# "Immigrant Attractiveness of Non-Metropolitan Cities in Canada: Is Being 'Welcoming' enough?"

Working paper

CPSA Conference - Calgary

By Marc Y. Valade PhD Candidate in Policy Studies Ryerson University

May 2016

# ABSTRACT

This exploratory investigation sought to test whether 'welcoming' attributes of a geographic community, such as the presence of settlement services and higher education institutions, facilitate immigrant settlement in non-metropolitan cities. Statistical analysis of census data on a sample of 131 cities was conducted. Specifically, descriptive statistics, correlation tests, and linear regression were used to study the variation in the proportion of the foreign-born residents in those communities between 2006 and 2011. Control variables included the size of nonmetropolitan cities, their distance from major immigrant-attracting metropolises, immigrant networks, median earnings, human capital value, and a labour activity index that emphasized full-time employment rates. Labour activity and the valorization of human capital were found to be strong predictors of variations in the immigrant population, while the 'welcoming' variables only proved to be a correlate. Among the 50 non-metropolitan cities that showed an increase in their proportion of immigrants, 38 were among the lowest tier within the sample in terms of population (10,000 to 60,000). And 20 of those were located in the Western provinces, with few to none of the welcoming amenities measured, but with the most robust labour activity. Results suggest that for non-metropolitan cities looking to attract immigrants, focusing solely on improving newcomer-friendly services and attitudes, without promoting economic development and creating jobs, may be an ineffective strategy. Moreover, contrary to the main stream notion (see Hyndman, Shuurman and Fiedler 2006), the size of cities did not appear a significant factor in attracting immigrants to Canadian non-metropolitan cities.

# **INTRODUCTION**

Immigration now plays an essential role in Canadian population renewal and labour force growth. It has become the main driver for net population increase with yearly caps at approximately 250,000 new permanent residents during the last decade (StatsCan 2010). Considering this continuous flow of job searchers, one could think human resource needs to be satisfied all over the country. But evidence show that nearly 75% of newcomers settled mainly in Montreal, Toronto and Vancouver during the same period (Krahn, Derwing and Abu-Laban 2005; Carter, Margot and Amoyaw 2008; Chagnon 2013). In 2011, according to census data, the seven most populous metropolitan areas, which hosted 48% of the population, also included 77% of the immigrants<sup>1</sup>, a 12% increase compared to 2006.

This situation creates disparities. On the one hand human capital – defined as individual's education attainment and job experience – is being underused in the big cities, since a greater proportion of immigrants now have to resort to survival jobs for longer periods (Ogbuagu 2012; Orcutt Duleep and Dowhan 2008). On the other hand, many smaller and remote cities struggle in capitalizing on human resource. For instance, Statistics Canada reported that some 88 census divisions – county or regional municipality level— had suffered a demographic decline between 2009 and 2010 (StatsCan 2011a). At facing attraction challenges, some smaller regions have not

<sup>&</sup>lt;sup>1</sup> This paper adopts Statistics Canada census definition of immigrant, that is an individual born outside of Canada, naturalized or not, excluding temporary statuses.

been able to significantly retain newly arrived immigrants. If not properly attended, these discrepancies can bring important economic and developmental consequences.

Against this 'metro-attraction' backdrop the question arising is why some regions succeed more than others? Is it just a matter of 'attractiveness,' which implies that smaller communities should feel responsible for being more or less interesting to immigrants? What factors could then shed light on their decision to move and invest themselves in smaller or distant communities? This paper reports on an exploratory observational research that investigated on some typical factors discussed in the literature, using accessible online data from the 2006 and 2011 Canadian censuses, and repertoires of institutions and organizations.

The main goal of this investigation has been to test whether 'welcoming' attributes of a community are tangible factors conducing to increased immigrant presence, holding other determinants constant. In the context where the federal immigration agency and various provincial partners are promoting a 'Welcoming community' approach to help smaller communities attract more immigrants, this research speaks to the validity of that policy. For that matter, it is hypothesized that a welcoming determinant such as upfront settlement services can have a positive effect on immigrant attraction in a sample of agglomerations along the non-metropolitan urban landscape. This effect is believed to vary positively with various independent variables embodying the economic vibrancy of the community, the valorization of human capital, the presence of higher education institutions and ethnic social networks, and the size of cities. The effect is conversely considered to vary negatively with distance.

The paper will first review currently discussed and researched factors related to regional development, and people and immigrants attractors to Canadian cities. The methodology section will explain the sample construction, define the variables, and describe the data acquired. Then results will be presented in the third section, prior to discussing their implications in the fourth. The main findings confirm the economic thesis over welcoming and amenity attributes, that is that job creation and salary levels do more at explaining the immigrant variation. Finally, at concluding, it will be argued that economically struggling communities cannot just rely on broad attitudinal strategies to attract the needed human resources supplied by immigration.

#### LITERATURE REVIEW

What strikes at conducting a literature review on this subject is two-fold. First, the dearth of specific studies embodying a comprehensive approach to immigrant re-settlement factors outside of the big cities in Canada, over time, is surprising. This might stem from the fact that non-urban centric issues are generally considered less mainstream, either for policy or research. Second, there is an amount of published studies of various connected interests, although scattered along many disciplines. Since the interest of smaller communities in attracting new residents, through immigration, is linked to socioeconomic sustainability issues, this review will be grouped under three categories: regional development, people attractors, and immigrant attractors.

#### **Regional development**

Traditional studies on regional economic growth in developed countries, including Canada, have shown that the size of cities and their proximity to big agglomeration economies positively influence local GDP and employment levels (Cuadrado-Roura 2001; Shearmur and Polèse 2007). Alongside this approach, Storper and Scott (2009) have exposed the relation between the location of firms and attraction of labour. Multiple factors can indeed be invoked among the OECD countries to positively affect regional growth: geographic location, natural resources, size of cities, demography, specialization, productivity, and human capital (Spieza and Weiler 2007). But among these, population and employment appear as key drivers.

This brief overview portrays human resource and human capital as clearly associated with regional growth and economic vitality. It is therefore plausible to assume such a connection in smaller Canadian cities, although with two caveats: 1) Rural regions have been developed mainly on natural resources, from which at least 50% of national exports are still based (FCM 2009); 2) Because of the historical demographic and ageing structure of these places, human capital is now rarely accounted as endogenous; therefore is has to be persuaded in.

#### **People attractors**

Employment might be among the most important factors to attracting the right crowd, but it is unlikely the only one influencing people's dwelling choice. Again, size of cities matters, in the Canadian context, because of the attractiveness of their local economy, their centrality in the regions, and the career opportunities and inner social and cultural vibrancy they offer (Hyndman, Shuurman and Fiedler 2006; Lepawsky, Phan and Greenwood 2010). Size is also an explanation for a higher presence of university degree holders (Delisle and Shearmur 2010) and students (Darchen and Tremblay 2010), who are more easily associated with human capital.

The size approach seems then reliable at explaining the capacities of communities to attract people, but cannot stand alone in the Canadian context. In that regard, Lepawsky and colleagues (2010) have made a clear point in showing that distance plays a negative role, thus dampening the size effect. For instance, they have demonstrated that mid-sized and vibrant cities will serve as spring boards to individuals wanting to satisfy higher expectations, thus moving out after a while toward major economic hubs.

#### **Immigrant attractors**

For immigrants, in the same way, the international dimension of Montreal, Toronto, and Vancouver plays as a magnet, even if they first landed elsewhere (Lepawsky, Phan and Greenwood 2010). This is consistent with the fact that people hardly envisaged themselves too far from their own social network – comprised of family members, friends, compatriots or likewise immigrants, as highlighted by an international survey on immigrant destination choice (Eurostat 2001). There is no revelation then in asserting that a concentration of immigrants in an area will have an effect on others' decision (MacDonald 2004), a phenomenon called 'chain migration.'

Social networks are said to intervene in many aspects of the settlement experience and destination choice. But here too, it stands alongside other factors, such as employment or business opportunities (Sherell, Hyndman and Preniqi 2004; Akbari 2006; OCASI 2012), education infrastructures, and community size (Hyndman, Shuurman and Fiedler 2006; Chénard and Shearmur 2012). Once established though, immigrant re-settlement patterns can be influenced by factors related to their employment outcomes, such as local economic vitality and recognition of their skills and education (Krahn, Derwing and Abu-Laban 2005; Wiginton 2013). These patterns, are not that different from Canadian-born, as demonstrated by Finnie (2004), suggesting a potential for remote communities to attract less recent immigrants, especially if language barriers have been overcome.

On the policy side, a specific response to settlement dissemination has evolved between the federal government and most provinces and territories since the end of the 1990s, through the Provincial Nominee Program (PNP). By letting provinces promote themselves and nominate applicants that match their skill needs, some positive retention effects have been observed mainly in the West (80-95%) but with challenges in the Maritimes (40%) (CIC 2011). At analyzing these trends, Golebiewska (2009) stresses that in absolute numbers, net settlement results in the smaller regions are still too low to influence current demographic declines.

Finally, a promising research and knowledge transfer stream is being invested by Immigration Refugees and Citizenship Canada (IRCC), in conjunction with scholars and practitioners, regarding the "Welcoming Communities" trend (Burr 2011). This additional variable puts the onus of immigrant retention on a set of factors for which the community needs to take charge (Walton-Robert 2005; Stewart et al. 2008; Esses et al. 2010). Coordinated immigrant settlement services are front and center, obviously, of expected local attitudes for immigrants to feel welcomed and wanted. They should not downplay however the importance of building community networks capable of instilling multicultural inclusiveness and openness, such as through general services delivery, thus trying to avoid ethnic discrimination (Lai and Huffy 2009).

#### **METHODOLOGY**

To test the main hypothesis, the research followed an exploratory observational design gathering publicly available data on immigration outcomes and defined control variables for a sample of lower-tier census metropolitan areas (CMA) and all of census agglomerations (CA)<sup>2</sup> listed by Statistics Canada for the 2011 Census (StatsCan 2011b). Accordingly, nine variables were analyzed through descriptive statistics, correlation and association tests (Pearson, ANOVA and Chi<sup>2</sup>), and submitted to an OLS regression using "R" software. A subsequent series of tests were also performed on the model retained to assert its level of fit. In that regard, the distribution of residuals is regular.

<sup>&</sup>lt;sup>2</sup> CMAs and CAs are census delimitations that take in account a high level of economic interdependency between a core urban center and surrounding municipalities. This dependency is mostly measured by the level of work-related commuting toward the core. In the case of a CMA, the population must be of at least of 100,000, with an urban center of minimum 50,000. For a CA, the inner core must be of at least 10,000.

#### Sample construction

The demarcation of agglomerations for the sample followed two major criteria. Firstly, all of the 2011 denominated CAs (114) were included without exclusion factor<sup>3</sup>. Secondly, only the smallest CMAs with an emergent immigrant population were included – 17 out of 33; see Appendix 1 for a list of all the CAs-CMAs included and excluded. These were defined as third-tier CMAs both for their smaller size and their lower concentration of immigrants. As such, they did not possess more attractive attributes in appearance than the aforementioned CAs, out of their slightly bigger size – 116,000-233,000 in 2006 numbers, compared to 10,000-114,000 for the CAs. Since size intervenes as a control variable, their presence in the sample was assumed relevant to assert the influence of that dimension.

Nine second-tier CMAs were excluded mainly because of their size, which ranks them in a different class range (330,000-720,000). Six of those agglomerations are located in the Southern Ontarian peninsula, benefitting from the economic vitality and international attractiveness of the Greater Toronto Area (GTA) and of the Golden Horseshoe, or submitted to border effects with the United States. These agglomerations have been advantaged by a historically high level of immigrant settlement, with resulting levels from 54,000 to 166,000, compared to a maximum of 34,000 in the stated 131 case sample. Because of this exclusion criteria, Quebec City and Halifax were also discounted. Even though their immigrant population was still emergent during these years (26,000 and 27,000 respectively), it was assumed that the combination of their size and posture as provincial capitals would have brought outliers in the sample. The same applied to Victoria, BC, who enjoyed 62,000 residents from immigration sources in 2006.

The remaining seven biggest CMAs constitute the first-tier level, characterized for the purpose of this study as 'immigrant magnets.' Not only is their size disproportionate relative to the defined sample, with populations ranging from 695,000 (Winnipeg) to 5.4 million (Toronto), but their immigrant presence is also more substantial, from 123,000 to 2.3 million (still in 2006 numbers). These conditions, aligned with their advantageous economic situation, have made these destinations obviously appealing for landing immigrants or those relocating, in search of likewise immigrant networks and multicultural settings. These CMA's will serve then as the point zero to calculate distances as explained below.

# Dependent variable

To capture the immigrant attractiveness effect of the sampled cities, including their capacity at renewing their population base, the dependent variable has been defined as the 'variation in **percentage points**' of each city-case's immigrant proportion between the 2006 and 2011 censuses.

While population counts are based on census data, the immigrant numbers are Statistic Canada's estimates based on two different survey tools. The first, in 2006, is the mandatory 'long-form'

<sup>&</sup>lt;sup>3</sup> Five new CAs were added in 2011 compared to the 2006 list, and two retrieved (discounted from the sample). The five new immigration estimates were compared to the corresponding city limits in 2006, which equate to the core urban center of these CAs.

survey questionnaire delivered to an evenly distributed sample of 20% of dwellings. With nonresponse rates in the three percent, the immigrant population estimates drawn have been considered robust by the scientific community and generally representative at every scales of the Canadian geography. The second, in 2011, is the National Household Survey (NHS), a tool designed to replace the former long-form mandatory instrument by a voluntary one, as mandated by the federal legislator. Statistics Canada expended its sample in this case, to counterbalance an expected jump in non-response rates (StatsCan 2013). As these came back effectively quite higher – 15 to 45% for each agglomeration in the present sample—, with a lack of discloser regarding standard errors estimates, less confidence can be lent to the 2011 immigrant estimates, particularly at the smaller census sub-division (i.e., small municipalities) and census track (small parts of neighborhoods in bigger cities)<sup>4</sup>. Despite this limitation and the delicateness of comparing estimates from two distinct survey methods, as it is the case, an assumption has been made that the overall 2011 immigrant estimates at the CA and CMA aggregate level are probably within acceptable margins of error.

Last detail regarding the dependent variable measurement procedures concerns the adjustment of the 2006 immigrant estimates to the 2011 boundary changes of certain agglomerations. Statistics Canada already published adjusted 2006 population counts to be able to compare to the 2011 ones over the same place boundaries – these can evolve with time, as agglomerations grow or cities go through amalgamation. Since no similar adjustment were found for the 2006 immigrant estimates, these were weighted according to the population count proportional adjustment in 38 cases, thus to better align immigrant estimates comparisons on the same territorial basis.

# Independent variables

The independent variables were defined to portray principal features of the sampled agglomerations that are believed to be influential with regard to immigrant attraction in the research literature. In other words, features that immigrant settling or resettling within Canada would expressly look for in their decision process. Without being exhaustive, considering the time constraints and access to data limitations, these variables constitute nevertheless an array of relevant dimensions for the exploratory purpose of this research.

To embody a first manifestation of the welcoming attributes of the communities, a categorical variable was constructed to measure the presence of upfront formal 'settlement services'. Using IRCC online comprehensive lists of settlement services provided for each provinces<sup>5</sup>, more than 200 organizations related to the sample of cities were surveyed through their specific websites. A code was assigned for each agglomeration as follow: 0 = no service or partial services embedded or masked by the primary mission of an organization; 1 = a full service range embedded, visible but promoted among other classes of services; 2 = a full service range with complete exposure by

<sup>&</sup>lt;sup>4</sup> As a matter of fact, Statistics Canada has not released 1,800 sublevel territorial NHS estimates all over the country, which are zones with non-response rates over 50% (probably because of evident non-response bias). This situation hinders access to evidence concerning rural communities or big city districts populated by economically precarious residents and newly arrived immigrants, less prone or equipped to answer a long questionnaire pertaining to a process they do not fully understand (OCUL 2014).

<sup>&</sup>lt;sup>5</sup> www.cic.gc.ca/english/newcomers/map/services.asp

an organization promoting primarily immigrant settlement and inclusion as its core mission. To be quoted, the organization had to exist and be delivering services in 2006 and onward, in order to measure its potential effect over a five year period. To be consistent with this logic, if services appeared during the 2006-2011 period, the quote was kept to 0.

A second categorical variable was included, this time to account for the presence of '**post-secondary institutions**'. As seen earlier, education programs are also believed to play a role in destination choice. Accordingly, this variable should account for potential post-secondary educational attainment in the community, either for immigrants themselves wishing to update their own skills, or simply wanting more complete on site educational opportunities for their own children. A comprehensive list of all Canadian higher education institutions provided by the Canadian Information Centre for International Credential<sup>6</sup> was screened. Communities with no such accredited institutions were quoted 0. Those with only a college on site were quoted 1. When only a university was present, the quote was 2. Finally, if both college and universities were available, the quote was upgraded to 3. Faith-based theological seminars were excluded.

The rest of the control variables are continuous ones.

**'Immigrant networks**' is meant to account for the attractive effect of multicultural and immigrant-based social networks. This dimension is simply measured by the adjusted 2006 immigrant estimates, on the assumption that more immigrants with a foothold in the community heightens the propensity to find structured immigrant networks and informal social networks. This assumption was similarly adopted by Hyndman et al. (2005) to measure the immigrant network appeal of smaller cities in their British Columbian study.

'**Human capital valorization**' is set to measure the proportion of university degree holders among the active population (older than 15) that were currently earning from a full-time paid job or self-employed during the whole year before the 2006 census. Since skilled and educated immigrants to Canada were favoured by the point system evaluation of permanent residence demands, their university degree attainment is higher than the Canadian average. It is therefore assumed that a higher valorization of immigrant's human capital can be attractive, although the variable does not take in account wages levels nor job type, but simply a higher or lower level of degree holders employed in the community. Nevertheless, a higher level of degree holders employed can still inform whether higher-skilled labour force is sought for. This variable is also closely related to economic vitality.

The next two variables attest for the economic vibrancy of the communities, in absence of local GDP levels. The first one is simply the annual '**median earnings**' of the active population employed full time during the whole year before the 2006 census (in 2006 dollar value). This measure focuses more on labour activity as a consequence of economic activity than 'income' which includes in the census all other sources of revenue, such as retirement, financial, or transfer payments. The second is a 'labour activity' index using the proportion of the active population earning from an all-year full-time paid job, divided by the annual unemployment rate.

<sup>&</sup>lt;sup>6</sup> www.CICIC.ca

This index is considered for this research as a fair measure of economic vibrancy, translating into direct involvement of the workforce. By comparison, the participation rate, which is more typically used, indiscriminately includes both the active population employed as well as those looking for a job. As a result, similar high participation rates can hide an unemployment differential between communities. The current labour activity index avoids this trap. It gives the best index points to the highest proportion of people earning amidst a lower unemployment rate. Similarly, those faring worse will be the ones with a lower proportion of people earning, accompanied by the highest unemployment rate. The observations with a high proportion of people earning along with a higher unemployment rate will be ranked proportionally in between –see Appendix 2 for a comparative example among a subset of cases drawn from the sample.

The last two variables are set to control for geographical influences as reported by the literature. **'Size'** is obviously measured by the 2006 adjusted population counts of each agglomeration. As for **'distance**,' it was determined in the shortest road-trip (in kilometres) from the closest immigrant magnet centers, preferring intra-provincial links whenever possible, or as postulated by economic interdependencies. As a result of the absence of such a point zero in the Maritimes, all of the East Coast agglomerations have been aligned with Montreal<sup>7</sup>.

#### RESULTS

Immigrants have increased by 5% in sheer numbers from 2006 to 2011 among the sample as a whole. Notwithstanding, at observing the distribution of the dependent variable frequencies, immigrant participation in the demographic consolidation of these communities tells another story. Proportionally to city size, the immigrant presence has declined in 81 of the cases<sup>8</sup>. As shown in Table 1, which portrays the distribution of cities who lost and gained immigrant presence relative to their size, the smaller-sized cities (10,000-59,000) are more numerous in the losses but also take up 76% of the gains. In fact, 38 of these 95 lower-tier cases registered an increase. It is among this same lower-tier subset that outcomes fluctuate the most, from -4.0 to 5.5 percentage points. It is finally there that 80% of the gains greater than 2 percentage points are located, generally showing a higher growth rate than the upper-tiers when occurring.

<sup>&</sup>lt;sup>7</sup> This is simply an arbitrary cut off, Montreal being the nearest. It does not mean that this city is considered more attractive to immigrants than Toronto or Ottawa.

<sup>&</sup>lt;sup>8</sup> The number of cases that lost immigrants in absolute numbers is actually 68, which is still a majority.

City size range	Lost (%)	Gained (%)	Total (%)	Variation range
116k-233k CMAs	9 (11.1)	8 (16)	17 (13)	-1.7 to 2.9*
60k-115k CAs	15 (18.5)	4 (8)	19 (14.5)	-1.9 to 1.1
10k-59k CAs	57 (70.4)	38 (76)	95 (72.5)	-4.0 to 5.5
Total	81 (100)	50 (100)	131 (100)	

Table 1: 2006-2011 immig	grant proportion	losses and gains	hy city size range
Table 1. 2000-2011 IIIIIII	grant proportion	iosses and gains	by city size range

\* Note: If two one-offs cases with higher rates were discounted from this group (Saskatoon and Regina), the maximum increase would then be of only 1 percentage point.

Another trend concerns these outcomes' regional distribution. Surprisingly, especially considering the appeal for Toronto and Vancouver, the two provinces which communities in the sample registered the most losses, in terms of immigrant proportion, are Ontario (31 decreases), and British Colombia (23 decreases). Conversely, 20 communities saw their immigrant proportion increase in the Prairies (Alberta, Saskatchewan and Manitoba). This phenomenon however should not lend to think that the bigger provinces are losing ground as a whole, in terms of immigrant settlement. It has more to do with a shift in the concentration of the immigrants along this layer of the urban landscape. It goes either in favour of the bigger cities, or following the path of employment growth. Globally however, the current sample reveals how the smaller cities seem to have more difficulties in keeping their current immigrant residents or in attracting new ones, except for some successful cases. Regression results give more insights as how to explain this.

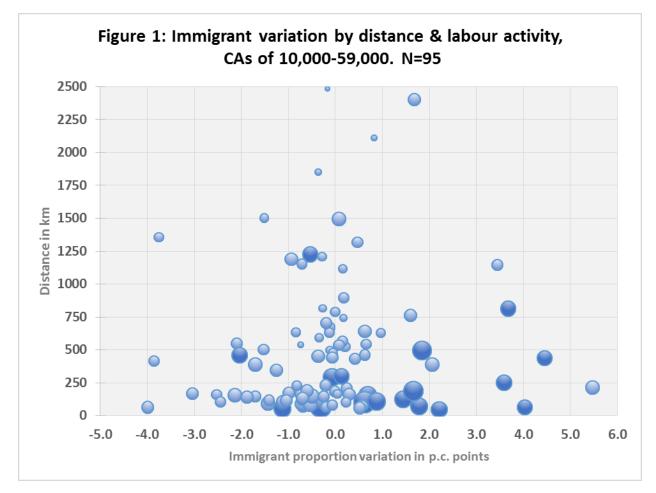
Independent variable	Coefficient estimate	(SE)	
(Intercept) Settlement services Post-secondary institutions Immigrant networks Human capital valorization Median earnings Labour activity Size Distance	-1.1849 0.1568 0.0921 -0.0001 0.1324 -0.0001 0.1329 0.0000 0.0004	(0.8549) (0.1638) (0.1553) (0.0000) (0.0600) (0.0000) (0.0289) (0.0000) (0.0003)	* * **

# Table 2: Immigrant attractiveness determinants ofCanadian non-metropolitan agglomerations

Notes: The dependent variable is the 2006-2011 variation of the proportion of immigrant estimates in % points. Two-tailed tests: \*\*\* = p < .001, \*\* = p < .01, \* = p < .05. Adjusted  $R^2$  = .2349. N=131.

Indeed, the linear regression model presented in Table 2 reveals statistically significant results with substantial effects primarily at 'labour activity' and 'human capital valorization.' As such, these findings suggest that the level of labour engagement, a direct consequence of local economic vibrancy, and the proportion of university degree holders among the active population earning from a job, are strong predictors of the immigrant proportion variation. In other words, a stronger local offer of full time jobs would be the right and foremost recipe for the communities sampled in this study's to attract more immigrants. The same would go for a higher-skilled demand, although these two variables are not correlated in the data. As such, a higher labour activity is not necessarily associated with a higher presence of university degree holders 'earning' is generally paired in the data with a regional administrative center that hosts more public services, colleges and universities.

To understand further the implication of economic activity on the growth of immigrant presence, Figure 1 compares the abovementioned smaller-tier agglomerations -10,000-59,000, where the highest increases are observed— with distance and labour activity outcomes. The graph first teaches that among the18 cases with the highest labour activity index (darker blue), 13 exhibit a positive increase, with five over 2 percentage points.



Note: Spheres represent labour activity frequencies, proportionally sized according to the index values, ranging from 2.3 to 31.0. The darker spheres highlight the upper area of the index, from 15.0 to 31.0. There are 20 cases pertaining to this upper-end group in the sample, 18 of which in this subgroup and two in the middle-range CA group.

Second, one cannot dismiss the relative proximity of these positive outcomes to magnet centres when 9 of the 13 higher labour index with positive increase are within a 250 km range. To support the trend observed here, a Person's test between the labour activity and distance variables confirms a negative correlation. This means that higher labour activity points on the index would generally be associated with less distance from the big cities. The matter that 'distance' is not statistically confirmed by the regression analysis only signifies that it cannot be ascertained as a predictor of the immigrant variation in the data. But labour activity can.

As can 'immigrant networks' and 'median earnings.' Faring at the 95% confidence interval, the effect of those two variables appears however negative, that is they contribute to cutting down the immigrant proportion as their value rises, all things being equal. This can seem counterintuitive but nevertheless logic, considering the sample and related data. The biggest immigrant proportion gains happen mainly at the lower stratum of the sampled cities –10,000-59,000, 95 cases out of the total 131—, with lower median earnings and less immigrants as a general trend. By the same time, the highest median earnings observed are mainly among the CMAs in the sample, which also bear bigger immigrant networks. Since these last present a lower increase in immigrant proportions, compared to the smaller-city group, the resulting effect

in the data of increased earnings or immigrant networks appears negative. Shearmur and Polèse 2007 observed the same negative relationship between Canadian wage levels and employment growth through a thirty year period ending in 2001. In no way should the current result be interpreted as immigrants being more prone to accept less rewarded positions or to avoid the presence of other immigrants.

These informative findings should not overshadow the absence of corroboration regarding 'settlement services' and 'post-secondary institutions.' These two amenities, theoretically relevant to immigrant settlement choice, are hereby disconfirmed as predictors of the immigrant presence variation. A Chi<sup>2</sup> test between them asserts nevertheless their mutual association. On the one hand, the cities with the highest points at both variable scales are mainly among the CMAs (7 out of 11 with all amenities accounted). On the other hand, as one would expect, those with none of the amenities are all but one situated among the smaller 10,000-59,000 CAs (61 out of 62). 20 of these smaller agglomerations have seen their immigrant presence vary positively, with 8 cases above 1%, including a peek at 4.5%. But on the other side some 40 'non-amenity' cases all fare negatively, with the same kind of extremes. Although tempting, no inference on these amenities' effect should be allowed on the basis of these descriptive statistics, especially when the regression model does not ascertain their influence. Notwithstanding, these variables still make sense in the data since an ANOVA concedes some correlation at distinct and intersecting levels. For example, settlement services and post-secondary institutions are respectively associated with immigrant networks and human capital valorisation. In turn, settlement services and human capital are also respectively correlated with the dependent variable.

Finally, 'size' do not stand as a predictor, contrary to what other studies have highlighted. In this case, results might have to do with the sampling construction, which discounted the rest of the biggest CMAs, considered as pertaining to another category. Therefore, along the present stratum of non-metropolitan agglomerations, size is not as much an advantage as it was thought when counting the dependent variable as the immigrant proportion variation, except regarding the presence of amenities and services. Although it is probable that bigger cities will attract more immigrants in numbers, because of the scale effect, especially if they are landing as permanent residents (Hyndman, Shuurman and Fiedler 2006), it does not mean that the proportion will contribute as much to their demographic consolidation. Comparatively, Shearmur and Polèse (2007, p.468) demonstrated that size alone was not a direct cause of employment growth, in the Canadian context, but rather the proximity to a metropolitan area, as the current data also suggest relative to labour activity. This also gives credit to the 'distance' variable. Even though it suffers the same non-statistically significant result in the model, it is still clearly correlated by a Pearson's test, especially with labour activity, as shown earlier. Consequently, size and distance should remain relevant control variables to pursue research on this matter.

# **DISCUSSION**

In sum, the demographic consolidation of Canadian cities and agglomerations, outside of the usual immigrant magnet centers, is not doing that well. 81 out of the 131 cases in this study (i.e., 62%) have witnessed a decline in term of immigrant proportion, 54 of which in Ontario and British Columbia while 20 communities in the Prairies gained. Strikingly, 76% of the overall

increases were located among the lower-tier CAs, accounting for 8 of the 10 biggest increments. These latter were associated with a higher labour activity, a sign that economic vibrancy creating full time jobs is a stronger attractor of immigrants, as the regression analysis suggests. Additionally, 18 out of the 20 highest quoted on the labour activity index were situated in the West, with 14 in Alberta alone. None were in the Maritimes. This analysis concurs in identifying that the few successes registered along the non-metropolitan urban landscape is mainly due to expanding economic activity, corresponding in good part to the oil boom of that period.

It is noteworthy that none of the 20 abovementioned highest quoted cases showcased all of the education and settlement amenities combined. Moreover, 12 of those did not benefit from any of the amenities. Considering that the main hypothesis stating that 'welcoming' determinants can have a positive effect on immigrant settlement is not substantiated by the regression, the case becomes even harder to support on the sole basis of the data. A veil of doubt arises then at assessing strategies that would rely before all on the welcoming discourse to attract. Alongside this, the core findings aligning labour activity and human capital valorisation as predictors of immigrant settlement growth strengthen the economic thesis. In other words, immigrants will primarily follow the path of job creation to settle in smaller urban areas, or the path of jobs commensurate with their educational and skill attainment. Krahn et al. (2005) identified the same two determinants as contributing to the "retention of newcomers in second- and third-tier cities" in Alberta (p.872), along with the presence of compatriots. Although their study concerned only a population of sponsored refugees, the similarity in the findings strikes. This being said, the current analysis does not allow discrediting efforts on behalf of communities to appear more welcoming and inclusive, particularly through settlement services. It does question though the soundness of attracting immigrants on the sole basis of welcoming attitudes and openness in the absence of a job creating strategy.

Regardless, correlations are validated between 'settlement services' and most of the variables, except labour activity and distance. As the only dimension introduced to operationalize the welcoming community concept in the current exploratory research, 'settlement services' still shows a breadth of relevant associations that is promising. Even amidst measurement biases such as those generated by the review of Internet sites and the resulting coding. With more resources and time, measurement could be improved and other categories implemented, such as the existence of ethnic cultural and faith-based associations, multicultural promoting events, active immigration networks and their strategy, to name a few. Further research could then help flesh out these relationships. The sample should be extended in that regard to include a smaller-sized subset of cities, for example between 5,000-10,000, and the effect could be stretched out to a 10 year span, particularly after the next 2016 census.

More limitations inherent to research design and constraints must be acknowledged. First, the variables do not capture the longitudinal behavior of immigrants along the geography, nor since when they have been living in Canada. As such, the dependent variable itself is only a measure of variance of the immigrant proportion in the agglomerations over time. What could shed more light in future rounds would be to compare the average length of stay of immigrants, and the proportion of family settling, assuming that these are signs of more investment in stability and reliance to services. The effect of settlement organizations and welcoming strategies could then be analyzed against the integration and retention levels of these populations. Second, to measure

current job level attainments of the immigrant population according to their skills would better represent human capital valorization, and help clarify this dimension's link with settlement outcomes. Third, adding control variables to account for ethnic origin could also be appropriate to measure some attractive features of destination communities. In that regard, some immigrant groups have been known to settle in favorite destinations, thus suggesting co-nationals attractive effects. Fourth, surely this exploratory study suffers omitted variable bias. For example, regional factors and direct policy influence have not been included. Additionally, more measures of economic outcomes that are comparable between cases and over time appear essential.

A keeper, for that matter, is the 'labour activity index' preferred in this research. Its face validity in terms of capturing the direct outcome of economic vibrancy that is full time employment turnout, unbiased by hidden unemployment rates, makes more sense. Its usefulness in associating labour activity with higher increases in immigrant proportion, where the economy has been flourishing, particularly in the Prairies, has demonstrated its reliability and robustness.

# CONCLUSION

This paper reported on an empirical research on the topic of immigrant presence in Canadian non-metropolitan agglomeration cities. To test whether welcoming attributes of these communities can foster more immigrant settlement in order to support their demographic consolidation, a quantitative research design has been implemented throughout a sample of 131 agglomerations with an array of control variables. These where set to verify the influence of settlement services along with other consensual dimensions over the immigrant proportion fluctuation between 2006 and 2011. The data allowed expressing concerns about the negative evolution of immigrant presence in a majority of those cities. Regression results invalidated the initial thesis but strikingly confirmed the economic and human capital dimensions as strong predictors of the immigrant presence variation in this sample. This lead to suggest that investing solely on welcoming attributes of communities, such as in settlement services, could fall short of their target if not accompanied by an effective local development strategy and job creation policy.

This last line of reasoning can appear obvious and intuitive. Nevertheless, the analysis provided should remind policy-makers that economically struggling communities cannot just rely on attitudinal strategies to move forward, especially considering strong structural tendencies such as the 'Prairies effect' in job creation (Shearmur and Polèse 2007). Investments by all levels of governments in local immigration partnerships and in education to diversity are surely good ways to "communicate the appeal of less prominent communities" (Hyndman et al. 2006, p.1). But this approach alone may not yield expected outcomes if not accompanied by stronger local development policies. Adversely, the current neoliberal polity tends to warrant letting communities struggle on their own to attract human resources and new residents, including immigrants, and compete with other cities, in order to consolidate their declining demography. And if the declining communities fail, they will bear themselves the brunt of the responsibility. The problem with this logic is that all Canadian regions are not developing on the same ground and that receding communities left to their own devices are at risk of accelerated if not irreversible decline.

#### REFERENCES

- Akbari, A. H. 2006. « Attirer et Retenir les Immigrants : Quelles Sont les Solutions Viables et les Mesures Prises dans le Canada Atlantique? » *Nos diverses cités 2*: 142-147.
- Burr, Kathleen. 2011. "Local Immigration Partnerships: Building Welcoming and Inclusive communities through Multi-Level Governance." *Horizons Policy Research Initiative*, 1-9.
- Carter, Tom, Morrish Margot, and Benjamin Amoyaw. 2008. "Attracting Immigrants to Smaller Urban and Rural Communities: Lessons Learned from the Manitoba Provincial Nominee Program." *Journal of International Migration & Integration* 9: 161-183. doi: 10.1007/s12134-008-0051-2\*.
- Chagnon, Jonathan. 2013. *Migration: International, 2010 and 2011. Component of Statistics Canada Catalogue no. 91-209-X.* Report on the Demographic Situation in Canada. Ottawa: Statistics Canada.
- Chénard, Philippe, and Richard Shearmur. 2012. "Immigration Attraction or Local Production? Some Determinants of Local Human Capital Change in Canada." *Canadian Journal of Urban Research* 21/1: 79-108.
- CIC Citizenship and Immigration Canada. 2011. *Evaluation of Provincial Nominee Program*. Ref. No.: ER201110.01E. Ottawa.
- CIC Citizenship and Immigration Canada. 2012. *Fact Sheet Provincial Nominee Program*. Retrieved online http://www.cic.gc.ca/english/resources/publications/employers/provincial-nominee-program.asp.
- Cuadrado-Roura, Juan R. 2001. "Regional Convergence in the European Union: From Hypothesis to Actual Trends." *Annals of Regional Science* 35: 333-56.
- Darchen, Sebastien, and Diane-Gabrielle Tremblay. 2010. "What attracts and Retains Knowledge Workers/Students: The Quality of Place or Career Opportunities? The Cases of Montreal and Ottawa." *Cities* 27: 225-33.
- Delisle, Françoise, and Richard Shearmur. 2010. "Where Does All the Talent Flow? Migration of Young Graduates and Nongraduates, Canada 1996–2001." *The Canadian Geographer* 54/3: 305-323.
- Derwing, Tracey M., and Harvey Krahn. 2008. "Attracting and Retaining Immigrants Outside the Metropolis: Is the Pie Yoo Small for Everyone to Have a Piece? The Case of Edmonton, Alberta." *Journal of International Migration and Integration* 9: 185-202.

- Esses, Victoria M., Leah K. Hamilton, Caroline Bennett-AbuAyyash, and Meyer Burstein. 2010. *Characteristics of a Welcoming Community*. A Report prepared for the Integration Branch of Citizenship and Immigration, Ottawa.
- Eurostat. 2001. "Why Do People Migrate?" *Statistics in Focus. Population and Social Conditions* 3/1, Cat. No. KS-NK-01-001-EN-I, European Communities.
- FCM Federation of Canadian Municipalities. 2009. Wake-Up Call: The National Vision and Voice We Need for Rural Canada. The Federal Role in Rural Sustainability.
- Finnie, Ross. 2004. "Who moves? A Logit Model Analysis of Inter-Provincial Migration in Canada." *Applied Economics*, 36/16: 1758-1779. doi: 10.1080/0003684042000191147\*.
- Golebiowska, Kate. 2009. "Canadian Regional Immigration Policies: Provincial Strategies and Their Outcomes in a Comparative Perspective." *Korea Review of International Studies* 11/2: 3-32.
- Hyndman, Jennifer, Nadine Shuurman, and Rob Fiedler. 2006. "Size Matters: Attracting New Immigrants to Canadian Cities." *Journal of International Migration and Integration* 7/1: 1-25.
- Krahn, Harvey, Tracey M. Derwing, and Baha Abu-Laban. 2005. "The Retention of Newcomers in Second- and Third-Tier Canadian Cities." *International Migration Review*, 34/4: 872-894.
- Lai, Daniel W., and Nedra Huffey. 2009. "Experience of Discrimination by Visible Minorities in Small Communities." *Our Diverse Cities*, *6*, 124-129.
- Lepawsky, John, Crystal Phan, and Rob Greenwood. 2010. "Metropolis on the Margins: Talent Attraction and Retention To the St. John's City-Region." *The Canadian Geographer* 54/3: 324-46. doi: 10.1111/j.1541-0064.2010.00315.x\*.
- Mcdonald, James T. (2004, Summer ). Toronto And Vancouver Bound: The Location Choice Of New Canadian Immigrants. *Canadian Journal Of Urban Research*, 13(1), 85-101.
- OCASI Ontario Council of Agencies Serving Immigrants. 2012. *Making Ontario Home. A Study of settement and integration services for immigrants and refugees*. Toronto.
- OCUL Ontario Council of University Libraries. 2014. Cancellation of the mandatory longform census - background and impact. Accessed March 1, 2015. <u>http://www.ocul.on.ca/node/3400</u>.
- Ogbuagu, Buster C. 2012. "Nice CV! You Will Hear From Us: Canadian Labor Market and the Phenomenology of the Marginalized Ethnic Professional Migrant." *Journal of Social Sciences*, 8/1: 1-17.

- Orcutt Duleep, Harriet, and Daniel J. Dowhan. 2008. "Research on Immigrant Earning." *Social Security Journal*, 68/1: 31-50.
- Pratt, Andy C., and Thomas A. Hutton. 2013. "Reconceptualising the Relationship between the Creative Economy and the City: Learning from the Financial Crisis." *Cities* 33: 86-95.
- Shearmur, Richard, and Mario Polèse. 2007. "Do Local Factors Explain Local Employment Growth? Evidence from Canada, 1971 2001." *Regional Studies*, 41/4: 453-471. doi: 10.1080/00343400600928269\*.
- Sherrell, Kathy, Jennifer Hyndman, and Fisniq Preniqi. 2004. "Sharing the Wealth, Spreading the "Burden"? The Settlement of Kosovar Refugees in Smaller B.C. Cities." Research on Immigration and Integration in the Metropolis. *Working Paper Series* 04/06.
- Spiezia, Vincenzo, and Stephan Weiler. 2007. "Understanding Regional Growth." *The Review of Regional Studies* 37/3: 344-366.
- StatsCan Statistics Canada. 2010. Population Projections for Canada, Provinces and Territories 2009 to 2036. Catalogue no. 91-520-X, Ottawa.
- StatsCan Statistics Canada. 2011a. Annual Demographic Estimates: Subprovincial Areas. 2005 to 2010. Catalogue no. 91-214-X, Ottawa.
- StatsCan Statistics Canada. 2011b. *Standard Geographical Classification (SGC) 2011*. Accessed March 1, 2015. <u>http://www.statcan.gc.ca/subjects-sujets/standard-norme/sgc-cgt/2011/sgc-cgt-intro-eng.htm#a4</u>.
- StatsCan Statistics Canada. 2013. National Household Survey User Guide. Catalogue no. 99-001-x2011001. Accessed March 1, 2015. <u>http://www12.statcan.gc.ca/nhs-enm/2011/ref/nhsenm\_guide/index-eng.cfm</u>.
- Stewart, Miriam, Joan Anderson, Morton Beiser, Edward Mwakarimba, Anne Neufeld, Laura Simich, and Denise Spitzer. 2008. "Multicultural Meanings of Social Support among Immigrants and Refugees." *International Migration*, 46/3: 123-159.
- Storper, Micheal, and Alan Scott. 2009. "Rethinking Human Capital, Creativity and Urban Growth." *Journal of Economic Geography* 9: 147–167.
- Walton-Roberts, Margaret. 2005. "Regional Immigration and Dispersal: Lessons from Small-and Medium-Sized Urban Centres in British Columbia." *Canadian Ethnic Studies*, 37/3: 12-34.
- Wiginton, Lindsay K. 2013. Canada's Decentralised Immigration Policy Through a Local Lens: How Small Communities Are Attracting and Welcoming Immigrants. Adapted from a Supervised Research Project, completed in partial fulfillment of the Masters of Urban Planning degree, McGill University, ISBN 978 1 895397 79 6.

# **Appendix 1: Sample list and exclusions**

Sample	Population 2006	Immigrant estimates 2006	Sample (Continued)	Population 2006	Immigrant estimates 2006
		(Adjusted)			(Adjusted)
CAs			CAs		
Strathmore	10,280	755	Sept-Iles	27,827	400
Bay Roberts	10,507	95	Thetford Mines	28,110	365
Sylvan Lake	10,703	400	Miramichi	28,773	640
High River	10,716	1,070	Baie-Comeau	29,674	210
Lacombe	10,752	695	Stratford	30,516	3,465
Dawson Creek	10,994	810	Alma	31,864	215
Steinbach	11,066	1,665	Owen Sound	32,259	2,290
Elliot Lake	11,549	1,500	Val-d'Or	32,288	355
Wetaskiwin	11,689	860	Saint-Georges	32,902	265
Ingersoll	11,760	895	Moose Jaw	33,360	1,585
Lachute	11,832	275	Bathurst	34,106	475
Estevan	11,883	285	Campbell River	34,707	3,700
Cold Lake	11,991	585	Midland	35,432	2,815
Canmore	12,039	1,885	Woodstock	35,822	4,345
Cowansville	12,182	390	New Glasgow	36,288	885
Hawkesbury	12,267	495	Brockville	39,668	3,435
Portage la Prairie	12,728	685	Salaberry-de-Valleyfield	39,672	605
Prince Rupert	13,392	1,665	Orillia	40,532	4,085
Thompson	13,446	775	Rouyn-Noranda	40,650	490
Grand Falls-Windsor	13,558	190	Prince Albert	40,766	1,640
Temiskaming Shores	13,654	480	Penticton	41,303	6,930
Petawawa	14,651	820	Duncan	41,387	5,680
Tillsonburg	14,822	2,045	Timmins	42,997	1,765
Kenora	15,177	745	Victoriaville	43,195	900
Squamish	15,256	3,145	Joliette	43,306	1,085
Terrace	15,420	2,050	Truro	45,077	1,810
Camrose	15,630	1,025	Sorel-Tracy	46,595	820
Summerside	16,153	470	Grande Prairie	47,107	4,050
Salmon Arm	16,205	1,640	Brandon	48,256	3,065
Dolbeau-Mistassini	16,257	95	Rimouski	48,918	790
Port Hope	16,390	1,725	Leamington	49,741	10,440
Swift Current	16,533	670	Courtenay	51,383	6,390
Powell River	16,537	2,490	Wood Buffalo	52,643	5,785
Okotoks	17,150	1,485	Saint-Hyacinthe	54,976	1,825
Amos	17,176	135	Vernon	55,418	6,375
Collingwood	17,290	2,065	Shawinigan	56,408	410
Yorkton	17,438	675	Cornwall	58,485	4,575
Campbellton	17,878	315	Charlottetown	59,325	2,555
North Battleford	18,081	705	Norfolk	62,563	7,830
Cobourg	18,210	2,440	North Bay	63,424	3,605
Yellowknife	18,700	2,140	Granby	68,352	2,395
Matane	18,709	140	Medicine Hat	68,822	5,160
Williams Lake	18,760	1,865	Kawartha Lakes	74,561	6,010
Quesnel	21,049	2,005	Sault Ste. Marie	80,098	8,230
Brooks	22,452	2,905	Chilliwack	82,465	11,130
Edmundston	22,471	530	Drummondville	82,949	2,245
Whitehorse	22,898	2,290	Red Deer	83,154	7,650
Pembroke	23,195	1,125	Prince George	83,225	7,780
Cranbrook	24,138	2,100	Fredericton	86,226	5,910
Fort St. John	25,136	1,445	Saint-Jean-sur-Richelieu	87,492	2,565
Port Alberni	25,343	2,855	Sarnia	88,793	11,205
Kentville	25,969	1,010	Belleville	91,518	7,880
Centre Wellington	26,049	2,660	Nanaimo	92,361	13,930
Riviere-du-Loup	26,423	180	Kamloops	92,797	9,665
Parksville	26,518	5,375	Lethbridge	95,196	10,990
Lloydminster Corner Brook	27,023 27,194	790 505	Cape Breton Chatham-Kent	105,928 108,589	1,730 10,825

Sample (Continued)	Population 2006	Immigrant estimates 2006 (Adjusted)		Population 2006	Immigrant estimates 2006 (Adjusted)
3rd-tier CMAs included					
Peterborough	116,570	10,795			
Saint John	122,389	5,035			
Thunder Bay	122,907	12,600			
Brantford	124,607	15,935			
Moncton	126,424	4,245			
Guelph	133,698	25,765			
Trois-Rivieres	144,713	3,075			
Kingston	152,358	18,505			
Saguenay	156,305	1,755			
Greater Sudbury	158,258	10,450			
Abbotsford - Mission	159,020	37,070			
Kelowna	162,276	23,720			
Barrie	177,061	22,515			
St. John's	181,113	5,250			
Sherbrooke	191,410	10,360			
Regina	194,971	14,725			
Saskatoon	233,923	17,790			
Magnet reference: 1st-tie	er CMAs		Excluded Second-Tier CMAs		
Calgary	1,079,310	252,770	Halifax	372,858	27,410
Edmonton	1,034,945	189,775	Hamilton	692,911	166,630
Montréal	3,635,556	740,357	Kitchener - Cambridge - Wat	451,235	103,060
Ottawa - Gatineau	1,133,633	203,250	London	457,720	87,420
Toronto	5,113,149	2,320,160	Oshawa	330,594	53,920
Vancouver	2,116,581	831,265	Québec	719,153	26,333
Winnipeg	694,668	121,255	St. Catharines - Niagara	390,317	70,320
P -0		,	Victoria	330,088	61,985
			Windsor	323342	74770

Agglomeration	Proportion >15 earning	Participation rate (%)	Unemployment rate (%)	Labour activity Index
Yellowknife	0.749	84.2	5.7	13.1
Fort St. John	0.737	80.5	4.4	16.8
Canmore	0.743	79.4	2.4	31.0
Red Deer	0.633	76.9	4.4	14.4
Estevan	0.731	74.6	3.0	24.4
Petawawa	0.690	71.6	5.8	11.9
Prince Rupert	0.809	68.2	13.1	6.2
Wetaskiwin	0.633	65.3	3.2	19.8
Sept-Iles	0.664	65.1	8.3	8.0
Rimouski	0.634	63.9	7.4	8.6
Orillia	0.589	63.5	5.7	10.3
Brockville	0.631	61.9	6.4	9.9
Midland	0.579	61.6	6.4	9.0
Bathurst	0.643	60.3	9.4	6.8
Courtenay	0.549	58.8	6.3	8.7
Corner Brook	0.586	58.0	15.2	3.9
Lachute	0.532	56.9	5.6	9.5
Dolbeau-Mistassini	0.597	56.1	11.3	5.3
Bay Roberts	0.508	53.7	22.2	2.3
Parksville	0.444	43.8	6.8	6.5
Elliot Lake	0.390	38.2	13.2	3.0

# **Appendix 2: Labour activity index compared**

Note: The group of CAs above are ranked by participation rate (active population + searching for a job). Prince Rupert is classed 7th with a 13.1% unemployment rate while Wetaskiwin, just under, indicates 3.2%. According to the labour activity index classification below (proportion of population>15 earning/unemployment rate), Wetaskiwin is now ranked third and Prince Rupert assumes a 17th.

Agglomeration	Proportion >15 earning	Participation rate (%)	Unemployment rate (%)	Labour activity Index
Canmore	0.743	79.4	2.4	31.0
Estevan	0.731	74.6	3.0	24.4
Wetaskiwin	0.633	65.3	3.2	19.8
Fort St. John	0.737	80.5	4.4	16.8
Red Deer	0.633	76.9	4.4	14.4
Yellowknife	0.749	84.2	5.7	13.1
Petawawa	0.690	71.6	5.8	11.9
Orillia	0.589	63.5	5.7	10.3
Brockville	0.631	61.9	6.4	9.9
Lachute	0.532	56.9	5.6	9.5
Midland	0.579	61.6	6.4	9.0
Courtenay	0.549	58.8	6.3	8.7
Rimouski	0.634	63.9	7.4	8.6
Sept-Iles	0.664	65.1	8.3	8.0
Bathurst	0.643	60.3	9.4	6.8
Parksville	0.444	43.8	6.8	6.5
Prince Rupert	0.809	68.2	13.1	6.2
Dolbeau-Mistassini	0.597	56.1	11.3	5.3
Corner Brook	0.586	58.0	15.2	3.9
Elliot Lake	0.390	38.2	13.2	3.0
Bay Roberts	0.508	53.7	22.2	2.3

# **Appendix 3: Summary of variable frequencies**

Immigrant prop. variation 2006-2011 (% pts)	Size (Popu. counts)	Immigrant networks (Immigr. estimates)
Min.:-3.9950	Min.: 10280	Min.: 95
1st Qu.:-1.0045 Median :-0.2010	1st Qu.: 16844 Median : 32902	1st Qu.: 725 Median : 1885
Mean :-0.1544	Mean : 51844	Mean : 4160
3rd Qu.: 0.3540	3rd Qu.: 68587	3rd Qu.: 5205
Max. : 5.4750	Max. :233923	Max. :37070
Distance (kilometres)	Median earnings (dollars)	Labour act. index (prop.popu.>15 earning/ unempl. rate)
Min. : 41.0	Min. :16876	Min. : 2.287
1st Qu.: 129.0	1st Qu.:24001	1st Qu.: 8.046
Median : 292.0	Median :26319	Median : 9.588
Mean : 472.8	Mean :26733	Mean :10.738
3rd Qu.: 630.5	3rd Qu.:28118	3rd Qu.:12.348
Max. :2536.0	Max. :44886	Max. :30.974
Human capital valorization (prop. univ. degree earning)	Post-secondary institutions (catego.)	Settlement services (catego.)
Min. : 4.032	Min. :0.0000	Min. :0.0000
1st Qu.: 6.253	1st Qu.:0.0000	1st Qu.:0.0000
Median : 7.273	Median :0.0000	Median :0.0000
Mean : 7.906	Mean :0.7939	Mean :0.6031
3rd Qu.: 8.919	3rd Qu.:1.0000	3rd Qu.:1.0000
Max. :16.991	Max. :3.0000	Max. :2.0000