Does the propensity to 'double-up' vary by immigrant class of entry over the first four years after arrival? Evidence from the Longitudinal Survey of Immigrants to Canada

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ABSTRACT

Explanations for doubling-up – coresidence with extended kin and non-kin – among immigrants center on life-course events, culture, and economic need. Recent studies show the temporary nature of doubled-up households within the adaptation process, but empirical evidence on how entry status influences the duration of being doubled-up remains limited. Using data from the Longitudinal Survey of Immigrants to Canada, results show different patterns for sponsored parents/grandparents shortly after arrival and over time; no differences between economic class principal applicants, sponsored spouses/fiancés/other relatives, and refugees in the odds of doubling-up shortly after arrival; and the odds of being doubled-up for economic class principal applicants are significantly lower than for others, both two and four years after arrival, as their households have greater turnover than other immigrant households. Findings suggest that using a linear effect of time since arrival to measure the migration process without considering variations by entry status is misleading.

INTRODUCTION

The foreign-born Canadian population has grown in the last several decades and by 2006, the number of immigrant families reached almost one fifth of all Canadian families (Statistics Canada, 2007a). Data for this same year indicate that immigrants were much more likely to have low incomes and live in larger households that combine multiple families, when compared to non-immigrant populations (Lee & Edmonston, 2013). This pattern is not exclusive of the Canadian case (Flake, 2012; Glick, Bean, & Van Hook, 1997). Upon arrival, most immigrants need to find housing and employment, learn a new language, and establish new social networks. To ease overcoming these tasks they might turn to friends and family for support. In times of economic need, coresidence with extended kin or non-kin, "doubling-up", may serve as a safety net as individuals pool economic and non-economic resources. Besides economic need, explanations of the formation of shared households center on socio-demographic constraints, life-course processes (Blank & Ramon, 1998), and the role of cultural values associated with ideas of "familism" and solidarity (Kamo, 2000).

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But the migration process itself plays a key role as well (Glick, 2010). While recent immigrants are more likely to double-up as they settle and adapt to the host country in the first years upon arrival, coresidence with kin or non-kin tends to be a temporary arrangement (Glick & Van Hook, 2002) and does not always reflect patterns observed in origin countries (van Hook & Glick, 2007). In other words, immigrants' coresidence with kin or non-kin is conceived as a strategy for adaptation (Menjívar, 1997b; van Hook & Glick, 2007), but how long these arrangements last is an empirical question. The migration process is usually captured with variables of time since arrival that assume a linear pattern over time. Studies on the duration of shared living arrangements are scarce, but the little available evidence shows that durations depend on the relationship between the members of the household, and on the distribution of economic resources among family members. In other words, the length of these arrangements depends on how individuals contribute to the household, their potential for reciprocity, and the relationships between household members (Glick & Hook, 2011).

Immigration policy creates legal and bureaucratic channels that enable people to move, determines the definition of the family, who can migrate, and when (Triadafilopoulos, 2006), and classifies newcomers as refugees, economic or familial migrants. Canada has an explicit immigrant selection policy that screens and selects immigrants for their skills and potential for integration into the job market, while accepting immigrants under family reunification procedures and for humanitarian reasons. Behind the rationale for screening immigrants and selecting them for their skills and human capital is the notion that this process maximizes immigrants' chances of integrating into the economy (Borjas, 1993). For critics of family reunification, family class immigrants are conceived as dependents and burdens (Collacott, 2006). Scholars generally assume that these different immigrant categories (refugee, economic, and family class) reflect migrants' preexisting characteristics – motivations for migrating and levels of human and social capital – independent of selection policies.

However, whether these categories reflect motivations for migrating in a meaningful way, or are mere bureaucratic categories that are the result of legal procedures, is open to debate (Li, 2003). The role of the state and the influence of immigration policy on migrant outcomes have been conceptualized by two opposing approaches: the realist and nominalist perspectives. The latter considers that entry status reflects differences in motivations, and human and social capital, whereas the former considers entry status a social construction that does not necessarily reflect differences in motivations, nor pre-migration characteristics (Elrick & Lightman, 2014; Hein, 1993). State policies exist within broader contexts of reception that are known to matter for explaining different modes and pathways toward incorporation (Portes, 1995; Portes & Rumbaut, 2006). This context is influenced by state policies, labor markets, welfare-systems and the cultural domain (Freeman, 2004).

Evaluating how entry status impacts family patterns is complicated and little is known in terms of how entry status influences recent immigrants' living arrangements (Glick, 2010). This gap in the literature has been mainly driven by data limitations on immigrants' entry status and on the lack of longitudinal data that allow studying the

turnover of shared households. To fill this gap in the literature, our overarching question is whether or not there are differences in living arrangements by immigrant class of entry. Specifically, we address two main research questions: *1) Are there differences by entry status in the propensity to 'double-up' shortly after arrival; and 2) are there differences by status in the propensity to double-up and the continuity of immigrants' living arrangements over the first four years after arrival?* By answering these questions, we aim to provide a better understanding of the change and continuity of living arrangements and their relationship to adaptation processes among recent immigrants. Moreover, we aim to better understand how immigration policy mediates adaptation processes, and the implications of using time since arrival to capture these processes. We use data from the Longitudinal Survey of Immigrants to Canada (LSIC), a nationally representative survey that followed immigrants over the course of their first four years after arrival. LSIC is well suited to address these questions as it is one of the few longitudinal data sources including detailed information of the adaptation experience, immigrants' living arrangements, and entry status.

'DOUBLING-UP': LIVING WITH EXTENDED KIN OR NON-KIN

Migration is related to family dynamics, kinship, and intergenerational ties at different levels. Most immigrants do not move alone but do so with other family members, or where relatives and friends have settled already (Massey et al., 1993). Once in the destination country, immigrant family dynamics are affected by cultural and social meanings and practices from the home country as well as social, economic and cultural factors in the destination country (Clark, Glick, & Bures, 2009; Foner, 1997). Therefore, immigrant family patterns are the result of pre-migration family, marriage and kinship beliefs and practices, as well as the demographic composition of the immigrant group, and external economic, structural and cultural conditions. The higher prevalence of extended family households among migrants than non-migrants observed in developed countries is evidence of these patterns (Flake, 2012; Glick et al., 1997; Lee & Edmonston, 2013).

It has long been established that the determinants of living in households with extended kin and non-kin are associated with demographic and economic structural aspects, as well as cultural factors (Angel & Tienda, 1982; Burr & Mutchler, 1993). Demographic factors like sex and age, and life-course transitions, such as changes in marital status or the birth of a child, may lead individuals to pool their resources and exchange different types of support (Blank & Ramon, 1998). In times of financial need due to unemployment, economic crises and recession, shared households act as a safety net. Sharing a household is also influenced by cultural factors associated with the norms and values of familism and kinship, collectivism, solidarity, and support. However, economic need and culture are mediated by the nature of the relationships within the household (particularly, the level of dependency between household members), and how members contribute to the household (Angel & Tienda, 1982), as well as the events that led to household extension. Extended households with younger or older generations attached to the original household – vertical extended households – tend to be associated more often with family and demographic events like health problems, separation, widowhood or single

motherhood. On the other hand, the reasons why individuals from the same generation are attached to the original household – horizontal extended household – tend to be related more often to economic insufficiency (Kamo, 2000).

Ethno-racial minorities and immigrants are more likely than the White native-born population to reside in shared households. In addition to the explanations put forward for the overall population – demographic, structural, and cultural factors – recent immigration explains much of the racial and ethnic variation in living arrangements. Findings show that this is true for vertical extended households – parents' coresidence with adult children – (Glick & Van Hook, 2002), as well as for horizontal living arrangements (Leach, 2012). However, among recent immigrants, the continuity of extended households has been found to depend on age, changes in marital status, and immigrant class of entry (Khoo, 2008).

The distinction between types of extended households informs strategies implemented by recent immigrants while adapting to the challenges faced in the destination country. For example, a larger presence of extended living arrangements in the U.S. was a consequence of an increase of horizontal extended households among Mexican, Guatemalan and Salvadoran immigrants due to increases in proportions of young, single adults living with relatives, as well as increasing poverty rates (Glick et al., 1997). A historical revision of patterns over time shows that family reunification policy – like the 1965 U.S. Immigration Act – encouraged the vertical extension of households (Gratton, Gutmann, & Skop, 2007). Similarly, a study comparing Ukrainian, Chinese, and Italian families in Canada finds that immigration policy and family reunification challenged ideas of familism often viewed as an intrinsic characteristic of some ethnic groups (Satzewich, 1993).

The argument that recent immigration influences individuals to live in shared households assumes that 'doubling-up' is a temporary living arrangement that may last while immigrants adapt to the new country. Two perspectives have explained the continuity of shared living arrangements with kin and non-kin. The functionalist perspective pertains more often to multigenerational households where the elderly or children are more likely to depend on support from others, and asserts that unidirectional assistance from some members to others, as well as social norms of obligation, account for the continuity of living arrangements. In contrast, the contractual perspective applies more often to co-residential households shared by siblings or other extended kin, or non-kin, and assumes that all members of the household contribute to and benefit from this arrangement, and that a balanced and reciprocal exchange of resources occurs. Data from the U.S. show that most shared households change their living arrangements within one year after arrival, and very few remain constant after three years, with the duration of shared living arrangements depending on the relationships of those sharing the household, the distribution of economic resources, as well as ideas of reciprocity and exchange (Glick & Hook, 2011). Multigenerational households tend to stay together longer than other doubled-up households when one or two individuals provide a disproportionate share of the economic resources in the household, contrary to other shared households, which last longer when resources are more evenly distributed (Glick & Hook, 2011).

Co-residence with kin can provide support and act as a safety net, but also may produce conflict and strain relationships as family members negotiate roles and obligations (Swartz, 2009). This is particularly true in contexts where material and physical resources are limited. For example, Menjívar (1997b) shows that economic need influences the duration of kinship networks, both inside and outside the household, challenging the notion that support is an attribute from the immigrant group itself (1997a). In other words, economic need influences the likelihood of doubling-up, as well as the turnover rate of shared households.

THE MIGRATION PROCESS REVISITED: IMMIGRANT CLASS OF ENTRY

a. Immigrant class of entry in the Canadian case

Canada presents a suitable context for studying the role of entry status in the immigrant adaptation process. Canada is known to be a 'nation of immigrants' – with one in every five people being foreign born. Immigration has been central to nation building (Kelley & Trebilcock, 2010; Li, 2003; Simmons, 2010) and is likely to continue since the country has the highest migration rate in the world today (Statistics Canada, 2007). The 1967 Immigration Act removed all explicitly racially discriminatory rules and implemented a points system to select immigrants in terms of their skills, work experience and demographic characteristics. This change in policy resulted in increased immigration from Latin America and Asia, substituting previous majority European flows. However, immigrants are not only accepted into Canada as permanent residents for economic motivations, but also for humanitarian and family reunification considerations.

Immigrants arrive to Canada as permanent residents under one of the statuses of entry as defined by Citizenship and Immigration Canada[2]: A) economic class (includes both principal applicants and their spouses and dependents); B) family class (spouses, dependent children, grandparents, and other sponsored eligible relatives); C) refugees (sponsored – selected from abroad and referred by the United Nations High Commissioner for Refugees and other sponsorship groups – and refugee claimants and asylum seekers who applied and were granted status within Canada); and D) investors, entrepreneurs and self-employed business people. Since 2000, the annual average of new permanent residents has been 250,000. In the last ten years, around 26% of the new immigrants are family class, 60% are economic migrants, 11% are refugees and 3% are other immigrants (Citizenship and Immigration Canada, 2012).

Whether these categories reflect motivations for migration in a meaningful way or whether they are mere bureaucratic categories and the result of legal procedures is open to debate (Li, 2003). However, entry status reflects differences in selectivity processes that may translate into different pathways to social and economic integration, and that

[2] The main functions of Citizenship and Immigration Canada (CIC) are to facilitate the arrival of immigrants (selecting permanent and temporary residents), provide protection to refugees and offer settlement programs for newcomers.

may influence living arrangements – whether or not new immigrants 'double-up' – as well as the duration of these shared living arrangements. In the next section, we review evidence for these possible processes.

b. Entry status and living arrangements

Family class immigrants

Family class immigrants are those arriving under three broad categories: spouses and fiancés, parents and grandparents, and other relatives (children, siblings, aunts and uncles, nieces and nephews). Family class immigrants are not subject to the points system but have to be sponsored by a citizen or permanent resident of Canada. The sponsor is committed to providing food, clothing, lodging, care and maintenance, and financial assistance, preventing the sponsored relative to be dependent on federal or provincial programs (Citizenship and Immigration Canada, 2014). Sponsors are committed to providing this support,[3] but not all of the immigrants live under the same roof with the members who sponsored them (Thomas, 2001). Given the lack of mechanisms for enforcing this requirement (Kelley & Trebilcock, 2010), there is no guarantee that the signed commitment will translate into financial assistance. If the sponsor fails to meet their obligations, then the sponsored immigrant is left unprotected with no access to public social programs. Potential sponsors cannot be receiving social assistance at the time of sponsorship and their federal income needs to have been a minimum of 30% above the Low Income Cut-off for the three years prior to becoming a sponsor. By preventing low-income permanent residents or Canadian citizens from sponsoring relatives, access to family reunification is related to social class. Economic need among those arriving under family class procedures depends on the conditions of the sponsor, how the sponsor shares her/ his resources, and the savings and wealth that immigrants bring with them.

Immigrants arriving under the family class as parents and grandparents are more likely to live with extended kin given their age, sex, and marital status because demographic characteristics are key determinants of living with extended kin among the elderly, regardless of immigration status (Boyd, 1991; Gurak & Kritz, 2010; Kaida, Moyser, & Park, 2009). Studies indicate that among the elderly, the safety net provided by relatives is explained by cultural factors, rather than economic need (Gonzales, 2007). In addition, studies demonstrate that immigration policy (Wilmoth, De Jong, & Himes, 1997) or unmeasured structural constraints that may be related to immigration policy (Glick & Van Hook, 2002), may influence immigrants' decision to live with extended kin. The signed commitment of support may increase the social norms of family obligation that keep multigenerational households together, as explained by the functionalist perspective of shared households (Glick & Hook, 2011). Therefore, sponsored parents or grandparents are more likely to remain in extended family households for longer. Support for this, for example, is that household size among immigrants to Israel who arrived at an older age show little variation with time spent in the host country (Cohen-Goldner, 2010).

[3] The duration of this commitment depends on the relationship between the immigrant and her/his sponsor, and age at arrival. It ranges from three years for spouses to twenty years for parents and grandparents.

Permanent residents and citizens of Canada may also sponsor married or common law spouses and fiancés, as well as siblings, sons and daughters, nieces and nephews, aunts and uncles, and other eligible relatives. Among these adult immigrants – likely to be younger than parents and grandparents – life-course transitions such as changes in marital status and transitioning to adulthood (Jeong, Hamplová, & Le Bourdais, 2013), as well as factors associated with horizontal extended households (Kamo, 2000) are likely to explain being doubled-up, as well as frequent household turnover rates. In Australia, for instance, family class parents and grandparents are more likely to live in extended households than are spouses and other sponsored relatives, six and three years after arrival (Khoo, 2008). In Canada, studies show that family class migrants tend to be more stable in the initial years after arrival, moving less from one province to another (Newbold, 2007), or between metropolitan areas and postal codes (Dion, 2010). This suggests that among younger adult family class immigrants being doubled-up is likely to have a temporary nature whereas the nature of being doubled-up among older family class immigrants is likely to be more permanent.

Economic class immigrants

Immigrants arriving to Canada under the economic class have either been selected under the points system for their skills or assets that are expected to contribute to the Canadian economy, or are arriving as investors, entrepreneurs, or provincial nominees. This category includes the principal applicant, along with their her/ his spouses and dependent children. Two-thirds of economic migrants are family members of the principal applicant. As a consequence, only one in every four immigrants has been directly selected by the points system (Citizenship and Immigration Canada, 2012).

Economic migrants fare better than refugees in terms of employment, but differences between skilled workers and family class immigrants are small (Phythian, Walters, & Anisef, 2009). A number of studies indicate that in the long term, employment and earnings trajectories for economic and family class immigrants to Canada converge (Bevelander & Pendakur, 2013; Silva, 1997), similarly to what has been observed in the U.S. (Jasso & Rosenzweig, 1995). However, immigrant earnings have remained lower than natives' (Reitz, Curtis, & Elrick, 2014), and the challenges for economic integration associated with foreign-credential recognition and lack of Canadian experience are well known (Reitz, 2007; Simmons, 2010). Spouses of principal applicants are grouped with their dependent children, but they may be highly skilled, enter the labor force, and contribute economically to the household, although their wages tend to be lower than those of the principal applicant (Elrick & Lightman, 2014).

In Australia, which has adopted a similar points system for admitting economic immigrants, economic immigrants are more likely than other immigrants to live with non-kin and less likely to live with extended kin, although this changes with time since arrival (Khoo, 2008). In Canada, studies on secondary migration show that economic immigrants are mobile and likely to move over the first four years of arrival. A 2010 study shows that 16% of recent economic immigrants had migrated internally, changing

metropolitan area or census area, over this four-year period (Dion, 2010), and that they were more mobile than family class migrants.

Refugees

Refugee claimants and asylum seekers who apply and are granted status from within Canada transition from temporary to permanent residence status after having already lived in the country and establishing social networks. In contrast, sponsored refugees or those selected from abroad and referred by the UNHCR receive permanent residence upon arrival. For structural reasons, refugees are more likely than other migrants to arrive with other family members (Boyd, 1989; Glick, 2010). Although scholars debate whether or not such a sharp distinction exists between refugees and economic migrants, the main difference between the two categories lies in their relationship with the state. Specifically, the different statuses have different implications within the social welfare system in terms of access to public aid and social services, with refugees having greater access than other migrants, – resources that may serve as an alternative to either ethnic enclaves or the mainstream labor markets (Hein, 1993). The extent to which social programs for refugees provide them with a safety net will influence their choice to double-up as a strategy to cope with economic difficulty.

Most refugees from abroad do not choose their city of destination; immigration officials and a center in Ottawa managed by CIC determine this. Therefore, upon arrival, refugees tend to migrate a second time, moving out of smaller cities to larger metropolitan areas where co-ethnic networks are available (secondary migration). Internal migration rates are highest among refugees, compared to economic and family class immigrants (Dion, 2010). Although they have access to temporary housing programs, the major barrier faced by both sponsored and internal refugee claimants for good-quality housing is affordability (Murdie, 2008; Murdie, 2010), partially due to employment uncertainty (Johnson, 1989). Research on the U.S. shows that earnings and occupational attainment among refugees lags behind those of other immigrants, even after controlling for other explanatory factors such as language proficiency, education, family support, mental and physical health, and neighborhood characteristics (Connor, 2010).

THE CURRENT STUDY

Research has established that the determinants of being doubled-up are associated with demographic, economic and cultural factors. Among migrants, the role of the adaptation process, normally understood as time since arrival, has been found to be key to explaining why being doubled-up tends to be a temporary arrangement. However, the role that immigration policy, captured by immigrant class of entry, plays in this adaptation process has not been quantified. Therefore, in this study we aim to better understand whether or not there are differences in living arrangements by immigrant class of entry, net of demographic, socio-economic, and cultural factors. Specifically, we address two main research questions: *1) Are there differences by entry status on the propensity to 'double-up' shortly after arrival; and 2) are there differences by status in*

the propensity to double-up and the continuity of immigrants' living arrangements over the first four years after arrival?

Based on the discussion presented above, we expect that overall, parents and grandparents arriving under family class will be more likely to double-up, and less likely to change their living arrangements compared to immigrants arriving under other entry statuses due to demographic factors, the social norms of obligation, as well as the formal obligations created by immigration policy. Second, given that immigrants who are not arriving as sponsored parents/grandparents are more likely to double-up in horizontal extended households or with non-kin, we expect the continuity of these shared households to be shorter, following the contractual perspective of shared households. Moreover, we expect economic class migrants to be less likely to double-up than family class migrants and refugees, and we expect that if they double-up, this situation should tend to be momentary rather than structural, i.e. temporary and short-lived. Third, it is unclear whether or not spouses and other sponsored relatives will have different patterns of doubling-up than the spouses and dependents of economic class principal applicants. While the former are expected to have larger economic resources under the realist perspective, the latter are expected to have stronger social networks in the host society that may influence their tendency to double-up for family reasons, rather than economic need.

This article builds upon previous studies of immigrants' household living arrangements, but differs in several significant ways. The information on class of entry available in our study provides a better understanding of what influences the migration process during the first years of settlement, something that has been called for in previous studies (Clark et al., 2009; Glick, 2010; Gratton et al., 2007; Landale & Oropesa, 2007). Although immigration scholarship has been central to Canadian sociological and demographic literatures, there is scarce research on immigrant families and their living arrangements. Studies looking at immigrant housing conditions have examined living arrangements indirectly, with the main focus being housing quality, homeownership, rental markets, and neighborhood quality (Mendez, Hiebert, & Wyly, 2006; Teixeira, 2010), overcrowding over time (Haan, 2010), and the effect of overcrowding on housing satisfaction (Simone & Newbold, 2014). Others have looked at immigrant living arrangements among specific populations: in relation to Ukrainian, Chinese and Italian family formation (Satzewich, 1993), among elderly women immigrants (Boyd, 1991), or earlier immigrants arriving before 1995 (Thomas, 2001), to name a few. However, this is the first study we know of that focuses on shared living arrangements among recent immigrants in Canada.

DATA, MEASURES AND METHODS

Data

We use the Longitudinal Survey of Immigrants to Canada (LSIC), a nationally representative survey of immigrants arriving in Canada as permanent residents[4] between October 1, 2000 and September 30, 2001, who were interviewed at three stages after arrival[5]: about six months, two years, and four years after landing. The LSIC is a comprehensive survey specifically designed to study the process by which new immigrants adapt to Canadian society and covers a wide range of topics related to the settlement process (Statistics Canada, 2007b). The survey includes only those aged 15 and over at the time of landing who have applied for permanent status from abroad to Citizenship and Immigration Canada (CIC). LSIC excludes immigrants who applied and landed from within Canada, i.e. those who transitioned from temporary status – holding study or work permits, or as refugees claiming asylum to the Immigration and Refugee Board – to permanent status.

Our population of interest is those immigrants of the LSIC cohort who still reside in Canada at the time of the third interview. From the 12,040 individuals surveyed the first time, only 7,716 were surveyed four years after arrival. We limit the analytic sample to immigrants arriving as adults, aged 25 and older, in order to reduce processes related to the transition to adulthood among younger immigrants, specifically, leaving the parental home, union formation, and school attendance. This age restriction excludes 1,350 individuals. We further exclude observations with missing values in the variables of interest (around 1.15%) such that our final working sample is comprised of n=6,300 immigrants. Statistical tests comparing all immigrants arriving aged 25 and older who were followed four years after arrival and those who were only interviewed once (t tests), show that our sample under-represents immigrants doubling-up at the baseline. Specifically, tests by immigrant class show a significant underestimation in our sample (0.9% difference; p=0.2) of refugees who were doubled-up shortly after arrival. From our working sample of 6,300 immigrants, living arrangements changed among 17% over the four years. Therefore, our final sample used for analyzing changes in doubling-up is comprised of n=1,005 individuals.

Measures

Dependent variables

Our dependent variable is an indicator for being *doubled-up*, i.e. living in a shared household with relatives or non-kin (1) v.s. not being doubled-up, i.e. immigrant with/without partner and/or children (0). Immigrants who are not doubled-up live alone, or in nuclear households with or without a partner, and with or without children. That is, we do not distinguish between couples with and without children or lone parents because

[4] LSIC excludes non-permanent residents, i.e. foreign-born under a temporary status or without status.
[5] The survey is based on a complex sample stratified design; i.e., the random sampling was stratified by country of origin and visa category. The unit of analysis is the longitudinal respondent (LR) with a single longitudinal survey weight. Bootstrap weights (1,000 replications) provided by Statistics Canada were used to approximate the variance of estimates. Following their guidelines, the total number of cases has been rounded and we only present weighted descriptive statistics.

the main interest of the paper is living with extended kin or non-kin[6]. This variable is defined using a detailed categorical variable differentiating 18 different household structures in terms of presence/absence of spouses, children, relatives, and non-kin. Statistics Canada define this detailed variable using immigrant's position in the household and her/his relationship to other members. Unfortunately, LSIC users are only provided with the generated variable, and not the position or relationship matrix. Therefore, it is impossible to differentiate by type of kin – parents, siblings, or others – which would allow us to study horizontal and vertical households separately, and this constitutes a serious limitation of the study.

Key independent variables

Our key independent variable is immigrant class of entry derived from the classification by Citizenship and Immigration Canada. The categorical variable is defined as follows: 1) sponsored parents and grandparents arriving under family class (reference); 2) sponsored spouses, fiancés and other relatives arriving under family class; 3) Economic class principal applicants; 4) Spouses and dependents of economic class principal applicants; and 5) Refugees. Our definition of economic class includes federal skilled workers, as well as those arriving as investors, entrepreneurs, and provincial nominees. Refugees include government sponsored refugees, privately sponsored refugees, as well as other refugees from abroad.

Covariates

Models account for socio-demographic characteristics and self-rated health, which are known to be associated with household living arrangements. Sex is a dummy variable with females as the reference group. Age was grouped into five categories: 25-29, 30-39, 40-49, 50-64, 65 and over (reference). Self-rated health status is measured with a regrouped dummy variable for good/very good health (1), or poor health (very bad/bad/neither). We include a dummy variable to indicate the presence of young children aged 4 and younger in the household. Marital status is measured by a categorical variable with three groups: single never married, married/common law, and separated/widow/divorced[7]. To account for different provincial integration policies (Biles, 2008), as well as social, cultural, political, economic, and welfare contexts, we include a variable of province of residence coded into four groups: Ontario (reference), Quebec, British Columbia and the rest of Canada.

To account for pre-migration characteristics associated with ideas and norms from origin countries, as well as processes of discrimination in Canada that influence social and economic integration outcomes (Reitz, Banerjee, Phan, & Thompson, 2009), and that may influence immigrant living arrangements, we control for visible minority group and

[6] With this we aim to exclude processes of step-migration within the same immigration unit when, as a strategy for adaptation, one of the members arrives earlier and is joined by others, usually a spouse and/or children.

[7] Due to collinearity, marital status was omitted in the cross-sectional analysis and it is included only in longitudinal fixed-effects models as a time-varying covariate to capture life-course transitions.

religion. Visible minorities in Canada are those who are non-Caucasian in race or non-white in color and who do not report being Aboriginal. Visible minority is a combination of region/country of origin, race and ethnicity (Henry, Tator, Mattis, & Rees, 2000). We group it here in eleven categories: Whites (reference), Chinese, South Asian, Black, Filipino, Latin American, South East Asian, Arab, West Asian, Korean, and other. Religion is measured with a five-group categorical variable: secular (reference), Catholic, Protestant/Orthodox/Jewish, Muslim, and Eastern.

Models account for social integration – the process by which immigrants become a part of the social institutions of the host community at the same time as they retain their own identity (Frideres, 2008). Social integration is measured with indicators of language proficiency, social and ethnic networks, and previous residence in Canada. The variable of official language proficiency uses the best score from either French or English to indicate good or very good proficiency, or having one of the official languages as mother tongue (1), and otherwise (0). Social and ethnic networks are measured using a categorical variable: the migrant has not made new friends, most of the new friends are not from the same ethnic or cultural group, and most of the new friends are from the same ethnic or cultural group (reference). To account for previous experience in Canada that may affect social networks and adaptability, we include an indicator variable of having resided in Canada before.

Finally, models also account for economic integration outcomes. The availability of economic resources is measured using employment status, and a logarithm of total personal income and contribution to household income.[8] Current employment status was divided as no employment (reference), part-time, and full-time employment. Total personal income was transformed logarithmically. Contribution to household income was calculated by dividing total personal income over total household income, and so it ranges from 0 to 1.

Methods

After presenting descriptive statistics, we estimate logistic regression models and logistic fixed-effects models – also known as conditional fixed-effects regression models – to address our research questions. Our methodological strategy is divided into two main sections: a) being doubled-up shortly after arrival; b) change and continuity of being doubled-up over the first four years. To evaluate the factors associated with doubling-up at the baseline, we estimate a series of nested logistic regression models controlling for demographic characteristics, visible minority group status and religion, indicators of social integration, and economic resources. These factors are introduced sequentially to account for the possibility of confounding factors associated with immigrant class of

[8] The measurement of economic resources within a shared household presents problems of endogeneity. We tested different indicators of income: a) total household income divided by the square root of household size; b) natural logarithm of total household income; c) indicator variable of low income (total household income less than $20,000); and d) a subjective measure of income adequacy to meet basic needs. These two measures were chosen because they had a lower correlation than the others, higher explanatory power, and they correspond to the theoretical explanations of poverty and contribution to the household economy.

entry. We use a series of nested fixed-effects models to study changes in shared living arrangements, controlling for characteristics that do not vary over time. We introduce the key independent variable of immigrant class of entry –which is time-invariant – in the fixed-effects models, interacted with the variable of time since arrival: six months, two years, and four years after landing in Canada. This allows studying if the association of being doubled-up and class of entry varies over time. Models are compared using the Akaike Information Criteria (AIC) to assess goodness-of-fit.[9]

Fixed-effects models have the advantage of controlling for unobserved heterogeneity that is constant over time and uncorrelated with independent variables (Allison, 2009). Therefore, this controls for personality, optimism, genetic make-up, and other individual-level factors that are stable over time, especially cultural values and norms associated with familism, solidarity and reciprocity, that may influence living arrangements, whether they are measured or not. However, one limitation of fixed-effects methods relates to discarding between-person variation, as only individuals for whom the dependent variable changes are included in the analysis. In this case, individuals who do not change type of living arrangement are excluded from the fixed-effects analysis and our working sample of 6,300 individuals is reduced to 1,005 immigrants.

RESULTS

Descriptive analysis: Baseline sample characteristics

Table 1 shows sample characteristics by type of immigrants' household, at the baseline, i.e. six months after arrival. Results from Pearson chi-squared tests show that differences in sex, having lived in Canada before, and employment status by doubled-up/not doubled/up household are not statistically significant. Otherwise, all the other characteristics shown in Table 1 differ by type of living arrangement. Nearly 80% of those who are not doubled-up are economic migrants, whereas 43% of those who are doubled-up are economic migrants. Close to 40% of those who are doubled-up is a sponsored parent or grandparent, and slightly more than one in every three are economic class principal applicants. The relative presence of sponsored spouses and other relatives who are doubled-up (15%) is greater than spouses and dependents of economic class immigrants (9%).

In terms of their demographic characteristics, those who are doubled-up tend to be from older and younger age groups, are unmarried, and have poorer self-rated health than those living in households of their own. In terms of place of residence, there is a fewer immigrants living in doubled-up households in Quebec and more doing so in provinces other than the main three settlement provinces. In terms of visible minority group, there is

[9] Analyses were performed in Stata 13. Estimations of standard errors where obtained using the Stata procedures *bs4rw* and *svy* that take into account the survey sample design and 1,000 bootstrapped replications. Post estimation procedures to calculate predicted probabilities and logits, and assess estimated differences between groups where carried out using the *margins*, *pwcompare* and *contrast* commands in Stata.

a larger proportion of South Asians and Filipinos who are doubled-up shortly after arrival. Slightly more than one in every three doubled-up immigrants is South Asian, one in every five is Chinese, and one in every seven is Filipino. The main differences in indicators of social integration are that there is a larger presence of immigrants with non-coethnic social networks, and poor official language proficiency who are doubled-up. Those doubled-up have lower personal incomes, and tend to contribute less than those who are doubling-up.

[TABLE 1 ABOUT HERE]

Doubling-up six months after arrival

Table 2 shows estimated odds-ratios of being doubled-up six months after landing among immigrants who were 25 and older at arrival, from a series of nested logit models. The unadjusted equation (Model 1) shows that at the baseline, sponsored parents/grandparents are more likely to be doubled-up than immigrants under other entry statuses ($p<0.001$). Spouses and dependents of economic class principal applicants are the least likely to be doubled-up, followed by economic class principal applicants, refugees, and spouses and other relatives under family class. Significant differences ($p<0.001$) to parents/grandparents under family class are observed when socio-demographic characteristics are accounted for, and persist when we control for visible minority group and religion, indicators of social integration, and economic resources, although the order of those who are the most/least likely to double-up changes.

First, including indicators of demographic characteristics (Model 2) increases the difference between family class immigrants – parents/grandparents and spouses/fiancés/others – but the estimated odds-ratios of all other classes of entry remain unchanged. Second, when visible minority group and religion are accounted for (Model 3) the differences between all migrants and parents/grandparents are reduced, but the relative reduction is larger for refugees (suggesting that the composition in terms of country/region of origin, race/ethnicity and religion of refugees is different to the rest). Third, the inclusion of ethnic networks, language proficiency and previous residence in Canada changes the estimated odds-ratios for class of entry reducing differences between parents/grandparents with economic migrants, and other family class migrants, but not with refugees. This also increases differences between Black and Filipino immigrants with Whites, suggesting different social capital among these groups upon arrival. Finally, the indicators of economic resources are not statistically significant, but their inclusion increases the differences between sponsored parents/grandparents and immigrants under other classes of entry (consistent with the idea that parents/grandparents contribute economically and have different formal employment patterns than others). In summary, the relationship between being doubled-up and immigrant class of entry is partially mediated by our explanatory variables. For economic class immigrants and refugees, the estimated odds-ratios of doubling-up remain relatively stable once we account for visible minority group and religion. For sponsored spouses/fiancés and other relatives, the estimated odds-ratios from the unadjusted model are the same as the fully adjusted (Model 6).

Model 6 presents the best fit, when assessed using the Akaike Information Criteria. Estimates from the final model (Table 2; Model 6) show that, when other variables in the model are held constant, immigrating to Canada as refugees, sponsored spouses/fiancés and other relatives, principal applicants under economic class, and spouses and dependents of economic migrants reduces the odds of living in a doubled-up household shortly after arrival (by 81%, 83%, 84%, and 95%, respectively). However, only spouses and dependents of economic class migrants have significantly different propensities to double-up than family class spouses/fiancés, and other sponsored relatives, economic class principal applicants, and refugees. Another way of looking at these differences is by calculating average predicted probabilities by immigrant class of entry from Model 6. While the average predicted probability of being doubled-up upon arrival is 0.53 for parents and grandparents arriving under family class, it is 0.21 for refugees, 0.19 for other family class immigrants, 0.18 for economic class principal applicants, and 0.076 for economic spouses and dependents (data not shown).

Results from the full model (Model 6) show that when all the other factors are held constant, doubling-up is positively associated with having young children in the household, non co-ethnic networks, and living in a province other than Ontario, Quebec, and Vancouver – the main provinces of immigrant settlement. On the other hand, doubling-up is negatively associated with being aged 30-50, residing in Quebec, reporting poor self-rated health, and poor official language proficiency. Doubling up is more likely to happen among visible minorities than among Whites; but the odds vary by group. Estimates show that among Filipinos, the odds of being doubled-up are slightly higher than 4 times those among Whites, and the odds for South East Asians, Blacks, South Asians, Chinese, and others are around 2 times higher than for Whites. The likelihood of being doubled-up for Latin Americans, Arabs, West Asians, and Koreans is not statistically significantly different from that of Whites, when all the other factors are held constant. Indicators of social integration and economic resources have a mediating effect on population group, especially among Filipinos, reducing association with doubling-up, and suggesting an association between country/region of origin and social and economic integration. Notably, none of the indicators of economic resources are statistically significantly associated with being doubled-up six months after arrival when all other factors are held constant.

[TABLE 2 ABOUT HERE]

Remaining in the same type of living arrangement or experiencing change

Before presenting results from multivariate analysis studying change in living arrangements over the first four years of arrival, we provide a descriptive overview of this change by immigrant class of entry. Table 3 shows the proportion of those experiencing change and remaining in the same living arrangements, given their doubled-up status shortly after arrival and over the following years, by immigrant class of entry. Results from chi-squared tests show that living arrangements over time vary by immigrant class of entry. First, from the whole sample of immigrants, only 17% changed their status as 73% were not doubled-up and 10% were living in a doubled-up household over the course of the three interviews. There is a slightly larger proportion (10% vs. 7%)

of immigrants who were doubled-up shortly after arrival and not doubled-up at a subsequent interview, than those who transitioned into a doubled-up household.

Second, the largest relative presence of those who always doubled-up is among family class parents and grandparents – with slightly more than half– contrasting sharply with only 4% of economic class principal applicants and 2% of economic class spouses and dependents. The smallest relative presence of immigrants who never doubled-up is among family class parents/grandparents and other sponsored immigrants (21% and 67%, respectively). Third, among those who experienced change in doubled-up status, we note that there is a similar proportion of parents/grandparents experiencing turnover in their initial non doubled-up or doubled-up living arrangement (13% and 14%, respectively). However, for immigrants arriving under other classes of entry, the relative presence of transitions from doubled-up shortly after arrival to non doubled-up households later is larger than the transition into doubled-up households.

Doubling-up over the first four years after arrival

Table 4 shows estimated odds-ratios for doubling-up during the first four years after arrival from a series of nested fixed-effects logistic bootstrapped models. These models control for time-constant characteristics while studying variation in being doubled-up within individuals. In all models, the overall association of being doubled-up with immigrant class of entry varies over time: the interaction effect of immigrant class of entry and time since arrival is statistically significant ($p<0.001$)[10]. In other words, the trajectory of immigrants' living arrangements over the first four years varies by entry status, and this persists when changes in demographic characteristics, and social and economic integration indicators are controlled for. However, estimated odds-ratios show that not all immigrants are statistically significantly different to family class parents/grandparents. Only spouses/fiancés and other sponsored relatives, and principal applicants from economic class, have statistically significantly lower odds of being doubled-up compared to sponsored parents/grandparents, two years ($p<0.05$ and $p<0.001$, respectively) and four years after arrival ($p<0.01$ and $p<0.001$, respectively). Comparing between nested models we see that the sequential addition of covariates increases the estimated odds-ratios of entry status two years after arrival, but decreases the odds-ratios four years after. In other words, differences by type of entry over time are mediated by other time-variant factors.

Results from nested fixed-effects logit models show consistent significant associations between being doubled-up and marital status, and presence of young children 4 years old and younger. In other words, life-course transitions associated with changes in marital status and having children are associated with changes in shared living arrangements. For example, the odds of doubling-up were twice as high in the interviews when there were young children as compared to interviews in which there were no children aged 4 or younger. None of the indicators of social integration or employment status where significantly associated with being doubled-up in any of the models. The estimated odds-

[10] The interaction effects are relative to the first interview (six months after arrival) and the main effect of class of entry is omitted because it is time invariant.

ratios from the fully adjusted model (Model 5; Table 4) show a positive association between being doubled-up and the natural logarithm of personal income (OR=1.06, $p<0.001$), but a negative association with the contribution of personal income to household income (OR=0.4, $p<0.001$)[11].

[TABLE 4 ABOUT HERE]

To better understand how the probability of being doubled-up varies by immigrant class of entry over time, Graph 1 shows adjusted average predicted probabilities from the full fixed-effects logit model (Model 5). That is, the average of individual predicted probabilities with observed time-varying covariates and controlling for all time-constant characteristics. The probability of being doubled-up is the same for all immigrants at the baseline, six months after arrival. However, it declines over time for all types of entry except for sponsored parents and grandparents arriving under the family class, for which the probability increases but is not statistically significantly different two and four years later. Among family class spouses/fiancés, and other sponsored relatives, the probability of being doubled-up four years after arrival is significantly different at $p<0.05$ from the probability six months after arrival. The same is true for spouses and dependents of economic class principal applicants, and for refugees. However, the probability of being doubled-up four years after arrival between these three types of immigrants is not statistically significantly different. On the other hand, the probability of being doubled-up for economic class principal applicants is significantly different than for their spouses and dependents, four years after arrival.

[GRAPH 1 ABOUT HERE]

DISCUSSION

The main objective of this study was to test whether or not being doubled-up shortly after arrival and the continuity of initial living arrangements over the first four years, differed by immigrants' entry status. Although a majority of immigrants never doubled-up over the first four years, slightly more than one in every four (27%) of recent immigrants did, and if they did, they were more likely do it shortly after arrival. Almost one in every five (17%) immigrants experienced a turnover in their initial living arrangement over the first four years. *Are there differences by entry status on the propensity to 'double-up' shortly after arrival?* As expected, we found differences in being doubled-up by immigrant class of entry shortly after arrival, with sponsored parents/grandparents significantly more likely to double-up than the rest, when all the other factors are held constant. However, economic class principal applicants and sponsored spouses/fiancés/other relatives did not

[11] To study the potential effect of co-linearity we estimated models with different definitions of economic resources. Neither employment status nor the natural logarithm of personal income is statistically significant when they are the only indicators of economic resources included. Contribution to household income is negatively associated with being doubled-up (OR=0.583, $p<0.01$) when it is the only indicator of income included in the model. If the natural logarithm of total personal income is also accounted for, the odds-ratio of the contribution to household income decrease but remains statistically significant.

have significantly different odds of being doubled-up than refugees. The odds of being doubled-up for spouses and dependents of economic class migrants were significantly different than those of immigrants arriving under all other entry statuses.

Are there differences by entry status in the propensity to double-up and the continuity of immigrants' living arrangements over the first four years after arrival? Once we control for time-constant characteristic, life-course events, and time-varying indicators of social integration and economic resources, results from fixed-effects models show that the trajectories of doubled-up households differ by immigrant class of entry. In this case, we find that sponsored parents and grandparents are always different from other immigrants, and that economic class principal applicants are less likely to double-up than others, both two and four years after arrival. However, for refugees, economic class spouses and dependents, and sponsored spouses/fiancés and other relatives, the likelihood of doubling-up is only different four years after arrival. In summary, households of economic class principal applicants have greater turnover than other immigrant households, such that duration of doubled-up households tends to be shorter.

The fact that shortly after arrival, economic class migrants arriving with spouses and dependents are less likely to be doubled-up than the rest, is consistent with the fact that spouses/dependents arrived in a nuclear household to begin with, whereas the group of economic class principal applicants includes those arriving alone who are likely to share the household with non-kin or relatives. However, the lack of significant difference between sponsored spouses and relatives, economic class principal applicants, and refugees, may be due to a number of reasons. First, it is possible that these doubled-up households differ in composition. Unfortunately, due to limitations of the data, we do not know the relationships between all members of the household. Descriptive analyses showed a larger relative presence of shared households with non-kin among economic class principal applicants and refugees, compared to family class migrants. Second, our sample misses the experience of 9% of refugees who were doubling-up in the first interview because of lack of follow-up four years after arrival. This is consistent with results showing higher rates of secondary migration among refugees who are likely to move where co-ethnic networks are available. Whether refugees are more or less likely to double-up in this new settlement area once they have stronger social networks, or if housing programs available for refugees prevent them from doubling-up is uncertain.

Many studies consider recent immigrants those who arrived within the last ten years. Given that our period of observation is only four years, our analysis may be underestimating change in living arrangements with immigrants moving out of shared households at later stages. Immigrants interviewed for LSIC may sponsor relatives later on. In fact, in Australia results show that immigrants, especially economic migrants who intend to settle permanently in the country, sponsor relatives (Khoo, 2003). Therefore, it is possible that some of those who did not double-up during the first four years do so afterwards – either with relatives who arrive later, who are already in the country, or with non-kin.

Overall, we found that socio-demographic factors, visible minority status, religion, social integration, and the availability of economic resources mediated the association of being doubled-up with immigrant class of entry, shortly after arrival. In terms of changes in living arrangements, results show that life course transitions, personal income and contribution to household income are associated with being doubled-up and that they mediate the differences in entry status over time. Our results are consistent with findings from an Australian study (Khoo, 2008) showing that living in extended households is more likely to happen soon after arrival, but change in household structure is related to age, immigrant visa category and change of marital status.

Although economic need is a major theoretical determinant for doubling-up, measuring this dimension is problematic due to endogeneity. Still, we found that results are robust to measurements of employment status, personal income, and contribution to household income. However, findings in this regard deserve further consideration. The cross-sectional analysis shows that none of the indicators of availability of economic resources is significantly associated with being doubled-up shortly after arrival, when all the other factors are accounted for. The main explanation is the relatively low variation of income between immigrants in the first months. However, the longitudinal analysis shows that personal income is positively associated with being doubled-up, and contribution to household is negatively associated with being doubled-up. The finding that immigrants who contribute larger shares are less likely to double-up is consistent with what is known from the literature in terms of the continuity of shared households – under the contractual perspective – and distribution of economic resources (Glick & Hook, 2011). The fact that immigrants with higher personal income are more likely to live in a shared household is counterintuitive with the notion that doubling-up is associated with economic need. However, this could be explained by a) that by coresiding with extended kin or non-kin, immigrants are able to increase their income while others take care of the children or provide other kinds of support, while entering into the labor force, or b) that doubling-up is associated with higher socio-economic status, particularly among those who were sponsored.

We found differences in doubling-up by visible minority group, but the mechanisms of family solidarity and support within these groups are unclear. Visible minority is used as an indicator of race and ethnicity. However, as it is measured by Statistics Canada, it refers to a combination of region/country of origin, race, and ethnicity with different levels of heterogeneity (e.g. Latin American, Filipino, Black, or Arab). To account for possible differences in religion within these categories, we included a grouped variable that was not statistically significantly associated, when visible minority was also included in the equation. Results show that the odds of doubling-up among Filipinos were twice as large as those for South East Asians, Blacks, South Asians, and Chinese, compared to Whites. What are these regional groupings really capturing? We could speculate a number of possible explanations. First, the similarity between South East Asians and Chinese could be attributed to cultural similarities in terms of Confucianism and filial piety. Second, they might capture demographic characteristics of the emigrant flows. For example, Filipinos have had a tendency to migrate to Canada alone as live-in caregivers or nurses, and then sponsor family members once they are eligible, which could explain

their higher rate of doubling-up. Third, these regional categories capture differences in settlement patterns in Canada that affect kin and co-national non-kin availability for doubling-up. For example, long-standing migration flows from China contrast more recent flows from Latin America.

It is well known that measuring cultural values, norms and ideas is difficult in nationally representative quantitative studies. Is it better to use fixed-effects models that control for time-constant cultural factors rather than using visible minority group and religion as proxies? On the one hand, using pan-ethnic labels to measure 'culture' has been criticized extensively for assuming homogeneity within groups. On the other hand, fixed-effects models control for time-constant factors associated with culture, as well as other factors like sex, personality, and country of birth. However, are cultural values and ideas, or gender roles time-invariant? Acculturation research has found that cultural practices are subject to change. Specifically, in terms of immigrants' living arrangements and culture related factors, research has shown assimilation with time since arrival; for example, among Chinese-Canadians (Lai, 2005), South-Asians (Ng & Northcott, 2013), and older immigrants (Basavarajappa, 1998). However, four years, the period of observation by LSIC, may be too short for major changes to happen and fixed-effects models may be appropriate to account for these factors. Preliminary analysis showed that the interaction effect of visible minority group and time since arrival was not statistically significant in fixed-effects models for being doubled-up. If the observation period were longer, then we would expect, similarly to what has been found for young adults (Jeong et al., 2013), that the effect of ethnicity in predicting living arrangements would decline over time spent in Canada.

We argue that the use of longitudinal data and fixed-effects models to inform changes over the first years upon arrival provides an effective way of understanding the migrant adaptation process. Our results show that the effect of time since arrival varies by entry status. In other words, modes of incorporation have an influence on the association of living arrangements with time spent in the host country. This finding has important implications for empirical research using a linear effect of time since arrival to measure the migration process. Specifically, this old approach misrepresents a) the experience of immigrants for whom being doubled-up tends to be a permanent arrangement (sponsored parents/grandparents); and b) different rates of turnover in doubled-up households between immigrants.

Along with its longitudinal nature, the availability of information on type of immigrant class of entry at LSIC is another advantage of this data. However, this study is not free of limitations. First, as discussed earlier, the lack of information on the relationships between household members does not allow distinguishing between horizontal and vertical extended households. Second, given attrition from the survey, those who change living arrangements are likely to be underestimated in our working sample. Third, not knowing the date of the change in type of living arrangement does not allow for a finer measure of time, like months. Fourth, because LSIC was not continued or the pool refreshed, it is impossible to understand how changes in immigrant selection policy influence doubling-up patterns over time. Immigrants interviewed by LSIC arrived to

Canada before the 2002 Immigration and Refugee Protection Act (IRPA). Among other changes, economic class applicants were now granted points for having relatives living in the country, with the rationale that immigrants with relatives in Canada adapt more easily and are more likely to settle permanently. These relatives include a parent, grandparent, child, grandchild, sibling, aunt/uncle, or niece/nephew. In other words, after the 2002 IRPA, CIC selected skilled workers with a larger potential to double-up or receive support from already established relatives. Before the 2002 IRPA, data from LSIC showed that 11.7% of economic class migrants had relatives in Canada by their time of arrival, and as expected, a larger relative presence of those with relatives in Canada (15.8%) were doubling-up shortly after arrival, compared to those without relatives (10.7%). What was the influence of providing points to high skilled immigrants for having relatives in Canada? Whether or not post-IRPA economic class immigrants were more likely to double-up is an open question. This project provides a baseline for future studies on the influences of entry status in relation to family dynamics pre-IRPA.

What is the role of selection policy on immigrants living arrangements? Overall, our findings show differences by immigrant type of entry. This means that, besides the usual explanations for doubling-up, which focus on demographic factors, culture and economic need, we need to consider how recent immigrants immigrated, as well as who was already in the country to provide support in times of adjustment, whether or not they committed to provide this support, and whether or not immigrants had access to social services. This general idea is not new. The role of family and social networks in immigrant adaptation processes has long been acknowledged (Massey et al., 1993; Pessar, 1999). Even if Canada emphasizes selecting immigrants for their human capital, skills, and work experience, immigration policy has implicitly influenced these family and social networks. The fact that IRPA assigns points to potential economic class immigrants with established relatives in Canada suggests that the realist perspective of immigration policy was partially relaxed to consider the protective role of family networks available for those arriving under the family class.

The debate between realist and nominalist perspectives has historically presented contrasting views on refugee flows, drawing sharp distinctions between refugees as political migrants and economic migrants (Hein, 1993), or of "forced" political migration vs. (freely chosen) "economic" migration (Petersen, 1958). Although these perspectives were not developed to explain differences in doubling-up by immigrant entry status, they shed light on the possible influence of immigration policy on living arrangements. The findings of small differences in economic outcomes by immigrant class have been explained by the fact that the social capital of family class migrants offsets economic migrants' human capital advantage (Fuller & Martin, 2012; Phythian et al., 2009). This is consistent with arguments that different forms of social, financial, and human-cultural capital of immigrant families explain different integration trajectories (Nee & Sanders, 2001). However, how social capital from family class migrants would influence being doubled-up is unclear. On the one hand, settled relatives may provide new immigrants with informational and material support that enable them to live on their own. On the other hand, family availability may increase the chances of being doubled-up compared to others whose social networks are small upon arrival. Similarly, it is unclear how

economic migrants' greater human capital would influence being doubled-up. Instead of doubling-up for economic need, they might double-up to provide support to recent immigrants, or others in their social network.

Future comparative research could study differences within Canada in relation to different provincial family policies and social welfare systems, or to other contexts such as the United States, where immigration policy's emphasis on family reunification has also influenced living arrangements (Glick & Van Hook, 2002; Gratton et al., 2007; Wilmoth et al., 1997), or to contexts with different family policies (Robila, 2014). However, the Canadian welfare system may reduce the need of kinship support when compared to other contexts with different welfare regimes, or with a larger undocumented population that lack access to social programs and institutional support. Finally, this study excludes temporary migrants with work and study permits or claiming refugee and asylum, an increasing population in Canada that is likely to double-up at higher rates than immigrants arriving with permanent residence from abroad. For some migrants with work permits, especially those in the live-in caregiver program, or temporary agricultural workers, living in a shared household with non-kin is the norm. However, the change and continuity in the living arrangements of other temporary migrants remains an open question.

REFERENCES

Allison, P. D. (2009). *Fixed effects regression models*. Los Angeles: Sage.

Angel, R., & Tienda, M. (1982). Determinants of Extended Household Structure: Cultural Pattern or Economic Need? *American Journal of Sociology, 87*(6), 1360-1383. doi: 10.2307/2779365

Basavarajappa, K. G. (1998). Living arrangements and residential overcrowding among older immigrants in Canada. *Asian and Pacific Migration Journal, 7*(4), 409-432.

Bevelander, P., & Pendakur, R. (2013). The labour market integration of refugee and family reunion immigrants: a comparison of outcomes in Canada and Sweden. *Journal of Ethnic and Migration Studies, 40*(5), 689-709. doi: 10.1080/1369183X.2013.849569

Biles, J. (2008). Integration policies in English-speaking Canada. In J. Biles, M. Burstein & J. Frideres (Eds.), *Immigration and Integration in Canada* (pp. 139-210). Montreal: McGill-Queen´s University Press.

Blank, S., & Ramon, S. T. (1998). Understanding the Living Arrangements of Latino Immigrants: A Life Course Approach. *International Migration Review, 32*(1), 3-19. doi: 10.2307/2547558

Borjas, G. J. (1993). Immigration policy, national origin, and immigrant skills: A comparison of Canada and the United States. In D. Card & R. Freeman (Eds.), *Small differences that matter: Labor markets and income maintenance in Canada and the United States* (Vol. 21-44). Chicago: University of Chicago Press.

Boyd, M. (1989). Family and Personal Networks in International Migration: Recent Developments and New Agendas. *International Migration Review, 23*(3), 638-670. doi: 10.2307/2546433

Boyd, M. (1991). Immigration and living arrangements: Elderly women in Canada. *International Migration Review, 25*(1), 4-27. doi: 10.2307/2546232

Burr, J. A., & Mutchler, J. E. (1993). Ethnic Living Arrangements: Cultural Convergence or Cultural Minifestation? *Social Forces, 72*(1), 169-179. doi: 10.1093/sf/72.1.169

Citizenship and Immigration Canada. (2012). *Facts and figures: Immigration overview, permanent and temporary residents. 2011*. Ottawa.

Citizenship and Immigration Canada. (2014). Family sponsorship Retrieved 07/31/2014, 2014, from http://www.cic.gc.ca/english/immigrate/sponsor/index.asp

Clark, R. L., Glick, J. E., & Bures, R. M. (2009). Immigrant families over the life course: Research directions and needs. *Journal of Family Issues, 30*(6), 852-872. doi: 10.1177/0192513x09332162

Cohen-Goldner, S. (2010). Household Structure of Recent Immigrants to Israel. In G. S. Epstein & I. N. Gang (Eds.), *Migration and Culture (Frontiers of Economics and Globalization, Volume 8)* (pp. 447-465): Emerald Group Publishing Limited.

Collacott, M. (2006). Family Class immigration: the need for a policy review. *Canadian Issues, Spring*, 90-93.

Connor, P. (2010). Explaining the Refugee Gap: Economic Outcomes of Refugees versus Other Immigrants. *Journal of Refugee Studies, 23*(3), 377-397. doi: 10.1093/jrs/feq025

Dion, P. (2010). Migrations secondaires des nouveaux immigrants au cours de leurs quatre premières années au Canada: motivations et trajectoires. *Cahiers québécois de démographie, 39*(2), 243-273.

Elrick, J., & Lightman, N. (2014). Sorting or Shaping? The Gendered Economic Outcomes of Immigration Policy in Canada. *International Migration Review*, n/a-n/a. doi: 10.1111/imre.12110

Flake, R. (2012). Multigenerational living arrangements among migrants. *Age, 47*(13.2), 40.45.

Foner, N. (1997). The immigrant family: Cultural legacies and cultural changes. *International Migration Review, 31*(4), 961-974.

Freeman, G. P. (2004). Immigrant Incorporation in Western Democracies. *International Migration Review, 38*(3), 945-969. doi: 10.1111/j.1747-7379.2004.tb00225.x

Frideres, J. (2008). Creating an inclusive society: Promoting social integration in Canada. In J. Biles, M. Burstein & J. Frideres (Eds.), *Immigration and integration in Canada* (pp. 78-101). Montreal: McGill-Queen´s University Press.

Fuller, S., & Martin, T. F. (2012). Predicting Immigrant Employment Sequences in the First Years of Settlement1. *International Migration Review, 46*(1), 138-190. doi: 10.1111/j.1747-7379.2012.00883.x

Glick, J. E. (2010). Connecting complex processes: A decade of research on immigrant families. *Journal of Marriage and Family, 72*(3), 498-515. doi: 10.1111/j.1741-3737.2010.00715.x

Glick, J. E., Bean, F. D., & Van Hook, J. V. W. (1997). Immigration and changing patterns of extended family household structure in the United States. [Article]. *Journal of Marriage and Family, 59*, 177-191. doi: 10.2307/353671

Glick, J. E., & Hook, J. V. (2011). Does a House Divided Stand? Kinship and the Continuity of Shared Living Arrangements. *Journal of Marriage and Family, 73*(5), 1149-1164. doi: 10.2307/41329653

Glick, J. E., & Van Hook, J. (2002). Parents' Coresidence With Adult Children: Can Immigration Explain Racial and Ethnic Variation? *Journal of Marriage and Family, 64*(1), 240-253. doi: 10.1111/j.1741-3737.2002.00240.x

Gonzales, A. M. (2007). Determinants of Parent-Child Coresidence among Older Mexican Parents: The Salience of Cultural Values. *Sociological Perspectives, 50*(4), 561-577. doi: 10.1525/sop.2007.50.4.561

Gratton, B., Gutmann, M. P., & Skop, E. (2007). Immigrants, their children, and theories of assimilation: Family structure in the United States, 1880–1970. *The History of the Family, 12*(3), 203-222. doi: 10.1016/j.hisfam.2007.10.003

Gurak, D. T., & Kritz, M. M. (2010). Elderly Asian and Hispanic Foreign- and Native-Born Living Arrangements: Accounting for Differences. *Research on Aging, 32*(5), 567-594. doi: 10.1177/0164027510377160

Haan, M. (2010). The residential crowding of immigrants in Canada, 1971–2001. *Journal of Ethnic and Migration Studies, 37*(3), 443-465. doi: 10.1080/1369183x.2011.526772

Hein, J. (1993). Refugees, Immigrants, and the State. *Annual review of sociology, 19*(ArticleType: research-article / Full publication date: 1993 / Copyright © 1993 Annual Reviews), 43-59. doi: 10.2307/2083380

Henry, F., Tator, C., Mattis, W., & Rees, T. (2000). *Colour of democracy: Racism in Canadian society*. Toronto: Harcourt Brace Canada.

Jasso, G., & Rosenzweig, M. R. (1995). Do Immigrants Screened for Skills do Better Than Family Reunification Immigrants? *International Migration Review, 29*(1), 85-111. doi: 10.2307/2546998

Jeong, Y.-J., Hamplová, D., & Le Bourdais, C. (2013). Diversity of Young Adults' Living Arrangements: The Role of Ethnicity and Immigration. *Journal of Ethnic and Migration Studies, 40*(7), 1116-1135. doi: 10.1080/1369183x.2013.831523

Johnson, P. (1989). Resources for coping with economic distress: The situation of unemployed Southeast Asian refugees. *Lifestyles, 10*(1), 18-43. doi: 10.1007/bf00986690

Kaida, L., Moyser, M., & Park, S. Y. (2009). Cultural Preferences and Economic Constraints: The Living Arrangements of Elderly Canadians. *Canadian Journal on Aging/La Revue canadienne du vieillissement, 28*(04), 303-313. doi: doi:10.1017/S0714980809990146

Kamo, Y. (2000). Racial and ethnic differences in extended family households. *Sociological Perspectives, 43*(2), 211-229. doi: 10.2307/1389794

Kelley, N., & Trebilcock, M. J. (2010). *The making of the mosaic: a history of Canadian immigration policy*. Toronto: University of Toronto Press.

Khoo, S.-E. (2003). Sponsorship of Relatives for Migration and Immigrant Settlement Intention. *International Migration, 41*(5), 177-199. doi: 10.1111/j.0020-7985.2003.00265.x

Khoo, S.-E. (2008). Household diversity and dynamics of recent immigrants in Australia. *Journal of Population Research, 25*(3), 315-336. doi: 10.1007/bf03033893

Lai, D. W. L. (2005). Cultural Factors and Preferred Living Arrangement of Aging Chinese Canadians. *Journal of Housing For the Elderly, 19*(2), 71-86. doi: 10.1300/J081v19n02_05

Landale, N. S., & Oropesa, R. S. (2007). Hispanic families: Stability and change. *Annual review of sociology, 33*(1), 381-405. doi: doi:10.1146/annurev.soc.33.040406.131655

Leach, M. A. (2012). A burden of support? Household structure and economic resources among Mexican immigrant families. *Journal of Family Issues*. doi: 10.1177/0192513x12466385

Lee, S. M., & Edmonston, B. (2013). Canada's immigrant families: Growth, diversity and challenges. *Population Change and Lifecourse Strategic Knowledge Cluster Discussion Paper Series/ Un Réseau stratégique de connaissances Changements de population et parcours de vie Document de travail, 1*(1, Article 4), 1-30.

Li, P. S. (2003). *Destination Canada. Immigration debates and issues*. Don Mills, Ontario: Oxford University Press Canada.

Massey, D., Arango, J., Hugo, G., Kouaouci, A., Pellegrino, A., & Taylor, J. E. (1993). Theories of international migration: A review and appraisal. *Population and Development Review, 19*(3), 431-466.

Mendez, P., Hiebert, D., & Wyly, E. (2006). Landing at home: Insights on immigration and metropolitan housing markets from the longitudinal survey of immigrants to Canada. *Canadian Journal of Urban Research, 15*(2), 82-104.

Menjívar, C. (1997a). Immigrant Kinship Networks and the Impact of the Receiving Context: Salvadorans in San Francisco in the Early 1990s. *Social Problems, 44*(1), 104-123. doi: 10.2307/3096876

Menjívar, C. (1997b). Immigrant kinship networks: Vietnamese, Salvadoreans and Mexicans in comparative perspective. *Journal of Comparative Family Studies, 28*, 1-24.

Murdie, R. (2008). Pathways to Housing: The Experiences of Sponsored Refugees and Refugee Claimants in Accessing Permanent Housing in Toronto. *Journal of International Migration and Integration / Revue de l'integration et de la migration internationale, 9*(1), 81-101. doi: 10.1007/s12134-008-0045-0

Murdie, R. (2010). Precarious beginnings: The housing situation of Canada's refugees. *Canadian Issues/Thèmes Canadiens*.

Nee, V., & Sanders, J. (2001). Understanding the diversity of immigrant incorporation: a forms-of-capital model. *Ethnic and Racial Studies, 24*(3), 386-411. doi: 10.1080/01419870020036710

Newbold, B. (2007). Secondary migration of immigrants to Canada: an analysis of LSIC wave 1 data. *Canadian Geographer / Le Géographe canadien, 51*(1), 58-71. doi: 10.1111/j.1541-0064.2007.00165.x

Ng, C. F., & Northcott, H. C. (2013). Living Arrangements of South Asian Immigrant Seniors in Edmonton, Canada: An Assessment of the Economic, Cultural, Health, and Availability of Kin Explanations. *Journal of Housing For the Elderly, 27*(1-2), 1-27. doi: 10.1080/02763893.2011.649827

Pessar, P. R. (1999). The role of gender, households, and social networks in the migration process: A review and appraisal. In C. Hirschman, P. Kasinitz & J. DeWind

(Eds.), *The handbook of international migration: The American experience*. New York: Russell Sage Foundation.

Petersen, W. (1958). A general typology of migration. *American Sociological Review, 23*(3), 256-266. doi: 10.2307/2089239

Phythian, K., Walters, D., & Anisef, P. (2009). Entry class and the early employment experience of immigrants in Canada. *Canadian Studies in Population, 36*(3-4), 363-382.

Portes, A. (1995). Economic Sociology and the Sociology of immigration: A conceptual overview. In A. Portes (Ed.), *The Economic Sociology of immigration: Essays on networks, ethnicity, and entrepreneurship* (pp. 248-280). New York: Russell Sage Foundation.

Portes, A., & Rumbaut, R. G. (2006). *Immigrant America: A Portrait* (Third ed.). Berkeley: University of California Press.

Reitz, J. G. (2007). Immigrant employment success in Canada, Part I: Individual and contextual causes. *Journal of International Migration and Integration, 8*(1), 11-36.

Reitz, J. G., Banerjee, R., Phan, M., & Thompson, J. (2009). Race, religion, and the social integration of new immigrant minorities in Canada. *International Migration Review, 43*(4), 695-726. doi: 10.1111/j.1747-7379.2009.00782.x

Reitz, J. G., Curtis, J., & Elrick, J. (2014). Immigrant Skill Utilization: Trends and Policy Issues. *Journal of International Migration and Integration, 15*(1), 1-26. doi: 10.1007/s12134-012-0265-1

Robila, M. (Ed.). (2014). *Handbook of Family Policies Across the Globe*. New York: Springer.

Satzewich, V. (1993). Migrant and immigrant families in Canada: State coercion and legal control in the formation of ethnic families. *Journal of Comparative Family Studies, 24*(3), 315-338.

Silva, A. D. (1997). Earnings of Immigrant Classes in the Early 1980s in Canada: A Reexamination. *Canadian Public Policy / Analyse de Politiques, 23*(2), 179-202. doi: 10.2307/3551484

Simmons, A. B. (2010). *Immigration and Canada. Global and transnational perspectives*. Toronto: Canadian Scholars' Press Inc.

Simone, D., & Newbold, K. B. (2014). Housing Trajectories Across the Urban Hierarchy: Analysis of the Longitudinal Survey of Immigrants to Canada, 2001–2005. *Housing Studies*, 1-21. doi: 10.1080/02673037.2014.933782

Statistics Canada. (2007a). *Immigration in Canada: A portrait of the foreign born population, 2006 Census*. Ottawa: Statistics Canada.

Statistics Canada. (2007b). *Longitudinal Survey of Immigrants to Canada, Wave 3 – User Guide*. Ottawa: Special Survey Division, Statistics Canada.

Swartz, T. T. (2009). Intergenerational family relations in adulthood: Patterns, variations, and implications in the contemporary United States. *Annual Review of Sociology, 35*, 191-212.

Teixeira, C. (2010). Newcomer's experiences of housing and homelessness in Canada *Canadian Issues/Thèmes Canadiens*. (Fall 2010).

Thomas, D. (2001). Evolving family living arrangements of Canada's immigrants. *Canadian Social Trends, 61*, 16-22.

Triadafilopoulos, T. (2006). Family immigration policy in comparative perspective: Canada and the United States. *Canadian Issues, Spring*, 30-33.

van Hook, J., & Glick, J. E. (2007). Immigration and living arrangements: Moving beyond economic need versus acculturation. *Demography, 44*(2), 225-249.

Wilmoth, J. M., De Jong, G. F., & Himes, C. L. (1997). Immigrant and non-immigrant living arrangements among America's White, Hispanic, and Asian elderly population. *International Journal of Sociology and Social Policy, 17*(9/10), 57-82.

Table 1
Selected sample carachteristics by type of immigrants' household

Variables		Nuclear	Doubled-up household	Total
Immigrant class of entry				
Family class	Parents/grandparents	5	36	11
	Spouses/fiances/other	12	15	13
Economic class	Principal applicants	47	34	44
	Spouses/dependents	32	9	27
Refugees		5	5	5
Demographic characteristics six months after arrival				
Sex*	Male	49	49	49
	Female	51	51	51
Age at arrival	25-29	19	25	20
	30-39	50	29	46
	40-49	23	12	21
	50-64	6	22	9
	65+	2	13	4
Marital status	Single never married	7	23	10
	Married/common-law	91	65	86
	Separated/divorced/widow	3	12	4
Young children (0-4) in HH	At least one	81	69	79
	None	19	31	21
Province of residence	Ontario	56	58	56
	Quebec	17	9	16
	BC	17	18	17
	Other	11	15	11
Self-rated health	Poor	21	30	23
	Good	79	70	77
Ethnicity/visible minority status				
Population group	White	23	11	21
	Chinese	24	20	23
	South Asian	22	36	25
	Black	4	4	4
	Filipino	6	14	8
	Latin American	3	2	3
	South East Asian	1	1	1
	Arab	6	4	6
	West Asian	4	4	4
	Korean	5	1	4
	Other	2	2	2
Religion	Secular	26	19	25
	Catholic	18	22	19
	Protestant/Orthodox/Jewish	22	15	21
	Muslim	19	14	18
	Eastern	14	29	17
Social integration indicators six months after arrival				
Social and ethnic networks	No new friends	57	52	56
	Different ethnic group	11	24	13
	Same ethnic group	33	24	31
Official language proficiency	Poor	36	51	39
	Good	64	49	61
Lived in Canada before*	No	90	92	91
	Yes	10	8	9
Economic resources six months after arrival				
Employment status*	Not employed	53	52	52
	Part-time	8	8	8
	Full-time	39	40	39
Natural logarithm of total personal income (Mean)		4.92	4.43	4.82
Contribution to household income (Mean)		0.44	0.37	0.43
n		5070	1230	6300

Source: Longitudinal Survey of Immigrants to Canada. See text for definition of variables.
* Chi-squared tests show that this characteristic does not vary significantly ($p > 0.05$) by condition of doubled-up

Table 2.

Estimated odds-ratios from a series of Logistic regression models of being 'doubled-up' (coresidence with extended kin or non-kin) among immigrants, six months after arrival

Variables		Model 1	Model 2	Model 3	Model 4	Model 5	Model 6
Immigrant class of entry							
Family class	(Parents/grandparents)						
	Spouses/fiances/other	0.17***	0.14***	0.16***	0.18***	0.17***	0.17***
Economic class	Principal applicants	0.10***	0.10***	0.13***	0.17***	0.16***	0.16***
	Spouses/dependents	0.04***	0.04***	0.05***	0.06***	0.06***	0.05***
Refugees		0.13***	0.13***	0.19***	0.19***	0.20***	0.19***
Demographic characteristics six months after arrival							
Sex	Male		1.03	1.02	1.06	1.01	1.01
	(Female)						
Age at arrival	18-29		1.73*	1.24	1.24	1.12	1.12
	30-39		0.83	0.61	0.60*	0.55*	0.54*
	40-49		0.59*	0.42***	0.41***	0.38***	0.37***
	50-64		0.79	0.67*	0.65*	0.62*	0.61*
	(65+)						
Young children (0-4) in HH	At least one		1.83***	1.71***	1.68***	1.72***	1.71***
	(None)						
Province of residence	(Ontario)						
	Quebec		0.53***	0.67**	0.67**	0.69*	0.67**
	BC		0.91	0.89	0.86	0.87	0.85
	Other		1.36**	1.34**	1.30*	1.27*	1.26*
Self-rated health	(Poor)						
	Good		0.85	0.81*	0.82*	0.82*	0.83*
Ethnicity/visible minority status							
Visible minority	(White)						
	Chinese			2.01***	1.97***	1.99***	1.99***
	South Asian			2.27***	2.28***	2.24***	2.25***
	Black			2.29***	2.42***	2.41***	2.45***
	Filipino			4.23***	4.62***	4.39***	4.32***
	Latin American			1.65	1.57	1.6	1.61
	South East Asian			2.61*	2.45*	2.44*	2.48*
	Arab			1.6	1.54	1.58	1.6
	West Asian			1.61	1.51	1.52	1.51
	Korean			0.97	0.86	0.92	0.94
	Other			3.44***	3.55***	3.50***	3.54***
Religion	Secular						
	Catholic			1.21	1.25	1.23	1.23
	Protestant/Orthodox/Jewish			1.03	1.07	1.05	1.05
	Muslim			1.06	1.04	1.06	1.06
	Eastern			1.39	1.35	1.33	1.32
Social integration indicators six months after arrival							
Social and ethnic networks	(No new friends)						
	Different ethnic group				1.61***	1.62***	1.63***
	Same ethnic group				1.14	1.12	1.11
Official language proficiency	(Poor)						
	Good				0.71***	0.70***	0.70***
Lived in Canada before	(No)						
	Yes				0.95	0.93	0.93
Economic resources six months after arrival							
Employment status	(Not employed)						
	Part-time					1.46*	1.35
	Full-time					1.31**	1.22
Natural logarithm of total personal income							1.02
Contribution to household income							0.84
Intercept		1.93***	2.17***	1.1	1.02	1.02	1.05
n		6300	6300	6300	6300	6300	6300
AIC (unweighted model)		5300.02	5101.37	4984.3	4966.65	4958.7	4959.32
pseudo R2 (unweighted model)		0.1494	0.1846	0.2079	0.212	0.2139	0.2145

Source: Longitudinal Survey of Immigrants to Canada.

Notes: Reference categories in parentheses. Models use survey and bootstrap weights provided by Statistics Canada.

* for p< .05, ** for p<.01, and *** for p<0.001 (two tailed tests)

Table 3
Type of immigrants' living arrangement over the first four years upon arrival by immigrant class of entry

Type of living arrangement over time		Family class		Economic class		Refugees	Total	Included in sample for Fixed-effects models
Six month after arrival	Two/four years after arrival	Parents or grand-parents	Spouses, fiances or other	Principal applicants	Spouses or dependents			
Not doubled-up	Never doubled-up	21	67	79	88	74	73	No
	Experienced being doubled-up	13	8	6	5	6	7	Yes
Doubled-up	Remained doubled-up	52	12	4	2	12	10	No
	Experienced not being doubled-up	14	12	12	5	9	10	Yes
Total		100	100	100	100	100	100	

Source: Longitudinal Survey of Immigrants to Canada.
Note: Sample includes

Table 4.

Estimated odds-ratios from a series of nested fixed-effects logistic regression models of being doubled-up (coresidence with extended kin or non-kin) among immigrants over the first four years after arrival

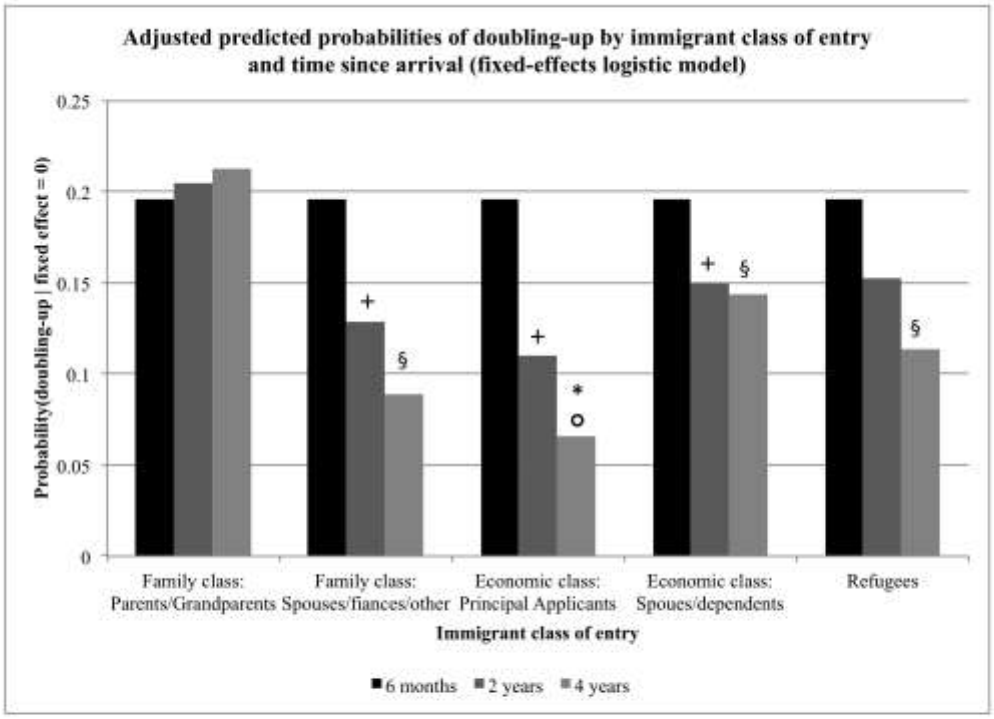
Variables		Model 1	Model 2	Model 3	Model 4	Model 5
Main effect: Time since arrival						
	(Six months)					
	Two years	0.95	1	1.05	1.06	1.06
	Four years	1.06	1.04	1.05	1.07	1.12
Interaction:						
Immigrant class of entry and time since arrival						
Two years since arrival*						
Family	(Parents/grandparents)					
	Spouses/fiances/other	0.76	0.59	0.58*	0.59	0.55*
Economic	Principal applicants	0.46***	0.50***	0.48***	0.49***	0.46***
	Spouses/dependents	0.84	0.76	0.74	0.77	0.67
Refugees		0.66	0.64	0.65	0.67	0.68
Four years since arrival*						
Family	(Parents/grandparents)					
	Spouses/fiances and other	0.49*	0.36**	0.36**	0.37**	0.34**
Economic	Principal applicants	0.25***	0.28***	0.28***	0.28***	0.24***
	Spouses/dependents	0.71	0.68	0.68	0.71	0.6
Refugees		0.42*	0.44*	0.45	0.48	0.45
Time-varying covariates						
Demographic characteristics						
Marital status	Single never married		4.35***	4.35***	4.33***	5.06***
	(Married/common-law)					
	Separated/divorced/widow		2.35	2.29	2.34	2.92*
Young children (0-4) in HH	At least one		2.45***	2.44***	2.42***	2.37***
	(None)					
Self-rated health	(Poor)					
	Good		0.76*	0.76*	0.76*	0.76*
Social integration						
Social and ethnic networks	(No new friends)					
	Different ethnic group			1.25	1.23	1.27
	Same ethnic group			1.13	1.13	1.13
Official language proficiency	(Poor)					
	Good			0.83	0.82	0.83
Economic resources						
Employment status	(Not employed)					
	Part-time				1.1	0.97
	Full-time				0.78	0.77
Natural logarithm of total personal income						1.06**
Contribution to household income						0.40***
n		1005	1005	1005	1005	1005
Akaike Information Criteria		2091.078	2001.184	2000.746	1991.932	1967.978
pseudo R2		0.0612	0.1055	0.1078	0.1107	0.1234

Source: Longitudinal Survey of Immigrants to Canada.

Notes: Reference categories in parentheses. Models use survey and bootstrap weights provided by Statistics Canada.

* for p< .05, ** for p<.01, and *** for p<0.001 (two tailed tests)

Graph 1



Source: Longitudinal Survey of Immigrants to Canada

Notes: Adjusted predicted probabilities based on Model 5, Table 4.

+ Statistically significantly different at p< 0.05 from parents and grandparents (Family), but not significantly different to each other

* Statistically significantly different at p< 0.05 from parents and grandparents (Family) and spouses and dependents (Economic)

§ Statistically significantly different at p<0.05 from six months after arrival, but not significantly different to each other

o Statistically significantly different at p<0.05 from six months after arrival and two years after arrival