001	−0.0006	−0.0002	−0.0002	−0.0001	0.0003	−0.0001
N.B.	−0.0019***	0.0003*	0.0002	0.0010***	0.0004*	0.0003	−0.0003	0.0008***	0.0005*
Que.	0.0095***	−0.0011	−0.0002	0.0108***	−0.0020**	−0.0003	−0.0032***	−0.0030**	−0.0015
Ont.	−0.0018	−0.0009	−0.0014	0.0191***	−0.0029*	−0.0017	−0.0016	0.0000	−0.0013
Man.	0.0005***	−0.0001**	−0.0001*	0.0003**	−0.0002**	−0.0002**	0.0000	−0.0002	−0.0001
Sask.	0.0009***	−0.0003*	−0.0002	−0.0005*	−0.0002	−0.0002	−0.0001	−0.0005**	−0.0003
Alta.	0.0012***	−0.0003**	−0.0002	0.0000	0.0000	−0.0001	0.0001	−0.0005**	−0.0003*
B.C.	0.0012*	−0.0008*	−0.0008	0.0044***	−0.0003	−0.0005	−0.0009**	−0.0007	−0.0008
STRUCTURAL									
Age	−0.2510	0.0182	−0.0145	−0.2376	0.0874	0.0494	0.3686	−0.0448	−0.0781
Age squared	0.0789	0.0510	0.0808	0.0942	0.0247	0.0374	−0.2499*	0.1206	0.1476
Male	−0.0123	0.0142	0.0141	−0.0048	−0.0027	−0.0016	0.0241*	0.0240	0.0230
Rural	−0.0277	−0.0021	−0.0133	0.0382	0.0351	0.0105	−0.0204	−0.0106	−0.0231
Marital status									
Married/common-law	0.0564**	−0.0205	−0.0147	0.0548**	−0.0229	−0.0146	0.0083	−0.0242	−0.0162
Single (never married)	−0.0168**	0.0058	0.0055	−0.0101	0.0063	0.0045	0.0045	0.0076	0.0063
Separated/ divorced/wid	0.0074	−0.0021	−0.0034	−0.0016	−0.0020	−0.0020	−0.0092*	−0.0034	−0.0041
Education									
Less than HS	−0.0115*	0.0002	0.0005	−0.0103	−0.0023	−0.0028	0.0031	0.0011	0.0008
HS or partial PSE	0.0113	−0.0017	−0.0025	0.0065	−0.0005	−0.0035	−0.0019	−0.0002	−0.0023
Non-uni PSE	−0.0067	−0.0001	−0.0016	−0.0021	0.0031	0.0036	−0.0038	0.0017	0.0003
University	0.0210*	0.0027	0.0054	0.0202*	0.0033	0.0091	−0.0003	−0.0045	0.0017
Home tenure									
Renter	−0.0280**	0.0046	0.0063	−0.0486***	−0.0036	0.0013	−0.0227***	−0.0008	0.0025
Owner with mortgage	0.0300**	−0.0125	−0.0136	0.0345***	−0.0090	−0.0153	0.0148**	−0.0002	−0.0045
Owner without mortgage	0.0056	0.0049	0.0040	0.0232**	0.0106	0.0104	0.0119*	0.0009	0.0009

Table B1 – Continued from previous page

	Non-Shelter Hardship			Affordability Issues			Housing-Induced Poverty		
	α=0	α=1	α=2	α=0	α=1	α=2	α=0	α=1	α=2
Dwelling characteristics									
Dwelling suitable	0.0361	−0.0219	−0.0175	−0.0174	−0.0301	−0.0246	0.0715*	−0.0387	−0.0343
Number of bedrooms	0.0344	−0.0392	−0.0367	0.0355	−0.0583	−0.0893	0.0216	−0.0415	−0.0337
Major repairs needed	−0.0040	0.0006	0.0012	−0.0018	0.0002	0.0011	0.0019	0.0022	0.0026
Minor repairs needed	−0.0008	−0.0001	−0.0029	0.0005	−0.0028	−0.0055	−0.0002	−0.0018	−0.0055
Only regular maintenance	0.0499*	−0.0062	−0.0044	0.0195	0.0082	0.0059	−0.0225	−0.0201	−0.0109
Single-detached house	0.0132	0.0169	0.0114	0.0030	0.0197	0.0211	−0.0019	0.0268	0.0145
Double, row, duplex	0.0092	−0.0016	−0.0020	0.0046	−0.0025	−0.0031	0.0052	0.0011	0.0000
Apartment	0.0332*	−0.0064	−0.0055	0.0192	−0.0059	−0.0064	0.0056	−0.0049	−0.0060
Other	−0.0017*	0.0000	0.0001	−0.0009	0.0000	0.0000	−0.0004	−0.0004	−0.0001
Province									
N.L.	−0.0001	0.0001	0.0001	−0.0001	0.0001	0.0001	0.0000	0.0001	0.0001
P.E.I.	0.0001	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
N.S.	−0.0002	−0.0002	−0.0003	0.0002	−0.0001	−0.0001	0.0001	−0.0002	−0.0003
N.B.	0.0007	−0.0004	−0.0006	0.0004	−0.0001	−0.0002	−0.0002	−0.0005	−0.0007
Que.	0.0118	−0.0061	−0.0054	0.0019	−0.0028	−0.0026	0.0019	−0.0108	−0.0089
Ont.	0.0167	−0.0091	−0.0025	0.0040	−0.0176	−0.0171	−0.0126	−0.0202	−0.0080
Man.	−0.0017	0.0005	0.0008	−0.0010	0.0003	0.0003	0.0004	0.0008	0.0010
Sask.	−0.0008	0.0004	0.0005	−0.0005	−0.0002	−0.0003	−0.0001	0.0008	0.0008
Alta.	0.0013	0.0026	0.0039	0.0034	0.0042	0.0053	0.0009	0.0011	0.0027
B.C.	−0.0039	−0.0019	−0.0025	−0.0039	−0.0027	−0.0050	−0.0049	−0.0013	−0.0026
Constant	0.0797	−0.0484	−0.0369	0.0710	−0.1049	−0.0233	−0.2015	−0.0502	−0.0337
N	113,230	113,230	113,230	113,230	113,230	113,230	113,230	113,230	113,230

Data source: Canadian Income Survey 2012-2016.
*$p < .05$; **$p < .01$; ***$p < .001$
All decompositions control for year of interview fixed effects.
Bootstrap standard errors are estimated using Statistics Canada's 1,000 bootstrap replicate weights.

Table B2: Decomposition of Concentration Index-based indicators: urban versus rural

	Non-shelter hardship			Affordability			Housing-induced poverty		
	α=0	α=1	α=2	α=0	α=1	α=2	α=0	α=1	α=2
Urban	−0.5156	−0.8186	−0.8422	−0.5437	−0.7539	−0.8245	−0.1343	−0.7388	−0.7927
	(0.0052)	(0.0029)	(0.0035)	(0.0049)	(0.0034)	(0.0038)	(0.0030)	(0.0042)	(0.0045)
Rural	−0.4031	−0.8347	−0.8561	−0.3549	−0.7668	−0.8382	−0.1111	−0.7541	−0.8063
	(0.0056)	(0.0046)	(0.0056)	(0.0053)	(0.0062)	(0.0064)	(0.0029)	(0.0069)	(0.0072)
Difference	−0.1125***	0.0161**	0.0140*	−0.1888***	0.0130	0.0137	−0.0232***	0.0153	0.0136
Endowment effect	−0.1307***	0.0429***	0.0380***	−0.1268***	0.0566***	0.0454***	−0.0174***	0.0599***	0.0508***
Structural effect	0.0182*	−0.0268***	−0.0240**	−0.0620***	−0.0436***	−0.0318***	−0.0057	−0.0446***	−0.0372**
ENDOWMENT									
Age	0.0388***	0.0122***	0.0143***	0.0225***	0.0237***	0.0231***	−0.0165***	0.0103***	0.0129***
Age squared	−0.0300***	−0.0125***	−0.0142***	−0.0147***	−0.0236***	−0.0230***	0.0168***	−0.0112***	−0.0135***
Male	−0.0083***	0.0028***	0.0022***	−0.0052***	0.0038***	0.0034***	−0.0014***	0.0032***	0.0023***
Immigrant status									
Immigrant	−0.0614***	0.0239***	0.0183***	−0.0467***	0.0254***	0.0223***	0.0084**	0.0375***	0.0270***
Years since migration	0.0434***	−0.0094*	−0.0047	0.0371***	−0.0057	−0.0054	−0.0191***	−0.0167*	−0.0091
Years since mig squared	−0.0113**	−0.0010	−0.0026	−0.0123**	−0.0039	−0.0032	0.0112***	0.0000	−0.0020
Marital status									
Married/common-law	−0.0200***	0.0079***	0.0072***	−0.0152***	0.0082***	0.0058***	−0.0022***	0.0120***	0.0102***
Single (never married)	−0.0088***	0.0018***	0.0015**	−0.0055***	0.0022***	0.0013*	0.0013***	0.0035***	0.0026***
Separated/ divorced/wid	−0.0022***	0.0019***	0.0018***	−0.0024***	0.0017***	0.0014***	−0.0016***	0.0024***	0.0023***
Education									
Less than HS	0.0106***	−0.0039***	−0.0034***	0.0036***	−0.0052***	−0.0043***	0.0007	−0.0061***	−0.0049***
HS or partial PSE	0.0001	0.0000	0.0000	0.0001	0.0000	0.0000	0.0000	0.0000	0.0000
Non-uni PSE	−0.0038***	0.0006*	0.0005	−0.0019***	0.0006	0.0006	−0.0004	0.0008*	0.0007
University	0.0165***	−0.0082***	−0.0075***	0.0056***	−0.0108***	−0.0088***	−0.0007	−0.0121***	−0.0097***
Home tenure									
Renter	−0.0612***	0.0097***	0.0066***	−0.0470***	0.0075***	0.0082***	−0.0092***	0.0128***	0.0089***
Owner with mortgage	−0.0046***	−0.0025***	−0.0032***	0.0029***	−0.0054***	−0.0044***	0.0060***	−0.0013*	−0.0026***
Owner without mortgage	−0.0303***	0.0100***	0.0091***	−0.0333***	0.0131***	0.0121***	−0.0152***	0.0098***	0.0095***
Dwelling characteristics									
Dwelling suitable	0.0036***	−0.0004	−0.0003	0.0052***	0.0003	0.0005	0.0025***	−0.0005	−0.0006
Number of bedrooms	−0.0165***	0.0011	0.0006	−0.0094***	−0.0015	−0.0030*	0.0033***	0.0041**	0.0032*

Table B2 – Continued from previous page

	Non-Shelter Hardship			Affordability Issues			Housing-Induced Poverty		
	α=0	α=1	α=2	α=0	α=1	α=2	α=0	α=1	α=2
Major repairs needed	0.0019***	−0.0005***	−0.0004*	0.0012***	−0.0004*	−0.0002	−0.0001	−0.0007***	−0.0005*
Minor repairs needed	−0.0004*	0.0002*	0.0002	−0.0003*	0.0002	0.0001	−0.0001	0.0002*	0.0002
Only regular maintenance	0.0026***	−0.0005**	−0.0003	0.0015***	−0.0003	−0.0002	−0.0004**	−0.0008***	−0.0005*
Single-detached house	0.0028	0.0154***	0.0174***	0.0106***	0.0225***	0.0213***	−0.0012	0.0239***	0.0238***
Double, row, duplex	0.0032**	−0.0032**	−0.0037**	0.0013	−0.0025*	−0.0042***	0.0002	−0.0042**	−0.0046**
Apartment	−0.0037	−0.0003	0.0000	−0.0071*	0.0059*	0.0027	−0.0026	−0.0022	−0.0021
Other	0.0001	−0.0017***	−0.0019**	−0.0011*	−0.0015***	−0.0020***	−0.0001	−0.0026***	−0.0027***
Province									
N.L.	0.0018***	−0.0004*	−0.0004*	−0.0006	−0.0007***	−0.0008***	−0.0001	−0.0008***	−0.0007**
P.E.I.	0.0006***	−0.0001	0.0000	−0.0004**	0.0001	0.0000	0.0000	−0.0001	0.0000
N.S.	0.0030***	−0.0005	−0.0001	0.0012*	0.0005	0.0006	0.0002	−0.0007	0.0000
N.B.	0.0031***	−0.0005*	−0.0003	−0.0015**	−0.0005	−0.0005	0.0005	−0.0013***	−0.0008*
Que.	−0.0023***	0.0003*	0.0001	−0.0026***	0.0006**	0.0002	0.0008***	0.0008***	0.0005
Ont.	0.0003	0.0007	0.0008	−0.0086***	0.0017**	0.0009	0.0007	0.0003	0.0008
Man.	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Sask.	−0.0004***	0.0001*	0.0001	0.0002*	0.0001	0.0001	0.0000	0.0002*	0.0001
Alta.	0.0035***	−0.0009***	−0.0006*	0.0002	0.0000	−0.0002	0.0002	−0.0014***	−0.0009**
B.C.	−0.0012*	0.0009**	0.0009*	−0.0041***	0.0005	0.0006	0.0009**	0.0008	0.0008
STRUCTURAL									
Age	0.1093	0.2650	0.1500	0.6881***	0.3409	0.0326	0.4127***	0.4145*	0.1775
Age-squared	−0.0981	−0.1260	−0.0593	−0.4258***	−0.1708	0.0129	−0.2204***	−0.1963	−0.0687
Male	−0.0161	−0.0009	0.0112	−0.0066	0.0049	0.0165	0.0078	−0.0093	0.0054
Immigrant status									
Immigrant	−0.0064	−0.0067	−0.0048	−0.0007	−0.0100	−0.0098	0.0030	−0.0057	−0.0011
Years since migration	0.0224	0.0094	0.0047	0.0205	0.0188	0.0129	−0.0075	0.0027	−0.0048
Years since mig squared	−0.0131	−0.0051	−0.0041	−0.0105	−0.0070	−0.0060	0.0041	0.0000	0.0013
Marital status									
Married/common-law	−0.0519***	0.0102	0.0060	−0.0454***	−0.0139	−0.0180	−0.0016	0.0214	0.0153
Single (never married)	0.0058*	0.0016	0.0030	0.0080**	0.0016	0.0044	0.0002	0.0008	0.0027
Separated/ divorced/wid	0.0062	−0.0051*	−0.0059	0.0012	0.0016	−0.0012	0.0002	−0.0071*	−0.0081*
Education									
Less than HS	−0.0063*	0.0029	0.0024	0.0013	0.0005	−0.0007	−0.0031	0.0023	0.0017
HS or partial PSE	−0.0017	0.0023	0.0030	−0.0022	−0.0007	0.0022	0.0023	0.0025	0.0040
Non-uni PSE	0.0080	−0.0053	−0.0050	0.0035	−0.0016	−0.0021	0.0084***	−0.0057	−0.0060

Table B2 – Continued from previous page

	Non-Shelter Hardship			Affordability Issues			Housing-Induced Poverty		
	α=0	α=1	α=2	α=0	α=1	α=2	α=0	α=1	α=2
University	0.0042	−0.0023	−0.0026	−0.0013	0.0012	0.0000	−0.0034*	−0.0016	−0.0022
Home tenure									
Renter	0.0096**	0.0041	0.0042	0.0087*	0.0142***	0.0102**	0.0075***	0.0082*	0.0067
Owner with mortgage	−0.0181**	−0.0001	0.0011	−0.0066	−0.0142*	−0.0071	−0.0081*	0.0018	0.0017
Owner without mortgage	−0.0076	−0.0107***	−0.0120**	−0.0156**	−0.0230***	−0.0195***	−0.0115***	−0.0227***	−0.0193***
Dwelling characteristics									
Dwelling suitable	−0.1692*	−0.0273	−0.0246	−0.0849	−0.0561	−0.0346	−0.0943**	−0.0477	−0.0253
Number of bedrooms	0.0054	−0.0248	−0.0193	−0.0047	0.0050	0.0204	−0.0401**	−0.0717**	−0.0591*
Major repairs needed	0.0012	0.0006	0.0008	0.0000	0.0001	−0.0004	0.0010	−0.0008	−0.0002
Minor repairs needed	0.0037	0.0005	0.0013	0.0023	0.0029	0.0054*	−0.0010	0.0020	0.0030
Only regular maintenance	−0.0222*	−0.0069	−0.0111	−0.0071	−0.0104	−0.0137	−0.0058	0.0007	−0.0079
Single-detached house	−0.0153	−0.0008	0.0081	−0.0137	−0.0028	0.0060	−0.0178*	0.0033	0.0186
Double, row, duplex	0.0060*	−0.0030	−0.0021	0.0037	−0.0022	−0.0004	−0.0001	−0.0074	−0.0060
Apartment	−0.0001	−0.0073**	−0.0102**	−0.0051	−0.0101***	−0.0132***	−0.0003	−0.0098*	−0.0127**
Other	−0.0025*	0.0033**	0.0040**	0.0001	0.0039***	0.0046***	−0.0001	0.0052**	0.0058**
Province									
N.L.	−0.0008	0.0001	0.0001	−0.0004	−0.0002	−0.0002	−0.0002	0.0005	0.0006
P.E.I.	−0.0004	0.0001	0.0002	0.0001	0.0001	0.0000	0.0002	0.0002	0.0003
N.S.	0.0010	−0.0004	−0.0003	−0.0002	0.0007	0.0014*	0.0015**	−0.0011	−0.0012
N.B.	−0.0001	−0.0004	−0.0007	−0.0001	−0.0002	−0.0005	−0.0008	−0.0004	−0.0005
Que.	0.0162***	0.0010	0.0029	0.0120**	0.0030	0.0051	−0.0073**	0.0027	0.0056
Ont.	−0.0145**	0.0037	0.0042	0.0019	0.0055	0.0124*	0.0037	0.0085	0.0062
Man.	0.0017**	0.0002	0.0005	0.0003	0.0001	−0.0003	0.0003	0.0001	0.0004
Sask.	−0.0002	−0.0008	−0.0011*	−0.0022***	0.0005	0.0005	−0.0006	−0.0009	−0.0012
Alta.	0.0005	−0.0003	−0.0011	0.0002	−0.0035	−0.0049	−0.0012	−0.0015	−0.0029
B.C.	0.0012	0.0006	0.0008	0.0028	0.0002	0.0000	0.0012	−0.0002	−0.0005
Constant	0.2608*	−0.0984	−0.0682	−0.1834	−0.1222	−0.0465	−0.0342	−0.1321	−0.0667
N	113,230	113,230	113,230	113,230	113,230	113,230	113,230	113,230	113,230

Data source: Canadian Income Survey 2012-2016.
*$p < .05$; **$p < .01$; ***$p < .001$
All decompositions control for year of interview fixed effects.
Bootstrap standard errors are estimated using Statistics Canada's 1,000 bootstrap replicate weights.

Table B3: Decomposition of concentration index-based indicators: age 65+ versus below age 65

	Non-Shelter Hardship			Affordability Issues			Housing-Induced Poverty		
	α=0	α=1	α=2	α=0	α=1	α=2	α=0	α=1	α=2
Below age 65	−0.5238	−0.8398	−0.8620	−0.5245	−0.7959	−0.8597	−0.1056	−0.7658	−0.8159
	(0.0051)	(0.0025)	(0.0028)	(0.0049)	(0.0028)	(0.0029)	(0.0027)	(0.0038)	(0.0038)
Age 65 and above	−0.4078	−0.6965	−0.6927	−0.4452	−0.5715	−0.6243	−0.2073	−0.6524	−0.6701
	(0.0064)	(0.0076)	(0.0107)	(0.0064)	(0.0079)	(0.0115)	(0.0049)	(0.0079)	(0.0107)
Difference	−0.1160***	−0.1433***	−0.1693***	−0.0793***	−0.2244***	−0.2354***	0.1016***	−0.1135***	−0.1458***
Endowment effect	0.0237***	−0.0286***	−0.0374***	−0.0478***	−0.0026	−0.0191*	−0.0449***	−0.0415***	−0.0469***
Structural effect	−0.1397***	−0.1147***	−0.1320***	−0.0315**	−0.2218***	−0.2163***	0.1465***	−0.0720***	−0.0989***
ENDOWMENT									
Male	0.0083***	−0.0034***	−0.0029***	0.0049***	−0.0040***	−0.0035***	0.0015***	−0.0038***	−0.0029***
Rural	0.0005**	−0.0004**	−0.0003	−0.0009***	−0.0007***	−0.0005**	−0.0001	−0.0007***	−0.0005**
Immigrant status									
Immigrant	0.0057***	−0.0025***	−0.0019***	0.0052***	−0.0029***	−0.0025***	−0.0005	−0.0039***	−0.0029***
Years since migration	−0.0385**	0.0322***	0.0300**	−0.0552***	0.0282*	0.0314	0.0182*	0.0382***	0.0356**
Years since mig squared	0.0074	−0.0199*	−0.0201	0.0344**	−0.0097	−0.0167	−0.0206**	−0.0169	−0.0189
Marital status									
Married/common-law	0.0222***	−0.0100***	−0.0095***	0.0170***	−0.0115***	−0.0092***	0.0034***	−0.0139***	−0.0122***
Single (never married)	−0.0152***	0.0019*	0.0003	−0.0117***	0.0041***	0.0011	0.0016*	0.0051***	0.0025
Separated/ divorced/wid	0.0185***	−0.0175***	−0.0195***	0.0141***	−0.0166***	−0.0174***	0.0102***	−0.0200***	−0.0213***
Education									
Less than HS	0.0357***	−0.0194***	−0.0199***	0.0122***	−0.0228***	−0.0225***	0.0037**	−0.0242***	−0.0232***
HS or partial PSE	−0.0002	0.0000	0.0000	−0.0002*	0.0000	−0.0001	0.0001	0.0000	0.0000
Non-uni PSE	0.0049***	−0.0015***	−0.0017***	0.0023***	−0.0014***	−0.0017***	0.0006*	−0.0016***	−0.0019***
University	0.0146***	−0.0085***	−0.0082***	0.0059***	−0.0103***	−0.0091***	0.0003	−0.0112***	−0.0098***
Home tenure									
Renter	−0.0080***	0.0018***	0.0015***	−0.0056***	0.0014***	0.0016***	−0.0011***	0.0020***	0.0017***
Owner with mortgage	0.0240***	0.0024	0.0027	−0.0052*	0.0148***	0.0076***	−0.0245***	−0.0023	−0.0005
Owner without mortgage	−0.0814***	0.0261***	0.0232***	−0.0813***	0.0345***	0.0295***	−0.0407***	0.0250***	0.0224***
Dwelling characteristics									
Dwelling suitable	0.0062***	−0.0015***	−0.0016**	0.0086***	−0.0007	−0.0010	0.0042***	−0.0014*	−0.0022***
Number of bedrooms	0.0168***	−0.0044***	−0.0048***	0.0107***	−0.0015	−0.0015	−0.0032***	−0.0074***	−0.0077***
Major repairs needed	−0.0008***	0.0001*	0.0001	−0.0005***	0.0001	0.0000	0.0000	0.0003**	0.0002*

Table B3 – Continued from previous page

	Non-Shelter Hardship			Affordability Issues			Housing-Induced Poverty		
	α=0	α=1	α=2	α=0	α=1	α=2	α=0	α=1	α=2
Minor repairs needed	0.0011**	−0.0003	−0.0002	0.0007*	−0.0002	−0.0001	0.0002	−0.0005	−0.0003
Only regular maintenance	−0.0033***	0.0005*	0.0002	−0.0020***	0.0005*	0.0001	0.0004*	0.0010***	0.0006
Single-detached house	−0.0005	−0.0019***	−0.0023***	−0.0013***	−0.0022***	−0.0022***	0.0001	−0.0024***	−0.0026***
Double, row, duplex	0.0008*	−0.0017***	−0.0021***	0.0000	−0.0012***	−0.0018***	−0.0002	−0.0018***	−0.0022***
Apartment	0.0013	0.0010	0.0012	0.0019**	−0.0003	0.0006	0.0010*	0.0013	0.0015
Other	−0.0001	−0.0010***	−0.0012**	−0.0005***	−0.0008***	−0.0010***	−0.0002	−0.0012***	−0.0013**
Province									
N.L.	0.0001	0.0000	0.0000	−0.0001	−0.0001	−0.0001	0.0000	−0.0001	−0.0001
P.E.I.	0.0001	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
N.S.	0.0004***	0.0000	0.0000	0.0002*	0.0000	0.0000	0.0000	0.0000	0.0000
N.B.	0.0003***	0.0000	0.0000	−0.0002**	−0.0001	−0.0001	0.0000	−0.0001*	−0.0001
Que.	−0.0010***	0.0002*	0.0003*	−0.0013***	0.0004***	0.0004**	0.0004***	0.0004**	0.0004*
Ont.	0.0000	0.0000	−0.0001	−0.0010**	0.0001	0.0000	0.0000	0.0000	0.0000
Man.	−0.0001	0.0000	0.0000	−0.0001	0.0000	0.0000	0.0000	0.0000	0.0000
Sask.	−0.0001	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Alta.	0.0038***	−0.0007**	−0.0005	0.0002	−0.0002	−0.0003	0.0002	−0.0013***	−0.0009*
B.C.	0.0002*	−0.0002	−0.0002	0.0008***	−0.0001	−0.0001	−0.0001*	−0.0002	−0.0002
STRUCTURAL									
Male	0.0655***	0.0002	0.0006	0.0339**	−0.0078	0.0031	−0.0161*	−0.0068	0.0020
Rural	−0.0157	−0.0130	−0.0205	−0.0809***	−0.0344	−0.0444	−0.0150	−0.0276	−0.0330
Immigrant status									
Immigrant	0.1352***	0.1002**	0.1549*	0.0369	0.0920	0.1398	−0.0616**	−0.0140	0.0393
Years since migration	−0.2478***	−0.1395*	−0.2178*	−0.0716	−0.1305	−0.2047	0.0589	0.0617	−0.0065
Years since mig squared	0.1179**	0.0492	0.0810	0.0300	0.0452	0.0775	−0.0093	−0.0454	−0.0202
Marital status									
Married/common-law	0.0465***	−0.0186*	−0.0189	0.0689***	−0.0099	−0.0106	0.0024	−0.0333***	−0.0348**
Single (never married)	0.0029	0.0062**	0.0082*	−0.0048*	0.0064**	0.0091**	−0.0070***	0.0046	0.0078*
Separated/ divorced/wid	−0.0214***	−0.0053	−0.0087	−0.0095	−0.0097	−0.0138	0.0132**	0.0045	−0.0011
Education									
Less than HS	−0.0361***	−0.0033	−0.0056	−0.0282***	−0.0037	−0.0071	0.0093***	0.0033	−0.0006
HS or partial PSE	−0.0012	0.0058	0.0069	0.0007	0.0051	0.0085	−0.0014	0.0042	0.0061
Non-uni PSE	0.0130***	−0.0053	−0.0055	0.0055	−0.0063	−0.0071	−0.0077**	−0.0066	−0.0068
University	0.0360***	0.0037	0.0063	0.0302***	0.0061	0.0080	−0.0053*	−0.0019	0.0020

Table B3 – Continued from previous page

	Non-Shelter Hardship			Affordability Issues			Housing-Induced Poverty		
	α=0	α=1	α=2	α=0	α=1	α=2	α=0	α=1	α=2
Home tenure									
Renter	0.0040	−0.0228***	−0.0393***	0.0009	−0.0376***	−0.0558***	0.0288***	−0.0272***	−0.0443***
Owner with mortgage	0.0260***	0.0028	0.0164**	0.0099**	0.0063	0.0210***	0.0076**	0.0074	0.0218***
Owner without mortgage	−0.0794***	0.0263***	0.0181	−0.0322***	0.0412***	0.0318**	−0.0566***	0.0250***	0.0149
Dwelling characteristics									
Dwelling suitable	0.1280	−0.1630*	−0.1273	−0.0600	−0.1258	−0.0532	0.2358***	−0.1325	−0.1282
Number of bedrooms	0.0852***	0.0875***	0.1180***	0.1151***	0.0822*	0.1319**	−0.0040	0.1148***	0.1383***
Major repairs needed	−0.0039**	0.0042***	0.0045**	−0.0029*	0.0026	0.0034	0.0001	0.0038**	0.0036*
Minor repairs needed	0.0039	−0.0071*	−0.0067	0.0026	−0.0045	−0.0042	−0.0025	−0.0069*	−0.0046
Only regular maintenance	0.0316**	−0.0221*	−0.0273*	0.0253*	−0.0133	−0.0229	0.0079	−0.0182	−0.0242
Single-detached house	0.0144	0.0520***	0.0645**	−0.0130	0.0349**	0.0515**	0.0000	0.0352*	0.0526*
Double, row, duplex	0.0051	0.0195***	0.0234***	0.0047	0.0177***	0.0217***	−0.0002	0.0204***	0.0242***
Apartment	0.0057	0.0266*	0.0346*	0.0237***	0.0295**	0.0392**	0.0152***	0.0331*	0.0393*
Other	−0.0018*	−0.0070***	−0.0087**	−0.0021**	−0.0063***	−0.0083***	−0.0012*	−0.0070***	−0.0088**
Province									
N.L.	0.0006	−0.0008**	−0.0005	−0.0025***	−0.0015***	−0.0010**	0.0001	−0.0011**	−0.0007
P.E.I .	0.0006***	0.0001	0.0000	−0.0001	0.0001	0.0000	−0.0004***	0.0001	−0.0001
N.S.	−0.0003	0.0006	0.0004	0.0010	0.0002	0.0003	−0.0009	0.0009	0.0008
N.B.	0.0005	0.0004	0.0000	0.0013*	−0.0002	−0.0009	−0.0005	0.0006	0.0002
Que.	0.0036	−0.0019	0.0068	0.0102*	0.0049	0.0141**	0.0250***	−0.0008	0.0048
Ont.	−0.0314***	0.0379***	0.0465***	0.0061	0.0334***	0.0329***	0.0024	0.0432***	0.0497***
Man.	−0.0018**	−0.0011	−0.0011	−0.0001	−0.0006	0.0003	0.0004	−0.0010	−0.0011
Sask.	0.0001	−0.0010	−0.0011	0.0007	−0.0007	−0.0009	0.0005	−0.0013	−0.0014
Alta.	−0.0001	−0.0044	−0.0052	0.0052**	−0.0004	−0.0037	0.0038***	−0.0029	−0.0037
B.C.	−0.0071*	0.0011	0.0006	−0.0071*	0.0020	0.0001	−0.0068***	−0.0007	−0.0006
Constant	−0.4179***	−0.1229	−0.2293	−0.1298	−0.2379*	−0.3712*	−0.0684	−0.0996	−0.1858
N	113,230	113,230	113,230	113,230	113,230	113,230	113,230	113,230	113,230

Data source: Canadian Income Survey 2012-2016.
*$p < .05$; **$p < .01$; ***$p < .001$
All decompositions control for year of interview fixed effects.
Bootstrap standard errors are estimated using Statistics Canada's 1,000 bootstrap replicate weights.

Table B4: Decomposition of concentration index-based indicators: couple versus non-couple

	Non-Shelter Hardship			Affordability Issues			Housing-Induced Poverty		
	α=0	α=1	α=2	α=0	α=1	α=2	α=0	α=1	α=2
Non-couple	−0.7124	−0.7200	−0.7539	−0.6144	−0.6400	−0.7362	−0.1315	−0.5918	−0.6703
	(0.0056)	(0.0040)	(0.0049)	(0.0060)	(0.0046)	(0.0052)	(0.0036)	(0.0058)	(0.0063)
Couple	−0.2909	−0.8851	−0.9034	−0.3435	−0.8256	−0.8810	−0.0919	−0.8375	−0.8776
	(0.0051)	(0.0032)	(0.0037)	(0.0050)	(0.0041)	(0.0046)	(0.0029)	(0.0046)	(0.0046)
Difference	−0.4214***	0.1651***	0.1494***	−0.2710***	0.1856***	0.1449***	−0.0397***	0.2457***	0.2073***
Endowment effect	−0.1598***	0.0605***	0.0533***	−0.0803***	0.0713***	0.0591***	−0.0070*	0.0909***	0.0734***
Structural effect	−0.2616***	0.1046***	0.0962***	−0.1907***	0.1143***	0.0858***	−0.0327***	0.1548***	0.1338***
ENDOWMENT									
Age	−0.0645***	−0.0257***	−0.0313***	−0.0333***	−0.0511***	−0.0515***	0.0393***	−0.0231***	−0.0297***
Age squared	0.0844***	0.0425***	0.0496***	0.0382***	0.0819***	0.0812***	−0.0592***	0.0406***	0.0490***
Male	−0.0351***	0.0086***	0.0069***	−0.0207***	0.0093***	0.0076***	−0.0057***	0.0118***	0.0082***
Rural	0.0015*	−0.0019**	−0.0017*	−0.0033***	−0.0033***	−0.0026***	−0.0003	−0.0032***	−0.0025*
Immigrant status									
Immigrant	0.0274***	−0.0063***	−0.0046***	0.0265***	−0.0060**	−0.0053*	0.0000	−0.0107***	−0.0075***
Years since migration	−0.0040**	0.0000	−0.0003	−0.0041**	−0.0004	−0.0005	0.0007	0.0004	0.0000
Years since mig squared	−0.0031**	−0.0009	−0.0011*	−0.0036***	−0.0016*	−0.0016	0.0014**	−0.0008	−0.0011
Education									
Less than HS	−0.0106***	0.0050***	0.0044***	−0.0025***	0.0067***	0.0055***	0.0002	0.0077***	0.0061***
HS or partial PSE	−0.0006*	0.0002	0.0002	−0.0008**	0.0001	0.0002	0.0001	0.0000	0.0001
Non-uni PSE	−0.0006***	0.0001*	0.0001*	−0.0002**	0.0001*	0.0001*	0.0000	0.0002*	0.0002*
University	−0.0105***	0.0058***	0.0052***	−0.0035***	0.0078***	0.0063***	0.0008*	0.0084***	0.0066***
Home tenure									
Renter	−0.0738***	0.0153***	0.0104***	−0.0517***	0.0137***	0.0127***	−0.0047**	0.0209***	0.0144***
Owner with mortgage	−0.0126***	−0.0069***	−0.0089***	0.0086***	−0.0146***	−0.0128***	0.0184***	−0.0024	−0.0067***
Owner without mortgage	−0.0113***	0.0046***	0.0041***	−0.0121***	0.0062***	0.0055***	−0.0053***	0.0046***	0.0044***
Dwelling characteristics									
Dwelling suitable	−0.0008	0.0003*	0.0002	−0.0013**	0.0000	−0.0002	−0.0007***	0.0003	0.0003
Number of bedrooms	−0.0366***	0.0052	0.0033	−0.0175***	−0.0004	−0.0064	0.0126***	0.0151***	0.0115**
Major repairs needed	−0.0016***	0.0006***	0.0004**	−0.0010***	0.0005**	0.0004*	0.0001	0.0008***	0.0006**
Minor repairs needed	0.0002*	−0.0001*	−0.0001	0.0001	−0.0001	−0.0001	0.0000	−0.0002*	−0.0001
Only regular maintenance	−0.0018***	0.0005***	0.0004**	−0.0012***	0.0005***	0.0004*	0.0003*	0.0007***	0.0005**
Single-detached house	0.0000	0.0149***	0.0168***	0.0078**	0.0197***	0.0195***	−0.0010	0.0230***	0.0224***
Double, row, duplex	0.0003	−0.0008**	−0.0009**	−0.0005	−0.0005	−0.0010**	−0.0004*	−0.0011*	−0.0012*

Table B4 – Continued from previous page

	Non-Shelter Hardship			Affordability Issues			Housing-Induced Poverty		
	α=0	α=1	α=2	α=0	α=1	α=2	α=0	α=1	α=2
Apartment	−0.0069*	−0.0016	−0.0012	−0.0081*	0.0027	0.0008	−0.0029	−0.0035	−0.0033
Other	0.0002	0.0009***	0.0010***	0.0008***	0.0008***	0.0010***	0.0002*	0.0014***	0.0014***
Province									
N.L.	0.0002**	−0.0001*	−0.0001*	−0.0001**	−0.0001**	−0.0001**	0.0000	−0.0002**	−0.0001*
P.E.I.	0.0001	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
N.S.	−0.0001	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
N.B.	0.0001	0.0000	0.0000	−0.0001	0.0000	0.0000	0.0000	−0.0001	0.0000
Que.	0.0019***	−0.0003	0.0000	0.0020***	−0.0005**	−0.0001	−0.0008***	−0.0007**	−0.0004
Ont.	0.0000	−0.0001	−0.0001	0.0019***	−0.0002	−0.0001	−0.0001	0.0000	−0.0001
Man.	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Sask.	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Alta.	−0.0017***	0.0006***	0.0004**	−0.0002	0.0000	0.0002	−0.0001	0.0008***	0.0006***
B.C.	−0.0001	0.0001	0.0001	−0.0004*	0.0000	0.0001	0.0001	0.0000	0.0001
STRUCTURAL									
Age	−1.5221***	0.5528***	0.4185*	−0.9059***	0.4797**	0.2231	0.6692***	0.9482***	0.6670**
Age squared	0.8478***	−0.2739***	−0.1938*	0.6036***	−0.2207**	−0.0617	−0.4185***	−0.4761***	−0.3141*
Male	−0.1202***	0.0111	0.0126	−0.1314***	−0.0233**	−0.0171*	−0.0042	0.0273**	0.0269**
Rural	−0.0180	0.0171	0.0153	0.0839***	−0.0068	−0.0153	0.0237	0.0276	0.0288
Immigrant status									
Immigrant	0.0730***	−0.0054	−0.0074	0.0898***	−0.0113	−0.0001	0.0223**	0.0023	−0.0015
Years since migration	−0.0744**	−0.0144	−0.0112	−0.0550*	−0.0157	−0.0391	−0.0022	−0.0231	−0.0182
Years since mig squared	0.0237	0.0153	0.0146	−0.0007	0.0184	0.0315	−0.0016	0.0195	0.0182
Education									
Less than HS	0.0040	0.0034	0.0035	0.0136***	0.0020	0.0032	0.0110***	0.0046	0.0048
HS or partial PSE	−0.0008	0.0032	0.0031	0.0069*	0.0016	−0.0002	0.0038	0.0043	0.0033
Non-uni PSE	−0.0004	0.0005	0.0013	−0.0040	0.0017	0.0036	−0.0028	0.0033	0.0030
University	−0.0058	−0.0098***	−0.0103**	−0.0276***	−0.0066*	−0.0082*	−0.0206***	−0.0154***	−0.0143***
Home tenure									
Renter	−0.0063	0.0113**	0.0074	0.0130*	0.0117*	0.0137**	0.0138***	0.0114	0.0078
Owner with mortgage	0.0040	0.0153***	0.0213***	0.0308***	0.0208***	0.0195***	−0.0182***	0.0164**	0.0233***
Owner without mortgage	0.0057	−0.0277***	−0.0293***	−0.0429***	−0.0331***	−0.0340***	0.0007	−0.0296***	−0.0321***
Dwelling characteristics									
Dwelling suitable	−0.2448***	0.0652**	0.0547*	−0.0173	0.0630*	0.0507	0.0112	0.1185***	0.0872**
Number of bedrooms	0.1236***	−0.0603***	−0.0610**	0.0113	−0.0299	−0.0470*	−0.0942***	−0.0991***	−0.0929***
Major repairs needed	−0.0010	0.0004	0.0008	0.0014	−0.0014	−0.0006	0.0031***	0.0008	0.0014
Minor repairs needed	−0.0011	−0.0008	−0.0018	−0.0012	−0.0001	−0.0006	0.0001	−0.0010	−0.0026

Table B4 – Continued from previous page

	Non-Shelter Hardship			Affordability Issues			Housing-Induced Poverty		
	α=0	α=1	α=2	α=0	α=1	α=2	α=0	α=1	α=2
Only regular maintenance	0.0148	−0.0010	−0.0022	−0.0094	0.0145*	0.0084	−0.0319***	−0.0044	−0.0050
Single-detached house	−0.0199*	0.0014	−0.0016	−0.0298***	−0.0147	−0.0099	0.0055	0.0018	−0.0041
Double, row, duplex	−0.0039	−0.0047	−0.0047	−0.0023	−0.0070*	−0.0064	0.0000	−0.0053	−0.0044
Apartment	0.0147*	−0.0078	−0.0088	0.0208**	−0.0005	−0.0068	−0.0096**	−0.0143	−0.0144
Other	0.0003	0.0010	0.0012	0.0001	0.0014	0.0016	0.0004	0.0015	0.0016
Province									
N.L.	−0.0013***	0.0003	0.0003	0.0002	0.0007**	0.0008**	0.0006*	0.0003	0.0003
P.E.I.	0.0001	0.0000	0.0000	0.0003*	−0.0001	−0.0001	0.0002**	0.0000	−0.0001
N.S.	−0.0003	0.0001	−0.0003	−0.0021***	−0.0007	−0.0007	0.0006	−0.0004	−0.0009
N.B.	−0.0008	−0.0001	−0.0003	0.0003	0.0001	0.0000	0.0004	0.0002	0.0000
Que.	0.0015	−0.0050*	−0.0024	−0.0149***	−0.0056*	0.0003	−0.0163***	−0.0090*	−0.0050
Ont.	0.0050	0.0008	0.0026	0.0286***	0.0106*	0.0098*	0.0034	0.0056	0.0082
Man.	0.0010	−0.0007	−0.0008	−0.0008	−0.0007	−0.0009	−0.0007	−0.0009	−0.0009
Sask.	0.0007	−0.0002	0.0000	−0.0005	0.0002	0.0001	−0.0014***	−0.0002	0.0002
Alta.	0.0028	0.0001	0.0005	−0.0010	−0.0008	−0.0005	−0.0055***	0.0001	0.0005
B.C.	0.0010	0.0034	0.0045*	0.0012	0.0011	0.0017	0.0061***	0.0049	0.0052
Constant	0.6356***	−0.1862*	−0.1301	0.1508	−0.1342	−0.0329	−0.1812**	−0.3651**	−0.2433*
N	113,230	113,230	113,230	113,230	113,230	113,230	113,230	113,230	113,230

Data source: Canadian Income Survey 2012-2016.
*$p < .05$; **$p < .01$; ***$p < .001$
All decompositions control for year of interview fixed effects.
Bootstrap standard errors are estimated using Statistics Canada's 1,000 bootstrap replicate weights.

Table B5: Decomposition of concentration index-based indicators: single mother versus single father

	Non-Shelter Hardship			Affordability Issues			Housing-Induced Poverty		
	α=0	α=1	α=2	α=0	α=1	α=2	α=0	α=1	α=2
Single mother	−0.8211	−0.6755	−0.7404	−0.5531	−0.6103	−0.7390	−0.0540	−0.5319	−0.6655
	(0.0086)	(0.0077)	(0.0091)	(0.0130)	(0.0098)	(0.0116)	(0.0063)	(0.0115)	(0.0118)
Single father	−0.6371	−0.7547	−0.7972	−0.5373	−0.7298	−0.8231	−0.1344	−0.6472	−0.7424
	(0.0261)	(0.0158)	(0.0180)	(0.0252)	(0.0164)	(0.0174)	(0.0156)	(0.0229)	(0.0230)
Difference	−0.1840***	0.0792***	0.0568**	−0.0157	0.1195***	0.0840***	0.0805***	0.1153***	0.0769**
Endowment effect	−0.0511***	0.0337***	0.0209**	0.0090	0.0277***	0.0156*	0.0374***	0.0479***	0.0275**
Structural effect	−0.1329***	0.0455*	0.0359	−0.0247	0.0919***	0.0685**	0.0431*	0.0674*	0.0494
ENDOWMENT									
Age	−0.1408***	0.1086***	0.0947**	0.0105	0.0688*	0.0540	0.0723**	0.1381***	0.1127**
Age squared	0.1366***	−0.0906***	−0.0817**	0.0029	−0.0530	−0.0437	−0.0647**	−0.1147***	−0.0971**
Rural	0.0005	−0.0022	−0.0023	−0.0048*	−0.0019	−0.0014	−0.0008	−0.0034	−0.0030
Immigrant status									
Immigrant	−0.0060	0.0033	0.0023	−0.0038	0.0013	−0.0005	0.0049*	0.0041	0.0026
Years since migration	0.0050	0.0027	0.0042	0.0077	0.0055	0.0074	−0.0019	0.0039	0.0052
Years since mig squared	−0.0008	−0.0010	−0.0013	−0.0016	−0.0016	−0.0020	0.0000	−0.0013	−0.0016
Education									
Less than HS	0.0041**	−0.0027**	−0.0024*	−0.0026	−0.0034**	−0.0026*	−0.0037**	−0.0044**	−0.0033**
HS or partial PSE	0.0003	−0.0007	−0.0008	0.0000	−0.0012	−0.0012	−0.0004	−0.0008	−0.0009
Non-uni PSE	0.0013	−0.0003	−0.0003	0.0006	−0.0004	−0.0003	−0.0011	−0.0006	−0.0005
University	0.0025*	−0.0032*	−0.0030*	−0.0033*	−0.0044*	−0.0038*	−0.0025*	−0.0044*	−0.0037*
Home tenure									
Renter	−0.0324***	0.0104***	0.0074***	−0.0147***	0.0067*	0.0033	0.0105***	0.0097***	0.0070**
Owner with mortgage	−0.0071**	0.0000	−0.0007	0.0103***	−0.0023	−0.0013	0.0154***	0.0025	0.0002
Owner without mortgage	−0.0013	0.0005	0.0004	−0.0013	0.0005	0.0002	−0.0003	0.0004	0.0004
Dwelling characteristics									
Dwelling suitable	0.0043**	−0.0017*	−0.0015	0.0002	−0.0016	−0.0009	0.0006	−0.0018	−0.0018
Number of bedrooms	−0.0039*	−0.0018	−0.0027	−0.0028	−0.0023	−0.0034*	−0.0012	−0.0021	−0.0026
Major repairs needed	−0.0011	0.0011	0.0008	0.0006	0.0007	0.0005	0.0006	0.0012	0.0008
Minor repairs needed	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Only regular maintenance	−0.0007	0.0005	0.0003	0.0009	0.0007	0.0005	0.0006	0.0005	0.0003
Single-detached house	0.0060*	−0.0002	−0.0008	0.0089*	0.0030	0.0022	0.0038*	0.0020	0.0001
Double, row, duplex	0.0001	−0.0001	−0.0003	0.0102***	0.0032*	0.0022	−0.0006	0.0025	0.0012
Apartment	−0.0013	0.0015	0.0016	0.0009	0.0016	0.0017	0.0015	0.0020	0.0019

Table B5 – Continued from previous page

	Non-Shelter Hardship			Affordability Issues			Housing-Induced Poverty		
	α=0	α=1	α=2	α=0	α=1	α=2	α=0	α=1	α=2
Other	−0.0001	0.0000	0.0000	0.0001	0.0000	0.0000	0.0000	0.0001	0.0000
Province									
N.L.	−0.0027*	0.0011	0.0006	−0.0009	0.0012	0.0009	0.0020**	0.0017*	0.0010
P.E.I.	−0.0003	−0.0001	−0.0002	−0.0002	−0.0003	−0.0004	−0.0002	0.0000	−0.0001
N.S.	−0.0017	0.0007	0.0009	−0.0014	0.0004	0.0011	0.0003	0.0005	0.0007
N.B.	−0.0008	0.0004	0.0003	0.0019	0.0001	0.0003	0.0000	0.0009	0.0005
Que.	−0.0128***	0.0075***	0.0054**	−0.0097***	0.0044**	0.0019	0.0022	0.0111***	0.0074***
Ont.	0.0035*	−0.0001	0.0001	0.0020	0.0024*	0.0015	−0.0006	−0.0002	−0.0001
Man.	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Sask.	0.0003	−0.0001	−0.0003	−0.0012	−0.0003	−0.0006	−0.0001	−0.0001	−0.0003
Alta.	−0.0016	0.0005	0.0004	−0.0008	0.0000	0.0003	0.0008	0.0009	0.0006
B.C.	0.0000	−0.0003	−0.0003	0.0003	−0.0001	−0.0002	0.0000	−0.0003	−0.0003
STRUCTURAL									
Age	−0.0590	−0.8412	−0.6697	−0.8029	−0.6250	−0.8084	−1.1253	−0.3198	−0.3360
Age squared	0.0908	0.3809	0.2622	0.3880	0.2469	0.2948	0.3790	0.1205	0.0931
Rural	0.0305	0.0042	−0.0314	−0.0989	0.0421	0.0203	0.0722	0.0558	0.0049
Immigrant status									
Immigrant	−0.0078	0.0017	−0.0068	0.0209	−0.0084	−0.0116	−0.0069	0.0109	0.0013
Years since migration	0.0202	0.0126	0.0326	−0.0151	0.0383	0.0513	0.0099	0.0091	0.0309
Years since mig squared	−0.0046	−0.0117	−0.0240	0.0017	−0.0260	−0.0382	−0.0029	−0.0097	−0.0232
Education									
Less than HS	−0.0091	0.0115**	0.0131**	0.0193*	0.0151**	0.0165**	0.0055	0.0107*	0.0148**
HS or partial PSE	0.0015	0.0119	0.0115	0.0143	0.0058	−0.0063	0.0061	0.0175	0.0151
Non-uni PSE	0.0326	−0.0400***	−0.0380**	−0.0050	−0.0284*	−0.0240	−0.0114	−0.0464**	−0.0439*
University	−0.0027	−0.0086	−0.0121	−0.0421***	−0.0160*	−0.0107	−0.0090	−0.0087	−0.0150
Home tenure									
Renter	0.0494*	0.0071	−0.0006	0.0389	−0.0144	−0.0196	0.0005	0.0046	−0.0013
Owner with mortgage	−0.0123	−0.0103	−0.0068	0.0106	0.0137	0.0096	0.0243*	−0.0094	−0.0092
Owner without mortgage	−0.0112	0.0000	0.0014	−0.0134*	0.0011	0.0034	−0.0054*	0.0005	0.0021
Dwelling characteristics									
Dwelling suitable	0.1179	−0.0213	−0.0094	0.1807	0.0418	0.0399	0.0263	−0.0083	−0.0025
Number of bedrooms	0.0275	0.0316	0.0456	0.0598	0.0244	0.0679	−0.0336	0.0091	0.0323
Major repairs needed	0.0059	−0.0052	−0.0045	0.0153*	−0.0024	−0.0015	0.0038	−0.0072	−0.0050
Minor repairs needed	−0.0123	0.0136	0.0121	−0.0218	0.0080	0.0043	−0.0069	0.0224	0.0180
Only regular maintenance	−0.0119	0.0045	0.0030	−0.0535	−0.0019	0.0004	−0.0098	−0.0017	−0.0070

Table B5 – Continued from previous page

	Non-Shelter Hardship			Affordability Issues			Housing-Induced Poverty		
	α=0	α=1	α=2	α=0	α=1	α=2	α=0	α=1	α=2
Single-detached house	−0.0424	−0.0119	−0.0130	−0.0769*	−0.0277	−0.0360	−0.0177	−0.0166	−0.0124
Double, row, duplex	0.0105	0.0037	0.0037	0.0093	0.0108	0.0103	0.0099	0.0089	0.0047
Apartment	0.0008	−0.0030	−0.0016	−0.0003	0.0071	0.0038	−0.0029	−0.0030	−0.0002
Other	0.0003	0.0005	0.0003	0.0021	−0.0013	−0.0004	−0.0001	0.0000	−0.0001
Province									
N.L.	0.0024	0.0007	−0.0011	0.0059	0.0000	−0.0011	0.0009	0.0013	−0.0007
P.E.I.	0.0025	−0.0012	−0.0005	−0.0093*	−0.0026	−0.0019	0.0027	−0.0009	0.0001
N.S.	0.0176**	0.0000	0.0013	0.0044	0.0051	0.0089	−0.0015	−0.0040	−0.0007
N.B.	−0.0029	0.0047	0.0055*	0.0018	0.0015	0.0027	0.0105*	0.0060	0.0059
Que.	−0.0532***	0.0142	0.0183	−0.0264	0.0057	0.0032	−0.0319**	0.0136	0.0199
Ont.	−0.0143	−0.0009	0.0003	0.0252	0.0106	0.0106	−0.0040	−0.0033	−0.0046
Man.	−0.0010	−0.0008	−0.0025	0.0062	0.0037	−0.0010	−0.0046	0.0028	−0.0009
Sask.	0.0008	−0.0070	−0.0085	0.0033	−0.0045	−0.0073	−0.0087*	−0.0079	−0.0102
Alta.	−0.0148*	0.0014	0.0010	−0.0129	−0.0026	−0.0045	−0.0034	0.0017	0.0007
B.C.	−0.0053	−0.0028	−0.0001	0.0053	−0.0033	0.0005	0.0003	−0.0032	0.0012
Constant	−0.2791	0.5068	0.4548	0.3382	0.3723	0.4900	0.7774	0.2221	0.2771
N	5,540	5,540	5,540	5,540	5,540	5,540	5,540	5,540	5,540

Data source: Canadian Income Survey 2012-2016.
$^*p < .05; ^{**}p < .01; ^{***}p < .001$
All decompositions control for year of interview fixed effects.
Bootstrap standard errors are estimated using Statistics Canada's 1,000 bootstrap replicate weights.

Table B6: Decomposition of concentration index-based indicators: renter versus owner

	Non-Shelter Hardship			Affordability Issues			Housing-Induced Poverty		
	α=0	α=1	α=2	α=0	α=1	α=2	α=0	α=1	α=2
Owner	−0.2491	−0.8603	−0.8795	−0.2778	−0.7871	−0.8631	−0.0919	−0.7998	−0.8444
	(0.0028)	(0.0021)	(0.0024)	(0.0027)	(0.0022)	(0.0022)	(0.0017)	(0.0028)	(0.0027)
Renter	−0.8097	−0.7035	−0.7488	−0.6581	−0.6279	−0.7218	−0.1384	−0.5737	−0.6668
	(0.0038)	(0.0030)	(0.0037)	(0.0044)	(0.0036)	(0.0044)	(0.0031)	(0.0044)	(0.0049)
Difference	0.5606***	−0.1568***	−0.1308***	0.3803***	−0.1592***	−0.1413***	0.0465***	−0.2261***	−0.1776***
Endowment effect	0.1415***	−0.0777***	−0.0701***	0.1116***	−0.1056***	−0.0775***	0.0266***	−0.1103***	−0.0903***
Structural effect	0.4192***	−0.0790***	−0.0607***	0.2688***	−0.0536***	−0.0637***	0.0199***	−0.1158***	−0.0873***
ENDOWMENT									
Age	−0.0335***	−0.0293***	−0.0316***	−0.0257***	−0.0475***	−0.0451***	0.0196***	−0.0318***	−0.0333***
Age squared	0.0259***	0.0212***	0.0229***	0.0221***	0.0351***	0.0333***	−0.0121***	0.0241***	0.0249***
Male	0.0147***	−0.0062***	−0.0050***	0.0055***	−0.0090***	−0.0076***	0.0001	−0.0088***	−0.0064***
Rural	−0.0067***	0.0045***	0.0044***	0.0084***	0.0067***	0.0052***	0.0003	0.0082***	0.0066***
Immigrant status									
Immigrant	0.0042***	−0.0015***	−0.0012***	0.0039***	−0.0016***	−0.0013***	0.0006**	−0.0021***	−0.0015***
Years since migration	0.0086***	−0.0015	−0.0007	0.0084***	−0.0007	−0.0001	−0.0007	−0.0025	−0.0012
Years since mig squared	−0.0030**	−0.0004	−0.0008	−0.0039***	−0.0017	−0.0020	0.0018*	−0.0003	−0.0008
Marital status									
Married/common-law	0.0528***	−0.0260***	−0.0228***	0.0367***	−0.0281***	−0.0186***	0.0048***	−0.0388***	−0.0315***
Single (never married)	0.0178***	−0.0044***	−0.0032***	0.0076***	−0.0062***	−0.0029**	−0.0055***	−0.0088***	−0.0060***
Separated/ divorced/wid	0.0091***	−0.0082***	−0.0078***	0.0104***	−0.0077***	−0.0061***	0.0070***	−0.0104***	−0.0094***
Education									
Less than HS	0.0122***	−0.0070***	−0.0057***	0.0012*	−0.0091***	−0.0067***	−0.0011**	−0.0108***	−0.0080***
HS or partial PSE	0.0005***	−0.0003*	−0.0003*	0.0007***	−0.0002*	−0.0002	0.0001	−0.0002	−0.0002
Non-uni PSE	0.0015***	−0.0005***	−0.0004**	0.0003*	−0.0005***	−0.0004**	−0.0003*	−0.0008***	−0.0006***
University	0.0094***	−0.0061***	−0.0051***	0.0022***	−0.0079***	−0.0057***	−0.0002	−0.0089***	−0.0067***
Dwelling characteristics									
Dwelling suitable	−0.0023***	0.0002	0.0001	−0.0057***	−0.0005	−0.0007*	−0.0029***	−0.0003	0.0001
Major repairs needed	−0.0008***	0.0002**	0.0001**	−0.0004***	0.0001**	0.0001*	0.0000	0.0003***	0.0002**
Minor repairs needed	0.0005***	−0.0001	−0.0001	0.0003**	0.0000	−0.0001	0.0000	−0.0002*	−0.0002*
Only regular maintenance	−0.0022***	0.0004***	0.0003**	−0.0013***	0.0005***	0.0003**	0.0000	0.0008***	0.0005***
Single-detached house	0.0231***	−0.0187***	−0.0200***	0.0138***	−0.0286***	−0.0262***	0.0038	−0.0323***	−0.0297***
Double, row, duplex	−0.0002	0.0017**	0.0025***	0.0026***	0.0021**	0.0039***	0.0014**	0.0035***	0.0040***

Table B6 – Continued from previous page

	Non-Shelter Hardship			Affordability Issues			Housing-Induced Poverty		
	α=0	α=1	α=2	α=0	α=1	α=2	α=0	α=1	α=2
Apartment	0.0147***	0.0037	0.0040	0.0291***	−0.0018	0.0029	0.0086***	0.0079	0.0078
Other	−0.0001	0.0003***	0.0003***	0.0003***	0.0003***	0.0004***	0.0001*	0.0005***	0.0005***
Province									
N.L.	−0.0007***	0.0003**	0.0003**	0.0007***	0.0005***	0.0005***	0.0003**	0.0007***	0.0005***
P.E.I.	−0.0001	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
N.S.	−0.0006***	0.0002*	0.0001	−0.0003**	0.0000	0.0000	−0.0001	0.0002**	0.0001
N.B.	−0.0012***	0.0002**	0.0002	0.0003*	0.0002**	0.0002*	−0.0001	0.0004***	0.0003**
Que.	−0.0035***	0.0001	−0.0002	−0.0041***	0.0001	−0.0006*	0.0012***	0.0007*	0.0000
Ont.	0.0007***	−0.0003*	−0.0002*	−0.0017***	0.0000	−0.0002	−0.0001	−0.0006***	−0.0004**
Man.	−0.0003**	0.0001*	0.0001*	−0.0001*	0.0002**	0.0002**	0.0000	0.0002*	0.0001*
Sask.	0.0006***	−0.0002**	−0.0002*	0.0000	−0.0002*	−0.0002*	0.0001	−0.0003**	−0.0002*
Alta.	0.0001	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	−0.0001	0.0000
B.C.	0.0000	−0.0001	−0.0001	0.0003*	0.0000	0.0000	0.0000	0.0000	−0.0001
STRUCTURAL									
Age	0.3154**	0.1342	0.5044***	−0.0444	0.4879***	1.1427***	−0.8966***	0.4333**	0.8523***
Age squared	−0.1375**	−0.1389*	−0.3603***	0.1113	−0.3939***	−0.7767***	0.6254***	−0.3205***	−0.5739***
Male	−0.0216***	0.0383***	0.0296***	0.0543***	0.0380***	0.0289***	0.0300***	0.0476***	0.0316***
Rural	−0.0008	0.0299*	0.0348*	−0.0527**	0.0751***	0.0648***	0.0087	0.0545***	0.0495**
Immigrant status									
Immigrant	−0.0395***	0.0053	0.0079*	−0.0607***	0.0136**	0.0182***	−0.0253***	0.0042	0.0079
Years since migration	0.0255**	0.0094	0.0059	0.0397***	−0.0007	−0.0069	0.0181**	0.0165	0.0108
Years since mig squared	−0.0059	−0.0098	−0.0078	−0.0085	−0.0060	−0.0020	−0.0068	−0.0151	−0.0117
Marital status									
Married/common-law	0.0124***	0.0047	0.0020	0.0394***	0.0018	0.0047	0.0297***	0.0010	0.0009
Single (never married)	0.0006	−0.0056**	−0.0044*	−0.0048*	−0.0013	−0.0037	−0.0114***	−0.0041	−0.0042
Separated/ divorced/wid	−0.0106***	0.0036	0.0033	−0.0233***	−0.0014	−0.0009	−0.0042*	0.0036	0.0031
Education									
Less than HS	0.0100***	−0.0012	0.0011	−0.0061*	0.0051**	0.0049*	−0.0150***	−0.0002	0.0018
HS or partial PSE	−0.0021	−0.0028	−0.0016	−0.0122***	−0.0057***	−0.0042*	−0.0072***	−0.0061**	−0.0041
Non-uni PSE	−0.0104***	0.0031	0.0005	−0.0047	0.0011	−0.0015	0.0058***	0.0049	0.0024
University	−0.0019	0.0017	−0.0001	0.0196***	−0.0009	−0.0006	0.0177***	0.0022	0.0001
Dwelling characteristics									
Dwelling suitable	0.0157	0.0161	0.0132	−0.0020	0.0291	0.0403*	0.0285	0.0311	0.0211
Major repairs needed	−0.0029**	−0.0005	−0.0006	−0.0039***	0.0001	0.0001	−0.0037***	0.0002	−0.0003
Minor repairs needed	0.0031	0.0010	0.0012	0.0033	0.0015	0.0007	0.0018	0.0021	0.0026

Table B6 – Continued from previous page

	Non-Shelter Hardship			Affordability Issues			Housing-Induced Poverty		
	α=0	α=1	α=2	α=0	α=1	α=2	α=0	α=1	α=2
Only regular maintenance	0.0198**	0.0014	0.0020	0.0300***	−0.0058	−0.0036	0.0329***	−0.0099	−0.0062
Single-detached house	0.0036	0.0019	0.0070	0.0183***	0.0039	0.0176***	0.0054	0.0055	0.0110
Double, row, duplex	−0.0031	0.0103***	0.0120***	−0.0158***	0.0111***	0.0152***	−0.0032	0.0104**	0.0130***
Apartment	−0.0128*	0.0238***	0.0289***	−0.0412***	0.0292***	0.0382***	−0.0142***	0.0268***	0.0320***
Other	0.0011	−0.0026***	−0.0034***	0.0037***	−0.0028***	−0.0045***	0.0007	−0.0029**	−0.0037**
Province									
N.L.	0.0033***	−0.0009	−0.0003	0.0016	−0.0001	−0.0002	−0.0018**	−0.0007	0.0001
P.E.I.	0.0005	0.0007	0.0013*	−0.0012	0.0013**	0.0017***	−0.0017***	0.0011	0.0016*
N.S.	0.0000	0.0012	0.0021*	0.0043***	0.0022**	0.0023*	−0.0043***	0.0019*	0.0031***
N.B.	0.0006	−0.0001	0.0004	−0.0019	0.0006	0.0007	−0.0018*	−0.0007	0.0000
Que.	−0.0093***	0.0028	−0.0003	−0.0111***	−0.0019	−0.0044*	0.0152***	0.0030	−0.0006
Ont.	−0.0105***	−0.0018	−0.0030	−0.0277***	−0.0134***	−0.0113***	−0.0007	−0.0053	−0.0059
Man.	0.0007	−0.0002	−0.0010	0.0027	0.0004	0.0007	0.0023*	−0.0023	−0.0025
Sask.	0.0008	−0.0019*	−0.0022	0.0045***	−0.0025*	−0.0027*	0.0040***	−0.0020	−0.0023
Alta.	−0.0063***	0.0014	−0.0009	−0.0026	−0.0011	−0.0019	0.0080***	0.0025	−0.0012
B.C.	−0.0003	−0.0009	−0.0021	0.0047**	0.0009	0.0002	0.0002	−0.0006	−0.0020
Constant	0.2818***	−0.2027***	−0.3303***	0.2556***	−0.3183***	−0.6195***	0.1834***	−0.3978***	−0.5134***
N	113,230	113,230	113,230	113,230	113,230	113,230	113,230	113,230	113,230

Data source: Canadian Income Survey 2012-2016.
*$p < .05$; **$p < .01$; ***$p < .001$
All decompositions control for year of interview fixed effects.
Bootstrap standard errors are estimated using Statistics Canada's 1,000 bootstrap replicate weights.

Appendix C Decomposition of Shortfall Index-based indicators

Table C1: Decomposition of Shortfall Index-based indicators: immigrants versus non-immigrants

	Non-shelter hardship			**Affordability**			**Housing-induced poverty**		
	α=0	α=1	α=2	α=0	α=1	α=2	α=0	α=1	α=2
Non-immigrant	0.2681	0.1311	0.0935	0.3101	0.0750	0.0344	0.0877	0.0701	0.0611
	(0.0024)	(0.0017)	(0.0015)	(0.0024)	(0.0011)	(0.0007)	(0.0014)	(0.0010)	(0.0010)
Immigrant	0.3339	0.1695	0.1237	0.4122	0.1093	0.0522	0.0924	0.0902	0.0810
	(0.0107)	(0.0076)	(0.0071)	(0.0106)	(0.0050)	(0.0033)	(0.0061)	(0.0044)	(0.0048)
Difference	−0.0657***	−0.0384***	−0.0302***	−0.1022***	−0.0343***	−0.0178***	−0.0047	−0.0201***	−0.0199***
Endowment effect	0.0258***	0.0145***	0.0104***	−0.0058	0.0020	0.0016*	0.0067***	0.0051***	0.0045***
Structural effect	−0.0915***	−0.0529***	−0.0405***	−0.0964***	−0.0363***	−0.0194***	−0.0114	−0.0252***	−0.0244***
ENDOWMENT									
Age	−0.0103***	−0.0075***	−0.0059***	−0.0039***	−0.0029***	−0.0018***	0.0046***	−0.0006	−0.0018***
Age-squared	0.0098***	0.0075***	0.0059***	0.0020*	0.0026***	0.0017***	−0.0060***	0.0002	0.0017***
Male	−0.0008*	−0.0003*	−0.0001*	−0.0007*	−0.0001*	0.0000	−0.0002*	−0.0002*	−0.0001*
Rural	0.0033***	0.0007	0.0003	−0.0024**	−0.0005	−0.0001	0.0005	−0.0001	−0.0001
Marital status									
Married/common-law	0.0101***	0.0068***	0.0056***	0.0113***	0.0042***	0.0023***	0.0026***	0.0033***	0.0033***
Single (never married)	0.0054***	0.0043***	0.0035***	0.0054***	0.0025***	0.0014***	−0.0001	0.0017***	0.0019***
Sepa-rated/divorced/wid	0.0007***	0.0003**	0.0002**	0.0009***	0.0002***	0.0001**	0.0005***	0.0002***	0.0002**
Education									
Less than HS	0.0034***	0.0012***	0.0006***	0.0020***	0.0004***	0.0001**	0.0007***	0.0005***	0.0004***
HS or partial PSE	0.0001	0.0002	0.0001	0.0004**	0.0001*	0.0001	−0.0001	0.0001*	0.0001*
Non-uni PSE	−0.0033***	−0.0014***	−0.0009***	−0.0020***	−0.0007***	−0.0003**	−0.0006*	−0.0006***	−0.0005**
University	0.0115***	0.0044***	0.0024***	0.0084***	0.0017***	0.0006**	0.0017***	0.0020***	0.0016***
Home tenure									
Renter	−0.0034***	−0.0015***	−0.0010***	−0.0030***	−0.0007***	−0.0003***	−0.0008***	−0.0007***	−0.0006***
Owner with mortgage	0.0001	0.0000	0.0000	−0.0001	0.0000	0.0000	−0.0001	0.0000	0.0000
Owner without mortgage	−0.0032***	−0.0015***	−0.0011***	−0.0043***	−0.0010***	−0.0004***	−0.0018***	−0.0012***	−0.0009***
Dwelling characteristics									
Dwelling suitable	0.0047***	0.0052***	0.0049***	0.0092***	0.0044***	0.0025***	0.0043***	0.0033***	0.0030***
Number of bedrooms	0.0015***	0.0010***	0.0008***	0.0011***	0.0004***	0.0002***	−0.0002*	0.0002**	0.0003**
Need major repairs	0.0005***	0.0003***	0.0002***	0.0004***	0.0002***	0.0001**	0.0000	0.0001***	0.0002***
Need minor repairs	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Only regular maintenance	0.0005**	0.0003**	0.0002**	0.0004**	0.0001*	0.0001*	0.0000	0.0001*	0.0001*

Table C1 – Continued from previous page

	Non-shelter hardship			Affordability			Housing-induced poverty		
	α=0	α=1	α=2	α=0	α=1	α=2	α=0	α=1	α=2
Single detached house	−0.0008	0.0003	0.0004	−0.0006	0.0000	0.0001	−0.0011**	−0.0002	0.0000
Double, row, duplex	0.0012**	0.0009***	0.0007**	0.0005	0.0006***	0.0003**	0.0003	0.0005***	0.0005**
Apartment	−0.0010	−0.0001	0.0001	−0.0032***	−0.0004	−0.0001	−0.0005	−0.0002	−0.0002
Other	0.0002	0.0002	0.0002	−0.0003	0.0001	0.0001	0.0001	0.0001	0.0001
Province									
NFL	0.0009***	0.0003**	0.0001	−0.0002	−0.0001	−0.0001*	0.0000	0.0000	0.0000
PEI	0.0002***	0.0000	0.0000	−0.0001*	−0.0001***	0.0000***	0.0000	0.0000	0.0000*
NS	0.0010***	0.0003*	0.0001	0.0002	0.0000	−0.0001	0.0002	0.0001	0.0000
NB	0.0012***	0.0001	−0.0001	−0.0006***	−0.0004***	−0.0002***	0.0003*	−0.0001	−0.0002***
QC	−0.0060***	−0.0032***	−0.0025***	−0.0089***	−0.0023***	−0.0012***	0.0012*	−0.0007*	−0.0009**
ON	0.0010	−0.0018**	−0.0024***	−0.0146***	−0.0046***	−0.0023***	0.0010	−0.0015***	−0.0019***
MB	−0.0004***	−0.0001**	0.0000	−0.0002***	−0.0001*	0.0000	−0.0001	−0.0001**	0.0000
SK	−0.0006***	−0.0002*	−0.0001	0.0002	0.0000	0.0000	0.0000	−0.0001	−0.0001
AB	−0.0008***	−0.0002**	−0.0001	0.0001	0.0001	0.0000*	−0.0001*	−0.0001*	0.0000
BC	−0.0008*	−0.0016***	−0.0016***	−0.0031***	−0.0016***	−0.0009***	0.0004	−0.0010***	−0.0013***
STRUCTURAL									
Age	0.1121	0.0648	−0.0056	0.2529	−0.0417	45.3067	−0.2070	0.0191	0.0174
Age-squared	−0.0203	−0.0177	0.0143	−0.1089	0.0254	−22.0998	0.1449	−0.0007	−0.0042
Male	0.0139	0.0133	0.0119	0.0139	0.0074	0.2175	−0.0116	0.0018	0.0037
Rural	0.0140	−0.0165	−0.0155	0.0008	−0.0112	−2.0853	0.0092	−0.0062	−0.0077
Marital status									
Married/common-law	−0.0332*	−0.0098	−0.0026	−0.0337**	−0.0008	0.5059	−0.0063	−0.0057	−0.0018
Single (never married)	0.0108**	0.0041	0.0016	0.0072	0.0001	0.3398	−0.0015	0.0014	0.0010
Sepa-rated/divorced/wid	−0.0056	−0.0030	−0.0017	−0.0004	0.0001	−0.6666	0.0042	−0.0004	−0.0010
Education									
Less than HS	0.0055	0.0043	0.0033	0.0047	0.0013	0.4139	−0.0024	0.0011	0.0017
HS or partial PSE	−0.0069	−0.0050	−0.0041	−0.0051	−0.0034	−1.2282	0.0013	−0.0031	−0.0034
Non-uni PSE	0.0053	0.0026	0.0026	0.0038	0.0033	0.2270	0.0031	0.0009	0.0010
University	−0.0103	−0.0067	−0.0057	−0.0094	−0.0023	0.6567	0.0004	0.0011	−0.0002
Home tenure									
Renter	0.0130	0.0106*	0.0086	0.0253***	0.0084**	1.0126	0.0129**	0.0104***	0.0093**
Owner with mortgage	−0.0202**	−0.0147**	−0.0113*	−0.0333***	−0.0131***	−0.6924	−0.0130**	−0.0170***	−0.0146***
Owner without mortgage	0.0022	0.0005	−0.0001	−0.0003	0.0014	−0.5074	−0.0032	0.0024	0.0017

Table C1 – Continued from previous page

	Non-shelter hardship			Affordability			Housing-induced poverty		
	α=0	α=1	α=2	α=0	α=1	α=2	α=0	α=1	α=2
Dwelling characteristics									
Dwelling suitable	−0.0313	−0.0034	−0.0003	−0.0156	−0.0143	1.3740	−0.0538**	−0.0099	0.0008
Number of bedrooms	−0.0225	0.0036	0.0083	−0.0109	−0.0077	0.4547	−0.0216	−0.0143	−0.0095
Need major repairs	0.0021	0.0021	0.0019	0.0006	0.0008	0.1454	−0.0011	0.0004	0.0009
Need minor repairs	0.0016	0.0007	0.0010	0.0008	0.0015	−0.2287	0.0010	0.0010	0.0011
Only regular maintenance	−0.0305*	−0.0279**	−0.0265**	−0.0100	−0.0145*	−0.9197	0.0095	−0.0080	−0.0144*
Single detached house	−0.0022	−0.0049	−0.0037	0.0073	−0.0014	−1.0853	0.0073	0.0007	−0.0003
Double, row, duplex	−0.0056	−0.0027	−0.0017	−0.0034	−0.0016	−0.4005	−0.0033	−0.0025	−0.0020
Apartment	−0.0219*	−0.0114	−0.0081	−0.0200	−0.0087*	−1.4645	−0.0056	−0.0072	−0.0061
Other	0.0010*	0.0006*	0.0004	0.0007	0.0004*	0.0816	0.0002	0.0003*	0.0003*
Province									
NFL	0.0001	0.0001	0.0000	0.0001	0.0000	0.0057	0.0000	0.0000	0.0000
PEI	0.0000	0.0000	0.0000	0.0000	0.0000	0.0033	0.0000	0.0000	0.0000
NS	0.0001	0.0000	0.0000	−0.0001	0.0000	−0.5647	−0.0001	0.0000	0.0000
NB	−0.0005	−0.0004	−0.0004	−0.0003	−0.0002	0.0270	0.0001	−0.0001	−0.0002
QC	−0.0081	−0.0062	−0.0051	−0.0009	−0.0023	0.3657	−0.0027	−0.0028	−0.0029
ON	−0.0136	−0.0086	−0.0045	−0.0130	−0.0052	2.0425	0.0034	−0.0027	−0.0021
MB	0.0012	0.0007	0.0006	0.0010	0.0004	0.3190	−0.0001	0.0001	0.0002
SK	0.0006	0.0004	0.0003	0.0002	0.0002	−0.0241	0.0001	0.0000	0.0001
AB	−0.0001	−0.0005	−0.0004	−0.0018	−0.0005	0.9418	−0.0005	0.0005	0.0004
BC	0.0023	0.0005	0.0008	0.0017	−0.0002	2.4256	0.0034	−0.0005	−0.0001
Constant	−0.0444	−0.0221	0.0008	−0.1502	0.0421	−24.2987	0.1214	0.0145	0.0063
N	113,230	113,230	113,230	113,230	113,230	113,230	113,230	113,230	113,230

Data source: Canadian Income Survey 2012-2016.
*$p < .05$; **$p < .01$; ***$p < .001$
All decompositions control for year of interview fixed effects.
Bootstrap standard errors are estimated using Statistics Canada's 1,000 bootstrap replicate weights.

Table C2: Decomposition of Shortfall-based indicators: urban versus rural

	Non-shelter hardship			Affordability			Housing-induced poverty		
	α=0	α=1	α=2	α=0	α=1	α=2	α=0	α=1	α=2
Urban	0.2972	0.1488	0.1073	0.3601	0.0901	0.0419	0.0923	0.0798	0.0704
	(0.0033)	(0.0023)	(0.0022)	(0.0033)	(0.0015)	(0.0010)	(0.0020)	(0.0014)	(0.0015)
Rural	0.2294	0.1052	0.0735	0.2308	0.0550	0.0255	0.0747	0.0550***	0.0467***
	(0.0034)	(0.0023)	(0.0021)	(0.0033)	(0.0015)	(0.0010)	(0.0019)	(0.0013)	(0.0014)
Difference	0.0678***	0.0436***	0.0339***	0.1293***	0.0351***	0.0164***	0.0176***	0.0249***	0.0237***
Endowment effect	0.0866***	0.0465***	0.0350***	0.1108***	0.0310***	0.0151***	0.0209***	0.0237***	0.0222***
Structural effect	−0.0189***	−0.0029	−0.0011	0.0185***	0.0041	0.0013	−0.0033	0.0012	0.0015
ENDOWMENT									
Age	−0.0208***	−0.0157***	−0.0124***	−0.0079***	−0.0061***	−0.0038***	0.0102***	−0.0012	−0.0039***
Age-squared	0.0156***	0.0124***	0.0098***	0.0028*	0.0042***	0.0028***	−0.0107***	0.0001	0.0027***
Male	0.0056***	0.0019***	0.0009***	0.0049***	0.0010***	0.0003**	0.0015***	0.0012***	0.0009***
Immigrant status									
Immigrant	0.0418***	0.0268***	0.0212***	0.0436***	0.0172***	0.0098***	0.0012	0.0114***	0.0120***
Years-since-migration	−0.0280***	−0.0229***	−0.0189***	−0.0301***	−0.0137***	−0.0084***	0.0082**	−0.0074***	−0.0094***
Years-since-mig squared	0.0067*	0.0077***	0.0066***	0.0081**	0.0044***	0.0029**	−0.0063***	0.0017	0.0028*
Marital status									
Married/common-law	0.0135***	0.0090***	0.0074***	0.0150***	0.0056***	0.0031***	0.0034***	0.0044***	0.0044***
Single (never married)	0.0056***	0.0045***	0.0037***	0.0056***	0.0026***	0.0015***	−0.0001	0.0017***	0.0020***
Sepa-rated/divorced/wid	0.0017***	0.0007***	0.0006***	0.0023***	0.0006***	0.0003***	0.0013***	0.0006***	0.0005***
Education									
Less than HS	−0.0072***	−0.0026***	−0.0014***	−0.0042***	−0.0009***	−0.0003**	−0.0014***	−0.0011***	−0.0008***
HS or partial PSE	0.0000	0.0000	0.0000	−0.0001	0.0000	0.0000	0.0000	0.0000	0.0000
Non-uni PSE	0.0024***	0.0010***	0.0006***	0.0014***	0.0005***	0.0002*	0.0004*	0.0004***	0.0003**
University	−0.0116***	−0.0046***	−0.0026***	−0.0086***	−0.0019***	−0.0007***	−0.0016***	−0.0021***	−0.0017***
Home tenure									
Renter	0.0388***	0.0172***	0.0112***	0.0330***	0.0078***	0.0033***	0.0089***	0.0076***	0.0063***
Owner with mortgage	0.0024***	0.0007**	0.0001	−0.0041***	−0.0009***	−0.0004***	−0.0036***	−0.0017***	−0.0011***
Owner without mortgage	0.0200***	0.0095***	0.0067***	0.0267***	0.0063***	0.0027***	0.0112***	0.0073***	0.0057***
Dwelling characteristics									
Dwelling suitable	−0.0022***	−0.0022***	−0.0020***	−0.0039***	−0.0018***	−0.0010***	−0.0016***	−0.0013***	−0.0013***

Table C2 – Continued from previous page

	Non-shelter hardship			Affordability			Housing-induced poverty		
	α=0	α=1	α=2	α=0	α=1	α=2	α=0	α=1	α=2
Number of bedrooms	0.0102***	0.0066***	0.0052***	0.0074***	0.0025***	0.0013***	−0.0011*	0.0015***	0.0021***
Need major repairs	−0.0012***	−0.0007***	−0.0006***	−0.0010***	−0.0004***	−0.0002***	−0.0001	−0.0003***	−0.0004***
Need minor repairs	0.0003**	0.0002**	0.0002*	0.0003*	0.0001**	0.0001*	0.0001	0.0001**	0.0001**
Only regular maintenance	−0.0017***	−0.0009***	−0.0007***	−0.0014***	−0.0004***	−0.0002***	0.0001	−0.0004***	−0.0004***
Single detached house	0.0009	−0.0014	−0.0017	0.0004	−0.0005	−0.0004	0.0029*	0.0003	−0.0003
Double, row, duplex	−0.0025**	−0.0018***	−0.0014**	−0.0010	−0.0012***	−0.0007**	−0.0006	−0.0011***	−0.0010**
Apartment	0.0021	−0.0003	−0.0006	0.0083***	0.0008	0.0000	0.0012	0.0003	0.0003
Other	−0.0004	−0.0003	−0.0002	0.0005	−0.0001	−0.0001	−0.0002	−0.0002	−0.0002
Province									
NFL	−0.0012***	−0.0003**	−0.0001	0.0002	0.0001	0.0001*	−0.0001	−0.0001	0.0000
PEI	−0.0004***	0.0000	0.0001	0.0002**	0.0001***	0.0001***	0.0000	0.0000	0.0001**
NS	−0.0019***	−0.0005*	−0.0002	−0.0004	0.0001	0.0001	−0.0003	−0.0001	−0.0001
NB	−0.0020***	−0.0002	0.0002	0.0010***	0.0007***	0.0004***	−0.0005*	0.0002	0.0004***
QC	0.0015***	0.0008***	0.0006***	0.0022***	0.0006***	0.0003***	−0.0003*	0.0002*	0.0002**
ON	−0.0001	0.0010**	0.0012***	0.0067***	0.0021***	0.0011***	−0.0004	0.0008***	0.0009***
MB	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
SK	0.0003***	0.0001**	0.0001	−0.0001	0.0000	0.0000	0.0000	0.0000*	0.0000
AB	−0.0023***	−0.0006***	−0.0002	0.0002	0.0002	0.0001*	−0.0004**	−0.0003**	−0.0001
BC	0.0009*	0.0016***	0.0016***	0.0030***	0.0016***	0.0009***	−0.0004	0.0010***	0.0012***
STRUCTURAL									
Age	0.0054	0.0331	0.0426	−0.4488***	−0.0345	0.0000	−0.2115**	−0.0993*	−0.0334
Age-squared	0.0235	0.0020	−0.0069	0.2887***	0.0357	0.0098	0.1190**	0.0693**	0.0309
Male	0.0055	0.0052	0.0033	−0.0060	−0.0027	−0.0023	−0.0066	0.0013	0.0024
Immigrant status									
Immigrant	0.0029	0.0041	0.0046	0.0029	0.0034	0.0035*	−0.0031	−0.0009	0.0002
Years-since-migration	−0.0110	−0.0147*	−0.0135*	−0.0113	−0.0111*	−0.0088**	0.0062	−0.0007	−0.0029
Years-since-mig squared	0.0067	0.0081	0.0071	0.0053	0.0061*	0.0046*	−0.0031	−0.0002	0.0010
Marital status									
Married/common-law	0.0286***	0.0122**	0.0083	0.0164**	0.0027	0.0015	0.0022	0.0043	0.0039
Single (never married)	−0.0031	−0.0014	−0.0008	−0.0039*	−0.0003	0.0002	−0.0003	−0.0002	0.0000
Sepa-rated/divorced/wid	−0.0035	−0.0014	−0.0012	0.0010	−0.0003	−0.0006	−0.0002	−0.0009	−0.0011
Education									
Less than HS	0.0052**	0.0012	0.0002	0.0016	0.0002	−0.0003	0.0027*	0.0008	0.0006

Table C2 – Continued from previous page

	Non-shelter hardship			Affordability			Housing-induced poverty		
	α=0	α=1	α=2	α=0	α=1	α=2	α=0	α=1	α=2
HS or partial PSE	0.0016	0.0024	0.0023	0.0013	0.0019*	0.0011	−0.0010	0.0014	0.0014
Non-uni PSE	−0.0063*	−0.0018	−0.0013	−0.0024	−0.0014	−0.0005	−0.0060***	−0.0016	−0.0008
University	−0.0037*	−0.0025	−0.0016	−0.0016	−0.0012	−0.0004	0.0013	−0.0013	−0.0014
Home tenure									
Renter	−0.0035	−0.0009	0.0002	0.0002	0.0011	0.0009	−0.0031*	−0.0010	−0.0002
Owner with mortgage	0.0096**	0.0045	0.0023	0.0042	0.0017	0.0005	0.0050*	0.0045**	0.0029
Owner without mortgage	0.0002	−0.0021	−0.0028	−0.0041	−0.0044**	−0.0027**	0.0034	−0.0016	−0.0022
Dwelling characteristics									
Dwelling suitable	0.0934*	0.0384	0.0227	0.0481	0.0303*	0.0149*	0.0540*	0.0249*	0.0140
Number of bedrooms	−0.0081	−0.0261*	−0.0263**	−0.0042	−0.0111	−0.0077	0.0210*	−0.0005	−0.0067
Need major repairs	−0.0006	0.0007	0.0007	0.0008	0.0004	0.0002	−0.0007	0.0008	0.0009*
Need minor repairs	−0.0021	−0.0039**	−0.0038**	−0.0030	−0.0024*	−0.0014*	0.0007	−0.0023**	−0.0029**
Only regular maintenance	0.0122*	0.0063	0.0059	0.0027	0.0035	0.0025	0.0042	0.0004	0.0017
Single detached house	0.0040	−0.0002	0.0005	−0.0056	−0.0005	0.0003	0.0061	−0.0012	−0.0015
Double, row, duplex	−0.0042**	−0.0021	−0.0015	−0.0030*	−0.0015	−0.0008	−0.0008	−0.0004	−0.0001
Apartment	−0.0007	−0.0010	−0.0012	0.0016	−0.0007	−0.0007	−0.0004	−0.0012	−0.0014
Other	0.0019**	0.0010*	0.0008*	0.0004	0.0006*	0.0004*	0.0006	0.0007*	0.0006*
Province									
NFL	0.0005	0.0004	0.0002	0.0002	0.0001	0.0001	0.0002	0.0000	0.0000
PEI	0.0003*	0.0001	0.0001	0.0000	0.0000	0.0000	−0.0001	0.0000	0.0000
NS	−0.0007	0.0002	0.0001	0.0000	0.0001	0.0000	−0.0009*	0.0002	0.0003
NB	0.0002	−0.0002	−0.0001	0.0001	−0.0002	0.0000	0.0006	−0.0002	−0.0002
QC	−0.0104***	−0.0054**	−0.0042**	−0.0110***	−0.0023*	0.0000	0.0034*	−0.0016	−0.0024*
ON	0.0088**	0.0005	−0.0010	0.0003	−0.0001	−0.0001	−0.0013	−0.0001	−0.0001
MB	−0.0010**	−0.0003	−0.0001	−0.0002	0.0000	0.0000	−0.0002	0.0000	0.0000
SK	0.0000	0.0001	0.0001	0.0015***	0.0004**	0.0002*	0.0003	0.0001	0.0001
AB	−0.0006	−0.0007	−0.0006	−0.0004	−0.0001	−0.0001	0.0004	−0.0004	−0.0004
BC	−0.0007	−0.0004	−0.0003	−0.0011	−0.0001	0.0000	−0.0008	0.0000	0.0003
Constant	−0.1691*	−0.0583	−0.0361	0.1479*	−0.0093	−0.0117	0.0056	0.0077	−0.0019
N	113,230	113,230	113,230	113,230	113,230	113,230	113,230	113,230	113,230

Data source: Canadian Income Survey 2012-2016.
*$p < .05$; **$p < .01$; ***$p < .001$
All decompositions control for year of interview fixed effects.
Bootstrap standard errors are estimated using Statistics Canada's 1,000 bootstrap replicate weights.

Table C3: Decomposition of Shortfall Index-based indicators: age 65+ versus below age 65

	Non-shelter hardship			Affordability			Housing-induced poverty		
	α=0	α=1	α=2	α=0	α=1	α=2	α=0	α=1	α=2
Below age 65	0.2967	0.1581	0.1165	0.3331	−0.7959	−0.8597	0.0717	0.0771	0.0722
	(0.0033)	(0.0024)	(0.0022)	(0.0033)	(0.0028)	(0.0029)	(0.0018)	(0.0013)	(0.0015)
Age 65 and above	0.2482	0.0877	0.0541	0.3398	−0.5715	−0.6243	0.1411	0.0690	0.0469
	(0.0040)	(0.0022)	(0.0019)	(0.0041)	(0.0079)	(0.0115)	(0.0031)	(0.0017)	(0.0016)
Difference	0.0486***	0.0704***	0.0623***	−0.0067	−0.2244***	−0.2354***	−0.0694***	0.0081***	0.0253***
Endowment effect	−0.0166***	−0.0071*	−0.0033	0.0411***	−0.0026	−0.0191*	0.0245***	0.0118***	0.0073***
Structural effect	0.0652***	0.0776***	0.0657***	−0.0478***	−0.2218***	−0.2163***	−0.0940***	−0.0038	0.0180***
ENDOWMENT									
Male	−0.0057***	−0.0019***	−0.0009**	−0.0049***	−0.0040***	−0.0035***	−0.0016***	−0.0012***	−0.0009***
Rural	−0.0004***	−0.0001	0.0000	0.0003**	−0.0007***	−0.0005**	0.0000	0.0000	0.0000
Immigrant status									
Immigrant	−0.0038***	−0.0024***	−0.0019***	−0.0044***	−0.0029***	−0.0025***	−0.0002	−0.0011***	−0.0011***
Years-since-migration	0.0272**	0.0236***	0.0199**	0.0422***	0.0282*	0.0314	−0.0072	0.0098**	0.0111**
Years-since-mig squared	−0.0062	−0.0132*	−0.0122*	−0.0221**	−0.0097	−0.0167	0.0113*	−0.0047	−0.0064
Marital status									
Married/common-law	−0.0151***	−0.0100***	−0.0082***	−0.0171***	−0.0115***	−0.0092***	−0.0042***	−0.0050***	−0.0050***
Single (never married)	0.0093***	0.0075***	0.0062***	0.0101***	0.0041***	0.0011	−0.0003	0.0029***	0.0033***
Sepa-rated/divorced/wid	−0.0145***	−0.0072***	−0.0058***	−0.0173***	−0.0166***	−0.0174***	−0.0095***	−0.0052***	−0.0043***
Education									
Less than HS	−0.0248***	−0.0093***	−0.0052***	−0.0156***	−0.0228***	−0.0225***	−0.0061***	−0.0043***	−0.0032***
HS or partial PSE	0.0001	0.0001*	0.0001	0.0002**	0.0000	−0.0001	−0.0001	0.0001*	0.0001*
Non-uni PSE	−0.0032***	−0.0014***	−0.0009***	−0.0019***	−0.0014***	−0.0017***	−0.0007**	−0.0006***	−0.0005***
University	−0.0103***	−0.0042***	−0.0024***	−0.0081***	−0.0103***	−0.0091***	−0.0019***	−0.0020***	−0.0016***
Home tenure									
Renter	0.0051***	0.0022***	0.0014***	0.0042***	0.0014***	0.0016***	0.0011***	0.0010***	0.0008***
Owner with mortgage	−0.0132***	−0.0047***	−0.0018	0.0153***	0.0148***	0.0076***	0.0153***	0.0066***	0.0043***
Owner without mortgage	0.0550***	0.0246***	0.0169***	0.0736***	0.0345***	0.0295***	0.0320***	0.0202***	0.0152***
Dwelling characteristics									
Dwelling suitable	−0.0038***	−0.0037***	−0.0034***	−0.0065***	−0.0007	−0.0010	−0.0028***	−0.0022***	−0.0021***
Number of bedrooms	−0.0106***	−0.0069***	−0.0054***	−0.0080***	−0.0015	−0.0015	0.0010	−0.0017***	−0.0022***

Table C3 – Continued from previous page

	Non-shelter hardship			Affordability			Housing-induced poverty		
	α=0	α=1	α=2	α=0	α=1	α=2	α=0	α=1	α=2
Need major repairs	0.0005***	0.0003***	0.0002***	0.0004***	0.0001	0.0000	0.0000	0.0001***	0.0001***
Need minor repairs	−0.0007**	−0.0005**	−0.0004**	−0.0006**	−0.0002	−0.0001	−0.0002	−0.0003**	−0.0003**
Only regular maintenance	0.0021***	0.0012***	0.0009***	0.0017***	0.0005*	0.0001	−0.0001	0.0004***	0.0005***
Single detached house	0.0000	0.0002	0.0002	0.0000	−0.0022***	−0.0022***	−0.0003*	0.0000	0.0000
Double, row, duplex	−0.0007**	−0.0005***	−0.0004**	−0.0003	−0.0012***	−0.0018***	−0.0001	−0.0003***	−0.0003**
Apartment	−0.0006	0.0000	0.0001	−0.0020***	−0.0003	0.0006	−0.0005	−0.0002	−0.0002
Other	−0.0001	−0.0001	−0.0001	0.0002*	−0.0008***	−0.0010***	0.0000	0.0000	0.0000
Province									
NFL	−0.0001	0.0000	0.0000	0.0000	−0.0001	−0.0001	0.0000	0.0000	0.0000
PEI	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
NS	−0.0002***	−0.0001*	0.0000	−0.0001	0.0000	0.0000	0.0000	0.0000	0.0000
NB	−0.0002***	0.0000	0.0000	0.0001**	−0.0001	−0.0001	0.0000*	0.0000	0.0000*
QC	0.0007***	0.0003***	0.0003***	0.0010***	0.0004***	0.0004**	−0.0001*	0.0001	0.0001*
ON	0.0000	0.0001*	0.0001*	0.0007**	0.0001	0.0000	0.0000	0.0001*	0.0001*
MB	0.0001	0.0000	0.0000	0.0001	0.0000	0.0000	0.0000	0.0000	0.0000
SK	0.0001	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
AB	−0.0025***	−0.0008***	−0.0003*	0.0001	−0.0002	−0.0003	−0.0004**	−0.0003***	−0.0002*
BC	−0.0002*	−0.0003**	−0.0003***	−0.0005***	−0.0001	−0.0001	0.0001	−0.0002***	−0.0002***
STRUCTURAL									
Male	−0.0383***	−0.0148***	−0.0084*	−0.0190**	−0.0078	0.0031	0.0095*	−0.0031	−0.0053
Rural	0.0069	0.0121	0.0100	0.0428***	−0.0344	−0.0444	0.0055	0.0119*	0.0080
Immigrant status									
Immigrant	−0.0768**	−0.0309*	−0.0243	−0.0280	0.0920	0.1398	0.0248	−0.0014	−0.0069
Years-since-migration	0.1426**	0.0521	0.0399	0.0505	−0.1305	−0.2047	−0.0148	0.0066	0.0115
Years-since-mig squared	−0.0696**	−0.0220	−0.0159	−0.0229	0.0452	0.0775	−0.0052	−0.0061	−0.0060
Marital status									
Married/common-law	−0.0287***	−0.0405***	−0.0373***	−0.0421***	−0.0099	−0.0106	−0.0006	−0.0143***	−0.0187***
Single (never married)	−0.0008	0.0007	0.0007	0.0051***	0.0064**	0.0091**	0.0045***	0.0009	0.0004
Sepa-rated/divorced/wid	0.0115**	0.0104***	0.0098***	0.0019	−0.0097	−0.0138	−0.0081**	0.0030	0.0052**
Education									
Less than HS	0.0202***	0.0117***	0.0076***	0.0151***	−0.0037	−0.0071	−0.0064***	0.0023*	0.0033**
HS or partial PSE	0.0016	0.0003	0.0004	−0.0010	0.0051	0.0085	0.0014	0.0013	0.0010
Non-uni PSE	−0.0078***	−0.0054***	−0.0041**	−0.0043	−0.0063	−0.0071	0.0045**	−0.0009	−0.0019

Table C3 – Continued from previous page

	Non-shelter hardship			Affordability			Housing-induced poverty		
	α=0	α=1	α=2	α=0	α=1	α=2	α=0	α=1	α=2
University	−0.0205***	−0.0112***	−0.0072***	−0.0140***	0.0061	0.0080	0.0037**	−0.0037***	−0.0041***
Home tenure									
Renter	−0.0068*	0.0105***	0.0112***	−0.0123***	−0.0376***	−0.0558***	−0.0225***	−0.0010	0.0044**
Owner with mortgage	−0.0178***	−0.0118***	−0.0092***	−0.0199***	0.0063	0.0210***	−0.0074***	−0.0074***	−0.0069***
Owner without mortgage	0.0590***	0.0188***	0.0104***	0.0685***	0.0412***	0.0318**	0.0480***	0.0204***	0.0123***
Dwelling characteristics									
Dwelling suitable	−0.1209*	0.0179	0.0296	−0.0905	−0.1258	−0.0532	−0.1774***	−0.0260	0.0026
Number of bedrooms	−0.0346*	−0.0497***	−0.0437***	−0.0632***	0.0822*	0.1319**	0.0181	−0.0094	−0.0163
Need major repairs	0.0029***	0.0020***	0.0016**	0.0021*	0.0026	0.0034	0.0004	0.0011**	0.0012**
Need minor repairs	−0.0036	−0.0019	−0.0016	−0.0028	−0.0045	−0.0042	0.0004	−0.0007	−0.0009
Only regular maintenance	−0.0212**	−0.0176***	−0.0138***	−0.0138*	−0.0133	−0.0229	−0.0063	−0.0105***	−0.0105***
Single detached house	−0.0020	0.0086*	0.0097**	0.0197**	0.0349**	0.0515**	0.0052	0.0080**	0.0082**
Double, row, duplex	0.0001	0.0000	0.0000	0.0012	0.0177***	0.0217***	0.0030*	0.0016*	0.0009
Apartment	0.0005	0.0043	0.0033	−0.0143***	0.0295**	0.0392**	−0.0048	0.0031	0.0038*
Other	0.0000	−0.0007*	−0.0006*	0.0002	−0.0063***	−0.0083***	−0.0003	−0.0008***	−0.0008***
Province									
NFL	−0.0006*	0.0003*	0.0003*	0.0008**	−0.0015***	−0.0010**	−0.0003	0.0001	0.0002*
PEI	−0.0003**	0.0000	0.0000	0.0001	0.0001	0.0000	0.0002**	0.0000	0.0000
NS	0.0003	0.0005*	0.0004*	−0.0004	0.0002	0.0003	0.0005	0.0004*	0.0004**
NB	−0.0003	−0.0002	−0.0002	−0.0008*	−0.0002	−0.0009	0.0002	−0.0003*	−0.0002*
QC	−0.0032	−0.0078***	−0.0081***	−0.0071**	0.0049	0.0141**	−0.0142***	−0.0045***	−0.0046***
ON	0.0245***	0.0084***	0.0058**	0.0010	0.0334***	0.0329***	0.0046*	0.0062***	0.0048**
MB	0.0010*	0.0000	−0.0001	0.0000	−0.0006	0.0003	−0.0001	−0.0001	−0.0002
SK	−0.0002	−0.0003	−0.0004*	−0.0005	−0.0007	−0.0009	−0.0003	0.0000	−0.0002
AB	0.0000	−0.0017*	−0.0012*	−0.0020	−0.0004	−0.0037	−0.0018*	−0.0012*	−0.0011*
BC	0.0043*	0.0031**	0.0033**	0.0047**	0.0020	0.0001	0.0038***	0.0017*	0.0020*
Constant	0.2439***	0.1324***	0.0980**	0.0982	−0.2379*	−0.3712*	0.0380	0.0190	0.0325
N	113,230	113,230	113,230	113,230	113,230	113,230	113,230	113,230	113,230

Data source: Canadian Income Survey 2012-2016.
*$p < .05$; **$p < .01$; ***$p < .001$
All decompositions control for year of interview fixed effects.
Bootstrap standard errors are estimated using Statistics Canada's 1,000 bootstrap replicate weights.

Table C4: Decomposition of Shortfall index-based indicators: couple versus non-couple

	Non-shelter hardship			Affordability			Housing-induced poverty		
	α=0	α=1	α=2	α=0	α=1	α=2	α=0	α=1	α=2
Non-couple	0.4559	0.2370	0.1738	0.5006	0.1367	0.0660	0.1276	0.1195	0.1084
	(0.0044)	(0.0035)	(0.0033)	(0.0042)	(0.0023)	(0.0016)	(0.0027)	(0.0019)	(0.0022)
Couple	0.1584	0.0723	0.0500	0.2059	0.0449	0.0197	0.0550	0.0417	0.0352
	(0.0029)	(0.0018)	(0.0016)	(0.0031)	(0.0012)	(0.0007)	(0.0017)	(0.0011)	(0.0012)
Difference	0.2975***	0.1647***	0.1238***	0.2946***	0.0918***	0.0464***	0.0726***	0.0777***	0.0732***
Endowment effect	0.1189***	0.0464***	0.0268***	0.0974***	0.0182***	0.0061***	0.0266***	0.0203***	0.0158***
Structural effect	0.1786***	0.1184***	0.0970***	0.1972***	0.0737***	0.0403***	0.0460***	0.0574***	0.0574***
ENDOWMENT									
Age	0.0419***	0.0333***	0.0268***	0.0131***	0.0130***	0.0084***	−0.0237***	0.0014	0.0078***
Age-squared	−0.0509***	−0.0432***	−0.0349***	−0.0062	−0.0151***	−0.0103***	0.0390***	0.0006	−0.0090***
Male	0.0218***	0.0071***	0.0034***	0.0186***	0.0035***	0.0011*	0.0065***	0.0047***	0.0034***
Rural	−0.0014***	−0.0002	−0.0001	0.0010**	0.0002	0.0001	−0.0003	0.0001	0.0001
Immigrant status									
Immigrant	−0.0161***	−0.0098***	−0.0076***	−0.0178***	−0.0064***	−0.0035***	−0.0013	−0.0044***	−0.0045***
Years-since-migration	0.0021**	0.0016**	0.0013**	0.0024**	0.0009**	0.0006**	−0.0004	0.0006*	0.0007*
Years-since-mig squared	0.0014**	0.0014***	0.0012**	0.0017**	0.0008**	0.0005**	−0.0009**	0.0003	0.0005*
Education									
Less than HS	0.0080***	0.0029***	0.0015***	0.0046***	0.0010***	0.0003**	0.0015***	0.0011***	0.0008***
HS or partial PSE	0.0003*	0.0003**	0.0002*	0.0006***	0.0002**	0.0001*	−0.0001	0.0002**	0.0002**
Non-uni PSE	0.0004***	0.0002**	0.0001**	0.0002**	0.0001**	0.0000*	0.0001	0.0001**	0.0001*
University	0.0079***	0.0031***	0.0017***	0.0060***	0.0013***	0.0004***	0.0011***	0.0014***	0.0012***
Home tenure									
Renter	0.0537***	0.0242***	0.0159***	0.0448***	0.0107***	0.0046***	0.0111***	0.0103***	0.0088***
Owner with mortgage	0.0073***	0.0024***	0.0007	−0.0127***	−0.0027***	−0.0011***	−0.0114***	−0.0049***	−0.0033***
Owner without mortgage	0.0086***	0.0041***	0.0029***	0.0117***	0.0027***	0.0012***	0.0049***	0.0032***	0.0025***
Dwelling characteristics									
Dwelling suitable	0.0008***	0.0010***	0.0009***	0.0015***	0.0008***	0.0005***	0.0006***	0.0006***	0.0005***
Number of bedrooms	0.0268***	0.0182***	0.0143***	0.0190***	0.0067***	0.0037***	−0.0043**	0.0037**	0.0053***
Need major repairs	0.0011***	0.0007***	0.0005***	0.0009***	0.0003***	0.0002***	0.0001	0.0003***	0.0003***
Need minor repairs	−0.0002*	−0.0001*	−0.0001*	−0.0001*	−0.0001*	0.0000*	0.0000	−0.0001*	−0.0001*
Only regular maintenance	0.0012***	0.0007***	0.0005***	0.0010***	0.0003***	0.0001***	0.0000	0.0003***	0.0003***
Single detached house	0.0016	−0.0010	−0.0014	0.0010	−0.0004	−0.0004	0.0027*	0.0004	−0.0003

Table C4 – Continued from previous page

	Non-shelter hardship			Affordability			Housing-induced poverty		
	α=0	α=1	α=2	α=0	α=1	α=2	α=0	α=1	α=2
Double, row, duplex	−0.0005**	−0.0005**	−0.0004**	−0.0001	−0.0003**	−0.0002**	0.0000	−0.0002**	−0.0002**
Apartment	0.0032	0.0006	0.0000	0.0095***	0.0013	0.0003	0.0012	0.0008	0.0008
Other	0.0001	0.0001	0.0001	−0.0003*	0.0000	0.0000	0.0001	0.0001	0.0000
Province									
NFL	−0.0001***	0.0000*	0.0000	0.0000	0.0000	0.0000*	0.0000	0.0000	0.0000
PEI	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
NS	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
NB	−0.0001*	0.0000	0.0000	0.0000	0.0000*	0.0000*	0.0000	0.0000	0.0000
QC	−0.0014***	−0.0007***	−0.0006***	−0.0021***	−0.0005***	−0.0003***	0.0003*	−0.0001*	−0.0002**
ON	0.0000	−0.0002**	−0.0003***	−0.0015***	−0.0005***	−0.0002***	0.0001	−0.0002***	−0.0002***
MB	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
SK	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
AB	0.0012***	0.0003***	0.0001	−0.0001	−0.0001	−0.0001*	0.0002**	0.0001**	0.0001
BC	0.0001	0.0002*	0.0002*	0.0003*	0.0002*	0.0001*	0.0000	0.0001*	0.0001*
STRUCTURAL									
Age	1.0945***	0.7077***	0.5060***	0.5878***	0.2372***	0.1246***	−0.3575***	0.0715	0.1476**
Age-squared	−0.5805***	−0.4189***	−0.3101***	−0.3302***	−0.1475***	−0.0800***	0.2578***	−0.0379	−0.0943***
Male	0.0588***	0.0504***	0.0443***	0.0587***	0.0290***	0.0177***	−0.0033	0.0165***	0.0212***
Rural	0.0365*	0.0040	0.0008	−0.0264	−0.0085	−0.0026	0.0029	−0.0022	−0.0033
Immigrant status									
Immigrant	−0.0306**	−0.0084	−0.0008	−0.0479***	−0.0075	−0.0014	−0.0092	−0.0103*	−0.0062
Years-since-migration	0.0333	0.0076	0.0002	0.0350	0.0080	0.0029	0.0002	0.0054	0.0042
Years-since-mig squared	−0.0106	0.0002	0.0023	−0.0020	−0.0011	−0.0007	0.0005	0.0009	0.0007
Education									
Less than HS	0.0058**	0.0032*	0.0017	0.0003	0.0005	0.0001	−0.0013	0.0010	0.0012
HS or partial PSE	0.0023	0.0018	0.0011	−0.0001	0.0001	−0.0001	−0.0016	−0.0001	0.0001
Non-uni PSE	−0.0027	−0.0032	−0.0023	0.0003	−0.0007	−0.0001	0.0006	−0.0019	−0.0018
University	−0.0100***	−0.0044*	−0.0019	−0.0003	−0.0001	0.0002	0.0036*	0.0001	−0.0004
Home tenure									
Renter	0.0234***	0.0121***	0.0071**	0.0107**	0.0046**	0.0015	0.0028	0.0043**	0.0030
Owner with mortgage	−0.0010	0.0007	0.0030	0.0097***	0.0035*	0.0024*	0.0175***	0.0100***	0.0080***
Owner without mortgage	−0.0266***	−0.0152***	−0.0115***	−0.0216***	−0.0086***	−0.0041***	−0.0190***	−0.0145***	−0.0113***
Dwelling characteristics									
Dwelling suitable	0.1900***	0.1175***	0.1012***	0.1248***	0.0599***	0.0395***	0.0384*	0.0361***	0.0466***
Number of bedrooms	−0.1138***	−0.0832***	−0.0659***	−0.0518***	−0.0363***	−0.0228***	0.0352***	−0.0203**	−0.0299***

Table C4 – Continued from previous page

	Non-shelter hardship			Affordability			Housing-induced poverty		
	α=0	α=1	α=2	α=0	α=1	α=2	α=0	α=1	α=2
Need major repairs	0.0022*	0.0020**	0.0017*	0.0009	0.0009*	0.0006*	−0.0011	0.0003	0.0007
Need minor repairs	−0.0006	−0.0008	−0.0007	−0.0013	−0.0003	−0.0004	−0.0008	−0.0001	−0.0002
Only regular maintenance	−0.0203**	−0.0176***	−0.0152***	−0.0053	−0.0085**	−0.0054**	0.0136***	−0.0024	−0.0065*
Single detached house	0.0078	0.0101*	0.0093*	0.0025	0.0044	0.0030	−0.0079*	0.0019	0.0043
Double, row, duplex	−0.0002	−0.0006	−0.0005	−0.0016	−0.0008	−0.0003	−0.0020	−0.0013	−0.0011
Apartment	−0.0113**	−0.0119***	−0.0106***	−0.0089*	−0.0062***	−0.0037**	0.0032	−0.0049**	−0.0060**
Other	0.0004	0.0005	0.0004	0.0006	0.0003	0.0002	0.0003	0.0004*	0.0004*
Province									
NFL	0.0012***	0.0005*	0.0002	0.0002	0.0000	−0.0001	−0.0001	0.0002	0.0001
PEI	0.0000	−0.0001	−0.0001	−0.0002*	−0.0001*	−0.0001*	−0.0001	0.0000	0.0000
NS	0.0008	0.0007*	0.0005*	0.0012**	0.0003	0.0001	0.0000	0.0003	0.0004*
NB	0.0010**	0.0002	−0.0001	−0.0003	−0.0005***	−0.0003***	0.0001	−0.0002	−0.0003*
QC	−0.0071*	−0.0050*	−0.0045*	−0.0050	−0.0025*	−0.0016*	0.0067***	0.0004	−0.0007
ON	−0.0039	−0.0005	0.0013	−0.0023	0.0034	0.0029*	−0.0028	−0.0017	−0.0007
MB	−0.0013**	−0.0005	−0.0002	−0.0005	−0.0002	−0.0001	0.0000	−0.0003	−0.0002
SK	−0.0009**	−0.0007**	−0.0005*	0.0000	−0.0001	0.0000	0.0005*	−0.0002	−0.0002
AB	−0.0043***	−0.0008	0.0005	0.0017	0.0018**	0.0014**	0.0018*	0.0001	0.0001
BC	0.0004	0.0033*	0.0037**	0.0029	0.0030**	0.0019**	−0.0033**	0.0014	0.0025**
Constant	−0.4539***	−0.2321***	−0.1634***	−0.1349*	−0.0540	−0.0351	0.0705	0.0048	−0.0206
N	113,230	113,230	113,230	113,230	113,230	113,230	113,230	113,230	113,230

Data source: Canadian Income Survey 2012-2016.
*$p < .05$; **$p < .01$; ***$p < .001$
All decompositions control for year of interview fixed effects.
Bootstrap standard errors are estimated using Statistics Canada's 1,000 bootstrap replicate weights.

Table C5: Decomposition of Shortfall Index-based indicators: single mother versus single father

	Non-shelter hardship			**Affordability**			**Housing-induced poverty**		
	α=0	α=1	α=2	α=0	α=1	α=2	α=0	α=1	α=2
Single mother	0.5750	0.2445	0.1540	0.5026	0.1082	0.0459	0.1117	0.1113	0.0964
	(0.0089)	(0.0060)	(0.0055)	(0.0087)	(0.0037)	(0.0024)	(0.0051)	(0.0030)	(0.0036)
Single father	0.3965	0.1935	0.1343	0.3829	0.0906	0.0402	0.1194	0.1001	0.0890
	(0.0183)	(0.0121)	(0.0108)	(0.0176)	(0.0069)	(0.0044)	(0.0113)	(0.0065)	(0.0073)
Difference	0.1785***	0.0509***	0.0197	0.1197***	0.0176*	0.0056	−0.0077	0.0112	0.0074
Endowment effect	0.0727***	0.0312***	0.0187***	0.0309***	0.0071*	0.0027	−0.0033	0.0063**	0.0073**
Structural effect	0.1058***	0.0197	0.0009	0.0889***	0.0104	0.0030	−0.0044	0.0049	0.0001
ENDOWMENT									
Age	0.2022***	0.0777***	0.0456*	0.0569	0.0170	0.0058	0.0092	0.0246*	0.0246*
Age-squared	−0.1820***	−0.0705**	−0.0421*	−0.0475	−0.0161	−0.0060	−0.0039	−0.0211*	−0.0224
Rural	−0.0022	−0.0003	0.0001	0.0030*	0.0009	0.0004	−0.0010	0.0001	0.0002
Immigrant status									
Immigrant	0.0092**	0.0070*	0.0065*	0.0103**	0.0041*	0.0026*	0.0003	0.0024*	0.0036*
Years-since-migration	−0.0053	−0.0049	−0.0050	−0.0083	−0.0031	−0.0022	0.0001	−0.0008	−0.0021
Years-since-mig squared	0.0007	0.0008	0.0009	0.0015	0.0006	0.0004	0.0000	0.0000	0.0003
Education									
Less than HS	−0.0048**	−0.0021*	−0.0011	−0.0011	−0.0004	−0.0002	0.0015*	0.0000	−0.0003
HS or partial PSE	−0.0008	−0.0004	−0.0001	−0.0009	−0.0002	0.0000	−0.0001	−0.0003	−0.0002
Non-uni PSE	−0.0013	−0.0008	−0.0005	−0.0006	−0.0002	−0.0001	0.0007	0.0000	−0.0002
University	−0.0040*	−0.0013*	−0.0005	−0.0016*	−0.0003	0.0000	0.0003	−0.0005	−0.0003
Home tenure									
Renter	0.0339***	0.0176***	0.0118***	0.0242***	0.0061***	0.0028***	−0.0002	0.0069***	0.0071***
Owner with mortgage	0.0059**	0.0013	−0.0001	−0.0138***	−0.0022*	−0.0007	−0.0128***	−0.0044***	−0.0024**
Owner without mortgage	0.0015	0.0009	0.0006	0.0020	0.0004	0.0002	0.0007	0.0006	0.0005
Dwelling characteristics									
Dwelling suitable	−0.0038**	−0.0021*	−0.0015*	−0.0032*	−0.0012*	−0.0007*	−0.0012*	−0.0012**	−0.0010*
Number of bedrooms	0.0026*	0.0014	0.0008	0.0037*	0.0005	0.0002	0.0005	−0.0001	−0.0001
Need major repairs	0.0014*	0.0004	0.0001	0.0004	0.0001	0.0001	−0.0001	0.0001	0.0001
Need minor repairs	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Only regular maintenance	0.0008	0.0001	−0.0001	−0.0001	−0.0001	−0.0001	−0.0004	−0.0001	−0.0001
Single detached house	−0.0035	−0.0026	−0.0024	−0.0059*	−0.0021*	−0.0011	−0.0018	−0.0023**	−0.0022*
Double, row, duplex	0.0005	−0.0029**	−0.0026*	−0.0061***	−0.0018**	−0.0008	0.0012	−0.0021***	−0.0022**

Table C5 – Continued from previous page

	Non-shelter hardship			Affordability			Housing-induced poverty		
	α=0	α=1	α=2	α=0	α=1	α=2	α=0	α=1	α=2
Apartment	0.0014	0.0006	0.0003	0.0003	0.0002	0.0001	−0.0005	0.0003	0.0002
Other	0.0001	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Province									
NFL	0.0031**	0.0016*	0.0008	0.0012	−0.0001	−0.0002	−0.0007	0.0002	0.0002
PEI	0.0003	−0.0001	−0.0001	−0.0001	−0.0001	0.0000	0.0002	−0.0001	−0.0001
NS	0.0018	0.0009	0.0005	0.0008	0.0002	0.0000	0.0002	0.0005	0.0004
NB	0.0011	0.0001	−0.0002	−0.0017	−0.0005	−0.0003	0.0003	−0.0002	−0.0003
QC	0.0160***	0.0104***	0.0081***	0.0163***	0.0051***	0.0026***	0.0044***	0.0041***	0.0044***
ON	−0.0031*	−0.0019*	−0.0012*	0.0011	0.0002	0.0000	0.0001	−0.0003	−0.0004
MB	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
SK	−0.0005	0.0002	0.0003	0.0011	0.0005	0.0003	0.0000	0.0003	0.0003
AB	0.0017	0.0005	0.0002	−0.0004	−0.0002	−0.0001	−0.0001	0.0000	0.0000
BC	−0.0001	−0.0003	−0.0003	−0.0005	−0.0002	−0.0001	0.0000	−0.0002	−0.0002
STRUCTURAL									
Age	−1.2766	0.0891	0.4095	0.9091	0.3136	0.2634	0.2451	−0.0978	0.1178
Age-squared	0.5538	−0.1198	−0.2607	−0.5045	−0.1926	−0.1503	−0.0350	0.0276	−0.0941
Rural	0.0130	−0.0166	−0.0349	0.0497	−0.0130	−0.0124	−0.0157	−0.0188	−0.0393
Immigrant status									
Immigrant	0.0157	0.0040	0.0040	−0.0098	0.0042	0.0053	0.0080	−0.0010	−0.0022
Years-since-migration	−0.0197	−0.0128	−0.0157	0.0101	−0.0113	−0.0130	−0.0060	−0.0011	−0.0032
Years-since-mig squared	0.0033	0.0064	0.0088	−0.0002	0.0062	0.0068	−0.0002	−0.0014	0.0005
Education									
Less than HS	0.0152*	0.0014	−0.0019	−0.0038	−0.0020	−0.0018	−0.0025	0.0007	−0.0008
HS or partial PSE	0.0083	0.0045	0.0033	0.0038	−0.0010	−0.0010	0.0016	0.0016	0.0019
Non-uni PSE	−0.0399**	−0.0168*	−0.0089	−0.0077	−0.0006	0.0013	0.0014	−0.0068	−0.0054
University	−0.0121	0.0024	0.0051	0.0071	0.0044	0.0030	0.0024	0.0011	0.0026
Home tenure									
Renter	−0.0020	−0.0054	−0.0071	−0.0048	−0.0043	−0.0028	0.0042	−0.0046	−0.0066
Owner with mortgage	−0.0025	0.0003	−0.0002	0.0171	0.0038	0.0018	−0.0024	0.0035	0.0025
Owner without mortgage	0.0009	0.0014	0.0020	−0.0021	0.0005	0.0004	−0.0006	0.0005	0.0013
Dwelling characteristics									
Dwelling suitable	−0.0683	−0.0347	−0.0349	−0.0758	−0.0280	−0.0208	−0.0214	−0.0285	−0.0301
Number of bedrooms	−0.0285	−0.0213	−0.0217	−0.1260*	−0.0178	−0.0103	0.0208	0.0140	0.0023
Need major repairs	−0.0051	−0.0032	−0.0021	−0.0095*	−0.0008	0.0003	−0.0058	−0.0021	−0.0013
Need minor repairs	0.0108	0.0022	−0.0012	0.0115	−0.0021	−0.0028	0.0085	0.0002	−0.0025

Table C5 – Continued from previous page

	Non-shelter hardship			Affordability			Housing-induced poverty		
	α=0	α=1	α=2	α=0	α=1	α=2	α=0	α=1	α=2
Only regular maintenance	0.0101	0.0164	0.0167	0.0381	0.0100	0.0041	0.0195	0.0136*	0.0147
Single detached house	0.0258	0.0039	−0.0005	0.0469	0.0018	0.0011	0.0076	0.0007	−0.0029
Double, row, duplex	−0.0064	−0.0050	−0.0044	−0.0051	−0.0015	−0.0007	−0.0048	−0.0012	−0.0012
Apartment	−0.0024	−0.0022	−0.0034	0.0010	−0.0018	−0.0007	−0.0006	−0.0018	−0.0028
Other	0.0001	0.0008	0.0011	−0.0015	0.0004	0.0001	0.0004	0.0004	0.0007
Province									
NFL	0.0005	−0.0010	−0.0007	−0.0024	−0.0005	0.0000	0.0002	−0.0007	−0.0009
PEI	−0.0032	0.0021	0.0026*	0.0047	0.0018**	0.0010*	−0.0034	0.0007	0.0013*
NS	−0.0095	−0.0063	−0.0061	−0.0031	−0.0037	−0.0029	0.0004	−0.0008	−0.0020
NB	0.0055	0.0049*	0.0038*	−0.0025	0.0007	0.0005	−0.0042	0.0015	0.0024*
QC	0.0209	0.0018	−0.0016	0.0005	−0.0057	−0.0044	0.0162*	0.0047	0.0009
ON	0.0048	−0.0056	−0.0061	−0.0084	−0.0059	−0.0039	0.0035	−0.0026	−0.0026
MB	0.0001	−0.0026	−0.0025	−0.0019	−0.0014	−0.0001	0.0033	−0.0026	−0.0025
SK	−0.0029	−0.0047	−0.0041	−0.0028	−0.0011	−0.0009	0.0046	−0.0014	−0.0023
AB	0.0067	0.0046	0.0038	0.0078	0.0036	0.0021	0.0036	0.0020	0.0022
BC	0.0051	0.0034	0.0039	0.0028	0.0045	0.0034	0.0000	0.0003	0.0014
Constant	0.8842	0.1281	−0.0448	−0.2489	−0.0490	−0.0623	−0.2534	0.1050	0.0504
N	5,540	5,540	5,540	5,540	5,540	5,540	5,540	5,540	5,540

Data source: Canadian Income Survey 2012-2016.
*$p < .05$; **$p < .01$; ***$p < .001$
All decompositions control for year of interview fixed effects.
Bootstrap standard errors are estimated using Statistics Canada's 1,000 bootstrap replicate weights.

Table C6: Decomposition of Shortfall Index-based indicators: renter versus owner

	Non-shelter hardship			Affordability			Housing-induced poverty		
	α=0	α=1	α=2	α=0	α=1	α=2	α=0	α=1	α=2
Owner	0.1380	0.0638	0.0454	0.1792	0.0394	0.0177	0.0568	0.0376	0.0312
	(0.0016)	(0.0010)	(0.0008)	(0.0017)	(0.0006)	(0.0004)	(0.0010)	(0.0006)	(0.0006)
Renter	0.5397	0.2485	0.1677	0.5330	0.1235	0.0544	0.1479	0.1215	0.1032
	(0.0036)	(0.0025)	(0.0023)	(0.0035)	(0.0015)	(0.0010)	(0.0024)	(0.0013)	(0.0015)
Difference	−0.4017***	−0.1847***	−0.1223***	−0.3538***	−0.0841***	−0.0366***	−0.0912***	−0.0838***	−0.0720***
Endowment effect	−0.1043***	−0.0500***	−0.0347***	−0.1255***	−0.0291***	−0.0129***	−0.0339***	−0.0263***	−0.0228***
Structural effect	−0.2974***	−0.1347***	−0.0876***	−0.2283***	−0.0550***	−0.0237***	−0.0572***	−0.0576***	−0.0492***
ENDOWMENT									
Age	0.0171***	0.0174***	0.0141***	0.0039*	0.0058***	0.0037***	−0.0167***	−0.0002	0.0036***
Age-squared	−0.0127***	−0.0125***	−0.0101***	−0.0038***	−0.0041***	−0.0026***	0.0113***	−0.0002	−0.0028***
Male	−0.0121***	−0.0046***	−0.0026***	−0.0094***	−0.0020***	−0.0008***	−0.0027***	−0.0024***	−0.0019***
Rural	0.0038***	0.0003	−0.0002	−0.0048***	−0.0011***	−0.0004**	0.0001	−0.0005*	−0.0005*
Immigrant status									
Immigrant	−0.0026***	−0.0015***	−0.0011***	−0.0031***	−0.0010***	−0.0005***	−0.0006***	−0.0008***	−0.0007***
Years-since-migration	−0.0053***	−0.0036***	−0.0030***	−0.0061***	−0.0020***	−0.0012***	0.0001	−0.0014***	−0.0016***
Years-since-mig squared	0.0018**	0.0018***	0.0016***	0.0022**	0.0008**	0.0006**	−0.0012*	0.0004	0.0007*
Marital status									
Married/common-law	−0.0385***	−0.0230***	−0.0179***	−0.0408***	−0.0127***	−0.0066***	−0.0092***	−0.0108***	−0.0104***
Single (never married)	−0.0126***	−0.0095***	−0.0075***	−0.0100***	−0.0046***	−0.0025***	0.0020***	−0.0028***	−0.0036***
Sepa-rated/divorced/wid	−0.0069***	−0.0025***	−0.0018***	−0.0102***	−0.0020***	−0.0009***	−0.0060***	−0.0026***	−0.0017***
Education									
Less than HS	−0.0100***	−0.0039***	−0.0023***	−0.0053***	−0.0013***	−0.0005***	−0.0014***	−0.0014***	−0.0012***
HS or partial PSE	−0.0003**	−0.0002**	−0.0001*	−0.0006***	−0.0001**	0.0000	−0.0001	−0.0001***	−0.0001*
Non-uni PSE	−0.0012***	−0.0005***	−0.0003***	−0.0005***	−0.0002***	−0.0001***	0.0000	−0.0002***	−0.0001***
University	−0.0074***	−0.0029***	−0.0017***	−0.0053***	−0.0011***	−0.0004***	−0.0014***	−0.0013***	−0.0011***
Dwelling characteristics									
Dwelling suitable	0.0016***	0.0019***	0.0018***	0.0045***	0.0017***	0.0009***	0.0022***	0.0016***	0.0013***
Need major repairs	0.0005***	0.0003***	0.0002***	0.0003***	0.0001***	0.0001***	0.0000	0.0001***	0.0001***
Need minor repairs	−0.0003***	−0.0002***	−0.0002***	−0.0003**	−0.0001***	−0.0001***	−0.0001	−0.0001***	−0.0001***
Only regular maintenance	0.0013***	0.0007***	0.0005***	0.0010***	0.0003***	0.0002***	0.0001	0.0002***	0.0003***
Single detached house	−0.0156***	−0.0065***	−0.0039**	−0.0159***	−0.0032***	−0.0014*	−0.0052***	−0.0025**	−0.0020*

Table C6 – Continued from previous page

	Non-shelter hardship			Affordability			Housing-induced poverty		
	α=0	α=1	α=2	α=0	α=1	α=2	α=0	α=1	α=2
Double, row, duplex	0.0007	0.0009**	0.0008**	−0.0007	0.0005*	0.0003**	−0.0001	0.0004	0.0004*
Apartment	−0.0090***	−0.0037*	−0.0024	−0.0252***	−0.0037**	−0.0011	−0.0048**	−0.0019	−0.0018
Other	0.0001	0.0001*	0.0000	−0.0002**	0.0000	0.0000	0.0000	0.0000	0.0000
Province									
NFL	0.0005***	0.0002**	0.0000	−0.0003**	−0.0001**	−0.0001**	−0.0001	0.0000	0.0000
PEI	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
NS	0.0004***	0.0002***	0.0001**	0.0002**	0.0000	0.0000	0.0001*	0.0001**	0.0000*
NB	0.0008***	0.0002***	0.0000	−0.0002	−0.0002***	−0.0001***	0.0002**	0.0000	0.0000
QC	0.0025***	0.0014***	0.0012***	0.0036***	0.0009***	0.0005***	−0.0006***	0.0003***	0.0004***
ON	−0.0005***	−0.0001	0.0000	0.0014***	0.0003***	0.0001***	0.0000	0.0001*	0.0001**
MB	0.0002**	0.0001*	0.0000	0.0001*	0.0000	0.0000	0.0000	0.0000*	0.0000
SK	−0.0004***	−0.0001**	−0.0001	0.0000	0.0000	0.0000	−0.0001	−0.0001**	0.0000*
AB	−0.0001	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
BC	0.0000	−0.0001*	−0.0001*	−0.0002*	−0.0001*	−0.0001*	0.0000	−0.0001*	−0.0001*
STRUCTURAL									
Age	−0.1747*	−0.3298***	−0.2336***	0.2879***	0.0301	0.0226	0.8239***	0.1913***	0.0453
Age-squared	0.0449	0.1794***	0.1302***	−0.3115***	−0.0389*	−0.0189	−0.5758***	−0.1451***	−0.0432*
Male	0.0555***	0.0217***	0.0110***	0.0240***	0.0063***	0.0024	0.0072*	0.0092***	0.0076***
Rural	−0.0072	0.0206*	0.0238**	0.0878***	0.0329***	0.0167***	0.0011	0.0159**	0.0194***
Immigrant status									
Immigrant	0.0089*	0.0048	0.0029	0.0255***	0.0063***	0.0027*	0.0088***	0.0065***	0.0043**
Years-since-migration	0.0014	0.0051	0.0049	−0.0100	−0.0002	0.0001	−0.0026	−0.0007	0.0011
Years-since-mig squared	−0.0040	−0.0060*	−0.0048	−0.0018	−0.0023	−0.0010	0.0002	−0.0015	−0.0021
Married/common-law	0.0228***	0.0134***	0.0085***	0.0069**	0.0042***	0.0015*	−0.0023	0.0038***	0.0035**
Single (never married)	−0.0105***	−0.0065***	−0.0040***	−0.0063***	−0.0020**	−0.0005	0.0022*	−0.0017**	−0.0016*
Sepa-rated/divorced/wid	−0.0023	−0.0001	−0.0001	0.0027	−0.0002	−0.0003	−0.0034*	−0.0008	−0.0003
Education									
Less than HS	−0.0207***	−0.0094***	−0.0052***	−0.0081***	−0.0014*	−0.0002	0.0023	−0.0018**	−0.0019**
HS or partial PSE	−0.0024	−0.0004	0.0004	0.0012	0.0006	0.0004	0.0020	0.0006	0.0007
Non-uni PSE	0.0133***	0.0086***	0.0063***	0.0087***	0.0034***	0.0017**	−0.0005	0.0025***	0.0027**
University	0.0146***	0.0044***	0.0009	0.0016	−0.0013	−0.0012**	−0.0038***	−0.0004	−0.0004
Dwelling characteristics									
Dwelling suitable	−0.0098	−0.0141	−0.0146	−0.0065	−0.0105	−0.0072	−0.0253*	−0.0107	−0.0076
Need major repairs	0.0000	−0.0004	−0.0004	0.0010	0.0001	0.0001	0.0018***	0.0002	−0.0001
Need minor repairs	−0.0005	0.0008	0.0012	0.0005	0.0007	0.0005	−0.0005	0.0000	0.0002

Table C6 – Continued from previous page

	Non-shelter hardship			Affordability			Housing-induced poverty		
	α=0	α=1	α=2	α=0	α=1	α=2	α=0	α=1	α=2
Only regular maintenance	0.0022	0.0020	−0.0002	−0.0124*	−0.0033	−0.0027	−0.0173***	−0.0023	0.0002
Single detached house	0.0008	−0.0024	−0.0037	−0.0150***	−0.0056***	−0.0029**	−0.0021	−0.0032*	−0.0034*
Double, row, duplex	0.0056**	0.0078***	0.0069***	0.0136***	0.0059***	0.0030***	0.0047***	0.0068***	0.0063***
Apartment	0.0169***	0.0157***	0.0138***	0.0390***	0.0139***	0.0072***	0.0179***	0.0154***	0.0136***
Other	−0.0017***	−0.0018***	−0.0015***	−0.0030***	−0.0012***	−0.0006***	−0.0012***	−0.0015***	−0.0014***
Province									
NFL	−0.0036***	−0.0022***	−0.0012**	−0.0016*	−0.0003	0.0000	0.0005	−0.0008***	−0.0007**
PEI	−0.0009	0.0002	0.0004	0.0018**	0.0006**	0.0003**	0.0009*	0.0003	0.0004*
NS	−0.0015	−0.0022***	−0.0019***	−0.0029***	−0.0010**	−0.0005*	0.0020***	−0.0007*	−0.0012***
NB	−0.0021*	−0.0005	0.0000	0.0017*	0.0013***	0.0006**	0.0004	0.0007**	0.0008**
QC	0.0131***	0.0096***	0.0081***	0.0180***	0.0048***	0.0024***	−0.0071***	0.0016*	0.0029***
ON	0.0106***	0.0085***	0.0068***	0.0048*	0.0009	0.0005	0.0022	0.0038***	0.0040***
MB	0.0016	−0.0006	−0.0015	0.0001	−0.0011*	−0.0009**	−0.0007	0.0006	−0.0001
SK	0.0001	0.0005	0.0001	−0.0044***	−0.0009*	−0.0005	−0.0025***	−0.0007	−0.0004
AB	0.0092***	0.0040***	0.0021**	0.0004	−0.0006	−0.0005	−0.0023***	0.0000	0.0004
BC	−0.0001	−0.0011	−0.0016	−0.0045***	−0.0019**	−0.0008*	−0.0001	−0.0009	−0.0014*
Constant	−0.2767***	−0.0645*	−0.0417	−0.3672***	−0.0940***	−0.0472***	−0.2879***	−0.1442***	−0.0966***
N	113,230	113,230	113,230	113,230	113,230	113,230	113,230	113,230	113,230

Data source: Canadian Income Survey 2012-2016.
*$p < .05$; **$p < .01$; ***$p < .001$
All decompositions control for year of interview fixed effects.
Bootstrap standard errors are estimated using Statistics Canada's 1,000 bootstrap replicate weights.

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