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Language at Work: The Impact of Linguistic Enclaves on Immigrant Economic Integration

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Abstract:
This study examines the relationship between language enclaves and the economic integration of immigrants, paying particular attention to the earnings of immigrants. Two core questions are asked: 1) What factors influence the likelihood of employment in linguistic enclaves; and 2) What are the impacts of working in linguistic enclaves on earnings? The analysis utilizes two relatively new census questions on languages used at work most often and regularly asked in the 2006 Canadian census. The investigation shows that levels of language proficiency are important factors determining the type of language enclave where individuals are employed. Further language at work mediates much of the observed impacts of language proficiency on earnings. Wage determination models also confirm that employment in linguistic enclaves conditions weekly earnings; immigrants who use non-official languages at work have lower wages than those who use only English at work.

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I. Introduction

The purpose of this paper is to demonstrate the impacts of linguistic enclaves on the economic integration of immigrants. A linguistic enclave is defined as a group of people distinguished by the languages they are using at work. The paper makes three contributions to the field of immigrant economic integration. First, a five category classification of major types of linguistic enclaves is produced, using responses to two questions on the Canadian 2006 census of population: language most often used on the job and language(s) regularly used at work. Second, multivariate investigations on the factors which influence the likelihood of employment in linguistic enclaves confirm that language proficiency levels are major factors associated with languages used at work. Further, much of the earnings returns to language proficiency that are observed in earlier studies exist because of this relationship to language enclaves. When language used at work is entered into wage determination models for language proficiency, the effects of language proficiency on earnings are substantially diminished. Third, ordinary least squares regression models confirm that weekly earnings returns vary by language enclaves. Compared to immigrants and the native born who use only English at work, immigrantswho either use only non-official languages at work or who use non-official languages alongside English and/or French earn much less.

II. Ethnic Enclaves and Linguistic Enclaves

In the fields of economics and sociology, researchers often focus on the proficiencies of migrants in the official language(s) of the receiving country. Three

aspects of destination language proficiency are commonly studied: 1) the acquisition of host country languages (see: Chiswick and Miller,2001, 2002, 2003; Chiswick, Li and Miller, 2004); 2) the impact of host country language proficiency on labor force participation, occupational or industrial locations, and occupational mobility (Boyd, 1992,1994,1997,1999; Chiswick and Taengnoi, 2007; Davila and Mora, 2000; Evans, 1987); and 3) the effect of language proficiency on earnings, a subject matter mostly dominated by economists, particularly by Chiswick and Miller (2007).

A fourth area, the impact of working in linguistic enclaves, receives less attention, primarily because of the absence of relevant data produced by many surveys including censuses. As a result, past research has emphasizes membership in ethnic enclaves. In research on immigrants, "enclave" is a popular term, diversely measured. At its most basic definition, an enclave can be defined as a distinctly bounded field[1] enclosed within a larger unit or defined as a cluster of similar persons (McManus, 1990). The dimensions on which enclave boundaries can be constructed can vary (birthplace, ethnicity, language), and the term can be applied to residential patterns as well as to economic phenomenon. In the literature on immigrants, an ethnic enclave is usually though of as involving concentrations of ethnic and/or immigrant owned firms that for the most part hire members of the employer's ethnic or immigrant origin group. Much of the discussion on ethnic enclaves describes these sites of employment as secondary labour markets where economic mobility and employment security are low (Evans, 2005).

[1] Bounded geographical areas that are coterminous with ethnic concentration and with ethnic economies represent the strongest images and measures of ethnic enclaves; Chinatown and Little Italy epitomize the confluence of geographical, economic and social space. However, ethnic enclaves can exist without strong geographical boundaries, as witnessed by economic activities that bring co-ethnics together at work sites that may not be in the vicinity of residential areas. Much of the measurement of ethnic enclaves and their impacts on the economic adjustment of migrants does not use geography as a criterion except in the most general sense, such as Mexicans in the American Southwestern states.

Driven by the limitations of available data, measures of "ethnic" enclaves frequently have conflated ethnic and linguistic enclaves, either employing language as an indicator (for example, the percentages of an ethnic group that speaks a specific language (Chiswick and Miller, 2005; McManus, 1990)) or simply using host country language proficiency of individuals as another human capital variable. Left relatively neglected is a focus on language enclaves - on how participation in linguistically bounded work sites affect the labour market integration of immigrants and their related productivity, either net of ethnicity or across distinct origin groups.

When studies that use language proficiency (of individuals) to measure ethnic enclaves are discounted, the numbers of immigrant studies that emphasize "language enclaves" are few. Even here, most of these "language enclave" studies use individual respondents' inabilities to speak the destination country language as a measure of linguistic concentration without reference to additional labour market features such as the linguistic characteristics of business owners or language(s) used in the workplace (Chiswick and Miller, 2001, 2005; Mora and Davila, 2005; McManus, 1990). Notable exceptions are studies by Evans (2005), Li and Dong (2007) and Thomas (2009a, 2009b).

In her analysis of the 1981 Australian census, Evans (2005) attempts to improve proxy measures of linguistically based labor markets when she creates a meta-variable of the percentage of each non-English language group that consist of employers who own businesses and employed others. This measure is then attached to individual census records. As a result, each respondent's data includes a new variable measuring the prevalence of business ownership in his or her current language, with language measured by a general question that probes the respondents' language skills but does not tie them to

the employment setting. Evans finds linguistically isolated immigrants (those not speaking English) do better in terms of occupational status with increasing percentages of owners in their language groups, suggesting that language enclaves can offer some protection for non-fluent workers. Her explanations for these findings rest on a "communications costs hypothesis." Lower economic/occupational returns for non-fluent immigrants are associated with the communication costs imposed on employers from the dominant ethnic group if they hire workers who are not proficient in English; communication cost include factors such as longer training times and faulty communication. Given these costs, employers are either less likely to hire non-fluent workers, or tend to offer lower quality employment options. As a result of these costs, it is often more advantageous for non-fluent workers to remain within a linguistically homogenous enclave (Evans 2005; Chiswick and Miller 2001). However, Evans notes that living in linguistic enclaves (that is, having a high percentage of owners in a specific language group) leads to reduced networks necessary for bridging into mainstream jobs, thereby dampening occupational mobility. Further, living in such linguistic enclaves leads to lower wage rates in general and lower levels of proficiency in the host country dominant language.

In their analysis of the earnings of Chinese immigrants from the 2001 Canadian Census Public Use Micro-Data File of Individuals (PUMF), Li and Dong (2007) use an even more direct indicator of a language enclave, focusing on responses to the census question on language most often used on the job, dichotomized into English and/or French versus other. They find that Chinese immigrants of the same gender and place of birth (Hong Kong, People 's Republic of China, and Taiwan) who work where no English

or French spoken (one type of linguistic enclave) earn substantially less than their counterparts who work where English and/or French is most often used. Although their study represents a first look at linguistic enclaves using characteristics of the workplace, it can be critiqued for the omission of key variables such as length of duration in Canada, the assumption that those who are in non-English or French work sites are working in Chinese, and the conceptual and empirical focus on an ethnic Chinese enclave rather than on language.

Most recently, two interrelated Canadian studies used information from the 2006 Canadian census questions on language(s) used at work most often and used regularly, focusing on differences between three groups of immigrant workers: those who use an official language most of the time at work but also regularly use a non-official language at work; those who mostly use a non-official language at work, and those who only use a non-official language at work. The largely descriptive analysis confirms that non-official languages are most likely to be used in the work place for immigrants who are not well educated, who arrived recently, who are older and who immigrated at older ages. Additionally, immigrants who used non-official languages at work are concentrated in select occupations and industries and in lower paying jobs (Thomas, 2009a; 2009b).

III. Why Study Linguistic Enclaves?

Why focus on language enclaves rather than ethnic enclaves? Or, more precisely, what can be learned by studying linguistically bounded work sites? The answers rest on conceptual and empirical distinctions. First, although ethnic and language enclaves may overlap for large immigrant origin groups characterized by high in-migration flows, it is

wrong to assume that language enclaves are synonymous with ethnic enclaves. For example, mainstream enclaves are those consisting of work sites where the host country language is the only language used – this is so commonly taken for granted that employment in this setting is considered to represent participation in the mainstream economy. Furthermore, language enclaves can consist of settings where multiple languages are used and where workers often may find that their own languages are less frequently spoken. In both types of language "enclaves" the work force is likely to be ethnically heterogeneous and not geographically concentrated. In sum, linguistic enclaves often are not the same as ethnic enclaves which are defined by ethnic homogeneity and often conceptually assume geographical concentration.

Second, studying linguistic enclaves, defined as languages spoken at work, increases understanding of the empirical relationship between the language proficiencies of individual immigrants and their economic integration. Arguments about the language as a form of human capital, the likely acquisition of the host country language for workers, and a gradient of earnings returns to increasing levels of language proficiency in fact often assume participation in the mainstream host country language enclave (i.e., the mainstream economy). However, low levels of host country language proficiency may constrain workers to work settings where language skills are not as relevant. Specifically, low proficiencies in the host country language(s) may allocate workers to certain sectors of the economy. In such instances, the language(s) used on the job both derive from the language characteristics of immigrant workers and mediate the total causal effect of language proficiency on earnings. Stated somewhat differently, the well established consequences of low language skills for earnings is likely to partially reflect the language

enclaves in which such workers find employment. The first half of this paper examines the relationship between levels of language proficiency in English and/or French and the earnings returns to levels of language proficiencies for immigrants. My analysis demonstrates that the levels of destination country language proficiencies are strongly associated with linguistic enclaves, and that the latter mediates much of the effects associated with linguistic skills.

Third, by themselves, these diverse linguistic enclaves have implications for the economic trajectories of immigrants. As articulated by Evans (2005) and others, workers who are employed in settings where languages used by workers and owners match countries of origins may receive lower wages because of crowding and competition, and they may be more vulnerable to unemployment and blocked mobility into the mainstream economy. My investigation into the wage rates paid to workers in different linguistic enclaves confirms the existences of lower pay in those work settings where English and/or French are not used on the job.

V. Census Data and the Measurement of Linguistic Enclaves

My research analyzes data from the most recent 2006 Canadian census of population. Because of its sample size and the comprehensive information collected, census data have long been used to study immigrant social and economic outcomes. One in five households in Canada are asked to respond to the 2B form which asks detailed questions on the demographic, linguistic, ethnic, birthplace, immigration and marital characteristics of each household member; questions are also asked about educational attainments, labour force participation, weeks worked in the preceding year, occupations,

earnings, and other sources of income. In this paper, down-weights are employed that have a mean of 1 in order to provide significance tests for the population that approximates the unweighted size of the population of interest.

The analysis uses the 2006 Canadian census master data base housed at the University of Toronto Research Data Centre. Under a joint arrangement between Statistics Canada, the Social Science and Humanities Research Council and universities, census data bases are made available through Research Data Centres (RDC) located at a limited number of universities. Access to this data is restricted to those who have submitted a research proposal that is subsequently reviewed and approved by a panel of academic and Statistics Canada experts. Because of confidentiality issues, output is screened and vetted by RDC staff. The most problematic data to be released are descriptive statistics, consisting of percentages and means. Numerators and denominators be rounded; tests of dispersion must be performed for income variables; information for cells with small numbers is surpressed along with cells that would allow the recreation of missing statistics; and repeated requests for the release of new descriptive statistics with small changes in the coding of variables or in the sample selection are likely to be refused on the grounds that it would be possible to identify individuals or calculate values for cells with small counts. For this reason, descriptive statistics are not presented at this time, but will be included in the final draft of the paper.

The population under analysis consists of the Canadian born and immigrants (excluding temporary migrants[2]) age 25-64 who reported employment in 2005 or 2006.

[2] The Canadian census asks respondents to indicate if they now, or ever have been, a *landed immigrant*, defining that term as a person who has been granted the right to live in Canada permanently by the immigration authorities. Those who are not landed

Today, increasing numbers of migrants come from countries where English (and French) are not widely used. The population under analysis consists of allophone immigrants (excluding temporary workers) age 25-64 who reported employment in 2005 or 2006. Allophones are those with a mother tongue which is neither English nor French. This does include a small group who declared mother tongues of non-official languages, but also indicated a simultaneous mother tongue of English/French, and this group is used as a reference group in the multivariate analyses that follow. Appendix A, Chart I shows the question that produced the allophone population studied in this paper.

As discussed in the preceding sections, languages used on the job are the economic representation of a linguistically bounded worksite. Answers to two questions on the 2006 census are used to define the various linguistic enclaves in which immigrants work. Respondents were asked to indicate the language(s) ***most often*** used in their job; this question was supplemented by an additional question that asked if the respondent used any other languages ***on a regular basis*** on the job (Appendix A, Chart I). These two language-at-work questions produce a classification of languages at work that range from all English and/or French to neither English nor French (Table 1). Canada has two charter languages: English and French.

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immigrants are considered to be in Canada on a temporary basis, either as refugee claimants awaiting the adjudication of their claims, as students, or as temporary workers.

Table 1: Language Used in the Worklace

English only
French only
English & French together most often and regularly
English/French most often, other language regularly
other language most often, English & French regularly
English and/or French & non-English/French mixture
Other language only

Source: Appendix A, Chart 1.

Statistics show that fewer than two percent of the Canadian born use non-English/non-French languages at work. However, this is not true for the foreign born. For those with paid employment and between the ages of 25-64 in 2006, nearly one in five (16.5%) of all foreign born and nearly one in four of allophone immigrants (22.2%) use languages other than English and/or French at work (Table 2). The term "allophones" refers to those with a mother tongue is neither English nor French; mother tongue is defined as that language which the respondent first learned at home in childhood and still understands (Appendix A, Chart 1).

Table 2: Percent Distribution of Language Use Sites for All Immigrant and Allophone Immigrant Workers, Age 25-64, Canada 2006

	All Foreign-born	Allophones
English only	72.5	67.5
French only	3.7	3.4
English and French together most often and regularly	7.4	6.9
English & French most often, other language regularly	8.7	11.7
Other language most often, English & French regularly	2.3	3.1
English and/or French & Non-official language (mixture)	2.7	3.5
Other language only	2.8	3.9
Total	100.0	100.0

Source: Statistics Canada, 2006 Census masterdata base.

The first part of the paper overviews the factors that are associated with working in linguistic enclaves, paying particular attention to the influence of destination country language proficiency. Numerous investigations of the economic integration of recent immigrants during the 1990s show that they are not doing as well as previous cohorts

with respect to employment, avoidance of poverty and earnings (Aydemir and Skuterud 2005; Frenette and Morissette, 2005; Picot and Hou, 2003; Warman and Worswick, 2004). Poor knowledge of English or French and country of origin are singled out as important factors underlying the deteriorating economic situation of immigrants (Galarneau and Morissette, 2008; Grondin, 2005; Picot and Sweetman, 2005).

Because not knowing English and/or French can be a barrier to employment in the mainstream economy, language skills strongly influence the likelihood of working in a non-English or non-French worksite. The measure of language proficiency used in this study builds on an earlier scale that showed levels of language proficiency, derived from census questions about mother tongue, home language and official language knowledge (see Boyd, 1999; Boyd, Devries, and Simkin, 1994). The new scale of language proficiency includes more detailed information on the language spoken at home – in 2001 for the first time, the census collected information not only on the home language used ***most often*** but also asked respondents to report other home languages ***used regularly***. These questions were repeated in the 2006 census questionnaire. The combination of the census questions on language, presented in Appendix A, Chart I, produces up to nine categories of language proficiency (Table 3). However, small numbers in categories 3 necessitated combining this category with categories 7; additional investigation confirmed that category 4 was unusual in characteristics and numbers were small; this category subsequently was omitted from the analysis.

Table 3: Levels of English and/or French Language Proficiency based on Mother Tongue, Home Langua
Used Most Often, Home Language Used Regularly, and Official Language Knowledge,
2001 Census of Canada, Master Database.

Level 1: Mother tongue is English and/or French, home languages used most often and regularly are English/French and official language knowledge is English/French
Level 2: Mother tongue is English and/or French, home languages used most often is English/French; ho language used regularly is **not** English/French and official language knowledge is English/Frencl
Level 3: Mother tongue is English and/or French, home languages used regularly is English/French; hom language used most often is **not** English/French and official language knowledge is English/Fren
Level 4: Mother tongue and official language knowledge are English and/or French, home languages use most often and regularly are **not** English/French
Level 5: Mother tongue is **not** English and/or French, home languages used most often and regularly are English/French and official language knowledge is English/French
Level 6: Mother tongue and home languages used regularly are **not** English/French; home language used most often and official language knowledge are English/French.
Level 7: Mother tongue and home languages used most often are **not** English/French; home language use regularly and official language knowledge are English/French.
Level 8: Mother tongue and home languages used most often and used regularly are **not** English/French; official language knowledge is English/French.
Level 9: Mother tongue, home languages used most often and used regularly and official language knowl are **not** English/French

A second major outcome variable of interest in this paper is earnings. For economists, earnings are measures of productivity while for sociologists earnings are measures of life chances – the ability to afford housing, and health if not happiness. In this paper, earnings are defined as 2005 weekly wages and self employment earnings for those who worked at least one week in 2005. Because earnings re transformed into nature logarithms (ln), negative and zero earnings are recoded to a $1.00 value prior to the logarithmic transformation. It is possible to calculate hourly wages using information for the number of hours worked in the week before the 2006 census (May 16, 2006). However, unlike the United States, where the reference for hours worked corresponds to the same time period in which wages and self-employment earnings were received, there is no guarantee with Canadian census data that the hours of work reported in May 2006 prevailed during the previous earnings year (2005). For that reason, weekly earnings are usually studied by analysts at Statistics Canada and elsewhere. In this paper, analyses of

the economic returns to language(s) used at work are conducted for the immigrant allophone population that arrived before 2005. Persons arriving in the first five months of 2006 (the census was fielded in May 2006) would have no Canadian earnings to report for 2005 and most persons arriving in 2005 would have reported only part-year earnings.

Assessing the role of language proficiency in determining employment in linguistic enclaves and showing impact of working in linguistic enclaves for earnings requires attentiveness to differences between men and women. Inflow data collected by Citizenship and Immigration Canada, which administers Canada's immigration program, show that women are slightly less likely than men to arrive without English and/or French language skills, a pattern that mostly likely reflects both different admission classes for men and women and gender stratification in origin countries that affect female schooling and paid work patterns. Past research also suggests that immigrant women often do not invest as heavily in improving their host country language proficiencies (Cobb-Clark and Connolly, 2001), with the result that women more than men may be employed in language enclaves. With respect to earnings, women may be more penalized than men when working in an enclave economy because of the gendered job opportunities. Alternatively, however, there may be little differences between men and women within specific linguistic enclaves, particularly where the mainstream language is not used. This could occur when overall work in these enclaves is low-wage, leading to little variation in earnings.

Language Proficiency and Employment in Linguistic Enclaves

Who ends up working in language enclaves, particularly those which are not the mainstream English/French enclaves? Language proficiency is one of the most

determining factors since individuals who cannot speak the host country language(s) would have difficulty finding employment in labour markets that primarily used destination country languages. Indeed, the empirical association of language proficiency with the languages at work is so strong that in order to illuminate the relationship, the dependent variable of interest – language at work – had to be collapsed for data release from the Research Data Centres (RDC) where the census data are housed.

As shown in Table 4 for the allophone population (*data on the full Canadian born and immigrant population will be added in the final draft)*, those women and men who are most proficient in English and/or French are also the most likely to be working in English and/or French environments; conversely, those with lower levels of proficiency are more likely to be working in settings where other languages are used. What language(s) are used at home is an important determinant of these patterns. Of those who mostly use English and/or French at home (type 1 through Type 3), over 4 out of 5 use only English/French on their jobs and fewer than one in twenty (less than 5 percent) use another language most often or only at work. When the mother tongue and home languages are not English and/or French, the percentages working in another language increase; in fact for those allophones who cannot converse in English and or French, approximately seven out of ten are using other languages in their jobs (Table 4). There is, of course, the problem of endogeneity, or reciprocal causation. Employment in non-English/French settings may perpetuate the lack of language proficiency in English and/or French or cause deterioration of limited official language skills. There are, however, no good instruments in the census to correct for such possibilities, and this possibility awaits analysis with longitudinal data.

Table 4: Percentages Working in Language Enclaves by Language Proficiency for Allophone Immigrants, Age 25-64 by Sex, Canada 2006

	Languages at Work							
	Women				Men			
	Total	Other used most often, mixed or only	Eng, Fr used most often, Other language used regularly	Eng Fr only	Total	Other used most often, mixed or only	Eng, Fr used most often, Other language used regularly	Eng Fr only
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Allophones								
Language Proficiency[(a)]								
Type 6	100.0	68.3	11.0	20.7	100.0	70.9	10.9	18.2
Type 5	100.0	14.7	14.7	70.5	100.0	14.1	15.0	70.8
Type 4	100.0	8.7	14.8	76.5	100.0	7.7	15.3	77.0
Type 3	100.0	3.8	10.5	85.7	100.0	3.3	11.0	85.6
Type 2	100.0	4.1	6.6	89.3	100.0	3.7	6.2	90.1
Type 1	100.0	5.2	6.3	88.5	100.0	5.3	7.3	87.4

(a) Language proficiency categories are:
Type 6: Other language only
Type 5: Mother tongue & home languages are unofficial language(s), knows official language(s)
Type 4: Mother tongue & home language used mostly is non-official language; home language used regularly and is official language(s) and respondent knows official language(s)
Type 3: Mother tongue and language used regularly in the home are non-official language(s); home language used mostly is English and/or French, knows official language(s)
Type 2: Mother tongue is a non-official language; home language used mostly and regularly are official languages; knows official language(s)
Type 1: Mother tongue, home languages used mostly and regularly are official language(s) and knows official languages.

Levels of language proficiency are associated with other factors; scholars note that language skills in the host language(s) increase with duration in the destination country, with education, and with other socio-demographic characteristics (see: Chiswick and Miller, 2007). In order to determine the net effect of language proficiency on the propensity to be employed in linguistic enclaves, multinomial logistic regression shows the factors underlying employment in different types of language enclaves. These models are run separately for allophone immigrant women and men those in Canada on a temporary basis (see footnote 2). Independent variables (or "predictive" variables) include age, years of schooling, period of arrival, marital status, CMA location, and percentage of respondent's mother tongue group that are living in his/her place of residence and language proficiency. Because the education questions were dramatically altered in the 2006 Canadian census, the years of schooling variable previously available on the 1996 and 2001 census databases are not available for the 2006 census. Instead,

years of schooling are calculated using an algorithm developed by Statistics Canada analysts of the 2006 census data (personal communication, February 3, 2009). In the years of schooling scale, the lowest years of schooling is ten years, assigned to those who indicated on the census form as not having completed a secondary (high school) diploma or equivalent. The highest level of education, an earned doctorate degree was assigned as 22 years of schooling. The restricted range of the education variables means that the scaling of "potential years of experience" by the algorithm (Age – 6 +years of schooling) is distorted. As a result the earnings analysis found in this paper does not use potential years of experience, relying instead on age and years of schooling.

As shown by the logits in Table 5, socio-demographic characteristics do influence the (log-odds) likelihood of employment in settings other than English and/or French only. Those with fewer years of education, who are older or divorced, or who are living in Vancouver (relative to living in Toronto) are most likely to be employed in language enclaves where languages other than French and/or English are used (Table 5, columns 1 and 5). Those who are recently arrived in Canada or who have low levels of language proficiency also are most likely to be employed where non-official languages are used (Table 5, columns 2-4 and 6-8). The pseudo R-squared measures for models in which period of entry and levels of language proficiency are entered in separately show that language skill compared with period of arrival has a stronger effect on the languages that individuals are employed (Table 6, column 2 vs. column 3 and column 6 vs. column 7). At the same time, the strong association between language skills and period of arrival is evident from the pseudo R-squared measures for the final combined models (Table 6, columns 4 and 8).

Table 5: Multinomial Logits of Using Select Languages at Work, Foreign-born Allophone Women and Men, Age 25-64, Canada 2006

	Women				Men			
	Model 1 (1)	Model 2 (2)	Model 3 (3)	Model 4 (4)	Model 1 (5)	Model 2 (6)	Model 3 (7)	Model 4 (8)
Other language most often, mixed or only vs English and/French only								
Intercept	-0.114 *	-2.357 ***	-2.321 ***	-3.127 ***	-0.432 ***	-2.438 ***	-2.141 ***	-2.834 ***
Marital Status								
Married	0.279 ***	0.141 ***	0.145 ***	0.073 **	0.352 ***	0.110 ***	0.150 ***	0.055 *
Divorced, separated, or widowed	0.351 ***	0.213 ***	0.364 ***	0.275 ***	0.369 ***	0.223 ***	0.356 ***	0.281 ***
Single	(rg)	(rg)	(rg)	(rg)	(rg)	(rg)	(rg)	(rg)
City of Residence								
Montreal	-0.050 *	0.003 (ns)	0.183 ***	0.205 ***	-0.031 (ns)	0.006 (ns)	0.257 ***	0.266 ***
Vancouver	0.752 ***	0.748 ***	0.733 ***	0.733 ***	0.908 ***	0.931 ***	0.898 ***	0.908 ***
All other CMAs	-0.599 ***	-0.539 ***	-0.408 ***	-0.402 ***	-0.623 ***	-0.533 ***	-0.411 ***	-0.397 ***
All other areas	-0.428 ***	-0.220 ***	0.251 ***	0.281 ***	-0.382 ***	-0.108 *	0.273 ***	0.327 ***
Toronto	(rg)	(rg)	(rg)	(rg)	(rg)	(rg)	(rg)	(rg)
Age	0.006 ***	0.040 ***	0.004 ***	0.019 ***	0.006 ***	0.038 ***	0.005 ***	0.018 ***
Years of Schooling	-0.168 ***	-0.205 ***	-0.063 ***	-0.087 ***	-0.155 ***	-0.196 ***	-0.077 ***	-0.096 ***
Period of Migration								
2001-2006		2.239 ***		0.981 ***		2.130 ***		0.861 ***
1996-2000		1.874 ***		0.842 ***		1.749 ***		0.693 ***
1986-1995		1.432 ***		0.662 ***		1.438 ***		0.616 ***
1976-1985		0.834 ***		0.334 ***		0.863 ***		0.334 ***
before 1975		(rg)		(rg)		(rg)		(rg)
Language Proficiency[(a)]								
Type 6			3.787 ***	3.543 ***			3.877 ***	3.659 ***
Type 5			1.217 ***	1.102 ***			1.116 ***	1.007 ***
Type 4			0.658 ***	0.596 ***			0.491 ***	0.430 ***
Type 3			-0.274 ***	-0.209 **			-0.465 ***	-0.418 ***
Type 2			-0.277 ***	-0.175 **			-0.441 ***	-0.343 ***
Type 1			(rg)	(rg)			(rg)	(rg)
English and/or French most often, other regularly vs English and/or French only								
Intercept	-0.972 ***	-1.832 ***	-1.971 ***	-2.325 ***	-0.966 ***	-1.735 ***	-1.694 ***	-1.929 ***
Marital Status								
Married	0.093 ***	0.048 *	0.031 (ns)	0.026 (ns)	0.325 ***	0.242 ***	0.226 ***	0.208 ***
Divorced, separated, or widowed	0.169 ***	0.130 ***	0.208 ***	0.199 ***	0.301 ***	0.251 ***	0.339 ***	0.323 ***
Single	(rg)	(rg)	(rg)	(rg)	(rg)	(rg)	(rg)	(rg)
City of Residence								
Montreal	-0.581 ***	-0.563 ***	-0.507 ***	-0.502 ***	-0.631 ***	-0.619 ***	-0.551 ***	-0.551 ***
Vancouver	0.404 ***	0.402 ***	0.421 ***	0.418 ***	0.366 ***	0.376 ***	0.379 ***	0.383 ***
All other CMAs	-0.299 ***	-0.274 ***	-0.211 ***	-0.207 ***	-0.406 ***	-0.371 ***	-0.305 ***	-0.300 ***
All other areas	-0.319 ***	-0.238 ***	-0.026 (ns)	-0.011 (ns)	-0.272 ***	-0.168 ***	0.021 (ns)	0.040 (ns)
Toronto	(rg)	(rg)	(rg)	(rg)	(rg)	(rg)	(rg)	(rg)
Age	-0.002 **	0.010 ***	0.000 (ns)	0.005 ***	-0.003 ***	0.010 ***	0.001 (ns)	0.004 ***
Years of Schooling	-0.059 ***	-0.070 ***	-0.045 ***	-0.049 ***	-0.065 ***	-0.078 ***	-0.060 ***	-0.063 ***
Period of Migration								
2001-2006		0.720 ***		0.259 ***		0.703 ***		0.213 ***
1996-2000		0.672 ***		0.258 ***		0.577 ***		0.125 ***
1986-1995		0.639 ***		0.309 ***		0.601 ***		0.223 ***
1976-1985		0.422 ***		0.209 ***		0.350 ***		0.095 ***
before 1975		(rg)		(rg)		(rg)		(rg)
Language Proficiency[(a)]								
Type 6			1.800 ***	1.744 ***			1.674 ***	1.620 ***
Type 5			1.005 ***	0.973 ***			0.829 ***	0.799 ***
Type 4			0.972 ***	0.951 ***			0.810 ***	0.789 ***
Type 3			0.510 ***	0.528 ***			0.383 ***	0.392 ***
Type 2			-0.002 (ns)	0.035 (ns)			-0.254 ***	-0.228 ***
Type 1			(rg)	(rg)			(rg)	(rg)
Pseudo R-Square								
Cox and Snell	0.046	0.079	0.152	0.156	0.049	0.077	0.149	0.152
Nagelkerke	0.062	0.106	0.203	0.209	0.066	0.104	0.201	0.205
McFadden	0.034	0.060	0.119	0.123	0.037	0.059	0.119	0.122

Note: [(a)] Types are as follows:
Type 6: Other language only
Type 5: Mother tongue & home languages are unofficial language(s), knows official language(s)
Type 4: Mother tongue & home language used mostly is non-official language; home language used regularly and is official language(s) and

To highlight the impact of period of arrival and language skills on the propensity of employment in linguistic enclaves, net of each other and net of variations in the socio-demographic characteristics of census respondents, logits from the multinomial models were transformed into probabilities of employment in three language enclaves (Table 6).

The hypothetical probabilities (or percentages) indicate the chances of using, or not using, English /French at work if everyone had the same set of other characteristics but varied with respect to period of arrival or language proficiency. The patterns are similar to those observed using actual percentages. Working in a setting where immigrants use non-official languages increases with decreasing language skills. Adjusting for other factors including period of immigration that influence language use on the job, three out of five allophone immigrants who cannot converse in one of Canada's official languages are employed in jobs where they use non-official languages. Further, those who have arrived most recently are more likely to be using languages other than English or French at work than are those immigrants who arrived in earlier decades.

Table 6: Hypothetical Percentages of Working in Language Enclaves Net of Other Factors for Allophone Immigrants, Age 25-64 by Sex, Canada 2006

	Languages at Work							
	Women				Men			
	Total	Other used most often, mixed or only	Eng, Fr used most often, Other language used regularly	Eng Fr only	Total	Other used most often, mixed or only	Eng, Fr used most often, Other language used regularly	Eng Fr only
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Allophones								
Language Proficiency[a][b]								
Type 6	100.0	58.1	12.4	29.5	100.0	61.4	11.9	26.7
Type 5	100.0	12.5	14.2	73.2	100.0	11.9	14.5	73.6
Type 4	100.0	8.0	14.7	77.3	100.0	7.1	15.2	77.8
Type 3	100.0	3.9	10.7	85.4	100.0	3.3	11.2	85.5
Type 2	100.0	4.2	6.8	89.0	100.0	3.8	6.3	89.9
Type 1	100.0	5.0	6.5	88.5	100.0	5.2	7.7	87.1
Period of Immigration[c]								
2001-2004	100.0	11.1	11.6	77.3	100.0	9.4	14.2	76.4
1996-2000	100.0	9.8	11.7	78.4	100.0	8.1	13.4	78.5
1986-1995	100.0	8.3	12.5	79.2	100.0	7.5	14.6	77.9
1976-1985	100.0	6.2	11.7	82.1	100.0	5.8	13.4	80.8
before 1975	100.0	4.6	9.9	85.5	100.0	4.3	12.5	83.2

(a) Net of education, marital status, age, education, period of arrival, and CMA location.
(b) Language proficiency categories are:
Type 6: Other language only
Type 5: Mother tongue & home languages are unofficial language(s), knows official language(s)
Type 4: Mother tongue & home language used mostly is non-official language; home language used regularly and is official language(s) and respondent knows official language(s)
Type 3: Mother tongue and language used regularly in the home are non-official language(s); home language used mostly is English and/or French, knows official language(s)
Type 2: Mother tongue is a non-official language; home language used mostly and regularly are official languages; knows official language(s)
Type 1: Mother tongue, home languages used mostly and regularly are official language(s) and knows official languages.
(c) Net of education, marital status, age, education, CMA location, and language proficiency.

In the preceding tables, the relationship between language proficiency and the chances of employment using non-official languages are modeled as antecedent and consequent variables. The argument underlying this presentation is that poor language proficiency sorts workers into sectors of the labour market. The separate and combined effects of language proficiency levels and language at work on earnings further support this argument.

Table 7 shows first the gross effects of language proficiency and language at work on weekly earnings for female and male allophone immigrants and then combines the two variables. As separate determinants of earnings, language(s) at work have more explanatory power than do levels of language proficiency. Additionally, language at work mediates substantial portions of the effects of levels of language proficiency on earnings. This is shown in the changing parameters between Model 1 and Model 3. For example, for women nearly three quarters of the effect of not knowing at least one of Canada's two official languages (Type 6) on earnings is mediated by the influence of language at work ((column1-column3/column 1) while for men all of the effect of not knowing official languages is mediated by languages used at work (Alwin and Hauser, 1975). Similarly, for women and men, nearly one third and just over half, respectively, of the effect of having non-official language mother tongue and home use (Type 5) on earnings is mediated by the influence of language at work.

Table 7: Regressions Coefficients and Relative Effects (Percent Deviations) of Language Used at Work for Logged (Ln) Weekly 2005 Earnings for Foreign-born Allophone Women and Men, Age 25-64, Canada, 2006

	Women			Men		
	Model 1[(a)]	Model 2[(b)]	Model 3[(c)]	Model 1[(a)]	Model 2[(b)]	Model 3[(c)]
Regression Coefficients, Languages Used at Work						
Other language only	-1.315 ***	-0.913 ***	-0.911 ***	-1.236 ***	-0.919 ***	-0.830
English and/or French & non-English/French mixture	-0.577 ***	-0.470 ***	-0.434 ***	-0.721 ***	-0.590 ***	-0.515
Other language most often, English & French regularly	-0.968 ***	-0.781 ***	-0.737 ***	-1.089 ***	-0.900 ***	-0.796
English/French most often, other language regularly	-0.337 ***	-0.265 ***	-0.241 ***	-0.463 ***	-0.384 ***	-0.329
English & French together most often and regularly	0.070 **	0.171 ***	0.168 ***	-0.135 ***	0.033 (ns)	0.065
French only	-0.400 ***	-0.087 *	-0.114 **	-0.460 ***	-0.167 ***	-0.173
English only	(rg)	(rg)	(rg)	(rg)	(rg)	(rg)
Percent Deviations, Language Used at Work						
Other language only	-73	-60	-60	-71	-60	-56
English and/or French & non-English/French mixture	-44	-37	-35	-51	-45	-40
Other language most often, English & French regularly	-62	-54	-52	-66	-59	-55
English/French most often, other language regularly	-29	-23	-21	-37	-32	-28
English & French together most often and regularly	7	19	18	-13	ns	7
French only	-33	-8	-11	-37	-15	-16
English only	(rg)	(rg)	(rg)	(rg)	(rg)	(rg)

(a) Gross effects, only the variable, language used at work, is in Model 1.
(c) Net of age, place of residence, marital status, education and period of immigration.
(c) Net of skill level of occupation and industry of job

What are the consequences of working in linguistic enclaves for earnings?

In order to showcase the importance of linguistic enclaves, OLS wage determination models for the foreign born include the linguistic enclave typology developed in this paper, with categories transformed into dummy variables (Hardy, 1992). Other independent variables, often found in studies of immigrant earnings that use census data, consist of age, years of education, marital status and period of immigration. A measure of work experience is not included in this analysis. Because the education information collected on the census coded those with less than a high school diploma into one category, calculating experience as a combination of age and years of schooling (making allowances for the age at which schooling begins) creates a potential work experience measure that may over-estimate the experience that respondents actually have. As a result, the model excludes a measure of experience and instead includes age and age-squared along with education.

Results are presented in three stepwise regressions, beginning with only the typology of languages used at work, followed by controls for age, education, marital

status and period of arrival, and finally by controls for skill levels of occupations and industrial sector of employment. Within an economic framework, the second regression indicates the returns to language at work for earnings after taking other productivity enhancing factors into account. From a sociological perspective, however, the process by which languages used at work affects earnings can be mediated by other characteristics of jobs, particularly by occupations and industrial location. As noted by Thomas (2009b), those immigrants who are not using English and/or French on the job are highly concentrated in select occupations, many of them being low skilled. As well, background analysis for this paper revealed different industrial profiles exist for the linguistic enclave typology categories. The third regression therefore includes occupational skill and industrial location in order to partial out the impact of these factors on weekly earnings. The skill level of occupations is defined by Human Development and Social Resources Canada National Occupational Classification Matrix (www5.hrsdc.gc.ca/NOC/English/NOC/2006/pdf/Matrix.pdf). The analysis begins with an analysis of the allophone foreign born population permanently residing in Canada. It then considers variations between Toronto, Vancouver and Montreal with respect to the consequences of working in linguistic enclaves

Full details on the regression results are found in the Appendixes B and C of this paper. Table 8 summarizes the results for all of Canada. The first panel provides the coefficients for logged (ln) weekly earnings. Because the practice of interpreting these coefficients as indicating proportionate increments or decrements in earning relative to the reference group is often inaccurate for dummy variables (Halvorsen and Palmquist, 1980), the second panel presents transformed coefficients as percentage difference in

earnings relative to that received by the reference group, defined as those who use only English at work.

Table 8: Relative Effects of Language Used at Work for Logged (Ln) Weekly 2005 Earnings for Foreign-born Allophone Women and Men, Age 25-64, Canada, 2006

	Women			Men		
	Model 1[a]	Model 2[b]	Model 3[c]	Model 1[a]	Model 2[b]	Model 3[c]
Regression Coefficients, Languages Used at Work						
Other language only	-1.315 ***	-0.913 ***	-0.911 ***	-1.236 ***	-0.919 ***	-0.830 ***
English and/or French & non-English/French mixture	-0.577 ***	-0.470 ***	-0.434 ***	-0.721 ***	-0.590 ***	-0.515 ***
Other language most often, English & French regularly	-0.968 ***	-0.781 ***	-0.737 ***	-1.089 ***	-0.900 ***	-0.796 ***
English/French most often, other language regularly	-0.337 ***	-0.265 ***	-0.241 ***	-0.463 ***	-0.384 ***	-0.329 ***
English & French together most often and regularly	0.070 **	0.171 ***	0.168 ***	-0.135 ***	0.033 (ns)	0.065 *
French only	-0.400 ***	-0.087 *	-0.114 **	-0.460 ***	-0.167 ***	-0.173 ***
English only	(rg)	(rg)	(rg)	(rg)	(rg)	(rg)
Percent Deviations, Language Used at Work						
Other language only	-73	-60	-60	-71	-60	-56
English and/or French & non-English/French mixture	-44	-37	-35	-51	-45	-40
Other language most often, English & French regularly	-62	-54	-52	-66	-59	-55
English/French most often, other language regularly	-29	-23	-21	-37	-32	-28
English & French together most often and regularly	7	19	18	-13	ns	7
French only	-33	-8	-11	-37	-15	-16
English only	(rg)	(rg)	(rg)	(rg)	(rg)	(rg)

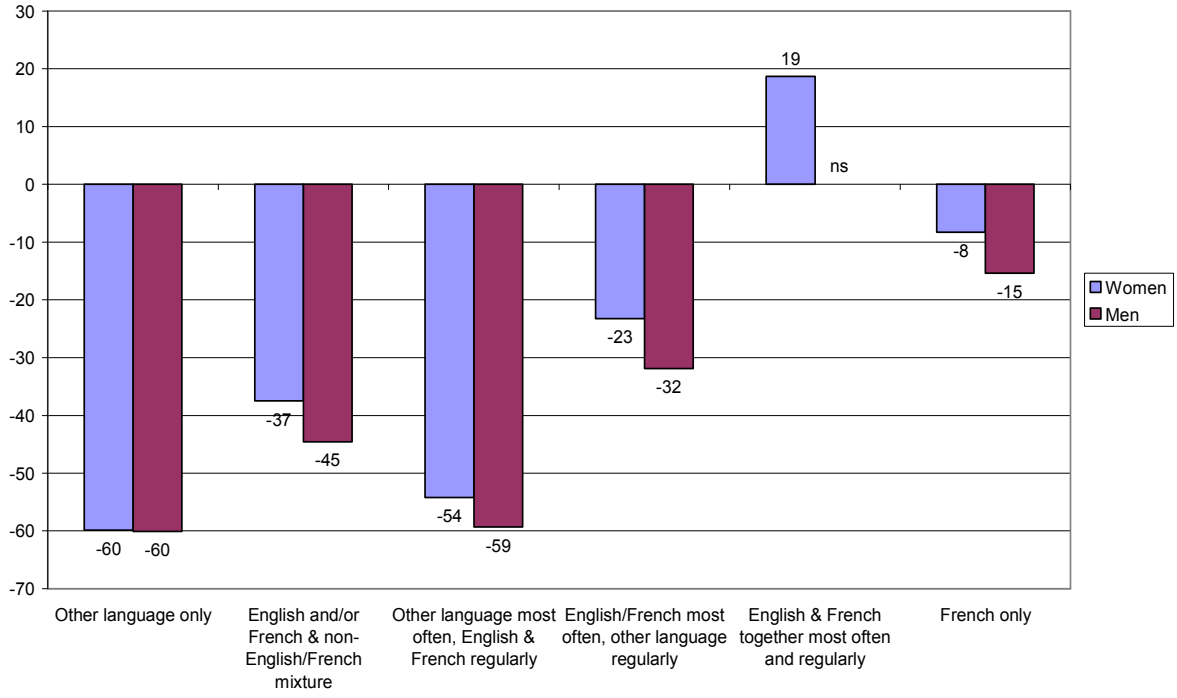
(a) Gross effects, language used at work are in Model 1.
(c) Net of age, place of residence, marital status, education and period of immigration.
(c) Net of skill level of occupation and industry of job
(ns) Not significant at p=0.05 level *<0.05, **<0.01, ***<0.001.
Source: Appendix B1 and B2.

Compared to those who work in places where only English is used, those who work in French only sites earn less; however those who are employed where both English and French are used most often and regularly earn more. The penalty to employment in non-English/non-French language enclaves is apparent. Even when allophone immigrants work in sites where English and/or French is used most often but where other languages are used regularly, they experience a wage penalty, with weekly wages 21 to 29 percent lower for women and 28 to 37 percent lower for men than those received by their counterparts who are employed in English only settings. This weekly earnings gap increases when other languages are used most often. Compared to those who work in English only settings, foreign born women and men who are employed only where non-official languages are in use, received weekly earnings that are between 56 to 73 percent lower, depending on additional variables included in the analysis of earnings. Although increments to R-squared for the female and male regressions in Appendix B1 and B2

confirm that skill level of occupations and industrial location are important predictors of earnings, changes in the regression coefficients and relative effects between Model II and Model III suggest that very little of the effects of language enclaves on the weekly earnings of allophone immigrants is mediated by these two job related variables.

Chart 1 summarizes the penalties for allophone immigrants who use languages other than English or French at work, using the relative effects for language at work for earnings after taking productivity enhancing factors such as age, education, marital status and period of arrival into account (Model 2). Compared to those allophone immigrants who use only English at work, the weekly wages of those who use non-official languages solely at work or most often are substantially lower, standing at 60 percent less for those working only in non-official languages. Those who are employed where a mixture of French, English and other languages are used also have lower earnings, as do those who use only French at work. It is likely that the latter is partly measuring regional labour markets, not fully captured by the CMA residence variable.

Chart I: Relative Effects (Percent Deviations) of Language Used at Work, English Only as the Reference, Age 25-64, by Sex, Canada, 2005 Earnings



Although the pattern is not uniform throughout all language at work settings, the wage deficit for women who use non-official languages at work is slightly less than observed for allophone immigrant men. This is consistent with the greater variability and range of male earnings compared to female earnings. Only when English and French are used together with no other languages spoken, do allophone immigrant women earn more than those speaking English only.

VII. Conclusion

Analysis presented in this paper indicate that language used at work is an important, but often overlooked, factor affecting the successful integration of immigrants to Canada. While it is well understood that language proficiency – the fluency with which the destination country language(s) are understood, spoken, read and manipulated – is an

important determinant of immigrant earnings, data constraints frequently mean that less attention is given to the impacts of different languages used at work. Analytical results presented here suggest that the link between language proficiency and earnings exists in large measure because language proficiency allocates workers to jobs where destination country languages may, or may not, be used. The impact of language proficiency on weekly earnings is substantially reduced when language(s) used at work are included in earnings determination models. Additional analysis confirms variations in the earnings of workers, differentiated by the languages used most often and regularly on the job. The average weekly earnings of immigrant allophone women and men in Canada who use non-official languages either solely or in combination with English and/or French are considerably lower than those who use only English at work. Net of factors that also enhance the productivity of work and influence earnings (age, marital status, years of schooling, period of immigration and place of work), immigrant allophones who either speak only non-official languages at work or who use other languages most often have average weekly earnings that are between 50 and 60 percent below those received by their counterparts who use only English at work.

Research findings presented in this paper inform immigration policy with respect to the language skills of immigrants who are admitted to Canada and migrant policy with respect to integration initiatives after entry. If, as the analysis indicates, low levels of English/French language proficiency means greater participation in non-English/non-French employment sites, and if participation in such enclaves means reduced earnings, then refinements to existing immigration and migrant policy, toward improving language skills may be useful. In recent years, more points for language skills have been

implemented, most recently in the Immigration and Refugee Protection Act, effective June 2002. However, such initiatives - which include increasing number of skilled workers who are admitted to Canada - are relatively recent and do not affect all migrants. In 2007 only 17 percent of all immigrants to Canada were assessed on the full skilled worker points system (Citizenship and Immigration Canada, no date) which would have included testing of language skills. As a result, language enclaves where workers are paid less will continue into the foreseeable future. In terms of migrant policy, most language training programs frequently are indifferent to the work site. Nonetheless, in the recent past, a few programs have been designed to target workers in linguistic enclaves, as in the case of English instruction available for room cleaners in hotels. Continuing to monitor the range and characteristics of language enclaves can inform future initiatives, particularly those on-the-job out-reach strategies to reach workers who otherwise have no or little usage of destination country language(s).

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Appendix A
Chart I: 2006 Census Language Questions

2006 CENSUS QUESTIONS USED IN LANGUAGE USED AT WORK TYPOLOGY

48 (a) In this job, what language did this person use most often?

(Precoded responses)
( ) English
( ) French
( ) Other - specify

(b) Did this person use any other languages on a regular basis in this job?

( ) No
( ) Yes, English
( ) Yes, French
( ) Yes, Other — Specify

2006 CENSUS QUESTIONS USED IN LANGUAGE PROFICIENCY SCALE

Mother Tongue

Question 16: What is the language that this person first learned at home in childhood and still understands?

If this person no longer understands the first language learned, indicate the second language learned.

(Precoded responses)
( ) English
( ) French
( ) Other – specify

Knowledge of Official Languages

Question 13: Can this person speak English or French well enough to conduct a conversation?

(Precoded responses, only one response permitted)
( ) English only
( ) French only
( ) Both English and French
( ) Neither English nor French

Language questions continue …

Appendix A, Chart I continues

Home Language(s)

15 (a) What language does this person speak most often at home?

(Precoded responses)
( ) English
( ) French
( ) Other - specify

15 (b) Does this person speak any other languages on a regular basis [at home]

(Precoded responses)
( ) No
( ) Yes, English
( ) Yes, French
( ) Yes, Other — Specify

Appendix B1: Regression Coefficients of Logged (Ln) Weekly 2005 Earnings for Language at Work, Allophone Immigrant Women, Age 25-64, Canada, 2006

	Model 1 (1)	Model 2 (2)	Model 3 (3)
	b	b	b
Constant	5.795 ***	3.569 ***	3.438 ***
Language Used at Work			
Other language only	-1.315 ***	-0.913 ***	-0.911 ***
English and/or French & non-English/French mixture	-0.577 ***	-0.470 ***	-0.434 ***
Other language most often, English & French regularly	-0.968 ***	-0.781 ***	-0.737 ***
English/French most often, other language regularly	-0.337 ***	-0.265 ***	-0.241 ***
English & French together most often and regularly	0.070 **	0.171 ***	0.168 ***
French only	-0.400 ***	-0.087 *	-0.114 **
English only	(rg)	(rg)	(rg)
Age		0.078 ***	0.073 ***
Age Squared		-0.100 ***	-0.092 ***
City of Residence			
Montreal		-0.298 ***	-0.292 ***
Vancouver		-0.048 **	0.012 (ns)
Other CMAs		-0.039 **	0.014 (ns)
Non-CMAs		-0.842 ***	-0.704 ***
Toronto		(rg)	(rg)
Marital Status			
Single		(rg)	(rg)
Married		-0.081 ***	-0.077 ***
Other marital status		-0.144 ***	-0.127 ***
Total Years of Schooling		0.088 ***	0.146 ***
Total Years of Schooling Squared (divided by 100)		-0.003 (ns)	-0.302 ***
Period of Immigration			
2001-2004		-0.737 ***	-0.608 ***
1996-2000		-0.520 ***	-0.440 ***
1986-1995		-0.332 ***	-0.280 ***
1976-1985		-0.145 ***	-0.123 ***
before 1975		(rg)	(rg)
Skill Level			
0			(rg)
A			0.394 ***
B			-0.072 **
C			0.021 (ns)
D			-0.025 (ns)
Industry			
Agriculture, mining			-0.733 ***
Distributive			0.060 *
Construction			-0.173 ***
Manufacturing			0.203 ***
Retail, trade			-0.364 ***
Financial, management			0.266 ***
Professional, scientific services			-0.169 ***
Public, administrative, health, education			(rg)
Accommodation, food			-0.352 ***
Other service industry			-0.532 ***
R	0.132	0.191	0.232
Adjusted R Square	0.017	0.037	0.054

(ns) Not significant at p=0.05 level *<0.05, **<0.01, ***<0.001.
(rg) Reference group.
Source: Statistics Canada, 2006 Census masterdata base.

Appendix B2: Regression Coefficients of Logged (Ln) Weekly 2005 Earnings for Language at Work, Allophone Immigrant Men, Age 25-64, Canada, 2006

	Model 1 (1)		Model 2 (2)		Model 2 (2)	
	b	signif	b	signif	b	signif
Constant	6.083	***	5.508	***	5.366	***
Language Used at Work						
Other language only	-1.236	***	-0.919	***	-0.830	***
English and/or French & non-English/French mixture	-0.721	***	-0.590	***	-0.515	***
Other language most often, English & French regularly	-1.089	***	-0.900	***	-0.796	***
English/French most often, other language regularly	-0.463	***	-0.384	***	-0.329	***
English & French together most often and regularly	-0.135	***	0.033	(ns)	0.065	*
French only	-0.460	***	-0.167	***	-0.173	***
English only	(rg)		(rg)		(rg)	
Age			0.043	***	0.037	***
Age Squared			-0.066	***	-0.059	***
City of Residence						
Montreal			-0.248	***	-0.238	***
Vancouver			-0.082	***	-0.017	(ns)
Other CMAs			0.114	***	0.132	***
Non-CMAs			-0.747	***	-0.587	***
Toronto			(rg)		(rg)	
Marital Status						
Single			(rg)		(rg)	
Married			0.381	***	0.347	***
Other marital status			0.137	***	0.126	***
Total Years of Schooling			-0.062	***	0.001	(ns)
Total Years of Schooling Squared (divided by 100)			0.430	***	0.143	*
Period of Immigration						
2001-2004			-0.695	***	-0.642	***
1996-2000			-0.536	***	-0.507	***
1986-1995			-0.369	***	-0.352	***
1976-1985			-0.186	***	-0.187	***
before 1975			(rg)		(rg)	
Skill Level						
0					(rg)	
A					0.387	***
B					0.085	***
C					-0.074	***
D					0.030	(ns)
Industry						
Agriculture, mining					-0.972	***
Distributive					-0.124	***
Construction					-0.209	***
Manufacturing					0.338	***
Retail, trade					-0.387	***
Financial, management					-0.037	(ns)
Professional, scientific services					-0.278	***
Public, administrative, health, education					(rg)	
Accommodation, food					-0.477	***
Other service industry					-0.451	***
R	0.124		0.176		0.216	
Adjusted R Square	0.015		0.031		0.047	

(ns) Not significant at p=0.05 level *<0.05, **<0.01, ***<0.001.
(rg) Reference group.
Source: Statistics Canada, 2006 Census masterdata base.