Integrating housing and transportation using structural change

A case study of Filipino immigrants in the Toronto CMA

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Outline for the presentation

- Research context and definitions

- Research questions

- Literature on immigrants' housing and transportation choices and gaps in the research

- Methodology and methods

- Preliminary results

Context

- Transportation and housing play significant roles in how our cities grow and change: more sustainable transportation and more equitable housing are major concerns for Canadian municipalities

- There is a lot of research on immigrants' housing patterns, and some on transportation patterns, but still many gaps in the literature

- **Choice** is the opportunity of choosing, as opposed to **preference**, which is a choice guided by one's judgement or predilections. Choice implies a decision-making process while preference is an inclination that may or may not be realistic; planners' impact on choice

- **Structural change** is a set of observations about how economic changes and policy shifts impact cities

Research questions

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

- How do these choices differ among immigrant cohorts?

In particular, the dissertation will focus on a case study of the Filipino community in Toronto and ask the question

- How do Filipino immigrants make housing and transportation choices in the Toronto CMA?

	Study purpose	Methods	Geographic focus	Ethnocultural group
Large-scale studies Hulchanski, 2007 Walks & Bourne, 2006 Hiebert, 2006 Haan, 2005 Hou & Picot, 2004 Ray & Bergeron, 2004 Hiebert & Ley, 2003 Balakrishnan and Hou, 1999 Balakrishnan and Wu, 1992 Murdie, 1969	Interest in housing disparities, segregation, inequities influencing housing choice	Index of Segregation Index of Dissimilarity Regression analysis Data comparison Factor analysis	Focus on Toronto, Montreal, and Vancouver	Focus on major census groups: East Asian, African, European, etc.
Small-scale studies Bauder & Lusis, 2008 Ghosh, 2007 Walton-Roberts, 2007 Murdie, 2002 Osuwu, 1999 Texeira, 1995	Interest in immigrant settlement process, social networks as influencing housing choice	Interviewing Data comparison Surveys	Focus on Toronto and mid-sized cities in Ontario	Focus on specific language or ethnocultural groups: Bengali, Somali, etc.

Canadian research on immigrant housing choice

Immigrant housing choice: Canadian results

- Generally, immigrants make different choices than non-immigrants

- Immigrants show a lot of variety in their housing choices depending on their ethnocultural group

- Immigrant spatial concentration patterns are linked to a variety of factors such as social networks, employment trends, and the location of affordable and rental housing

- Most of the research reflects societal bias towards homeownership and economic barriers immigrants may encounter; recently a trend towards sociocultural networks

	Study purpose	Methods	Geographic focus	Ethnocultural group
Large-scale studies Blumenberg & Smart, 2008 Blumenberg, 2008 Blumenberg & Shiki, 2006 **Heisz & Schellenberg, 2004*** Pucher & Renne, 2003 **Litman, 2003*** DOT, 2000	Interest in transportation disparities	Regression analysis, logit models	National or statewide	African Americans, Hispanic Americans, occasionally Asians (In Canada, immigrant groups)
Small-scale studies Li, 2008 Liu, 2008 Sharma, 2004	Interest in labour market participation of a particular group	Regression analysis, logit models	Municipalities	Hispanic Americans, African Americans

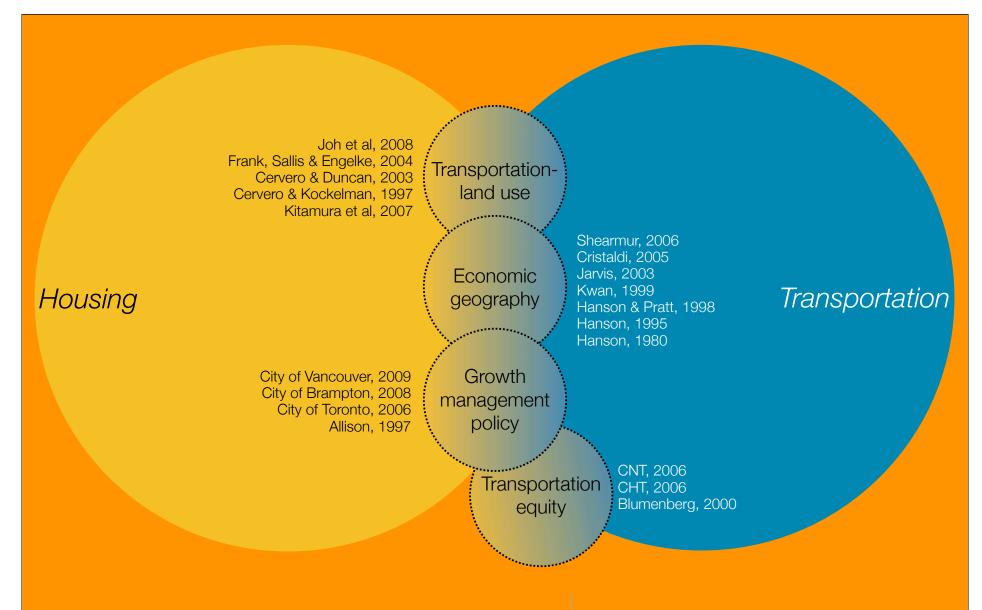# US/Canadian research on immigrant transportation choice

*Canadian studies

Immigrant transportation choice: US/Can results

- Generally, immigrants make different transportation choices from non-immigrants

- There is little evidence of "spatial mismatch" in Canadian cities, where public transit users are quite diverse in income and ethnocultural group

- Immigrants living in Toronto, Vancouver, and Montreal are much more likely to use public transit than those born in Canada, though this decreases with time

- About 20% of Canadian households do not have a car, more than double the US rate (8.7%). Transportation research with ethnic and immigrant groups in the US tends to be biased towards car ownership

- Only a few studies acknowledge the role transportation infrastructure may play in housing choice

Gaps in the research

- Still very little understanding of non-economic factors that may impact housing and transportation choices; very little describing transportation choices, let alone explaining them

- Housing research has only recently moved from describing **what** is happening to explaining **why** it might be happening

- Little understanding of immigrants' decision-making processes: choice vs. preference; perceptions of housing and car ownership as desired societal goals have contributed significantly to policy and research

- There are some links between housing and transportation research, but researchers generally do not study housing and transportation choice together

Housing

Transportation

Joh et al, 2008
Frank, Sallis & Engelke, 2004
Cervero & Duncan, 2003
Cervero & Kockelman, 1997
Kitamura et al, 2007

Transportation-land use

Economic geography

Shearmur, 2006
Cristaldi, 2005
Jarvis, 2003
Kwan, 1999
Hanson & Pratt, 1998
Hanson, 1995
Hanson, 1980

City of Vancouver, 2009
City of Brampton, 2008
City of Toronto, 2006
Allison, 1997

Growth management policy

Transportation equity

CNT, 2006
CHT, 2006
Blumenberg, 2000

Housing and transportation research links

Structural change as a bridging theory

- Structural changes have been noted in transportation and housing research

- Structural changes have also been crucial in the development of growth management policies (affordable housing locations, concentrating growth and increased density along transit corridors, neighbourhoods with a variety of housing types and transportation options)

- Viewing structural change as a major force shaping housing and transportation choice brings these larger ideas into the realm of planning research

- Research theory: changes in immigration, housing, labour market, and transportation policy and practice have constrained immigrants' choices

Structural change and urban growth in cities

- ***Changes in immigration policy***: fewer family class immigrants and more economic class immigrants (highly skilled and well educated), more temporary workers, different source countries

- ***Changes in housing policy***: little new rental housing has been built, inner city rents have increased, and high-rise condos have begun to replace apartments

- ***Changes in the labour market***: manufacturing has relocated to the suburbs, smaller cities, and offshore; professional and managerial jobs have increased in the inner city; job instability has grown; the work day has become more flexible

- ***Changes in transportation infrastructure and choices***: subway construction, highway construction, increased gentrification around transit lines

Methodology

- Using a mixed-methods case study to explore how structural changes affect immigrants' housing and transportation choices

- Small-scale case studies as useful in expanding and generalizing theories (Yin 1994); taking the view that social science is not cumulative in nature but instead research contributes to the "ongoing social dialogue about the problems we face and how things may be done differently" (Flyvberg 2001, 61)

- Filipinos as an ideal case: variety of housing choice, variety of transportation choice, spatially dispersed across the Toronto region, long period of immigration to Canada and especially Toronto, well-defined in the Census data

Filipinos in Canada

- In the 2001 Census there were over 223,000 Filipinos in Toronto (42% of all Filipino immigrants to Canada) and in 2006 more Filipinos immigrated to Canada than any other group

- From 1980-2001 45% of Filipino immigrants entered as Family Class immigrants, 25% as Skilled Workers, 15% as Assisted Relatives, and 12% as Live-in Caregivers (Kelly 2006)

- In Toronto, 56% of Filipinos own housing (compared to 66% of all immigrants) and 42% commute by transit (compared to 27% of all immigrants and 20% of all non-immigrants)

- Filipinos have high levels of employment but low average earnings (Kelly 2006; Darden 2004, 2009)

Methods

- Principal components analysis (PCA) with 1971 and 2001 Census data

  - Census variables: housing tenure, immigration period (1961-2001), commute distance, transportation mode to work, weeks worked, occupation (20 NAIC categories), total income for all immigrants

- Interviews with Filipino immigrants who arrived in different periods: 1971-80, 1981-90, 1991-2000, 2001-present

Principal Components Analysis

- PCA is the first stage in factor analysis, a statistical method that can take many different variables and combine the data into new factors that explain variance in the data

- PCA gives factors in the order of importance: the first factor explains the majority of variance in the data, the second factor explains slightly less, etc.

- Together, the factors explain 100% of the variance in the data

- Factor loadings, which vary between -1.0 and 1.0, show the strength of relationship between the original variables and the factors

- Preliminary analysis: 22 factors were retained

PCA: preliminary results

1960s and 1970s cohorts
homeownership
high labour market participation
high income
long commute distances

1990s cohort
renting
commute by transit
low-level service sector jobs

Factor 1

finance, insurance,
and professional jobs
renting
commute by transit

manufacturing workers
larger families
1980s and 1990s cohorts
commute as car passengers

Factor 2

1960s cohort
retail and education jobs
commute by walking

manufacturing, finance,
and insurance jobs
commute by transit
long commute distances

Factor 3

PCA using STATA, a statistical software, and 2001 Census data

PCA: preliminary results

- The remaining factors reinforce the contrasts between established and newly arrived immigrants, between low- and high-level service workers

- PCA shows that public transit is linked to both low- and high-level occupations, both long commute distances and short

- Income, housing tenure and family size only appear in the first two factors

- There are definite differences between immigrant cohorts in terms of their housing and transportation choices

- Changes over time will be examined by comparing the 2001 Census to the 1971 Census

Interviews

- Recruitment through several Filipino cultural and community organizations

- Using purposive sampling to interview immigrants who entered the country from 1971-2010 as Skilled Workers or Family Class immigrants

  - interviews with immigrants in each cohort 1971-80, 1981-90, 1991-2000, 2001-2010

  - anticipated results: Filipino immigrants who arrived in the earliest cohort would have made different housing and transportation choices than the most recent cohort because of structural changes that have placed further constraints on choice

Preliminary results from interviews

		Anticipated # of participants	# of participants as of March 18, 2010
Immigrant cohort	1971-1980	8	6
	1981-1990	8	0
	1991-2000	8	1
	2000-2010	8	3
Total		32	10

Preliminary results from interviews

- Many participants bring a history of homeownership and transit use in the Philippines to their lives in Canada

- Social networks are the critical factor in housing location and type for initial settlement, while proximity to work, school, and shopping are important in successive housing choices

- Changes in family size/status are important factors in successive housing choices (marriage, birth of the first child, arrival of the family from the Philippines)

- Transportation infrastructure is influential in housing choice (proximity to TTC, GO Transit, highways)

- Structural changes in the labour market and housing policy are acknowledged to be factors influencing immigrants, leading to differences between cohorts

Summary

- Immigrants are a major demographic in Canada's largest cities, and have different housing and transportation patterns from the general population

- There are many gaps in the literature, particularly linking housing and transportation choice

- Preliminary results show that transportation is an influential factor in housing choice for Filipino immigrants in the Toronto CMA, but family size/status, proximity to work are also influential; structural changes in the labour market and housing policy are also contributing factors

- The study will be useful in filling some of the gaps in the research, integrating the concept of structural change into planning research, and contributing to discussions about housing and transportation policy

Questions?

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