The Role of Maternal Employment in the Economic Integration of New Immigrants: Implications for Ethnic Gaps in Poverty Exit

Lisa Kaida
Department of Sociology
University of Toronto

Abstract

Despite growing interests in the role of employment in reducing poverty in the post-welfare reform era, research on the benefit of employment for poor immigrants – female immigrants in particular – is limited to date. This paper addresses this research gap by examining the effect of immigrant women's employment on the exit from poverty as family during their initial settlement period. I use propensity score models and bivariate probit models to analyze data from the Longitudinal Survey of Immigrants to Canada. Results suggest that immigrant women's employment makes sizeable contributions to lifting their family out of poverty. This has implications especially for women of Arab, Western and Central Asian, and Middle Eastern origins as their notably low employment rates account for 20-40% of their low poverty exit rates explained by measurable characteristics. Overall, results are inconsistent with the conventional view that women's earnings are merely "pin money" to their family income.

The Role of Maternal Employment in the Economic Integration of New Immigrants: Implications for Ethnic Gaps in Poverty Exit

Introduction

For recent immigrants, settling in a new country is undeniably an uphill challenge. Economic hardships such as poverty are their typical experiences. Despite their initial disadvantages, it is expected that recent immigrants eventually move up by improving their host country language skills, building networks in the host societies, and landing higher wage jobs. However, what happens if recent immigrants fail to quickly overcome their initial economic hardships? Research shows that immigrants who did not move out of poverty within their first year in the host country have staggering chances of remaining in poverty for an extended period of time (Picot, Hou, and Coulombe 2008). Such persistent poverty is considered to have detrimental effects on one's physical and psychological well-being (Iceland 2003). In particular, poverty during childhood is found to have adverse impacts on the lives of immigrant children along various dimensions, including cognitive development, school performance, access to health care, and mental health (Anisef et al 2010; Beiser et al. 1998; Crosnoe 2007; Corcoran 2002; Grodem 2009; Mollenkopf and Champeny 2007; Pong and Hao 2007). Therefore, identifying solutions to lifting recent immigrants out of poverty as quickly as possible is imperative for the successful immigrant integration across generations.

While research has evaluated a number of possible strategies for combating poverty (e.g. education, training, government transfer), a strand of immigration research has stressed the role of working immigrant women in particular in alleviating poverty (Cattan 1998; Tienda and Jensen 1988; Zhou 1995). This strand of research has shown that a greater number of immigrant families would be in poverty if their female spouses were not in the labor force. Although this body of research contributes to challenging the conventional notion of women's earnings as "pin money" to their family income, little is known about the role of maternal employment in lifting poor immigrant families *out of* poverty. Another strand of immigration research has paid closer attention to ethnic variations in the labor force participation of immigrant women and sought to explain why women of particular ethnic groups are more likely to work in the host country than others. Given that many immigrants come from countries/cultures where strict gender roles persist, this strand of research often addresses the question of whether immigrants' dire economic needs outweigh their origin country/cultural norms, driving immigrant women to go to work in order to complement the low earnings of their male spouse.

Despite the shared interests in immigrant women's employment, the dialogue between these two streams immigration research – research on the role of working immigrant women in poverty alleviation and research on the ethnic variations in immigrant women's labor force participation – is virtually non-existent. To my knowledge, no study has addressed an intriguing question of whether the ethnic variations in women's employment account for the variations in poverty exit rates among recent immigrants from different ethnic origins. This paper sheds light on this understudied area of the effect of recent immigrant women's employment on the exit from poverty as family in the context of ethnic variations. I address three questions: 1) For two-parent families of recent immigrants, does maternal employment help them exit poverty?; 2) If so, to what extent does maternal employment contribute to poverty exit in comparison to paternal employment?; and 3) To what extent does the difference in maternal employment rates observed among different ethnic groups explain ethnic variations in poverty exit rates?

Background

Immigrant Poverty and Family Survival

Studying poverty in the context of family survival is important particularly in the research on immigrant poverty. Recent immigrants tend to make settlement-related decisions collectively in order survive a life in a new country as family (Boyd 1989; Glick 2010). This is not a surprising phenomenon considering the widely known fact that decisions on international migration are often made as family and that settlement is a logical extension from migration experience (Massey et al. 1993). It may be that as collectivity of individuals (related by blood in many cases), immigrant families can overcome economic challenges although each individual may not successfully integrate into the host country labor market when their success is measured by individual-level outcomes, such as hourly wages and weekly earnings.

Although no well-established theory specifically addresses the question of whether and to what extent the employment of immigrant women helps their family exit poverty, two existing research hypotheses provide valuable insights: the pin money hypothesis and the family investment hypothesis. These hypotheses have been developed and tested in the fields of immigrant economic integration, family labor economics, and gender to account for women's labor force activities in relation to their family economic well being.

The pin money hypothesis argues that for married couples, a female spouse's employment is merely secondary to her family income. Reasons include women's higher propensities to engage in part-time work as opposed to full-time work and their high concentration in low-paid jobs in the peripheral labor market (DeRiviere 2008). The pin money hypothesis broadly concerns the extent to which the earnings of working women contribute to their family income and does not pay specific attention to immigrant women or poverty. Yet, its argument of women's secondary status as earners leads one to expect that immigrant women's employment does not make a significant contribution to lifting their family out of poverty.

The pin money hypothesis has been long criticized for its assumption of the male-breadwinner model. This hypothesis assumes that the earnings of a male partner contribute to the majority of family income, while the earnings of his female spouse (if she is working) are supplementary (Harknes et al 1997). Indeed, a growing number of studies of married couples in advanced industrialized countries, including Australia, the Britain, Canada, and the United States, show that the share of the earnings of female spouses in their family income is continuously increasing, countering the male breadwinner model (Cheal 1993; Drago, Black and Wooden 2005; Harkness et al 1997). Concomitantly, however, there is also evidence that the pin money hypothesis still strongly holds among low-income couples (Harkness et al 1997). Given that I focus on poor immigrants, the pin money hypothesis may hold in the analysis that assesses the impact of maternal employment on poverty exit.

In contrast to the pin money hypothesis, the family investment hypothesis posits that immigrant women are more likely to work upon arrival while their male spouses invest in their human capital in the host country with the help of women's finance. This hypothesis also states that although their male partners' earnings rapidly increase over time as a result of their investment in the host country human capital, immigrant women's earnings are leveled off because they have made no or less investment in their host country human capital.

The family investment hypothesis gained empirical support during the 1980s and the early 1990s (Baker and Benjamin 1993; Beach and Worswick 1993; Duleep and Sanders 1993; Long 1980). However, the more recent studies have provided evidence that counters its argument (Blau et al 2002; Cobb-Clark and Crossley 2004; Duleep and Dowhan 2002). For instance,

analysis of the 1980 and 1990 U.S. census data by Blau et al (2002) finds that both immigrant women and their male spouses experience positive earnings growths and that their earnings growths are not influenced by their spouse's investment in the host country human capital. Rather, their earnings trajectories are influenced by their own human capital.

The family investment hypothesis is criticized because of its assumption that the primary earner is male and that it is the male spouse who goes back to school in order to upgrade his skills once in the host country (Cobb-Clark and Crossley 2004). An analysis of immigrants in Australia finds that women are considered as the primary earners in over 15 out of 100 couples of recent arrivals (ibid). This group of couples ("nontraditional families" in the researchers' term) is found to deviate from what the family investment hypothesis predicts. Male partners in non-traditional families (even if they are not family heads under Australia's immigrant admission system) have weaker labor force attachment and greater engagement in school than male immigrants who are married to female Australian residents who are family heads in terms of earnings.

As discussed above, the family investment hypothesis mainly discusses the earnings trajectories of immigrant women in relation to their spouses. The hypothesis does not, therefore, extend its scope to the earnings contributions of immigrant women to their family income. Yet, given its emphasis on immigrant women's labor market attachment during their initial settlement stages, it can be inferred from this hypothesis that the employment of immigrant women will make a significant contribution to their family income. To narrow down this prediction to the present study which focuses on poverty exit, it can be expected that the employment of recently-arrived immigrant women makes a significant contribution to lifting their family out of poverty.

In summary, neither the pin money hypothesis nor the family investment hypothesis addresses the specific question of the effect of employment of immigrant women on the exit from poverty as families. Nevertheless, both of the hypotheses provide meaningful theoretical frameworks that help guide my research questions. While the pin money hypothesis indicates that recently-arrived immigrant women do not make a significant contribution to lifting their families out of poverty, the family investment hypothesis suggests that it does. Using the LSIC data, this paper examines which hypothesis better explains the results from multivariate analysis.

Ethnic Variations in the Employment of Immigrant Women

This paper further considers ethnic variations in the employment of immigrant women and their possible link to the ethnic variations in poverty exit rates among recent immigrants. As the family investment model points out, recently-arrived immigrant women are found to have strong labor market attachment. However, research also finds wide variations in the employment rates of immigrant women by ethnic origins. Studies of immigrant women in the United States show that overall, immigrant women of Chinese, Filipino and Cuban origins have higher labor force participation rates (Duleep and Sanders 1993; Read and Cohen 2007; Stier and Tienda 1994). In contrast, women of Mexican, Puerto Rican, Asian Indian, Japanese, Arab, and Middle Eastern origins are less likely to work in the U.S. (Read 2004).

In contrast to the number of existing U.S. studies on the *ethnic* variations in immigrant women's employment, comparable studies are non-existent in Canada to date. Yet, a handful of Canadian studies have highlighted significant *ethnic* variations in poverty or economic vulnerability in a broad sense over the past decade (Harvey, Siu, and Reil 1999; Kazemipur and Halli 2000, 2001a, 2001b; Mata 2010). Analyzing the 1991 Census of Canada Public Use Microdata file (PUMF), Kazemipur and Halli (2001) find that over 35% of immigrants of West Asian, Arab, Vietnamese, Latin American, Central and South American, and Spanish origins

were living in poverty in 1990. In contrast, the poverty levels of immigrants of many European origin groups, including Germans, Balkans, Portuguese, French, and British, were much lower than the aforementioned ethnic minority groups (about 15%, which is similar to the national average). Moreover, ethnic variations in poverty rates are wide especially among recent immigrants. Harvey, Sui, and Reil (1999) find that the variances in poverty rates among European origin groups as well as non-European groups were over 25% among recent arrivals (in Canada less than 10 years), which is far greater than the poverty rate variances among earlier immigrant cohorts of European and non-European origins. Moreover, recent immigrants of Arab, West Asian, Chinese, Filipino, Vietnamese, Latin American, Central and South American origin groups had staggering poverty rates of over 50% in 1990 (Kazemipur and Halli 2000).

Taking into account these two research trends – ethnic variations in the employment of immigrant women and the incidence of immigrant poverty –, one can address a meaningful question of whether ethnic variations in maternal employment explain ethnic variations in poverty exit rates among recent immigrants. This paper will compare two aggregated ethnic groups - Arabs, West/Central Asians and the Middle Eastern (known for relatively *low* female labor force participation rates and *high* poverty rates) and Europeans (known for relatively *high* female labor force participation rates and *low* poverty rates) – and examine to what extent the difference in maternal employment rates between the two groups explains their poverty exit gaps.

Data and Methods

Data

I use data from the Longitudinal Survey of Immigrants to Canada (LSIC) – a longitudinal survey that is often considered as a Canadian counterpart of the New Immigrant Survey (NIS). The LSIC represents 169,400 immigrants aged 15 or older who landed in Canada from abroad as permanent residents in 2000-2001. The Wave 1 interview was conducted six months after the target immigrants arrived, followed by Wave 2 (two years after arrival) and Wave 3 (four years after arrival) interviews. The LSIC provides the most ideal data for the present analysis for two main reasons. First, the LSIC collects rich information on both pre- and post-migration characteristics of immigrants that are relevant to the analysis (e.g. education prior to arrival, labor market activities after arrival, annual family income after arrival). Second, as a survey specifically designed to study settlement processes of new immigrants, the LSIC covers a large sample size of recently arrived immigrants (7,700 unweighted cases) for a Canadian longitudinal survey. Other major Canadian longitudinal surveys, such as the Survey of Labour and Income Dynamics (SLID), include a far smaller sample of recent immigrants, given its broader sampling framework (i.e. the total population of Canada).

An ideal sample for this study would be a sample of immigrant couples, both of whom participated in the survey. However, the unit of analysis of the LSIC is individuals called longitudinal respondents (LRs), not couples. Although the LSIC collects some information on respondents' spouses, such information is not as extensive or detailed as the respondents' own and may not be as accurate either. Given such limitations, this paper derives two samples from the LSIC data in order to make most of the information on immigrant women and their spouses available in the data. The first sample (referred to as *maternal data*) includes low-income (defined later) female respondents in prime working age (age 25 to 54) in Wave 1 who were living with their male spouse throughout the three waves, whereas the second sample (referred to as *paternal data*) includes low income male respondents aged 25-54 who lived with their female spouse throughout Waves 1-3.

The dependent variable in this analysis is exit from poverty in Wave 3 (four years after immigration). I define an immigrant's poverty status using Statistics Canada's Low Income Cutoff, following a number of existing studies on immigrant poverty in Canada (Harvey, Siu, and Reil 1999; Kazemipur and Halli 2001a, b; Palameta 2004; Picot and Hou 2003). The LICO is set at 20% above the average percentage of family income spent on essentials, such as food, shelter, and clothing, which is currently set at 44% based on the results from the 1992 Family Expenditures Survey. Therefore, if a family spends more than 64% (= 44%+20%) of its income on food, shelter and clothing, all the members in this family are considered to be in "constrained circumstances" or low income (Statistics Canada Income Statistics Division 2006). This 64% threshold is then converted into a total of 35 possible cut-offs according to the family size (a total of seven categories ranging from one to seven-plus member(s)) and community size (a total of five categories: rural; small urban regions; population from 30,000 to 99,999; population from 100,000 to 499,999; and population of 500,000 or more). As Figure 1 shows, 43% of the total LSIC immigrants were classified as being in poverty (sample of this analysis) in Wave 2 when LICOs are used as the poverty thresholds. Among these Wave 2 poor respondents, approximately half of them exited poverty in Wave 3.

[Figure 1 about here]

This paper uses the indicator of immigrant women' employment status in Wave 3 as the independent variable. I include other variables as controls that are expected to influence poverty exit and/or the employment of immigrant women. For the control variables for poverty exit, I include immigrant women's age in Wave 2, initial levels of education (at the time of arrival), initial French (for residents in Quebec)/English (for residents in the rest of Canada) language skills, ethnic origin, their spouse's employment status in Wave 3, the number of children in household in Wave 2, presence of coresiding relatives in Wave 2, and place of residence upon arrival. A similar set of control variables are also used to estimate the probability of employment of immigrant women (for correcting for selection into employment – to be discussed later): immigrant women's age in Wave 2, initial education, initial English or French skills, their male spouse's weekly wages, ethnic origin, number of children in Wave 2, presence of coresiding relatives in Wave 2, place of residence at arrival, and non-job income in Wave 2.

Methods

Event history analysis would be a most ideal analytical technique to fully take advantage of the longitudinal nature of the LSIC. However, since the LSIC collected the information on annual family income only at two time points (Waves 2 and 3), the data on family income are insufficient to perform event history analysis. Alternatively, this paper adopts a logistic regression framework, guided by Picot et al.'s study (1999) of the exits from low income among children between 1993 and 1994. Using logistic regression, I predict probabilities of exit from poverty in Wave 3 (one's annual family income in Wave 3 is above the LICO) for those whose annual family income in Wave 2 is below the LICO. I also use propensity score weighting models and bivariate probit models in order to consider the possibility of immigrant women's selection into employment that may bias the results. Further, I use Fairley's (2006) logistic decomposition methods to examine the extent to which differences in maternal employment rates between Europeans and the Arab, West/Central Asian, and Middle Eastern (AWCM) group explain the notable gap in poverty exit rates between the two groups. I will detail the methods for propensity score analysis, bivariate probit models, and logistic decomposition in the full paper.

Preliminary Results

Preliminary findings from descriptive statistics, regression analysis (simple binary logistic regression, propensity score weighting, and bivariate probit models), and decomposition methods are threefold (Tables 1-7). First, descriptive statistics and simple logistic regression models show that immigrant women experiencing poverty in Wave 2 (two years after immigration) who hold employment in Canada are more likely to exit poverty as family in Wave 3 (four years after immigration) than their non-employed counterparts. Second, the above result holds when propensity score analysis and bivariate probit models are used to rigorously handle immigrant women's selection into employment. In particular, when immigrants' unmeasured characteristics are taken into account using bivariate probit models, women's employment is found to have a greater effect on poverty exit than the employment of their male spouse. Overall, preliminary results support the family investment hypothesis in that the employment of recently-arrived immigrant women makes a notable contribution to lifting their family out of poverty.

[Tables 1-7 about here]

Third, descriptive statistics suggest that among immigrants experiencing poverty in Wave 2, those of Arab, West and Central Asian, and Middle Eastern origins (the AWCM group) have less than half the chance of exiting poverty in Wave 3 than immigrants of European origins. Decomposition analysis shows that approximately half of this poverty exit gap is explained by the differences in observable characteristics (e.g. education, language skills) between the two groups. In particular, the lower employment rates of women of the AWCM group explain 20 to 40% of this effect of compositional differences on the poverty exit gap.

Next Steps

This study contributes to the literature on immigrant incorporation in three important ways. First, this study adopts a dynamic approach to the research on the role of working immigrant women in poverty exit. This approach is arguably a departure from a handful of existing studies that examined the effects of employment of immigrant women on poverty alleviation (Cattan 1998; Tienda and Jensen 1988; Zhou 1995). Second, this paper highlights family strategies in immigrant economic incorporation by focusing on the contribution of women's employment to exiting poverty as families. Although family-context analysis is on the rise in recent years as Blau et al (2003) point out, such analysis is yet limited in immigrant economic incorporation research which mostly studies individual-level economic outcomes, such as occupations and earnings. Third, this paper pays special caution to the possibility of selection bias that may be associated with immigrant women's participation in the host country labor market by using propensity score analysis and bivariate probit models. This is a methodological improvement from previous studies which examine the relationship between immigrant women's employment and poverty alleviation using simple logistic regression frameworks. The next step of this study is to further interpret results from regression analysis and to discuss implications of the results for the policy-making of immigrant economic integration (e.g. gender-/culturally- specific intervention to provide employment support for new immigrants).

References

Anisef, Paul, Robert S. Brown, Kelly Phythian, Robert Sweet, and David Walters. 2010. Early School Leaving among Immigrants in Toronto Secondary Schools. *Canadian Review of Sociology* 47 (2):103-128.

Baker, Michael, and Dwayne Benjamin. 1997. The role of the family in immigrants' labor-market activity: An evaluation of alternative explanations. *The American Economic Review* 87 (4):705.

Beach, Charles M., and Christopher Worswick. 1993. Is There a Double-Negative Effect on the Earnings of Immigrant Women. *Canadian Public Policy-Analyse De Politiques* 19 (1):36-53.

Beiser, Morton, Feng Hou, Ilene Hyman, and Michel Tousignant. 1998. Growing Up Canadian - A Study of New Immigrant Children: Catalogue no. W-98-24e. Strategic Policy Working Paper. Ottawa: Human Resources Development Canada. www.hrsdc.gc.ca/en/cs/sp/sdc/pkrf/publications/research/1998-000142/W-98-24E.pdf (accessed October 17, 2006).

Blau, Francine D, Lawrence M Kahn, Joan Y Moriarty, and Andre Portela Souza. 2003. The role of the family in immigrants' labor-market activity: An evaluation of alternative explanations: Comment. *The American Economic Review* 93 (1):429.

Boyd, Monica. 1989. Family and Personal Networks in International Migration: Recent Developments and New Agendas. *International Migration Review* 23:638-670.

Cattan, P. 1998. The effect of working wives on the incidence of poverty. *Monthly Labor Review* 121 (3):22-29.

Cheal, David;. 1993. Changing household financial strategies: Canadian couples today. *Human Ecology* 21 (2):197-213.

Cobb-Clark, Deborah, and Thomas F. Crossley. 2004. Revisiting the Family Investment Hypothesis. *Labour Economics* 11 (3):373-393.

Corcoran, Mary. 2002. Mobility, Persistence, and the Intergenerational Determinants of Children's Success. In *Understanding Poverty*, edited by S. H. Danziger and R. H. Haveman. New York: Russell Sage.

Crosnoe, Robert. 2007. Early Child Care and the School Readiness of Children from Mexican Immigrant Families. *International Migration Review* 41 (1):152-181.

DeRiviere, Linda. 2008. Have we Come a Long Way? Using the Survey of Labour and Income Dynamics to Revisit the 'Pin Money' Theory. *The Journal of Socio-Economics* 37 (6):2340-2367.

Drago, Robert, David Black, and Mark Wooden. 2005. Female Breadwinner Families: Their Existence, Persistence and Sources. *Journal of Sociology* 41 (4):343-362.

Duleep, Harriet Orcutt, and Daniel J. Dowhan. 2002. Revisiting the Family Investment Model with Longitudinal Data: The Earnings Growth of Immigrant and U.S.-Born Women. IZA Discussion Paper, no. 568.

Duleep, Harriet Orcutt, and Seth Sanders. 1993. The Decision to Work by Married Immigrant Women. *Industrial and Labor Relations Review* 46 (4):677-690.

Fairlie, Robert W. 2006. An Extension of the Blinder-Oaxaca Decomposition Technique to Logit and Probit Models. IZA Discussion Paper No. 1917.

Glick, Jennifer E. 2010. Connecting Complex Processes: A Decade of Research on Immigrant Families. *Journal of Marriage and Family* 72 (3):498-515.

Grodem, Anne Skevik. 2009. The impact of poverty and immigrant background on children's school satisfaction: Evidence from Norway. *International Journal of Social Welfare* 18 (2):193-201.

Harkness, Susan, Stephen Machin, and Jane Waldfogel. 1997. Evaluating the Pin Money Hypothesis: The Relationship between Women's Labour Market Activity, Family Income and Poverty in Britain. *Journal of Population Economics* 10 (2):137-158.

Harvey, E. B., B. Siu, and K. D. V. Reil. 1999. Ethnocultural groups, period of immigration and socioeconomic situation. *Canadian Ethnic Studies* 31 (3):94-103.

Iceland, John. 2003. *Poverty in America: A Handbook*. Berkeley: University of California Press.

Kazemipur, A., and S. Halli. 2000. The Invisible Barrier: Neighbourhood Poverty and Integration of Immigrants in Canada. *Journal of International Migration and Integration* 1 (1):85-100.

Kazemipur, Abdolmohammad, and Shiva S. Halli. 2001a. The Changing Colour of Poverty in Canada. *Canadian Review of Sociology and Anthropology* 38 (2):217-238.

———. 2001b. Immigrants and New Poverty: The Case of Canada. *International Migration Review* 35 (4):1129-1156.

Long, James E. 1980. The Effect of Americanization on Earnings: Some Evidence for Women. *Journal of Political Economy* 88 (3):620-29.

Massey, D. S., J. Arango, G. Hugo, A. Kouaouci, A. Pellegrino, and J. E. Taylor. 1993. Theories of International Migration - a Review and Appraisal. *Population and Development Review* 19 (3):431-466.

Mata, Fernando. 2010. Economic Vulnerability and Ethnicity in Canada's Metropolitan Workforce: An Exploratory Analysis of Census Classifications. Metropolis British Columbia Working Paper no.10-04.

Mollenkopf, John, and Ana Champeny. 2007. The Neighbourhood Context for Second-Generation Education and Labour Market Outcomes in New York. *Journal of Ethnic and Migration Studies* 35 (7):1181-1199.

Palameta, Boris. 2004. Low Income among Immigrants and Visible Minorities. *Perspectives* (April):12-17.

Picot, Garnett, and Feng Hou. 2003. The Rise in Low-Income Among Immigrants in Canada: Catalogue no. 11F0019MIE2003198. Ottawa: Statistics Canada. www.statcan.ca/english/IPS/Data/11F0019MIE2003198.htm (accessed January 25, 2004).

Picot, Garnett, Feng Hou, and Simon Coulombe. 2008. Poverty Dynamics among Recent Immigrants to Canada. *International Migration Review* 42 (2):393-424.

Picot, G., M. Zyblock, and W. Pyper. 1999. Why Do Children Move Into and Out of Low Income: Changing Labour Market Conditions or Marriage and Divorce?: Analytical Studies Branch - Research Paper Series, 11F0019MPE No. 132. Ottawa: Statistics Canada. www.statcan.ca/english/research/11F0019MIE/11F0019MIE1999132.pdf (accessed April 22, 2007).

Pong, Suet-ling, and Lingxin Hao. 2007. Neighborhood and School Factors in the School Performance of Immigrants' Children. *International Migration Review* 41 (1):206-241.

Read, J. G. 2004. Cultural Influences on Immigrant Women's Labor Force Participation: The Arab-American Case. *International Migration Review* 38 (1):52-77.

Read, J. G., and P. N. Cohen. 2007. One size fits all? Explaining US-born and immigrant women's employment across 12 ethnic groups. *Social Forces* 85 (4):1713-1734.

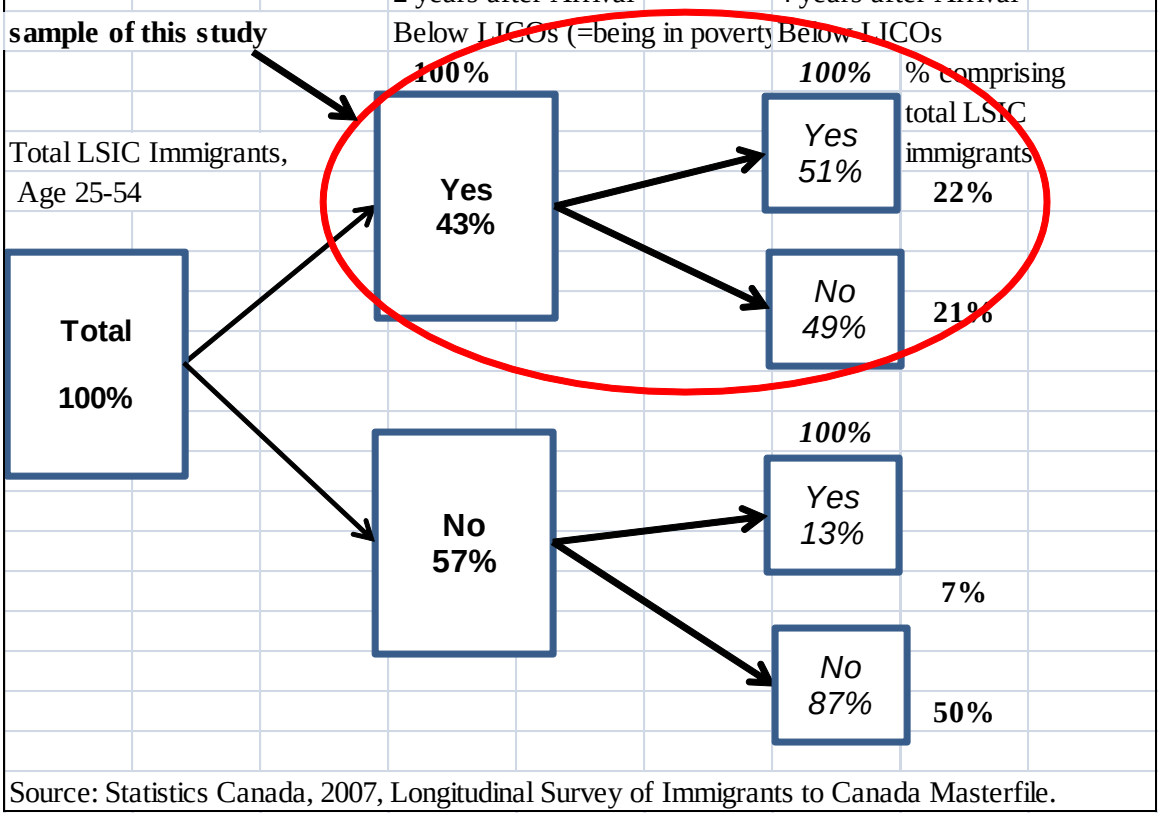
Statistics Canada Income Statistics Division. 2006. Low Wage and Low Income: Income Research Paper Series. Catalogue no. 75F0002MIE2006006. Ottawa: Statistics Canada. http://www.statcan.ca/english/research/75F0002MIE/75F0002MIE2006006.pdf (Accessed March 10, 2007).

Stier, Haya, and Marta Tienda. 1992. Family, Work and Women: The Labor Supply of Hispanic Immigrant Wives. *International Migration Review* 26 (4):1291-1313.

Tienda, Marta, and Leif Jensen. 1988. Poverty and Minorities: A Quarter-Century Profile of Color and Socioeconomic Disadvantage. In *Divided Opportunities: Minorities, Poverty, and Social Policy*, edited by G. D. Sandefur and M. Tienda. New York and London: Plenum Press.

Zhou, Min. 1995. Low-wage Employment and Social Mobility: The Experience of Immigrant Chinese Women in New York City. *National Journal of Sociology* 9 (1):1-30.

Figure 1 Transition into/out of Low Income between Waves 2 and 3, Immigrants Age 25-54, Canada, 2002-2005



Source: Statistics Canada, 2007, Longitudinal Survey of Immigrants to Canada Masterfile.

Table 1 Characteristics of Immigrants Age 25-54 Experiencing Poverty in Wave 2, Canada, 2000-2005

	% Distribution or Means	Mean Poverty Exit Rates in Wave 3
	(1)	(2)
Age (mean)	36.0	(not applicable)
Sex (%)	100.0	
Female	49.3	47.0
Male	50.7	51.0
Ethnic origin (%)	100.0	
Northern & Western European	2.4	68.5
Eastern European	4.6	70.1
Southern European	3.3	50.8
Arab	12.5	30.1
West & Central Asian	6.7	29.8
South As an	21.5	54.8
East & Southeast Asian	41.0	51.2
African	3.4	38.0
Latin, Central, South American	2.0	62.1
Caribbean	1.8	38.3
Other (Pacific, Aboriginal, other, multiple)	0.8	56.0
Highest level of education obtained abroad (%)	100.0	
Above Bachelor's	20.4	54.3
Received Bachelor's	41.4	50.8
Postsec. education, received certificate or diploma	13.2	48.9
Some postsec education	7.1	47.5
High school graduate	10.6	38.4
Less than high school	7.4	40.9
English/French language skills at time of arrival[(a)] (%)	100.0	
Fluent	3.8	62.9
Very well	26.7	52.0
Well	23.0	52.9
Fairly well	21.0	50.2
Poor	18.2	39.3
None	7.4	39.0

(continued on next page)

Table 1 (continued)		
	% Distribution or Means	Mean Poverty Exit Rates in Wave 3
	(1)	(2)
City of residence at time of arrival (%)	100.0	
Montreal	21.9	34.9
Ottawa-Hull	3.7	40.6
Toronto	41.0	56.5
Calgary	3.2	57.5
Vancouver	17.0	48.0
Other Central Metropolitan Areas (CMAs)	11.2	50.3
Non-CMA area	1.9	57.3
Live with relative(s) in hhld, Wav 3 (%)	100.0	
No	91.2	49.6
Yes	8.8	54.3
Female Spouse Employed, Wav 3[(b)] (%)	100.0	
No	48.7	34.5
Yes	51.3	64.2
Male Spouse Employed, Wav 3[(b)](%)	100.0	
No	27.9	23.2
Yes	72.1	59.7

Notes: [(a)] Refers to French speaking skills for Quebec residents and English speaking skills for residents in the rest of Canada.

[(b)] Applied to only respondents who lived with their spouse across Waves 1-3.

Source: Statistics Canada, 2007, Longitudinal Survey of Immigrants to Canada Masterfile.

Table 2 Binary Logit Estimates of Exit from Poverty in Wave 3, for Low Income Immigrants
Age 25-54 Living with Spouse in Waves 1-3, Canada, 2000-2005

	Maternal Data		Paternal Data	
	logit		logit	
	(1)		(2)	
Independent Variable				
Immigrant Woman, Worked in Wav 3				
Yes	1.139	***	0.910	***
No	(rg)		(rg)	
Control Variables				
Immigrant Women's Other Characteristics				
Age in Wav 2	-0.006		0.003	
Obtained postsecondary credential from abroad				
Yes	0.174		0.283	
No	(rg)		(rg)	
English/French language skills at time of arrival[(a)]				
Speak fluently, very well, or well	0.511	*	0.443	
Speak fairly well, poorly, or none at all	(rg)		(rg)	
Ethnic origin				
European[(b)]	(rg)		(rg)	
Arab	-0.961	*	-1.380	**
West Asian	-0.753		-0.620	
South Asian	-0.343		-0.342	
East/Southeast Asian	-0.096		-0.539	
Others [(c)]	-0.706		-0.338	
Household Characteristics				
Male Spouse, Worked in Wav 3				
Yes	1.417	***	1.641	***
No	(rg)		(rg)	
# of respondent's children in hhld, Wav 2	-0.219	*	-0.256	*
Live with spouse in household, Wav 2				
Yes	0.488		-0.104	
No	(rg)		(rg)	

(continued on next page)

Table 2 (continued)				
	Maternal Data		Paternal Data	
	logit		logit	
	(1)		(2)	
Contextual Characteristics				
City of residence at time of arrival				
Montreal	-0.501		-0.788	**
Toronto	(rg)		(rg)	
Vancouver	-0.168		-0.428	
Other CMAs	0.132		-0.437	
Non-CMAs	0.218		-0.429	
Intercept	-1.115		-0.715	
df	16		16	
AIC	1000		965	
SC	1081		1045	
-2 Log likelihood	966		931	
Notes: [(a)]Refers to French speaking skills for Quebec residents and English speaking skills for residents in the rest of Canada.				
[(b)] Includes: British, French, Western European, Northern European, Eastern European, and Southern European.				
[(c)] includes: African, Pacific Islands, Latin, Central and South American, Caribbean, multiple origins.				
* p<0.05, ** p<0.01, ***<0.001 (rg) reference group.				
Source: Statistics Canada, 2007, Longitudinal Survey of Immigrants to Canada Masterfile.				

Table 3 Binary Logit Estimates of Poverty Exit in Wave 3 for Low Income Immigrants Age 25-54 Living with Spouse in Waves 1-3, Using Propensity Weights, Canada, 2000-2005

	Maternal Data		Paternal Data	
	(1)		(2)	
Panel 1				
Weighted by propensity (EOTM)				
Female Spouse Worked in Wave 3	1.033	***	0.899	***
Intercept	-0.815	***	-0.598	***
Treatment effect for the treated				
Female Spouse Worked in Wave 3	1.247	***	1.117	***
Intercept	-0.815	***	-0.598	***
Treatment effect for the controlled				
Female Spouse Worked in Wave 3	1.232	***	1.015	***
Intercept	-1.014	***	-0.714	***
Panel 2				
Weighted by propensity (EOTM)				
Female Spouse Worked in Wave 3	1.007	***	0.782	***
Male Spouse Worked in Wave 3	1.507	***	1.622	***
Intercept	-1.951	***	-1.766	***
Treatment effect for the treated				
Female Spouse Worked in Wave 3	1.214	***	1.003	***
Male Spouse Worked in Wave 3	1.573	***	1.664	***
Intercept	-2.007	***	-1.799	***
Treatment effect for the controlled				
Female Spouse Worked in Wave 3	1.172	***	0.885	***
Male Spouse Worked in Wave 3	1.456	***	1.576	***
Intercept	-2.076	***	-1.831	***
* p<0.05, ** p<0.01, ***<0.001				

Source: Statistics Canada, 2007, Longitudinal Survey of Immigrants to Canada Masterfile.

Table 4 Bivariate Probit Estimates of Maternal Employment& Exit from Poverty in Wave 3, Low Income Immigrants Age 25-54 Living with Spouse in Waves 1-3, Canada, 2000-2005

	Bivariate Probit			
	Maternal Employment in Wav 3		Poverty Exit in Wav 3	
	(1)		(2)	
Immigrant Woman, Worked in Wav 3				
Yes			1.798	***
No			(rg)	
Immigrant Women's Other Characteristics				
Age in Wav 2	0.008		-0.008	
Obtained postsecondary credential from abroad				
Yes	0.315	**	-0.059	
No	(rg)		(rg)	
English/French language skills at time of arrival[a]				
Speak fluently, very well, or well	0.398	**	0.056	
Speak fairly well, poorly, or none at all	(rg)		(rg)	
Ethnic origin				
European[b]	(rg)		(rg)	
Arab	-1.193	***	0.032	
West Asian	-0.200		-0.258	
South Asian	-0.441	*	0.020	
East/Southeast Asian	-0.287		0.080	
Others [c]	0.018		-0.303	
Household Characteristics				
Male Spouse, Worked in Wav 3				
Yes			0.660	***
No			(rg)	
Male Spouse's Wkly Wages, Wav 2 (in $100)	0.027			
# of respondent's children in hhld, Wav 2	-0.052		-0.072	
Live with spouse in household, Wav 2				
Yes	0.360	*	0.087	
No	(rg)		(rg)	
Non-job income in Wav 2 (in $1,000)	-0.012			

(continued on next page)

Table 4 (continued)				
	Bivariate Probit			
	Maternal Employment in Wav 3		Poverty Exit in Wav 3	
Contextual Characteristics				
City of residence at time of arrival				
Montreal	-0.335	*	-0.038	
Toronto	(rg)		(rg)	
Vancouver	-0.243		0.026	
Other CMAs	0.045		0.043	
Non-CMAs	-0.049		0.100	
Intercept	0.024		-1.131	***
rho	-0.775	***		
df	35			
AIC	2085.6			
BIC	2251.4			
- Log Likelihood	-1007.791			
Notes: [(a)]Refers to French speaking skills for Quebec residents and English speaking skills for residents in the rest of Canada.				
[(b)] Includes: British, French, Western European, Northern European, Eastern European, and Southern European.				
[(c)] includes African, Pacific Islands, Latin, Central & South American, Caribbean, and multiple origins.				
* p<0.05, ** p<0.01, ***<0.001 (rg) reference group.				
Source: Statistics Canada, 2007, Longitudinal Survey of Immigrants to Canada Masterfile.				

Table 5 Marginal Effects of Covariates on the Probability of Exit from Poverty in Wave 3 Using Bivariate Probit Model (from Table 4), Canada, 2000-2005

	Ref-erence	Direct Effect	Indirect Effect	Total Effect	% Change
		(1)	(2)	(3)	(4)
Endogenous Variable		when y_2=1	y_2=0		
Immigrant woman worked in Wav 3	1	0.877	0.000	0.371	37.1
Continuous Variables					
Immigrant woman's age, Wav 2	37.9	-0.004	0.002	-0.002	-0.2
# of respondent's children in hhld, Wav 2	1.9	-0.035	-0.013	-0.048	-4.8
Non-job income in Wav 2 (in $1,000)	8.6	0.000	-0.003	-0.003	-0.3
Male Spouse's Wkly Wages, Wav 2 (in $100)	244.7	0.000	0.000	0.000	0.0
Binary Variables		when x=1	when x=0		
Level of Education (r.g. no postsecondary credential)					
Obtained postsecondary credential from abroad	0	-0.029	0.076	0.042	4.2
Immigrant woman's Eng/Fre skills[a] in Wav 1 (r.g. speak fairly well, well, poorly, none at all)					
Speak fluently, very well	0	0.027	0.097	0.113	11.3
Ethnic origin (r.g. European[b])					
Arab	0	0.016	-0.289	-0.273	-27.3
West Asian	0	-0.126	-0.048	-0.163	-16.3
South Asian	0	0.010	-0.107	-0.104	-10.4
East/Southeast Asian	0	0.039	-0.069	-0.034	-3.4
Others [c]	0	-0.148	0.004	-0.133	-13.3
Live with relative(s) in hhld, Wave 2 (r.g. No)					
Yes	0	0.042	0.087	0.120	12.0
Employment status of male spouse, Wav 3 (r.g not working)					
Worked in Wave 3	0	0.322	0	0.322	32.2
City of residence at time of arrival (r.g. Toronto)					
Montreal	0	-0.018	-0.081	-0.102	-10.2
Vancouver	0	0.013	-0.059	-0.049	-4.9
Other CMAs	0	0.021	0.011	0.032	3.2
Non-CMAs	0	0.049	-0.012	0.037	3.7

Notes: [a]Refers to French speaking skills for Quebec residents and English speaking skills for residents in the rest of Canada.

[b] Includes: British, French, Western European, Northern European, Eastern European, and Southern European.

[c] includes: African, Pacific Islands, Latin, Central and South American, Caribbean, multiple origins.

Source: Statistics Canada, 2007, Longitudinal Survey of Immigrants to Canada Masterfile.

Table 6 Logit Estimates for Exit from Poverty in Wave 3 for European and Arab/West & Central Asian/Middle Eastern Origin Groups
Age 25-54, Canada, 2000-2005

	Maternal Data						Paternal Data					
	European			Arab, West & Central Asian, Middle Eastern			European			Arab, West & Central Asian, Middle Eastern		
	logit		Proportion/ Means	logit		Proportion/ Means	logit		Proportion/ Means	logit		Proportion/ Means
	(1)		(2)	(3)		(4)	(5)		(6)	(7)		(8)
Independent Variable												
Immigrant Woman, Worked in Wav 3												
Yes	1.493	**	0.706	1.277	*	0.309	1.162	*	0.567	0.849	*	0.320
No	(rg)			(rg)			(rg)			(rg)		
Control Variables												
Immigrant Woman's Other Characteristics												
Age in Wav 2	-0.034		38.022	0.056		37.144	0.024		36.022	0.083	*	35.855
Obtained postsecondary credential from abroad												
Yes	0.624		0.714	-0.847		0.571	1.416	**	0.667	0.766		0.532
No	(rg)			(rg)			(rg)			(rg)		
English/French language skills at time of arrival[(a)]												
Speak fluently, very well, or well	0.417		0.295	0.413		0.304	0.117		0.236	-0.983		0.367
Speak fairly well, poorly, or none at all	(rg)			(rg)			(rg)			(rg)		
Household Characteristics												
Male Spouse, Worked in Wav 3												
Yes	2.187	***	0.833	3.581	**	0.621	1.759	**	0.788	1.558	**	0.666
No	(rg)			(rg)			(rg)			(rg)		
# of respondent's children in hhld, Wav 2	-0.309		1.465	-0.328		2.389	-0.115		1.400	-0.368		2.084

(continued on next page)

Table 6 (continued)

	Maternal Data				Paternal Data			
	European		Arab, West & Central Asian, Middle Eastern		European		Arab, West & Central Asian, Middle Eastern	
	logit	Proportion/ Means	logit	Proportion/ Means	logit	Proportion/ Means	logit	Proportion/ Means
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Contexual Characteristics								
City of residence at time of arrival								
Montreal	0.036	0.161	0.242	0.419	-1.814 *		-0.268	0.490
Toronto	(rg)		(rg)		(rg)	0.693[(b)]	(rg)	
Vancouver	0.491	0.105	-0.204	0.094	-1.125		-0.240	0.102
Outside Montreal, Toronto, Vancouver	0.929	0.290	0.790	0.231	-1.244	0.307	-0.393	0.176
Intercept	-1.446		-5.778 *		-1.856		-4.317 **	
Log pseudolikelihood	-77.6		-69.7		-62.4		-104.1	

Notes: [(a)]Refers to French speaking skills for Quebec residents and English speaking skills for residents in the rest of Canada.

[(b)] The three categories - Montreal, Tornto, and Vancouver - are collaped for proportion calculation due to the small unweighted cases for some of the categories.

* p<0.05, ** p<0.01, ***<0.001; (rg) reference group.

Source: Statistics Canada, 2007, Longitudinal Survey of Immigrants to Canada Masterfile.

Table 7 Non-Linear Decompositions of European-Arab, West & Central, and Middle Eastern Asian Gaps in Poverty Exit Rates, Using Various Coefficient Estimates								
Source of Data	Maternal Data				Paternal Data			
Group used as coefficient weight			Arab, West & Central				Arab, West & Central	
	European		Asians, Middle Eastern		European		Asians, Middle Eastern	
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Randomized ordering of variables								
Predicted poverty exit rate for Europeans	0.621		0.621		0.653		0.653	
Predicted pov exit rate for AWCM group	0.238		0.238		0.312		0.312	
European-AWCM gap	0.383		0.383		0.340		0.340	
Contributions from ethnic differences in:		%		%		%		%
Immigrant woman's age at Wave 2	-0.005	-1.9	-0.013	6.6	0.000	0.2	-0.009	4.8
# of respondent's children in hhld, Wav 2	0.046	17.8	-0.040	20.0	0.012	7.1	-0.041	22.9
Immigrant woman's education	0.017	6.7	0.019	-9.3	0.033	20.0	-0.021	11.8
Immigrant woman's English/French skills	-0.001	-0.3	-0.003	1.5	-0.003	-1.8	-0.032	17.7
City of residence at time of arrival	0.006	2.5	0.001	-0.7	0.039	23.5	-0.003	1.5
Employment of immigrant woman	0.113	43.8	-0.086	42.7	0.045	27.0	-0.042	23.2
Employment of male spouse	0.082	31.9	-0.080	39.3	0.040	24.2	-0.030	16.9
All included variables	0.258	67.5	-0.203	52.9	0.167	49.0	-0.177	52.1
Calculation based on logits and proportional distributions/means in Table 6								
Source: Statistics Canada, 2007, Longitudinal Survey of Immigrants to Canada Masterfile.								