5-1-2003

Family Change and Economic Well-Being in Canada: The Case of Recent Immigrant Families with Children

Jianye Liu
University of Western Ontario, jliu8@lakehead.ca

Don Kerr
King's University College, University of Western Ontario, dkerr@uwo.ca

Follow this and additional works at: http://ir.lib.uwo.ca/pscpapers

Recommended Citation
Available at: http://ir.lib.uwo.ca/pscpapers/vol17/iss8/1
Family Change and Economic Well-Being in Canada: The Case of Recent Immigrant Families with Children

by
Jianye Liu
Don Kerr

Discussion Paper no. 03-08

May 2003

On the web in PDF format: http://www.ssc.uwo.ca/sociology/popstudies/dp/dp03-08.pdf

PAPER PREPARED FOR THE 2003 CANADIAN POPULATION SOCIETY MEETINGS, JUNE 1-3, 2003 HALIFAX, NOVA SCOTIA.

Population Studies Centre
University of Western Ontario
London CANADA N6A 5C2
Family Change and Economic Well-Being in Canada: The Case of Recent Immigrant Families with Children

By Jianye Liu and Don Kerr,
Department of Sociology University of Western Ontario

Abstract:
This paper examines the relationship between family change and economic well-being among recent immigrant families with children to Canada over the 1977-1997 period. Defining recent immigrants as those having migrated within the past decade, this study documents a substantial decline in the average level of economic well being of immigrants who migrated during the 1990s relative to those who migrated in the 1970s and 1980s. Whereas the average income to needs ratio of all Canadian families with children is up modestly over this period, this same generalization is not true when shifting our emphasis to recent immigrants. In this context, to the extent that change in family circumstances is relevant, an increased incidence of lone parenthood has had a net negative effect on the economic well-being of recent immigrants - in a manner that is analogous to other Canadian families. Other changes in family structure and living arrangements appear to be of lesser importance in shaping recent trends, including change in the average number of children per family, the age distribution of the parents of children and the tendency of immigrants to co-reside with family members beyond the immediate nuclear family.

Introduction:
Research in both the United States and Canada has long documented the economic difficulties of many new immigrants during the first several years after arrival (Driedger, 1987; Boyd, 1992; Li, 1998). In many respects, the difficulties experienced by new immigrants are analogous to other new labor market entrants. Often without local experience and connections, a considerable level of economic dislocation accompanies the first years of residence, only to improve noticeably as the new arrivals come to familiarize themselves with the requirements of their newly adopted country’s labour market. The socio-economic status of immigrants in Canada has long been shown to be positively correlated with the length of time after landing, a generalization which is certainly true of the present, as it has been true with many successive waves of immigrants (Chiswick, 1986; Richmond and Kalbach, 1980; Beaujot and Rappak, 1990).

At the same time, a negative trend has been documented over recent years, that being, newer waves of immigrants appear to be facing a greater initial earnings deficiency relative to other Canadians (Devoretz, 1995; Fagnan, 1995; Reitz, 2001). A wide assortment of factors have been raised in efforts to explain this situation, including the possibility that more recent immigrants experience increased prejudice and discrimination based on race, perhaps as a partial backlash due to high levels of non-European immigration (Bloom et al, 1995; Huber and Espenshade, 1997). Yet as argued by Reitz (2001), there are clearly many additional factors that must be considered in this context, including the impact of change in labour market conditions, the educational credentials and experience of immigrants and natives alike, among other fundamental factors. In terms of characteristics of immigrants to Canada, it is noteworthy that there has been a downward pressure on earnings and total family income even though the average level of educational attainment among immigrants to Canada has been rising.

Without specific reference to immigrants, Picot et al. (1998) have emphasized the importance of three fundamental institutions in shaping the economic well-being of Canadians, including (i) the market - especially the labour market, (ii) the state - with direct transfers of both services and payments, and (iii) the family (in explaining how Canadians earn and pool resources). Without downplaying the importance of structural explanations that emphasize the role of labour markets and/or government policy, the current paper intentionally shifts the emphasis somewhat, in focusing specifically upon the latter of these three institutions, i.e. of what relevance is family/demographic change to the evolving economic conditions faced by new immigrants (if any). While obviously changes in labour market conditions are particularly salient.
in this context, this is not to suggest that shifts in living arrangements and family structure are irrelevant. In supplementing previous emphasis on structural explanations, the current study considers a somewhat neglected area of research in the Canadian context by examining family/demographic change, and the corresponding repercussions of this change for economic well-being.

We examine changes in economic well-being of recent immigrant families in Canada over the 1977-1997 period, using the economic family files from the 1977, 1982, 1987, 1992 and 1997 public use microdata samples of the Canadian Survey of Consumer Finances. The family records in each file contain detailed information on the living arrangements, income and employment information of family member. This allows us to address two basic objectives. First, we describe changes in economic well-being of new immigrants over the 1977-1997 period, using an income to needs ratio that specifically considers family size and structure in its calculation. Second, we evaluate the role of change in family structure in shaping these trends. To what extent has recent change in the structure of immigrant families had an impact on their relative economic well-being, and in particular, has this change served to exasperate or counter the difficulties that many experience in terms of lower earnings and higher unemployment. Recent immigrants can be identified using these public use microdata files as those having migrated over the previous decade (prior to each successive survey year).

Immigration, Employment and Earnings in Canada

Relative to its overall population size, Canada receives a substantial share of all immigrants to North America. Currently, the admission of over 200,000 immigrants annually represents well over half of Canada’s overall population growth (Statistics Canada, 2003). On an annual basis, since 1994, net international migration has comprised a larger percentage of total population growth in Canada than has natural increase (births – deaths). This situation has contributed to a sizeable share of Canada’s population being foreign born - at 18.4% according to the 2001 Census (Statistics Canada, 2003). The comparable figure in the United States is 11.1% foreign born (Bureau of the Census, 2001), which highlights the relative importance of immigration to Canada’s demographic and socioeconomic development.

The success of immigrants in settlement, in gaining employment and/or the necessary skills for employment, has long been a central priority in developing Canada’s immigration policy. With this in mind, the federal government introduced the “points system” in the 1960s, in promoting the selection of immigrants on the basis of education, occupational skills and knowledge of official languages. While a substantial proportion of all immigrants continue to migrate to Canada under the family re-unification class (and to a lesser extent, political refugee class), the federal government is committed to increasing the share of all immigrants that migrate to Canada on the basis of skills and education. As a result, immigrants as admitted to Canada over recent decades have had educational levels significant higher than that of other Canadians, non-surprisingly in light of the highly selective character of current immigration policy.

Despite these rising levels of educational credentials, the earnings and employment success of recent cohorts of new immigrants to Canada has declined in quite a pronounced manner (Abbott and Beach, 1993; Baker and Benjamin, 1994; CIC, 1998). While the introduction of Canada’s point system was initially met with success, there is a growing body of evidence to suggest that migrants who immigrated to Canada during the 1990s have not fared nearly as well as those who migrated earlier, in the 1970s and 1980s. While Canada has a reputation for its success in terms of integrating new immigrants, the economic difficulties as experienced more recently by immigrants to Canada has served to undermine this reputation (Li, 2003). While an explanation of this declining performance in the labour market is beyond the scope of the current study, it is noted that a similar situation has characterized the broader North American context. As directly suggestive of this tendency, Camaroto (1999) found that the gap between immigrant and native born poverty rates in the United States almost tripled between 1970 and 1997 – to the clear disadvantage of immigrant households.

In the broader North American context, Huber and Espenshade (1997) have argued that the tolerance for immigrants has waned over recent decades, with a corresponding increase in discrimination in the labour market. Starting from an emphasis on dual labour market theory, Massey et al. (1993) argue that
irregardless of selective immigration policy, immigrants are increasingly under demand in the secondary labour market (i.e. specifically in jobs that are noted for their unstable, unskilled and poorly remunerated character). In echoing this argument in the Canadian context, Kazemipur and Halli (2001) provide evidence to suggest that human capital factors (higher education or work experience) are less rewarding for immigrants than Canadian born, just as Pandekur and Pandekur (2002) document widening earnings differentials, after controlling for many human capital variables. In drawing comparisons across immigrant groups, immigrants with European ancestry have been documented as being less disadvantaged in employment earnings than those who immigrated from Africa, Asia and Latin America (Bloom, Grenier and Gunderson, 1995). With a shift in national origins, to increasingly Third World countries, it has been suggested that the changing composition in source countries is at least partially responsible for the decline in earnings relative to other Canadians (Borjas, 1991; Baker and Benjamin, 1994; Halli and Driedger, 1999).

Reitz (2001) raises other possible factors in explaining this change. In particular, it is noted that while the average level of education of immigrants has been increasing, so too has the average level of education for younger cohorts of internal entrants to the labour force. Over the last several years, the relative gains made by younger cohorts of Canadian men and women have served to narrow considerably the competitive advantage that immigrants have previously benefited from in terms of educational credentials. Canada has dramatically increased its commitment to an educated workforce, such that presently, young Canadians are among the best educated in the industrial world (OECD, 2002). In combination with other fundamental changes, including a shift toward a postindustrial service economy - it is argued that the value of education credentials obtained abroad may very well have declined. Whereas racial discrimination may be contributing to an increased discounting of immigrant skills, Reitz makes the argument that independent of any other change; recent immigrants to Canada are facing greater competition in efforts to establish themselves in the labour market.

Immigration, Family Change and Economic Well-Being

In a description of family living arrangements among Canada’s immigrants, Thomas (2001) suggests that the migratory behaviour of individuals can often be understood in the context of a family strategy. In making what is frequently a very difficult transition in a move from one country to the next, immigration is often made easier when enacted with the emotional and economic support of other family members. By relying upon the skills and resources of more than one family member, immigrants can potentially qualify for admission more rapidly and/or more easily establish themselves economically. Furthermore, often the specific purpose of migration is to accompany or rejoin family members that have already established themselves in Canada.

For this reason, it is not surprising that recent immigrants to Canada are more likely than other Canadians to be living in the same household as other family members. A large majority of recent immigrants to Canada live in households with at least two people, and in a majority of cases, these are people who are related by blood, marriage or adoption (CIC, 2001). Important differences relative to the Canadian born population include the fact that recent immigrants are much more likely to be a part of an extended family (beyond the nuclear family), less likely to be part of a lone parent family, and slightly more likely to be living in the same household as their children (Thomas, 2001). People who migrate to Canada together tend to be members of the same nuclear family (husband and wife, with or without children) whereas many persons who migrate alone do so to join family members - often as a spouse or member of an extended family (as a parent or grandparent).

The emphasis of the current study is on families at a comparable stage of the family life cycle, i.e. families that have at least one child under the age of 18. In evaluating their relative economic status, it is obviously necessary to move beyond individual earnings and income to also consider how family members pool resources in meeting the needs of all household members. Over the last several decades in Canada, average family size has declined, with many other changes in the structure and characteristics of families. Change in the number and timing of children and the formation and dissolution of unions have had an impact on the family life and economic conditions, for immigrants and natives alike. Several different analyses have considered the impact of family and demographic change on Canadian families (Dooley,
1988, 1991; McQuillan, 1992; Picot and Myles, 1996; Kerr and Bélanger, 2001) although it remains an interesting empirical issue as to how this might differ for specific segments of the Canadian population – as for example, among recent immigrants.

Among the most important demographic changes to have a net beneficial impact in this context has been the well documented decline in fertility that followed the baby boom (Romanian, 1984). Among both immigrants to Canada and the native born, a decrease in the number of children per family has had direct economic ramifications, since it means fewer dependent youths per household and thus a decline in the number of claimants on family income (Dooley, 1989; Brouillette et al, 1990). There has also been an upward shift in the age pattern of fertility (Ram, 1990; Beaujot et al., 1995; Belanger, 1999). This may be associated with a higher level of economic well-being, as adults delay having children until later in their reproductive years, when economic resources are generally greater (Oppenheimer, 1988; Grindstaff et al., 1989). One of the most fundamental changes in family structure to have a net negative effect on economic well-being has been the increase in marital instability, as there is ample evidence to suggest that separation and/or divorce cause considerable economic hardship for both women and children (Ross and Shillington, 1989; Dooley, 1991; Rashid, 1994). While the long-term economic repercussions of union dissolution are generally not as great as those faced by single women who have births without a partner, in general, children experience significant hardship as a result of their parents’ inability to continue their relationship (McQuillan, 1992).

In some countries, immigrant fertility is significantly different from that of the receiving population, whereas in the Canadian case, similarities better characterize the situation (Gauthier, 1989; Ram and George, 1990; Krishnan and Krotki, 1989; Beaujot, 1995; Halli et al., 1995). One generalization to come out of recent research is that immigrants probably have fewer children at time of arrival but more afterwards, such that overall we observe a convergence with the receiving population over the life course (Beaujot, 1995; Halli et al., 1995). In terms of lone parenthood, it is well established that recent immigrants are less likely to be single parents, even though the proportion lone parent has been rising over recent years (CIC, 2001). In addition, recent immigrants are significantly more likely to be part of an extended family, as for example, the 1996 Census documented that 16% of all immigrants (1991-1996) who were living with relatives did so as part of an extended family, which compares with only 6% of the Canadian born (Statistics Canada, 2001). A variety of factors explain this situation, including cultural factors that might encourage the co-residence of more than two generations. In addition, by pooling resources, families can often ease the adjustment process in settling in Canada and minimize the social costs for all involved. Interestingly, as immigrants settle in Canada, immigrant families come to more closely resemble the Canadian born, as extended family arrangements often appear to be temporary.

Taken as a whole, it has been shown in the literature that the above mentioned changes have had offsetting effects on the economic well being of Canadian families with children in Canada (Dooley, 1989; Picot and Myles, 1996). In shifting our emphasis to recent immigrants, it is an interesting empirical issue as to how this experience has differed from Canadians overall. What is clear is that while the experience of immigrants in terms of fertility is quite similar, it is also known that their experience with family disruption and non-marital fertility is not. In shifting our emphasis to immigrants it is also necessary to consider the impact of co-residence beyond the nuclear family, as this sort of living arrangement is much more common than among the general population. The basic question is asked as to what extent recent change in the structure of immigrant families had an impact on their relative economic well-being, and in particular, has this change served to exasperate or counter the difficulties that many experience in terms of lower earnings and higher unemployment.

Methodology

Measuring Economic Well-Being

Income-based measures of economic well-being have many well-known limitations, most of which have been discussed in detail elsewhere (Ruggles, 1990; Wolfson and Evans, 1989; Cotton et al., 1999). Most income-based measures of economic well-being exclude information on property or wealth, just as they
exclude various sources of potential income and services not easily captured through survey research. More specifically, they tend to systematically under-report or exclude various types of in-kind public assistance, the sharing of resources and services across households and generations, the impact of exchanges in the formal economy, the bartering of goods and services, among other potential sources of non-declared income. In addition, most research on economic well-being completely neglects the manner in which resources are shared within families – between spouses and between adults and children. The implicit assumption of an equal sharing of financial resources can potentially obscure important differences in the actual economic conditions experienced by individual family members (Phipps and Burton, 1995).

Attempts to document economic well-being compel, among other things, some adjustment of income to take account of economic need. As merely a simple example, there appears to be little debate that larger families require larger incomes to obtain a comparable level of well-being relative to smaller households. In following this observation, most indicators of economic well being presently encountered in the literature involves some sort of algebraic manipulation of two fundamental components, these being (1) a measurement of household resources (usually in terms of total income) and (2) some sort of indicator of a household’s relative level of economic need. While the requirement that household income be adjusted on the basis of economic need is perhaps obvious to even the most casual observer, in actual fact, there has been relatively little consensus as to the most appropriate procedures in so doing.

In efforts to accommodate this variation in economic need, researchers have developed what are known as “equivalence scales”, which assign values to families of varying size which are hypothetically in direct proportion to their level of relative economic need. This is considered an improvement over the convention of merely adjusting income by dividing it in terms of number of persons in the family (ex. family income per capita). Implicit in most poverty lines or low income cutoffs are equivalence scales that consider the economics of scale as related to family size. On this basis, one of the most commonly used measures of economic well-being is the “income to needs ratio”, computed as the ratio of household income to its hypothesized level of economic need (with the latter typically defined in terms of a set of low income cutoffs). As there are currently many different low income cutoffs in circulation, the current study relies upon one of the most commonly cited, i.e. Statistics Canada’s 1992 base low income cutoffs (before tax). In making comparisons over time, all dollar figures are adjusted to account for changes in the cost of living, in converting all family income data into 1997 dollars.

Data

The primary data source for the present study is the Canadian Survey of Consumer Finances (SCF), an annual survey first introduced in Canada during the 1970s. Although this survey was discontinued in 1998 - to be replaced by Statistics Canada’s Survey of Labour and Income Dynamics (SLID) - the SCF was for many years the most reliable source of information on the income and income distribution of Canadian families and individuals. As a supplement to the Canadian Labour Force Survey, the SCF had large representative national samples, as for example, over recent years approximately 35,000 households (or 65,000 individuals) were contacted with a response rate of about 80%. The SCF collected detailed information on various socio-demographic and labour force characteristics of Canadians, with a sample size which is sufficient when limiting our analysis to recent immigrants.

Although Statistics Canada discontinued this survey in 1998, much the same information has more recently been gathered through its Survey of Labour and Income Dynamics (SLID). Yet unfortunately, the information publicly available to researchers outside of Statistics Canada from this latter data set is very limited, and does not allow for the current analysis to move beyond 1997. For example, the public use microdata files have virtually no information on the family living arrangements of Canadians nor does it provide information on the immigration status of respondents. For this reason, without many of the variables necessary for the current analysis, this study is limited to the SCF data, merging data from the 1977, 1982, 1987, 1992 and 1997 calendar years. In selecting solely recent immigrant families (i.e. those with at least one adult reporting immigration over the past decade) the current analysis works with a merged data set of 4,713 families across the five calendar years.
When income figures are expressed in constant 1997 dollars, it is possible to derive comparable income statistics for families for the entire 1977-1997 period. As above indicated, the current study examines the “income to needs ratios” of different families, while relying upon Statistics Canada’s 1992 low-income cut-offs as the denominator for this ratio. These cut-offs are weighted so that larger families require higher incomes to meet their economic needs, while “economies of scale” also kick in as size increases. Furthermore, the cut-offs are weighted differently depending on whether the family lives in a major metropolitan area, a smaller city, or a rural area (for exact values, see Table A1).

Decomposition Technique:

The methodology of the present study borrows from several sources, including Wolfe et al. (1982), Blackburn (1990), Macunovich and Easterlin (1990) and Kerr and Bélanger (2001). After documenting recent trends in terms of average income to needs, the current study sets out to decompose these trends through the use of a series of regressions and “nested” models. More specifically, through a series of regressions with the aforementioned merged data set, the current study sets out to identify the relative importance of change in specific family structure variables to overall trends in economic well-being, while controlling for several additional variables, such as occupation, labour force participation and the education of recent immigrants. Table 1 includes a full listing of all of the variables included in the current decomposition. The primary emphasis of the current study is on change in (i) the number of children per family, (ii) the age structure of parents, (iii) the presence of parents, and (iv) potential shifts in the propensity of Canadians to live in extended families. With a specific emphasis on recent immigrants, this decomposition strategy controls for education, labour force participation and occupation, and is also applied separately to the native born, for comparative purposes.

Table 1 about here

The full model to be estimated is:

\[ \log(\text{IN}_i) = \beta' X_{it} + \xi_{it} \]


where the dependent variable \( \log(\text{IN}_i) \) is the logarithmic transformation of the income to needs ratio of the \( i \)th family in year \( t \), \( X_{it} \) is a vector of explanatory variables (see Table 1), \( \beta \) is a vector of corresponding parameters, and \( \xi_{it} \) is an error term assumed to have zero mean and constant variance across \( i \) and \( t \). The decision to work with the logarithmic transformation is justified as initial regression diagnostics with the income to needs ratio suggested problems with heteroscedasticity (Johnston, 1984; Fox, 1984). With the full model, most of the variables had a statistically significant impact on the dependent variable, with a few minor exceptions (e.g., a few of the dichotomous variables introduced in estimating the impact of occupation). Table A2 in the appendix provides the unstandardized coefficients and corresponding standard errors upon which this decomposition exercise was based.

The regression coefficients associated with the year variables are particularly useful in the decomposition of recent trends. These dichotomous variables are intended to capture differences in \( \log(\text{IN}_i) \) across years after we control for all other factors in the analysis. For the full model as hypothesized, the coefficients associated with the year dummies are meant to reflect differences in the average level of the dependent variable across years after controlling for all other variables in Table 1. Alternatively, consider the following reduced form regression (with unstandardized coefficients) that includes solely the year dummies (setting 1977 as the reference category with the 5 year merged data):

\[ \log(\text{IN}_{it}) = \beta_0 + \beta_2 (\text{year82}) + \beta_3 (\text{year87}) + \beta_4 (\text{year92}) + \beta_5 (\text{year97}) \]

In the absence of controls, the y intercept (\( \beta_0 \)) is equivalent to the arithmetic mean of the dependent variable for income units selected from the 1977 data file (reference category), while \( \beta_0 + \beta_1 \) is equivalent to the mean associated with the 1982 file, \( \beta_0 + \beta_2 \) is equivalent to the mean associated with the 1997 file, and so
on. As the dependent variable is the logarithmic transformation of the income to needs ratio, such values exponentiated are equivalent to the corresponding geometric means of the income to needs ratio. The coefficients on the year dummies of this reduced regression can be said to indicate the effect of “all” factors operating to change the income to needs ratio from the base year 1977 to 1982 or from 1977 to 1987. In direct contrast, the full model (which controls for all the variables listed in Table 1) provides coefficients on the year dummies which can be said to indicate the effect of those factors that remain considering the specified controls.

In estimating the relative importance of any single demographic or non-demographic factor in changes observed in the average income to needs ratio over time, one can simply exclude it from the full model and consider the change observed with respect to the coefficients of the year variables. The impact of a specific variable can be estimated as the difference between the effect identified with the revised model (after the variable of specific interest is excluded) and the effect identified with the full model. This procedure gives a “conservative” estimate, in that it suggests only the marginal effect of that factor, controlling for all others. The results from this decomposition technique can at least partially explain recent trends in average the income to needs of immigrant families.

Results:

Table 2 summarizes family/demographic change for recent immigrants and the native-born over the 1977-1997 period using data on “economic families”. The “economic family” concept is considered particularly useful in this context as it consists of all individuals residing in the same household who are related by blood, marriage or adoption. This concept is more general than the commonly employed "census family" (i.e. couples with or without never-married children or lone parent families) as it permits researchers to potentially consider a wider range of family living arrangements beyond the nuclear family. In contrast, if one were to merely use the “census family concept” (as for example, when working with the public use micro-data files from the Canadian census), important difference would be obscured when comparing immigrant and non-immigrant families.

Table 2 about here

For both immigrants and native born, Table 2 demonstrates how the average number of children in families has declined over recent decades, yet only to a moderate extent. As has been well documented elsewhere, the largest part of the fertility decline in Canada occurred during the 1960s and 1970s, and subsequently, only the tail end of this decline is reflected in Table 2. By 1997, Table 2 documents that the average number of children among recent immigrants to Canada had declined to 1.8 children – down to a level that is indistinguishable from the native born.

With regard to the age distribution of parents, Table 2 demonstrates considerable change over the 1977-97 period, with a continued trend toward delayed childbearing. Throughout the 1980s and 1990s, the proportion of families headed by young parents declined, such that by 1997, only 20.2% of recent immigrant families had a mother under 30, a figure which is slightly above the 19.1% for persons born in Canada. A major shift in the tempo of fertility has transformed family life in Canada, as associated with a wide variety of factors, from the increased involvement of women in the paid labour force through to some rather dramatic changes in the involvement of young adults in postsecondary education.

Table 2 also documents a substantial climb in the incidence of lone parenthood, again for both immigrants and non-immigrants alike. By 1997, 14.9% of recent immigrant families involved a female lone parent, with an additional 2.2% involving male lone parent families. While this is not as high as among the Canadian born (with the respective figures at 18% and 3.7%), the basic direction of recent trends is similar. The total proportion of families that are female lone parent has more than doubled among recent immigrants, from 6.5% in 1977 to 14.9% in 1997. Over this 20 year period, the differential between immigrants and the native born appears to have narrowed slightly, as recent immigrants are increasingly experiencing the same sort of marital instability and non-marital fertility as other Canadians.
Table 2 demonstrates the relatively high proportion of recent immigrants who live in extended families, as 12.7% are classified in this manner in 1997, more than three times the 4.2% as observed among the native born. While the proportion of recent immigrants who live in extended families increased somewhat during the 1980s, more recently this proportion appears to have stabilized. This initial increase is consistent with the observation that during the early to mid 1980s, the proportion of all immigrants under the family class increased relative to the independent class. With the recession of the early 1980s, immigration targets were lowered by the federal government, which largely occurred at the expense of the independent class. Previous obligations to family-class applicants were maintained, regardless of the government’s stated policy of encouraging independent migrants selected on the basis of skills and education. Pressure for family reunification has always resulted in many immigrants making the move on the basis of sponsorship by relatives already established in Canada, often with the initial intention of co-residence.

Table 3 moves on to present the average income to needs ratio for both Canadian born and recent immigrant families, classified across categories of the aforementioned family/demographic variables. Overall, the data demonstrates some rather dramatic differences in comparing trends over recent years, in considering separately the experience of the Canadian born relative to immigrant families. For example, while the average income to needs ratio of the Canadian born is up slightly over the 1977-1997 period (from 1.88 to 2.10), among recent immigrants a significant decline is documented (from 1.77 down to 1.34). While in 1977, the mean income to needs ratio for immigrants was only slightly lower than that of the Canadian born, two decades of deteriorating economic conditions for immigrants has widened significantly the gap between new arrivals and other Canadians.

While a full explanation of this situation is certainly beyond the scope of the current analysis, it is noted that for immigrants, the average income to needs ratio is down across categories of all the aforementioned family/demographic variables, without exception. In documenting recent trends in economic well being, it is obvious from this data that the economic conditions as faced by new immigrants would have worsened, irregardless of family/demographic change. For the Canadian born, this indicator on economic well being is down solely for the youngest of families (in families where the reference person is under the age of 30).

Table 3 about here

Overall, Table 3 demonstrates the average relative economic disadvantages associated with having a larger number of children, of commencing family life at a young age, and/or in raising children in a female lone parent family. For both immigrants and the Canadian born, the income to needs of such families are noticeably worse off than others. The relative economic difficulties that characterize lone parenthood is particularly striking, as averages are consistently below or very close to 1.0 (with Statistics Canada’s low income cutoffs serving as the denominators in these ratios). In addition, recent immigrants who live in extended families appear to be doing slightly better than others, suggestive that the pooling of resources and co-residence may very well serve as a useful strategy in immigrating to Canada.

A Decomposition of Recent Trends

The relationships presented so far have been exclusively bivariate and tell us relatively little about the comparative importance of each variable in explaining recent trends in the income to needs ratio. For example, what is the impact of recent trends in the incidence of lone parenthood, after we control for several other family/demographic and socioeconomic variables in our model? To answer this type of question, we rely upon our previously specified multivariate model to decompose recent trends. This decomposition provides some insight into the net impact of selected variables, after we control for the other variables considered important in explaining changes in family economic well-being.

For the purposes of this study, our model includes education, occupation and labour force participation of mothers, in all but male lone-parent families. It is expected that that the significant changes that have occurred in the educational attainment, occupation and labour force involvement of immigrant and non-immigrant women over recent years will have an important impact on the economic conditions experienced by these families. Yet while we control for these variables, the main focus in our analysis
remains the aforementioned family and demographic variables. Table 4 summarizes the results of this decomposition, for four distinct periods (1977-1982; 1982-1987; 1987-1992; and 1992-1997).

Table 4 about here

The data indicate that change in terms of “presence of parents” has the greatest impact among the family/demographic variables, particularly for the Canadian born. When we control for all other variables in the model, we observe that change in terms of the presence of parents has a negative effect over the period, responsible for an estimated 3% decline in the average income to needs ratio among recent immigrants and a much more pronounced effect among the Canadian born, contributing to an estimated 9% decline. This decline is at least partially explainable, as a growing proportion of Canadian families involve female lone parents, with the corresponding economic consequences. The fact that the effect is more pronounced among the Canadian born is less straight forward, although possible related to the fact that the discrepancy in terms of average income in comparing dual parent and single parent families seems to be somewhat greater among those born in Canada. To the extent that this is true, one would likely observe a amplification of the effect of shifting family structure, with an increased proportion of families involving female lone parents. Among recent immigrants, recent trends in terms of average income to needs has involved a reduced level of economic well being, for dual parent families and single parent families alike.

Over the entire period, the effects of change in the other family and demographic variables are all in the opposite direction, serving to offset the negative effect of increased lone parenthood. For example, both the number of children and the age distribution of parents have a net positive effect on average income to needs, although this procedure again suggests that their impact is greater for the Canadian born. Among non-immigrants, change in the age distribution of parents and number of children has contributed to an estimated 2% and 3% increase respectively in the average income to needs ratio, whereas among recent immigrants, the comparable figures were limited to only about a 1% increase. Similarly, the effect of recent changes in the propensity to co-reside with extended family members had a very slight positive impact on the average income to needs of immigrants (contributing to a slight 1% increase). With the exception of this latter variable, family change has had a weaker effect on the economic well-being among immigrants than among other Canadians.

For the remaining variables in the model (i.e. education, occupation and labour force participation), the results are quite different, again depending upon whether our emphasis is on recent immigrants or the Canadian born. For example, gains made with regard to education of mothers are estimated to have contributed to an increase of fully 7% for the Canadian born, whereas the estimated return on education for recent immigrants is modest in comparison (at only 1%). With regard to changes in the labour force participation of women, for both recent immigrants and the Canadian born, a positive effect is documented (at about 6% and 4% respectively). Shifts in occupational classification, after controlling for all other variables in the model, suggest a slight negative effect for the Canadian born (responsible for an estimated 2% decline) whereas among recent immigrants, a more pronounced negative effect is documented (responsible for a 5% decline). The impact of socioeconomic and family demographic variables appear to interact with immigration status in an important manner, as the current study documents the distinctive experience of recent immigrants to Canada.

Discussion and Conclusion:

The current analysis has examined the relationship between family change and economic well-being among recent immigrant families with children to Canada. Defining recent immigrant families as all those with at least one parent who migrated to Canada within the last 10 years (i.e. of each respective survey), this study documents a substantial decline in their average level of economic well being since 1977. Whereas for all Canadian families with children we have documented a modest improvement over the 1977-1997 period, this same generalization is not true when shifting our emphasis to recent immigrants. In working with an indicator of economic well-being that specifically considers family size in its calculation, the current study documents a decline of about 25% in the income to needs ratio of recent immigrants – a figure that can be held in direct contrast with the 12% increase as documented among the Canadian born.
For the 1977-1997 period, the current study also reveals several ongoing changes in the familial circumstances of Canadians with children, for immigrants and non-immigrants alike. These changes include a shift in the timing of childbirth toward older ages, a slight decline in the average number of children per family, an ongoing growth in the proportion of female lone-parent families, and for immigrants, a slight increase in the propensity to co-reside with family members beyond the nuclear family. While in general these changes have been shown to have had offsetting effects, the most harmful trend, from the point of view of meeting the economic needs of Canadian families, has been a steady rise in the number of lone-parent families. Yet as indicated in our analysis, the effect of this change is far more pronounced among the Canadian born than among immigrants to Canada. While the proportion of recent immigrant families that involved a lone parent more than doubled over this 20 year period, the overall impact of this change after controlling for the other family/demographic and socioeconomic variables was not as great as might be expected.

A fundamental factor in explaining this situation is likely the simple observation that across categories of family structure, the average income to needs ratio of immigrants has declined. Even further, it is noted that the discrepancy as observed in the average income to needs ratio when comparing dual parent and female lone parent families actually lessened somewhat among recent immigrants (a generalization which is certainly not true when shifting our emphasis to the Canadian born). In addition, among immigrants, the average income to needs ratio is down across categories of all remaining family/demographic variables, without exception. In documenting recent trends in economic well being, it is obvious from these data that the economic conditions as faced by new immigrants would have worsened, irregardless of family/demographic change.

As Picot et al. (1998) stated in a comprehensive analysis of 1973-1995 low income trends in Canada, it is preferable to avoid focusing too narrowly on family and demographic events to the exclusion of broader “social and economic events that might influence the availability of jobs, employment earnings, and other sources of market income”. While such a “broader” emphasis is certainly beyond the scope of the current study, a few general concluding comments appear to be in order. Particularly relevant in this context may very well be the aforementioned argument by Reitz (2001), with his emphasis upon the relative education credentials of immigrants and non-immigrants alike. In particular, while the average level of education for immigrants has been increasing, so too has the average level of education for younger cohorts of internal entrants to the labour force. Over the last several years, the relative gains made by younger cohorts of Canadian men and women have served to narrow considerably the competitive advantage that immigrants have previously benefited from in terms of educational credentials. The simple fact that our decomposition suggests that change in educational obtainment contributed to a much larger increase in average income to needs among the Canadian born (7%) than among recent immigrants (at only 1%) is directly supportive of this argument.

Several other studies have set out to document why recent immigrants appear to be facing greater difficulties in establishing themselves in the Canadian labour market, including discussions that have explicitly considered recent shifts in the racial/ethnic and linguistic composition of immigrants to Canada. Unfortunately the current analysis included neither knowledge of language nor race/ethnicity as a potentially relevant control in our analysis; due to the fact that reliable time series data including this information was absent in the SCF public use tapes. Others have analyzed the importance of these latter variables in greater detail elsewhere, as for example, Boyd (1999) demonstrates the importance of language proficiency among immigrants to their relative success in the Canadian labour force. In addition, Richmond (1992) has examined in some detail the issue of racial discrimination in Canada, in considering problems relating to the non-recognition of qualifications, the insistence upon the relative education credentials of immigrants and non-immigrants alike. In particular, while the average level of education for immigrants has been increasing, so too has the average level of education for younger cohorts of internal entrants to the labour force. Over the last several years, the relative gains made by younger cohorts of Canadian men and women have served to narrow considerably the competitive advantage that immigrants have previously benefited from in terms of educational credentials. The simple fact that our decomposition suggests that change in educational obtainment contributed to a much larger increase in average income to needs among the Canadian born (7%) than among recent immigrants (at only 1%) is directly supportive of this argument.

Several other studies have set out to document why recent immigrants appear to be facing greater difficulties in establishing themselves in the Canadian labour market, including discussions that have explicitly considered recent shifts in the racial/ethnic and linguistic composition of immigrants to Canada. Unfortunately the current analysis included neither knowledge of language nor race/ethnicity as a potentially relevant control in our analysis; due to the fact that reliable time series data including this information was absent in the SCF public use tapes. Others have analyzed the importance of these latter variables in greater detail elsewhere, as for example, Boyd (1999) demonstrates the importance of language proficiency among immigrants to their relative success in the Canadian labour force. In addition, Richmond (1992) has examined in some detail the issue of racial discrimination in Canada, in considering problems relating to the non-recognition of qualifications, the insistence upon “Canadian experience” in hiring, the persistence of low income relative to qualifications and experience, among other problems of social adjustment not related to language or family/demographic circumstances. In combination with other fundamental changes, including a shift toward a postindustrial service economy - it may be that the value of education credentials obtained abroad has declined. Massey et al. (1993) has forcefully argued that regardless of selective immigration policy, immigrants are increasingly under demand in the secondary labour market (i.e. specifically in jobs that are noted for their unstable, unskilled and poorly remunerated character). In terms of the demography of labour supply, it is suggested that North America’s economy relies upon immigrants to fill jobs in the lower sectors of the service industry. In a sense, it
serves the interests of employers to maximize the number of immigrants, then not to recognize their credentials, thereby obtaining significant numbers of workers in areas of high labour market demand while keeping wages low.

Table 1: Variables Included in the Multivariate Model:

**Family / Demographic Variables**

- *Number of Children*: continuous
- *Age of Reference Person* (Mother’s Age or Male Lone Parent)
  - under 30, 30-34, 35-39, 40+
- *Presence of Parents*
  - Husband-wife family, female lone parent, male lone parent
- *Extended family*
  - dichotomous (yes or no)

**Socio-economic variables**

- *Education* (Mother’s education or male lone parent)
  - less than 10 years, 11-13 years, some post-secondary, university graduate
- *Occupation* (1981 Occupational Classification)
  - mother’s or male lone parent’s
- *Labour force participation of spouse*
  - full-time/full-year; part-time/full-year; full-time/part-year; part-time/part-year; other
- *Year dummies*

Note: The current analysis separately considers (i) recent immigrants and (ii) the Canadian born. Other immigrants that have been in Canada for a longer period are not included.
Table 2. Distribution of Families with Children, among Recent Immigrants and the Canadian Born by Selected Variables, 1977-1997

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Recent immigrants (previous decade)</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Number of children under 18</td>
<td>2.0</td>
<td>2.0</td>
<td>1.9</td>
<td>1.9</td>
<td>1.8</td>
<td>2.1</td>
<td>1.9</td>
<td>1.9</td>
<td>1.9</td>
<td>1.8</td>
</tr>
<tr>
<td>Mother or lone father’s age</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Under 30</td>
<td>36.7</td>
<td>28.8</td>
<td>29.4</td>
<td>28.6</td>
<td>20.2</td>
<td>34.1</td>
<td>33.8</td>
<td>27.9</td>
<td>23.7</td>
<td>19.1</td>
</tr>
<tr>
<td>30-34</td>
<td>29.8</td>
<td>35.7</td>
<td>31.8</td>
<td>31.9</td>
<td>30.3</td>
<td>24.7</td>
<td>26.1</td>
<td>27.8</td>
<td>27.5</td>
<td>23.7</td>
</tr>
<tr>
<td>35-39</td>
<td>21.2</td>
<td>22.9</td>
<td>23.5</td>
<td>19.9</td>
<td>28.6</td>
<td>18.1</td>
<td>21.1</td>
<td>23.4</td>
<td>25.3</td>
<td>27.9</td>
</tr>
<tr>
<td>40+</td>
<td>12.4</td>
<td>12.6</td>
<td>15.3</td>
<td>19.6</td>
<td>20.9</td>
<td>23.1</td>
<td>19.0</td>
<td>21.0</td>
<td>23.5</td>
<td>29.3</td>
</tr>
<tr>
<td>Family type</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Husband-Wife Family</td>
<td>93.1</td>
<td>91.3</td>
<td>90.5</td>
<td>82.7</td>
<td>82.9</td>
<td>87.0</td>
<td>84.6</td>
<td>83.7</td>
<td>79.0</td>
<td>78.4</td>
</tr>
<tr>
<td>Lone Male Parent</td>
<td>0.4</td>
<td>1.8</td>
<td>2.0</td>
<td>3.2</td>
<td>2.2</td>
<td>1.8</td>
<td>2.2</td>
<td>2.1</td>
<td>2.8</td>
<td>3.7</td>
</tr>
<tr>
<td>Lone Female Parent</td>
<td>6.5</td>
<td>7.0</td>
<td>7.6</td>
<td>13.2</td>
<td>14.9</td>
<td>11.2</td>
<td>13.2</td>
<td>14.2</td>
<td>18.3</td>
<td>18.0</td>
</tr>
<tr>
<td>Extended family</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>No</td>
<td>91.5</td>
<td>89.8</td>
<td>86.8</td>
<td>86.7</td>
<td>87.3</td>
<td>96.0</td>
<td>96.5</td>
<td>97.1</td>
<td>96.3</td>
<td>95.8</td>
</tr>
<tr>
<td>Yes</td>
<td>8.5</td>
<td>10.2</td>
<td>13.2</td>
<td>13.3</td>
<td>12.7</td>
<td>4.0</td>
<td>3.5</td>
<td>2.9</td>
<td>3.7</td>
<td>4.2</td>
</tr>
</tbody>
</table>

Table 3. Economic Well-being of Families with Children by Selected Variables, Canada, 1977-1997, for recent immigrants and the Canadian born, Canada, 1977-1997

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>TOTAL</td>
<td>1.77</td>
<td>1.73</td>
<td>1.58</td>
<td>1.41</td>
<td>1.34</td>
<td>1.88</td>
<td>1.90</td>
<td>2.07</td>
<td>2.11</td>
<td>2.10</td>
</tr>
</tbody>
</table>

**Number of children under 18**

- One Child: 1.94 1.86 1.69 1.55 1.46; 2.08 2.04 2.19 2.20 2.19
- Two Children: 1.78 1.83 1.66 1.45 1.32; 1.89 1.89 2.10 2.11 2.11
- Three Children: 1.70 1.43 1.27 1.11 1.14; 1.70 1.71 1.88 1.99 1.94
- Four or More Children: 1.12 1.31 1.13 1.00 1.02; 1.46 1.49 1.51 1.69 1.68

**Mother or lone father’s age**

- under 30: 1.78 1.62 1.39 1.11 1.18; 1.75 1.68 1.72 1.67 1.63
- 30-34: 1.78 1.71 1.43 1.43 1.37; 1.90 1.95 2.04 2.06 2.06
- 35-39: 1.62 1.92 1.76 1.41 1.30; 2.00 2.08 2.24 2.24 2.17
- 40+: 2.00 1.72 1.99 1.79 1.49; 1.97 2.03 2.42 2.46 2.38

**Family type**

- Husband-Wife Family: 1.83 1.81 1.65 1.55 1.44; 2.00 2.05 2.25 2.34 2.33
- Lone Male Parent\(^1\): - - - - -; 1.95 1.84 2.15 2.02 1.81
- Lone Female Parent: 0.96 0.84 0.71 0.70 0.80; 0.98 0.99 1.05 1.11 1.16

**Extended family**

- No: 1.77 1.76 1.58 1.40 1.28; 1.88 1.90 2.07 2.11 2.09
- Yes: 1.85 1.54 1.60 1.44 1.74; 1.86 1.90 2.07 2.07 2.30

\(^1\) insufficient sample size in estimating mean income to needs

Table 4. Effect of Change in Selected Variables on the Mean of the Income to Needs Ratio of Families with Children, Recent Immigrants and the Canadian Born, 1977-1997

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Recent Immigrants</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Number of children</td>
<td>1.00</td>
<td>1.00</td>
<td>1.01</td>
<td>1.00</td>
<td>1.01</td>
<td>1.00</td>
<td>1.02</td>
<td>1.02</td>
<td>1.01</td>
<td>1.02</td>
</tr>
<tr>
<td>Age of reference person</td>
<td>1.00</td>
<td>1.00</td>
<td>1.01</td>
<td>1.01</td>
<td>1.01</td>
<td>1.00</td>
<td>1.00</td>
<td>1.01</td>
<td>1.02</td>
<td>1.03</td>
</tr>
<tr>
<td>Presence of parents</td>
<td>1.00</td>
<td>0.98</td>
<td>0.98</td>
<td>0.96</td>
<td>0.97</td>
<td>1.00</td>
<td>0.98</td>
<td>0.95</td>
<td>0.93</td>
<td>0.91</td>
</tr>
<tr>
<td>Extended family</td>
<td>1.00</td>
<td>1.00</td>
<td>1.01</td>
<td>1.01</td>
<td>1.01</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
</tr>
<tr>
<td><strong>Canadian born</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Education</td>
<td>1.00</td>
<td>1.01</td>
<td>1.00</td>
<td>1.01</td>
<td>1.01</td>
<td>1.00</td>
<td>1.02</td>
<td>1.03</td>
<td>1.05</td>
<td>1.07</td>
</tr>
<tr>
<td>Occupation</td>
<td>1.00</td>
<td>0.99</td>
<td>0.98</td>
<td>0.97</td>
<td>0.95</td>
<td>1.00</td>
<td>0.99</td>
<td>0.99</td>
<td>0.99</td>
<td>0.98</td>
</tr>
<tr>
<td>Labour force participation (spouse)</td>
<td>1.00</td>
<td>1.04</td>
<td>1.03</td>
<td>1.04</td>
<td>1.06</td>
<td>1.00</td>
<td>1.01</td>
<td>1.02</td>
<td>1.03</td>
<td>1.04</td>
</tr>
</tbody>
</table>

Appendix: Table A1. Low Income Cutoffs (1992 base), Before Tax (1997 dollars)

<table>
<thead>
<tr>
<th>Community Size</th>
<th>rural areas</th>
<th>less than 30,000</th>
<th>30,000 to 99,999</th>
<th>100,000 to 499,999</th>
<th>500,000 and over</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Size of Family unit</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1 person</td>
<td>12,030</td>
<td>13,796</td>
<td>14,827</td>
<td>14,931</td>
<td>17,409</td>
</tr>
<tr>
<td>2 persons</td>
<td>15,038</td>
<td>17,245</td>
<td>18,534</td>
<td>18,664</td>
<td>21,760</td>
</tr>
<tr>
<td>3 persons</td>
<td>18,703</td>
<td>21,448</td>
<td>23,050</td>
<td>23,231</td>
<td>27,063</td>
</tr>
<tr>
<td>4 persons</td>
<td>22,639</td>
<td>25,964</td>
<td>27,903</td>
<td>28,098</td>
<td>32,759</td>
</tr>
<tr>
<td>5 persons</td>
<td>25,307</td>
<td>29,023</td>
<td>31,191</td>
<td>31,409</td>
<td>36,618</td>
</tr>
<tr>
<td>6 persons</td>
<td>27,975</td>
<td>32,081</td>
<td>34,478</td>
<td>34,720</td>
<td>40,479</td>
</tr>
<tr>
<td>7 or more persons</td>
<td>30,643</td>
<td>35,140</td>
<td>37,766</td>
<td>38,032</td>
<td>44,339</td>
</tr>
</tbody>
</table>

\(^1\) Includes cities with a population between 15,000 and 30,000 and small urban areas (under 15,000)

**Source:** Statistics Canada, 2001
Table A2. Regression Results for the Full Model, for Recent Immigrants and the Native Born.

<table>
<thead>
<tr>
<th>Family Structure Variables</th>
<th>Recent Immigrants</th>
<th>Native Born</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>b</td>
<td>S.E.</td>
</tr>
<tr>
<td><strong>Number of Children</strong></td>
<td>-0.073</td>
<td>0.020</td>
</tr>
<tr>
<td><strong>Age of Reference Person</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>30-34</td>
<td>0.029</td>
<td>0.048</td>
</tr>
<tr>
<td>35-39</td>
<td>0.104</td>
<td>0.054</td>
</tr>
<tr>
<td>40+</td>
<td>0.167</td>
<td>0.059</td>
</tr>
<tr>
<td><strong>Presence of Parents</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Lone Male Parent</td>
<td>-0.976</td>
<td>0.142</td>
</tr>
<tr>
<td>Lone Female Parent</td>
<td>-0.348</td>
<td>0.072</td>
</tr>
<tr>
<td><strong>Extended family</strong></td>
<td>0.237</td>
<td>0.059</td>
</tr>
<tr>
<td><strong>Socio-economic Controls</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Education of Reference Person</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>grades 11-13</td>
<td>0.118</td>
<td>0.052</td>
</tr>
<tr>
<td>Some Post Secondary</td>
<td>0.081</td>
<td>0.058</td>
</tr>
<tr>
<td>University</td>
<td>0.017</td>
<td>0.067</td>
</tr>
<tr>
<td><strong>Occupation of Reference Person</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Managerial</td>
<td>0.026</td>
<td>0.109</td>
</tr>
<tr>
<td>Natural Science</td>
<td>0.269</td>
<td>0.071</td>
</tr>
<tr>
<td>Teaching</td>
<td>0.224</td>
<td>0.107</td>
</tr>
<tr>
<td>Clerical</td>
<td>0.135</td>
<td>0.060</td>
</tr>
<tr>
<td>All Others</td>
<td>0.080</td>
<td>0.060</td>
</tr>
<tr>
<td>No job</td>
<td>-0.100</td>
<td>0.070</td>
</tr>
<tr>
<td><strong>Labour Force Participation</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>full-time full-year</td>
<td>0.655</td>
<td>0.061</td>
</tr>
<tr>
<td>part-time full-year</td>
<td>0.533</td>
<td>0.089</td>
</tr>
<tr>
<td>full-time not full-year</td>
<td>0.257</td>
<td>0.067</td>
</tr>
<tr>
<td>part-time not full-year</td>
<td>0.382</td>
<td>0.082</td>
</tr>
<tr>
<td><strong>Year</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1982</td>
<td>0.005</td>
<td>0.054</td>
</tr>
<tr>
<td>1987</td>
<td>-0.318</td>
<td>0.056</td>
</tr>
<tr>
<td>1992</td>
<td>-0.282</td>
<td>0.059</td>
</tr>
<tr>
<td>1997</td>
<td>-0.365</td>
<td>0.058</td>
</tr>
<tr>
<td><strong>(Constant)</strong></td>
<td>0.003</td>
<td>0.085</td>
</tr>
<tr>
<td><strong>$R^2$</strong></td>
<td>0.130</td>
<td>0.283</td>
</tr>
</tbody>
</table>

Reference categories:
- Age of Reference person < 30 years
- Presence of Parents - Dual parent
- Education < 11 years
- Occupation - Sales/Services
- Labour Force Participation - no employment
- Year - 1977
List of References


Gauthier, Anne, 1989, A propos de la différence de fécondité entre le Québec et l’Ontario. Cahiers Québécois de Démographie 18(1) 185-194


