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The Decline of the Immigrant Homeownership Advantage: Life-Cycle, Declining Fortunes and Changing Housing Careers in Montreal, Toronto and Vancouver, 1981-2001

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This paper represents the views of the author and does not necessarily reflect the opinions of Statistics Canada.

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Abstract

In the past, working-age immigrant families in Canada's large urban centres had higher homeownership rates than the Canadian-born. Over the past twenty years however, this advantage has reversed, due jointly to a drop in immigrant rates and a rise in the popularity of homeownership among the Canadian-born. This paper assesses the efficacy of standard consumer choice models, which include indicators for age, income, education, family type, plus several immigrant characteristics, to explain these changes. The main findings are that the standard model almost completely explains the immigrant homeownership advantage in 1981, as well as the rise over time among the Canadian-born, but even after accounting for the well-known decline in immigrant economic fortunes, only about one-third of the 1981-2001 immigrant change in homeownership rates is explained. The implications of this inability are discussed and several suggestions for further research are made.

1. Introduction

Historically, immigrants in Canada's 3 largest CMAs enjoyed higher homeownership rates than the Canadian-born (Figure 1). According to the census, 52%, 65%, and 70% of all working-age immigrant families living in Montreal, Toronto, and Vancouver owned their homes in 1981, each surpassing the rates of their Canadian-born counterparts (46%, 55%, and 58%, respectively). By 2001, although the immigrant advantage still existed in Vancouver (64% versus 55%), it had disappeared in both Montreal (42% versus 54%) and Toronto (61% versus 64%).

Figure 1: The decline of the immigrant homeownership advantage among 25-54 year olds, Montreal, Toronto and Vancouver, 1981-2001
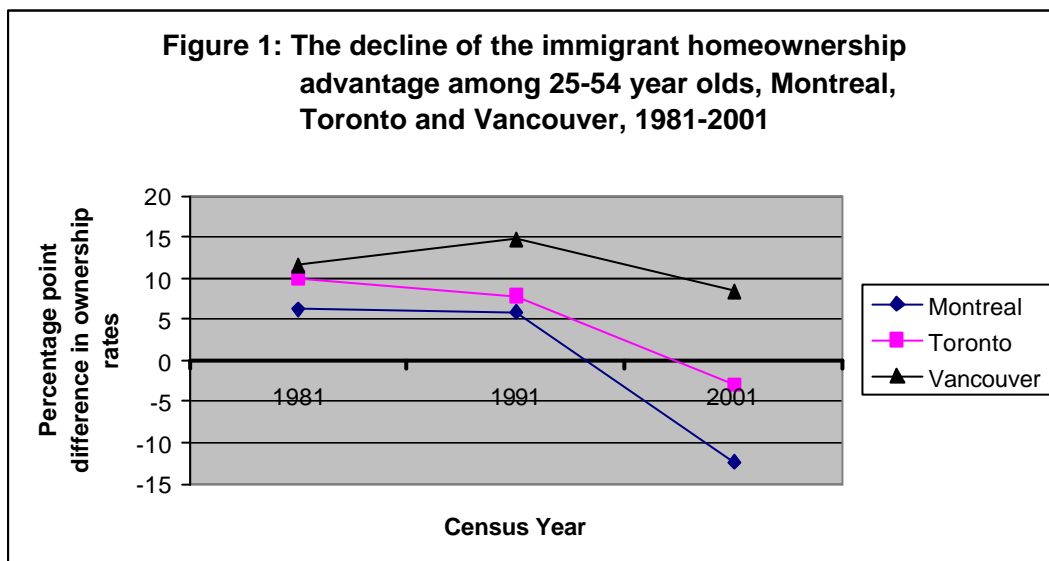
Note: The unit of analysis is the economic family. Non-permanent residents, persons living in collective dwellings and immigrants arriving in a Census year or the year immediately prior are deleted from file.
Source: 1981-2001 Census of Canada economic family file created by author.

Homeownership plays a fundamental role in determining the social and economic well-being of families (Rosenbaum 1996), it is a dimension of social stratification (Alba and Logan 1992), and a bellwether of future inequality (Charles and Hurst 2002)[1]. It can therefore be broadly conceived as a salient indicator of an immigrant family's life chances in their destination country, reflecting their ability to meet the economic requirements of a large purchase, all-the-while finding a neighbourhood, community, and ultimately, country worth settling and investing in. Consequently, the recent immigrant decline may have implications that extend beyond inequality in the present.

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1. See Rohe, McCarthy and Van Zandt (2001) for a critical review of some of the benefits of homeownership.

The purpose of this paper is to identify the socioeconomic and demographic sources of this decline.[2] Using the 1981-2001 Census of Canada 20% sample economic family files,[3] compositional characteristics are found to explain some, but not all, of the declining advantage; for the Canadian-born, the increase stems from changes in housing careers; most of the immigrant decline remains unexplained. To provide a backdrop for understanding these trends, the parallel notions of 'housing career' and 'median housing consumer' are detailed below and illustrated with some descriptive statistics. Next, several reasons to suspect an evolution in housing career in recent history are provided, followed by four hypotheses about how compositional changes might have differentially affected immigrant and Canadian-born homeownership rates. These hypotheses are then tested, as is the prospect of interactions with time, and the implications of both sets of findings are discussed.

2. Housing careers and the median housing consumer

A good deal of housing research relies on a microeconomic model of consumer choice, where the average person, or 'median housing consumer', makes decisions based on his/her needs and preferences, contingent on financial resources (Alba and Logan 1992; Flippen 2001). Since these decisions are both sequential and dependent on life circumstances, people have 'housing careers', much like they have employment and family careers (Mulder 1993). Like these other careers, 'housing career' borrows heavily from the notion of the life-cycle, which casts life as a series of changes in states, each affecting needs and altering preferences. A basic ideal-type housing career, paraphrased from Foote et al. (1960), and reiterated in Murdie et al. (1999), might as a minimum contain the following phases: (1) pre-child, (2) childbearing (3) child-rearing and launching, (4) post-child, and (5) later life.[4]

People in their pre-child phase are typically younger, have few long-term investments, and must contend with more precarious employment prospects. As a result, their spending habits are 'prudent', or cautious in the face of future income uncertainty (Nagatani 1972). At this stage, individuals either live with their parents or in rental accommodations. As income and employment stabilizes, individuals—or possibly, by now, families—begin to think more seriously about their shelter as not only a consumption good but also an avenue for investment, making them more receptive to the idea of moving into an owner-occupied dwelling. Families will shift their preferences several times as they pass through their housing career phases mentioned above, although they will likely not return to renting until later life, when they must often forfeit their housing equity to gain access to constant care.[5]

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2. Throughout this paper, the change in the homeownership gap is referred to as an immigrant decline for style and brevity, even though in reality the change in relative positions stems as much from an increase among the Canadian-born as it does to a decrease among immigrants.

3. Highest earners are selected to represent the entire economic family. Institutionalized residents and collective dwelling residents, and those who immigrated either in the census year or the year before the census (since they are unlikely to have received a full year's income) are not included in this study.

4. In 1960, when Foote et al. introduced the median housing consumer, it consisted of a Canadian-born husband and wife, married at age 23 and 20, respectively, with 2 or 3 children born when the husband was between 25-30 years old (Foote et al. 1960, p.97).

5. This is obviously a 'straw man' version of the housing career, and has been criticized heavily for its blindness to the unique nature of housing as an investment good. It is presented here only as a baseline model of housing

Although not specifically designed with an eye to describing the median *immigrant* housing consumer, the logic can be applied in a fairly straightforward manner, once immigrants overcome the hurdles of integrating into their new society. The housing career caricature above can therefore be conceived as the model that immigrants 'assimilate into', and for immigrants as well as the Canadian-born, the standard demographic and socioeconomic characteristics that determine where an individual is in their housing career (age, family composition, childbearing, and labour market characteristics) are expected to be the primary factors driving homeownership propensities. For immigrants, duration and attainment of charter language ability will also shape homeownership patterns.

2.1   Homeownership relevant changes in the Canadian population

As the description above suggests, in order for housing careers to proceed accordingly, the median consumer needs to leave home, marry, have children, secure stable employment, and eventually retire in a part- or full-time care facility. Although these events still occur for some Canadians, many today construct much more diverse biographies, suggesting that overarching concepts like median housing consumer and housing career have become somewhat limiting as conceptual ideal-types, and are decreasingly useful for understanding residential experiences in contemporary Canadian society.

This diversification stems from many sources. First, due to changes in the labour market, both immigrants (Baker and Benjamin 1994; Frenette and Morissette 2003) and young adults (Heisz, Jackson and Picot 2002; Picot and Myles 1996) have been experiencing depressed earnings and poorer employment prospects in recent history; second, the decline of the 'family-centered life course'(Ravanera, Rajulton and Burch 1998) has eroded the monopoly of marriage as a conjugal endpoint and desirable social institution (Hughes 2003); third, since each CMA has its own peculiar housing market, the allocation of immigrants and the Canadian-born could alter relative homeownership rates; finally, due to high immigration rates in the 1990s, there are presently more new arrivals, and the immigrant advantage could be due to changes in immigrant 'recency'.

In total, this new context appears to be helping the Canadian-born buy homes but hurting immigrants (Table 1). In 1981 immigrants surpassed the homeownership rates of the Canadian-born by a wide margin, but have been rapidly losing their advantage since then, so that by 2001 it became more accurate to talk about the immigrant

Table 1: Ownership rates, 1981-2001		
Year	CB	Imm.
1981	51.0%	62.9%
1991	52.3%	61.4%
2001	58.6%	57.9%

Source: 1981-2001 Censuses of Canada.

housing disadvantage. Table 1 shows that this change can be jointly attributed to an increase in ownership rates among the Canadian-born operating alongside a decrease for immigrants. Below, the four possible sources of change in housing careers mentioned above are described in greater detail, each presented with an eye to identifying the sources of the immigrant housing decline.

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consumption, and departures are expected. The argument here is that departures are becoming increasingly common, and that 'median housing consumer' is accurate for a decreasing portion of the population.

3. Changes in the socioeconomic characteristics of immigrants and the Canadian-born

3.1 Income

Since homeownership is necessarily a function of income (Miron 1988), the ability of families to continue buying homes at the rates of their predecessors depends heavily on comparable levels of labour market success.

Table 2: Median family income by age and immigrant status, 1981-2001						
	Canadian-born			Immigrant		
Age	1981	1991	2001	1981	1991	2001
25-34	$33,729	$35,388	$36,161	$30,880	$29,209	$28,208
35-44	$34,606	$37,609	$39,054	$31,508	$32,119	$28,212
45-54	$38,083	$42,096	$42,759	$35,201	$37,575	$34,161
45-54 - 25-34 year olds	$4,354	$6,708	$6,598	$4,320	$8,366	$5,953

Note: Age refers to the highest earner in the economic family. All figures are Adult-equivalent-adjusted and deflated to 2000 dollars.
Source: 1981-2001 Census of Canada economic family files

Assuming income proxies labour market success, Table 2 above shows that both immigrant and Canadian-born young people have been doing progressively worse compared to their older counterparts. In 1981, both immigrant and the Canadian-born aged 25-34 earned about $4,300 less (AEA-adjusted, in 2000 dollars) than 45-54 year olds. This gap increased in the 1980s, and shrunk after that, so that by 2001 the income gap between 25-34 and 45-54 year olds was around $6,600 for the Canadian-born and $6,000 for immigrants, a relative widening of approximately $2,200 and $1,600, respectively.

Given this growing divergence, we would expect to see a similar widening in homeownership rates. Instead, there has been almost no change (Table 3). In 1981, 45-54 year olds had an ownership rate that was between 23 (Canadian-born) and 27 (immigrants) percentage points higher than their 25-34 year old counterparts. By 2001 the gap was virtually identical implying that, despite income declines, younger generations of homebuyers in the 3 CMAs have been able to keep pace with their elders.

Table 3: Homeownership rates by age and immigrant status, 1981-2001						
	Canadian-born			Immigrant		
Age	1981	1991	2001	1981	1991	2001
25-34	38.9%	40.6%	43.9%	47.8%	42.6%	42.6%
35-44	59.9%	58.4%	63.6%	67.3%	64.2%	56.5%
45-54	61.4%	64.3%	66.9%	74.9%	73.6%	69.5%

Note: Age refers to the highest earner in the economic family. Differences are expressed in percentage points.
Source: 1981-2001 Census of Canada economic family files

A different story emerges between immigrants and the Canadian-born. Like young people, each successive wave of immigrants has been earning less than its predecessor, but unlike young people, their

relative homeownership rates have also been declining (Figure 2).[6] Already in 1981, immigrants were earning nearly 10% less than the Canadian-born, but homeownership rates were much higher (see Ray and Moore (1991) or Teixeira (1995) for a discussion of some of the reasons behind high homeownership rates of some earlier immigrant groups). Over the next twenty years, not only did the income gap grow, but the homeownership advantage also disappeared.

Figure 2: Median AEA family income and ownership differences, immigrants and the Canadian-born 1981-2001
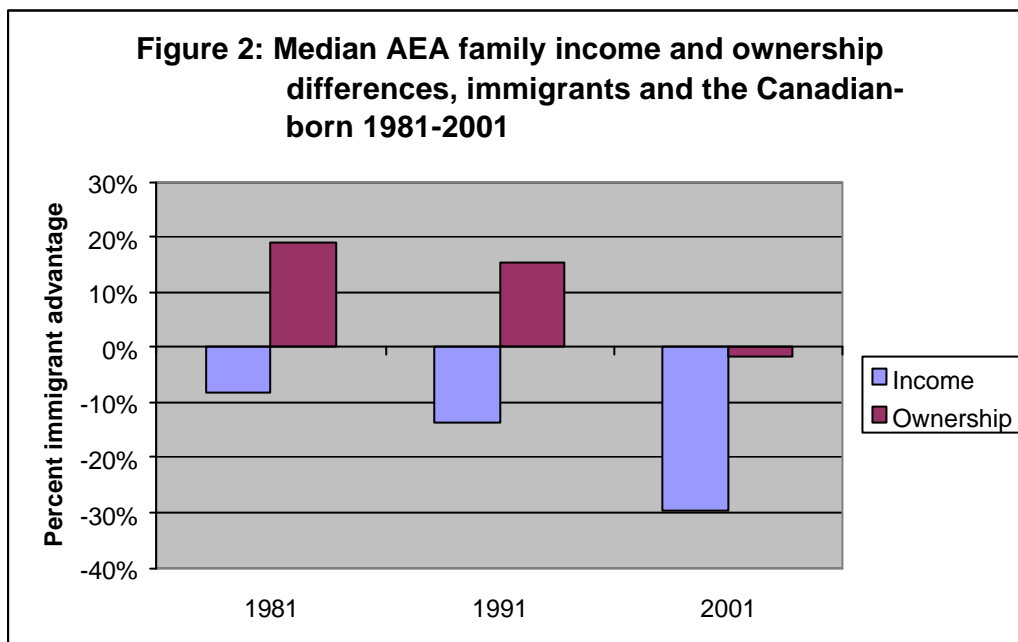
Note: Income is AEA-adjusted. Immigrants who arrived in census year or the year before are excluded
Source: 1981-2001 Census of Canada economic family file created by author where heads are age 25-54.

Given the trends in income and ownership shown above, in the multivariate analysis later is expected that income will form a large part of reason for the immigrant homeownership decline, although certainly not all, given that young people have also experienced a decline in earnings without an accompanying drop in homeownership.

3.2 Changes in other labour market characteristics

The ability to meet downpayment requirements and to fulfill the necessary long-term obligations associated with homeownership depends not only on present income, but also on the capacity to maintain (or surpass) these earnings well into the future. These are difficult to assess with cross-sectional data, but at least one indicator, the number of full-time earners in an economic family, does allow for an assessment of earnings stability. In one earner households, financial security entirely rests on the vitality of one person, whereas a household with earnings 'spread out' over several people will be less reliant on a single source, and might therefore be less likely to experience a total loss of earnings, presumably making them a smaller credit risk.

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6. For a more detailed discussion of this, see Baker and Benjamin (1994), Frenette and Morissette (2003), or McDonald and Worswick (1998).

Table 4: Number of full-time earners, 1981-2001		
Year	Canadian-born	Immigrant
1981	1.30	1.49
1991	1.30	1.43
2001	1.36	1.37

Note: Refers only to economic families with more than one adult.
Source: 1981-2001 Census of Canada economic family files.

If we accept this to be the case, then immigrants held an advantage up to the 1990s (Table 4). Since then, this has diminished, and by 2001 immigrant and Canadian-born households had reached earner parity. These differences could partly stem from what has been described as the 'casualization', or the trend away from stable, full-time, employment (Vosko, Zukewich, and Cranford 2003), and has been found elsewhere to disproportionately affect visible minorities and recent immigrants (Ibid.). Consequently, the rise of casualization, defined as a drop in income and a relative decline in the proportion of high earners working full-time is expected to negatively affect both immigrant confidence in making a long-term financial commitment and a mortgage lender's willingness to provide the requisite funds, thereby depressing immigrant homeownership rates.

3.3   Changes in educational attainment

Another socioeconomic shift in the Canadian population likely to alter housing careers is the further consolidation of tertiary education into the life course (Table 5). In 1981, only 21% of the Canadian-born and 21% of all immigrants aged 25-34 had a university degree. These rates are even lower among older cohorts, at 19% and 12%. Educational attainment levels steadily increased over the next twenty years, so that by 2001 a third of young Canadian-born adults and 35% of all young immigrant high earners could claim a bachelor's degree or higher.

Table 5: Educational attainment by age and immigrant status, 1981-2001									
	1981			1991			2001		
Age	CB	FB	Diff	CB	FB	Diff	CB	FB	Diff
25-34									
No High school	20%	23%	3	17%	21%	4	11%	14%	3
High school	16%	10%	-6	14%	13%	-1	9%	10%	0
Post-secondary	43%	46%	2	46%	44%	-2	47%	41%	-6
B.A. or above	21%	21%	0	23%	22%	-1	33%	35%	2
35-44									
No High school	29%	31%	1	18%	22%	3	14%	17%	3
High school	14%	7%	-7	15%	11%	-4	14%	12%	-2
Post-secondary	38%	43%	4	42%	42%	0	46%	41%	-5
B.A. or above	19%	19%	1	24%	25%	1	26%	30%	4
45-54									
No High school	44%	42%	-1	28%	29%	1	16%	19%	3
High school	12%	7%	-5	15%	10%	-6	16%	12%	-5
Post-secondary	32%	39%	6	37%	40%	3	41%	40%	-1
B.A. or above	12%	12%	0	20%	22%	2	27%	29%	2

Source: 1981-2001 Census of Canada economic family file created by author. Figures are for highest earner only.
           Comparable data for 1971 are not available.

Increases in educational attainment will likely alter housing careers for several reasons. First, people will be less likely to buy homes as long as they are in school, due to both mobility requirements and budget constraints. Although this may not alter the relationship between education and income, it will likely

change the age patterns of housing consumption. As young people continue the move towards higher educational attainment, an almost inevitable result is the delay of a home purchase.

Once they complete their training, however, university graduates have higher levels of human capital and should have an easier time securing a mortgage, enabling a rapid 'catch-up'. As one of the most salient indicators of human capital, educational attainment signals both future earnings potential and income stability, and once again we'd expect this to increase homeownership rates. Assuming equal returns and credential valuation,[7] there is little reason to expect that the increases in educational attainment will convey an advantage to either immigrants or the Canadian-born, since both groups have increased their educational attainment levels in tandem.

4. *Changes in family composition, 1981-2001*

In addition to the labour market-related determinants of homeownership outlined above, another important factor in the decline of the immigrant advantage is the evolution in the type, nature and duration of conjugal relations in Canada. A central part of the housing career caricature presented above is the family status of the individual, and given that people are now much more likely to delay or forego marriage (Statistics Canada 2003), live common law (Statistics Canada 2000), and/or experience marital dissolution than they were in the past (Beaujot 1991), it is likely that housing careers have also changed due to shifts in the nature of conjugal relations.

Table 6: Family composition by year and immigrant status									
Family type	1981			1991			2001		
	CB	Imm.	Diff.	CB	Imm.	Diff.	CB	Imm.	Diff.
Married with children*	40%	55%	-15.0	34%	48%	-14.0	32%	45%	-13.2
Married without children*	22%	18%	4.0	23%	20%	3.0	22%	20%	2.3
Lone-parent	9%	7%	2.0	9%	9%	0.0	10%	12%	-1.1
Unattached individuals	19%	13%	6.0	22%	12%	10.0	24%	13%	11.4
Non-family member**	7%	5%	2.0	9%	7%	2.0	7%	6%	1.2

* Includes common law.

**Includes persons who do not belong to a census family but are part of an economic family, such as cousins, grandparents, lodgers, roommates and employees.

Source: 1981-2001 Censuses of Canada economic family file created by author.

As Table 6 above suggests, the proportion of the population with the relationship patterns of a median housing consumer has declined dramatically, particularly among the Canadian-born. Comparing immigrants to the Canadian-born, in 1981 immigrants seem to more closely approximate the median housing consumer, with a far greater proportion of households containing married adults with children (the family type most likely to be in the ownership phase of the housing career). Since then, there have been a number of changes. First, among the Canadian-born, the proportion of unattached individuals rose by five points, the number of families with children dropped by eight points, and the proportion of lone parents rose by one point. These should all reduce homeownership rates, as each signals a departure from the characteristics of the median housing consumer.

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7. This may not be a reasonable assumption, as credential recognition is an increasing problem for immigrants (Reitz 2003).

For immigrants, the prevalence of unattached adult households was steady, the percentage of lone-parent families nearly doubled, and the proportion of families consisting of a married couple with children declined by 10 points. Immigrants continue to resemble the median housing consumer more closely, and it is therefore expected that, relative to the Canadian-born, their family composition shields them to some extent from an even greater decline due to declining labour market fortunes.

5. Changes in immigrant 'recency'

As most contemporary accounts of immigrant incorporation acknowledge, new immigrants to Canada are expected to encounter initial difficulties settling into Canadian society, due to cultural differences, language barriers, and other difficulties. These hurdles should be temporary, however, and over time immigrants should increasingly enjoy access to the benefits that the Canadian-born have. As this relates to homeownership, immigrants will initially experience low homeownership rates, but as other outcomes improve with time, they should move towards owner-occupied accommodations. Consequently, knowledge of a charter language and duration in Canada should both positively predict homeownership, and if currently a greater proportion of immigrants are recent arrivals then the declining immigrant advantage could be traced to a net shift in immigrant 'recency'.

Table 7: Distribution of immigrants by duration in Canada			
Years in Canada	1981	1991	2001
2 to 5	8.5%	15.3%	15.8%
6 to 10	21.3%	11.3%	20.7%
11 to 15	23.1%	13.6%	17.0%
15 to 20	11.8%	19.8%	9.2%
20+	35.4%	40.0%	37.3%
Mean	16.6	18.0	17.3

Source: 1981-2001 Census of Canada economic family files

Table 7 shows this to be the case. In 2001, over one-third of the foreign born in Canada's three big CMAs had been in Canada for ten years or less. This is a greater share than in any other year, and could therefore overemphasize the magnitude of the immigrant homeownership decline. The advantage may therefore only be temporarily suspended, and as duration increases, there may be a resurgence of the immigrant advantage.

6. Changes in locational choices

Since each CMA has its own housing market peculiarities (attitudes toward ownership and tenancy, as well as housing age, quality, and availability), homeownership rates also vary widely across CMAs. Montreal, for example, has a long history of being extremely tenant-friendly (Choko 1987), and has much lower homeownership rates than the other two CMAs (Table 8).

Table 8: Homeownership rates by city, 1981-2001			
	1981	**1991**	**2001**
Montreal	47.0%	50.5%	52.1%
Toronto	59.8%	58.8%	63.2%
Vancouver	62.4%	56.6%	58.9%

Source: 1981-2001 Census of Canada economic family files created by author

Given these differences across CMAs, shifts in the locational choices of immigrants and the Canadian-born over time will likely alter relative homeownership rates, and could account for some of the declining advantage.

Table 9: Distribution of immigrants and the Canadian-born across cities, 1981-2001									
	1981			**1991**			**2001**		
	CB	**Imm.**	**All**	**CB**	**Imm.**	**All**	**CB**	**Imm.**	**All**
Montreal	49%	24%	40%	46%	21%	38%	45%	19%	36%
Toronto	33%	58%	42%	35%	61%	43%	36%	60%	44%
Vancouver	18%	18%	18%	19%	18%	19%	19%	21%	20%

Source: 1981-2001 Census of Canada economic family files created by author

As can be seen in Table 9 above, Montreal claims a decreasing share of the population of the three CMAs over time, going from 40% in 1981 to only 36% in 2001, with Toronto and Vancouver equally claiming the difference. The decline was almost the same for immigrants and the Canadian-born, with a 5 point drop for immigrants and a 4 point drop for the Canadian-born. This movement away from Montreal is especially pronounced among more recent arrivals (< 10 years), which is perhaps the least likely group to have accumulated Canadian housing equity (Table 8). Although Toronto's net recipiency has remained relatively stable, with around 60% of the three CMAs' recent arrivals, Montreal has declined, with Vancouver largely claiming the difference. Consequently,

Table 10: Distribution of Recent Immigrants, 1981-2001			
CMA	**1981**	**1991**	**2001**
Montreal	22.6	20.7	17.8
Toronto	58.9	62.3	59.0
Vancouver	18.5	17.0	23.2

like family changes, distribution across CMAs should further protect immigrants from a greater decline.

7. *Hypotheses*

Several hypotheses about the immigrant homeownership decline can be drawn from the discussion above. First, it seems likely that both diminishing immigrant labour market fortunes (Figure 2) and changes in immigrant recency (Table 7) will push immigrant homeownership rates downward. These two forces may be offset to some extent by other factors, such as an immigrant movement away from tenant-friendly Montreal (Tables 9 and 10) and a family structure that continues to more closely approximate that of the median housing consumer (Table 6). Drawing from the evidence presented thus far, the following four hypotheses emerge:

1. Changes in immigrant and Canadian-born CMA choice, most notably an immigrant movement away from Montreal (especially recent immigrants), will dampen an even greater immigrant decline.

2. The declining economic resources (income, number of earners, full-time status and unemployment prevalence) of recent immigrants hinder their ability to buy a home.

3. Within the framework of the traditional housing career, a greater proportion of immigrant families should seek homeownership, since more of them are likely to be married with children than the Canadian-born. This is expected to prevent an even greater decline.

4. The increasing share of immigrants that are recent arrivals in 2001 reduces immigrant homeownership rates.

7.1   The evolution of housing careers over time

The hypotheses above imply a historicity, or that compositional characteristics have the same impact on homeownership rates over time. This is likely to prove a naïve assumption, as the many cultural and structural changes that have swept across Canada from 1981-2001 probably also altered the incentive structures for buying homes. If this is true, then a person's social, economic and demographic 'repertoire' will position them differently for homeownership, both in terms of preference and accessibility, at different points in time. The 'potency' of various factors could therefore be evolving, implying that there may be interactions between time and the explanatory variable clusters above. To test for this, key variables will be interacted with time and entered into a subsequent set of models.

8.   Data and methods

8.1   Data

The remainder of this study uses a 20% extract of a pooled sample of data from the beginning (1981) and end (2001) of the immigrant homeownership advantage decline. The unit of analysis throughout is the economic family, defined as either an unattached individual or a union of two or more persons living in the same dwelling and related by blood, marriage, common-law or adoption. The analysis is restricted to permanent Canadian residents who have recently moved and are not living in institutions, collective dwellings or military quarters, where the highest earner is age 25-54. For all analyses, the characteristics (year of arrival, socio-demographic variables, etc) of the highest earner are used to represent family characteristics.

8.2   The variables

The models used to test the hypotheses above are fairly standard in microeconomic models of consumer choice, and include life-cycle characteristics, CMA indicators, socioeconomic variables and immigration characteristics. *Life-cycle indicators* include demographic and household composition information. *CMA indicators* are expected to net out CMA-specific homeownership determinants, including availability, affordability, etc. *Socioeconomic characteristics* include measures of income, employment status, and several controls, like age and education, which are correlated with homeownership but not hypothesized to be important factors behind the immigrant homeownership decline. *Immigration characteristics* include an immigrant indicator, years since migration (YSM), YSM squared and

knowledge of the local languages (English/French in Montreal, and English in Toronto and Vancouver). YSM and its square are both mean-centered so that coefficients can be interpreted as the effect for immigrants that have been in Canada the average length of time (about 17 years in both 1981 and 2001). The coding for most variables (all except interaction terms) is presented in Table 11 below.

Table 11: Regression variables and coding key		
Demographic information	**Coding**	**Mean**
Age 25-34	Reference Category	0.32
Age 35-44	Dichotomous, 1=yes	0.37
Age 45-54	Dichotomous, 1=yes	0.31
Household composition		
Married with children	Reference Category	0.42
Married without children	Dichotomous, 1=yes	0.21
Lone-parent	Dichotomous, 1=yes	0.10
Unattached individual	Dichotomous, 1=yes	0.18
Non-Census family member	Dichotomous, 1=yes	0.06
Educational information		
No High school	Reference Category	0.21
High school	Dichotomous, 1=yes	0.12
Post-secondary training	Dichotomous, 1=yes	0.42
University degree	Dichotomous, 1=yes	0.25
Currently in school (FT or PT)	Dichotomous, 1=yes	0.11
Income and employment status		
Number of full-time earners	Continuous	1.41
Income under $10,000	Reference Category	0.09
$10,000-19,999	Dichotomous, 1=yes	0.13
$20,000-29,999	Dichotomous, 1=yes	0.19
$30,000-39,999	Dichotomous, 1=yes	0.19
$40,000-49,999	Dichotomous, 1=yes	0.14
$50,000+	Dichotomous, 1=yes	0.25
Immigration characteristics		
Speaks English/French	Dichotomous, 1=yes	0.98
Canadian-born	Reference Category	0.50
Years since migration (centered)	Continuous	0.00
Years since migration Squared	Continuous	57.03
City indicators		
Montreal	Dichotomous, 1=yes	0.34
Toronto	Reference Category	0.47
Vancouver	Dichotomous, 1=yes	0.19
Time indicators		
Census year	Dichotomous, 1=2001	0.62
Dependent variable		
Owner	Dichotomous, 1=Owner	0.57

Note: In addition to these variables, a series of interaction terms are used in some models. These terms are discussed more fully below.

Income is adjusted with an adult equivalence scale (Statistics Canada 1999), a useful modification because it provides a better indication of how much money a family actually has for shelter. The method entails dividing the total economic family income by a weighted proportion of the number of people assumed to live off this income. In this analysis, the first person in the economic family is given a weight of 1, and each additional adult (age 18 or older) has a weight of 0.4. Children are weighted at 0.3, unless the family is a lone-parent family, in which case the first child is weighted at 0.4, and subsequent

children are counted as 0.3 of a person. This tally is known as the adult equivalence factor, and the total economic family income is divided by this number to yield adult equivalent adjusted (AEA) income. The difference between this figure and regular total income can be substantial, and to give an idea of the difference, a family with two adults and two children age 18 or under has an AEA income that is exactly half of their regular income. Since unattached individuals have no dependents, no adjustment is made to their income. AEA income is then further adjusted using the consumer price index so that it is in 2000 dollars, and then divided into $10,000 increments (collapsing values for those with adjusted income of less than $10,000 and over $50,000).

8.3 Analytical technique

To model housing tenure, researchers typically use logit or probit models, the two most common techniques for estimating binary outcomes. The advantage of these approaches is that predicted probabilities are bounded by 0 (no probability of homeownership) and 1 (100% probability of homeownership). The downfall is that the relationship between X and Y is non-linear, and on their own, the raw coefficients do not have any straightforward interpretive value. Depending on the goal of the analysis, this can encumber interpretation.

This paper seeks to identify the sources of a declining immigrant homeownership advantage over time, or to explain the 'difference in differences', and to facilitate this, linear probability models will instead be used. Although OLS is generally considered unsuitable for estimating binary outcomes, results will often be very close to non-linear functions when outcomes are evenly divided. In fact, Moffitt (1999) argues that OLS may actually be *superior* to non-linear models when coefficient estimates are sought instead of predicted values, as is the case here. To further eliminate doubts about the accuracy of results, however, OLS results have been compared with those derived from logit models, and in all cases, estimates were within one percentage point of each other. Consequently, interpretability has been greatly improved with very little loss of precision.

To assess the hypotheses stated earlier, immigrants and the Canadian-born are modeled in the same equation, a useful strategy because it illustrates what homeownership rates 'should' be, given observed characteristics, equal proportions, and the global effects of predictors (Coulson 1999). The four explanatory variable clusters used to assess hypotheses 1-4 (city indicators, socioeconomic indicators, family characteristics and immigration variables) plus the interaction terms (city and education) are incrementally introduced into the models. Because variables are likely to be correlated with one another, the order in which a variable is entered partly determines the magnitude of its impact. It is therefore possible to amplify the 'effect' of a single indicator by putting it before other variables with which it co-varies (entering age before income to magnify the 'effect' of age, for example). To further determine whether effects are confounded, age and education, the two variables most likely to be correlated with others[8] but not hypothesized to affect the immigrant advantage are entered independently to reduce misinterpretation of results.

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8. Age, for example, is likely to be correlated with income and years of migration, and education will co-vary with income.

Characteristics which do not correspond directly with housing careers, like CMA indicators, are entered first, followed by socioeconomic characteristics, then family composition and duration indicators. The ordering is slightly different from the earlier discussion, and was chosen for methodological (as opposed to theoretical) reasons. Stated more formally, the models are estimated in the following order:

$$H_{it} = a + ?I_{it} + dC_{it} + \mu(I_{it} * C_{it}) + e_{it} \qquad (1)$$
$$H_{it} = \text{Model 1} + \beta_l CMA_{it} \qquad (2)$$
$$H_{it} = \text{Model 2} + \text{Age} \qquad (3)$$
$$H_{it} = \text{Model 3} + \text{Education Variables} \qquad (4)$$
$$H_{it} = \text{Model 4} + \text{Labour Force Variables} \qquad (5)$$
$$H_{it} = \text{Model 5} + \text{Family Characteristics} \qquad (6)$$
$$H_{it} = \text{Model 6} + \text{Immigrant Characteristics} \qquad (7)$$

Where: H = an owner/renter indicator

a	= Intercept
I	= Immigrant indicator
C	= Census year
CMA	= Census Metropolitan Area indicators
Labour Force Variables	= Income, Unemployed indicator, Full-time status and number of earners in economic family
Education Variables	= A vector of educational attainment indicators
Age	= Age of highest earner
Family Characteristics	= Family composition characteristics
Immigrant Characteristics	= Years since migration variables and knowledge of English/French
e	= Error term

In the above models, d refers to the unexplained increase from 1981 to 2001 in homeownership rates (in percentage points) for Canadian-born households, ? equals the immigrant advantage in 1981, and μ stands for the change in the immigrant homeownership rate relative to the Canadian-born rate from 1981 to 2001. Tracking changes in ? across models will show how well the 1981 immigrant advantage can be explained by the standard consumer choice model, whereas d illustrates how well the models explain the increase over time for the Canadian-born. Of central interest in this analysis, however, is the coefficient μ, which indicates, by its magnitude, how well the models can explain the changing gap in homeownership rates.

The interpretation of these coefficients does not change with the inclusion of other covariates, only now it is the size of the gap after controls are introduced. In essence, d, ?, and μ can be interpreted as the portion of the difference that are unexplained by other variables in the model. To further illustrate, consider the model without covariates (Model 1). Recall that the 1981 Canadian-born homeownership rate was 51.0% and the immigrant rate was 62.9% (Table 1), and by 2001 the rates were 58.6% and 57.9% respectively, so d for Model 1 should equal around 7.6, ? should be 11.9, and μ for model 1

should equal -12.7.[9] Model 2 will net out any changes in μ due to changing CMA distributions (hypothesis 1), Model 3 controls for Age, Model 4 for education differences, Model 5 removes the effects of economic resources (hypothesis 2), Model 6 captures family composition differences (hypothesis 3), and Model 7 removes the effects of changes in average immigrant 'recency' (hypothesis 4). In all of these models, the goal is to reduce μ to 0, thereby explaining the reasons behind the decline of the immigrant advantage.

9. Results

Table 12a lists the coefficients for all 'composition' models, with μ highlighted in bold. In Models 1-6, variables are incrementally introduced without any consideration for changing effects over time (except for a period main effect term and a period*immigrant interaction). From these models it can be determined how compositional changes have differentially affected the relative homeownership rates of immigrants and the Canadian-born. In Table 12b, the coefficients for Model 7 (reproduced for comparison purposes from Table 12a) plus the terms from the 'interaction' models (models 8-13) are shown, testing the prospect of changes in the effect of compositional characteristics over time.

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9.   d=58.6-51.0=7.6; ? = (62.9-51.0)=11.9; μ = (51.0-62.9) – (58.6-57.9) = -12.7

Table 12a: Compositional determinants of the homeownership gap							
	1	2	3	4	5	6	7
Variable	ß	ß	ß	ß	ß	ß	ß
Immigrant	0.1180	0.0873	0.0654	0.0659	0.0578	0.0423	0.0301
Period	0.0789	0.0739	0.0439	0.0228	0.0309	0.0533	0.0583
Period*Immigrant	**-0.1274**	**-0.1282**	**-0.1234**	**-0.1192**	**-0.0812**	**-0.0935**	**-0.0889**
Toronto		Ref.	Ref.	Ref.	Ref.	Ref.	Ref.
Montreal		-0.1192	-0.1241	-0.1186	-0.0635	-0.0614	-0.0660
Vancouver		*-0.0023*	*-0.0037*	*-0.0027*	0.0371	0.0363	0.0330
Age 25-34			Ref.	Ref.	Ref.	Ref.	Ref.
Age 35-44			0.1868	0.1861	0.1702	0.1351	0.1259
Age 45-54			0.2511	0.2518	0.1989	0.2151	0.1847
No high school				Ref.	Ref.	Ref.	Ref.
High school				0.0476	0.0111	0.0117	0.0204
Post-secondary				0.0848	0.0293	0.0288	0.0389
University degree				0.1256	0.0312	0.0135	0.0418
Currently In school				-0.1110	-0.0592	-0.0331	-0.0236
Income < $10,000					Ref.	Ref.	Ref.
Income $10,000-19,999					0.0501	0.0158	0.0152
Income $20,000-29,999					0.1523	0.1242	0.1125
Income $30,000-39,999					0.2183	0.2087	0.1856
Income $40,000-49,999					0.2446	0.2573	0.2294
Income > $50,000					0.3084	0.3472	0.3091
Number of full-time workers					0.1351	0.0383	0.0365
Married with children						Ref.	Ref.
Married without children						-0.1898	-0.1854
Lone-parent						-0.2641	-0.2704
Unattached individual						-0.4236	-0.4332
Non-Census fam. member						-0.2740	-0.2690
English/French knowledge							-0.1158
YSM (mean-centered)							0.0200
YSM Squared							-0.0003
Intercept	0.5056	0.5647	0.4474	0.3967	0.0822	0.3556	0.4990
R squared	**0.0057**	**0.0175**	**0.0608**	**0.0713**	**0.2051**	**0.2740**	**0.2858**

Note: All coefficients but those in italics are statistically significant at p<0.05 or higher.
Source: 1981 and 2001 Censuses of Canada Master 20% random economic family subsample file of even proportions taken by author.

As expected, ?, d, and μ in Model 1 in Table 12a roughly correspond with the values derived shown earlier, further illustrating how closely the linear probability models approximate the descriptive results.

For all models the incremental increase in fit was found to be statistically significant with a sequential F-test, indicating that each cluster of variables increases the ability to correctly predict the tenure status of any given household. What is important for this paper is not how well these characteristics predict homeownership, however, but how well they explain the *differential* changes in homeownership rates. It is with this focus in mind that the results are presented below, with each hypothesis separately discussed under its own heading.

9.1 *Are locational choices responsible for the declining immigrant advantage?*

Hypothesis 1 posits that part of the reason behind the change in relative homeownership rates is that immigrants have increasingly chosen to locate in CMAs where conditions make homeownership attainment more difficult. Model 2 tests this by adding a vector of CMA variables to the baseline model.

Prior to looking at μ, it is worth noting the change in the immigrant main effect ? and the Canadian-born period effect d. Comparing ? for Model 2 with the baseline model suggests that CMA choice did play a role in the immigrant homeownership advantage of 1981, as ? goes from 11.8 percentage points in Model 1 to only 8.7 points in Model 2. The implication of this result is that the 1981 immigrant homeownership advantage of 12 points would have been about 3 points smaller if everyone was living in the same CMA (or in different CMAs with similar housing markets). CMA choice in 1981 was therefore a substantial part of the reason behind the immigrant homeownership advantage. Part of this can no doubt be linked to the relatively small proportion of immigrants living in Montreal in 1981, which as the coefficients in Model 2 show, have much lower expected homeownership rates.

Although allocation across CMAs impacts initial homeownership differences, it does little to explain the changes over time. For the Canadian-born, d is reduced by only 0.5 points, and μ shows allocation across CMAs to have an even smaller effect for immigrants. This contradicts hypothesis 1, and shows that changes in the distribution of immigrants and the Canadian-born have had little effect on the changes in homeownership rates over time.

9.2 To what extent do changes in socioeconomic characteristics reverberate in the housing market?

The next possible cluster of characteristics behind homeownership dynamics are changes in the socioeconomic characteristics of immigrants and the Canadian-born. Foremost among these is the well-known decline in immigrant labour market success. Since these variables are heavily intercorrelated with other socioeconomic and demographic characteristics, it is first necessary to control for characteristics that covary with labour market characteristics and homeownership rates, but are not hypothesized to be behind changes in homeownership rates. As expected, both age (Model 3) and education (Model 4) bear a clear relationship to homeownership, but neither seems to explain changes over time for immigrants. Education also explains a small portion of the immigrant decline, although once again it is very little.

Earlier in the paper (Figure 2), we saw that immigrants went from an 8% income disparity with the Canadian-born in 1981 to almost 30% less in 2001. Furthermore, not only was their income lower, but they also faced more precarious job prospects (Table 4 and Vosko, Zukewich and Cranford (2003)). Hypothesis 2 posits that these changes hurt the homeownership potential of immigrants and, as an extension, their ability to maintain a homeownership advantage.

The increase in R^2 of 7.1 in Model 3 to 20.5 in Model 4 attests to the centrality of labour market success in determining if a family owns a home or not. As expected, income and the number of full-time earners in a family increases the probability of homeownership by a large margin, and add more predictive power than any other cluster of variables in this analysis.

What is more important for our purposes here, however, is how these variables affect μ. Taking income and the number of full-time earners together, μ is reduced from -11.9 points in Model 4 to -8.1 in Model 5, a reduction of nearly one-third. This strongly suggests that the relationship between declining labour market success and homeownership rates are indeed related, supporting hypothesis 2 and demonstrating that part of the reason immigrants have been unable to maintain their homeownership advantage is their labour market misfortunes.

9.3 The role of differential changes in family composition

As illustrated earlier, compared to the family patterns of the Canadian-born, immigrants have a family structure that should lead them to prefer ownership to tenancy. With the increasing proportion of the Canadian-born living either as unattached individuals or lone parents, deviation from the standard housing career is much greater, and this should negatively affect homeownership rates. The family structure of immigrants should therefore protect them from greater homeownership declines.

We can see from Model 6 that this is the case. Compared with Model 5, μ increases from -8.1 points to -9.4 when family characteristics are included, implying that if the family structure of immigrants had changed in identical fashion to the Canadian-born in the 1981-2001 period, the homeownership decline would have been even greater. Immigrant family structure therefore protected against this, and a look at the coefficients reveals why this is so. Of all family types, married families with children (which we saw from Table 6 contains 45% of immigrants and 32% of Canadian-born families in 2001), are by far the most likely to own their home. Married couples without children (20% of immigrants and 22% of the Canadian-born) trail by 19 points, and unattached individuals, the group that grew fastest among the Canadian-born, are a chasmic 42 percentage points behind the reference group. Lone parents, which became a more frequent family type for both groups in this period, trail behind by about 26 percentage points.[10] These differences are quite consistent with the patterns expected by the traditional housing career discussed earlier, with rates declining sharply for family types that do not fall into one of the five phases discussed earlier. Consequently, as predicted in hypothesis 3, the family characteristics of immigrants prevent an even greater homeownership decline.

9.4 Changes in immigrant recency have reduced the immigrant advantage

In 2001, about 37% of all immigrants to Canada arrived in the previous ten years, a significantly higher proportion than in any other year in recent history, and *much* higher than the recent immigrant rate of 30% of 1981 (Table 7). Since it typically takes some time for immigrants to grow accustomed to life in their new country and accumulate the necessary resources to purchase a home, tenure rates are expected to be low for recent arrivals, and to rise with duration in Canada. Hypothesis 4 posits that the surge in the number of recent arrivals will partially explain why the overall immigrant homeownership rate has fallen in recent years. In Model 7 the change in immigrant recency between 1981 and 2001 does explain some of the declining immigrant homeownership advantage, although very little. Oddly, knowledge of English (Toronto and Vancouver) or English/French (Montreal) is a *negative* predictor of

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10. Since 'census non-family members' is a residual category, they are not discussed in this paper.

homeownership, and may have to do with the high homeownership rates of some 1960s arrivals that do not know English or French.

Despite these adjustments, µ – which, with the duration indicator added, now represents the change in immigrant homeownership rates at mean duration in Canada (17 years)—still stands at -8.9 percentage points, suggesting that the differences in the arrival times of immigrants in 2001 and 1981 explains a small margin of the homeownership gap, providing only some support for hypothesis 4.

10. *Changing housing careers by time and family type*

When all the hypothesized main effects are included, roughly 8.9 points, of the homeownership gap remains unexplained. Put differently, these models suggest that accounting for the most salient characteristics of homeownership for the median housing consumer (age, education, labour market outcomes, location and family type), roughly 2/3 of the change in the homeownership rates between immigrants and the Canadian-born remain unexplained. Earlier it was suggested that the relationship of some of these characteristics to homeownership may themselves be evolving over time, leading to a shift in the behaviour of the median housing consumer, and a reduction in the ability of some of these characteristics to explain the changing gap. By interacting key variables in the models with the year in which they were observed, it is possible to determine whether part of the reason for the loss of the immigrant housing advantage is a change in the impact of certain characteristics over time.

Models 8-13 test this notion more explicitly, by re-estimating Model 7 with incrementally-introduced interaction terms between census year (2001=1) and CMA, age, education, labour market variables, family type and duration indicators. These interaction terms allow for an assessment of whether the impact of compositional characteristics has shifted over time, and how these changes have affected d, ?, and especially µ.

Table 12b: Determinants of the homeownership gap							
	7	8	9	10	11	12	13
Variable	ß	ß	ß	ß	ß	ß	ß
Immigrant	0.0301	0.0305	0.0298	0.0291	0.0261	0.0204	0.0170
Period	0.0583	0.0612	0.0627	0.0427	0.0360	*-0.0172*	*0.0399*
Period*Immigrant	**-0.0889**	**-0.0872**	**-0.0869**	**-0.0857**	**-0.0788**	**-0.0683**	**-0.0871**
Toronto	Ref.	Ref.	Ref.	Ref.	Ref.	Ref.	Ref.
Montreal	-0.0660	-0.0683	-0.0685	-0.0679	-0.0714	-0.0708	-0.0713
Vancouver	0.0330	0.0657	0.0658	0.0663	0.0661	0.0680	0.0683
Age 25-34	Ref.	Ref.	Ref.	Ref.	Ref.	Ref.	Ref.
Age 35-44	0.1259	0.0203	0.1388	0.1375	0.1387	0.1306	0.1291
Age 45-54	0.1847	0.0373	0.1725	0.1699	0.1745	0.1743	0.1740
No high school	Ref.	Ref.	Ref.	Ref.	Ref.	Ref.	Ref.
High school	0.0204	0.0203	0.0195	*-0.0044*	*-0.0010*	*0.0009*	*0.0009*
Post-secondary	0.0389	0.0374	0.0367	0.0262	0.0319	0.0338	0.0332
University degree	0.0418	0.0404	0.0394	0.0313	0.0433	0.0451	0.0458
Currently In school	-0.0236	-0.0239	-0.0238	-0.0244	-0.0257	-0.0184	-0.0179
Income < $10,000	Ref.	Ref.	Ref.	Ref.	Ref.	Ref.	Ref.
Income $10,000-19,999	0.0152	0.0128	0.0128	0.0127	0.0220	0.0128	*0.0128*
Income $20,000-29,999	0.1125	0.1094	0.1093	0.1091	0.1179	0.1058	0.1047
Income $30,000-39,999	0.1856	0.1829	0.1828	0.1828	0.1756	0.1658	0.1638
Income $40,000-49,999	0.2294	0.2259	0.2259	0.2260	0.2031	0.1974	0.1948
Income > $50,000	0.3091	0.3077	0.3076	0.3076	0.2846	0.2844	0.2814
Number of full-time workers	0.0365	0.0379	0.0381	0.0381	0.0379	0.0379	0.0384
Married with children	Ref.	Ref.	Ref.	Ref.	Ref.	Ref.	Ref.
Married without children	-0.1854	-0.1871	-0.1871	-0.1871	-0.1860	-0.2238	-0.2230
Lone-parent	-0.2704	-0.2775	-0.2774	-0.2774	-0.2761	-0.2939	-0.2940
Unattached individual	-0.4332	-0.4303	-0.4300	-0.4298	-0.4290	-0.4990	-0.4985
Non-Census fam. member	-0.2690	-0.2704	-0.2701	-0.2701	-0.2692	-0.2909	-0.2891
English/French knowledge	-0.1158	-0.1258	-0.1260	-0.1266	-0.1259	-0.1256	-0.0883
YSM (mean-centered)	0.0200	0.0200	0.0201	0.0201	0.0201	0.0201	0.0254
YSM Squared	-0.0003	-0.0003	-0.0003	-0.0003	-0.0003	-0.0003	-0.0004
Intercept	0.4990	0.5045	0.5045	0.5149	0.5172	0.5479	0.5124
Interactions							
Montreal		*0.0054*	*0.0054*	*0.0048*	*0.0109*	*0.0085*	*0.0093*
Vancouver		-0.0473	-0.0476	-0.0481	-0.0467	-0.0504	-0.0510
Age 35-44			-0.0188	0.0428	0.0379	0.0362	0.0366
Age 45-54			0.0179	0.0214	0.0126	0.0102	0.0118
High school				0.0177	-0.0007	-0.0030	-0.0035
Post-secondary				0.0012	*0.0038*	*-0.0062*	*-0.0071*
University degree				-0.0174	*-0.0190*	*-0.0072*	*-0.0056*
Currently In school				*0.0209*	0.0144	0.0129	0.0126
Income $10,000-19,999					*-0.0150*	*0.0007*	*0.0009*
Income $20,000-29,999					*-0.0159*	*0.0036*	*0.0058*
Income $30,000-39,999					0.0120	0.0287	0.0323
Income $40,000-49,999					0.0386	0.0503	0.0543
Income > $50,000					0.0358	0.0400	0.0445
Married without children						0.0617	0.0605
Lone-parent						0.0312	0.0324
Unattached individual						0.1117	0.1120
Non-Census fam. member						0.0362	0.0347
English/French knowledge							-0.0612
YSM (mean-centered)							0.0011
YSM Squared							0.0002
R squared	**0.2858**	**0.2893**	**0.2895**	**0.2896**	**0.2900**	**0.2916**	**0.2918**

Note: All coefficients but those in italics are statistically significant at p<0.05 or higher.

Source: 1981 and 2001 Censuses of Canada Master 20% economic family subsample file taken by author.

10.1 The evolving Canadian housing career

In Table 12a, Model 2 tests to see whether changes in the allocation of immigrants and the Canadian-born across CMAs reduced the immigrant advantage. That model shows that although locational choice does explain some of the differences between immigrant and Canadian-born homeownership rates (demonstrated through a reduction in the immigrant main effect term ?), changes in the allocation of immigrants across CMAs over time did little to change relative homeownership rates. Indeed, if anything, CMA location helped immigrants stave off greater declines.

By accounting for the prospect of changing CMA effects over time, as is done in Model 8, a slightly different story emerges. Now, CMA-specific changes in homeownership propensities over time reduce the unexplained homeownership gap, and now play a minor role in explaining the immigrant homeownership decline. In Table 12a, μ went from -12.7 in Model 1 to -12.8 in Model 2, suggesting that CMA choice acted as a slight buffer from a greater reduction. In Table 12b, however, this result changes, and immigrant CMA choice (coupled with a change in the effects of CMA choice) now slightly *reduces* the unexplained homeownership gap.

A close look at the CMA coefficients in Model 8 illustrates why this is the case, and points to Vancouver changes as the main source. From 1981-2001, adjusted Montreal and Toronto homeownership rates increased in tandem, but the growth rate in homeownership of Vancouver fell behind Toronto's by nearly 5 points. Although Montreal still has the lowest homeownership rates (as the Montreal main effect shows), the between-year change reduced the size of the benefit that disproportionately moving to Vancouver had for immigrants. Although this is an interesting result, and nicely illustrates why accounting for changing impacts over time can alter interpretation, in this example the effect on μ is rather modest, at roughly 0.2 percentage points.

In Models 3 and 4, although age and education together explained some of the 1981 immigrant advantage and a large part of the change for the Canadian-born, it reduced the unexplained immigrant advantage (μ) by only 1 point. By interacting these variables with period (Models 9 and 10), the contribution remains rather modest in all three regards. The largest change here is in explaining the Canadian-born increase, which is reduced by 2 points. The immigrant advantage, and its decline over time, both remain steady.

Consistent with the descriptive results in Table 3, 45-54 year olds advanced into homeownership between 1981 and 2001 slightly faster than reference group 25-34 years olds, although in all models the differences were very small. For education, the biggest changes occurred for high school graduates and those with postsecondary training other than university. Looking at the interaction terms for the income variables, the effect of income only changed for those with high earnings. Homeownership rates rose fastest for those with an AEA-adjusted income of over $40,000. This change has only a modest effect on any three of the unexplained homeownership rates.

Perhaps the most striking result from the interaction terms in Table 12b is how homeownership propensities changed across family types in the past 20 years (Model 12). Between 1981 and 2001, the interaction terms show that there was a 'catch-up' in homeownership rates for virtually all family types.

For married families without children, the 22 point deficit to married couples with children was closed by almost 7 points, and although lone parents did not change relative to the reference group, unattached individuals closed what was a 50 percentage point gap in 1981 by 11 points.

Furthermore, this increase among other family types seems to be driving some of the decline of the immigrant homeownership advantage. By including changing family effects in Model 12, μ drops from -7.9 to -6.8 percentage points. What is even more interesting is how, as with CMA location, the effect reverses from that shown in Table 12a. There, family composition shielded immigrants slightly from a greater decline in relative homeownership rates, but once the prospect of changing effects is acknowledged, family composition no longer helps immigrants. Furthermore, d is no longer statistically significant, indicating that the growth in homeownership rates among the Canadian-born is now explained in the models. ? is now also quite small (about 2 points), indicating that the 1981 immigrant advantage has largely been explained.

The unexplained portion of the change in relative immigrant homeownership rates remains large, however, and only increases by interacting immigration characteristics with period. It seems that although the standard model of consumer choice largely explains both 1981 homeownership rates and the 1981-2001 change for the Canadian-born, it does a rather poor job at explaining the changes for immigrants.

11. Discussion

In this paper, it has been shown that over the past 20 years immigrants have lost their once-large homeownership advantage, and that some of the decline can be linked to homeownership-relevant shifts in the compositional characteristics of immigrants and the Canadian-born. Foremost among these changes is the dramatic decline in immigrant labour market success, although changes in age composition, educational attainment and immigrant recency also play a more subtle role. Their fall in homeownership rates has been offset to some extent by 'buffering' factors, such as CMA choice and family composition. These buffers suggest that the decline would have been even greater if immigrants resembled the Canadian-born in these regards.

Compositional changes only seem to tell part of the story. Most of the important predictors are time-sensitive, and averaging their effects over time glosses over their dynamic nature. This was particularly true for the relationship between family type and homeownership, and from 1981 to 2001 all family types made at least some headway in catching up to married families with children. For some, such as unattached individuals, the changes were quite dramatic. These results start to complicate the theoretical link between family type and dwelling type. Traditional housing careers, as described in the introduction, are partially motivated by the desire to build equity, but more importantly for 'homestead building', or providing a good environment to raise a family. In the past twenty years, there seem to be changes underway, as all family types are now increasing their homeownership attainment rates. These changes may stem from what has been referred to elsewhere as the 'individualization of the life course' (Shanahan 2000) and the 'second demographic transition' (Lesthaeghe 1995), but in real terms, it points to an evolution in housing careers, with all family types closing the homeownership gap with married couples with children.

The central finding of this paper, however, is that immigrant and Canadian-born housing careers are not similarly evolving. In 1981, standard tenure models were able to explain homeownership quite well for both immigrants and the Canadian-born, but by 2001, although these variables continued to explain the trends in homeownership among the Canadian-born (with the allowance of changing effects over time), for immigrants there was a large change in homeownership rates between 1981-2001 that could not be explained from within this framework.

12. Conclusion

This study illustrates that there remains a lot to be learned about why immigrant homeownership rates have fallen in recent years. After controlling for all the standard correlates of homeownership, nearly 2/3 of the 1981-2001 immigrant decline remains unexplained. Researchers studying other outcomes in cognate fields have begun to suspect that deviations from standard scripts like conceptions of the housing career is because there is something 'new' about recent arrivals to western countries (Boyd 2003; Logan 2003; Massey 1995). None of these researchers have systematically analyzed the implications that this 'newness' may have for Canadian immigrant homeownership rates and patterns. This study is a first step in showing that there is quite a bit that is new about more recent arrivals.

Given the inability of the consumer choice model to explain changes over time, future immigrant homeownership research would do well to move beyond traditional tenure models like the ones used in this paper.[11] It is possible that recent immigrants do not share the 'housing appetites' of some earlier immigrant groups. Over the past thirty years, the source countries for immigrants to Canada have shifted from Europe to the rest of the world, and it is possible that caricatures like 'housing career' and 'median housing consumer' do not apply as well to these new arrivals. Alternatively, it is possible that housing appetites have not changed, but that discrimination, both subtle and overt, plays a greater inhibitive role on immigrant homeownership than it did in the past.

A second possible component of the decline that is unexplored in this paper is the impact of the changing wealth position of recent immigrants. Compared to earlier arrivals, Morissette, Zhang and Drolet (2002) document a 25% drop in the median wealth of recent immigrants (<10 years) from 1984 to 1999. Declines like these, which are not observed in the census, are no doubt also affecting the ability of immigrants to buy homes, and future research could determine more precisely how heavily these changes impact immigrant homeownership rates.

Perhaps the recent declines lie in the different attainment strategies of 'old' (largely white and European) and 'new' (non-white, non-European) arrivals. Already in 1981, immigrants earned less than the Canadian-born, and may have faced discrimination in the housing market, but were often able to achieve high ownership rates through less conventional means, like accepting boarders or living in multiple family dwellings to meet mortgage payments (Sturino, 1999) or by fixing up older houses in poorer neighbourhoods then selling them at a profit (Teixeira, 1995). Lastly, given the rapid ascent of visible minority enclaves in major Canadian CMAs (Hou, 2004), it would be worthwhile to investigate

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11. Several research projects by the author aim to do this.

whether a dual housing market is emerging in Canada, and whether the immigrant homeownership decline is a product of differential changes in housing supply.

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