

Inter-Regional Return and Onwards Migration in Canada: Evidence Based on a Micro-Regional Analysis*

K. Bruce Newbold and Stefania Cicchino
School of Geography & Earth Sciences
McMaster University
1280 Main St. West
Hamilton, ON L8S 4K1

Introduction

It has long been recognized that migration is a repetitive event that is based upon a complex of personal, social, and economic factors affecting each potential migrant differently. In addition, particular attention has been paid to migration events for their ability to affect the demographic and socioeconomic profile of different regions, particularly those that are economically vulnerable. Previous studies indicate, for instance, that the main components of migration flows, including primary (i.e., first time migrations), return (i.e., returns to a previous place of residence), and onward (i.e., migrations to a subsequent destination other than the previous place of residence) migrations all differ in their intensity, spatial patterns, characteristic profiles, and their net redistributive effects. Representing twenty to thirty percent of all recorded migration events, return migration tends to be highest into high-growth regions and tend to increase in importance during periods of economic decline (Newbold 2001). Furthermore, studies suggest that return migrants tend to be negatively selective in terms of education, skills, and income.

While most countries collect data on usual residence five years prior to the Census, Canada (along with Australia), collect information on the place of residence at both one and five-years prior, allowing return migration to be assessed

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based on a fixed (5-year) interval. Within the context of this paper, it allows return and onward migrations to be defined on the place of residence five-years prior the Census (Bell 1995, 1996; Newbold and Bell 2001) as compared to place of birth (i.e., 'lifetime returns') more commonly noted in the literature (i.e., Long 1988; Newbold and Liaw 1990, 1994; Rogers and Belanger 1990). Moreover, using fixed interval migration measures provides a number of theoretical and empirical advantages over return migrations based on the comparison of place of residence on Census day with the place of birth. These advantages include a shorter interval over which migration is measured (one and four years versus lifetime), more precise measurements of the notion of a 'home' region (Newbold and Bell 2001), greater reliability of the linkage between personal attributes such as education or labour force status and migration, and greater insight into the concept of 'rapid' returns (DaVanzo 1976; Lin et al 1999; Morrison 1971).

The purpose of this paper is to further contribute to the understanding of repeat migration in Canada, based on place of residence five years prior to the Census. Specifically, the purpose of this paper is to examine the frequency, spatial patterns, and impacts of fixed interval return and onward migrations in Canada, employing custom tabulations drawn from the 1996 Canadian Census. While findings will be related to earlier work, differences in the spatial patterns are also likely to emerge, given that these custom tabulations provide a larger sample size (based on the 20 percent of the Canadian population that completed the Census 'long form'), and additional spatial detail with regards to place of residence in 1991 and 1995. Typically, the Public Use Microdata Files (PUMF) only record the CMA of residence at the end of the Census period, with earlier residential locations constrained to the provincial scale. In our case, place of residence in 1991 and 1995 are defined at the CMA scale, along with provincial residuals. Moreover, with increased spatial scale, the propensity to make a return migration should decrease as the number of options available for onward migrations increase. That is, a migration observed to be a 'return' at an aggregate scale would be less likely to be a return migration as the number of spatial choices increases (Newbold 2005). In this way, we aim to examine the incidence, composition, and spatial patterns of return and onward migrations over the 1991-1995-1996 period at a more disaggregate spatial scale.

Background

Since Ravenstein's (1889) recognition of 'counterstream' migration, the analysis of return and onwards migration has tended to be a relatively focused niche of the migration literature (Newbold and Bell 2001). It has also often focused on 'lifetime' migrations, with return and onward migrations defined relative to the place of birth. The resulting literature has described the spatial patterns and impacts, characteristics, and reasons associated with return and onwards migration (see, for example, Long 1988; Newbold and Liaw 1990, 1994; Rogers and Belanger 1990). Research based on lifetime data, for example, indicates that return migration represents approximately twenty to thirty percent of all moves in

Canada, and tends to counter the net-redistributive effects of primary migration (Newbold and Liaw 1990).

Research also indicates that the intensity of return migration is dependant largely upon personal characteristics and economic conditions, increasing in importance during periods of economic decline (Newbold and Liaw 1990). Return migrants are stereotypically viewed as being less skilled, less educated, and potentially less motivated and financially stable than onward migrants (Long 1988), with returns often characterized as ‘failed’ migrations and including a high proportion of those motivated by a disappointing initial first move (Newbold and Liaw 1990). Returns also represent a return to familiar surroundings with the support of family and friends which significantly reduces the risk of migration (DaVanzo 1976; Yezer and Thurston 1976; Grant and Vanderkamp 1986). Concurrently, onward migrants are generally perceived to be better educated and more highly skilled than return migrants, whose mobility is largely a result of the pursuit of better employment opportunities.

Many of these results have, however, been based on lifetime return migration data. The use of fixed interval data, on the other hand improves or offers an alternative to lifetime return migration analyses. For example, lifetime measures of return migration typically lack information on location-specific capital such as returns to an original dwelling. In fact, analyses of return migrations based on fixed-interval data suggest that many return migrations are actually planned events following a short-term job transfer, extended vacation, or education, suggesting the complexity of return migration (Newbold and Bell 2001). More generally, the place of birth may be a relatively poor proxy for evaluating a ‘home’ region for return migrants, particularly among older individuals who are more likely to have relocated over their lifespan. Instead, places where individuals grew up, attended school, worked, or vacationed may be more accurate proxies of a home region, meaning that the disparity between place of birth and previous residence as are unknown markers in the migration process.

While fixed interval data provides a complementary picture of return and onwards migration (Bell 1995, 1996; Newbold and Bell 2001; Newbold 2001), the role of geographic scale is less well understood. Indeed, most studies of return and onward migrations in Canada or elsewhere have been based on analyses at the provincial or state scale (Long 1988; Newbold and Liaw 1990, 1994). However, Newbold’s (2005) analysis of fixed interval return migrations at the 5-, 9-, and 40-region scales demonstrated that spatial scale was important. For example, both the count and proportion engaging in a return migration decreased with increased spatial detail, reflecting the increased number of options for onward migration. In addition, as spatial resolution increased, the ability to capture migrations improved. However, it is questionable whether or not the trends and patterns observed at the aggregate, provincial scale are also visible at a more disaggregate scale which allows the identification of individual metropolitan areas or geographic regions. Does, for example, all of British Columbia hold an attraction to new arrivals and a strong ability to retain its previous in-migrants, a phenomenon which earned it the label as “the end of the line” in the existing literature (Newbold and Liaw 1990)? Similarly, do all the regions in Atlantic

Canada have high rates of return in-migration? More likely than not, such effects will be randomly distributed over space.

This study therefore advances the study of return and onwards migration in two key ways. First, it relies upon a finer spatial resolution to exam these migration flows, with the added spatial detail useful in examining events at a small scale, such as inter-regional moves and determining exactly which metropolitan areas are being affected by migration events. Second, it defines return and onward migration based on fixed-interval data.

Data and Methods

Since 1991, Statistics Canada has collected data on usual place of residence both one and five-years prior to the Census enumeration date, offering researchers several advantages, including shorter intervals over which migration can be measured, reducing the effects of multiple moves in the overall data and capturing 'rapid' return migrations or those which occur relatively quickly after the initial, primary migration. Furthermore, basing return migration on place of residence five-years prior offers insight into the nature of return and onward migration by examining the effects of personal characteristics on the migration process given that temporal changes to personal effects such as education and employment status are limited using the fixed interval data because such variables are less likely to change over the short time interval (Newbold 2001).

Data for this analysis are derived from a custom tabulation based upon the 1996 Canadian Census. As with the more common Public Use Microdata File (PUMF), the analysis compares the place of residence of Canadians at three points in time: 5 years prior to the Census date (1991), 1 year prior to the Census date (1995), and at the time of the Census (1996). Therefore, migrants and migrations are defined by reference to changes of usual residence over the 1991-95 and 1995-96 intervals, with returns to a previous (1991) place of residence.

The advantage of the custom-tabulated data lies in its geographic detail of the location of residence in 1991 and 1995. Typically, the PUMF only identifies place of residence on Census day, with earlier locations coded to the provincial scale. In this case, the analysis focuses on inter-regional migrations based on 40 identified regions, including 24 Census Metropolitan Areas (CMAs) and 16 regions, based on the remaining provincial data. For example, in the province of Ontario, nine CMAs¹ were identified, along with the 'Eastern', 'Central', 'South-west', and 'Northern' Ontario regions. In the province of Newfoundland and

1. The nine Ontario CMAs include Ottawa-Hull, Toronto, Hamilton, St. Catherines-Niagara, Kitchener, London, Windsor, Sudbury, and Thunder Bay. The additional four regions noted above complete the coverage of the province. Excepting PEI, which is a single unit, a CMA and a 'rest of province' define all three other Atlantic provinces, along with Manitoba. Quebec includes 5 CMAs and 3 additional regions. Saskatchewan has 2 CMAs and one rest of province region. Both Alberta and BC have two CMAs each, while Alberta has 1 rest of province, and BC is divided into 2 additional regions (Coast/Interior and Northern).

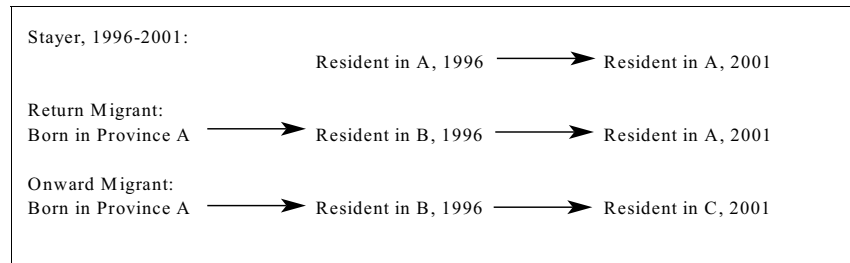


FIGURE 1 Migrant Types

Labrador, the St. John's CMA and a 'rest of province' region were defined. In order to simplify the analysis, the samples were restricted to those aged five and older at the time of the Census. The foreign-born as well as those who did not report a place of residence at any of the three points during the study period (1991, 1995 and 1996) were deleted from the sample. Finally, the three northern territories were excluded from the analysis, given sparse migration flows between the three territories and between the territories and the rest of Canada.

Based on the comparison of place of residence in 1991, 1995, and 1996, five distinct groups of migrants could be identified (see Figure 1):

- People who do not migrate between 1991-96;
- People who made an inter-regional migration between 1991 and 1995 but did not migrate between 1995 and 1996;
- People whose region of residence was unchanged between 1991 and 1995 but who migrated between 1995 and 1996;
- People who migrated between 1991 and 1995 and who returned to their region of origin between 1995 and 1996;
- People who made an inter-regional migration between 1991 and 1995 and who migrated again to a different region between 1995 and 1996.

The fourth group can be identified as return migrants, while the fifth group can be defined as onward migrants.

The analysis focuses on the return and onward migration components of inter-regional migration through descriptive measures, including the count and proportion of migrants and migration events. In particular, the analysis focuses on the volume of migration, the personal characteristics of migrants, and spatial patterns. Mobility is measured with reference to the population 'at-risk' of making a return or onwards migration (i.e., the population who moved over the 1991-95 migration interval).

TABLE 1 Return and Onward Migration by Geography: 1991-95-96, Aged 5+

	Number	1995-96	1991-95	All	Total
			%	%	
Did not migrate	24,593,890				
Return migration	50,270	16.5	2.7	2.3	0.2
Onward migration	120,545	39.6	6.4	5.5	0.5
Total repeat	170,815	56.1	9.1	7.8	0.6
Migrated 1995-96 only	133,790	43.9	7.1	6.1	0.5
All 1995-96 migrations	304,605	100	16.2	14	1.1
Migrated 1991-95 only	1,705,640	--	90.9	78.2	6.4
All 1991-95 migrations	1,876,455	--	100	86	7.1
Total migrations	2,181,060	--	--	100	8.2
Total migrants	2,010,245	--	--	--	7.6
Recorded migrants 1991-96	1,959,975	--	--	--	7.4
Total population	26,604,135	--	--	--	100

Results: Who Moves?

Counting Migrants and Migrations

Table 1 sets out the breakdown of inter-regional migration between 1991-95-96 and is divided according to the type of move and the timing of the move. In order to effectively examine chronic migration, a distinction must be made between migrants and migration. The former refers to the number of individuals that make one or more moves during the observed period, while the latter refers to the aggregate number of moves recorded (Newbold 2001). Since some people move more than once, the number of movers is typically smaller than the number of moves. Therefore, by combining data from 1991-95 and 1995-96, Table 1 indicates a total of 2,181,060 inter-regional moves. However, since some of these moves represent people who migrated in both the 1991-95 and 1995-96 intervals, the total number of migrants is determined by subtracting all return and onward moves, leaving a total of 2,010,245. If data were limited solely to the transitions between 1991 and 1996, with no information on place of residence in 1995, the number of migrants would be further reduced to 1,959,975, since no return migrations would be identified (Newbold 2001).

Table 1 also indicates the intensity of chronic migration during the period in question. Of the more than two million migrants in the 1991-95-96 interval, 170,815 (18.5 %) made inter-provincial moves in both periods. Of these, 50,270 (29.4 %) returned to their 1991 place of origin. The significance of return and onward migration can be noted by examining the 1995-96 flow values. Of those who moved outside their place of origin over the one-year period (1995-96), 56.1 % had made a previous inter-provincial move between 1991 and 1995. Therefore, 16.1 % of all 1995-96 migrants were returning to the region where they originally

resided in 1991. Studies indicate that the reasons for leaving home are varied and involve a complex assortment of factors that vary from person to person. Possible examples include students attending post-secondary education away from home, employees in large firms responding to inter-provincial job transfers, or retirees who take part in extended vacations in different regions.

Reinforcing Newbold (2005), a far larger count and proportion of repeat migrations appear to be onward migrations at this scale than typically observed at the provincial scale. That is, out of the 170,815 repeat migrations, nearly 71 % (120,545) are onward migrations. In comparison, based on an analysis at the provincial scale, nearly 80 % of all repeat migrations were return (Newbold 2001). Most likely, this reflects the greater number of opportunities for a migration to be classified as a onward migration when working with more spatially detailed data.

Personal Effects

Prior research examining personal characteristics of migrants suggests that both return and onward migrants generally possess distinct personal traits depending on their migratory status (Newbold 2001). For example, research suggests that onward migrants tend to be better educated and more skilled than return migrants (Newbold 2001). Table 2 outlines inter-regional migration rates according to different personal characteristics. The data suggests that repeat migration is most prevalent among young adults, aged 15-24 and 25-34, with approximately 1 in 10 who changed their place of residence over the 1991-96 period doing so twice. Young adults also displayed a high propensity to engage in both return and onward moves, although onward migration is consistently greater than return migration. Interestingly, while individuals in the 15-24 age group were least likely to migrate in 1991-95 (74.9 %), they had the highest proportion engaged in a return or onward migration (12.1 %). They also had the largest proportion migrating in 1995-96 only, likely due to the fact that by the end of the 1991-95 period, this group had become more mobile in pursuit of education and/or employment opportunities. High mobility amongst those aged 60 and over was also observed, with 92 % migrating in 1991-95 only, but only a small proportion making either return or onward migration. This is likely the result of retirees relocating to a different location (Longino 1979; Longino and Serow 1992).

Educational status is evaluated in terms of both whether an individual was attending school at the time of the census (attending or not) and the educational level (high school, trade certificate or diploma, and BA or better). Individuals who attended school had similar rates of return migration to those who did not attend (2.6 % and 2.5 %, respectively). However, the former has a higher onward migration rate (7.3 compared to 5.8 %). Specifically, those possessing a high school diploma or less were twice as likely to be onward migrants as opposed to return migrants. Furthermore, people possessing a Bachelors degree or better were 4.3 times more likely to be onward migrants as opposed to return migrants. However, those with a BA or better were also less likely to make a return migration in comparison to other levels of education (high school or a trades

TABLE 2 Inter-Regional Migration Rates by Personal Characteristics: 1991-95-96, Aged 5+

	% all migrants				% 1991-95 migrants		% 1995-96 migrants	
	Migrated	Migrated	Return	Onward	Return	Onward	Return	Onward
	1991-95 Only	1995-96 only	Migrants	Migrants	Migrants	Migrants	Migrants	Migrants
Total:	84.8	6.7	2.5	6.0	2.7	6.4	16.5	39.6
Age:								
5-14	87.8	5.3	2.2	4.6	2.4	4.9	18.3	38.0
15-24	74.9	13.1	3.7	8.4	4.3	9.6	14.8	33.3
25-34	83.5	6.4	2.7	7.4	2.9	7.9	16.3	45.0
35-44	88.3	4.6	2.0	5.0	2.1	5.3	17.2	43.0
45-59	89.9	4.3	2.0	3.8	2.1	4.0	19.6	37.7
60+	92.1	4.3	1.3	2.3	1.3	2.4	16.1	29.6
Occupation:								
Professional	86.0	4.8	2.0	7.2	2.1	7.5	14.4	51.2
Skilled	85.1	6.5	2.6	5.9	2.8	6.3	17.3	39.4
Sales	83.3	7.6	2.7	6.4	2.9	6.9	16.3	38.3
Unskilled	80.7	9.7	3.2	6.5	3.6	7.2	16.6	33.4
Sex:								
Male	85.3	6.5	2.5	5.7	2.7	6.1	17.0	38.9
Female	84.6	6.8	2.5	6.2	2.7	6.6	16.0	39.9
Tenure:								
Primary	87.1	4.8	2.3	5.8	2.5	6.1	18.1	45.0
Own	92.7	3.2	1.4	2.7	1.4	2.8	18.6	37.8
Rent	82.9	6.0	3.0	8.1	3.2	8.6	17.7	47.2
NA	83.7	8.0	2.6	5.8	2.8	6.3	15.7	35.5
Labor Force Status:								
Employed	85.1	6.2	2.4	6.3	2.6	6.7	16.3	42.4
Unemployed	75.4	12.1	3.7	8.8	4.2	10.0	15.2	35.7
NLF	86.0	6.9	2.3	4.7	2.5	5.1	16.7	33.8
Education Status:								
Attending	80.1	10.0	2.6	7.3	2.9	8.2	13.0	36.8
Not	85.7	6.0	2.5	5.8	2.7	6.2	17.4	40.6
Education Level:								
HS	84.1	7.7	2.7	5.5	2.9	5.9	17.1	34.4
Trades	85.5	6.2	2.6	5.7	2.8	6.1	18.1	39.3
BA	84.1	5.9	1.9	8.2	2.0	8.7	11.9	51.3

certificate/diploma).

Turning to occupation and labour force status, skilled migrants were 2.3 times more likely to be onward migrants as opposed to return migrants, while professionals were 3.6 times more likely to make an onward migration than a return migration. While unskilled individuals were still more likely to migrate onward than return, the ratio between onward and return migration was much less than for their more skilled counterparts (2.0). Alternatively, people that were

unemployed were more likely to engage in either return (3.7%) or onward migration (8.8%) as opposed to employed individuals.

While females are somewhat more likely to make an onward migration than males (6.2 % versus 5.7 %, respectively), there is relatively little difference in return and onward migration proportions with respect to gender. Finally, tenure status suggests that while renters are more likely to return than owners (3.0 to 1.4, respectively); they were also more likely to engage in an onward migration (8.1%).

Spatial Impacts of Return and Onward Migration

Typically, and when based on provincial or state level data, return moves tend to reduce the extent of population redistribution owing to migration. At the same time, return migration usually partially offsets net-migration losses to a region (Long 1988; Newbold and Liaw 1990). However, at a more detailed level, the spatial impacts of return and onward migration are less consistent as demonstrated in Table 3, which outlines the spatial impacts of return and onward migration. For example, while return migration tends to reduce population gains made by CMAs and regions with net in-migration, including Vancouver, Edmonton, and Calgary, and offsets losses associated with primary and onward migration in regions such as Newfoundland, this is not consistent. For instance, return migration from Toronto was the largest flow, exceeding primary and onward migration flows in the 1995 to 1996 period, while Alberta had a net loss of all three types of migrants. Similarly, onward migration is typically seen as reinforcing population gains associated with primary migration, although there was no consistent direction. For example, onward moves reduced net inflows to Oshawa and worked counter to primary migration. Furthermore, onward migrations also often exerted a greater numerical impact on regional or CMA population change (which is opposite to what is seen in more aggregate analyses), but this likely reflects the greater number of options for onward migrants as compared to what is visible at the provincial scale.

Repeat migrations assume particular significance when viewed in relation to other migrations in the 1995-96 interval. For example, the Toronto CMA had only a modest gain in 1995-96 (610), and while onward and single migrations contributed population (1,665 and 955, respectively), returns (-2,010) significantly reduced the gains. In the Oshawa and Windsor CMAs, the net outflow between 1995 and 1996 was due largely to the loss of chronic (return and onward) migrants. Other CMAs and regions displayed similar patterns, but in varying degrees. Such effects are derived, in part, from the character of individual regions, but also reflect variations in the level and direction of net migration. For instance, from 1991-95 Toronto lost significantly more migrants than any other location (nearly twice that of Montreal, the second biggest loss). However, in 1995-96, the total numbers were positive. Conversely, Oshawa had a net gain between 1991-1995, but a net loss in 1995-1996. Return migration appears to play a key role in these annual shifts. For example, return migrations out of Edmonton and Montreal in 1995-96 contributed to their net loss for that same period.

TABLE 3 Net Gains and Losses from Return and Other Migration Flows, CMAs and Regions, 1991-95-96

	Net gain Or loss 1991-95	Net gain or loss 1995-96			Total
		From Onward migration	From Return migration	Net Single Migration	
Newfoundland	-12,325	655	330	1,960	2,945
St. John's CMA	-2,120	60	-300	-360	-600
PEI	1,060	485	-215	190	460
Nova Scotia	-250	785	-700	1,210	1,295
Halifax CMA	-3,840	220	-750	125	-405
New Brunswick	200	630	-520	250	360
Saint John CMA	-845	-30	-255	-60	-345
South Shore QC	1,545	155	-3,140	1,505	-1,480
Quebec City CMA	2,090	70	-1,765	-1,305	-3,000
North Shore QC	18,075	-855	-3,175	-585	-4,615
Trois-Rivieres CMA	500	-100	-480	-370	-950
Sherbrooke CMA	-670	-390	-600	-480	-1,470
Montreal CMA	-38,040	1,215	-2,950	1,290	-445
North Quebec QC	-8,175	485	-825	780	440
Chicoutimi-Jonquiere CMA	-2,485	140	-410	335	65
Eastern ON	7,865	-270	-1,420	-930	-2,620
Ottawa-Hull CMA	-3,165	-335	-1,755	-1,345	-3,435
Central ON	31,390	590	-2,790	-290	-2,490
Oshawa, CMA	10,360	-135	-685	460	-360
Toronto CMA	-72,410	1,665	-2,010	955	610
Hamilton CMA	-390	100	-1,040	580	-360
St. Catherines-Niagara CMA	-95	410	-465	65	10
Kitchener CMA	1,050	-65	-795	-605	-1,465
Southwest ON	1,695	725	-1,210	1,085	600
London CMA	-2,055	-470	-1,180	-800	-2,450
Windsor CMA	800	-315	-330	20	-625
Northern ON	-6,770	360	-980	220	-400
Sudbury CMA	-1,255	115	-390	205	-70
Thunder Bay CMA	-2,925	40	-290	-160	-410
Manitoba	-2,045	115	-330	280	65
Winnipeg CMA	-10,905	500	-1,030	870	340
Saskatchewan	-9,870	955	-620	1,015	1,350
Regina CMA	-3,240	125	-630	290	-215
Saskatoon CMA	-2,950	195	-1,280	-255	-1,340
Alberta	10,095	-1,330	-1,945	-2,060	-5,335
Calgary CMA	5,510	-575	-1,680	1,335	-920
Edmonton CMA	-16,350	725	-1,895	425	-745
Coast/Interior BC	97,175	-2,950	-3,710	-2,275	-8,935
Vancouver CMA	2,830	-1,835	-2,445	-2,650	-6,930
Victoria CMA	8,410	-740	-985	-520	-2,245
Northern BC	2,860	-945	-1,405	-340	-2,690

Chronic migration can also be examined by looking at the importance of return migration in single-year migration flows. Rates of out-migration found in Table 4 indicate the ability of a region to retain its in-migrant population, while rates of return in-migration indicate the ability to regain former out-migrants. The results suggest that a substantial proportion of moves over a single year were comprised of flows of earlier arrivals (this can be found in Table 2). For example,

TABLE 4 Total and Return Migration Flows, CMA and Regions, 1995-1996

	Inflows 1995-96			Outflows 1995-96		
	Return	%	Total	Return	%	Total
Newfoundland	710	11.8	6,040	380	12.3	3,095
St. John's CMA	225	8.4	2,685	525	16.0	3,275
PEI	225	13.4	1,685	215	21.5	1,000
Nova Scotia	1,035	15.4	6,705	700	16.0	4,375
Halifax CMA	655	10.5	6,210	750	12.6	5,960
New Brunswick	1,060	17.2	6,175	520	10.9	4,755
Saint John CMA	125	10.1	1,240	255	17.5	1,460
South Shore QC	3,050	24.1	12,675	3,140	28.3	11,105
Quebec City CMA	1,340	20.3	6,595	1,765	21.4	8,255
North Shore QC	2,000	23.8	8,410	3,175	28.8	11,025
Trois-Rivieres CMA	255	16.3	1,560	480	21.3	2,255
Sherbrooke CMA	260	11.9	2,180	600	17.7	3,390
Montreal CMA	6,010	28.1	21,365	2,950	18.7	15,800
North Quebec QC	1,045	20.4	5,115	825	22.7	3,630
Chicoutimi-Jonquiere CMA	105	5.8	1,820	410	24.8	1,650
Eastern ON	1,625	17.5	9,305	1,420	13.8	10,300
Ottawa-Hull CMA	1,065	11.1	9,615	1,755	14.6	11,985
Central ON	2,095	15.6	13,470	2,790	20.1	13,865
Oshawa, CMA	340	9.4	3,615	685	18.8	3,635
Toronto CMA	5,125	18.9	27,145	2,010	9.4	21,410
Hamilton CMA	745	12.5	5,960	1,040	18.7	5,575
St. Catherines-Niagara CMA	300	8.8	3,420	465	15.0	3,110
Kitchener CMA	465	9.0	5,170	795	12.9	6,170
Southwest ON	1,765	19.2	9,215	1,210	17.7	6,850
London CMA	310	5.8	5,315	1,180	15.8	7,455
Windsor CMA	215	9.8	2,185	330	12.7	2,595
Northern ON	1,235	15.9	7,760	980	14.2	6,925
Sudbury CMA	215	8.9	2,425	390	17.1	2,280
Thunder Bay CMA	20	1.4	1,460	290	15.7	1,850
Manitoba	1,110	19.1	5,825	330	7.2	4,610
Winnipeg CMA	100	1.4	7,155	1,030	15.3	6,715
Saskatchewan	2,260	24.5	9,235	620	11.0	5,625
Regina CMA	30	0.9	3,220	630	18.5	3,405
Saskatoon CMA	85	2.0	4,315	1,280	23.0	5,570
Alberta	3,285	23.1	14,240	1,945	11.9	16,290
Calgary CMA	295	2.6	11,485	1,680	13.9	12,110
Edmonton CMA	1,280	10.5	12,225	1,895	16.2	11,690
Coast/Interior BC	3,410	25.0	13,655	3,710	19.3	19,180
Vancouver CMA	3,130	20.9	14,985	2,445	13.0	18,785
Victoria CMA	355	7.4	4,825	985	14.7	6,715
Northern BC	1,130	23.1	4,900	1,405	21.7	6,460

between 7.2 (Manitoba) and 28.8 (North Shore, Quebec) % of those who left each CMA or region between 1995 and 1996 had arrived since 1991, and between 1 (Regina) and 28 (Montreal) % of arrivals were previous out-migrants. Such migration patterns are important for understanding both the process of migration, as well as impacts of migration upon communities.

When examining migration at the regional scale, the data offers a somewhat different perspective on the patterns seen on a larger (interprovincial) scale. When examining the CMA statistics in Table 4, the overall average inflow return percentage is much lower than the provincial inflow return rates (10.4 and 17.5 %,

respectively). This data suggests that CMAs are, on average, less able to regain former out-migrants than the smaller surrounding areas in a given province. Alternatively, the 1995-96 outflow return percentages for the CMA's is slightly higher than those from the remaining provincial data (18.7 and 16.4 %, respectively), suggesting that CMA's are slightly more effective at retaining previous in-migrants.

The data also suggests that there are high rates of return migration scattered throughout Canada and not localized near the coasts as is observed at a provincial scale. In particular, high rates of return have been previously associated with Canada's east coast (Newbold and Liaw 1990). Disaggregation of provinces, however, reveals that while 11.8 % and 8.4 % of in-migrants to Newfoundland and St. John's CMA respectively were returns, much higher proportions of in-migrants were observed in places such as Montreal (28.1 %), Manitoba (19.1 %), and Saskatchewan (24.5 %). Similarly, with the exception of the Chicoutimi-Jonquiere CMA, the Quebec City CMA had a strong ability to attract its previous out-migrants (with inflow return percentages 6.7 % greater than the national average), but a low ability to retain its migrant population (with outflow return percentages 6.1% higher than the national average), an outcome which may reflect language issues within the province, the relative distinctions between French and English-speaking migrants, and the ability of the province to retain them. In addition, BC has been acknowledged in previous work to have a strong tendency to retain its population – the so called 'end of the line' migration. Yet, we see large variations in the retention (i.e., out-migration rates), with the Vancouver and Victoria CMAs having a strong ability to retain (low proportions of return migration), but much higher in the Coast and Interior regions (exceeding 20 %).

Spatial Patterns of Return and Onward Migration

The data in Table 5 indicate the top ten origins of return and onward migrants to and from Toronto, Montreal, and Vancouver, identifying the significance of 'way stations', or the intermediate (i.e., 1995) locations where migrants go before arriving at their final 1996 destination. This table provides insight into the spatial patterning of migrations and the distances people are traveling when migrating. For example, we can ask where individuals were in 1995, if they were resident in Toronto in 1991 and made a return migration to Toronto by 1996. Results indicate that eight of the top ten origins of return migrants to Toronto were from locations within Ontario. For return migrations to Montreal, return migrants way-stationed elsewhere in Quebec, Toronto, or Vancouver. For return migrations to Vancouver, the top three origins were in British Columbia (i.e., Coast/Interior, Victoria, or Northern BC). Other western regions and CMAs (i.e., Calgary, Edmonton, and Winnipeg) were important way-stations for return migrants to Vancouver. Overall, the relative proximity of way-stations to the origin/destination in all three cases suggests that these return migrations were likely planned, with individuals pursuing education or employment opportunities.

Similar trends were observed when examining the top ten origins for onward migrants to these three metropolitan areas. While the 1991 origins of these onward migrants could have been anywhere except the final destination, the data indicates

TABLE 5 Top 10 Origins for Return and Onward Migrations to Toronto, Montréal, and Vancouver

Onward		Return	
1995 Origin	N	1995 Origin	N
1996 Destination: Toronto			
Central ON	1,005	Central ON	1,320
Ottawa-Hull CMA	855	Hamilton CMA	560
Southwest ON	625	Oshawa CMA	540
Montreal CMA	595	London CMA	315
Hamilton CMA	570	Kitchener CMA	265
Kitchener CMA	540	Ottawa-Hull CMA	265
Eastern ON	540	Montreal CMA	220
London ON	425	Vancouver CMA	215
Northern ON	410	Eastern ON	210
Vancouver CMA	340	Northern ON	190
1996 Destination: Vancouver			
Toronto CMA	1,025	Coast/Interior BC	1,935
Coast/Interior BC	690	Victoria CMA	225
Edmonton CMA	550	Northern BC	205
Calgary CMA	495	Toronto CMA	125
Montreal CMA	385	Calgary CMA	110
Ottawa-Hull CMA	365	Edmonton CMA	95
Winnipeg CMA	330	Winnipeg CMA	60
Alberta	315	Saskatchewan	40
Northern BC	305	Alberta	40
Victoria	295	Hamilton CMA	30
1996 Destination: Montreal			
South Shore QC	1,300	North Shore QC	2,060
North Shore QC	705	South Shore QC	1,840
Quebec City CMA	640	Quebec City CMA	630
Northern QC	565	Northern QC	345
Chicoutimi-Jonquiere CMA	250	Sherbrooke CMA	220
Ottawa-Hull CMA	245	Toronto CMA	165
Sherbrooke CMA	225	Chicoutimi-Jonquiere CMA	120
Trois-Rivieres CMA	225	Trois-Rivieres CMA	115
Toronto CMA	200	Vancouver CMA	110
Eastern ON	190	Ottawa-Hull CMA	90

that eight of the top ten origins for onward migrants to Toronto were from within Ontario, suggesting a high degree of interaction between Toronto and its neighbouring regions. Similarly, onward migrants to Montreal were from nearby locations, either in Quebec or in south-eastern Ontario. Vancouver is the exception, with the largest flow of onward migrants from Toronto. As well, its onward migrants tended to source from other major CMAs, including Montreal, Ottawa-Hull, Winnipeg, Calgary, and Edmonton.

Conclusions

This paper has examined the processes of internal return and onward migration based on fixed interval data (which indicates the region of residence at the start of the census interval) relative to personal characteristics and spatial patterns. While

most studies analyze return and onward migration at a provincial or state scale, the use of custom-tabulated data allows a total of 40 regions to be defined in this analysis, enabling greater spatial detail than typically obtained. The identification of chronic migrants is important as it helps to distinguish between the number of moves and movers, which helps to distinguish between mobility rates measured over intervals of varying lengths (Long and Boertlein 1976; Rogerson 1990). Determining who enters, returns, or leaves a region may be important to economically depressed areas that attract few immigrants. By referencing the place of origin prior to the census period, an accurate account of migration transitions can be measured over the one and five year intervals. Furthermore, the intensity of chronic migration is also significantly affected by the characteristics of individual regions as well as their economic performance in relation to the rest of Canada. For example, an economically viable city such as Toronto, as well as growing regions such as Calgary, are able to both retain incoming migrants and have a strong ability to regain former out-migrants. Three broad conclusions may be drawn from the foregoing analysis.

First, the results generally substantiate the findings of previous research. In general, onward migrants tended to be younger, better educated, and more highly skilled than return migrants. In addition, renters and those who are unemployed are at a much larger risk of being chronic migrants, particularly onward migrants. Despite the similarities that this profile bears to that of so-called “failed” migrations, the data indicates that a significant proportion of individuals who were highly skilled or engaged in professional occupations were also return migrants. This suggests that many of the return migrations were pre-planned, likely reflecting the pursuit of education or career opportunities, particularly in large firms that may have policies of temporary regional relocation. In addition, a significant proportion of return migrants were young adults, with return migrations likely reflecting returns to a parental home after an extended absence. In many cases, young adults return home to live with parents for the first few years after leaving the home for various reasons, including the pursuit of higher education in a different region or failed initial migrations. Failed migrations may be a result of various circumstances, including loss of employment or the breakup of a marriage, whereby social and financial assistance is required, particularly if children are involved.

Second, the spatial proximity of many of the return migrations further reinforces our first conclusion. That is, many return migrations to Toronto, Montreal, or Vancouver were returning from proximate way-stations. In the case of Toronto, for example, neighbouring way-stations included the London, Oshawa, Kitchener and Hamilton CMAs, as opposed to origins that were located further away. Even in terms of onward migrations, the 1995 way-station was typically relatively proximate, reminiscent of a stepped migration pattern.

Third, while previous analyses of return and onward migration based on more aggregate data noted that return migration tended to work counter to the effects of primary and onward migration in re-distributing the population, analyses at finer spatial scales revealed a far more complex picture. In many cases, return migration reinforced the redistributive effects of primary and onward migration, while in other cases either return or onward migration were responsible for the greatest population movement. Furthermore, there are high rates of return migration

scattered throughout Canada and not localized near the coasts as is observed at the provincial scale. Previous research has, for example, demonstrated that low rates of retention and return are key factors in the high population turnover characteristic of specialized economic regions (such as the resource dependant Territories) (Newbold and Bell 2001). In previous work, British Columbia has been identified as a region that has a strong tendency to maintain its population. However, the data indicates significant variations, with Vancouver and Victoria CMA's having a strong ability to retain, but significantly higher in the Coast/Interior BC.

Policy issues are apparent. In particular, the aging of Canadian society raises questions about future mobility patterns. Which areas will gain and lose older migrants? In a paper examining the geographic dimensions of aging in Canada, Moore et al (2000) noted that the geography of aging in Canada was linked to economic disadvantage. That is, areas with high and growing proportions of elderly were most likely to be in areas of slow growth and below average incomes. Inter-regional migration may further these differences, shifting people and non-earnings income away from slow growth regions. Amongst gaining areas, are local jurisdictions ready for population movement in terms of the provision of shelter and other services? Related to the impact of migrations, any migration will redistribute incomes across the country. Among older age groups in particular, the movement of 'non-earned' incomes, including pensions and other savings, may have substantial impacts on the local economy (Nelson 2005; Plane 1999). In this case, transfers of non-income earnings across space can effectively be seen as subsidies to receiving units, while sending units are the subsidizers. There is, for example, a significant movement of non-earned income across the provinces associated with primary, return, and onward migrations (Newbold 2007), and return migration is an important conduit for income transfers to economically weak areas. Among the working age population, the effect of income transfers associated with primary, return and onward migration may be no less important.

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