

Are refugees more likely to leave initial destinations than economic immigrants? Recent evidence from Canadian longitudinal administrative data

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This is the peer reviewed version of the following article, Kaida L, Hou F, Stick M. Are refugees more likely to leave initial destinations than economic immigrants? Recent evidence from Canadian longitudinal administrative data. *Popul Space Place*. 2020; 26:e2316, which has been published in final form at <https://onlinelibrary.wiley.com/doi/10.1002/psp.2316>. This article may be used for non-commercial purposes in accordance with Wiley Terms and Conditions for Use of Self-Archived Versions. This article may not be enhanced, enriched or otherwise transformed into a derivative work, without express permission from Wiley or by statutory rights under applicable legislation. Copyright notices must not be removed, obscured or modified. The article must be linked to Wiley's version of record on Wiley Online Library and any embedding, framing or otherwise making available the article or pages thereof by third parties from platforms, services and websites other than Wiley Online Library must be prohibited.

ABSTRACT

Secondary migration is of policy interest in many immigrant receiving countries when efforts are made to steer immigrants away from major urban centers. One example is refugee dispersal policy. While previous research, mostly evaluating the policy itself, argues it would disproportionately increase the secondary migration of refugees settled in non-gateway cities, quantitative analysis is limited. This study compares the long-term secondary migration in Canada by immigrant admission category with a focus on the city size of initial settlement. Our analysis of the Longitudinal Immigration Database finds although resettled refugees have a higher overall secondary migration rate than economic immigrants, their difference in the likelihood of leaving a same-size initial destination city is minor. The majority stay in the initial city of residence regardless of admission category. The findings have a strong policy implication; the geographic distribution of immigrants can be influenced most effectively at arrival.

KEYWORDS

secondary migration; refugees; Canada; the Longitudinal Immigration Database; unemployment

1. INTRODUCTION

In many immigrant-receiving countries, a more balanced geographic distribution of immigrants is of policy interest to reduce the settlement-related burden of gateway cities and to enhance the ethnocultural diversity and economic growths of non-gateway cities (Di Biase & Bauder, 2004; Hanaoka, Ishikawa & Takeshita, 2017; Krahn, Derwing & Abu-Laban, 2005). One program contributing to this policy goal is refugee dispersal, whereby refugees are sent to smaller cities as part of government resettlement programs (Hagström, 2009; Morken & Skop, 2017; Simich,

Beiser & Mawani, 2002). If they quickly leave, especially for unemployment-related reasons, their departure signifies the limitations of the policy intervention and the failure to create a welcoming environment. In fact, the findings of research on the effectiveness of dispersal policies targeting refugees in Australia, Denmark, Germany, the Netherlands, Sweden, the UK, and the US are generally negative (Andersson, Musterd & Galster, 2018; Arnoldus, Dukes & Musterd, 2003; Bloem & Loveridge, 2018; Boswell, 2003; Bulk, 1996; Edin, Fredriksson & Åslund, 2004; Schech, 2014; Wren, 2003).

In Canada, the geographic dispersal of resettled refugees is achieved both directly and indirectly through the nation's two main resettlement programs: government assistance and private sponsorship. The former directly affects resettled refugees' initial destination, as Government-Assisted Refugees (GARs) are assigned to one of many designated communities across the country, where they receive financial, employment and social support for up to one year after arrival (Simich et al., 2002). The latter indirectly influences refugee destination, as individuals and organizations in large and small communities volunteer to take in Privately Sponsored Refugees (PSRs). While research suggests some refugees, especially GARs, quickly leave the initial destination for employment-related reasons (Fang, Sapeha & Neil, 2018; Simich, 2003), no large-scale quantitative study has assessed resettled refugees' departure from the initial destination cities or the impact of unemployment on secondary migration. Most empirical studies on secondary migration concern interprovincial movement, focusing on departure from the initial destination province. Research on secondary migration at a lower unit of geography (e.g., the city level) is hampered by the lack of suitable data, but to further the dialogue on refugee dispersal policy and secondary migration, it is important to find empirical evidence of refugee decisions at these lower levels.

This study asks two sets of questions. First, are resettled refugees more likely to leave their initial destination city than economic immigrants when their group differences in socio-demographic and contextual characteristics are taken into account? Among resettled refugees, are GARs more likely to leave their initial destination city than PSRs? Second, to what extent does the impact of unemployment on secondary migration vary by admission category? Among resettled refugees, are GARs more responsive to unemployment than PSRs in leaving the initial destination city? We focus on the secondary migration patterns of resettled refugees (GARs and PSRs), as their initial destination is influenced by government dispersal policies. Unlike other countries (e.g., Sweden), Canada has no dispersal policy targeting asylum claimants, whose irregular border crossing activity (particularly via the US-Canada border) has become a major political issue in recent years (Smith, 2019; Statistics Canada, 2019).

The study makes three contributions to the literature on internal migration and refugee secondary migration. First, it is one of the first to investigate secondary migration using the city as the geographic unit of analysis. With the Longitudinal Immigration Database (IMDB), administrative data of landing records of all immigrants who landed in Canada since 1980 linked to annual tax records, we can handle city boundary changes over time by constructing consistent boundaries. Previous research using higher units of geography, such as provinces and states, is less concerned with boundary changes.

Second, the IMDB data enable us to directly identify resettled refugees and pinpoint the timing of secondary migration. The data contain detailed admission categories of refugees (e.g., PSR, GAR, asylum claimants). Some previous studies simply inferred a refugee population based on immigrants' country of origin and year of arrival because specific admission category information was lacking (Åslund, 2000; Edin et al., 2004; Khuu & Bean, 2019). Moreover, the

IMDB has immigrants' place of residence (at lower units of geography like city and postal code) each year, allowing us to better identify the timing of secondary migration. This improves on the existing research on immigrant internal migration, which tends to use cross-sectional census data and only identifies *recent* inter-state/-provincial migration between censuses.

Third, it examines the individual experience of unemployment as a factor of secondary migration by taking advantage of the individual annual tax records in the IMDB. Previous research often uses only aggregate labor market data (e.g., regional unemployment rates) as a proxy of the economic reason for migration. While our study controls for such contextual characteristics, the use of individual unemployment allows us to directly compare our results with qualitative work identifying unemployment as a key push factor for secondary migration (Fang et al., 2018).

2. SECONDARY MIGRATION AND ADMISSION CATEGORY

Early departure from the initial destination may delay immigrants' social and economic integration and disrupt the local community resources (Bloem & Loveridge, 2018; Carter, Morrish & Amoyaw, 2008; Nogle, 1994; Simich, Beiser & Mawani, 2003). The secondary migration of refugees is of special interest to policy makers as they tend to be settled in smaller communities to solve population and economic declines in those areas while reducing the burden of immigrant settlement in the more popular gateway cities (Andersson et al., 2018; Fang et al., 2018). Thus, their early departure may be regarded as policy failure, disrupting the resettlement process, and augmenting the geographic concentration of immigrants in large cities.

Refugee secondary migration has attracted international scholarly interest, with most research evaluating the dispersal policy itself (e.g., All-of-Sweden policy, the UK's 1999

Immigration and Asylum Act, the US Refugee Act of 1980) or conducting case studies of the experience of refugees in smaller cities (Andersson & Solid, 2003; Bulk, 1996; Simich, 2003; Stewart, 2012). Results generally suggest refugee dispersal policy is ineffective; refugees who settle in smaller cities quickly leave for reasons such as social isolation and the lack of job opportunities, ethnocultural diversity, and family support.

Although limited in number, some studies have empirically assessed the degree of refugee secondary migration (e.g., Åslund, 2000; Mossaad, Ferwerda, Lawrence, Weinstein & Hainmueller, 2019). This literature can be loosely characterized as: 1) focusing on a higher unit of geography; and 2) treating refugees as an aggregate.

First, previous research on secondary migration mostly features state- or province-level analysis. For instance, Haan, Arbuckle & Prokopenko (2017) find the odds of refugees who landed in Canada in 1990 and 1995 leaving the initial province of residence are respectively 1.55 and 1.11 times ($p < 0.001$) higher than their economic immigrant counterparts when group differences in observed individual and contextual characteristics are adjusted. Conversely, the more recent refugee cohorts (2000 and 2005 arrivals) are less likely to leave the initial province of destination than their economic immigrant counterparts (0.84 and 0.90 times the odds, respectively).

Only a handful of studies have examined the variations in secondary migration at lower levels of geography (Åslund, 2000; Haan et al., 2017; Houle, 2007; Newbold, 2007; Nogle 1994). These studies suggest the government refugee dispersal policy does not substantially drive refugees from their initial destination. As Newbold's (2007) regression analysis of the Longitudinal Survey of Immigrants to Canada data shows, within six months after arrival, refugees are slightly less likely (odds ratio = 0.94, $p < 0.05$) to leave the initial Central

Metropolitan Area (CMA) than economic immigrants when compositional differences in measurable characteristics (e.g., initial CMA of residence, region of origin) are adjusted. Similarly, a difference-in-difference analysis of the Longitudinal Individual Data for Sweden by Åslund (2000) finds asylum seekers who arrived in 1987-1989 under the strict All-of-Sweden policy (a resettlement policy that systematically assigned resettled refugees and asylum seekers to municipalities across Sweden) had 13% higher probability of leaving the initially assigned municipality four years after arrival than other immigrants. However, the refugees' higher propensity for secondary migration was largely explained by the characteristics of the destination municipalities; these refugees disproportionately settled in municipalities with unfavorable characteristics for the long-term resettlement of newcomers (e.g., smaller labor markets).

This type of research has a methodological limitation; the analysis of long-term secondary migration (i.e., a broader arrival cohort, longer time framework) is hampered by city boundary changes over time. As detailed in the methods section, our study addresses this gap by constructing consistent city boundaries and examines the secondary migration of refugees/immigrants for up to the first 10 years in Canada.

Second, the literature tends to treat refugees as an aggregate, but distinguishing admission categories is important, especially in Canada, as resettled refugees come from two long-standing programs, government assistance and private sponsorship (Haan et al., 2017; Houle, 2007; Newbold, 2007). As discussed earlier, dispersal policy under these programs can impact the patterns of initial destination, subsequently influencing the likelihood of secondary migration.

Therefore, we examine the variations in secondary migration by immigrant admission category with a special focus on resettled refugees. We adopt Vertovec's (2007) superdiversity argument that migration type is a key source of inequality, in addition to ethno-racial and

national origins, influencing immigrant incorporation, including residential choice. The argument posits different migration types “entail different motivation for migration, pre-migration circumstances, selection process, legal status, and host country receptivity” (Hou & Bonikowska, 2017: 1437). These interrelated factors explain group differences in immigrants’ initial destination, social and economic contexts (e.g., presence of immigrant community, economic conditions), and individual characteristics, all of which may influence secondary migration.

Canada’s three main migration types, economic class, family class, and refugees, reflect the country’s objectives of immigration policy - economic development, family reunification, and humanitarian interest, respectively (Evra & Proponenko, 2018). All immigrants share the same legal status, becoming permanent residents upon arrival. They are generally entitled to settle anywhere in Canada, but the initial destination of economic and family class immigrants is less constrained by policy than that of refugees (Haan et al., 2017). In the former two cases, motivation may play a larger role in the selection of destination. Seeking economic success, economic immigrants are likely to settle in large gateway cities like Toronto, Montreal, and Vancouver, where job opportunities and ethnic networks are abundant. Family class immigrants, motivated by family reunification, are likely to settle where their family members have established their roots, most likely in the gateway cities. In contrast, the initial destinations of resettled refugees are influenced by the country’s two main refugee settlement programs. GARs tend to settle in designated communities nation-wide (including smaller cities) where the Resettlement Assistant Program (RAP) is delivered (Citizenship and Immigration Canada [CIC], 2011). The RAP services include income support, directly paid by the federal government and various immediate and essential supports (e.g. provision of temporary accommodation, assistance with permanent accommodation, employment counseling, life skills training) provided

by Service Provider Organizations (SPOs) – non-profit organizations (e.g. settlement agencies, social service organizations) receiving funding from the government (IRCC, 2017). Since 2008, Local Immigrant Partnerships (LIPs), often involving municipal governments, also have contributed to local resettlement strategies as community-based councils (Walton-Roberts, Veronis, Wayland, Dam & Cullen, 2019). Meanwhile, PSRs settle in communities where their sponsors (groups of five or more people, organizations, or sponsorship agreement holders) are located, often in smaller cities (Lanphier, 2003). By contrast, asylum claimants' initial destinations are not influenced by government policy in Canada.

The settlement patterns suggest immigrants in different admission categories experience different contexts of reception, including economic and social ones (Goodwin-White, 2018; Krahn et al., 2005). The concentration of co-ethnics/-nationals is considered a key social context. The group affinity hypothesis posits new immigrants prefer to move to and stay in a place where co-ethnics concentrate, as resources generated from the co-ethnic communities may assist in settlement (Ellis & Goodwin-White, 2006; Haug, 2008; Hou, 2007). Ethnic resources entail “economic tangibles like price discounts and interest-free loans, or intangibles like information about business conditions, employment tips and generalized goodwill in market transactions” (Portes, 1995, p. 12). Such location-specific social capital, may facilitate social and economic integration, making immigrants who initially settle in an area with a higher concentration of co-ethnics/-nationals less likely to move (Kritz & Nogle, 1994).

Economic conditions also matter. Economic theory argues people make a rational choice of location to maximize their economic position, making migration a human capital investment (Sjaastad, 1962). Immigrants may be more likely to relocate if economic opportunities are better elsewhere. Economic conditions of the initial destination may play an especially important role

in the secondary migration of recent immigrants, as their priority is to establish economic security in the new country (Newbold, 1999; Thomas, 2019).

The variations in secondary migration by admission category can be partly explained by the variations in the social/ economic context of the initial destination (Sapiro, 2017). The three largest cities, Toronto, Montreal, and Vancouver, have established immigrant communities, attracting economic and family class immigrants who migrate for economic and family reasons, respectively. Conversely, refugees settle in non-gateway cities through government assistance or private sponsorship; the local economy may be stagnant, and the immigrant community may be non-existent.

The pre-migration circumstances and selection processes of three groups of immigrants also vary, so their individual characteristics, notably their human capital, differ. Canada's economic immigration policy is a merit-based selection process weighing applicants' pre-migration human capital. Consequently, economic immigrants have high levels of education and language fluency. They may also attend school after arrival to upgrade their skills. In contrast, family class immigrants' and refugees' educational attainment and host country language skills are comparatively low, as their human capital is not considered in the selection process. They may be less likely to attend school in Canada as their motivation to migrate has less to do with economic success. Human capital theory and the spatial assimilation model suggest pre- and post-migration human capital may increase the spatial mobility of immigrants, including secondary migration (Kritz & Gurak, 2018; Spring, Ackert, Crowder & South, 2017).

In what follows, we examine the variation in long-term secondary migration across admission categories by taking into account compositional differences in immigrants' measurable characteristics, including initial destination, contextual characteristics, and human

capital characteristics. We consider the compositional differences in demographic (gender and marital status) and migration-related characteristics (age at migration and origin region) that may impact secondary migration (Trevena, McGhee & Heath, 2013). Even after considering these measurable characteristics, we expect resettled refugees are more likely to leave the initial destination than other immigrant types because of differences in unmeasured circumstances, including context of reception and attitudes (e.g., social isolation in destination, family/friend ties elsewhere).

We also examine the variations in the host society's reception of immigrants/refugees. The positive reception of immigrants/refugees in local communities may facilitate their integration as newcomers can cultivate social capital through positive interactions with local residents (Portes & Rumbaut, 2001). Although both GARs and PSRs tend to settle in smaller cities with limited or no pre-existing co-ethnic/-national communities, PSRs may receive more personalized social support from their sponsors, who are legally responsible for their resettlement for the first year in Canada, and this may discourage them from quickly leaving the initial destination (Woon, 1987). GARs may have a weaker supporting network in the initial destination as their main contact is the government staff (or government-funded settlement organizations) responsible for their resettlement. Thus, GARs may have less contact with local residents and be more prone to leave the initial destination quickly than PSRs (Simich, 2003).

3. IMPACT OF UNEMPLOYMENT ON SECONDARY MIGRATION

While previous research has explored various individual, group, and contextual characteristics contributing to secondary migration, we focus on the impact of individual experiences of unemployment on secondary migration, including whether and to what extent the impact of

unemployment varies by admission category. Employment is an indicator of self-sufficiency and shapes other aspects of immigrant integration, including finding housing, expanding social networks, improving host country language skills, enjoying better mental health, and having a greater sense of belonging (Beiser, 2003; Hynie, Korn & Tao, 2016). Newcomers often experience unemployment because of unfavorable local economic conditions, discrimination, and non-recognition of foreign qualifications by employers (Fang et al., 2018; Wren, 2003). As a negative “push” factor, unemployment is thus of policy concern as it deters new immigrants’ economic and social integration (Andersson & Solid, 2003).

Immigrants from different admission categories may respond to the experience of unemployment differently; some may opt for secondary migration more readily than others. Economic immigrants’ motivation for immigration (and subsequent internal migration) is employment driven. They may respond to unemployment by making a second move more quickly than family class immigrants, whose main motivation is to reunite with their family members (Nogle, 1994). The latter are more anchored in the initial destination, as they benefit from the pre-existing kinship and friend networks.

For resettled refugees, the differences in the context of reception for GARs and PSRs may lead to different reactions to their unemployment experience in the initial destination. The receiving community’s attitude toward GARs may be neutral, as their resettlement is facilitated by the government and SPO staff, and they can be less visible to the local community (Woon, 1987). As a result, they may be less likely to quickly establish social capital. They may also have less incentive to stay for social reasons if they are unable to become financially independent quickly. PSRs’ context of reception may be more positive, as they regularly receive support from sponsoring individuals or organizations and thus, are more visible to the local community

(Haugen, 2019). Consequently, PSRs may be more socially integrated and satisfied with their new lives in the initial destination than GARs. They may be less responsive to the experience of unemployment as they are more optimistic about their employment prospects, given their local network.

The above discussion leads us to derive the following four hypotheses:

Hypothesis 1 (H1): Resettled refugees are more likely to experience secondary migration than economic immigrants when compositional differences in their initial destination and some contextual, human capital, and other demographic characteristics are taken into account.

Hypothesis 2 (H2): GARs are more likely to experience secondary migration than PSRs, even after compositional differences in their initial destination, contextual, and other demographic characteristics are adjusted.

Hypothesis 3 (H3): GARs are more likely to respond to their unemployment experience by undertaking secondary migration than are economic immigrants.

Hypothesis 4 (H4): PSRs are less likely to respond to their unemployment experience by undertaking secondary migration than are economic immigrants.

4. DATA, MEASURES, AND METHODS

4.1 Data

We test the above hypotheses using the Longitudinal Immigration Database (IMDB). The IMDB combines the landing records and annual tax information of immigrants who arrived in Canada in 1980 and onward. Immigrants who have filed at least one tax return since 1982 are included in the database. The landing records contain immigrant characteristics at the time of landing, such

as age, education, marital status, source country, official language, and admission category (e.g., economic class, family class, refugees). Tax records provide information on annual wages and salaries, self-employment income and other incomes, current marital status, tax deductions for post-secondary education, and place of residence. The most recent IMDB covers landing and tax information up to 2016.

The study focuses on immigrants aged 20 to 54 at the time of landing in Canada. The analysis follows individuals' mobility status longitudinally from the year of arrival to the 10th year in Canada. The selected age range ensures most immigrants are still in the prime-working age in the follow-up period, as employment status is a key predictor of mobility in this study. We limit the sample to immigrants who landed in Canada between 2000 and 2014. The sample size of the selected immigrant cohorts ranges from 129,960 for the 2000 arrivals to 158,690 for the 2014 arrivals.¹

4.2 Measures

We use Census Metropolitan Areas (CMAs) and Census Agglomeration (CAs) as the geographic units to measure immigrants' secondary migration.² This is an advantage over most previous studies which rely on provinces/states as the geographic units (CIC, 2000; Haan et al., 2017;

¹ As counted in the first full year after arrival.

² A CMA or CA is delineated by Statistics Canada as an economically integrated and spatially contiguous area. It is formed by one or more adjacent municipalities surrounding an urban core. To be included in the CMA or CA, an adjacent municipality must have a high degree of economic connection with the urban core in terms of commuting flows. Among other delineation rules, at least 50% of the employed labor force living in the municipality works in the urban core, or conversely, at least 50% of the employed labor force working in the municipality lives in the urban core. A CMA and a CA differ in population size. A CMA has a total population of at least 100,000 of whom 50,000 or more live in the core, while a CA has a core population of at least 10,000. In 2011, there were 147 CMAs and CAs in Canada, of which 33 were CMAs.

Mossaad et al., 2019; Nogle, 1997; Okonny-Myers, 2010; van Huystee & St Jean, 2014). Since the rate of internal migration tends to decrease with the size of geographic units, provincial/state level analysis would not capture most internal mobility among immigrants. Further, immigrant distribution and mobility across CMAs and CAs shed light on the efficacy of policy steering immigrants from gateway to smaller cities. Compared to smaller geographic areas (e.g., municipalities), a CMA or a CA is an appropriate unit of local labor market. A move across CMAs or CAs would have greater implications on labor market access and social interactions with friends and relatives than mostly residential moves across municipalities within a CMA or CA.³

One challenge of using CMAs/CAs to study mobility is that their boundaries may change from one census to another because of the spatial expansion of economic connectedness and the boundary adjustment of the component municipalities. For example, the tax file of the IMDB data changes its geographic boundaries when a new census is conducted. In this study, we create consistent CMA and CA boundaries using the 2011 census boundaries as the base. First, we assign an immigrant's postal code of residence as given in the tax file to the smallest standard geographic unit of Dissemination Area (DA) for the 2001 and more recent censuses, or Enumeration Area (EA) for censuses before 2001 using the Postal Code Conversion File.⁴ The EA/DA is then matched to a corresponding CMA and CA in the 2011 census based on a set of historical boundary conversion files provided by Statistics Canada. This approach to creating

³ For instance, the Victoria CMA had a total population of 345,000 in 2011, a medium-size urban area with 22 municipalities (Census Subdivisions). Many moves across municipalities would not involve substantial disruption in labor market activities and social life. Descriptive statistics from the IMDB data shows economic immigrants have a higher rate of mobility across municipalities within a CMA or CA than refugees, likely because the former have higher residential mobility as a result of purchasing a new home or moving to neighborhoods with better quality schools.

⁴ Self-reported place of residence on December 31 of the income-tax year.

consistent CMA/CA boundaries works well for the 1996 and later censuses. However, there are some problems with earlier years because many postal codes do not have a unique EA code and some provided EA codes cannot be matched to the historical boundary conversion files.

Therefore, we focus on immigrants and refugees who arrived in Canada in the 2000s and early 2010s.

In the descriptive analysis, we calculate retention rate as the percentage of staying in the initial destination cities among immigrants who appeared in the tax file in a given year. Those who never filed tax (about 8% in the selected age range, see Evra and Prokopenko, 2018) and those who left Canada are not included in the calculation. If immigrants did not file tax in a given year but filed in a subsequent year, they are still included in the data file. We use their place of residence in the year of reappearance to determine whether they remained in the initial destination.

The dependent variable in event-history models is the incidence of internal migration in a specific year (t), defined as the year when an immigrant leaves the initial destination of resettlement. The initial destination is the CMA or CA where an immigrant resided in the calendar year of arrival (hereafter the landing year) if s/he filed an income tax return in that year, or the CMA or CA where an immigrant resided in the year after arrival (the first full year after immigration) if s/he did not file income tax in the arrival year. In our sample, about 93% of immigrants who filed income tax in the first full year after immigration also did so in the landing year. Therefore, the initial destination of the majority was the place of residence in the landing year.

The focal independent variable is immigrant admission category, consisting of five groups: economic class, family class, GARs, PSRs, and in-Canada asylum claimants and their

dependents. Although it is not a focus of this paper, the family class is included here to get a complete picture of all immigrant classes. In our sample of 2,092,950 immigrants, 1,276,690 (61.0%) are economic class immigrants, 592,370 (28.3%) are family class, 53,280 (2.5%) are GARs, 33,520 (1.6%) are PSRs, and 137,090 (6.6%) are asylum claimants.

In our multivariate analysis, we use four sets of covariates to account for observed differences by admission category in the likelihood of leaving the initial destination. The first set is the size of the initial destination, coded into six groups: Toronto; Montreal; Vancouver; medium-size CMAs with populations over 500,000 (Ottawa, Calgary, Edmonton, Hamilton, Winnipeg, Quebec City); small CMAs with populations between 100,000 and 500,000 (e.g., Victoria, Saskatoon, Halifax); and small urban areas. Immigrants who initially settled in rural areas are excluded because we cannot create consistent boundaries for scattered rural areas. However, very few immigrants, particularly refugees, initially settled in rural areas (Table 1).

[Table 1 about here]

The second set of covariates contains years since immigration and socio-demographic characteristics at the time of arrival. Years since immigration are coded as a set of single year dummy variables. We restrict observations to the first 10 years after arrival to reduce out-of-range predictions for arrival cohorts with fewer than 10 years of observations. The likelihood of leaving the initial destination is generally small 10 years after immigration.⁵ Socio-demographic

⁵ For instance, for the 2000-2001 arrivals for whom 15 years of observation are available, the share of remaining in the initial destination decreases by 17.2 percentage points in the first 10 years and 2.6 percentage points in the following five years for economic immigrants. For GARs, the share of staying in the initial destination decreases by 22.6 percentage points in the first 10 years and 2.4 percentage points in the following five years. For PSRs, the share of remaining in the initial destination decreases by 19.8 percentage points in the first 10 years and 2.4 percentage points in the subsequent five years.

characteristics at the time of arrival include age at immigration, gender, education, official language, and source region. The education variable has four categories: less than high school; a high school diploma; some postsecondary education; and a university or above degree. Official language skills are based on the knowledge of official languages at arrival: English and/or French; neither English nor French. The source region is coded into 11 categories: Western developed countries (the US, Western and Northern Europe, Australia, New Zealand), the Caribbean and Central America, South America, Southern Europe, Eastern Europe, Africa, Southern Asia, Southeast Asia, East Asia, West Asia, and others.

The third set of covariates covers post-immigration marital status, schooling, and labor market activities. These are time-varying variables, measured annually in each tax year before an immigrant's mobility status is determined. Marital status has three categories: married or common-law; divorced, separated or widowed; single. The school attendance variable is coded 1 if an immigrant attended full-time school in the last tax year and 0 otherwise.⁶ The labor market activity in the last year is coded as unemployed, employed, and not in labor force. The unemployed include those who receive at least \$100 employment insurance income (government transfer payment to unemployed individuals) in a given tax year.⁷ The employed entail individuals who receive at least \$100 employment income and no or less than \$100 employment insurance income.⁸ The residual group is defined as not in the labor force. We interact the labor

⁶ In the IMDB, school attendance can be estimated using the information on tax deductions for education.

⁷ This definition includes individuals who ever collected some employment insurance over an entire year. Thus, the unemployment rate calculated according to this definition is generally higher than the unemployment rate commonly measured in a census reference week.

⁸ As a sensitivity test, we also use receiving at least \$500 employment insurance as the threshold to define unemployment and receiving at least \$1000 employment earnings and no more than \$500 employment insurance as employment. These alternative definitions reduce the unemployment rate by 0.2 and one percentage points and the employment rates by two to five

force activity variable with the admission category variable (the independent variable) to test Hypotheses 3 and 4.

The fourth set of covariates captures the social and economic contexts of the initial destination. One indicator is the percentage of immigrants of the same origin region in the CMA or CA where an immigrant initially settled (Aradhya, Hedefalk, Helgertz & Scott, 2017). This indicator is used to examine the role of ethnic enclave in retaining immigrants. The other indicator is the percentage of unemployed individuals among the Canadian born and immigrants who arrived in Canada more than 20 years ago. We use this to examine the possible effect of job opportunities in the local labor market on retaining immigrants. Both indicators are time-varying and are measured in the year before mobility status is determined.

4.3 Methods

The first step is to derive descriptive statistics on the distribution of immigrants by the size of initial destination cities and the differences by admission category in select socio-demographic characteristics. We also determine the share of immigrants remaining in the initial destination by years since immigration. We present the statistics for all initial destinations combined and separately for three gateway cities, medium-size centers, and small metropolitan areas. These statistics illustrate the importance of the size of initial destination in explaining differences by admission category in the likelihood of secondary migration.

Since migration status is determined on a yearly basis, we use discrete-time event history models to estimate the likelihood and timing of secondary migration. The multivariate models

percentage points, depending on admission category. The coefficients of the derived labor activity variables in multivariate models remain similar in sign and magnitude.

focus on the first instance of departure. Immigrants are followed up to the year they leave the initial destination or to the latest year of observation (or the 10th year after immigration, whichever comes first) if they remain.

We run three event history models sequentially to estimate the probability of leaving the initial destination city. Model 1 contains a set of dummy variables for years since immigration from year two to 10 and the admission category variable. It tests the overall differences in the likelihood of leaving the initial destination for economic immigrants, family class immigrants, GARs, PSRs, and asylum claimants. Model 2 adds select covariates, including the size of initial destination, socio-demographic characteristics at landing, post-immigration marital status, school attendance and labor market activity, local ethnic enclave and labor market conditions. Model 3 adds the interaction terms between post-immigration labor market activity and admission category to see if refugees are more or less responsive to unemployment than economic immigrants.

Models 2 and 3 are multi-level, with both individual- and community-level variables. Since dependency among observations within a local community (CMA or CA) can underestimate standard errors of the regression coefficients, we use robust variance estimation that takes into account cluster effects (Steenbergen & Jones, 2002). Such a model is equivalent to a fixed-intercept model with level-one covariates and level-two predictors within the framework of Hierarchical Linear Models (Raudenbush, Bryk, Cheong & Congdon, 2000).

5 RESULTS

5.1 A first look

We first explore the landing and post-migration characteristics of the sample. Table 1 shows a notable divide between the gateway (Toronto, Vancouver, and Montreal) and non-gateway cities by admission category. The majority (66%) of economic and family class immigrants settle in one of the three gateway cities, while more than half of resettled refugees (GARs and PSRs) reside in medium-size centers or small metropolitan areas (58% and 52%, respectively). Within the refugee population, there is a wide geographic variation. Asylum claimants, who are not subject to government dispersal policy, are even more likely to settle in the three gateway cities (73%) than economic and family class immigrants. Between the two groups of resettled refugees, PSRs are more likely to settle in the gateway cities (41%) than GARs (33%).

Admission categories also reflect source regions. Africa and West Asia are the dominant regions for the 2000-2014 arrivals, comprising 66% and 92% of GARs and PSRs, respectively. The source regions of asylum claimants are more evenly distributed, with 23%, 22%, 13%, and 12% born in South Asia, Africa, Caribbean and Central America, and South America/West Asia, respectively. In contrast, Asia (Southern, Southeast, and East) is the source region for 56% of economic immigrants, whereas 52% of family class immigrants came from South Asia, East Asia, and Western developed countries.

Human capital profiles vary by admission category as well. Overall, economic immigrants are most highly educated, with 65% possessing bachelor's or higher degrees at the time of arrival, followed by family class immigrants (34%) and asylum claimants (18%). Resettled refugees are less educated; more than 70% of GARs and PSRs have not completed high school at arrival. These refugees are also disadvantaged in official language skills. Sixty-eight percent of GARs and 54% of PSRs know neither English nor French at arrival. Conversely,

the majority of economic and family class immigrants and asylum claimants know one of the official languages.

Table 2 displays post-migration characteristics of immigrants by admission category. While these characteristics can vary in each tax year, the characteristics in years two and five are presented as snapshots of the initial- and mid-stage resettlement. The variations in the time-varying individual characteristics between the five admission categories are of note, especially two years after arrival. Economic immigrants and asylum claimants are far more likely to have attended school in year one (12% and 10%, respectively) than resettled refugees. However, the gaps between these admission groups rapidly decrease by year five, as the rate of school attendance drops for economic immigrants and asylum claimants and increases for resettled refugees.

[Table 2 about here]

Similarly, we observe wide variations in individual labor market activities in year two by admission category. While the non-labor force participation rates for economic and family class immigrants, PSRs, and asylum claimants range from 21% to 26%, more than half (57%) of GARs are not in the labor force. Many GARs may be taking language training or choose not to engage in employment to retain their eligibility to receive a monthly income assistance from government during the first year in Canada. PSRs' relatively low non-labor force participation rates may reflect sponsors' efforts to make them economically independent during the first 12 months, the period when sponsors are legally responsible for PSRs' finances (Lenard, 2019). This is consistent with an analysis of the IMDB by Kaida, Hou and Stick (2019); they find the employment rates of PSRs in the first year in Canada are comparable to those of economic

immigrants. The variations in non-labor force participation rates shrink by year five, although GARs are still less likely to be in the labor force than other immigrants.

There is also a clear difference in the incidence of unemployment by admission category. GARs' unemployment rates in year one are low, likely because many may not yet be in the labor force and not be looking for employment. The unemployment rates of economic immigrants, PSRs, and asylum claimants are comparable (12.1%, 12.4%, and 17%, respectively), lower than those of family class immigrants. In year five, the unemployment rates rise across all admission categories. This may be because more immigrants and refugees have worked long enough to qualify for employment insurance when unemployed.

Contextual characteristics differ to a lesser extent between admission groups. Regional unemployment rates vary little in both years two and five. Resettled refugees tend to have fewer co-national immigrants in their city of residence (the mean share of co-national immigrants in the same city is around 2% for GARs and PSRs) than economic and family class immigrants, and the percentages of co-national immigrants in the city of residence hardly change three years later (year five).

5.2 Secondary migration by initial resettlement city size

We now move to the results for secondary migration. Figures 1-4 display proportions of immigrants who remain in the initial destination by years after immigration and admission category. These figures show the retention rates by the size of destination city of resettlement: all destinations combined (Fig. 1); the three gateway cities (Toronto, Montreal, Vancouver) (Fig. 2); medium-size cities (Fig. 3); and small metropolitan areas (Fig. 4).

[Figures 1-4 about here]

First, overall, resettled refugees are less likely to remain in the initial destination than economic and family class immigrants, yet three quarters of resettled refugees are still in the initial destination 10 years after arrival (Fig. 1). Second, the size of an initial destination city matters in accounting for the variations in immigrant retention rates by admission category. In the three gateway cities, the variation in retention rates by admission category is virtually non-existent (Fig. 2). More than 85% of immigrants remain in the initial destination 10 years after arrival for all admission categories. Immigrants are slightly less likely to remain in medium-size centers than in gateway cities. Three quarters of economic immigrants, resettled refugees, and asylum claimants arriving in medium-size centers stay there, while the retention rate is slightly higher for family class immigrants (Fig. 3). In the small metropolitan areas, retention rates vary widely by admission category (Fig. 4). Economic immigrants and GARs follow a similar pattern and are the least likely to remain in their initial destination throughout the first 10 years. PSRs and asylum claimants are more likely to stay, with 69% and 67%, respectively, still there in year 10. Family class immigrants are most likely to remain in these areas.

5.3 Event history analysis predicting secondary migration

The results for secondary migration in Fig. 1 (all initial destinations) are based on observed data; differences in measurable characteristics of immigrants from different admission categories are not considered. However, as shown in Tables 1 and 2, immigrants from different admission categories differ in their demographic, socioeconomic, and contextual characteristics, and this may partly explain why certain categories are more likely to leave the initial destination than others. Discrete-time event history models help us test our hypotheses on the probability of

secondary migration by admission category and the differential impacts of unemployment by admission category while controlling for measurable group differences (Table 3).

[Table 3 about here]

When no individual or contextual characteristics of immigrants are taken into account (Model 1), both groups of resettled refugees have a higher likelihood of leaving the initial destination than economic immigrants, as the positive and statistically significant coefficients for GARs and PSRs suggest, consistent with Fig. 1 (all destinations). After controlling for measurable covariates, as in Model 2, PSRs are less likely to leave the initial destination than economic immigrants ($p < 0.05$). This suggests PSRs' higher probability of secondary migration found in Model 1 can be largely explained by the fact that they are more likely to settle in smaller size cities initially and differences in other characteristics. With the control variables, GARs' coefficient is still positive and statistically different from zero (Model 2). However, the statistical significance of coefficients does not tell the whole story. Figure 5 displays predicted probabilities of remaining in the initial destination by admission category based on Model 2's results. In calculating the probabilities, we set the values for the covariates at means (for continuous variables) or proportions (for categorical variables) for all immigrant groups combined.

[Figure 5 about here]

Figure 5 suggests GARs' estimated probability of remaining in the initial destination differs little from economic immigrants. Similarly, the difference between PSRs and economic immigrants in the estimated probability of staying in the initial destination is small. Overall, economic immigrants' and resettled refugees' predicted retention rates are similar and remain fairly high (over 75%) throughout the first 10 years.

In Model 3, we add interaction terms between admission category and labor market activities in the previous year to test H3 and H4. Figure 6 presents a graph of predicted probabilities of remaining in the initial destination for unemployed and employed GARs, PSRs, and economic immigrants in years two to 10, based on Model 3's results.

[Figure 6 about here]

Contrary to H3, unemployment experience has no greater impact on secondary migration for GARs than economic immigrants. The impact of unemployment is virtually the same for GARs and economic immigrants ($p > 0.05$). As shown in Fig. 6, the gaps between unemployed and employed economic immigrants and GARs are similar throughout the first 10 years after landing. Meanwhile, the experience of unemployment has a negative but non-significant impact on secondary migration for PSRs. Thus, the impact of unemployment is smaller for PSRs than economic immigrants, consistent with H4.

Although H4 is supported from a statistical significance standpoint, it is worth noting that the predicted probabilities of staying in the initial destination differ little for all employed and unemployed immigrants, regardless of admission category, as demonstrated in Fig. 6. Over 70% of employed and unemployed immigrants remain in the initial destination in year 10, and the difference in the probability of leaving the initial destination by employment status is minor for GARs and PSRs, as well as for economic immigrants.

The above models and predicted retention rates are based on immigrants in all initial destinations. Since resettled refugees are disproportionately allocated initially outside of the three largest gateway centers, a more policy-relevant question is how they compare with other immigrants in retention in smaller cities. We replicate the above event-history modelling by excluding immigrants who initially settled in the three gateway centers. The results show GARs

and economic immigrants have essentially identical retention rates at about 72% 10 years after immigration. PSRs and asylum claimants have slightly higher retention rates at 76% and 75%, respectively, 10 years after arrival.

6 CONCLUSION AND DISCUSSION

This study compares the propensity of resettled refugees (GARs and PSRs) and economic immigrants to leave the initial city of destination. Taking advantage of the IMDB data, we improve upon previous studies by analyzing the timing of secondary migration of a broader arrival cohort of immigrants (2000-2014) at lower geography levels (CMAs and CAs) for a longer period (the first 10 years after arrival).

Our analysis of the IMDB data shows resettled refugees are more likely to undertake secondary migration than economic immigrants during their first 10 years in Canada. However, this is mostly explained by the fact that resettled refugees tend to settle initially in smaller cities. PSRs' higher propensity to migrate than economic immigrants is fully explained by their tendency to settle in non-gateway cities. GARs are more likely to leave the initial destination even after a number of measurable characteristics are taken into account, suggesting unmeasured factors (e.g., social isolation in the initial destination, dissatisfaction with settlement services) may also play a role. Thus, Hypothesis 1 (Resettled refugees are more likely to undergo secondary migration than economic immigrants when a series of measurable characteristics are adjusted) is partially supported. Among resettled refugees, only GARs are more likely to leave their initial destination than economic immigrants when compositional differences in their initial destination, contextual, human capital, and other demographic characteristics are controlled for.

Hypothesis 2 is also supported; GARs are more likely to undertake secondary migration than PSRs, even after compositional differences in their initial destination, contextual, and other demographic characteristics are held constant. Unmeasured characteristics, both pre- and post-migration (e.g., period of displacement, experience in refugee camps, social network cultivated in the initial destination city, health), may account for the persistent PSR-GAR gaps in secondary migration.

Our event history analysis examines the differential impact of unemployment on secondary migration by admission category. While an experience of unemployment in the previous year increases the probability of leaving the initial destination city for both economic immigrants and GARs, the magnitude of unemployment effects is similar for these two immigrant groups, contrary to Hypothesis 3 (GARs are more likely to respond to their unemployment experience by undertaking secondary migration than economic immigrants). Moreover, for PSRs, unemployment has no significant impact on leaving the initial destination, thus rejecting Hypothesis 4 (PSRs are less likely than economic immigrants to respond to their unemployment experience by undertaking secondary migration). PSRs who were unemployed in the previous year may be more satisfied overall with their lives in the adopted community, and unemployment will not make them think of relocating.

More importantly, our calculation of predicted probabilities of secondary migration highlights that regardless of admission category, the majority of immigrants remain in the initial destination even 10 years after arrival. This has an important policy implication; if there is a concerted policy effort to get immigrants to settle initially in small cities, the majority will stay there. Previous studies and the public tend to suggest policy designed to steer immigrants away from gateway cities will be ineffective because immigrants prefer larger cities and they have the

right to move anywhere they want. However, our empirical results suggest otherwise: most new immigrants stay in the initial destination.

The observation that resettled refugees are not substantially different from economic immigrants in secondary migration rates is particularly noteworthy, given that many refugees' initial destinations are not self-chosen but assigned by government. Without such assignment, most refugees would probably never set foot in small cities where they have no economic or social connections. The very high concentration of asylum claimants in Toronto and Montreal provides a striking case of comparison when a dispersal policy is not in place.

Overall, the findings are consistent with Åslund's study (2000) on secondary migration in Sweden: refugee dispersal policy does not necessarily induce secondary migration. Most refugees stay in the initial destination city, suggesting policy efforts to affect the geographic distribution of immigrants will be most effective at the time of arrival. Moreover, the slightly higher retention rate among PSRs than GARs suggests the effect of government allocation can be enhanced by contextual considerations, such as local ethnic enclaves, religious communities, non-governmental organizations, family networks, and regional economy/labor markets. In this regard, Canada's ongoing shift to placed-based immigrant integration policy, exemplified in the combined efforts for GAR resettlement between the RAP holders and LIP actors in many municipalities, can be a promising strategy to retain immigrants/ refugees in the initial destination (Walton-Roberts et al., 2019).

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Tables

TABLE 1 Initial destinations and socio-demographic characteristics of immigrants by category, 2000-2014 arrivals					
	Economic class	Family class	Government-Assisted Refugees	Privately Sponsored Refugees	Asylum claimants
	%				
Initial destination					
Montreal	17.8	13.1	5.6	5.0	20.4
Toronto	34.0	39.0	15.9	28.9	52.3
Vancouver	14.6	14.0	11.1	6.7	4.8
Medium-size centers	18.8	16.7	34.0	37.5	13.0
Small metropolitan areas	8.2	9.6	23.6	15.1	7.8
Small urban areas	4.0	4.1	9.6	6.0	1.4
Rural areas	2.7	3.5	0.4	0.9	0.3
Source region					
Western developed countries	7.9	11.8	0.1	0.0	0.3
Caribbean and Central America	3.2	9.3	0.5	0.2	12.9
South America	3.7	4.7	12.8	2.1	11.8
Southern Europe	0.9	1.9	1.6	0.5	1.6
Eastern Europe	8.4	5.4	7.0	0.9	5.8
Africa	11.5	9.8	30.5	44.8	22.0
South Asia	18.7	25.5	6.7	2.6	23.1
Southeast Asia	15.4	10.2	5.6	1.4	1.0
East Asia	21.7	14.2	0.2	0.1	9.8
West Asia	8.6	6.8	35.3	47.5	11.6
Others	0.1	0.4	0.0	0.0	0.3
Highest level of education at landing					
Less than high school	11.3	34.8	72.9	69.7	48.0
High school completion or trade	11.5	19.2	11.3	13.0	19.6
Some post-secondary	12.6	12.0	5.3	7.9	14.3
Bachelor's degree or higher	64.6	34.0	10.5	9.4	18.1
Knowledge of official language at landing					
English and/or French	17.8	29.0	67.7	53.2	14.7
Neither English nor French	82.2	71.0	32.3	46.8	85.4
Source: Longitudinal Immigration Database					

TABLE 2 Time-varying predictors of mobility among prime-aged immigrants by admission category, 2000-2014 arrivals					
	Economic	Family	Government-	Privately	Asylum
	class	class	Assisted	Sponsored	claimants
			Refugees	Refugees	
Second year after landing	%				
Attended school in the previous year	11.9	6.9	4.1	4.6	10.0
Not in the labour force in the previous year	24.1	20.7	56.9	23.2	26.3
Unemployed in the previous years	12.1	24.9	3.6	12.4	17.0
Regional unemployment rate	11.1	10.9	11.9	10.6	10.8
Percent of own-group immigrants	4.7	4.4	1.9	2.6	3.7
Fifth year after landing					
Attended school in the previous year	9.3	6.1	7.3	6.7	7.5
Not in the labour force in the previous year	17.0	18.4	36.6	22.5	21.3
Unemployed in the previous years	21.8	28.8	18.9	24.2	21.7
Regional unemployment rate	11.0	10.9	11.7	10.4	11.3
Percent of own-group immigrants	5.3	4.8	2.1	2.7	4.2

TABLE 3 Discrete-time event-history models predicting leaving the initial destination city

	Model 1		Model 2		Model 3	
Years since migration (ref = year 1)						
Year 2	-2.45	***	-1.78	***	-1.81	***
Year 3	-3.37	***	-2.66	***	-2.69	***
Year 4	-3.56	***	-2.82	***	-2.85	***
Year 5	-3.76	***	-2.98	***	-3.01	***
Year 6	-3.93	***	-3.12	***	-3.15	***
Year 7	-4.10	***	-3.27	***	-3.30	***
Year 8	-4.23	***	-3.38	***	-3.41	***
Year 9	-4.34	***	-3.47	***	-3.50	***
Year 10	-4.45	***	-3.57	***	-3.60	***
Admission category (ref = economic class)						
Family class	-0.17	***	-0.20	***	-0.13	***
Government-Assisted Refugees	0.42	***	0.04	***	0.15	***
Privately Sponsored Refugees	0.19	***	-0.03	*	0.05	**
Asylum claimants	-0.11	***	-0.08	***	-0.02	*
Initial destination (ref = Toronto)						
Montreal			-0.19	***	-0.19	***
Vancouver			0.05	***	0.05	***
Medium-size centers			0.20	***	0.21	***
Small metropolitan areas			0.84	***	0.84	***
Small urban areas			1.28	***	1.28	***
Age at landing			-0.02	***	-0.02	***
Gender (ref = man)						
Woman			-0.17	***	-0.17	***
Marital status (ref = married or common-law)						
Divorced, separated, or widowed			0.38	***	0.38	***
Never married, single			0.28	***	0.28	***
Education (ref = bachelor's or higher degree)						
Less than high school			-0.27	***	-0.27	***
High school graduation			-0.21	***	-0.21	***
Some postsecondary education			-0.19	***	-0.19	***
Knowledge of official language at landing (ref = knew English and/or French)						
Neither English nor French			0.04	***	0.04	***
					(Continues)	

TABLE 3 (Continued)					
	Model 1	Model 2	Model 3		
Region of origin (ref = West Asia)					
Western developed countries		-0.01		-0.02	
Caribbean and Central America		-0.32	***	-0.33	***
South America		-0.10	***	-0.11	***
Southern Europe		-0.54	***	-0.55	***
Eastern Europe		-0.24	***	-0.24	***
Africa		0.14	***	0.13	***
South Asia		0.46	***	0.46	***
Southeast Asia		-0.50	***	-0.50	***
East Asia		0.45	***	0.44	***
Other countries		-0.70	***	-0.71	***
Attended school in the previous year (ref= did not attend)					
		0.24	***	0.24	***
Regional unemployment rate					
		0.01	***	0.01	***
Percent of own-group immigrants					
		-0.09	***	-0.09	***
Employment status in the previous year (ref = employed)					
Not in labor force					
		0.20	***	0.28	***
Unemployed					
		0.03	***	0.08	***
Not in labor force*family class					
				-0.16	***
Not in labor force*GARs					
				-0.31	***
Not in labor force*PSRs					
				-0.30	***
Not in labor force*asylum claimants					
				-0.29	***
Unemployed*family class					
				-0.15	***
Unemployed*GARs					
				0.00	
Unemployed*PSRs					
				-0.11	**
Unemployed*asylum claimants					
				0.03	
<i>Note</i> : * $p < 0.05$; ** $p < 0.01$; *** $p < 0.001$					

Figures

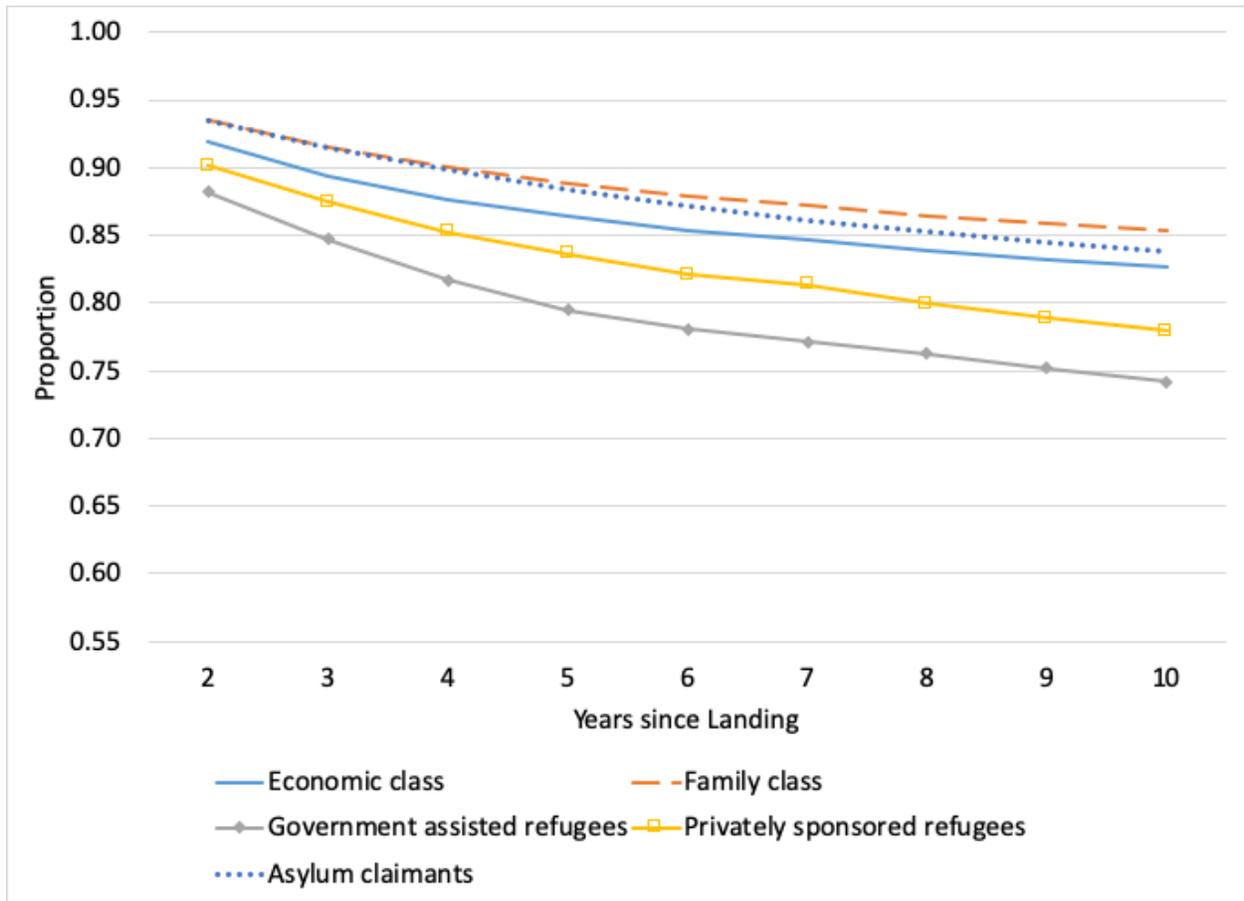


FIGURE 1 Proportion of immigrants remaining in initial destination city by admission category, all destinations

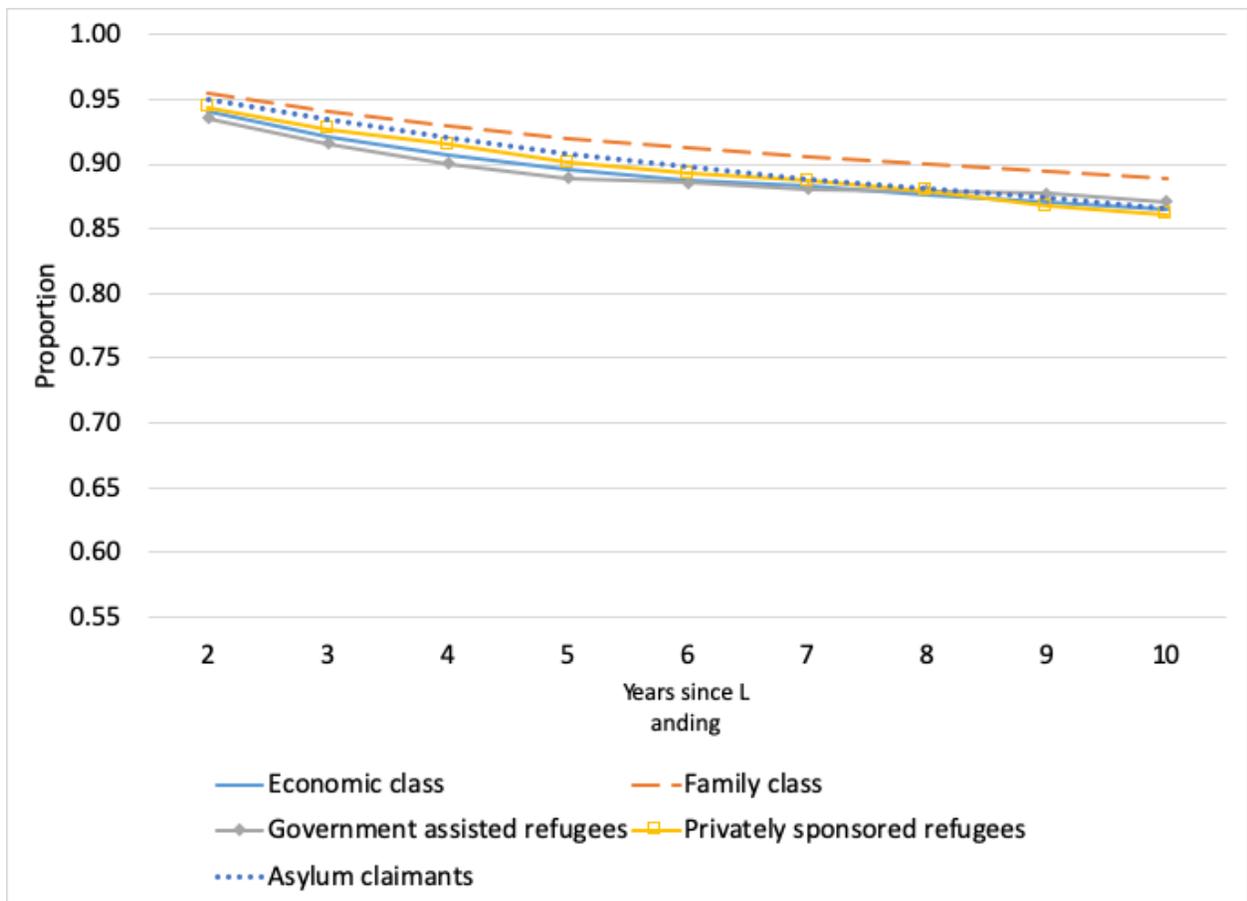


FIGURE 2 Proportion of immigrants remaining in initial destination by admission category, Toronto, Montreal and Vancouver

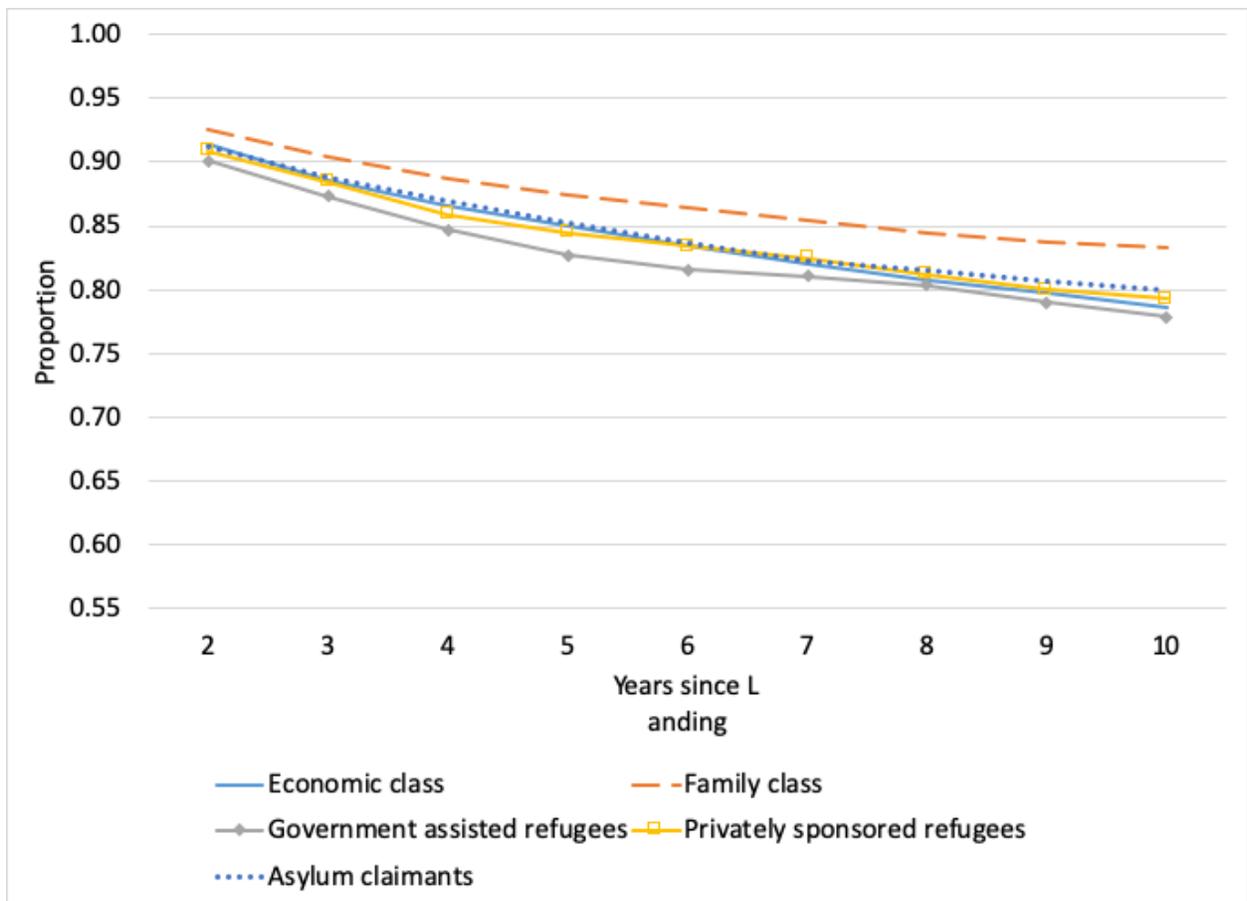


FIGURE 3 Proportion of immigrants remaining in initial destination by admission category, medium-size centers

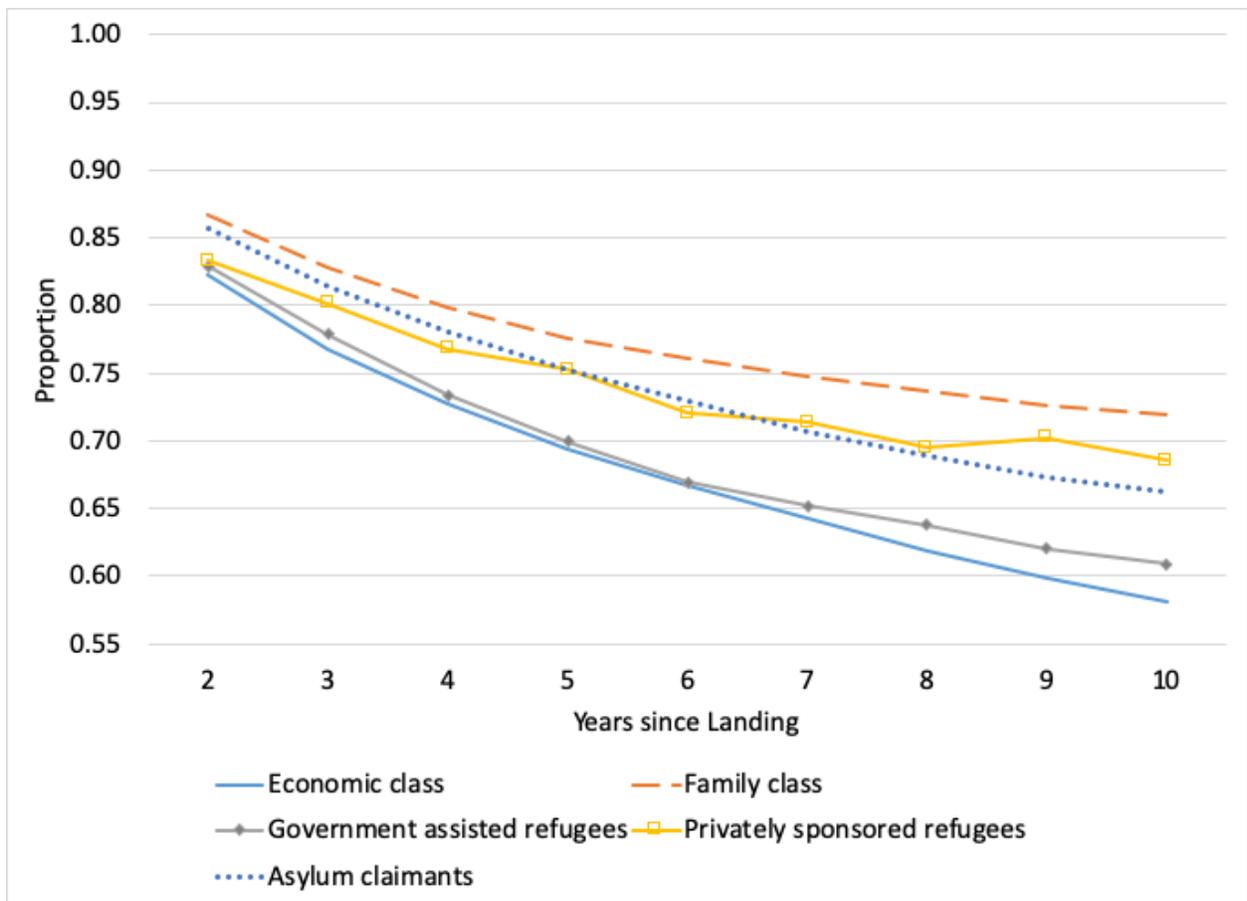


FIGURE 4 Proportion of immigrants remaining in initial destination by admission category, small metropolitan areas

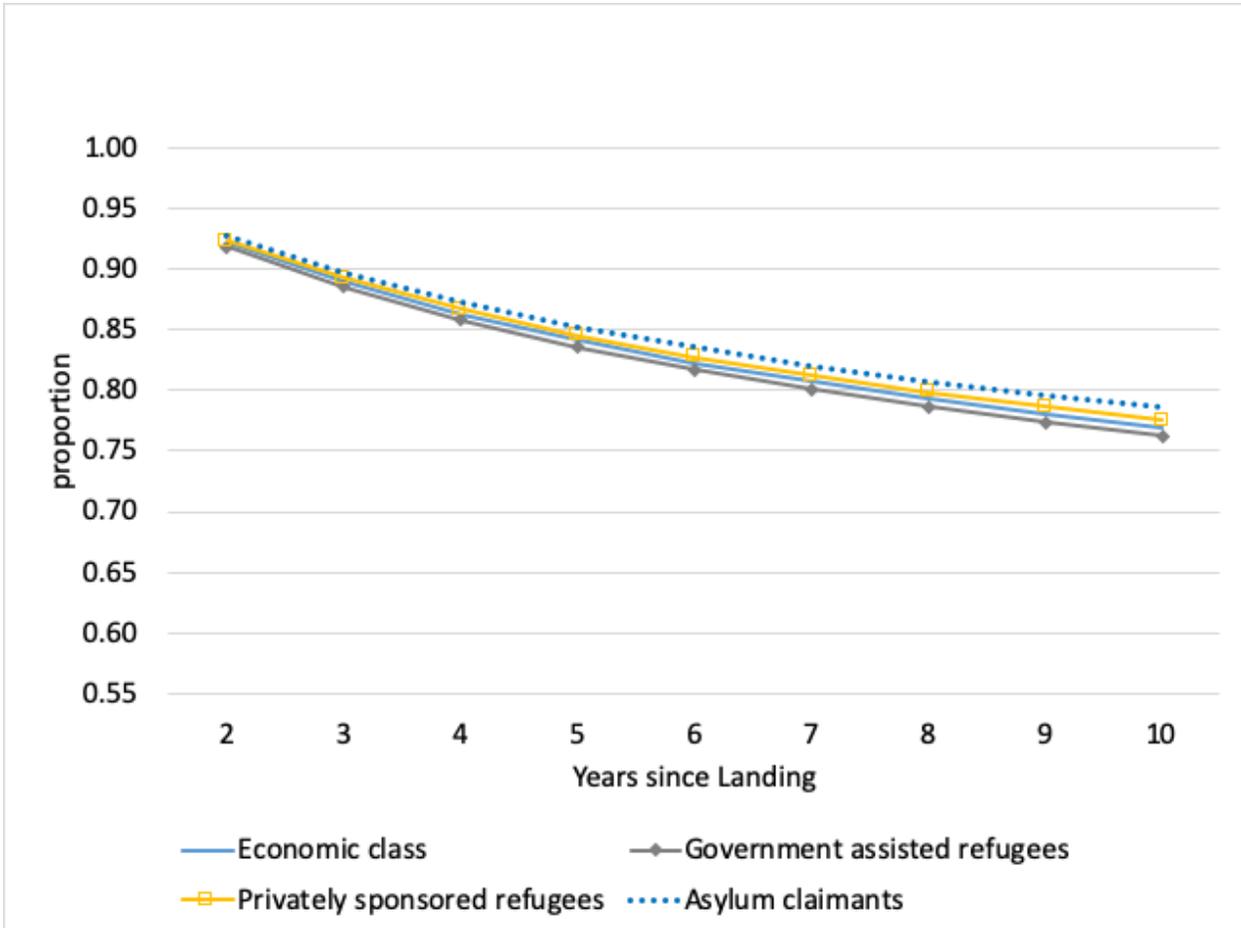


FIGURE 5 Predicted proportion of immigrants remaining in the initial destination city by admission class

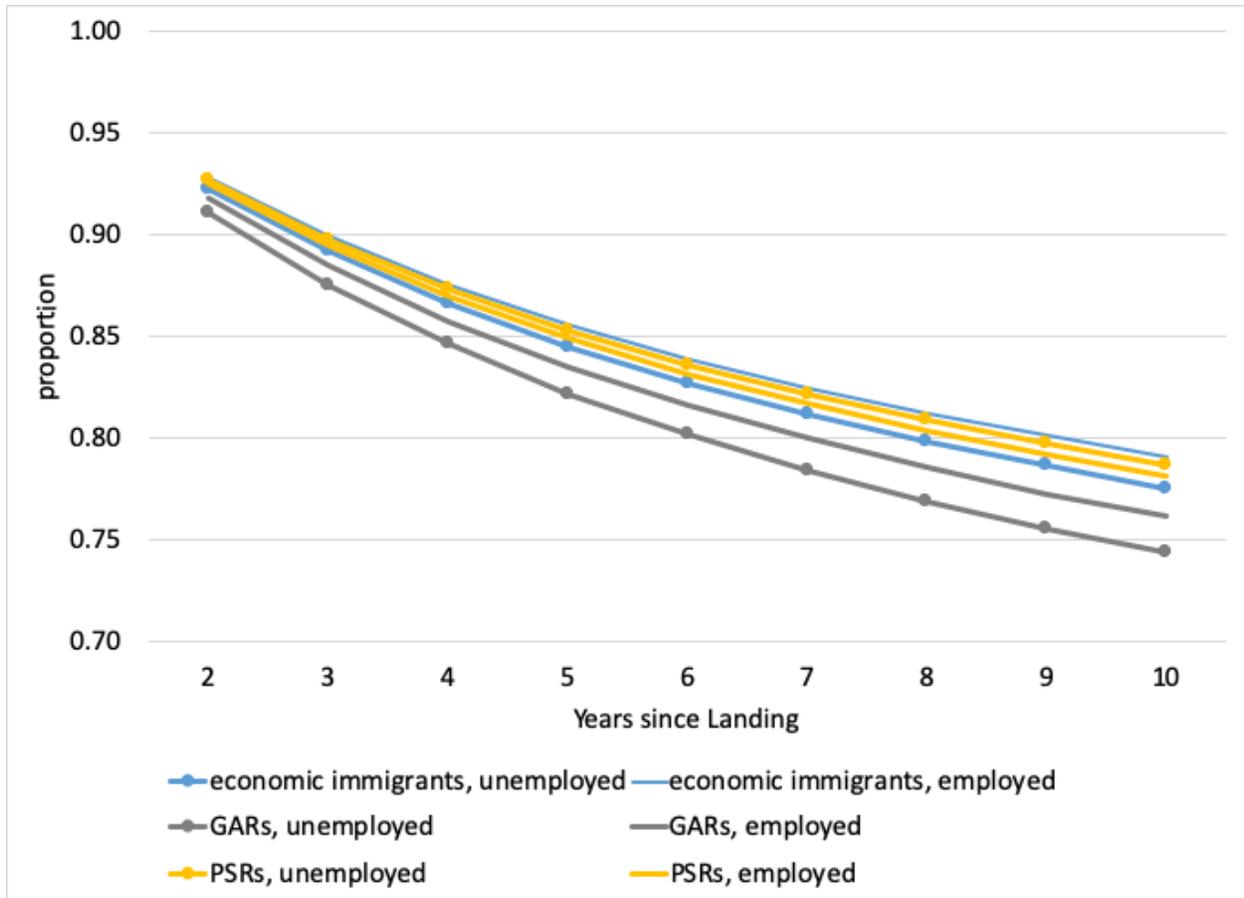


FIGURE 6 Predicted proportion of immigrants remaining in initial destination by employment status and admission category