INTEGRATING HOUSING AND TRANSPORTATION CHOICE USING STRUCTURAL CHANGE:
A CASE STUDY OF FILIPINO IMMIGRANTS IN THE TORONTO CMA

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INTRODUCTION

Individuals' housing and transportation choices have a major impact on our planning policies, particularly in major metropolitan areas. While there have been many Canadian studies on immigrants' housing trends in the past decade, none have discussed the impact of transportation choices on housing choice; the relationship between these two areas is still poorly understood. This paper summarizes a case study of Filipino immigrants in the Toronto Census Metropolitan Area (CMA) exploring housing and transportation choices. The focus of this study is the relationship between housing and transportation choices, and how choices may be related to structural changes in immigration policy, housing policy, the labour market, and transportation infrastructure from the 1960s to the present. Data comparison, principal components analysis (PCA), and interviews with 32 Filipino immigrants in the Toronto CMA have revealed the complexities of housing and transportation choices. Filipino immigrants have more extreme housing and transportation patterns compared to immigrants in general, but the research findings indicate that policy goals of increased affordable housing, rental housing and transit-accessible housing must be reinforced in the Toronto CMA in order to accommodate the needs of increasing numbers of new immigrants.

First, the research questions will be presented. The literature in housing research and transportation research will be discussed. Following this, the methodology and methods will be explained. Finally, preliminary findings will be summarized: this paper is based on the author's dissertation, which is still in progress at the School of Community and Regional Planning at the University of British Columbia. This study has been funded through a Doctoral Fellowship from the Social Sciences and Humanities Research Council.

RESEARCH QUESTIONS

The research questions are as follows:

- Have structural changes in immigration policy, housing policy, the labour market, demographics, and transportation infrastructure from 1967-2001 played a major role in shaping immigrants' housing and transportation choices?

- How do these choices differ among immigrant cohorts (e.g. those who arrived in the 1960s compared to those who arrived in the 1990s)?

In particular, the dissertation focuses on a case study of the Filipino community in Toronto and address the question:

- How do Filipino immigrants make housing and transportation choices in the Toronto Census Metropolitan Area (CMA)?

Choice in this context is defined as the act or opportunity of choosing, and not **preference,** which is defined as a choice guided by one's judgment or predilections (Merriam-Webster). Choice implies the power, right, or liberty to choose, as well as care in choosing. One may **prefer** to walk to work every day, but be unable to **choose** to live within walking distance; one may **choose** to rent an apartment against one's **preference** towards homeownership. Choice implies a decision-making process; preference is an inclination that may or may not be realistic. The interrelationship, but distinction, between choice and preference is often ignored in literature on homeownership and transportation choice.

RESEARCH CONTEXT

There is a strong theoretical background linking housing and transportation, mostly in the areas of sociology and geography. In urban planning, there is a recent trend among Canadian municipalities and regions to integrate the two areas in growth management policy. As immigration has become the largest source of population growth for many Canadian cities, it has become significant for planners concerned with growth management. Immigrants make up 48 percent of the population in the Toronto CMA and 40 percent in Vancouver CMA, the highest foreign-born metropolitan populations in the world (StatsCan, 2008). Mid-sized cites such as Edmonton, Halton, and Laval, and Waterloo experience significant secondary immigration (FCM 2009). Their housing and transportation choices are therefore very significant for urban planners in Canadian cities.

Major trends in the housing literature

Researchers in geography have concentrated on housing patterns in order to understand decreased homeownership and spatial concentration of immigrants and ethnocultural groups in Canadian cities. This research has identified some trends across Canadian cities.

First, there is low residential segregation for most ethnocultural groups in most Canadian cites (Balakrishnan and Wu 1992, Walks and Bourne 2006, Ray and Bergeron 2006). In fact, many Canadian neighbourhoods are becoming more diverse, with a mix of ethnocultural groups rather than "ethnic enclaves" dominated by one group.

Secondly, many studies have shown spatial concentrations of immigrants in areas with high concentrations of affordable and rental housing (Owusu 1999, Murdie 2002, Ghosh 2007, Hou and Picot 2004, Hiebert et al. 2006, Walks and Bourne 2006). Following these findings, it is no surprise that homeownership has been decreasing among immigrants since 1981 (Balakrishnan and Wu 1992, Haan 2005). The main reasons for this shift seem to be decreased incomes among immigrants (Hulchanski 2007, Hiebert and Ley 2003) and the tendency of immigrants to locate in the most expensive cities in the country (Haan 2005). Other reasons may be the impact of social and transnational networks (Owusu 1999, Murdie 2002, StatsCan 2005, Ghosh 2007, Teixeira 2008, Bauder and Lusis 2008).

Some of the oldest theories suggest that immigrants initially settle in an inner city reception area, then spatially assimilate outwards (Burgess, 1925) where the most desirable housing is located (Booth 1902). Over time, they are able to move into housing more suitable for families, such as single-family detached houses, the preferred housing type in North American cities (Alonso 1964, Haan 2005). With these changes in residential location and type, they are also able to take advantage of the fastest transportation infrastructure: rail and streetcar up until the 1940s, and highways afterwards. But these theories seem a little too simplistic to explain immigrants' housing patterns in Canadian cities.

Immigrants do not all show the same housing patterns: there are marked differences between ethnocultural groups. There are high homeownership rates among some groups, and high rental rates among others; some groups are concentrated in social housing (Owusu 1999, Balakrishnan and Wu 1992, Hou and Picot 2004). There are high residential concentrations in some groups and low concentrations in others (Balakrishnan and Wu 1992, Hou and Picot 2004, Walks and Bourne 2006, Bauder and Lusis 2008, Murdie forthcoming). Some immigrants prefer to live among co-ethnics (Owusu 1999, Murdie 2002, Ghosh 2007), while others prefer mixed neighbourhoods (Teixeira 2008, Agrawal and Qadeer 2008). Some groups face more societal racism and housing market discrimination than others (Balakrishnan and Hou 1999, Murdie 2002, Darden 2004, Teixeira 2008). Some immigrants have a history of urban or high-density housing in their own countries (Murdie 2002, Teixeira 2008) compared to a history of rural housing (Murdie 2002), which may affect their housing choices. Hiebert et al. (2006) indicate that the number of immigrants arriving in Toronto, Montreal, and Vancouver is too large to be accommodated in one neighbourhood.

The concentric pattern has shifted significantly in the postwar era, with pockets of high-rent and low-rent neighbourhoods dispersed throughout many Canadian cities, as cities have taken on more polycentric forms. Decades ago Hoyt (1939) proved that the many variations in topography, transportation infrastructure, low- and high-rent districts created different patterns in each city, including high-rent

districts in the inner city and low-rent districts on the outskirts. Harris and Lewis' historical analysis (1998) showed that immigrants often lived in both inner city and suburban neighbourhoods, and that there was in fact great class, ethnic, and income diversity among suburbs in the pre-war era. Despite this, many researchers studying immigrants' housing patterns use a simplified version of Burgess' spatial assimilation theory, while noting that it does not apply in Canadian cities (Walks and Bourne 2006, 276 and 286) or questioning its desirability (Hiebert and Ley 2003, 19). Although the segregation of certain groups in the American context has been linked to decreased labour market participation and other inequities, this does not seem to be the case in Canadian cities (Balakrishnan and Hou 1999, Ray and Bergeron 2006).

Considerable demographic shifts have made researchers question the housing career model. In his study of declining homeownership in Canadian cities, Haan (2005, 2191) argued that the concept of housing career may be somewhat outdated today, as we have more diversity in life cycles (e.g. single parent families, couples without children). Hou and Picot (2004), while indicating their acceptance of the housing career model, wrote that new immigrants could be restricted to poor neighbourhoods with affordable housing that becomes available as native-born families move to the next lifecycle stage.

Because these theories imply the societal goal of homeownership, most of the studies done in the past twenty years have been concerned with immigrants' ability to buy housing. In this context, renting becomes a measure of deprivation rather than a choice. Until recently, there has been little exploration of non-economic factors that may influence housing choice. In the past few years, several studies on immigrants' settlement processes have focused on the impact of immigrants' social and transnational networks in the decision to immigrate and select a city in which to live (Bauder and Lusis 2008, Ghosh 2007, Walton-Roberts 2007). These studies have revealed the influence of social networks on neighbourhood choice, going beyond description of housing trends (*what* is happening) to describing factors that influence the trends (*why* it is happening). All of these have been small-scale case studies integrating interviewing, focus groups, and data comparison of specific ethnocultural groups, rather than large-scale studies that solely used Census data to compare many groups at once.

The role of transportation infrastructure in housing choice remains unexplored, which is surprising considering that the concentric growth, spatial assimilation, and housing career theories are strongly linked to the spatial location of transportation infrastructure in cities.

Trends in transportation research

While few researchers have addressed the issue of immigrants' transportation choice, Hulchanski (2007) highlights the increased income and homeownership along the Bloor and Yonge subway lines in Toronto. He also demonstrated that transit ridership was fairly constant across the inner city, inner suburban, and outer suburban neighbourhoods in Toronto (between 31 and 34 per cent). Murdie (2002) mentions the role that public transit played in housing choice for Polish and Somali immigrants. Heisz and Schellenberg's 2004 study stands apart as the sole study focusing on immigrant public transit ridership: immigrants use public transit much more than the Canadian-born population in Toronto, Vancouver, and Montreal. Unlike American scholars who tend to see this trend as problematic (Blumenberg 2006, Blumenberg 2008, Liu 2008), Heisz and Schellenberg are quick to assert the need for better public transit provision to meet the demands of the immigrant population.

There is a tendency to link the transportation patterns of immigrants and ethnocultural groups with "spatial mismatch" of jobs and housing (Kain 1969), however this trend seems to be an American phenomenon due to the dominance of segregated inner city neighbourhoods (Deka 2003, Blumenberg and Shiki 2006, Sharma 2004). As there has been so little research done in either the US or Canada on immigrants' transportation patterns or choices, there has been little theory development in this area (US DOT 2000). Allison (1997, 32) noted some major differences between American and Canadian cities: inner city crime, racial segregation, poverty, and the presence of a federally funded freeway system which overlays most major metropolitan areas all help to support a system with high suburban house prices and low inner city housing prices. Canadian cities are more likely to have high inner city house prices and affordable suburban housing. Just as housing research has been biased towards the economic advantages of homeownership, transportation research has been biased towards the advantages of car ownership. In this context, American researchers often associate public transit use, particularly among immigrants and visible minorities, with poverty, segregation and labour market participation.

Theoretical framework for this study

The sectoral change theory (Hoyt 1939), housing trajectory (Murdie et al. 1999), and structural change theory (Friedman 1986, Ley and Smith 2000, Hutton 2006, and Harris 1997) all acknowledge differential growth and change in cities, but the literature on structural change is particularly useful.

Hoyt's study (1939) showed that the unique topography and transportation of each city, its rate of growth, social and class composition created patterns of land use particular to each city. Over time, high-rent areas moved outwards from the city center in a sectoral pattern along the fastest transportation lines, towards

higher ground that was safe from flooding, non-industrial waterfronts, and the residences of city leaders. Many earlier studies done in Toronto confirmed that immigrants' housing choices were limited by the persistence of high-rent neighbourhoods in the inner city and increased by access to subway and streetcar lines, showing sectoral change over time (Murdie 1969, Johnson 1970, Knight and Trygg 1977, Maher 1974).

Murdie et al. (1999) introduced the concept of housing trajectory, which includes life cycle stages as well as other factors such as occupation, income, and ethnocultural background. These factors intersect with each other over time and differentially affect patterns of housing consumption. Murdie (2002) and Teixeira (2008) have begun to use the concept of housing trajectory to explain immigrants' successive housing choices, rather than the housing career model used in housing forecasts in official documents such as the Toronto Official Plan (2006, 4).

Finally, structural changes in immigration policy, housing policy, transportation infrastructure, demographics, and the labour market in the past four decades have had a major effect on the physical form of our cities (Friedmann 1986, Ley and Smith 2000, Hutton 2006, Harris 1997). These changes seem to have constrained immigrants' housing and transportation options. While choices are always constrained by economy and practicality (Alonso 1964), structural changes have impacted the social and spatial geography of the Toronto CMA.

Immigration policy has shifted significantly in recent decades, with the amendment to allow entry to citizens of non-European countries as skilled workers (1967); the introduction of family reunification (1976); limiting immigration to occupations with the need for workers (1986); and the stabilization at very high levels (over 200,000 new immigrants per year) favouring immigrants with university educations and significant work experience (Darden 2004, Hiebert and Ley 2003).

Housing policy has also shifted significantly, favouring homeownership at the expense of rental housing from the 1960s to the present day (Hulchanski 2007b). The feasibility of building rental housing in Canada has decreased drastically since the passage of condominium acts in the 1970s, mainly due to the transfer administration of federal housing programs to provinces and territories (1996) without provision of appropriate funding, and the removal of rent review, which had been instituted in 1975 in the Province of Ontario, in the late 1990s (Darden 2004). This policy imbalance has greatly increased homeownership in Canadian cities at the expense of affordable rental housing. Yet 73 percent of recent immigrants to Toronto, who arrived in Canada less than two years ago, live in rental housing; Hiebert et al (2006) and Murdie (2008) argue that high rents push immigrants into homeownership. The City of Toronto suffered a decrease in rental units from 1996-2006, the same period that saw record high numbers of immigrants

entering the city, in part due to rental conversions. Ninety percent of private rental buildings in Toronto were built before 1975 (2006b, 13). The City reports that housing choice is limited by supply (2006c, 26).

While Canada has never had a federal highway plan, or indeed a federal transportation plan, federal transportation policy has nevertheless supported road and highway construction over public transit from the 1960s to the present day. Toronto may in fact be the one city in Canada that has still managed to preserve transportation choice despite the construction of several highways in the 1970s. This is largely due to its construction of the Bloor and Yonge subway lines (1954 and 1963) and the landmark decision to preserve its streetcar system (1972). Political fragmentation has been a crucial element in transportation infrastructure decisions in Canadian cities, as municipalities are dependent upon provincial and federal funding to build major infrastructure.

Demographic shifts in Canadian cities have been profound in the past few decades. Researchers have pointed out declining household size, growing proportions of single-person households and single-parent households (Bourne and Rose 2001, Hulchanski 2007, Bourne 1999). Immigration has replaced natural population growth, increasing from about 85,000 per year in the late 1980s to over 200,000 per year (Bourne and Rose, 2001). These demographic shifts have had a major impact on housing choice in Toronto, Montreal and Vancouver (Murdie 2008, Hiebert et al. 2006). Gentrification and the increase in single-person, single-parent, and dual income households without children, have led to increased competition for centrally located housing. With little new rental housing, or affordable housing, being built, the choice to live in the inner city is removed for all but the wealthiest immigrants. Younger households, single-person households and immigrant households depend heavily upon affordable rental housing despite their life cycle stages (City of Toronto 2006b, 23).

The labour market has changed dramatically, changing expectations for newer cohorts of immigrants. The employment structure of the CMA changed radically after 1966, with a major decline in manufacturing and, during the 1980s, a steady rise in service sector employment, as well as part-time and temporary jobs in all occupational categories (Darden 2004, Hulchanski 2007, Li 1998). Replacing these were jobs in finance, insurance, real estate, creative and technical jobs (Hutton 2004), contributing to an increasingly skilled workforce in the city center and a rapid increase in luxury condominiums and high-rent apartments catering to a more wealthy and skilled population. Income disparities between immigrants and non-immigrants have increased and immigrants are more likely to remain in the low-income bracket (Hulchanski 2007, Picot et al. 2007). Skilled worker class immigrants were more likely to be low-income than family-class immigrants, likely due to economic recessions and problems having foreign credentials recognized in Canada.

These structural changes have helped create the cities we know today: postwar cities with biases towards homeownership, car ownership, and increasingly polarized occupational sectors. Structural changes have made it more difficult for immigrants to choose rental housing over homeownership, to choose inner city neighbourhoods over suburban, and to choose public transit over car ownership.

Policy links between housing and transportation

While the political viability of growth management measures is often debated, planning policy and practice shows a recent trend towards combining housing and transportation infrastructure. Throughout the 1990s planners advocated more housing in downtown Vancouver to decrease suburb-to-city commuting, resulting in a considerable mode shift: bike trips have tripled, transit trips increased by 20%, and vehicle trips decreased by 10%. The City voted to double pedestrian and cycling infrastructure expenditure in June 2009 (City of Vancouver 1991, 1995, 2009). The City of Toronto Strategic Plan calls for a wider range of housing types to suit people of all income levels as well as more transportation choice. The Toronto Transit Commission has traditionally developed residential and commercial properties in conjunction with the Bloor and University subway lines. Toronto's Official Plan designates 160 kilometers of lands along Toronto's commercial and mixed-use transit corridors as 'Avenues' to accommodate future growth in housing (2006, 60). The City of Brampton's Official Plan includes an objective "to promote the development of an efficient transportation system and land use patterns that foster strong live-work relationships and encourage an enhanced public transit modal share." (2008, 168)

This trend can also be seen in regional planning documents, such as Metro Vancouver's Livable Region Strategic Plan, and the Province of Ontario's *Places to Grow* initiative (2008), and at the federal level (the Equilibrium initiative launched in 2009).

Although much of the literature linking housing and transportation comes from the field of geography, there are many practical examples of urban planning policies that have responded to structural changes in metropolitan areas. Studies documenting the changes in immigrants' housing patterns often do not consider structural changes in cities major factors in housing choice, and transportation choice is largely left out of this discourse (Haan 2005, Murdie et al. 1999, Hiebert et al 2006, Hulchanski 2007, Murdie 2008).

METHODOLOGY

A case study, within which several methods are contained, is the logical choice for such complex research questions. Many researchers have used mixed-methods case studies to identify transportation patterns and

choices of particular demographic groups. Transportation researchers have used both qualitative and quantitative methods in studies of land use-transportation interactions, including interviewing (Hanson and Pratt 1988), life biographies (Jarvis 2003), regression analysis (Shearmur 2006), space-time analysis (Kwan 1999), and factor analysis (Cervero and Kockelman 1997, Cristaldi 2005). Geographers have also used mixed-methods case studies to examine the settlement patterns and housing trajectories of particular ethnocultural groups (Ghosh 1997, Teixeira 2008, Murdie 2002, Owusu 1999).

Both Yin (1994) and Flyvberg (2001, 78) advocate choosing critical cases, particularly where a phenomenon is least likely, or most likely, to be found. Here, the theory is that structural changes from 1967-2001 have played a major role in shaping immigrants' housing and transportation choices. The ideal case would provide the means of exploring the effects of structural changes on the choices over time. Filipinos are a logical choice, as they are a large ethnic origin group, and 43 percent of Filipinos in Canada live in Toronto (Kelly 2006, 4). Filipinos are among the most spatially dispersed ethnocultural groups in the region (Kelly 2006, Murdie forthcoming). They have a lower homeownership rate and a higher rate of transit use for the commute to work than immigrants in general (StatsCan 2006). Further, their unique labour market characteristics (Darden 2009, Kelly 2006) and decades of immigration to Toronto make them an ideal group to work with in testing the theories of structural change. From 1980-2001, 45 percent of Filipino immigrants entered under the Family Class immigration category; 25 percent under the Skilled Worker Class; 15 percent under the Assisted Relative Class; and 12 percent under the Live-In Caregiver Class (Darden 2004, 2009, Kelly 2006, and del Rio-Laquian and Laquian 2008).

Filipinos seem to have assimilated spatially without increasing incomes, or did not settle in ethnic neighbourhoods to begin with. Their homeownership rate is fairly low, yet they are spatially dispersed. They are quite integrated in the labour market yet they show high transit use. They present a puzzle that cannot be solved using the prevailing models of housing career, spatial assimilation and ethnic resources. Their decades of immigration to Canada make them an ideal case study for research on housing and transportation choice in the context of structural change.

Methods

Three methods were used in this study: simple data comparison, principal components analysis (PCA), and interviewing. Many Canadian housing studies present data that compare housing trends across ethnocultural groups, as this data is readily available from the Census and is easily presented in tables or graphs. PCA is not as commonly used, but interviewing is quickly becoming common in this type of case study.

Factor analysis can be a very useful tool for the interpretation of complex descriptive data, and has been used in both transportation studies (Cristaldi 2005, Cervero and Duncan 2003, Kitamura et al, 1997) and extensively in earlier studies of Canadian cities that linked housing and transportation (Maher 1974, Bourne and Murdie 1972, Johnson 1970, Murdie 1969). PCA is the first stage in factor analysis: it identifies a number of factors that capture the variance in the data. The factors combine the data into new components, which are found through matrix algebra. PCA gives us these factors in order of importance: the first factor explains the most variance in the data, the second factor explains less, and so on. Together, the factors explain 100 per cent of the variance in the data, since they merely combine the data in a different way; often the first few factors explain the majority of the variance. The factor loadings, which are between 1.0 and –1.0, show the strength of relationship between the original variables and the factors. The PCA was done for the Census years 1996 and 2006 with adjustments for the different questions asked on each Census. It was not possible to do the PCA for earlier Census years, since the transportation mode and commute distance variables were not collected in the Census until 1996.

Most housing studies focusing on specific ethnocultural groups have used social networks, immigrant service providers, and non-profit groups to recruit interview participants (Bauder and Lusis 2008, Walton-Roberts 2003, Ghosh 2007, Murdie 2002). None of these studies focused on particular neighbourhoods in an effort to be representative; on the contrary, they used social networks and interviewing, rather than random selection and surveying. As Small (2009) points out, small-*n* studies in social science cannot be representative even if the neighbourhoods are carefully chosen because the researcher defines the "typical" or "average" neighbourhood. Also, random selection in these cases is often not random because of the very high non-response rate.

Stage 1: Census data comparison and Principal Components Analysis (PCA)

The data comparison was done using the Public Use Microdata Files (Individuals) from the Censuses of Canada for 1986, 1991, 1996, 2001 and 2006 and STATA statistical software. Housing tenure, transportation mode, commute distance, total household income, weeks worked, labour force participation, occupational category, highest degree, certificate or diploma, and household size were the variables used in the first stage of the research. For each variable Filipino immigrants were compared to all immigrants and to non-immigrants. Unfortunately it was not possible to use earlier Census data since before 1986, many ethnicities, including Filipino, were not specified in the Census. There was very little change in these variables over time, with the exception of occupational categories, which were defined by the Standard Industry Classification (SIC) until 2001, and by the North American Industry Classification (NAIC) in the 2006 Census. Appropriate modifications have been made to the 2006 NAICS categories to

match the SIC categories in the earlier Census years, but these were minor. The variables for transportation mode and commute distance were not available in the Census until 1996.

The variables were then used in a PCA, again using STATA. In this case it was only possible to compare immigrants and non-immigrants; there were insufficient numbers of Filipino immigrants in some of the variables, making PCA impossible until the 2006 Census. At this point, very preliminary PCA results will be discussed in this paper.

Stage 2: Interviews

The second stage of the research involved interviews with Filipino immigrants living in the Toronto CMA who arrived from the 1960s to the 2000s. The Behavioural Research and Ethics Board at the University of British Columbia approved the study, as it is the major component of a doctoral dissertation. Interviewees were recruited according to ethics guidelines, through various social, cultural and advocacy events held at by the participating organizations: Filipino Seniors of Mississauga, Federation of Filipino Canadians of Brampton, Filipino Students Association of Toronto, Kababayan Community Centre (Toronto), Filipino Centre Toronto, and the Philippine Chamber of Commerce (Toronto). Interviews followed a semi-structured format with questions on housing history, housing choice and transportation choice in both the Philippines and Canada. Interviews took place in Toronto from January to May 2010. Interviews were held in locations convenient for the participants: in their homes, at the offices of the associations/groups named above, and when time or distance was a barrier for them, over the telephone. Interviews were digitally recorded for later transcription. The data was coded and analyzed with an emphasis on choice, preference, attitudes towards housing and transportation, and structural change issues.

RESEARCH RESULTS

Data comparisons for Filipino immigrants, all immigrants, and non-immigrants will be discussed first, then very preliminary results from the PCA. Finally, interview results will be presented.

Data Comparison from 1986-2006

Housing Tenure

In general, Filipino immigrants have a considerably higher rental rate than immigrants in general and non-immigrants, which translates into a lower homeownership rate. 1996 was a very significant year for housing tenure for Filipino immigrants, representing a renting peak and a major increase in condo tenure. This year remains significant for two reasons: it was the middle of a major economic recession in Ontario and it was a time when policy change led to significant increases in immigration. Even in 2006, which

saw the lowest rental rates for all three groups, renting was much more prevalent among Filipinos (34 percent) than among immigrants in general (29 percent) or non-immigrants (23 percent). Thus, for Filipinos, renting was almost as common as owning until 2006. For immigrants in general, the rental rate is generally around 33 percent, with a peak of 38 percent in 1996, while for non-immigrants there has been a steady decline in renting over the twenty-year period. This represents a major change from 1986, when non-immigrants actually had a slightly higher rental rate than immigrants.
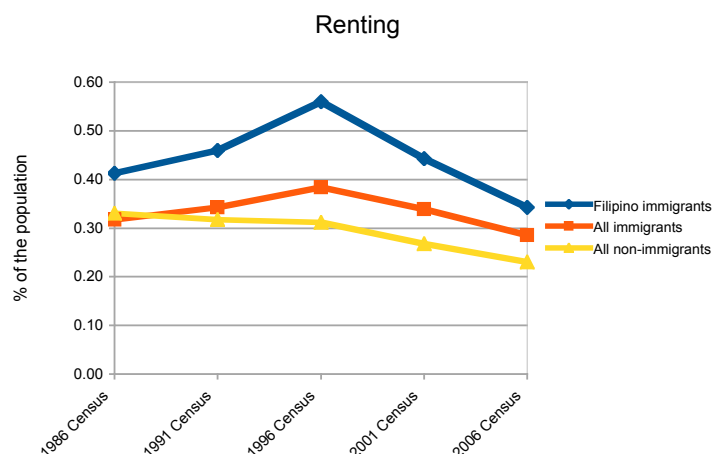

Figure 1. Renting among Filipino immigrants, all immigrants, and all non-immigrants in the Toronto CMA. Data source: Public Use Microdata Files for Individuals (1986, 1991, 1996, 2001, 2006). Statistics Canada.

Correspondingly, Filipino immigrants have the lowest rate of homeownership, with a low of 44 percent in 1996 and a high of 66 percent in 2006. Condominium tenure is fairly low in 1986: 14 percent for Filipinos, 11 percent for immigrants in general, and only 8 percent for non-immigrants. Filipinos maintained a higher rate of condominium tenure than both groups for the entire twenty-year period: in 2006 19 percent of Filipinos, 18 percent of all immigrants, and 10 percent of non-immigrants lived in condominium units.

Transportation Mode

Since transportation mode is a variable that only dates as far as back as the 1996 Census, it is relatively stable over this ten-year period. However, Filipino immigrants show some interesting trends.

First, public transit use for the commute to work is highest among Filipino immigrants, when compared to all immigrants and all non-immigrants. In 1996 48 percent of Filipino immigrants used transit to commute to work compared to 27 percent of all immigrants and 19 percent of non-immigrants. This level has decreased since 1996 for Filipinos, while for the other two groups transit use has remained stable. Still, in 2006 twice as many Filipinos were commuting to work by transit (40 percent) than non-immigrants (20 percent).

Secondly, these high rates of transit use are balanced by lower rates of driving to work among Filipino immigrants. In 1996 the percentage of Filipino immigrants who commute by car as a driver was only 39 percent, compared to 60 percent of all immigrants and 66 percent of non-immigrants. While the driving rates for non-immigrants decreased slightly over the ten-year period, the rate for immigrants was stable, and the rate for Filipinos increased to 46 percent. Filipinos commute as car passengers at a similar rate as immigrants in general and non-immigrants.

Walking to work was a relatively minor mode for all three groups. In the 1996 Census only 4 percent of Filipinos reported walking to work, the same as all immigrants and slightly lower than all non-immigrants (6 percent). These rates have remained stable from 1996 to 2006.

Transportation Mode for the Work Commute (%): Toronto CMA	Filipino Immigrants				
	1986 Census	1991 Census	1996 Census	2001 Census	2006 Census
Car - driver	n/a	n/a	0.39	0.46	0.46
Car - passenger	n/a	n/a	0.08	0.06	0.09
Public transit	n/a	n/a	0.48	0.42	0.40
Walked to work	n/a	n/a	0.04	0.05	0.03
Bicycle	n/a	n/a	0.00	0.00	0.00
Other method	n/a	n/a	0.00	0.01	0.01
Total	n/a	n/a	**1.00**	**1.00**	**1.00**

Figure 2. Transportation Mode for the Commute to Work (%) for Filipino Immigrants.
Data source: Public Use Microdata Files for Individuals (1986, 1991, 1996, 2001, 2006). Statistics Canada.

Transportation Mode for the Work Commute (%): Toronto CMA	All Immigrants				
	1986 Census	1991 Census	1996 Census	2001 Census	2006 Census
Car - driver	n/a	n/a	0.60	0.61	0.60
Car - passenger	n/a	n/a	0.07	0.07	0.08
Public transit	n/a	n/a	0.27	0.27	0.26
Walked to work	n/a	n/a	0.04	0.04	0.04
Bicycle	n/a	n/a	0.00	0.00	0.01
Other method	n/a	n/a	0.00	0.01	0.01
Total	n/a	n/a	**1.00**	**1.00**	**1.00**

Figure 3. Transportation Mode for the Commute to Work (%) for All Immigrants in the Toronto CMA.
Data source: Public Use Microdata Files for Individuals (1986, 1991, 1996, 2001, 2006). Statistics Canada.

Transportation Mode for the Work Commute (%): Toronto CMA	Non-Immigrants				
	1986 Census	1991 Census	1996 Census	2001 Census	2006 Census
Car - driver	n/a	n/a	0.66	0.66	0.63
Car - passenger	n/a	n/a	0.07	0.07	0.09
Public transit	n/a	n/a	0.19	0.20	0.20
Walked to work	n/a	n/a	0.06	0.06	0.06
Bicycle	n/a	n/a	0.01	0.01	0.01
Other method	n/a	n/a	0.01	0.01	0.01
Total	n/a	n/a	**1.00**	**1.00**	**1.00**

Figure 4. Transportation mode for the commute to work (%) for non-immigrants in the Toronto CMA.
Data source: Public Use Microdata Files for Individuals (1986, 1991, 1996, 2001, 2006). Statistics Canada.

Commute distance

As a categorical variable, commute distance shows a typical pattern in graphs: a reversed J-shaped curve, with the majority of people living closest to home, and the numbers decreasing accordingly until the last category, where there is a slight increase, usually reflecting people living in outer suburbs and exurbs. This pattern is seen for non-immigrants, and is slightly less pronounced for immigrants, but for Filipino immigrants, there is no increase in the final distance category. These patterns are fairly consistent across the 1996, 2001 and 2006 Census years, but there have been slight decreases in the number of Filipino immigrants and immigrants in general living in the "less than 5km" category. For Filipinos, as of the 2006 Census there were more people living from 5 to 9.9km from work than people living less than 5km away.
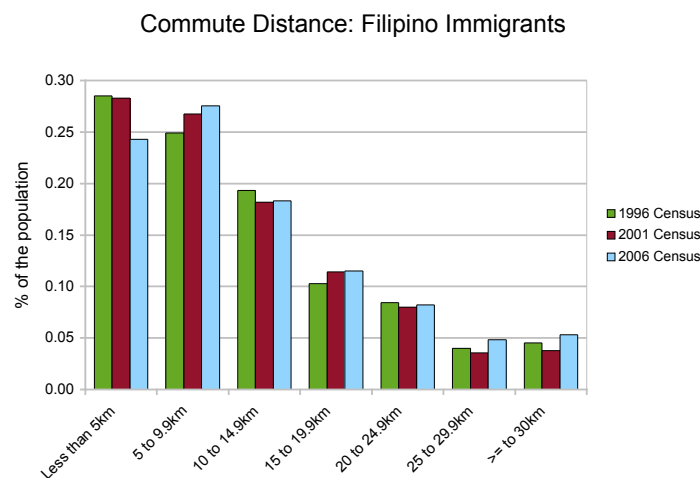

Figure 5. Commute distance for Filipino immigrants in the Toronto CMA from 1996 to 2006.
Data source: Public Use Microdata Files for Individuals (1986, 1991, 1996, 2001, 2006). Statistics Canada.
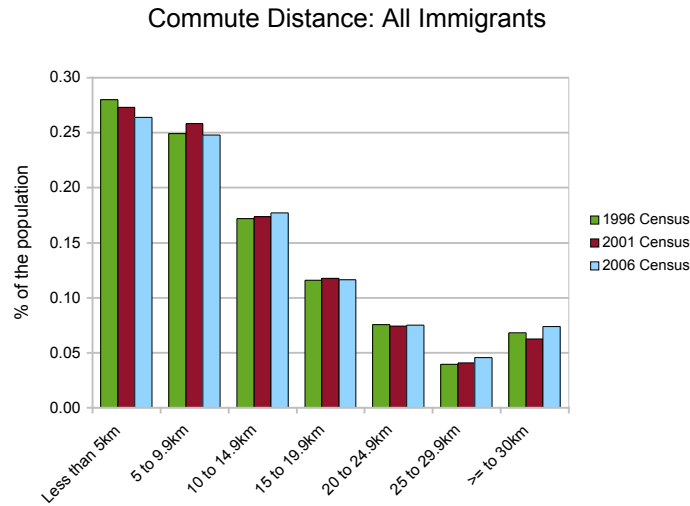
Commute Distance: All Immigrants

Figure 6. Commute distance for all immigrants in the Toronto CMA from 1996 to 2006.
Data source: Public Use Microdata Files for Individuals (1986, 1991, 1996, 2001, 2006). Statistics Canada.

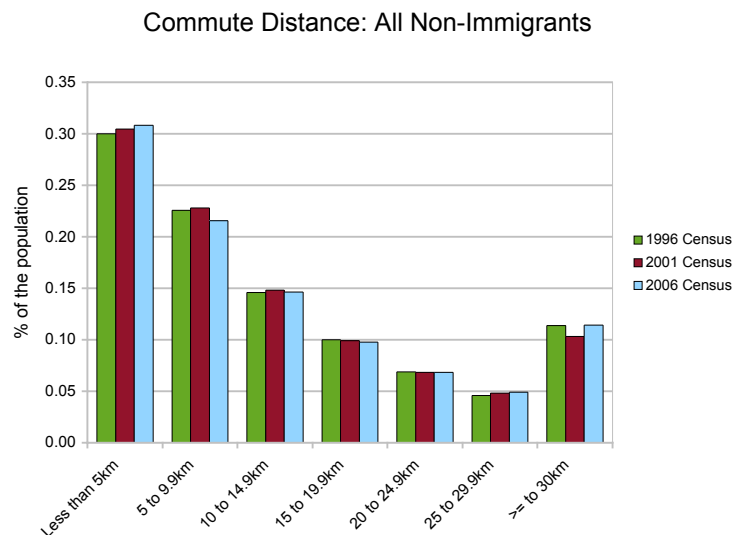Commute Distance: All Non-Immigrants

Figure 7. Commute distance for non-immigrants in the Toronto CMA from 1996 to 2006.
Data source: Public Use Microdata Files for Individuals (1986, 1991, 1996, 2001, 2006). Statistics Canada.

Note that for all immigrants, the two lowest categories have similar values in 2006, but for non-immigrants, the reversed J curve is maintained.

Total household income

When the mean for total household income is compared, some interesting patterns emerge. In 1986 the incomes of Filipino immigrants, immigrants and non-immigrants were very similar. Filipinos had slightly lower incomes than immigrants in general, but this changed in 2006 when the two reached parity. Non-immigrants' income has increased steadily since 1986, particularly from 1986 to 1991. All three groups

experienced relatively stable incomes from 1991 to 1996, then an increase from 1996 to 2001, and a sharper increase from 2001 to 2006.

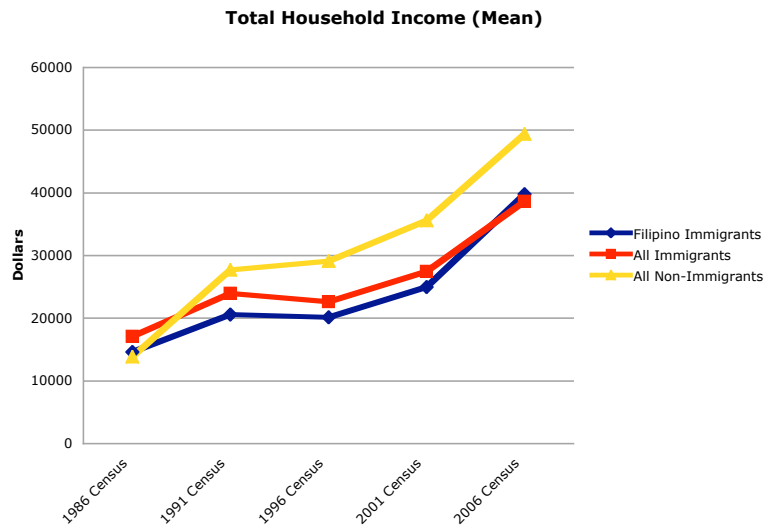**Total Household Income (Mean)**

Figure 8. Mean total household income for Filipino immigrants, immigrants and non-immigrants in the Toronto CMA. Data source: Public Use Microdata Files for Individuals (1986, 1991, 1996, 2001, 2006). Statistics Canada.

However, the mean income masks much greater disparity among the three groups. At the twenty-fifth percentile, there is really not much difference among them. In 2006, Filipinos at the twenty-fifth percentile had a total household income of $12,000, immigrants $9,000 and non-immigrants $9,000. At this percentile, Filipino immigrants are making 133 percent of the income of immigrants and non-immigrants. At the fiftieth percentile, non-immigrants had lower incomes than Filipino immigrants and all immigrants in 1986. Since 1991 however, non-immigrants have had higher incomes than both groups. By 2006, the gap has increased: Filipino immigrants made $26,000 at the fiftieth percentile, all immigrants $22,000, and non-immigrants $30,000. Here, Filipinos are making 118 percent as much as all immigrants and 87 percent as much as non-immigrants. When we get to the seventy-fifth percentile, the difference between immigrants and non-immigrants is more extreme, and the gap between them is increasing each year. By 2006, the total household income at the seventy-fifth percentile is $40,000 for Filipinos, $42,000 for all immigrants, and $56,000 for non-immigrants. In this percentile, Filipinos are making 95 percent as much as all immigrants and 75 percent as much as non-immigrants. This same pattern is seen at the ninety-fifth percentile. In 2006, the total household income for Filipinos at the 95th percentile is $74,000, for immigrants, $87,000, and for non-immigrants, $120,000. At this point, Filipinos are making 90 percent as much as immigrants in general, and only 62 percent as much as non-immigrants.

Weeks worked

The number of weeks worked in the year prior to the Census year is a rough measure of labour force activity, which will be discussed shortly. The levels have stayed fairly stable over the years (between 41 and 43 weeks out of 52) for Filipino immigrants, all immigrants and non-immigrants. All three groups saw decreases in the recessionary period (1991 to 1996) and economic recovery period (2001 to 2006).

Labour force activity

Employment shows similar patterns for Filipino immigrants, immigrants and non-immigrants, although Filipinos consistently have the highest employment rate, followed by immigrants and then non-immigrants. There is a general decrease from 1986 to 1996, although employment for Filipino immigrants actually increased slightly from 1986 to 1991.
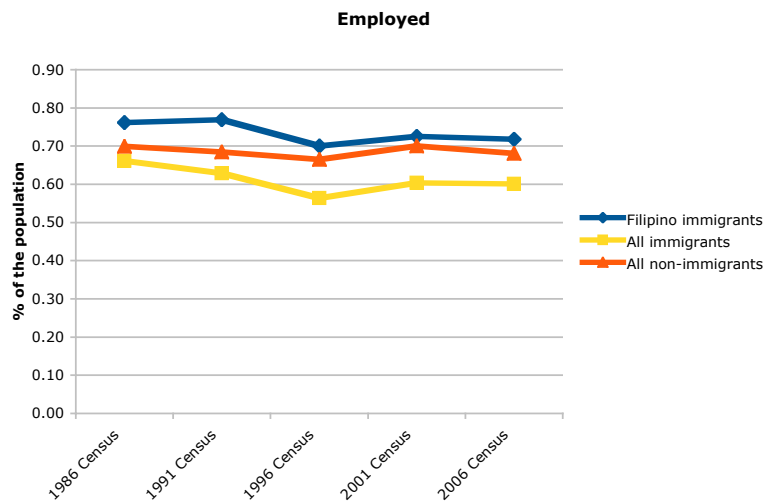

Figure 9. Employed population for Filipino immigrants, immigrants and non-immigrants in the Toronto CMA. Data source: Public Use Microdata Files for Individuals (1986, 1991, 1996, 2001, 2006). Statistics Canada.

There is a recovery for all three groups from 1996 to 2001, and then a slight decrease from 2001 to 2006. In 1986, the high point for all three groups, employment was 76 percent for Filipino immigrants, 66 percent for all immigrants, and 70 percent for all non-immigrants. In 1996, the low point for all three groups, employment was 70 percent for Filipinos, 56 percent for all immigrants and 66 percent for all non-immigrants. The gap between Filipinos and all immigrants has narrowed in the past twenty years.

Unemployment has been relatively stable for all three groups (between 4 and 7 percent). The unemployment rate for non-immigrants has been stable for the twenty-year period, while there was a slight peak for immigrants and Filipino immigrants in 1996. However, even at this point, the unemployment rate only increased by two percentage points for Filipinos (to 6 percent), and three

percentage points for all immigrants (to 7 percent), while remaining stable at 5 percent for non-immigrants.

Occupation

Some interesting occupational shifts have happened throughout the twenty-year period from 1986 to 2006. While many of the occupations have remained stable, some have shifted significantly. Manufacturing, finance, insurance and real estate (often referred to as the FIRE industries), business services, and "other services" have seen more fluctuation, and will be discussed here. In fact, these are the very industries at the root of the structural change thesis (Hutton 2004, 2006; Li 1998; Harris 1997; Friedmann 1986).

Generally, as Toronto has transitioned to a postindustrial economy, there has been a decrease in manufacturing jobs during the twenty-year period, particularly for non-immigrants. From 1986 to 1996, immigrants in general had the highest percentage of the population working in manufacturing, followed by Filipino immigrants and then non-immigrants. In 1986, 23 percent of Filipino immigrants, 28 percent of all immigrants, and 18 percent of non-immigrants worked in manufacturing. For all three groups, manufacturing decreased from 1986 to 1991, then at a slower rate from 1991 to 1996. From 1996 to 2006, all immigrants and non-immigrants follow a similar pattern of decrease. But Filipino immigrants show an increase from 1996 to 2001, to the point where manufacturing becomes most prevalent in this group: 22 percent of Filipino immigrants worked in manufacturing in 2001, compared to 20 percent of immigrants, and 12 percent of non-immigrants. This position is maintained in 2006 (19 percent compared to 17 of immigrants and 9 percent of non-immigrants). By this point, more than twice as many Filipino immigrants worked in manufacturing than non-immigrants.

Finance, insurance and real estate (FIRE) is a relatively stable occupational category for all immigrants and non-immigrants: the rate is between 8 and 9 percent for both groups over the twenty-year period. However, the percentage of the population working in this occupation has decreased for Filipino immigrants, who have traditionally had a much higher percentage working in FIRE and still maintain a slight lead over immigrants and non-immigrants in 2006. In 1986, 17 percent of Filipino immigrants, 8 percent of all immigrants and 9 percent of non-immigrants worked in this occupation. This decreased markedly by 1996, when the rate for Filipino immigrants decreased to 10 percent, while the rate for immigrants and non-immigrants remained stable. So over the twenty-year period, Filipino immigrants went from having double the rate of all immigrants and non-immigrants for workers in FIRE to having only a slight advantage.

The percentage of the population working in business services has increased for Filipino immigrants, all immigrants and non-immigrants over the twenty-year period. From 1986 to 2001, there is a slow and steady increase in business services for all immigrants and all non-immigrants. Non-immigrants have the highest rate of the population working in this occupational category, followed by all immigrants and then Filipino immigrants. The exception to this is in 1986, when Filipinos actually had a slightly higher rate (7 percent) than all immigrants (6 percent). In fact, from 1986 to 1991 the percentage of Filipino immigrants working in this occupation decreased slightly, while the percentage for all immigrants and non-immigrants increased. In 2006, the rates for all three groups are virtually identical.

The percentage working in "other services" has also seen some fluctuation from 1986 to 2006. At the beginning and end of this time period, the rates are very similar: in 1986, 7 percent of Filipinos, 6 percent of all immigrants and 9 percent of non-immigrants worked in other services. In 2006, 6 percent of Filipinos, 6 percent of non-immigrants and 5 percent of non-immigrants worked in this occupation. However, the recessionary years (1991 and 1996) show some interesting changes. In 1991, almost half as many Filipinos (6 percent) than non-immigrants (11 percent) were working in other services. By 2001, 9 percent of Filipino immigrants, 13 percent of all immigrants and 14 percent of non-immigrants were working in this occupational category. These higher levels, which may reflect the increase in live-in caregivers, decreased by 2006.

Highest degree, certificate or diploma

Filipino immigrants are much more educated than immigrants in general and non-immigrants. In 1986, only 23 percent of Filipinos had a secondary school diploma as their highest degree, compared to 49 percent of all immigrants and 40 percent of non-immigrants. By 2006, only 9 percent of Filipinos, 21 percent of all immigrants and 18 percent of immigrants said a secondary school diploma was their highest degree. Far more Filipinos have Bachelors degrees than all immigrants or non-immigrants. In 1986, 29 percent had Bachelors degrees, compared to only 7 percent of all immigrants and 11 percent of non-immigrants. By 2006, the gap was narrower: 28 percent of Filipinos had Bachelors degrees compared to 16 percent of immigrants and 17 percent of non-immigrants.

Household size

Household size has remained relatively stable across the twenty-year period. Filipinos consistently have larger household sizes than immigrants in general and non-immigrants. For Filipino immigrants, there has been a slight decrease in the mean family size (from 4.6 to 4.4 persons). The mean household size for immigrants has not changed at all (3.7 persons), and it has decreased very slightly for non-immigrants (3.5 persons in 1986 and 3.6 in 2006).

Immigration period

The immigration pattern for Filipinos shows some marked differences from the pattern for immigrants in general. For all immigrants, there is a slow and steady increase until 1991-2000, the period when the majority of immigrants entered the country, due to policy changes favouring high, sustained rates of immigration. Filipino immigrants entered the country in very small numbers until 1971, when family class immigration was legalized and martial law was declared in the Philippines. There is every indication that the first decade of the 2000s will surpass this all-time high, since the Philippines was the top source country for immigrants to Canada in 2006.
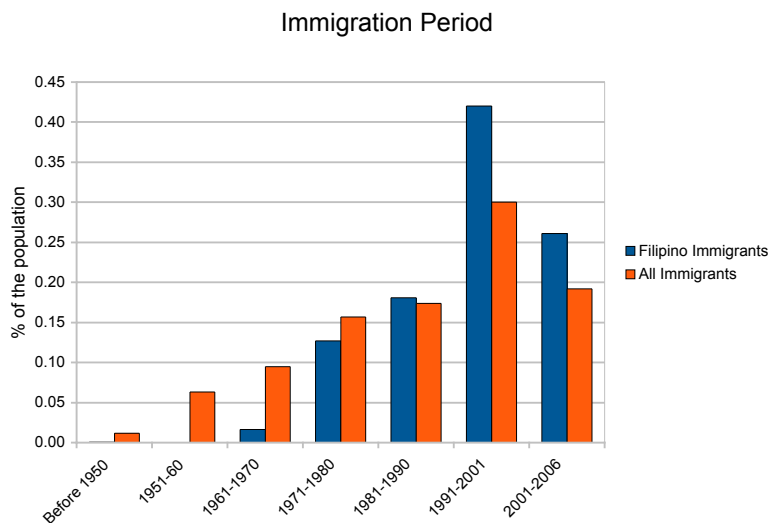

Figure 10. Immigration period for Filipinos and all immigrants in the Toronto CMA.
Data source: Public Use Microdata Files for Individuals (1986, 1991, 1996, 2001, 2006). Statistics Canada.
Notes: 1. For the 1986 Census, the period 1981-1990 only contains data from 1981-86. 2. For the 1991 Census, the period 1991-2000 only contains data from 1991. 3. For the 1996 Census, the period 1996-2001 only contains data from 1996

Summary

In summary, Filipino immigrants stand apart from immigrants in general and non-immigrants. They have a higher rental rate than both groups, which means they have the lowest homeownership rate. Filipino immigrants have the highest condominium tenure as well. A much higher percentage of Filipino immigrants use public transit for the commute to work than immigrants in general and non-immigrants, and a significantly fewer drive to work compared to the other two groups. Commute distances for Filipino immigrants are similar to immigrants and non-immigrants, except that fewer Filipino immigrants live more than 30 km from their workplace. While the mean incomes for Filipinos have increased since 1986, Filipinos had lower incomes than all immigrants and non-immigrants until 2006. At the higher income percentiles, a growing gap between the three groups is evident.

Many of these observations may be due to labour market changes. Filipino immigrants worked slightly fewer weeks of the year than immigrants or non-immigrants, although they consistently have the highest employment rate of the three groups. Despite the general decrease in the percentage of the population working in manufacturing, more Filipino immigrants have worked in manufacturing than immigrants or non-immigrants since 2001. During the recessionary period (1991-2001) Filipino immigrants had an increase in manufacturing jobs, a decrease in FIRE jobs, a fairly stable rate in business services, and an increase in other services. For manufacturing and FIRE, Filipino immigrants never returned to their higher rates of participation, while the rates for business services and other services stabilized to pre-recessionary values.

This shift is surprising considering that Filipino immigrants are more educated than all immigrants or non-immigrants, and likely reflects increased competition for jobs during the 1990s economic recession, coupled with the huge increase in immigration. The occupational shift probably has more of an effect on incomes than the employment rate, which has been fairly stable. When we consider that Filipino immigrants also have consistently larger household sizes, we can see that this group faces some very interesting housing and transportation dilemmas. Major increases in immigration at a time of economic recession, postindustrial changes in the structure of the labour market, and decreased construction of rental and affordable housing have created some unique shifts in Filipino immigrants' choices. These trends will be discussed further in the PCA results and the interviews.

Principal Components Analysis (PCA) Results

The PCA was done for immigrants and non-immigrants, using both the 1996 and 2006 Census data. While the data comparisons give us an idea of general trends in housing choice and transportation choice, as well as some other variable that may influence these choices, we do not have an understanding of how these variables influence each other. With the PCA, we can begin to see these interrelationships. Here, the first five factors of the PCA will be discussed, but since these results are very preliminary at this point, the data itself will not be presented.

Factor 1 explains the majority of variation in the data: it tells us what variables are most responsible for this variation and how they are related to one another. In 1996, Factor 1 portrays a contrast in life cycle and attainment: on one side we have homeowners who drive, have high incomes, and have high employment; on the other side we have transit users with lower employment and education who are in their 20s. While this Factor is similar for immigrants and non-immigrants, a number of other variables are important for non-immigrants: travelling as a car passenger, working in retail, working in accommodations, and the 30s and 40s age groups. Notably, homeownership is not significant for non-

immigrants, and commute distance is not significant for either group. Factor 1 portrays the same contrasts in 2006, but income becomes less significant while driving, walking, and commute distance become more significant. This holds for both immigrants and non-immigrants, although income is no longer significant for immigrants in any factor. So the relationships in Factor 1 are what we would expect considering well-established theories like housing career, concentric growth and spatial assimilation.

But a very different picture emerges in Factor 2, which shows variation in transportation mode, occupation and household size. In 1996, the contrast for immigrants is between transit users working in FIRE or health sciences, and drivers working in manufacturing who have larger households. For non-immigrants, homeownership is a significant variable here: on one side are homeowners who drive and have larger households, while on the other are those who take transit or walk and have a Bachelors degree. By 2006, driving and working in FIRE are less significant for immigrants while the educational variables have become stronger. The occupational variables have become important for non-immigrants. So in 2006, this Factor shows the transportation and educational contrasts between manufacturing and FIRE estate workers for both immigrants and non-immigrants. The real difference is that homeownership is still a significant variable for non-immigrants, and not for immigrants. Driving is linked to the manufacturing occupation for immigrants in 1996, and for both groups in 2006; an identical pattern emerges for the link between transit and the FIRE estate occupation. Factor 2, then, shows us some of the relationships we would expect from the sectoral growth and structural change models.

Factor 3 deals with employment and education variables, and is similar for immigrants and non-immigrants. The main contrast is between unemployed people who work in education, and employed people who have only a high school diploma. For immigrants, the older age groups and household size are also significant in Factor 3. By 2006, Factor 3 has changed considerably. Age, working in education, and household size are no longer significant for immigrants. For non-immigrants, having a Bachelors degree or higher, working more weeks of the year, and the retail occupation have become significant. So we can say that Factor 3 still contrasts education and employment, but in 1996 there was a focus on those in the education field. This may indicate the massive retirement of educators in the 1990s, without comparable replacement by their younger, more educated successors. Again, this factor illustrates some of the issues raised in the structural change literature: an increasingly educated population, working in service-sector jobs.

Factor 4 contrasts those who work in education and are in their 40s, with those who commute a long distance and are in their 30s. For immigrants, walking to work and working in business services are also important variables. For non-immigrants, employment/unemployment and non-university certification are

important variables. This is the first factor where commute distance is an important factor for either group. By 2006, Factor 4 is more complex. For immigrants, working in FIRE and having a Bachelors degree have become more significant, while working in business services or education have dropped out of this Factor. Age becomes more significant for immigrants. For non-immigrants, transit and walking are now significant, and the loading for commute distance is higher in 2006. Working in retail or FIRE are now significant variables. Age has dropped out. So Factor 4 again portrays the link between transit and working in FIRE, and the contrast between occupations (this time FIRE and health services, retail, and education).

Factor 5 is the final factor in which housing tenure, transportation mode, and commute distance are significant. The main contrast is between homeowners with long commutes, who work in FIRE and have a Bachelors degree, with those who walk to work. For non-immigrants, transit, working in health services, having a non-university certification, and having a medical/dental degree are also significant, so the factor contrasts occupation as well. In 2006, Factor 5 changes dramatically. Notably, homeownership has dropped out of this factor for immigrants, as have walking, commute distance, working in FIRE, and having a Bachelors degree. Homeownership is still significant for non-immigrants, but transportation mode and commute distance are not. Factor 5 is now very different for immigrants (for whom the main variables are age, working in health services and medical/dental degrees) and non-immigrants (for whom the factor still contrasts homeowners working in FIRE with a Bachelors degree and workers in health services who have a non-university certification or medical/dental degree). We still see some of the structural changes issues here, particularly in terms of education, occupation and commute distance.

Summary

The PCA results tell us that while the older models of spatial assimilation and housing career may help explain some of the housing and transportation choices among immigrants in Toronto, they do not explain everything. The sectoral growth and structural change models are also useful. The PCA results show the polarization of the work force, increased educational requirements, and dichotomy between inner-city jobs in FIRE and business versus suburban jobs in manufacturing, observed in the work of Hutton (2004, 2006), Ley and Smith (2000), Li (1998), and many other authors examining structural change in cities. To this discussion on postindustrial, post-Fordist economies, we can now add the importance of transportation mode and commute distance, and the links between transportation choice, housing choice and occupation in the Toronto CMA.

Interview Results

Interviews with Filipino immigrants bring a depth to the trends seen in the data comparisons and the PCA. In the interest of space, this summary of the interview results will introduce only the housing and transportation data. In total there were 32 participants, 12 male and 20 female (this ratio reflects the reality of the Filipino population in Toronto). They live in a variety of neighbourhoods across the Toronto CMA, work in many different occupations, and have a wide range of incomes. Twelve participants immigrated under the Assisted Relative Class, 13 immigrated independently as Skilled Workers, and 7 under the Live-in Caregiver Program (LCP). They arrived in the Canada during the following time periods:
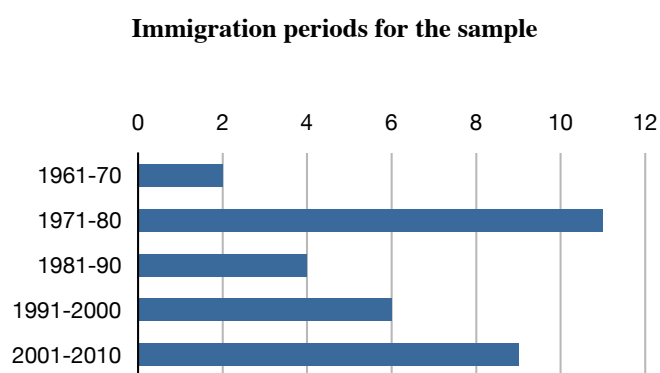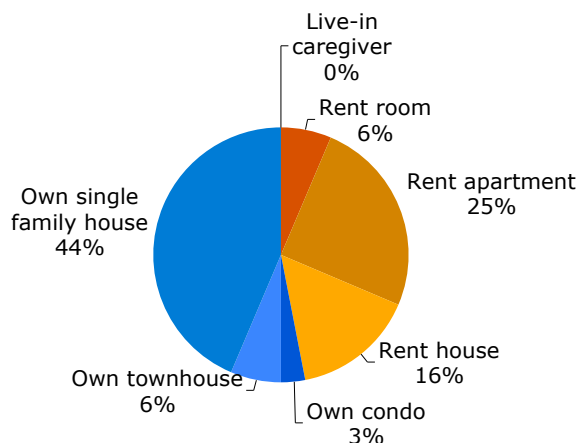
Immigration periods for the sample

Figure 11. Number of interview participants in each immigration period. Immigration periods are the same as those used in the Census.

Housing choice

Participants generally showed much more diversity in tenure in the Philippines than in Canada. It was more common to rent an apartment, townhouse, or house, perhaps due to the fact that housing types are different in the Philippines. Rental units are often low-rise townhouses, as opposed to the high-rise units commonplace in Toronto.

Living with extended family was fairly commonplace in the Philippines, and also in Canada. In Canada, the practice is clearly linked to immigration, since many new immigrants were sponsored by family members and would stay with them upon arrival. Others had friends or colleagues in Toronto who they lived with initially. However, the length of time that they lived in this transitional housing varied depending on the year they arrived: immigrants who arrived in the 1970s and 1980s usually stayed a very short time (a few days or weeks), while immigrants who arrived in the 1990s and 2000s often stayed with relatives for years.

Housing tenure: Philippines

Housing tenure: Canada

Philippines:
- Live-in caregiver 0%
- Rent room 6%
- Rent apartment 25%
- Own single family house 44%
- Own townhouse 6%
- Own condo 3%
- Rent house 16%

Canada:
- Live-in caregiver 6%
- Rent room 3%
- Rent apartment 13%
- Rent house 3%
- Own single family house 46%
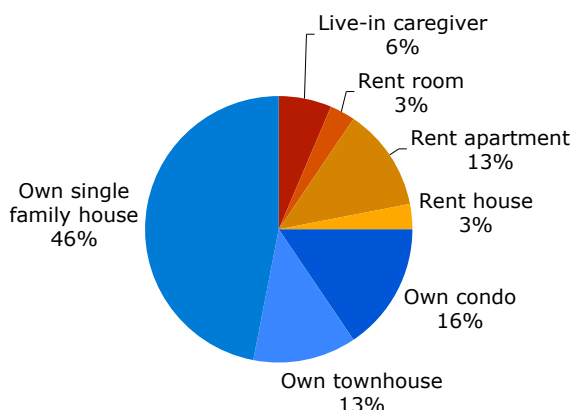- Own condo 16%
- Own townhouse 13%

Figure 12. Housing tenure of the participants. These charts represent the most recent housing choices in each country, ie. 2010 for Canada, and the year of migration for the Philippines.

The process of finding housing also changed over the years. For the earlier immigrants, it seems that housing was readily available, affordable, and easy to find; for those who arrived more recently, there were more barriers. Although housing was easy to find, the locations were often not ideal and rents were usually quite high in relationship to newcomers' salaries. This would confirm the major changes in housing policy that have led to higher rents and lower vacancy rates in major Canadian cities since the 1990s. The need for references and a credit history, although present for renters in the 1960s and 1970s, was more pronounced for participants who arrived in the 1990s and 2000s. A few participants encountered housing discrimination in their search for an apartment. The quality of housing available to new immigrants seems to have changed over the years as well. Participants were asked to describe their housing, and what they liked or disliked about it. Earlier arrivals often described their housing as spacious, well-maintained, and adequate for their needs; those who arrived more recently were more likely to describe their housing as small, cramped, or poorly maintained, often basement apartments that they shared with friends or family.

Participants were asked what factors were important when they were looking for housing, initially and in successive moves. Most of the participants tried to choose housing that was close to their workplaces, their children's schools, services, and social contacts. Besides mere practical decision-making, this mirrors their housing history in the Philippines, where the majority of participants said they always had access to shops and services regardless of whether they lived in suburban or urban neighbourhoods. In many of the participants' neighbourhoods in the Philippines, the presence of small *sari-sari* stores, which people operated out of their homes, meant that it was always possible for residents to buy household essentials within a few minutes' walking distance of their homes.

Access to public transit was often a criteria for housing location, since most had very strong histories of transit use in the Philippines, and participants did not purchase cars right away when they arrived in Canada. Twenty-three of the participants mentioned access to public transit as a factor in their initial or successive housing choices, even those who bought cars. This is an example of the practicality that drove participants' choices.

Attitudes towards housing were quite diverse. Although some of the participants believed homeownership was the norm for Filipino immigrants, this attitude did not seem to reflect the majority. For about half of the participants (17 of the 32), their stated preference did not match up with their current housing choice: either they could not yet afford their ideal housing type, or they preferred to rent, but decided to buy due to the influence of other family members or the practical aspects of ownership (saving money over time). Almost every participant acknowledged that their attitudes towards housing had changed since they arrived in Canada: many used to believe renting was acceptable, but their perceptions shifted after living in Toronto for a few years. Although some of these changes may be due to participants' changes in life cycle (having children, empty nesters downsizing, etc.), the number of times that participants referred to renting as "throwing your money away" was notable: 12 of the 32 participants mentioned this. This is interesting considering their housing histories in the Philippines, where almost half the participants rented.

As the housing trajectory model would suggest, there were many reasons why the participants chose to buy a home, or live in a single-family home. Many had always wanted to own a single-family home, but for others it was merely a practical decision based on their household size, the fact that they had small children, or that they would be sponsoring relatives who would stay with them for a few years. Condos were common for young newcomers, singles, and retirees. Many participants came to Toronto on their own, either as unmarried individuals or to settle in the city before bringing family members over from the Philippines (this is particularly the case for those entering the country as live-in caregivers). Divorce was also fairly common among the participants. This means that many of the participants were, or had been, single-person households at one time, perhaps for many years. Homeownership, and living in a single-family home, were not necessarily the goals to which all aspired.

Transportation choice

Transit was by far the dominant mode of transportation for the participants for commuting to work, errands and social travel while they lived in the Philippines; very few owned cars. Transit options are more varied in that country: participants made use of buses, *jeepneys*, and *tricycles*. The latter two options were present even in suburban residential neighbourhoods and rural areas, since *jeepney* and *tricycle*

companies are small and privately-owned, often as home businesses. Thus, most of the participants were very used to taking transit, albeit in different forms than those that exist in Canada.

Transportation mode: Philippines

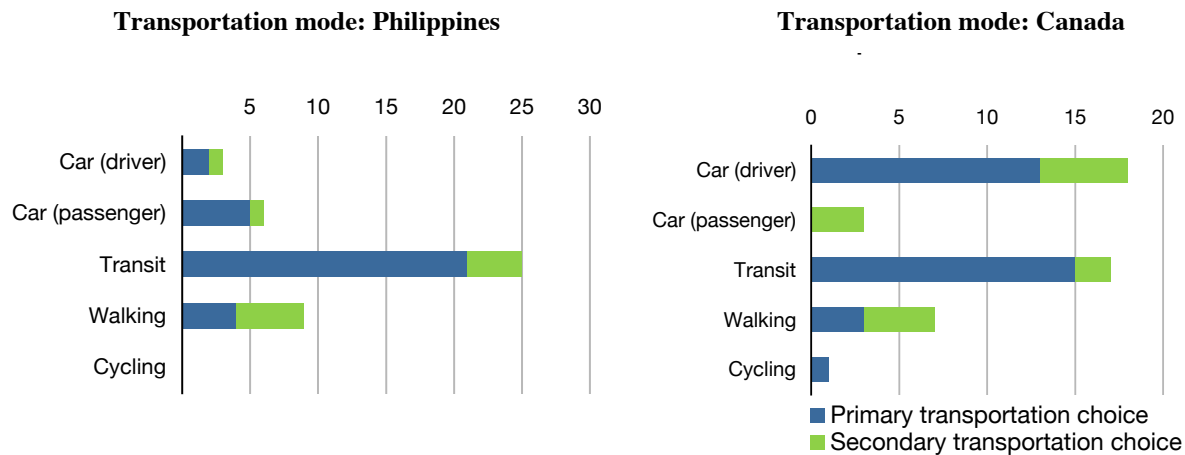**Transportation mode: Canada**

Figure 13. Primary and secondary transportation modes used by the interview participants. Participants were asked which mode they used to travel to work, for errands, and other travel both in the Philippines and in Canada. "Transit" in the Philippines includes buses, jeepneys, and tricycles. These graphs represent the most recent transportation choices in each country, ie. 2010 for Canada, and the year of migration for the Philippines.

Of the early arrivals, many bought cars within a year of arriving in Canada. However, later arrivals waited longer because of affordability issues, only bought a car because it was required for work, or chose not to buy a car. Typically, a household would have one car, so the rest of the household would travel by transit or as car passengers. Almost half of the participants preferred using transit (15 out of 32), while others considered this only a transitional transportation mode until they could afford a car.

There were some interesting trajectories when it came to driving: it was not the case that car ownership represented the pinnacle of transportation choice. Many of the participants drove for years and then went back to transit use upon retirement. Many continued to use transit to commute to work, reserving the car for household errands. Also interesting were the reasons participants chose to buy a car: because they lived in an area where transit was not very reliable (2), because transit was not convenient to access their workplace (8), because they had a child (5), or because of the cold weather (3). Only six participants indicated that they bought a car because they preferred to drive. Several female participants said that they preferred not to drive, or that their husband preferred driving. As with housing choice, 17 of the 32 participants' stated preferences did not match their transportation choices.

Summary

The interviews revealed some interesting factors in housing choice and transportation choice. Living with relatives or friends upon arrival was common, but the length of time the participants lived in this transitional housing seems to have increased over the years. It was harder to find affordable rental units

for more recent immigrants, and harder to find good quality rental units and buildings. Most participants chose housing that was close to their workplaces, children's schools, services, and social networks. While some preferred renting and some owning, many changed their attitudes towards housing after being in Canada a few years. Access to public transit was important, since the participants had strong histories of transit use in the Philippines, and also because none had access to a car when they first arrived. Motivations for buying a home or living in a single-family house ranged from mere practicality to the desire to own. About half the participants preferred to use public transit, while for others it was a transitional mode until they could afford a car. Participants chose to buy a car for reasons as diverse as changes in life cycle, weather, or because transit access to their workplace was inconvenient. In both housing choice and transportation choice, about half of the participants' stated preferences did not match their choices.

CONCLUSIONS

In summary, Filipino immigrants are making different housing and transportation choices from immigrants in general or non-immigrants. The Census data reveals lower incomes, and a growing income gap, between Filipino immigrants, all immigrants, and non-immigrants, despite Filipinos' high employment and education. Major increases in immigration at a time of economic recession, postindustrial changes in the structure of the labour market, and decreased construction of rental and affordable housing have evidently had some effects, which are further elaborated in the PCA results. The five factors explaining the majority of variation in the data show not only the effects of life cycle and attainment, but also polarization of the work force, increased educational requirements, and the dichotomy between inner-city transit users working in finance and business versus suburban drivers working at manufacturing jobs. The interviews confirmed the complexity of housing and transportation choice, and emphasized that drivers, transit users, homeowners, and renters are not so easily defined. For about half the participants, housing and transportation stated preferences did not match their choices, and there were many reasons for this mismatch. Strong histories of renting and transit use in the Philippines did not necessarily predict renting and transit use in Canada. The participants often made practical decisions, whether it be housing location or whether to buy a car, and these decisions did not define them: they could be urban transit users one year and suburban drivers the next, or vice versa; they might own a car, but still choose to commute to work by transit.

These findings contradict many Canadian housing studies, particularly where high homeownership rates among certain groups have been taken as proof that ownership is preferred. Structural changes in immigration policy, housing policy, the labour market and transportation infrastructure have affected the

choices Filipino immigrants make; those who arrived in the 1960s and 1970s had an easier time finding affordable rental housing and good-quality units, and bought cars more quickly than later arrivals. The recessionary period of the 1990s, particularly the changes in the labour market and housing policy, had severe and lasting effects on Filipino immigrants' housing and transportation choices. This study has also shown that transportation, particularly access to public transit, influences housing choice in addition to factors such as proximity to the workplace, schools, services and social networks. The findings confirm that urban growth policies and objectives in the Toronto CMA should continue to emphasize transit-accessible housing, a variety of housing types, and affordable housing, particularly as Filipino immigrants have become the largest source of immigrants to Canada. The increased, and prolonged, dependence of new immigrants upon rental housing and public transit are particular challenges for municipal and regional planners in Toronto and other major Canadian cities.

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