Community networks and economic integration of immigrants in Canada: some evidence from housing market

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Abstract

This paper investigates the impact of community networks on home ownership rates among immigrants in Canada. Home ownership is viewed as one indicator of economic integration of immigrants. We construct a demand model in which the homeownership rates among immigrant visible minority residents in Canada are determined by several economic and noneconomic variables. One of these determinants, used as a proxy for immigrant network effect, is the composition of visible minority in total population of a Census Metropolitan Area (CMA) chosen as the place of residence by an immigrant. The model is estimated using Feasible Generalized Least Square (FGLS) method with pooled cross section data for 8 visible minority communities resident in 14 CMAs based on 2006 census. Our results reveal that when the effect of several economic and demographic factors are held constant, the immigrant visible minority homeownership rate is affected by the presence of a corresponding population in the CMA. Compared to larger provinces which are traditional destinations of immigrants, this effect is not different in smaller provinces where visible minority is smaller.

Keywords: Immigration, Economic Integration, Community Networks, Housing Market, Canada

1. Introduction

The purpose of this paper is to analyze the impact of community networks on home ownership rates among immigrant visible minority population in Canada. Economic integration of new comers is the key to their social integration in host country. With economic integration in the new place comes a sense of pride and further motivation to do well in the new country. Among other factors, integration is stimulated through interaction with the resident population which is likely to have established economic status. In this paper, we investigate economic integration of visible minority immigrants in Canada and the impact of their networks in this regard. For this purpose, we conduct analyses of the home ownership rates, viewed as one indication of economic integration, among 8 visible minority immigrant groups resident in 14 Census Metropolitan Areas (CMA) of Canada.

Massey et al (1993) define migrant networks as sets of interpersonal ties that connect migrants, former migrants, and non-migrants in origin and destination countries through ties of kinship, friendship, and shared community origin.[1] Over the past fifteen years, economic considerations have played a central role in shaping immigration policy in developed countries. In their review of immigration policy trends in developed countries, Akbari and MacDonald (2014) note several common policy changes in Australia, Canada and New Zealand to attract economic immigrants. Economic integration of immigrants is important to enhance their economic impacts. This can be facilitated by the presence of a resident community who is welcoming of them. In particular, a new comer may feel more attached to a community comprising of individuals who came from his / her own country of origin in the past. The community members' own connections in the new place, knowledge of local language and customs, and the means to get around can benefit the new comer. On the other hand, new comers may feel alienated from the community if their education levels, economic status or the ability and willingness to adapt to new customs and practices differ.

Alba and Nee (1997) define integration as minority participation in mainstream socio-economic institutions (e.g., the labour market) on the basis of parity with ethnic-majority individuals of similar socio-economic origins. Myers and Pitkin (2010) use five benchmarks for social and economic integration of immigrants: citizenship, home ownership, English language proficiency, job status, earning better income. Differences in the five benchmarks of integration dissipate over time as an immigrant gains knowledge and ability to participate in the mainstream institutions such as labour and housing markets (Alba and Logan, 1992; McConell and Akresh, 2008). As these differences dissipate, immigrants are viewed to be more assimilated or integrated in the mainstream society. In addition to these five indicators of economic integration, the duration of unemployment in the host country and the appropriateness of their

[1] Massey, D, S. et al., (1993) "Theories of International Migration: A Review and Appraisal," *Population and Development Review*, Vol.19, pp. 431 – 466.

jobs to education and skills acquired in the country of origin may also be used as measures of integration.

House purchase is one's most important investment in his or her lifetime. Homeownership indicates economic progress since sufficient financial resources are needed to buy a home. Having one's own home also provides greater privacy and security. For immigrants, homeownership is one of the important signals of a commitment to life in Canada[2]. As Edmonston (2004) notes, "owing one's home is part of the dream of becoming successful in Canada". Thus, he suggests that homeownership is a particularly good variable for research on immigrant adaptation because "it represents both economic and symbolic integration, in addition to residential assimilation." Presence of social networks and community ties can be important determinants of whether and where an immigrant buys a house in the host country (Borjas, 2002; Filpen 2001, Gabriel and Painter 2003; Haan 2005).

More generally, from the perspective of longer term social integration, it has been argued that housing is an indicator of quality of life, including health, social interaction, community participation and general well being (Engeland and Lewis, 2005).

Clayton Research Associates (1994) report argues that housing is an important element in the integration of immigrants into Canadian society and most immigrant groups have a strong attachment to homeownership. Over time, ownership rates of immigrants become more like non-immigrants. Housing tenure is strongly related to income, household type, age of the household maintainer, place of birth, and period of immigration.

Stigler's (1962) theory of job search can be extended to house search in the market. When individuals search for a given type of house, they are looking for the best price and the best neighborhood. They continue their search until the cost of additional search equates with the benefits of it. Social networks can help reduce the cost of a house search as they reduce the cost of search.

In our literature review for the present paper, we noted a dearth of studies focusing on the impact of community networks on home ownership rates among visible minority immigrants within an economic framework. The present study is an attempt to fill in this gap.

The rest of the paper is organized as follows: Section 2 provides some descriptive housing statistics for visible minority population based on 2006 population census. Section 3 describes the method of analysis and data, while empirical results are presented in section 4. Section 5 concludes the study.

[2] Another important signal of commitment of life to Canada is citizenship acquisition.

2. Some Descriptive Statistics

The 2006 census based data permit a descriptive analysis of the patterns of homeownership rates among immigrant visible minority communities. Due to data limitations, these data are combined into six groups for descriptive analysis.These groups include Blacks, Chinese, Latin Americans, South Asians, Southeast Asians / Filipinos and Arabs / West Asians.

Table 1 results show that Blacks and Latin Americans are the top 2 most likely immigrant communities whose members live in homes requiring major repairs and were built more than 25 years ago. South Asians and Chinese are the least likely to live in homes with these physical conditions and age.

Table 1: Occupied private dwellings by condition of dwelling and Period of Construction (%)

	Major repairs		Period of Construction	
Visible Minority Group	Non-Immigrants	Established Immigrants	Non-Immigrants (1981-2006)	Established Immigrants (1981-2006)
Black	11.4	9.4	36.5	41.9
South Asian	5.4	5.0	58.3	61.9
Chinese	6.2	5.7	52.7	61.0
South East Asian	8.1	6.8	42.3	49.7
Filipino	7.2	6.5	51.8	46.4
Arab/West Asian	7.2	6.3	42.1	47.4
Latin American	13.5	9.8	35.4	37.2
Canada	**7.5**	**7.5**	**39.0**	**39.0**

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Table 2 shows South Asians and Chinese are also more likely than the average Canadian to live in large homes with more than 3 bedrooms. Arab / West Asians are as likely as an average Canadian to live in such homes.

Table 2: Total number of occupied private dwellings by number of rooms and number of bedrooms

Visible Minority Group	Number of Rooms (1-4 rooms)		Number of Bedrooms (0-3 bedrooms)	
	Non-Immigrants	Established Immigrants	Non-Immigrants	Established Immigrants
Black	40.3	34.9	86.8	76.1
South Asian	36.5	20.8	75.3	54.5
Chinese	30.7	24.1	75.1	60.8
South East Asian	40.4	28.3	86.3	71.9
Filipino	41.6	31.9	87.5	70.1
Arab/West Asian	33.0	31.7	78.0	72.3
Latin American	44.8	35.0	87.3	79.4
Canada	**25.5**	**25.5**	**77.3**	**77.3**

Table 3 shows Blacks and Latin Americans are also most likely to live in rented accommodations.

Table 3: Total number of occupied private households by tenure

Visible Minority Group	Owned		Rented	
	Non-Immigrants	Established Immigrants	Non-Immigrants	Established Immigrants
Black	39.3	49.2	60.7	50.8
South Asian	61.5	79.3	38.5	20.7
Chinese	71.1	83.5	28.8	16.5
South East Asian	46.2	67.7	53.8	32.3
Filipino	52.2	67.7	47.8	32.3
Arab/West Asian	59.9	60.8	39.9	39.2
Latin American	42.2	49.6	57.8	50.4
Canada	**68.4**	**68.4**	**31.6**	**31.6**

Finally, the values of the homes in which Blacks and Latin Americans live are the least as are their household incomes.

Table 4: Total number of occupied private households by Average Value of Dwelling and by Average Household Income

Visible Minority Group	Average Value of Dwelling		Average Household Income	
	Non-Immigrants	Established Immigrants	Non-Immigrants	Established Immigrants
Black	247729	272247	49128	58782
South Asian	384298	346214	76110	86960
Chinese	402183	414827	87365	77841
South East Asian	266711	343900	51070	65875
Filipino	273666	283701	66052	80521
Arab/West Asian	287561	347431	64044	66046
Latin American	251940	264553	50614	59728
Canada	**263369**	**263369**	**69548**	**69548**

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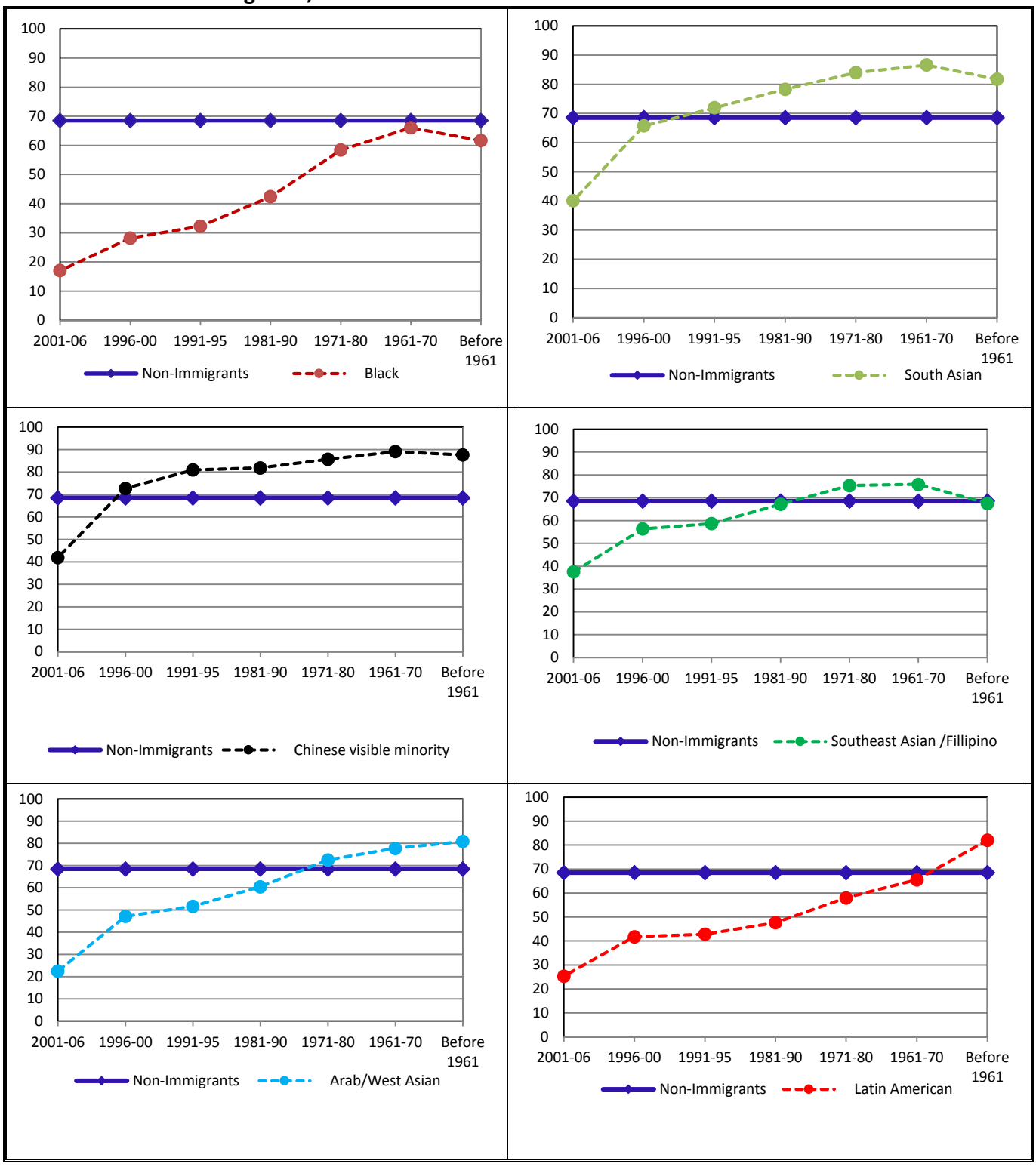
Chart 1 provides the average homeownership rates for each of the six visible minority immigrant communities resident in Canada. These rates have been plotted against the period of arrival of an immigrant to assess the impact of his / her length of stay. To assess their integration with non-immigrants on the basis of this measure of economic integration, homeownership rates among all non-immigrants have also been plotted in the same chart.

As expected, all visible minority immigrants initially have lower homeownership rates in Canada than do non-immigrants. The initial years after arrival are the periods of adjustment for an immigrant in Canada. He / she needs time to adjust to new culture in a new country. Lack of information about the labour market can also result in a high rate of unemployment for new arrivals as well as lower incomes. In addition, the new arrivals may not be certain of the permanency of their stay in Canada because of which they may not participate in house markets. Overtime, however, as immigrants adjust to their new country the homeownership rate rises among them, ultimately catching up with non-immigrants. This catching up with non-immigrant is one indication of economic integration in Canadian society. We find this to be happening in all visible minority communities, however, at the lowest rate among Blacks and Latin Americans who take about 35-40 years to have the same rates as non-immigrant Canadians (Chart 1). South Asians and Chinese emulate non-immigrants at the fastest rate, reaching equality with them in 5-10 years.

Chart 1: Home ownership rates among visible minority in Canada, immigrants by period of arrival and non-immigrants, 2006.



Source: Canadian population census, 2006.

3. Method of Analysis and Data

In this section, we first specify a homeownership demand model and then explain the data and methodology to estimate this model.

A Demand Model for Homeownership

We construct a demand model for homeownership in which the homeownership rates among immigrant visible minorities resident in a CMA in Canada are determined by several economic and noneconomic variables. The dependent variable, i.e., homeownership rate in a host community, is defined as the percentage of a visible minority immigrant population owning a house in that CMA. The independent variables are described below.

Price (PRICE): Following the law of demand, one would expect the average homeownership in a group to vary inversely with the average home price in the CMA where its members live. However, to avoid any problem of endogeneity, we use the average house price paid by the community members as the explanatory variable. This variable is highly correlated with the average house price in the CMA.

Income (INCOME): One would expect demand for homeownership to rise in an ethnic group as its members earn more income. Haurin et al. (1996) have argued that households are expected to own rather than rent when their incomes increase, because the implicit returns to owner-occupied housing are not taxed.

Household size (HHSIZE): With a rise in household size, demand for living space rises. Larger households are likely to prefer owned rather than rented dwelling. Hou (2010) concludes that non-family individuals are less likely to own than couples, particularly couples who have children.

Unemployment rate (UR): Tubergen, Maas and Flap (2004) argue that unemployment rate is a main barrier of economic integration of an immigrant community. With a rise in unemployment rate, demand for homeownership rate decreases in the community, not only because of income uncertainty but also because of the uncertainty regarding finding a new job in the place of current residence.

Percentage of a visible minority population in total CMA population (VISMIN/POP): This is our main variable of interest. Population size of an ethnic group residing in an area is an indication of presence of migrant network which helps provide information on local economic institutions and labour markets. Presence of a community also somewhat diffuses the cultural shock new arrivals face in a new country as they find their sending country's cultural practices in place. Hence, one would expect demand for home ownership in an immigrant group to rise with an increase in its own resident population.

Percentage of recent immigrants in total population (RPOP): Most studies suggest that immigrants purchase a house in their country of destination only after they have stayed for some time and have established some economic status. Hence, one would expect that if the percentage of recent immigrants in an ethnic group is large, the rate of home ownership will be lower in that group. For the purpose of this study, we consider those who arrived within ten years of the census to be recent immigrants.

Based on the above discussion, the demand model for homeownership is specified as below:

$$HRATE = \beta_0 + \beta_1 PRICE + \beta_2 INCOME + \beta_3 HHSIZE + \beta_4 UR + \beta_5 (VISMIN/POP) + \beta_6 RPOP$$

Our coefficient of interest is β_5.

We also add two slope dummies in the model to assess if the marginal impacts of networks differ between smaller and larger provinces. The dummy variable D_1 takes a value of 1 if the CMA is in Atlantic Canada and zero otherwise and the dummy variable D_2 takes a value of 1 if the CMA is in the Saskatchewan & Manitoba proviences and zero otherwise. Hence our extended demand model which incorporates the differential effects of networks in smaller provinces is stated as under:

$$HRATE = \beta_0 + \beta_1 PRICE + \beta_2 INCOME + \beta_3 HHSIZE + \beta_4 UR + \beta_5 (VISMIN/POP) + \beta_6 RPOP + \beta_7 (D_1*VISMIN/POP) + \beta_8 (D_2*VISMIN/POP)$$

Based on the above equation, the impact of resident immigrant population on homeownership rate in Atlantic Canada can be calculated as: $\beta_5 + \beta_7$ while the impact of resident immigrant population on homeownership rate in CMAs of Saskatchewan & Manitoba provinces can be calculated as: $\beta_5 + \beta_8$.

Organization of data used to estimate the housing demand model

Our unit of analysis is a visible minority community resident in a CMA. We use data based on 2006 census. Data for each community on average house prices paid, average community household income, household size, unemployment rate, community population and CMA population are based on customized tabulations purchased from Statistics Canada.

Pooled Cross sectional data are used for 8 visible minority communities resident in 14 different CMAs.[3] This gives us a total of 112 observations. In summary, combining many objects of cross-section observations pooled cross sectional data give "more informative data, more variability, less co-linearity among variables, more degrees of freedom and more efficiency"(Gujarati

[3] Census 2006 identified 33 CMAs in Canada. We were able to find data on all the variables for 14 CMAs.

,2004). The final demand equation for homeownership is estimated using Feasible Generalized Least Square (FGLS) specification as this corrects for cross section heteroscedasticity that may arise in pooled data. For robust variance the methodology of Beck and Katz (1995), which is also called a Pooled Corrected Standard Error (PCSE), is used in which the covariance estimators are robust to heteroscedasticity across cross-sections.

Regression Results

The results of the homeownership model are provided in Table 5. The model is estimated using Canada-wide census data. The unit of analysis is a visible minority community resident in a CMA. Our two main concerns are: 1) how is the homeownership rate among visible minority immigrants affected by the presence of a corresponding visible minority population and 2) is this effect different for smaller province which are newer destinations of immigrants. The second concern is addressed by interacting the dummy variables, created separately for Atlantic Canada and for provinces of Saskatchewan and Manitoba, with the percentage composition of visible minority population in the CMA. The coefficients of the interaction variables measure the differential impact of immigrant population in CMAs of Atlantic Canada and CMAs of Saskatchewan and Manitoba.

The adjusted R – square value indicates that the independent variables capture 52 percent of the variations in the immigrant homeownership rates. The F-statistic and the P-value are both indicative of the statistical significance of the model.

All variables have expected signs. However, the price and household size variables are statistically insignificant. Our variable of interest, i.e., percentage composition of visible minority in CMA population is statistically significant and has the highest coefficient in the model. When we interact this variable with the two regional dummies (Table 6), the effect of this variable is reduced in magnitude but it remains significant. A one percent rise in the composition of visible minority population in total CMA population increases homeownership rate by 1.05 percent. There is no statistically significant difference in this effect for Atlantic provinces or the Central provinces of Saskatchewan and Manitoba.

Table 5: Regression Results, Basic Demand Model

Variable	***Coefficient***	***t-statistic***	***P-value***
Constant	47.00905	5.781239	0.0000
Price($)	-1.32E-05	-1.24367	0.2164
House hold Income ($)	0.000422	6.79698	0.0000
Household Size (HS)	0.397244	0.180803	0.8569
Unemployment (Rate)	-0.46913	-1.99199	0.0490
Ratio of Total Vismin CMA Population to Total CMA Population (TPop)	1.151143	2.969753	0.0037
Ratio of Recent Immigrants to total Vismin Immigrants Population in CMA	-0.33493	-5.25658	0.0000
R^2	*0.52*	***SE of Reg.***	*12.557*
Adjusted R^2	*0.49*	***F-Statistic***	*18.5796*
No of Obs.	*112*	***Prob. (F-Stat)***	*0.0000*

Table 6: Regression Results, Extended Demand Model.

Variable	***Coefficient***	***t-statistic***	***P-value***
Constant	46.46778	5.914269	0.0000
Price($)	-1.01E-05	-0.88673	0.3773
House hold Income ($)	0.00043	7.01896	0.0000
Household Size (HS)	-0.01674	-0.00788	0.9937
Unemployment (Rate)	-0.36057	-1.53766	0.1272
Ratio of Total Vismin CMA Population to Total CMA Population (TPop)	1.051657	2.694282	0.0082
Ratio of Recent Immigrants to Total Vismin Immigrants Population in CMA	-0.32937	-5.35523	0.0000
Interaction variables *(Base: Provinces of Ontario, Quebec, Alberta and British Columbia)*			
(D_1) * (VISMIN/POP)	-4.36423	-1.43194	0.1552
(D_2) * (VISMIN/POP)	0.576712	0.522211	0.6026
R^2	*0.52*	***SE of Reg.***	*12.6272*
Adjusted R^2	*0.49*	***F-Statistic***	*14.0934*
No of Obs.	*112*	***Prob. (F-Stat)***	*0.0000*

6. Conclusion

The presence of large ethnic enclaves in larger cities of Canada, as demonstrated in previous studies, is in indication that new comers tend to interact with residents of similar country of origin. This interaction can be on economic, social and cultural grounds. The fact that resident community population affects homeownership rates in Canadian CMAs, as shown in the present study, is some indication of network effects in house markets. Networks reduce the cost of obtaining information. They may also help reduce some other transaction costs such as the legal costs, real estate agent costs, cost of obtaining mortgage, etc. All these help in integration of visible minority immigrants with resident Canadians in the house markets.

However, part of the effect captured by the visible minority population variable could be the peer effect which we are unable to entangle. As immigrants settle in the new place, they may feel social pressure to purchase a house if most in the community own a house.

The effect of the size of resident community does not differ for smaller provinces. This may be because of the larger involvement of community members in real estate business in smaller provinces.

Overall, these preliminary results imply the need for settlement policy to exploit network effects in economic integration of new immigrants.

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