

**Aspects of Linguistic Integration of Recent Immigrants to Canada:
Determinants of English Language Proficiency, Role of English in Labour-
Market Integration Outcomes and Skills Utilization**

by

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for the degree of Doctor of Philosophy

Centre for Industrial Relationships and Human Resources, School of Graduate Studies

University of Toronto

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ABSTRACT

The thesis explores the determinants of English proficiency as well as its role in labour-market integration outcomes and skills utilization. The Longitudinal Survey of Immigrants to Canada provides the data for the empirical analysis.

The introductory chapter offers insight into the recent changes to the Canadian immigration policy as well as immigration trends. This chapter also outlines chapters Two through Six and establishes the conceptual framework that unifies them.

Chapter Two introduces two theoretical approaches, human capital theory and macro-level factors of the source and destination countries' framework. It presents a review of the literature and introduces a theoretical model of linguistic integration that is subsequently tested in Chapters Three and Four.

Chapters Three and Four focus on the application of human capital theory and macro-level factors of the source and destination countries' framework. Chapter Three explores the factors that contribute to the immigrant's English proficiency upon arrival. Chapter Four investigates the role of human capital and destination country's macro-level factors in English proficiency four years after migration. The principal empirical results indicate that macro-level factors of the

source country are significantly related to the English proficiency at arrival, while macro-level factors of the destination country are significantly related to English proficiency four years after migration. The results also corroborate findings described in the human capital literature aiding comprehension of the relationship between human capital endowments and English proficiency.

Chapter Five investigates the role of English proficiency in such labour-market integration outcomes as employment seeking, incidence of employment, and employment within ethnic enclaves. The study finds that English proficiency is associated with higher odds of employment seeking and employment in Canada. It also significantly increases the likelihood of being employed outside ethnic enclaves.

Chapter Six integrates human capital theory and language as a dimension of ethnicity framework. The analysis concentrates on the role of English in immigrants' skills utilization. The principal results add to human capital theory, indicating that English proficiency significantly increases the odds of skills utilization. The findings also reveal that immigrants who speak standard English are more likely to utilize their skills than non-standard English speakers.

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TABLE OF CONTENTS

| | |
|---|------------|
| ABSTRACT | II |
| ACKNOWLEDGEMENTS | IV |
| TABLE OF CONTENTS | VI |
| LIST OF TABLES..... | IX |
| LIST OF FIGURES..... | XI |
| LIST OF APPENDICES..... | XII |
| CHAPTER 1: INTRODUCTION | 1 |
| 1.1. CANADIAN IMMIGRATION POLICY: OVERVIEW AND TRENDS | 1 |
| 1.2. OVERVIEW OF THE THESIS | 3 |
| CHAPTER 2: LINGUISTIC INTEGRATION OF RECENT IMMIGRANTS TO CANADA: INTRODUCTION AND THEORY OVERVIEW..... | 5 |
| 2.1 INTRODUCTION..... | 5 |
| 2.2 THEORY REVIEW | 7 |
| 2.2.1 <i>Human Capital Theory</i> | 7 |
| 2.2.1.1 Language As A Human Capital Attribute | 7 |
| 2.2.1.2 A Model Of Language Skills | 7 |
| 2.2.2 <i>Macro-Level Perspectives</i> | 8 |
| 2.2.2.1 Typology of Modes of Incorporation | 9 |
| 2.2.2.2 Macro Perspective of Destination Language Proficiency..... | 10 |
| 2.3 REVIEW OF EMPIRICAL RESEARCH..... | 11 |
| 2.3.1 <i>Language Proficiency Model</i> | 11 |
| 2.3.1.1 Education | 11 |
| 2.3.1.2 Age..... | 13 |
| 2.3.1.3 Gender..... | 14 |
| 2.3.1.4 Labour-Force Participation | 15 |
| 2.3.1.5 Occupation Type..... | 16 |
| 2.3.1.6 Years Since Migration | 16 |
| 2.3.1.7 Language Spoken at Home | 17 |
| 2.3.1.8 Immigration Category | 17 |
| 2.3.2 <i>Macro-Level Factors</i> | 18 |
| 2.3.2.1 Source-Country Economic Development..... | 18 |
| 2.3.2.2 Linguistic and Social Distance..... | 19 |
| 2.3.2.3 Minority Language Concentration | 21 |
| 2.3.2.4 Geographic Distance..... | 22 |
| 2.3.2.5 Location of Residence in the Destination Country..... | 23 |
| 2.3.2.6 Macro-Level Perspective Extended..... | 23 |
| 2.3.3 <i>Past Research Limitations</i> | 24 |
| 2.3.3.1 Measures of Language Proficiency | 24 |
| 2.3.3.2 Sample Limitations | 25 |
| 2.4 THEORETICAL FRAMEWORK..... | 26 |
| 2.4.1 <i>Model of Linguistic Integration</i> | 26 |
| 2.4.2 <i>Further Theoretical and Empirical Advancements</i> | 28 |
| CHAPTER 3: LINGUISTIC INTEGRATION OF RECENT IMMIGRANTS TO CANADA: THE DETERMINANTS OF ENGLISH LANGUAGE PROFICIENCY AT ARRIVAL..... | 30 |
| 3.1. INTRODUCTION..... | 30 |
| 3.2. THEORETICAL FRAMEWORK..... | 31 |
| 3.2.1 <i>The Model of Linguistic Integration: The Determinants of English Language Proficiency at Arrival</i> | 32 |

| | | |
|--|--|------------|
| 3.2.2 | <i>Defining English Language Proficiency at Arrival</i> | 32 |
| 3.2.3 | <i>Source Macro-Level Factors</i> | 34 |
| 3.2.4 | <i>Human Capital Factors and Control Variables</i> | 40 |
| 3.3. | DATA AND MEASURES | 41 |
| 3.4. | EMPIRICAL FRAMEWORK..... | 41 |
| 3.4.1 | <i>Multinomial Logit Model</i> | 42 |
| 3.5. | RESULTS..... | 42 |
| 3.5.1 | <i>The Distribution of English Language Skills</i> | 42 |
| 3.5.2 | <i>Multinomial Logit Estimation Results</i> | 43 |
| 3.5.2.1 | Macro-Level Factors | 43 |
| 3.5.2.2 | Human Capital Factors..... | 47 |
| 3.6. | SUMMARY AND DISCUSSION..... | 48 |
| | | |
| CHAPTER 4: INGUISTIC INTEGRATION OF RECENT IMMIGRANTS TO CANADA: THE DETERMINANTS OF ENGLISH LANGUAGE PROFICIENCY AFTER MIGRATION | | 78 |
| 4.1 | INTRODUCTION..... | 78 |
| 4.2 | THEORETICAL FRAMEWORK..... | 78 |
| 4.2.1 | <i>The Determinants of English Language Proficiency Four Years after Migration</i> | 78 |
| 4.2.2 | <i>Independent Variables</i> | 80 |
| 4.2.2.1 | Destination Macro-Level Factors..... | 80 |
| 4.2.2.2 | Human Capital, Ethnic-Enclave Factors and Control Variables | 83 |
| 4.3 | DATA AND MEASURES | 84 |
| 4.4 | EMPIRICAL FRAMEWORK..... | 85 |
| 4.4.1 | <i>Ordered Logit Model</i> | 85 |
| 4.5 | RESULTS..... | 86 |
| 4.5.1 | <i>The Distribution of English Language Skills Four Years After Migration</i> | 86 |
| 4.5.2 | <i>Multinomial Logit Analysis</i> | 86 |
| 4.5.2.1 | English Language Proficiency Four Years After Migration..... | 86 |
| 4.6 | DISCUSSION AND RECOMMENATIONS..... | 89 |
| | | |
| CHAPTER 5: LABOUR-MARKET INTEGRATION OF RECENT IMMIGRANTS: THE ROLE OF ENGLISH LANGUAGE PROFICIENCY IN LABOUR-MARKET INTEGRATION OUTCOMES | | 107 |
| 5.1. | INTRODUCTION..... | 107 |
| 5.2. | THEORY REVIEW | 109 |
| 5.2.1 | <i>Labour-Market Participation Trends</i> | 109 |
| 5.2.2 | <i>Role of Official Language Knowledge in Integration Outcomes</i> | 110 |
| 5.2.3 | <i>Official Language and Ethnic-Enclave Employment</i> | 112 |
| 5.3. | LIMITATIONS OF PAST RESEARCH | 114 |
| 5.4. | THEORETICAL FRAMEWORK..... | 115 |
| 5.4.1 | <i>Conceptual Model</i> | 115 |
| 5.5. | DATA AND VARIABLES | 118 |
| 5.5.1 | <i>Data Source</i> | 118 |
| 5.5.2 | <i>Sample</i> | 118 |
| 5.5.3 | <i>Dependent Variables</i> | 119 |
| 5.5.4 | <i>Independent Variables</i> | 119 |
| 5.6. | EMPIRICAL FRAMEWORK AND RESULTS | 121 |
| 5.6.1 | <i>Descriptive Statistics</i> | 121 |
| 5.6.2 | <i>Multivariate Analysis</i> | 122 |
| 5.6.2.1 | Employment-Seeking Model | 122 |
| 5.6.2.2 | Employment Status Model..... | 125 |
| 5.6.2.3 | Ethnic-Enclave Employment Model | 128 |
| 5.7. | DISCUSSION AND IMPLICATIONS | 131 |
| | | |
| CHAPTER 6: LABOUR-MARKET INTEGRATION OF RECENT IMMIGRANTS: ENGLISH LANGUAGE INFLUENCE ON SKILLS UTILIZATION | | 144 |
| 6.1 | INTRODUCTION..... | 144 |
| 6.1.1 | <i>Overview</i> | 144 |

| | | |
|---------|---|------------|
| 6.1.2 | <i>Research Questions</i> | 146 |
| 6.2 | THEORY REVIEW | 146 |
| 6.2.1 | <i>Human Capital Theory</i> | 146 |
| 6.2.2 | <i>Language as a Dimension of Ethnicity Frameworks</i> | 149 |
| 6.2.2.1 | The Effect of Non-Standard English | 149 |
| 6.2.2.2 | Cognitive Categorization Theories | 151 |
| 6.2.2.3 | Social Distance Theory | 151 |
| 6.3 | PAST RESEARCH LIMITATIONS | 152 |
| 6.4 | THEORETICAL FRAMEWORK | 152 |
| 6.4.1 | <i>Conceptual Model</i> | 152 |
| 6.4.2 | <i>Hypotheses</i> | 154 |
| 6.4.2.1 | Hypotheses Based on Human Capital Theory | 154 |
| 6.4.2.2 | Hypotheses Based on Language as a Dimension of Ethnicity Frameworks | 154 |
| 6.5 | DATA AND VARIABLES | 155 |
| 6.5.1 | <i>Data Source</i> | 155 |
| 6.5.2 | <i>Sample</i> | 156 |
| 6.5.3 | <i>Dependent Variable</i> | 156 |
| 6.5.4 | <i>Independent Variables</i> | 157 |
| 6.6 | EMPIRICAL FRAMEWORK AND RESULTS | 158 |
| 6.6.1 | <i>Descriptive Statistics</i> | 158 |
| 6.6.2 | <i>Multivariate Analysis</i> | 158 |
| 6.6.2.1 | Hypothesis based on Human Capital Theory | 158 |
| 6.6.2.2 | Language as a Dimension of Ethnicity Hypotheses | 161 |
| 6.7 | SUMMARY | 164 |
| | REFERENCES | 174 |

LIST OF TABLES

| | |
|---|-----|
| Table 2.1: Typology of Modes of Incorporation of Contemporary Immigrants to the Advanced Countries..... | 9 |
| Table 2.2: Education and Language Proficiency | 13 |
| Table 2.3: Age and Language Proficiency | 14 |
| Table 2.4: Gender and Language Proficiency | 15 |
| Table 2.5: Years Since Migration (YSM) and Language Proficiency | 17 |
| Table 2.6: Source-Country Economic Development and Language Proficiency | 19 |
| Table 2.7: Minority Language Concentration and Language Proficiency | 22 |
| Table 3.1: Characteristics of the Sample | 51 |
| Table 3.2: Characteristics of the Dependent Variables | 53 |
| Table 3.3: Coefficients from a Multinomial Logit Model Predicting English Language Proficiency Category | 54 |
| Table 3.4: Coefficients from a Multinomial Logit Model Predicting Speaking Language Proficiency Category | 60 |
| Table 3.5: Coefficients from a Multinomial Logit Model Predicting Reading Language Proficiency Category | 62 |
| Table 3.6: Coefficients from a Multinomial Logit Model Predicting Writing Language Proficiency Category | 64 |
| Table 3.7: Globalization and Occupation Related Characteristics of the Sample | 68 |
| Table 3.8: Coefficients from a Multinomial Logit Model Predicting English Language Proficiency Category for Immigrants with Work Experience from Countries with Globalization Ranking | 70 |
| Table 4.1: Characteristics of the Sample, Wave 3, Four Years after Migration | 92 |
| Table 4.2: Coefficients From a Multinomial Logit Model Predicting English Language Proficiency at Four Years after Migration | 94 |
| Table 4.3: Political Party in Power in Canadian Provinces between 2001 and 2004 | 98 |
| Table 4.4: Summary of Political Party in Power..... | 98 |
| Table 4.5: Coefficients from a Multinomial Logit Model Predicting Speaking Language Proficiency Category at Four Years after Migration | 101 |

| | |
|---|-----|
| Table 4.6: Coefficients From a Multinomial Logit Model Predicting Reading Language Proficiency Category at Four Years after Migration | 103 |
| Table 4.7: Coefficients From a Multinomial Logit Model Predicting Writing Language Proficiency Category at Four Years after Migration | 105 |
| Table 5.1: Labour Force Participation, Employment and Unemployment Rates among Immigrant Men and Women, between prior to 1961 and 2001 (Population Aged 25 to 44, in %) | 109 |
| Table 5.2: Language Used at Work Most Frequently, Immigrant and Native Born, Both Men and Women, Ages 25-64 | 113 |
| Table 5.3: Characteristics of the Sample | 134 |
| Table 5.4: Work Related Characteristics of the Sample | 136 |
| Table 5.5: Logit Coefficient Estimates for Employment Seeking and Employment Status..... | 137 |
| Table 5.6: Coefficients from a Multinomial Logit Model Predicting Employment Within Ethnic Enclave | 139 |
| Table 5.7: Logit Coefficient Estimates for Employment Seeking and Employment Status for Different Status Occupations | 142 |
| Table 6.1: Characteristics of the Sample | 166 |
| Table 6.2: Mother Tongue Related Characteristics of the Sample | 167 |
| Table 6.2: Logit Coefficient Estimates of Language Proficiency as a Human Capital Factor Affecting Skills Utilization | 168 |
| Table 6.4: Logit Coefficient Estimates of Language as a Dimension of Ethnicity Affecting Skills Utilization | 170 |

LIST OF FIGURES

| | |
|---|-----|
| Figure 2.1: Model of Linguistic Integration | 27 |
| Figure 3.1: Model of Linguistic Integration at Arrival | 32 |
| Figure 4.1: Model of Linguistic Integration After Migration | 79 |
| Figure 5.1: The Effect of English Language Proficiency on Labour-Market Integration | 116 |
| Figure 6.1: The Effect of English Language Proficiency on Skills Utilization | 153 |

LIST OF APPENDICES

| | |
|--|-----|
| Appendix 3.1: Definitions for Variables Used in Chapter 3 | 56 |
| Appendix 3.2: Determinants of English Proficiency in Each of Speaking, Reading and Writing Dimensions | 58 |
| Appendix 3.3: Language Proficiency for Immigrants with Work Experience from Countries with Globalization Ranking | 66 |
| Appendix 3.4: Macro-Level Factors of the Source Countries | 73 |
| Appendix 4.1: Definitions for Variables Used in Chapter 4 | 96 |
| Appendix 4.2: Definition of Political Party in Power | 98 |
| Appendix 4.3: Determinants of Speaking, Reading, and Writing Proficiency Four Years after Migration | 99 |
| Appendix 5.1: Definitions for Variables Used in Chapter 5 | 140 |
| Appendix 5.2: Employment Seeking and Employment of Recent Immigrants to Canada for Different Status Occupations | 142 |
| Appendix 6.1: Definitions for Variables Used in Chapter 6 | 172 |

CHAPTER ONE

INTRODUCTION

1.1. CANADIAN IMMIGRATION POLICY: OVERVIEW AND TRENDS

During the last several decades, the demographic and economic structure of the Canadian labour market has experienced major shifts. The demographic changes are associated with the lower fertility rate and aging of the workforce. The economic structural shift is marked by the movement toward a knowledge-based economy, which relies on a highly qualified labour force, innovation, and technology with the goal of promoting international competitiveness (Baldwin and Beckstead, 2003).

Responding to the pressures associated with these changes, the Canadian government has concentrated its efforts on long-term economic strategies, focusing on sustainability of the labour force. The migration policy is designed to recruit workers who would successfully supplement the knowledge-based labour force as well as replenish the general and working-age population.

In implementing the policy, the Canadian government has increased the number of immigrants over the past 25 years; immigrant inflow increased from 83,402 per year in 1985 to 152,098 in 1987, and to 250,000 in 1993, levelling off at 200,000 to 250,000 thereafter (Green and Green, 2004). This increase in the inflow rate demonstrates the importance of immigration and reflects the federal government's commitment to use migration to supplement the growth of the Canadian workforce.

The effects of immigration policy on the labour market can be measured, in part, by the economic performance of immigrants upon arrival in Canada (Borjas, 1994a; Bloom et al., 1995; Dustmann, 1997; Aydemir and Skuterud, 2005). Research suggests that more recent immigrants are less successful in labour-market integration than immigrants of earlier cohorts. This downward trend may manifest through decreased labour-market participation, increased unemployment, increased entry-level gap in earnings, lower earnings, and decreased skills utilization.

The results of empirical studies and statistical reports demonstrate that recent cohorts are more predisposed to lower labour-market participation and higher unemployment (Espenshade et al. 2001; Kahn, 2004; Lewin-Epstein et al., 2003; McDonald and Worswick, 1997).

The issue of skill underutilization of internationally trained professionals has also become more prominent in recent years. The Conference Board of Canada estimated that 60 percent of recent immigrants do not use education and skills acquired abroad in their current employment (Alboim et al., 2005). The Longitudinal Survey of Immigrants to Canada (Wave 1) found that six out of ten working immigrants are not employed in their intended occupational field. According to the Wave 2 data, among immigrants in the Skilled Workers category (age 25 to 44), only 48 percent found a job in their intended occupation. The results are similar in both natural and applied sciences as well as related occupations that require formal licensing (Statistics Canada, 2003).

The theoretical explanations of poor labour-market integration of recent immigrants vary. First, supporters of human capital theory argue that successful integration depends on such human capital factors as education, occupation, skills, and experience. One such factor is the ability of immigrants to meet English language proficiency requirements. Recent immigrants demonstrate considerably lower English proficiency than earlier cohorts (Borjas, 1994a; Espenshade and Fu, 1997; Ferrer et al., 2006; Chiswick and Miller, 1999, 2001; Picot and Sweetman, 2005). This trend is attributed to the shift from the traditional central and northern European (Carliner, 2000) to recent immigrant source countries — nations of the developing world. Newcomers arriving from these countries may experience difficulty meeting the English proficiency requirements necessary to successfully enter the Canadian labour market (Aydemir and Skuterud, 2005).

Second, the environment faced by immigrants both prior to and following migration is proposed to be an important determinant of successful integration. Researchers propose that characteristics of the source and destination countries, namely political, economic, and social structure, play a major role in assimilation (Portes and Borocz, 1989; van Tubergen and Kalmijn, 2005; van Tubergen et al., 2004).

Third, the change in the demographic composition of the workforce may lead to a multitude of issues including managing diversity in terms of the social, economic, and labour-market integration of recent immigrants. According to the 2001 Census data, 18.4 percent of all respondents were born outside of Canada; this is the highest proportion of foreign-born individuals in the last 70 years (Statistics Canada, 2003a). The shift to the recent source countries has produced a diverse mix of ethnic, racial, and cultural backgrounds. In the 2001 Census, Canadians reported to represent over 200 ethnicities (Statistics Canada, 2003a). This diversity may lead to stereotyping and discrimination against immigrants, thus resulting in their lower

labour-market integration (Lindemann, 2005; Lippi-Green, 1997; Picot and Sweetman, 2005; Portes and Rumbaut, 2001; Wang, 2002). Some examples include systematic undervaluation of international credentials, both educational and employment related, and increased barriers to obtaining licences or certification through Canadian professional organizations (Alboim et al., 2005; Bloom et al., 1995; Li, 2001; Picot, 2004; Picot and Sweetman, 2005; Reitz, 2001).

1.2. OVERVIEW OF THE THESIS

This thesis, following the industrial relations tradition of interdisciplinary research, applies human capital theory, macro-level factors theoretical framework, social distance theory, non-standard English language research, and cognitive categorization theories.

The thesis begins with Chapter 2, “Introduction and Theory Overview,” in which a thorough review of the literature is conducted and a theoretical model of linguistic integration is presented. The model merges the predictions of human capital theory with macro-level factors of the source as well as the destination countries’ framework. Empirical implications of the model of linguistic integration are then discussed in the next two chapters.

Chapters 3 and 4, “The Determinants of English Language Proficiency at Arrival” and “The Determinants of English Language Proficiency after Migration,” are dedicated to the application of human capital theory and macro-level factors of the source and destination countries’ framework. A linguistic integration model is developed that integrates human capital as well as macro-level characteristics of the source and destination countries. Chapter 3 explores the role of human capital and macro-level characteristics of the source country in the immigrant’s English proficiency upon arrival. Chapter 4 investigates the role of the destination country’s macro-level factors alongside human capital endowments in English proficiency four years after migration.

Chapter 5, “The Role of English Language Proficiency in Labour-Market Integration Outcomes,” considers the role of English proficiency in the labour-market integration of recent immigrants. A conceptual framework is developed that disentangles the role of overall English proficiency in such employment-related outcomes as employment seeking and incidence of employment. This chapter also examines the role of English proficiency in non-standard employment outcomes, such as ethnic enclave employment.

Chapter 6, “English Language Influence on Skills Utilization,” examines the role of English proficiency in immigrants’ skills utilization in the Canadian workplace. A conceptual model

captures the effect of English proficiency on skills utilization from human capital theory and language as a dimension of ethnicity framework perspectives. Two sets of hypotheses are tested directly — one that concentrates on language as a human capital factor and another that considers it an indicator of ethnicity.

CHAPTER 2

LINGUISTIC INTEGRATION OF RECENT IMMIGRANTS TO CANADA: INTRODUCTION AND THEORY OVERVIEW

2.1 INTRODUCTION

To date, few studies of linguistic integration of recent immigrants to Canada have been conducted. Such research, however, is essential since recent immigrants have been found to integrate into the economic and labour market with less success than the earlier cohorts (Bloom et al., 1995; Ferrer et al., 2003; Picot, 2004; Aydemir and Skuterud, 2005). This could be attributed to a divergence in level and quality of such human capital characteristics as education, occupation, skills, and experience between earlier and more recent immigrants.

The ability to meet English proficiency requirements is another important factor facilitating immigrants' incorporation into the labour force. Empirical evidence indicates that recent immigrants demonstrate considerably lower English proficiency when compared to earlier immigrant groups (Borjas, 1994a; Espenshade and Fu, 1997; Ferrer et al., 2003; Chiswick and Miller, 1999, 2001; Portes and Rumbaut, 2006). This trend is attributed to the shift from the traditional western European source countries (Carliner, 2000) to more recent source countries (Bloom et al., 1995), the majority of which represent nations of the developing world. To illustrate, of all those admitted to Canada in 1981, over 44 percent of immigrants came from Europe and the United States, 38 percent from Asia, 4 percent from Africa, and 14 percent from South America, the Caribbean, and other regions (Citizenship and Immigration Canada, 2006). In 2001, however, 72 percent of all immigrants admitted to Canada were from Asia, Africa, and Eastern Europe (Aydemir and Skuterud, 2005; Picot and Sweetman, 2005).

Two widely recognized theoretical approaches examine what constitutes and determines a destination country's language proficiency of immigrants. The first, human capital theory, considers official language proficiency as a major human capital attribute since it stimulates labour-market participation and positively influences employment returns. This theory suggests that language proficiency is a function of exposure, efficiency, and economic incentives (Dustmann, 1997; Espinosa and Massey, 1997; Carliner, 2000; Chiswick and Miller, 2001, Chiswick et al., 2004). While analysis of the effect of human capital on a destination country's

language knowledge has been extensive, the studies have not systematically examined the role of the environment in language acquisition.

The second approach deals with the role of environment or macro-level factors in acquisition of official language knowledge. Portes and Borocz (1989) propose that even though individual human capital characteristics are important determinants of language proficiency, the influence of economic, political, and social structures of both the source and the destination country should also be considered. To account for the environment of the source and destination countries, these authors developed the Typology of Modes of Incorporation of Contemporary Immigrants to the Advanced Countries. While the Typology is a useful theoretical tool in understanding the role of environment, it has not been extensively empirically tested.

This theoretical framework has been recently extended and empirically tested by van Tubergen and Kalmijn (2005), who incorporated the context of the immigrant's exit and reception into the analysis of linguistic integration. The authors examined the effects of macro-level factors, including origin, destination, and setting, on language proficiency. They found that the favourable macro-level factors of both the source and destination countries contributed significantly to higher language proficiency. The authors, however, were unable to examine how macro-level factors affect the linguistic integration of immigrants to Canada, citing the limitations and inconsistencies of the Census Canada dataset.¹ Additionally, van Tubergen and Kalmijn were unable to separate the macro-level factors associated with the source and destination countries.

The remainder of this chapter is divided into three sections. Section 2 examines the official language proficiency predictions that arise from human capital theory and research on the effect of macro-level factors in the integration process by concentrating on acquisition of, as well as proficiency in, the official language. Section 3 presents the summary and limitations of recent empirical research. Section 4 focuses on the development of the theoretical framework that will be tested empirically in Chapters 3 and 4. The theoretical framework is synthesized in the Linguistic Integration Model that combines the theories examined in the first two sections.

¹ The question on language proficiency in the 1991 and 1995 Census of Canada deviated from that of other nations' census questions on language proficiency. The measure of language knowledge separated those who speak English well enough to carry a conversation from those who did not.

2.2 THEORY REVIEW

2.2.1 HUMAN CAPITAL THEORY

2.2.1.1 LANGUAGE AS A HUMAN CAPITAL ATTRIBUTE

The primary focus of human capital theory is labour supply, and more specifically, worker qualifications. Human capital is comprised of both the innate and acquired characteristics that influence workers' productivity and, consequently, economic returns.

Acquired human capital attributes include education, training, labour-market information, mobility, and labour market experience. Language proficiency is also an acquired human capital attribute since it is embodied in a person and is productive in nature (Chiswick and Miller, 1999, 2001). Having defined language proficiency as a human capital characteristic, it is necessary to ascertain its determinants.

2.2.1.2 A MODEL OF LANGUAGE SKILLS

A model of language skills, developed and tested by Chiswick and Miller (1999, 2001, 2002), and Chiswick et al. (2004), identifies and examines language as a human capital attribute. According to the model, proficiency in the official language of a destination country is a function of exposure, efficiency, and economic incentives. Each element of the model consists of factors serving as either a benefit or detriment to language proficiency. The model is specified as:

Official Language Proficiency = f [exposure, efficiency, economic incentives].

Exposure to the destination country's official language is divided into exposure before and after migration. Exposure is gained through interaction with people with some knowledge of the destination country's language. These individuals could be parents, partners, teachers, neighbours, or work colleagues. Before migration, exposure may occur through formal education, utilization of the language at work or in everyday life, or travelling to a country where the destination country language is either official or dominant. After migration, the degree of language exposure is influenced by additional education, marriage, residing or being employed within an ethnic enclave, or having children. Overall exposure generally increases with the duration of stay in the destination country.

Efficiency is defined as the rate of language knowledge improvement, given the intensity of exposure. It is generally assumed that successful learning of a new language is associated with favourable observed and unobserved human capital. The level of improvement is determined by, among other characteristics, the age at which the acquisition begins; age at migration; individual learning ability indicated by level of education; linguistic distance between the immigrant's mother tongue and English (in the case of immigration to an English-speaking country); and the category to which the immigrant was assigned when admitted into the country.

Economic incentives for language acquisition depend on employment-related and consumption benefits associated with the destination country's language proficiency. Since language skills potentially improve economic status, the individual would deliberately invest in their development. The degree of investment before and after migration would depend on the magnitude of costs and expected benefits. With respect to employment-related benefits, wages appear to be the ideal indicator. However, wage changes and language knowledge improvements are endogenous. Wages may increase for employees who improve their language skills; in reverse, immigrants may wish to improve language to receive higher wages. This creates an empirical challenge of selecting proxies for economic incentives. Chiswick et al. (2004) utilized other variables as proxies for economic incentives, including the intention to return to the country of origin and citizenship plans. Migration motives, such as family reunification or migrating for political reasons, may offer an alternative proxy of economic incentives of linguistic integration. Expected duration of stay, likelihood of return migration, probability of employment, geographic distance from the source country, and permanent versus temporary settlement intentions are also potential proxies.

2.2.2 MACRO-LEVEL PERSPECTIVES

The human capital model does not fully consider macro-level factors (Lazear, 1995). Immigration and settlement take place within the political, social, economic, and cultural environment of both the source and destination countries. Immigrants from a particular source country are subject to the influence of the macro-level characteristics of that country. After arrival in the destination country, however, settlement patterns vary depending on the environment in which the migrant group lives (Bloom et al., 1995). Research examining the role of the destination country's society in immigrants' integration process is very limited (Portes, 1999). To study the integration process, the phenomenon of migration should be examined more

thoroughly by focusing on the political, social, and economic structure of the source and destination countries.

2.2.2.1 TYPOLOGY OF MODES OF INCORPORATION

In an effort to establish a conceptual role of the source and destination countries in the integration process, Portes and Borocz (1989) developed the Typology of Modes of Incorporation of Contemporary Immigrants to the Advanced Countries. The authors propose that contemporary immigrants follow different integration paths; they argue that settlement patterns depend on three groups of factors: conditions of exit, class origin of immigrants, and context of reception.

Political conditions of the source country are of particular importance in the analysis of immigrant integration outcomes. They include the process of the formation and transformation of states, authoritarian control, and violence (in general or against particular segments of the population). To illustrate, refugees fleeing a source country for political reasons may be inadequately prepared to integrate into the destination country, while economically assessed immigrants are more likely to arrive with a strong human capital base.

Variations in the context of reception of immigrants, including government policy, public opinion, and labour-market treatment, may channel newcomers with similar endowments into very different paths of integration (see Table 2.1).

Table 2.1

A Typology of Modes of Incorporation of Contemporary Immigrants to the Advanced Countries

| Context of Reception | Professional-Technical Class of Origin |
|-----------------------------|---|
| Handicapped | Ghetto Service Providers |
| Neutral | Primary Market Incorporation |
| Advantaged | Upward Mobility to Positions of Professional and Civil Leadership |

In the *handicapped context of reception*, immigrants face low receptivity from the government, employers, and society as a whole. Under such circumstances, the government restricts or regulates the size and selection of immigrant inflows and provides limited or no financial support, employers assign lower market value to such entrants' qualifications, and the public views and treats the newcomers unfavourably. This settlement pattern is precarious, with disadvantages persisting over time and opportunities being limited or blocked permanently.

The *neutral and advantaged contexts of reception*, however, are characterized by the absence of such limitations. In these conditions, immigrants receive significant legal and material assistance as well as favourable social reception, allowing them to utilize existing skills and qualifications while also developing new ones. As a result, immigrants encounter fewer barriers to labour-market integration when compared to the handicapped context of reception.

The *Typology of Modes of Incorporation* represents a breakthrough in the immigrant integration conceptual framework as it uncovers the importance of both conditions of exit and context of reception. Each factor is predicted to play a separate role in immigrant incorporation, resulting in different patterns of settlement. While the *Typology of Modes of Incorporation* approach was introduced as a conceptual framework, it does not appear to have been empirically tested in previous studies.

2.2.2.2 MACRO PERSPECTIVE OF DESTINATION LANGUAGE PROFICIENCY

The theoretical framework advanced by van Tubergen and Kalmijn (2005) highlights the importance of environmental factors of both the source and destination countries in linguistic integration. In an attempt to explain fluctuations in language proficiency among immigrants with similar individual characteristics, the authors proposed that the contextual aspects of the source and destination countries may affect language proficiency, leading to differential linguistic integration of immigrant groups. Van Tubergen and Kalmijn grouped the macro-level factors into those related to source country, destination country, and setting effects.

The authors proposed that certain macro-level characteristics of the source country potentially influence immigrants' proficiency in the destination language, including participation in the global economy, level of economic development, political conditions, and religion.

Conditions of the destination country may also influence immigrants' language proficiency. This may occur through exposure to language, economic incentives, and investment into language improvement, depending on the location of residence in the destination country. Among the destination country's effects, van Tubergen and Kalmijn identified the political party in power and degree of anti-immigrant prejudice as two key factors.

Van Tubergen and Kalmijn also argued that some factors belong to both the source and the destination countries, grouping these factors in "setting effects." Setting effects include such factors as the source country being a British colony, linguistic distance between the official

languages of the source and destination countries, size of the immigrant group, and geographic distance between the source and destination countries.

2.3 REVIEW OF EMPIRICAL RESEARCH

This section summarizes and discusses the empirical research on the determinants of destination language proficiency. Particular attention is paid to studies examining English knowledge determinants and those based on Canadian data.

2.3.1 LANGUAGE PROFICIENCY MODEL

Human capital theorists argue that language proficiency is associated with other human capital characteristics of immigrants. Therefore, the diminished destination language proficiency of recent immigrants can be attributed to a lower quality of their human capital (Borjas, 1994a; Espenshade and Fu, 1997; Chiswick and Miller, 1999; Ferrer et al., 2003; Aydemir and Skuterud, 2005). The following summarizes findings of earlier research that examined the relationship between human capital indicators and English proficiency.

2.3.1.1 EDUCATION

Education enhances the efficiency of learning; an individual whose ability to absorb and retain knowledge is enhanced by means of formal or informal education or self-study may use this ability when learning a new language. To obtain support for this prediction, education attained in the source country should have a positive effect on destination language skills.

The empirical evidence suggests that the probability of English fluency increases with educational attainment (see Table 2.2). English speaking ability of immigrants with lower levels of education is found to be significantly lower when compared to more highly educated immigrants (Espinosa and Massey, 1997). Carliner (2000) found that the probability of speaking the destination language well increases with each level of education attained in the source country.

It is important to note that the above positive effect is not limited to secondary or postsecondary education; additional education of any type contributes to a higher probability of English-speaking fluency (Shields and Price, 2002). For example, completion of an English as a Second Language course is associated with increased probability of improvement of both oral (listening and speaking) and literacy (reading and writing) competencies (Gonzalez, 2000).

Education acquired in the destination country is found to have a greater influence on language proficiency than education attained in the source country (Dustman, 1997; Espenshade and Fu, 1997). Therefore, to clearly understand the relationship between education and language knowledge, it is imperative to evaluate the effects of education obtained in the source country separately from education obtained in the destination country.

Education affects immigrants' oral (speaking and listening) and literacy (ability to read and write) fluency differently. Education obtained in both the source and destination countries is found to have a stronger effect on writing skills than on speaking skills. Each additional year of secondary school studies completed in the source country increases literacy skills more than it increases listening and speaking proficiency (Dustman, 1997; Gonzalez, 2000). These results imply that learning to read and write requires a consistent effort and a systematic approach. Since these competencies are more technical, substantial investments of time and effort are required (Dustman, 1997).

To the author's knowledge, no recent research based on Canadian or U.S. data has investigated the influence of education attained in the source versus destination country on either overall English language knowledge or proficiency in reading or writing.

Table 2.2

Education and Language Proficiency

| Study | Dependent Variable | Method | Summary |
|---------------------------|---|----------------|--|
| Carliner, 2000 | English Speaking | OLS, Logit | <ul style="list-style-type: none"> Each level of education significantly increases probability of English fluency |
| Espinosa and Massey, 1997 | English Speaking | Ordered Probit | <ul style="list-style-type: none"> Odds of speaking proficient English rise as level of education increases |
| Shields and Price, 2002 | English Speaking, Writing | Ordered Probit | <ul style="list-style-type: none"> Education improves the probability of spoken English language fluency Education in both source and destination countries has stronger effect on writing than speaking abilities |
| Dustman, 1997 | German Speaking, Reading, Writing | Ordered Probit | <ul style="list-style-type: none"> The effect of education is positive and significant on both reading and writing abilities The positive effect of education obtained in Germany is stronger, increasing the probability of speaking and writing German language |
| Espenshade and Fu, 1997 | English Speaking | Ordered Logit | <ul style="list-style-type: none"> Education in the source country and the United States positively affects spoken English proficiency, with education received in the United States having larger impact Immigrants who currently attend school have the largest improvement in spoken English skills |
| Gonzalez, 2000 | English Speaking, Reading, Writing, Understanding | Ordered Probit | <ul style="list-style-type: none"> Each year of secondary school in the source country increases the probability of literacy skills more than probability of oral proficiency ESL course completion in the destination country is associated with higher probability of both oral and literacy skills |

2.3.1.2 AGE

Age affects one's ability to learn and retain new information. Efficiency with which younger people acquire new knowledge is believed to be greater than that of older adults.

Earlier studies generally agree with respect to the role of age in an individual's ability to acquire language skills: older age at migration negatively affects immigrants' fluency in the destination country's language (Espenshade and Fu, 1997; Espinosa and Massey, 1997; Chiswick and Miller, 2001; Shields and Price, 2002; Chiswick et al., 2004). Gonzalez (2000) found that this effect is consistent across all linguistic competencies: speaking, reading, listening, and writing (see Table 2.3).

The age at migration influences the language proficiency of men and women differently. Dustmann (1997) found that while being older is negatively associated with language proficiency for both genders, the effect is even more pronounced for women.

Table 2.3
Age and Language Proficiency

| Study | Dependent Variable | Method | Summary |
|----------------|---|----------------|---|
| Gonzalez, 2000 | English Understanding, Speaking, Reading, Writing | Ordered Probit | <ul style="list-style-type: none"> ▪ Arriving later in life is associated with lower odds of proficiency across all competencies |
| Dustman, 1997 | German Speaking, Writing | Ordered Probit | <ul style="list-style-type: none"> ▪ For men, being 10 years older is associated with the reduced probability of speaking or writing German language well or very well by 21 percent and 10 percent respectively ▪ For women, respective reduction of the probability of fluency is 19 percent and 20 percent |

2.3.1.3 GENDER

Only a few studies have included gender in the analysis of official language proficiency (see Table 2.4). Espinosa and Massey (1997) found that female immigrants from Mexico to the United States tend to have inferior English-speaking skills. The effect was not statistically significant, which could be attributed to the small sample of women in the study. Another study examining English proficiency among Mexican migrants to the United States found that women exhibit significantly lower speaking fluency than men (Espenshade and Fu, 1997).

The effect of being a female on destination language skills is consistent across various destination countries. For example, only one-third of female immigrants to Germany reported the ability to speak German well or very well as opposed to almost half of their male counterparts. The difference in writing skills, while present, was not as great (Dustmann, 1997).

Carliner (2000) found that women who immigrate to join their husbands report lower English skills at entry. The author argued that the results might be due to lower economic incentives, as these women are not generally primary applicants or breadwinners. This difference should not be as pronounced for women who are primary applicants in the skilled-worker category under the Citizenship and Immigration Canada definition. Being assessed on their economic potential, these women have ample incentive to learn English as it becomes a major skill necessary both

for gaining entry to Canada (potential consumption benefits) and for obtaining higher economic status once in Canada (potential labour-market benefits). The evidence also shows that women with fewer years in the labour force than men have lower language skills improvement over time (Carliner, 2000). The difference in proficiency may be attributed to differential levels of language exposure.

Table 2.4

Gender and Language Proficiency

| Study | Dependent Variable | Method | Results |
|---------------------------|----------------------------|----------------|---|
| Dustmann, 1997 | German Speaking Writing | Ordered Probit | <ul style="list-style-type: none"> ▪ 33% of women report ability to speak German well or very well in contrast to 46% of men ▪ The difference in writing skills is not as considerable, with men being only 4% ahead of women |
| Espinosa and Massey, 1997 | English Speaking | Ordered Probit | <ul style="list-style-type: none"> ▪ Women from Mexico tend to have inferior English-speaking skills ▪ Relationship is not statistically significant |
| Espenshade and Fu, 1997 | English Speaking | Ordered Logit | <ul style="list-style-type: none"> ▪ Women exhibit significantly inferior English-speaking ability ▪ The odds that females are in the lower language category are 34% higher than the comparable odds for men |
| Carliner, 2000 | English Speaking | OLS Logit | <ul style="list-style-type: none"> ▪ Women who immigrate to join their husbands have lower English skills at entry ▪ If women participate in the labour market less than men do, their English skills improve less over time |

2.3.1.4 LABOUR-FORCE PARTICIPATION

Labour-force participation is expected to be positively related to English proficiency. Past research found that immigrants who do not participate in the labour force are least likely to be proficient in English (Espenshade and Fu, 1997).

This effect may be attributed to greater language exposure within the work environment. While working, individuals are often required to communicate with fellow employees, supervisors, or customers. These interactions stimulate not only speaking skills, but also the ability to understand spoken language. However, this holds true only if the immigrant is working for an organization where English is the dominant language. Exposure to English may be diminished in workplaces where employees speak a language (or where the official language of the company is) other than English.

It is also important to note that the relationship between labour-force participation and language fluency may be endogenous. There appears to be no research that examined the relationship between the language of the workplace and workers' English knowledge.

2.3.1.5 OCCUPATION TYPE

Occupation type may affect English proficiency by influencing the level of exposure to English and offering economic incentives to learn English. Since past surveys have had inadequate occupation information, no known studies have examined the relationship between occupation that the immigrant held in the source country and language knowledge of the destination country.

2.3.1.6 YEARS SINCE MIGRATION

Improvement of English skills has not always been found to be associated with length of residency. While some studies found that years since migration significantly contribute to an increase in the probability of English-speaking fluency (Espinosa and Massey, 1997; Gonzalez, 2000; Shields and Price, 2002), others found no such relationship (Carliner, 2000) (see Table 2.5).

Research suggests that only immigrants with advanced speaking skills benefit from time spent in the destination country. Having found no significant effect of the number of years in the United States on English proficiency for respondents with poor language skills, Bellante and Kogut (1998) argued that the development of human capital through experience is possible only for individuals with advanced English skills.

Gonzalez (2000) examined English proficiency by utilizing the 1992 National Adult Literacy Survey in the United States. The survey contained data on understanding, speaking, reading, and writing abilities. The author found that years since migration have a positive effect on English proficiency. However, the relationship between the number of years since migration and linguistic integration is not linear, and differs by specific competency. Gonzalez (2000) found that during their initial 20 years in the United States, immigrants are more likely to develop oral skills than literacy skills. Improvement in literacy skills becomes apparent only after the first 20 years in the country. Such results may be attributed to the complexity of acquiring literacy competencies, which requires a more a systematic approach than mere exposure to the language.

Table 2.5

Years Since Migration (YSM) and Language Proficiency

| Study | Dependent Variable | Method | Summary |
|---------------------------|---|----------------|---|
| Shields and Price, 2002 | English Speaking | Probit | <ul style="list-style-type: none"> ▪ YSM significantly contribute to the increase of the probability of English-speaking fluency |
| Gonzalez, 2000 | English Understanding, Speaking, Reading, Writing | Probit | <ul style="list-style-type: none"> ▪ YSM is associated with a higher probability of proficiency ▪ The effect differs: <ul style="list-style-type: none"> ○ Higher probability of oral proficiency in first 20 years ○ After 20 years, more likely to improve reading and writing |
| Bellante and Kogut, 1998 | English Speaking | | <ul style="list-style-type: none"> ▪ No significant effect of YSM in the U.S. for immigrants with low English proficiency |
| Carlner, 2000 | English Speaking | OLS Logit | <ul style="list-style-type: none"> ▪ No relationship between YSM and spoken English proficiency |
| Espinosa and Massey, 1997 | English Speaking | Ordered Probit | <ul style="list-style-type: none"> ▪ The odds of speaking proficient English rise significantly with increase in time spent in the U.S. |

2.3.1.7 LANGUAGE SPOKEN AT HOME

Earlier research that utilized Canadian Census data defined language proficiency as a measure of the ability to speak English as well as the degree of utilization of the official (English) language at home. Chiswick and Miller (2001) included speaking English versus a non-official language at home as a measure of English ability and practice. They found that speaking English at home is significantly related to English proficiency.

While using a non-official language at home may diminish an individual's exposure to English, the assumption that all respondents who report speaking only English at home are proficient in English may lead to unreliable estimates. For example, individuals who are proficient in English may continue speaking their mother tongue at home, while others with substandard English may speak English only at home. It is, therefore, important to understand the relationship between the use of non-official languages at home and English proficiency.

2.3.1.8 IMMIGRATION CATEGORY

In accordance with the requirements of the Citizenship and Immigration Canada's "Point System" selection criteria, each applicant declares his or her proficiency in one or both official

languages. With only basic or lower-level official language knowledge, the applicant receives zero points for language proficiency, which reduces the probability of him or her being granted a permanent resident visa. The point system is a mechanism that selects potential immigrants capable of demonstrating at least intermediate overall official language proficiency before entry to the country. The system, however, does not apply to refugees or individuals who join their families in Canada, since individuals in these categories have different reasons for immigration than economically assessed immigrants.

Evidence indicates that economically assessed immigrants in Australia have significantly better knowledge of English than refugees or family joiners. The magnitude of the relationship between the immigration category and language skills, however, tends to weaken over time in the destination country (Chiswick et al., 2004).

2.3.2 MACRO-LEVEL FACTORS

Immigration does not occur in a vacuum; it is imbedded in the social, political, cultural, and economic conditions of both the source and destination countries. Bloom et al. (1995) found that successful economic integration of immigrants varies depending on their region of origin as well as on the economic situation of the destination country. Past research included various environmental (macro-level) factors in the analysis of destination language proficiency. The following is a brief summary of the results of earlier research.

2.3.2.1 SOURCE-COUNTRY ECONOMIC DEVELOPMENT

Borjas (1994a) proposed that the economic development of the source country influences proficiency in the destination language. The effect may be explained by unequal income distribution, where immigrants from less developed countries have fewer opportunities to acquire knowledge and skills, including language proficiency. Recent empirical results measuring the level of economic development as gross domestic product (GDP) per capita, however, lend no support to this hypothesis (see Table 2.6). Carliner (2000) found that being from a less developed country does not predict lower English language skills for immigrants to the United States. Van Tubergen and Kalmijn (2005) also found no relationship between the economic development of the source country and immigrants' language proficiency.

Table 2.6

Source-Country Economic Development and Language Proficiency

| Study | Dependent Variable | Method | Summary |
|-------------------------------|--------------------------------------|--|--|
| Carliner, 2000 | English Speaking | OLS, Logit | No relationship between spoken English language knowledge and economic development of the source country |
| Van Tubergen and Kalmijn 2005 | Multiple Languages, Speaking Ability | Ordered-logit, Multinomial-logit, Multilevel nonhierarchical model | Economic development is not a significant predictor of destination spoken language skills |

2.3.2.2 LINGUISTIC AND SOCIAL DISTANCE

Source countries differ in terms of official language, as well as social and cultural structure. Lazear (1995) proposed that the difference in destination language proficiency might be attributed to a disparity in linguistic distance, as well as to social and cultural differences between immigrant groups. The rationale for this argument is that immigrants from more linguistically and/or socially distant source countries may have less exposure to English and, therefore, lower proficiency. In contrast, immigrants from former colonies and countries that have English as their official or dominant language have greater exposure to English and thus higher language knowledge.

Carliner (2000), when examining language proficiency of recent immigrants to the United States, found only partial support for the linguistic distance hypothesis. On one hand, immigrants from more distant linguistic groups exhibit higher or similar English language skills when compared to those speaking Spanish, a linguistically closer language. However, immigrants who speak other European languages that are linguistically close to English do not exhibit more advanced English language skills when compared to their counterparts from distant linguistic clusters, such as Arabic, Urdu, and Hindi. The author also found that being from an English-speaking country increases the probability of English proficiency, with almost all immigrants reporting speaking only English or speaking it very well.

Another study conducted by Shields and Price (2002), using British data, found only partial support for the linguistic distance hypothesis. The authors found that, all other factors being equal, Black Caribbean and African immigrants are the most likely to be fluent in English, while Pakistani, Indian, and Bangladeshi immigrants are the least likely. These results indicate that

potential cultural differences with respect to the country of origin may make it difficult for immigrants to acquire the destination language (Portes and Rumbaut, 2001).²

Chiswick et al. (2004) found that during the first months after arrival, the relationship between linguistic distance and English proficiency of immigrants to Australia was statistically significant. The relationship becomes insignificant after two years of residency in the country.

The analysis of the linguistic distance between the source and destination countries is not limited to English. Dustmann (1997), when analyzing German language determinants, obtained statistically significant support for the linguistic distance hypothesis. He found that immigrants from linguistically closer countries, such as Yugoslavia, have a higher probability of speaking and writing German well when compared to Spanish speakers, the reference group. Immigrants from Turkey, whose official language is more distant than Yugoslavian from German, did not, however, demonstrate significantly lower fluency when compared to the reference group.

One of the most recent studies conducted by van Tubergen and Kalmijn (2005) attempted to further the understanding of the social distance effect on destination language proficiency. The authors utilized the concept of dominant religion of the source country as a proxy for the social distance between the source and destination countries. Social distance was defined as the willingness to be associated with other groups. All destination countries in the analysis had Christianity as the dominant religion. The results did not find the relationship between the Christian religion and destination language proficiency to be significantly higher than that of other religions.

These inconclusive results imply that other confounding factors influence the relationship between the linguistic and social distance characteristics of the source country and language proficiency in the destination country. One plausible explanation is purposeful learning of the destination language before migration. People planning to migrate to an English-speaking country may be more inclined to study English; likewise, people who have studied English may be more likely to emigrate (Carliner, 2000). Furthermore, being from a country with an official language distant from English may not deter immigrants from attaining English proficiency in school or through self-study.

² According to Portes and Rumbaut (2001), distinctions in culture, physical appearance and socioeconomic background are associated with social distance.

2.3.2.3 MINORITY LANGUAGE CONCENTRATION

Social and cultural differences between immigrant groups, such as the size and cohesion of the ethnic community, may affect the degree of improvement in the official language after migration (Lazear, 1995; Dustmann, 1997). Concentration of non-official language speakers within one community may have a negative impact on the acquisition of the official language.

Concentration of immigrants in residential ethnic enclaves inhibits exposure to the destination language. Research examining the role of minority language concentration in ethnic residential enclaves has produced mixed results (see Table 2.7).

An early study found that concentration of non-official language speakers in one neighbourhood is associated with significantly lower language proficiency (Chiswick and Miller, 1995). A more recent study by Shields and Price (2002), using British data, examined several levels of minority language concentration, from having none to having more than 30 percent of individuals of the same ethnic or cultural background living in the same area. The authors found that for ethnic minority men in London, living among higher concentrations of their own ethnicity decreases English fluency significantly when compared to men in low ethnic-concentration neighbourhoods. However, the evidence also suggests that immigrants who live among more than 33 percent of their own ethnic group exhibit no significantly lower fluency than those from low ethnic-concentration neighbourhoods.

Evidence from the United States is also mixed, offering only partial support for the minority language concentration hypothesis. Concentration of the immigrant population in large metropolitan areas of the United States negatively affects the level of English-speaking proficiency when compared to immigrants who are more residentially integrated (Espenshade and Fu, 1997). At the same time, Carliner (2000) found that living in ethnic enclaves does not predict lower English skills.

When examining immigrants to Germany, Dustman (1997) concluded that living in locations where neighbours are of the same ethnic background statistically significantly reduces the probability of being fluent in German.

The minority language concentration research has not considered the social role of ethnic neighbourhoods. Ethnic communities may become self-sufficient in terms of offering the necessary social and cultural opportunities, thus removing a sense of urgency for learning the

official language. Socializing within an ethnic community may contribute to lower exposure to the destination language more than residing within such a community.

Table 2.7

Minority Language Concentration and Language Proficiency

| Study | Dependent Variable | Method | Summary |
|-------------------------|-----------------------------------|----------------|--|
| Dustmann, 1997 | German Speaking, Reading, Writing | Ordered Probit | <ul style="list-style-type: none"> ▪ Living in minority language concentration neighbourhood reduces the probability of being fluent in official language by 9.8 percent |
| Espenshade and Fu, 1997 | English Speaking | Ordered Logit | <ul style="list-style-type: none"> ▪ Negative and significant relationship between living in minority language concentration neighbourhood and spoken English skills |
| Carliner, 2000 | English Speaking | OLS Logit | <ul style="list-style-type: none"> ▪ Living in ethnic enclaves does not predict lower English skills |
| Shields and Price, 2002 | English Speaking | Ordered Probit | <ul style="list-style-type: none"> ▪ Living among 15 – 33 percent of one’s ethnicity decreases English fluency significantly when compared to the base group, 0 – 5 percent ethnic density ▪ Living among more than 33 percent of one’s ethnic group exhibit no significantly lower fluency than those in the low ethnic concentration group |

2.3.2.4 GEOGRAPHIC DISTANCE

Geographic distance between the source and the destination countries is thought to play a role in terms of an economic incentive for language learning. The cost of migration is assumed to be higher for nations located farther from the destination country. In addition, immigrants who travel longer distances are considered less likely to return to the source country (Chiswick and Miller, 2001). The higher costs associated with the return migration serve as an incentive to learn the destination country’s language.

Evidence regarding the role of geographic distance in language proficiency is mixed. Chiswick et al. (2004) found a statistically significant positive relationship between geographic distance and language proficiency, but only for immigrants who lived in Australia for 3.5 years. Van Tubergen and Kalmijn (2005) found the relationship between language knowledge and geographic distance to be negative.

2.3.2.5 LOCATION OF RESIDENCE IN THE DESTINATION COUNTRY

Only a few studies included the location of residence in the destination country in analysis of language proficiency of the destination country. A study of Canadian data conducted by Chiswick and Miller (2001) examined the role of the settlement region and municipality in English ability and practice. The findings indicate that immigrants who settled in a census metropolitan area (CMA) are less able to speak English than those located outside major cities. This effect may be attributed to the differential in concentration of non-official language speakers as well as increased supply of services offered in a non-official language.

The region of residence was also found to be a significant predictor of language ability and practice. Chiswick and Miller (2001) found that when compared to immigrants from Ontario, individuals who settled in the Prairie provinces were more likely to speak English and to speak it at home than not to speak it at all. At the same time, no difference in spoken English was found for immigrants to British Columbia or the Atlantic provinces when compared to immigrants settling in Ontario.

2.3.2.6 MACRO-LEVEL PERSPECTIVE EXTENDED

Van Tubergen and Kalmijn (2005) extended the macro-level perspective by organizing macro-level factors as group variables. Past research utilized macro-level factors at the individual level, whereas the authors utilized them at the source country's group level. They were also the first to utilize multi-level models when analysing the role of the macro-level effects of the source and destination countries in language proficiency. Before this study, when analyzing the influence of macro-level factors, researchers estimated individual and contextual effects together without considering the multi-level structure of the data.³

The authors introduced several novel macro-level factors associated with the source and destination countries. They also advanced hypotheses regarding the role in linguistic integration of the level of globalization, religion, and political suppression in the source country, and the existence of left-wing party and anti-immigrant attitudes in the destination country.

The authors found that a higher level of globalization is associated with significantly better language skills, while political suppression is inversely and significantly related to proficiency.

³ Multi-level structure of the data results from the incorporation of human capital variables (measured at the individual level) and macro-level factors (measured at the group level) in the model of language proficiency.

With respect to the destination country hypotheses, both a left-wing party in power and higher levels of anti-immigrant sentiment were found to be significantly associated with inferior language skills.

Despite offering a potential breakthrough approach to the examination of destination language proficiency, van Tubergen and Kalmijn were unable to separate the macro-level factors of the source and destination countries. Analyzing census data, the authors were limited to the measures of destination country language proficiency at some point after migration. No measures of destination country language proficiency at or shortly after arrival were available. To date, no research has considered the impacts of both the source and destination country factors in the analysis of English proficiency of immigrants to Canada.

2.3.3 PAST RESEARCH LIMITATIONS

When examining the determinants of destination language proficiency, researchers face challenges associated with sample size, representativeness, and adequacy of language proficiency measures or quality of the data.

2.3.3.1 MEASURES OF LANGUAGE PROFICIENCY

The inadequate measurement of English proficiency is a major challenge when attempting to analyze linguistic integration. Stevens (1999), who examined U.S. census data over the past 100 years, pointed towards vagueness of the concepts as well as inconsistencies in operationalization as major limitations of the census data. For example, across censuses, knowledge or use of non-English languages was measured as respondent's mother tongue, native language, language spoken at home, or language spoken during childhood. English proficiency was also defined differently among censuses. While in some censuses the measure included ability to speak English with "yes or no" responses, in others it included multiple responses using a Lickert scale.

Similar criticism also applies to the operationalization of the language concept in past Canadian censuses. The majority of recent research has relied on U.S. and Canadian censuses, which contain a limited set of questions that measure English-speaking ability and use of English or another language at home (Stevens, 1999; Carnevale et al., 2001, Chiswick and Miller, 2001). In the first cross-national comparative analysis, van Tubergen and Kalmijn (2005) examined destination language proficiency for nine developed countries. The analysis excluded Canada due to inadequacy of the English proficiency measures in the census. The authors found it

challenging to follow previous research and compare individuals who speak English well enough to conduct conversations with those who speak it not well, well, or very well. Despite the challenges, the authors attempted to include Canada in a preliminary analysis. The logit estimates for the Canadian sample, however, deviated too much from the comparative analysis results, which forced exclusion of Canada from the final sample.

A further difficulty is associated with differential use of the language knowledge measures. Analysis of the same data may produce different results, depending on the type of language measure utilized, making results difficult to compare. For example, Espinosa and Massey (1997), when measuring English proficiency among Mexican migrants, included four categories: does not speak or understand English; does not speak but understands English somewhat or well; speaks and understands some English; and speaks and understands English well. Chiswick and Miller (2001) developed a somewhat different measure for English/French proficiency among Canadian immigrants, using three categories: unable to conduct a conversation in either of the official languages of Canada; able to conduct a conversation in one of the languages, but usually speaks a non-official language at home; and speaks English and/or French, and usually speaks one or both of these languages at home.

Finally, language knowledge includes ability to understand, speak, read, and write. Limiting research to analysis of only speaking skills is insufficient, as this approach potentially leads to understating or overstating overall English proficiency. In the past research, only a limited assessment of other competencies, such as understanding, reading, and writing, was conducted (Gonzalez, 2000; Chiswick et al., 2004).

2.3.3.2 SAMPLE LIMITATIONS

Most past analyses of the determinants of official language proficiency have been conducted using relatively small data sets (Gonzalez, 2000), specific samples targeting immigrants from a limited number of source countries (Espinosa and Massey, 1997; Bellante and Kogut, 1998), or census datasets containing inadequate language knowledge measures (Carliner, 2000; van Tubergen and Kalmijn, 2005).

Early U.S. studies focused exclusively on the linguistic ability of immigrants with Hispanic language background, which was compared to that of a few non-Hispanic immigrant groups (Bellante and Kogut, 1998; Espinosa and Massey, 1997; Chiswick, 1991). The results of these

studies, despite being valuable in the explanation of English acquisition and their relevance to the understanding of linguistic integration for a particular ethnic group, cannot be reliably extrapolated to the vast and diverse immigrant population.

Language knowledge is acquired over time and with effort. All but one of the reviewed empirical studies used cross-sectional datasets that contain a measure of linguistic capability at one point in time. The utilization of consecutive census datasets using cross-section pooling methods does not truly identify the same individuals across the census datasets. Further research using longitudinal datasets is required to estimate immigrant linguistic integration over time.

2.4 THEORETICAL FRAMEWORK

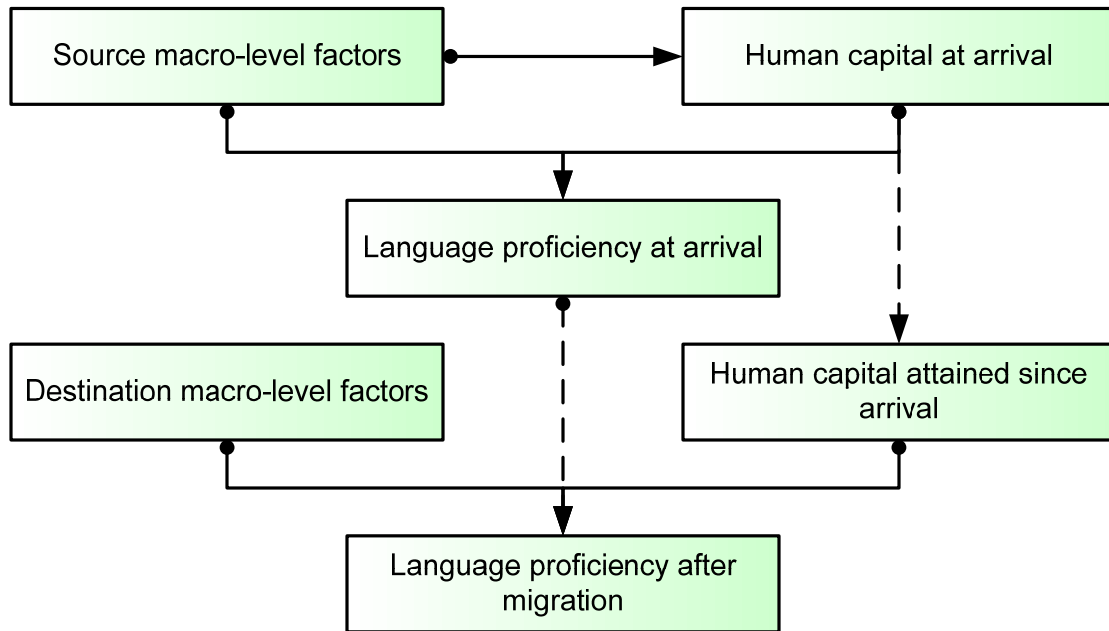
The empirical framework developed in this chapter is based on human capital theory and macro-level determinants of destination language proficiency framework. A review of past research revealed numerous gaps and inconsistencies in the analysis of linguistic integration as well as limitations associated with inadequate datasets and language measures.

2.4.1 MODEL OF LINGUISTIC INTEGRATION

In an effort to link the two theoretical frameworks while employing a more suitable measure of language proficiency, I developed and empirically tested (Chapters 3 and 4) an integrative Model of Linguistic Integration (Figure 2.1).

Figure 2.1

Model of Linguistic Integration



Human capital theory attributes the differences in linguistic integration to unequal human capital characteristics upon arrival and changes in human capital factors after migration.

From the macro-level perspective, the differences are caused by the effects of macro-level characteristics of both the source and destination countries. Immigrants arriving from a source country experience the influences of the same economic, social, cultural, and political environment unique to that country. After migration, effects of the source country's environment weaken. At the same time, effects of the destination country's macro-level environment become a dominant force in language acquisition. As immigrants settle in various areas of Canada, their experiences after migration may differ, thus potentially resulting in divergent linguistic integration patterns.

Based on the above, when analyzing language proficiency patterns, it is essential to distinguish between the linguistic fluency at arrival and linguistic integration after migration. Fluency at arrival is defined as the ability to speak, read, and write the destination language on the day of arrival in the destination country. Linguistic integration is defined as the immigrant's language fluency (i.e., ability to speak, read, and write in the destination language) after spending some time in the destination country.

To summarize, I argue that language proficiency at arrival is determined by a set of factors different from those affecting linguistic integration after migration. Amalgamating human capital theory and macro-level perspective, I propose that both language proficiency at arrival and linguistic integration after migration are determined by human capital and macro-level factors.

Specifically, language knowledge at arrival is associated with the immigrant's human capital characteristics (both innate and acquired in the source country) and macro-level factors of the source country. Linguistic integration after migration, however, is determined by human capital characteristics that are fixed (both innate and acquired in the source country), human capital attained in the destination country, and macro-level factors of the destination country.

In the model, macro-level effects of the source and destination countries are introduced separately. This is done to differentiate between the role of the economic, political, social, and linguistic characteristics of the source country at arrival, and the role of macro-level characteristics of the destination country after migration.

2.4.2 FURTHER THEORETICAL AND EMPIRICAL ADVANCEMENTS

The objective of the next two chapters (Chapter 3 and Chapter 4) is to determine what factors facilitate destination language acquisition before and linguistic integration after migration. In other words, I seek to answer the following questions:

What human capital and macro level factors influence:

- 1. English proficiency at arrival?*
- 2. Linguistic integration after migration?*

The empirical analysis of the Model of Linguistic Integration breaks new ground by analyzing the influence of macro-level effects of source and destination countries separately. Language proficiency at entry and linguistic integration after migration are examined separately since language knowledge at arrival is gained before migration, whereas linguistic integration occurs after immigrants have arrived in the destination country.

Considering that language proficiency encompasses not only speaking but also reading and writing, it is essential to examine language knowledge in its entirety. To achieve this, a Language Proficiency Index is developed that incorporates speaking, reading, and writing linguistic dimensions.

Finally, it is important to note that the existing empirical research considered the influence of only a limited number of source and destination macro-level factors on linguistic integration. Analysis presented in Chapters 3 and 4 includes such novel factors as the level of globalization, political stability, and democratization in the source country, as well as the economic growth, labour-force participation rate, and political party in power in the destination country.

CHAPTER 3.

LINGUISTIC INTEGRATION OF RECENT IMMIGRANTS TO CANADA: THE DETERMINANTS OF ENGLISH LANGUAGE PROFICIENCY AT ARRIVAL

3.1. INTRODUCTION

Every year Canada welcomes more than 200,000 immigrants. These newcomers are relied upon to play a significant role in the economic, social, and cultural development of Canadian society. But recent immigrants, a vital component of the labour force, have been less successful than earlier cohorts in obtaining employment that would fully utilize their skills and credentials (Borjas, 1994a; Bloom et al., 1995; Aydemir and Skuterud, 2005; Frenette and Morissette, 2005). Knowledge of one of Canada's two official languages is a factor essential for stimulating incorporation of immigrants into the labour market. In light of previous research findings, which demonstrated that recent immigrants exhibit lower levels of English proficiency than earlier immigrants (Carliner, 2000; Chiswick and Miller, 2001; Chiswick et al., 2004; Ferrer et al., 2006), it is important to analyze the factors that influence English proficiency.

Two distinct theoretical approaches presented in detail in Chapter 2 investigate what constitutes and contributes to the destination country language proficiency of immigrants. The first, human capital theory focuses on the quality of the labour force. Human capital includes both innate and acquired characteristics that result in higher individual productivity and economic returns (Borjas, 1994a). Acquired human capital attributes include education, training, mobility, labour-market information, and experience. The human capital approach considers official language proficiency to be a major human capital attribute, which facilitates labour-market participation and positively influences employment returns (Carnevale et al., 2001; Chiswick and Miller, 2002; Shields and Price, 2002).

Language proficiency is a function of exposure, efficiency, and economic incentive (Chiswick and Miller, 2001; Chiswick et al., 2004). Factors associated with language proficiency include age at migration, education, marital status, gender, occupation, and number of years since migration (Dustmann, 1997; Espenshade and Fu, 1997; Carliner, 2000; Shields and Price, 2002; Chiswick et al., 2006).

Even though human capital is an important determinant of language fluency, the influence of both the source and destination countries' characteristics should also be considered (Portes, 1999). Immigrants are subject to the influence of macro-level characteristics of their country of origin. A comprehensive analysis of the determinants of language proficiency should, therefore, take into consideration the political, social, economic, and labour-market structure of the source country (Portes and Borocz, 1989).

This macro-level factors perspective has been recently expanded and empirically tested by van Tubergen and Kalmijn (2005), who incorporated the effects of the source country into the analysis of linguistic integration. The authors investigated the role of macro-level factors such as the level of economic development, religion, globalization, and political suppression. They found that the source country's conditions contribute to immigrant's language proficiency. Van Tubergen and Kalmijn, however, were unable to separate the effects of the source and destination countries.⁴ Since macro-level factors of source and destination countries influence immigrants' language proficiency differently, with the former extending greater influence at arrival and the latter after migration, comprehensive analysis should separate the effects of these factors.

This chapter employs an integrative approach to the analysis of language proficiency of recent immigrants to Canada by combining the human capital and macro-level perspectives. The distinctiveness of this research is in isolating and examining the role of macro-level characteristics of the source country in English proficiency of immigrants at arrival in Canada.

3.2. THEORETICAL FRAMEWORK

A review of past research revealed numerous gaps in the analysis of linguistic integration as well as limitations associated with inadequate datasets and language measures. In their investigation of the determinants of destination language proficiency, human capital and macro-level perspective researchers often focused on different sets of factors. In addition, most datasets were inadequate in terms of either size or representativeness of the sample, or, like the census, in terms of adequacy of language proficiency measures.

In an effort to bridge the two frameworks while employing a more suitable measure of language proficiency, an integrative Model of Linguistic Integration is proposed (see Chapter 2). In this

⁴ Refer to Chapter 2 for a more detailed review and explanation.

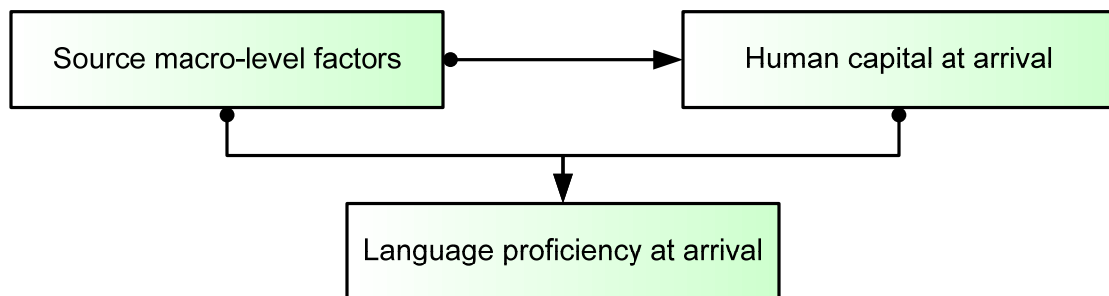
chapter, the first part of the model, determinants of English proficiency at arrival, is operationalized and empirically tested (see Figure 3.1).

3.2.1 THE MODEL OF LINGUISTIC INTEGRATION: THE DETERMINANTS OF ENGLISH LANGUAGE PROFICIENCY AT ARRIVAL

This segment of the model analyzes the influence of innate human capital characteristics as well as those attained in the source country, combined with macro-level factors of the source country, on English proficiency at arrival.

Figure 3.1:

Model of Linguistic Integration at Arrival



I expect that immigrants with better quality human capital and from countries with more favourable macro-level conditions will demonstrate higher English proficiency at arrival in Canada, leading to the following two hypotheses:

Hypothesis 1: *Macro-level characteristics of the source country will be related to English language proficiency at arrival.*

Hypothesis 2: *Advanced human capital characteristics will be related to greater English language proficiency at arrival.*

3.2.2 DEFINING ENGLISH LANGUAGE PROFICIENCY AT ARRIVAL

This research extends the definition of English proficiency to include three core competencies: speaking, reading, and writing. As discussed in detail in Chapter 2, most past studies have used spoken language proficiency as a proxy of language knowledge, with a few studies including reading and writing competencies. By measuring overall language proficiency, this research

expands on the work of Espinosa and Massey (1997), Chiswick and Miller (1999, 2001), and Gonzalez (2000).

English proficiency is formally defined as a combination of one's abilities to speak, read, and write. In the Longitudinal Survey of Immigrants to Canada (LSIC), language knowledge was measured for all linguistic dimensions with five response categories:

How well can you [speak, read, write in] English? Would you say:

Cannot [speak, read, write] this language;

Poorly;

Fairly well;

Well;

Very well.

The analysis concentrates on the overall language fluency at arrival (Wave 1). To gauge the overall proficiency, the following English Language Proficiency Index is calculated:

$$LP = LP_S + LP_R + LP_W$$

Where:

LP – Overall language proficiency;

LP_S – Speaking language proficiency;

LP_R – Reading language proficiency;

LP_W – Writing language proficiency.

To calculate the index for an individual, responses from all categories are combined, potentially ranging from 0 (“not at all” in all competencies) to 12 (“very well” in all competencies). The internal consistency score for the English Language Proficiency Index is high, with $\alpha = .90$.

Since English proficiency is ordered from the lowest (the inability to speak, read, or write) to the highest category (the ability to do it very well), it is possible to create a number of categories associated with the level of language knowledge. The Language Proficiency Index is grouped into five categories of combined speaking, reading, and writing dimensions:

No knowledge = 0-1

Limited knowledge = 2-4

Fair knowledge = 5-7

Good knowledge = 8-10

Very good knowledge = 11-12

Due to the fact that proficiency in different language dimensions may vary, the influence of human capital and macro-level factors on speaking, reading, and writing proficiency is also analyzed separately.

The remainder of this section describes the human capital and macro-level variables that are included in the model of language proficiency.

3.2.3 SOURCE MACRO-LEVEL FACTORS ⁵

Previous language proficiency studies considered such source country factors as economic development, level of globalization, English as an official language, and geographic distance. The current model includes these variables as well as measures of political stability and level of democratization.

Economic Development

Results of past research on the role of economic development of the source country in destination language proficiency are mixed (Borjas 1994a; Carliner, 2000; van Tubergen and Kalmijn, 2005). Nonetheless, economic development of the source country may foster an economic incentive to learn and facilitate exposure to the destination language.

Economic development of the source country is considered a proxy for the wages and spending ability of a family. At a low level of economic development, a household may lack sufficient funds to acquire a television, Internet services, language classes, or other means of exposure to the destination language. Under this scenario, the economic incentive to learn the destination language to escape poverty may be high, but the financial capacity is insufficient. As household income increases, destination language learning may become more affordable. When the economic development of the source country approaches or exceeds that of the destination country, the economic incentive is diminished. Despite being financially able to acquire language skills, potential migrants may experience less pressure to leave the source country.

⁵ Measures of source macro-level factors are available for 164 source countries. Refer to Appendix 3.4.

In summary, individuals from less economically developed countries are expected to have a strong economic incentive to learn English but lack the funds to do so, while individuals from more economically developed countries are expected to have greater means to afford English training but reduced economic incentive to do so. Consequently, it is difficult to make a clear prediction regarding the role of economic development of the source country and English proficiency at arrival. I, however, expect that economic incentive would outweigh the availability of means. Lower and medium levels of economic development are expected to be associated with higher language proficiency while higher levels of economic development are expected to be associated with lower proficiency.

Economic development of a source country is defined as gross national income (GNI) per capita in constant U.S. dollars in 2004 (World Bank, 2007).⁶ Following the conceptual approach of the World Economic Forum's new Global Competitiveness Index (World Economic Forum, 2006), the source countries in this study are divided into five stages of development:

1. GNI per capita is less than \$2,000 (e.g., Bolivia, Ukraine, Ethiopia, Laos);
2. GNI per capita is between \$2,000 and \$3,000 (e.g., Iran, Thailand, Algeria, Ecuador);
3. GNI per capita is between \$3,001 and \$9,000 (e.g., Argentina, Poland, Turkey);
4. GNI per capita is between \$9,001 and \$17,000 (e.g., Bahamas, South Korea, Taiwan);
5. GNI per capita is greater than \$17,000 (e.g., United States, Sweden, United Kingdom, Australia).

For several countries, GNI per capita is not readily available, which would lead to a reduction of the sample size. Where it is missing, GNI is derived using the following rules:

1. If a country ceased to exist due to being divided into several nations (e.g., Soviet Union, Yugoslavia, Czechoslovakia), and GNI measures are available for the new states, average GNI is utilized;
2. Where a respondent indicates arriving from a region (e.g., Western Africa, West Indies, and South America) without identifying the country of origin, the mean value for the countries in the region is utilized;

⁶ While GDP per capita was available for purchase, GNI per capita was the best publicly available measure. The World Bank defines GNI per capita as gross national income converted to U.S. dollars using the World Bank Atlas method, divided by the mid-year population. Gross national income is the sum of value added by all resident producers plus any product taxes not included in the valuation of output plus net receipts of primary income from abroad. Gross domestic product at purchaser's prices is defined as the sum of gross value added by all resident producers in the economy plus any product taxes and minus any subsidies not included in the value of the products. It is calculated without making deductions for depreciation of fabricated assets or for depletion and degradation of natural resources (The World Bank, 2009).

3. For nations that are the states of other countries (e.g., Bermuda), the GNI of the parent country is used;
4. The following nations that have no data on GNI per capita are assigned to the first stage of the economic development: Cuba, Palestine, West Bank/Gaza Strip, North Korea, and Myanmar (Burma).

Political Stability

Political stability in the source country can also be important in shaping destination language proficiency at arrival. Political stability is low in countries where there is high likelihood that the government will be destabilized or overthrown by unconstitutional or violent means, including terrorism (Kaufmann et al., 2005, World Bank). It is hypothesized that political stability is related to the efficiency of the language learning process as well as the economic incentives for leaving the politically unstable country. A decrease in political stability and an increase of violence may encourage some citizens to leave the country. These immigrants, due to lack of preparation and insufficient investment in learning the official language of the destination country, may find themselves at a disadvantage when compared to immigrants from more stable countries, where the decision to emigrate is not based solely on domestic instability (Portes and Borocz, 1989).

This effect, however, may be mitigated by increased motivation to immigrate to a more stable country. Individuals who are preparing to leave politically unstable countries have a stronger incentive to learn the destination language, considering the compromised prospects of return migration.

Immigrants from more stable countries, where the decision to emigrate is not based solely on domestic instability, may learn the destination language in anticipation of high economic returns after migration. At the same time, these immigrants may be less motivated to learn the destination language, given the possibility of returning to a stable source country.

Overall, I expect the level of political stability to be inversely related to English proficiency at arrival, but only at lower levels of political stability. With respect to more stable countries, immigrants from these countries are expected to have higher advanced English knowledge when compared to immigrants from the least stable countries.

Data on the level of political stability and absence of violence were obtained from the World Bank (2005) governance indicators. The political stability index (Kaufmann et al., 2005) ranges from zero, where the political situation is extremely unstable, to 100, where a country is politically stable and characterized by an absence of violence. Kaufmann et al. (2005) grouped countries into four categories of stability. Among the most politically unstable countries are Myanmar, Bangladesh, Haiti, Nigeria, and Colombia. The list of the most politically stable countries includes Grenada, Belgium, Netherlands, United Arab Emirates, and Japan. Based on the Kaufmann et al. (2005) index, countries are grouped into four categories ranging from unstable (below 25th percentile rank) to stable (above 75th percentile rank):

1. Below 25th percentile rank (e.g., Guatemala, Colombia, Albania, Liberia);
2. Between 25th and 50th (e.g., Nicaragua, Argentina, Belarus, Senegal);
3. Between 51st and 75th (e.g., United States, United Kingdom, Kuwait, Vietnam);
4. Above 75th percentile rank (e.g., Hong Kong, Sweden, Australia, Canada).

Level of Democratization

The level of democratization may influence the extent to which citizens can participate in selecting the government, as well as freedom of expression, freedom of association, and a free media (Kaufmann et al., World Bank, 2005). Where citizens have no voice, the ruling body has no accountability to the country's population, and fundamental rights and freedoms are limited, citizens may experience less exposure to other cultures and languages. As a nation becomes more democratic, exposure to the destination language may increase, thus facilitating destination country language learning. At the same time, higher levels of democratization may reduce motivation to invest in the destination country's human capital, since immigrants may choose to return to their source country without any political retribution. On balance, I expect that the level of democratization will be positively related to language proficiency at lower levels and inversely at higher levels.

This study utilizes measures of the level of democratization developed by Kaufman et al. (2005).⁷ The countries are grouped into four categories based on their level of democratization:

1. Below 25th percentile rank (e.g., Haiti, Ethiopia, Pakistan);
2. Between 25th and 50th (e.g., Uganda, Russia, Singapore, Guatemala);
3. Between 51st and 75th (e.g., Mexico, Bulgaria, Brazil);

⁷ A more detailed description of the index and its measures is available upon request.

4. Above 75th percentile rank (e.g., United States, United Kingdom, Costa Rica, Japan, Canada).

Cuba, Liberia, China, Somalia, Laos, and United Arab Emirates are among the least democratic countries, while Belgium, Poland, Italy, and Australia are among the most democratic.

Geographic Distance

Geographic distance between the source and destination countries is expected to be positively related to English proficiency (Chiswick and Miller, 2001; Chiswick et al., 2004). Relocation imposes certain psychological as well as financial pressures on the household. Greater distance amplifies these challenges, increasing relocation costs and reducing the likelihood of return migration. When the costs are higher and probability of return migration is lower, an immigrant is more likely to invest in learning the destination language. For this reason, it is hypothesized that geographic distance is positively related to language proficiency at arrival.

Geographic distance is measured as the distance between the capitals of the source and destination countries. A similar measure of geographic distance was used by van Tubergen and Kalmijn (2005), who found that relationship between geographic distance and language proficiency was strongest for shorter distances (500 kilometres). In the current study, geographic distance between Canada and the source country is grouped into three categories: up to 5,000 kilometres (short distance), 5,001 to 10,000 kilometres (medium), and greater than 10,000 kilometres (long distance). Since Canada is located on a separate continent (van Tubergen and Kalmijn studied mostly European countries), 5,000 kilometres is an appropriate “short distance” measure.

Official Language

Another extensively studied macro-level factor is the official language of the source country (Espenshade and Fu, 1997; Carliner, 2000). If the official languages of the source and destination countries are the same, immigrants are expected to have an advantage when compared to immigrants from a source country where the official language is different. Even though Canada has two official languages, English and French, this study concentrates only on the relationship between source macro-level factors and English. I expect that immigrants from countries where English is the official (or dominant) language would have higher language proficiency at arrival.

These individuals would be subject to higher exposure to English from an early age. They would also be more likely to learn the language in a formal educational setting, promoting efficiency of the learning process. Therefore, immigrants from countries where English is an official (or dominant) language are hypothesized to have better language skills at arrival.

The approach to coding the official or dominant language of the source country is similar to one utilized by Espenshade and Fu (1997). Countries where English is a dominant language (such as the United States), official language (such as the United Kingdom), or one of the official languages (such as India, Singapore, or Uganda), are given a value of 0; all other countries are coded as 1.

Globalization

Globalization has played an important social, cultural, and economic role during the last several decades. It is defined as a “process that erodes national boundaries, integrates national economies, cultures, technologies and governance and produces complex relations of mutual interdependence” (Dreher et al., 2006). Globalization facilitates exposure to various aspects of the destination country, including language. Therefore, the more advanced the inroads of globalization, the more likely the potential migrant is to be exposed to English. The increased exposure, in turn, facilitates English learning, resulting in greater language knowledge at arrival.

A rating of globalization is derived from the KOF Index of Globalization (Dreher et al., 2006). The variables in the index are derived from World Bank published statistics. The index, which was based on the data collected in 2004, combines measures of economic, social, and political dimensions for 122 countries. Economic globalization encompasses long distance flows of goods, capital, and services, as well as information and perceptions that accompany market exchanges. Dreher et al. (2006) indicate that while political globalization is a measure of the diffusion of government policies, social globalization is the extent of the spread of ideas, information, images, and people.

The globalization index is available for 101 source countries in the sample.⁸ Countries are grouped into five levels of globalization ranging from the lowest (ranked between 1 and 20) to the highest (ranked between 81 and 101):

1. Between 1 and 20 (e.g., Iran, Malta);

⁸ A more detailed description of the index and its measures is available on request.

2. Between 21 and 40 (e.g., Bolivia, Indonesia);
3. Between 41 and 60 (e.g., Mexico, Latvia);
4. Between 61 and 80 (e.g., Bulgaria, United Arab Emirates);
5. Between 81 and 101 (e.g., Belgium, Singapore, United Kingdom, United States).

3.2.4 HUMAN CAPITAL FACTORS AND CONTROL VARIABLES

Based on the human capital model in which English proficiency is a function of exposure, efficiency, and economic incentives, the role of pre-migration human capital in language proficiency at arrival is examined. The definitions and rationale for inclusion of various human capital factors in the current analysis are discussed in detail in Chapter 2.

In line with past research, I expect that due to higher learning efficiency, better-educated immigrants in a skilled-worker category would possess superior English skills when compared to less educated immigrants and those who arrived under family sponsorship or refugee claim categories (Carliner, 2000; Gonzalez, 2000; Shields and Price, 2002; Chiswick et al., 2004).

For individuals who aspire to gain additional labour-market benefits after migration, work experience in the source country may serve as an economic incentive to invest in language learning. After migration, such immigrants would expect to resume their participation in the labour market and obtain paid employment. Previous research indicates that immigrants with work experience in the source country are more likely to be engaged in the labour market (Borjas, 1994a; Dustmann, 1997; Carniner, 2000; Carnevale et al., 2001; Chiswick and Miller, 1999, 2002, Aydemir and Skuterud, 2005). Consequently, those who were employed in the source country would have greater economic incentive to learn English to amplify the benefits associated with having work experience. Therefore, these immigrants are expected to possess higher English skills at arrival.

I also expect that shorter distance between English and immigrant's mother tongue or closer religious ties would result in higher levels of language proficiency at arrival. Shorter distance between mother and destination languages may stimulate efficiency with which the destination language is learned. Christian faith may foster culture that is similar to Canadian culture, thus increasing exposure to English. As a result, immigrants of Christian faith are expected to have higher English proficiency than immigrants of other religious denominations. I expect younger individuals to have higher language knowledge than older individuals due to their efficiency in

learning the destination language. In light of mixed results of the past research, no expectations exist about the impact of gender and marital status on language knowledge (Espinosa and Massey, 1997; Espenshade and Fu, 1997).

Definitions and coding of the independent variables are summarized in Appendix 3.1.

3.3. DATA AND MEASURES

The hypotheses are tested utilizing data gathered through Wave 1 of the LSIC, which collected information from immigrants to Canada six months after arrival. The sample was restricted to only those who arrived in Canada from abroad between October 1, 2000 and September 30, 2001 and were age 15 or older at time of landing.

The LSIC is the most suitable source of data because it includes information that is not available through other data sources. It offers novel and comprehensive measure of English language proficiency, including measures of speaking, reading, and writing competencies.

For the purposes of this chapter, the sample is restricted to individuals aged 20 to 64. This exclusion is prudent because individuals who are under age 20 or over 65 may have distinctive patterns of language acquisition.

The Wave 1 data were gathered at six months after arrival pertaining to experiences of immigrants before migration; at this point, immigrants' English proficiency might have been somewhat influenced by their experiences in Canada. Researchers who examined language proficiency in the past, however, indicate that in general it takes much longer than six months to learn a language (Chiswick et al., 2004). Notwithstanding, to minimize the destination country influence, the sample is restricted to immigrants who reported learning most of their language before coming to Canada.

Finally, considering the uniqueness of the linguistic environment in Quebec, which emphasizes proficiency in French, immigrants who settled there are excluded from the analysis.

3.4. EMPIRICAL FRAMEWORK

To test the hypotheses associated with the Model of Linguistic Integration at Arrival (see Figure 3.1), two empirical models are estimated. The models examine:

1. The determinants of English language proficiency at arrival in Canada;

2. The determinants of English speaking, reading, and writing competencies, separately, at arrival in Canada.

The empirical framework and results for the first model are presented below; the empirical framework and results for the second model are presented in Appendix 3.2.

3.4.1 MULTINOMIAL LOGIT MODEL⁹

The following multinomial logit model is estimated to determine the relationship between human capital factors, macro-level factors, and English proficiency at the time of arrival in Canada¹⁰:

$$\Pr(ELP_m) = \frac{e^{bx}}{1 + \sum_{m=1}^3 e^{bx}}$$

Where:

ELP_m – English Language Proficiency with *m* categories (“poor”, “fair”, “good”, and “very good” with “no knowledge” as a reference category);

bx - Vector of characteristics thought to influence the probability of English proficiency at arrival: $X = HC + SML + C$, Where:

HC – Human capital characteristics

SML – Source country macro-level characteristics

C – Control variables

3.5. RESULTS

3.5.1 THE DISTRIBUTION OF ENGLISH LANGUAGE SKILLS

Descriptive statistics for all independent variables are provided in Table 3.1. Descriptive statistics for the dependent variables, English language proficiency and speaking, reading, and writing competencies are summarized in Table 3.2.

⁹ Since the English language variable can also be constructed as a continuous variable, an ordinary least squares regression was estimated. The results are similar to the multinomial logit model and therefore not presented here. The results are available upon request.

¹⁰ Since the language variable is ordinal, an ordered logit regression model was considered. The suitability of the ordered logit regression model was determined through the proportional odds test. For ordered logit models, the proportional odds between all of the categories must be the same. For example, the proportional odds from “no knowledge” to “poor” are the same as from “poor” to “fair,” and so on. However, a proportional odds test showed that the proportional odds assumption is not appropriate in this instance (results are not presented but available upon request) and therefore a multinomial logit is more suitable for the present analysis.

3.5.2 MULTINOMIAL LOGIT ESTIMATION RESULTS

The multinomial logit estimates are presented in Table 3.3. The reference category of the dependent variable is “no knowledge.” The estimated coefficients in the model indicate the effect of the predictor on the log of the odds of being in any of the categories of language proficiency when compared to the lowest — no knowledge of English.

The following macro-level variables are included in the model: economic development, level of political stability and democratization, geographic distance, and the official language.

The model also includes the following human capital variables: education level, immigration category, work experience in the source country, linguistic distance between mother tongue and English, religion, age at migration, gender, and marital status.

3.5.2.1 MACRO-LEVEL FACTORS

Economic Development

When compared to immigrants from countries where GNI per capita is below \$2,000 (in U.S. dollars in 2004), individuals from the countries where GNI is between \$2,000 and \$3,000 are significantly more likely to have poor or very good command of English than no knowledge. These immigrants are respectively 1.3 and 1.8 times more likely to have very good English skills than no skills ($e^{0.262} = 1.3$ and $e^{0.594} = 1.8$ respectively). Economic development for this group does not significantly increase the odds of fair or good language knowledge when compared to no knowledge.

Being from a country where GNI per capita is between \$3,001 and \$9,000 significantly increases odds of knowing English at any level (poor, fair, good, or very good) when compared to having no knowledge. When compared to countries with the lowest level of development, immigrants from these countries are 2.8 and 3.6 times more likely to have, respectively, good and very good English knowledge than no knowledge ($e^{1.01} = 2.75$ and $e^{1.283} = 3.61$ respectively).

As expected, at the medium levels of economic development, the relationship between economic development and English knowledge at arrival is positive and significant. Despite having strong incentives to learn English before migration, individuals who emigrate from countries where

GNI per capita is below \$2,000 may have limited financial capacity to engage in language learning, which may result in lower language proficiency at arrival.

The odds of demonstrating poor, fair, and good English knowledge than no knowledge are significantly higher for immigrants from more economically developed countries (GNI per capita is between \$9,001 and \$17,000). These immigrants are, respectively, 3.3, 3.8, and 1.8 times more likely to have poor, fair, or good language skills than none at all.

Immigrants from countries at the highest level of economic development (GNI per capita is greater than \$17,000) are more likely to have some (poor, fair) English knowledge than those from the least developed countries ($e^{0.510} = 1.67$ and $e^{0.578} = 1.783$ respectively). However, these immigrants are not more likely to know English well or very well.

The odds of knowing English are largest for immigrants from countries at the medium level of economic development; they tend to decrease for immigrants from countries where per-capita GNI is similar to Canada's. These results further explain the role of opposing motivating factors, exposure, and economic incentive of learning the destination language.

The results indicate that economic development of the source country is significantly related to English proficiency at arrival, lending support to the hypothesis that at a lower level of economic development immigrants will have higher incentive while at a higher level they will have lower incentive to learn English.

Political Stability

Immigrants from the least politically stable countries report higher levels of English proficiency than those from countries at medium levels of political stability (25%–50% and 51%–75%).

Immigrants from less stable nations (25%-50%) are significantly less likely to know English at any level (poor, fair, good, and very good) than not at all, when compared to immigrants from the least stable nations ($e^{-0.491} = 0.61$, $e^{-1.349} = 0.26$, and $e^{-1.754} = 0.17$, $e^{-2.050} = 0.13$ respectively). Being from a country at a medium level of political stability (51%-75%) significantly decreases the odds of knowing English well and very well ($e^{-0.314} = 0.73$, $e^{-0.481} = 0.62$ respectively).

Immigrants from the most politically stable countries (over 75%) are significantly more likely to have fair, good, and very good knowledge of English when compared to immigrants from the least politically stable countries. The odds of knowing English well and very well are three and

four times higher for immigrants from the most politically stable countries than the odds of knowing English for immigrants from the least stable countries ($e^{1.115} = 3.05$, $e^{1.396} = 4.04$ respectively).

These findings suggest that political stability is related to the efficiency and economic incentives of language learning. The results also suggest that economic incentives are strongest for immigrants from the least and most politically stable countries. The findings provide full support for the hypothesis that political stability and language proficiency at arrival are inversely related at lower levels of stability.

Level of Democratization

Newcomers from countries with lower levels of democratization (between 25th and 50th percentile) have equal odds of knowing English well and have significantly higher odds of English proficiency than individuals from the least democratic states (below 25th percentile) ($e^{0.067} = 0.94$, $e^{0.262} = 1.3$ respectively). When compared to those from countries with the lowest levels of democratization, immigrants from countries with lower levels of democratization (between 25th and 50th percentile) have significantly lower odds of poor and fair language knowledge at arrival than no language knowledge.

Immigrants from countries with medium or high democratization levels (between 51st and 75th, 76th and 100th percentile) have significantly lower odds of knowing English at any level than not at all (with the exception of immigrants who are proficient in English from countries with the highest level of democratization). Emigrating from a country with a higher democratization rating decreases the odds of knowing English at any level by as much as 75 percent depending on the level of democratization.

I expected that English proficiency would be greater for individuals from countries with low levels of democratization and lower for immigrants from countries with higher levels of democratization since newcomers from less democratized countries may have stronger incentive to learn English to facilitate migration. The results partially support the advanced hypothesis.

Geographic Distance

The farther the distance between the source and destination country, the more likely immigrants are to be proficient in English. Immigrants moving 5,001–10,000 are two to three times more likely to know English at any level than to not know it at all. The magnitude of the odds is larger for longer distances (greater than 10,000 kilometres), where immigrants are three to more than five times more likely to know English poorly, fairly well, well, or very well than not at all ($e^{1.188} = 3.28$, $e^{1.486} = 4.42$, $e^{1.721} = 5.59$, and $e^{1.59} = 4.9$ respectively).

Greater distance was expected to increase the costs of moving and reduce the likelihood of return migration. I expected that due to higher costs and lower probability of return, immigrants would be more likely to invest in learning the destination language and possess higher language knowledge at arrival; the findings support this hypothesis.

While lending support to the hypothesis, the results are inconsistent with findings of van Tubergen and Kalmijn (2005), who found a negative relationship between geographic distance and language knowledge. Their study, however, did not include Canada. Earlier research focusing on Canadian data found a positive and significant association (Chiswick and Miller, 2001).

Official Language

The final macro-level factor is the official and/or dominant language of the source country. As expected, being from a country where English is an official language significantly increases the chances of knowing English at arrival in Canada. Those who arrive from countries with non-English official languages are significantly less likely to have any English knowledge. The odds are the lowest for good and very good categories. Immigrants from countries with other official languages are 90 to almost 100 percent less likely to know English well and very well than not know it at all ($e^{-2.213} = 0.11$ and $e^{-3.364} = 0.04$ respectively).

The higher likelihood of proficiency in English for immigrants from English-speaking countries may be explained by increased exposure to English language through formal education, media, and the legal, political, and business environment.¹¹

¹¹ A model was estimated that included source country globalization ranking as a predictor. The model and full results are presented in Appendix 3.3.

3.5.2.2 HUMAN CAPITAL FACTORS

Education is a salient predictor of English proficiency. Each successive education level is associated with significantly higher odds of language knowledge at arrival in Canada. The magnitude of the effect is lowest for the high school diploma category, similar for some postsecondary and college diploma, and greatest for the bachelor and postgraduate degree categories. Those who completed high school are four to nine times more likely to know English at any level than not at all. These results are aligned with findings in literature, and conform to the proposition that language learning entails a systematic learning process (Dustman, 1997; Espinosa and Massey, 1997; Carliner, 2000; Gonzalez, 2000; Shields and Price, 2002).

Immigrants in the skilled-worker category demonstrate significantly higher English knowledge at any level when compared to family joiners and refugees. Family joiners are 80 percent and refugees are 90 percent less likely to know language very well ($e^{-1.772} = 0.17$ and $e^{-2.367} = 0.09$ respectively). This is consistent with results reported in the human capital literature, indicating that economically assessed immigrants have greater proficiency than immigrants who are admitted to the country for humanitarian or family reunification reasons (Chiswick et al., 2004).

Work experience in the source country is related to significantly higher odds of knowing English fairly well, well, and very well at arrival than not at all. The effect is most pronounced for the highest language knowledge categories. Specifically, those who did not work in the source country are almost 80 percent less likely to know English very well at arrival in Canada and 10 percent less likely to know it poorly ($e^{-1.421} = 0.24$ and $e^{-0.084} = 0.92$ respectively).

Linguistic distance does not appear to decrease the odds of being able to speak, read, and write English very well. Immigrants whose mother tongue belongs to the Indo-European language family (same as English) are significantly less likely to know English fairly well, well, and very well. Immigrants whose mother tongue belongs to a different language family have significantly greater English knowledge when compared to immigrants who declared English as their first language. These results are inconsistent with those found previously (Carliner, 2000; Shields and Price, 2002), which indicates the need for further investigation of the relationship between linguistic distance and language proficiency at arrival.

Religion appears to be an important factor in English acquisition. Immigrants who reported not following any religion as well as Jewish and Muslim immigrants have significantly lower odds

of knowing English well or very well when compared to Christians. These results are consistent with the hypothesis that Christian immigrants would have an advantage when learning English over immigrants of other faiths. I expected that Christian faith networks and religious ties to Canada or another country with a large Christian English-speaking population might expose Christians to English. It appears that religion as proposed by van Tubergen and Kalmijn (2005) may be a proxy for another factor, such as cultural distance. The LSIC, however, does not offer a direct measure of cultural distance.

The findings indicate that older immigrants have lower odds of knowing English at any level than not knowing it at all. Men are more likely to know English at any level compared to women. Single immigrants are generally more likely than married immigrants to be proficient in English. These results are consistent with past research findings (Espinosa and Massey, 1997; Espenshade and Fu, 1997; Gonzalez, 2000; Chiswick and Miller, 2001; Shields and Price, 2002; Chiswick et al., 2004).

3.6. SUMMARY AND DISCUSSION

It was proposed that language proficiency at arrival is determined by both human capital characteristics and macro-level factors of the source country. Immigrants from countries with favourable macro-level conditions (e.g., English is an official language) were expected to have higher English proficiency.

Unlike language knowledge measures utilized in earlier research, which in most cases was studying primarily speaking skills, the English Language Proficiency Index created in this study offers a balanced evaluation of English language knowledge by combining fluency in the three core competencies: speaking, reading, and writing.¹²

The current research utilized the data from the LSIC, Wave 1, conducted by Statistics Canada. Wave 1 of the survey includes comprehensive data about immigrants' experiences before migration. The following summarizes key findings from the multinomial logit analysis.

¹² As human capital and macro-level factors may affect each of the competencies differently, their influence on each competency was also assessed separately. The results are presented in Appendix 3.2.

Macro-Level Factors

It was found that macro-level factors of the source country are significantly related to immigrant language proficiency at arrival. The analysis included both macro-level factors used in the past research (such as economic development, geographic distance, official language of the source country) and novel measures (such as levels of political stability, democratization, and globalization).

Unlike earlier studies, the level of economic development of the source country was found to be related to English knowledge at arrival. In previous research, economic development of the source country was measured as a continuous variable. To replicate approach of van Tubergen and Kalmijn (2005) further analysis was conducted with economic development as a continuous variable. The results (not presented here) indicate that economic development, when measured as a continuous variable, is not significantly related to English proficiency at arrival. This finding suggests a more complex relationship between different stages of economic development of the source country and immigrants' language proficiency at arrival. At higher levels of economic development, the odds of knowing English poorly or fairly well is higher than that of knowing it well or very well. These findings support the proposition that the incentive to learn the destination language declines when economic development of the source country approaches that of Canada.

This study also lends support to the propositions associated with the role of the source country's macro-level factors, including political stability, and level of democratization. Political stability was found to be inversely related to English proficiency at lower levels of stabilization. The results also suggest that a direct relationship exists between political stability and English knowledge for immigrants from the most politically stable countries. The level of democratization is found to be inversely related to language knowledge.

Corroborating past research, it was found that greater geographic distance between Canada and the source country (Chiswick and Miller, 2001; van Tubergen and Kalmijn, 2005) as well as arriving from a country where English is an official or dominant language (Espenshade and Fu, 1997; Carliner, 2000) are associated with higher level of English proficiency at arrival.

Human Capital Factors

The results for education, immigration status, and work experience corroborate findings described in the human capital literature (for more detailed discussion, see Chapter 2). Results indicate that having higher education, being in a skilled-worker category, and having work experience in the source country all significantly increase the likelihood of knowing English better than not at all.

Younger, single and male immigrants are more likely to know English at arrival in Canada than older, married and female immigrants. While it has been established in the literature that older immigrants are less efficient in learning and retaining the second language when compared to younger individuals, there is no priori expectation about the relationship between marital status, gender, religion and English proficiency (Dustmann, 1997; Espinosa and Massey, 1997; Espenshade and Fu, 1997; Carliner, 2000). Further research is necessary to determine whether the inferior language knowledge for women and married immigrants is the result of lower exposure, efficiency, or economic incentives. It has been proposed that women would have lower incentive to learn English since they are not the primary applicants and are not expected to participate in the labour force to the same degree as men (Carliner, 2000). It has also been argued that married individuals, especially those with a spouse of the same background, would have less exposure to English (Chiswick and Miller, 2001). With respect to the results associated with religion, current research adds to the understanding of the relationship between religion and language knowledge (van Tubergen and Kalmijn, 2005).

Table 3.1

Characteristics of the Sample

| Variable | N =8,515 |
|--|-----------------|
| Economic Development | |
| GNI per capita < \$2,000 | 70.1% |
| GNI per capita \$2,000 - \$3,000 | 5.9% |
| GNI per capita \$3,001 - \$9,000 | 10.2% |
| GNI per capita \$9,001 - \$17,000 | 6.0% |
| GNI per capita >\$17,000 | 7.8% |
| Political Stability | |
| <25% (Least Stable) | 49.3% |
| 25%-50% | 31.6% |
| 51%-75% | 16.0% |
| >75% (Most Stable) | 3.1% |
| Level of Democratization | |
| <25% (Least Democratic) | 38.3% |
| 25%-50% | 23.3% |
| 51%-75% | 30.0% |
| >75% (Most Democratic) | 8.5% |
| Geographic Distance | |
| Up to 5000 km | 5.9% |
| 5001-10000 km | 25.7% |
| 10001-20000 km | 68.3% |
| Official Language | |
| English | 39.3% |
| Not English | 60.7% |
| Education Level | |
| Less than High School Diploma | 7.9% |
| High School Diploma | 9.8% |
| Some Postsecondary | 8.5% |
| College Diploma | 10.7% |
| Bachelor Degree | 41.4% |
| Postsecondary Degree | 21.7% |
| Immigration Category | |
| Skilled Worker | 72.2% |
| Family Sponsorship | 23.7% |
| Refugee Claim | 4.2% |
| Work Experience in Source Country | |
| | 84.4% |
| Linguistic Distance | |
| English | 8.4% |
| Same Family | 41.9% |
| Different Family | 49.7% |
| Religion | |
| Christian | 37.3% |

| | |
|-------------|-------|
| | |
| No Religion | 25.5% |
| Jewish | 17.0% |
| Muslim | 20.2% |
| Age | 35.4 |
| Female | 50.0% |
| Married | 82.6% |

Table 3.2

Characteristics of the Dependent Variables

| Variable | N =8,515 |
|------------------------------|-----------------|
| English Language Proficiency | |
| No knowledge | 6.8% |
| Limited knowledge | 7.0% |
| Fair knowledge | 19.9% |
| Good knowledge | 28.1% |
| Very good knowledge | 38.2% |
| Speaking Proficiency | |
| No knowledge | 6.8% |
| Limited knowledge | 13.6% |
| Fair knowledge | 20.8% |
| Good knowledge | 27.7% |
| Very good knowledge | 31.1% |
| Reading Proficiency | |
| No knowledge | 6.7% |
| Limited knowledge | 5.6% |
| Fair knowledge | 14.6% |
| Good knowledge | 24.9% |
| Very good knowledge | 48.2% |
| Writing Proficiency | |
| No knowledge | 7.2% |
| Limited knowledge | 8.9% |
| Fair knowledge | 17.4% |
| Good knowledge | 25.7% |
| Very good knowledge | 40.8% |

Table 3.3

Coefficients from a Multinomial Logit Model Predicting English Language Proficiency Category

| Independent Variable | Very Good | Good | Fair | Poor |
|---|----------------------|----------------------|----------------------|----------------------|
| | [No Knowledge] | | | |
| Economic Development (GNI per capita < \$2,000) | | | | |
| GNI per capita \$2,000 - \$3,000 | 0.594*** (0.079) | 0.047 (0.077) | -0.070 (0.076) | 0.262** (0.083) |
| GNI per capita \$3,001 - \$9,000 | 1.283*** (0.091) | 1.010*** (0.090) | 0.489*** (0.090) | 0.255* (0.102) |
| GNI per capita \$9,001 - \$17,000 | 0.050 (0.162) | 0.579*** (0.160) | 1.339*** (0.159) | 1.185*** (0.169) |
| GNI per capita >\$17,000 | 0.323 (0.189) | 0.281 (0.188) | 0.578** (0.187) | 0.510* (0.203) |
| Political Stability (<25%) | | | | |
| 25%-50% (Less Stable) | -2.050*** (0.062) | -1.754*** (0.060) | -1.349*** (0.059) | -0.491*** (0.065) |
| 51%-75% | -0.481*** (0.097) | -0.314** (0.095) | 0.027 (0.094) | 0.238* (0.106) |
| >75% (More Stable) | 1.396*** (0.185) | 1.115*** (0.185) | 0.580** (0.187) | 0.323 (0.207) |
| Level of Democratization (<25%) | | | | |
| 25%-50% | 0.262*** (0.054) | -0.067 (0.054) | -0.126* (0.053) | -0.415*** (0.058) |
| 51%-75% | -0.842*** (0.081) | -1.263*** (0.081) | -1.043*** (0.080) | -0.732*** (0.085) |
| >75% | -0.129 (0.158) | -1.017*** (0.158) | -1.334*** (0.156) | -0.696*** (0.165) |
| Geographic Distance (Up to 5000 km) | | | | |
| 5001-10000 km | 0.800*** (0.085) | 1.263*** (0.084) | 1.199*** (0.086) | 0.652*** (0.094) |
| 10001-20000 km | 1.590*** (0.097) | 1.721*** (0.096) | 1.486*** (0.096) | 1.188*** (0.105) |
| Official Language (English) | -3.364*** (0.073) | -2.213*** (0.072) | -1.336*** (0.071) | -0.870*** (0.077) |
| Education Level (Less than High School Diploma) | | | | |
| High School Diploma | 2.136*** (0.065) | 2.031*** (0.057) | 1.825*** (0.049) | 1.369*** (0.052) |
| Some Postsecondary | 3.499*** (0.077) | 3.088*** (0.071) | 2.399*** (0.067) | 1.601*** (0.072) |
| College Diploma | 3.836*** (0.078) | 3.374*** (0.072) | 2.957*** (0.066) | 2.294*** (0.070) |

| Independent Variable | Very Good | Good | Fair | Poor |
|---|----------------------|----------------------|----------------------|----------------------|
| | [No Knowledge] | | | |
| Bachelor Degree | 5.256*** (0.072) | 4.636*** (0.067) | 3.539*** (0.062) | 2.292*** (0.066) |
| Postsecondary Degree | 6.808*** (0.110) | 5.691*** (0.106) | 4.210*** (0.104) | 2.307*** (0.115) |
| Immigration Category (Skilled Worker) | | | | |
| Family Sponsorship | -1.772*** (0.046) | -1.126*** (0.045) | -0.885*** (0.044) | -0.615*** (0.048) |
| Refugee Claim | -2.367*** (0.073) | -1.785*** (0.068) | -1.358*** (0.065) | -1.039*** (0.071) |
| Work Experience in Source Country (Yes) | -1.421*** (0.047) | -0.649*** (0.045) | -0.362*** (0.043) | -0.084 (0.046) |
| Linguistic Distance (English) | | | | |
| Same Family | -0.283** (0.107) | -0.217* (0.105) | -0.351*** (0.105) | -0.173 (0.115) |
| Different Family | 0.570*** (0.111) | 0.490*** (0.109) | 0.275* (0.108) | 0.030 (0.119) |
| Religion (Christian) | | | | |
| No Religion | -1.486*** (0.063) | -1.070*** (0.062) | -0.946*** (0.062) | -1.181*** (0.068) |
| Jewish | -0.401*** (0.059) | -0.589*** (0.059) | -0.122* (0.058) | 0.121 (0.063) |
| Muslim | -0.540*** (0.069) | -0.520*** (0.068) | 0.032 (0.066) | -0.144* (0.072) |
| Age | -0.108*** (0.002) | -0.093*** (0.002) | -0.074*** (0.002) | -0.050*** (0.002) |
| Gender (Female) | 0.598*** (0.037) | 0.623*** (0.037) | 0.237*** (0.037) | 0.150*** (0.040) |
| Marital Status (Married) | 0.651*** (0.051) | 0.507*** (0.050) | 0.186*** (0.050) | -0.106 (0.056) |
| Constant | 5.109*** (0.149) | 4.002*** (0.143) | 3.215*** (0.139) | 1.756*** (0.151) |
| Sample Size | 8515 | | | |
| Chi-Square | 7486.21 | | | |

*p<0.05, **p<0.01, ***p<.001

Note: Numbers in parentheses are standard errors.

Appendix 3.1

Definitions for Variables Used in Chapter 3.

| Variable | Definition/Question | Coding |
|--------------------------|---|---|
| Economic Development | A level of economic development in the source country. A categorical variable, represented by the mutually exclusive categories | GNI per capita is: 1) Less than \$2000 (least developed, reference category) 2) Between \$2000 and \$3000 3) Between \$3001 and \$9000 4) Between \$9001 and \$17000 5) More than \$17000 |
| Political Stability | A level of political stability in the source country. A categorical variable, represented by the mutually exclusive categories | 1) Below 25 th percentile rank (least stable, reference category) 2) Between 25 th and 50 th 3) Between 51 st and 75 th 4) Above 75 th percentile rank |
| Level of Democratization | A level of democratization in the source country. A categorical variable, represented by the mutually exclusive categories | 1) Below 25 th percentile rank (least democratic, reference category) 2) Between 25 th and 50 th 3) Between 51 st and 75 th 4) Above 75 th percentile rank |
| Geographic Distance | The distance in kilometers from Ottawa, the capital of Canada, to the capital city of the source country | 1) Up to 5,000 kilometers (reference category) 2) 5,001-10,000 kilometers 3) 10,001-20,000 kilometers |
| Official Language | Countries where English is a dominant (e.g. United States) or official (e.g. United Kingdom) language or one of official languages (e.g., India, Singapore) | 0 = English 1 = Other than English |
| Education Level | A categorical variable, represented by the mutually exclusive categories | 1) Less than high school (reference category) 2) High school diploma 3) Some postsecondary 4) College diploma 5) Bachelor degree 6) Postgraduate degree |
| Immigration Category | A categorical variable represented by the mutually exclusive categories | 1) Skilled worker/provincial nominees/business class (reference category) 2) Family Sponsorship 3) Refugee Claim |
| Work Experience | Having work experience in a source country | 0 = yes (reference category) 1 = no |

| Variable | Definition/Question | Coding |
|----------------------------------|---|--|
| Linguistic Distance | The distance between English (one of Canada's official languages) and an immigrant's mother tongue. The classification of language families and branches within a family are taken from the Encyclopedia Britannica (2007). Dummy variables are constructed for each of the 3 mutually exclusive categories | 1) English (reference category) 2) Different branch, same family 3) Different family |
| Religion | A categorical variable represented by the mutually exclusive categories | 1) Christian (reference category) 2) No religion 3) Jewish 4) Muslim |
| Age | A continuous variable measured in years | 20-64 |
| Gender | | 0 = female (reference category) 1 = male |
| Marital Status | | 0 = married (reference category) 1 = single, divorced, widowed or separated |
| Occupation in the source country | Dummy variables are constructed for each of the 6 mutually exclusive categories | 1) Primary (reference category) 2) Industry 3) Clerical and sales 4) Services 5) Professional 6) Management |
| Globalization Ranking | Globalization ranking of the source country. A categorical variable represented by the mutually exclusive categories | 1) 0-20 (least global, reference category) 2) 21-40 3) 41-60 4) 61-80 5) 81-101 |

Appendix 3.2

Determinants of English Proficiency in Each of Speaking, Reading and Writing Dimensions

The empirical specification of models that estimate the role of human capital indicators and macro-level factors of the source country for each dimension of English proficiency is identical to that of the model analyzing overall language fluency. Overall, the effect of predictors on different dimensions of English is similar to that found in the model investigating overall language proficiency (presented in Table 3.3). Since the results show similar patterns, only a brief discussion of determinants of speaking proficiency is presented (see Table 3.4). For further comparison, the models on reading and writing proficiencies are presented in Tables 3.5 and 3.6.

Speaking Language Proficiency

The Speaking Language Skills model findings indicate that all macro-level factors, including economic development, political stability, level of democratization, geographic distance, and official language of the source country, are significant predictors of spoken English skills upon arrival.

Lower and medium levels of economic development are associated with greater spoken skills, which is also the case with overall language proficiency. Immigrants from countries with lower and moderate economic development are significantly more likely to speak English well and very well when compared to individuals from the least developed countries ($e^{0.430} = 1.54$ and $e^{0.668} = 1.95$ for countries with \$2,000 to \$3,000 GNI per capita, and $e^{1.142} = 3.13$ and $e^{1.519} = 4.57$ for countries with \$3,001 to \$9,000 GNI per capita respectively). The relationship is not as strong at higher levels of economic development. No difference is found between good and very good speaking skills of immigrants from more developed countries (GNI per capita of \$9,001 to \$17,000) and the least developed countries. Immigrants from the most developed countries (with GNI per capita higher than \$17,000) are two to three times more likely to speak English well and very well when compared to immigrants from the least developed countries ($e^{0.819} = 2.27$ and $e^{1.069} = 2.9$ respectively).

Similarly to the overall language proficiency model, lower levels of political stability are negatively and significantly related, and higher levels are positively related to speaking language proficiency when compared to the lowest level of stability.

Level of democratization is related to spoken English skills in a fashion similar to the relationship with overall language proficiency. Being from a country where democratization is higher than the lowest level is inversely and significantly related to spoken skills at arrival. The magnitude of the effect is stronger for individuals from countries with a medium level of democratization (51%-75%). These immigrants are significantly less likely to speak English at any level (poor, fair, good, and very good) than not at all when compared to immigrants from the least democratic countries ($e^{-0.464} = 0.63$, $e^{-1.241} = 0.29$, $e^{-1.147} = 0.318$ and $e^{-0.756} = 0.47$ respectively).

The findings associated with the relation between geographic distance and official language of a source country are similar to those for the overall language proficiency model. Geographic distance is positively and significantly related to speaking skills. Those who travel 5,000 to 10,000 kilometres are two to five times more likely to speak English at any level than not at all. Geographic distance is found to matter even more for immigrants who travel more than 10,000 kilometres. These immigrants are 6 to 11 times more likely to have English spoken proficiency. Arriving from a country where English is not an official language is associated with a significant decrease in speaking skills. These immigrants are 95 percent less likely to speak English very well at arrival than not be able to speak it at all ($e^{-2.922} = 0.05$).

With respect to human capital characteristics, the results are similar to those obtained when testing the overall language proficiency model. Each additional level of education, as expected, is positively and significantly related to speaking skills at arrival. Arriving under a skilled-worker immigration category and having work experience are associated with the ability to speak English significantly better at arrival in Canada, than have no knowledge at all.

The relationship between the mother tongue and speaking skills at arrival is related to the mother tongue's linguistic distance from English. Immigrants whose mother tongue belongs to the same linguistic family as English possess significantly worse language skills at arrival than immigrants whose mother tongue is English. At the same time, immigrants whose mother tongue belongs to a different family are significantly more likely to have better English-speaking skills than immigrants whose mother tongue is English. Christian immigrants are significantly more likely to speak English at any level than not at all when compared to immigrants with no religious affiliation or to Jewish and Muslim immigrants. Being young, male, and single are all factors associated with significantly higher odds of knowing English than not knowing it at all.

Table 3.4

Coefficients from a Multinomial Logit Model Predicting Speaking Language Proficiency Category

| Independent Variable | Very Good | Good | Fair | Poor |
|---|----------------------|----------------------|----------------------|----------------------|
| | [No Knowledge] | | | |
| Economic Development (GNI per capita < \$2,000) | | | | |
| GNI per capita \$2,000 - \$3,000 | 0.668*** (0.076) | 0.430*** (0.075) | -0.020 (0.074) | 0.045 (0.074) |
| GNI per capita \$3,001 - \$9,000 | 1.519*** (0.088) | 1.142*** (0.087) | 0.765*** (0.086) | 0.147 (0.089) |
| GNI per capita \$9,001 - \$17,000 | -0.202 (0.162) | -0.188 (0.160) | 0.538*** (0.159) | 1.235*** (0.159) |
| GNI per capita >\$17,000 | 1.069*** (0.199) | 0.819*** (0.199) | 1.053*** (0.199) | 1.510*** (0.201) |
| Political Stability (<25%) | | | | |
| 25%-50% (Less Stable) | -1.821*** (0.060) | -1.767*** (0.059) | -1.288*** (0.057) | -0.725*** (0.058) |
| 51%-75% | -0.367*** (0.096) | -0.059 (0.094) | 0.066 (0.093) | 0.309** (0.095) |
| >75% (More Stable) | 1.547*** (0.203) | 1.224*** (0.203) | 0.757*** (0.204) | 0.166 (0.211) |
| Level of Democratization (<25%) | | | | |
| 25%-50% | 0.158** (0.053) | -0.096 (0.052) | -0.192*** (0.051) | -0.254*** (0.051) |
| 51%-75% | -0.756*** (0.078) | -1.147*** (0.078) | -1.241*** (0.077) | -0.464*** (0.075) |
| >75% | -0.273 (0.161) | -0.768*** (0.160) | -1.292*** (0.159) | -1.525*** (0.158) |
| Geographic Distance (Up to 5000 km) | | | | |
| 5001-10000 km | 0.760*** (0.081) | 1.359*** (0.082) | 1.571*** (0.084) | 1.136*** (0.085) |
| 10001-20000 km | 1.803*** (0.094) | 2.446*** (0.093) | 2.049*** (0.094) | 1.842*** (0.094) |
| Official Language (English) | -2.922*** (0.070) | -1.784*** (0.069) | -1.437*** (0.068) | -0.477*** (0.068) |
| Education Level (Less than High School Diploma) | | | | |
| High School Diploma | 1.795*** (0.066) | 1.872*** (0.061) | 1.613*** (0.051) | 1.302*** (0.045) |
| Some Postsecondary | 3.105*** (0.077) | 3.006*** (0.073) | 2.432*** (0.067) | 1.770*** (0.064) |
| College Diploma | 3.488*** (0.079) | 3.266*** (0.075) | 2.924*** (0.068) | 2.333*** (0.065) |
| Bachelor Degree | 4.621*** (0.071) | 4.494*** (0.068) | 3.533*** (0.061) | 2.446*** (0.059) |

| Independent Variable | Very Good | Good | Fair | Poor |
|---|----------------------|----------------------|----------------------|----------------------|
| | [No Knowledge] | | | |
| Postsecondary Degree | 6.085*** (0.105) | 5.487*** (0.103) | 4.414*** (0.098) | 2.668*** (0.100) |
| Immigration Category (Skilled Worker) | | | | |
| Family Sponsorship | -1.950*** (0.046) | -1.343*** (0.045) | -1.039*** (0.044) | -0.630*** (0.044) |
| Refugee Claim | -2.306*** (0.074) | -1.747*** (0.068) | -1.428*** (0.065) | -0.915*** (0.064) |
| Work Experience in Source Country (Yes) | -1.707*** (0.047) | -1.079*** (0.044) | -0.575*** (0.042) | -0.361*** (0.041) |
| Linguistic Distance (English) | | | | |
| Same Family | -0.377*** (0.102) | -0.225* (0.102) | -0.573*** (0.100) | -0.443*** (0.101) |
| Different Family | 0.491*** (0.107) | 0.685*** (0.107) | 0.339** (0.105) | -0.001 (0.106) |
| Religion (Christian) | | | | |
| No Religion | -1.489*** (0.064) | -1.269*** (0.062) | -1.068*** (0.062) | -1.129*** (0.063) |
| Jewish | -0.522*** (0.058) | -0.830*** (0.057) | -0.468*** (0.056) | -0.130* (0.057) |
| Muslim | -0.625*** (0.068) | -0.900*** (0.067) | -0.215** (0.066) | -0.050 (0.065) |
| Age | -0.098*** (0.002) | -0.099*** (0.002) | -0.074*** (0.002) | -0.046*** (0.001) |
| Gender (Female) | 0.536*** (0.037) | 0.624*** (0.037) | 0.350*** (0.036) | 0.075* (0.037) |
| Marital Status (Married) | 0.839*** (0.051) | 0.568*** (0.050) | 0.410*** (0.050) | 0.140** (0.050) |
| Constant | 4.534*** (0.146) | 3.369*** (0.143) | 2.987*** (0.136) | 1.414*** (0.133) |
| Sample Size | 8515 | | | |
| Chi-Square | 70742.04 | | | |

*p<0.05, **p<0.01, ***p<.001

Note: Numbers in parentheses are standard errors.

Table 3.5

Coefficients from a Multinomial Logit Model Predicting Reading Language Proficiency
Category

| Independent Variable | Very Good | Good | Fair | Poor |
|---|----------------------|----------------------|----------------------|----------------------|
| | [No Knowledge] | | | |
| Economic Development (GNI per capita < \$2,000) | | | | |
| GNI per capita \$2,000 - \$3,000 | 0.448*** (0.078) | -0.090 (0.078) | -0.019 (0.079) | 0.150 (0.088) |
| GNI per capita \$3,001 - \$9,000 | 1.163*** (0.091) | 0.779*** (0.091) | 0.530*** (0.092) | 0.133 (0.108) |
| GNI per capita \$9,001 - \$17,000 | 0.682*** (0.169) | 1.774*** (0.168) | 1.330*** (0.169) | 0.867*** (0.184) |
| GNI per capita >\$17,000 | 0.726*** (0.192) | 0.781*** (0.192) | 0.736*** (0.195) | 0.154 (0.218) |
| Political Stability (<25%) | | | | |
| 25%-50% (Less Stable) | -1.860*** (0.061) | -1.708*** (0.061) | -1.241*** (0.061) | -0.533*** (0.068) |
| 51%-75% | -0.414*** (0.096) | -0.284** (0.095) | 0.050 (0.097) | 0.332** (0.110) |
| >75% (More Stable) | 0.928*** (0.186) | 0.886*** (0.187) | 0.431* (0.192) | 0.313 (0.220) |
| Level of Democratization (<25%) | | | | |
| 25%-50% | 0.243*** (0.054) | -0.068 (0.054) | -0.231*** (0.054) | -0.345*** (0.060) |
| 51%-75% | -0.881*** (0.081) | -1.258*** (0.081) | -1.015*** (0.082) | -0.865*** (0.089) |
| >75% | -0.525** (0.160) | -1.549*** (0.160) | -1.232*** (0.161) | -0.656*** (0.177) |
| Geographic Distance (Up to 5000 km) | | | | |
| 5001-10000 km | 0.943*** (0.084) | 1.168*** (0.085) | 1.232*** (0.090) | 1.401*** (0.112) |
| 10001-20000 km | 1.635*** (0.097) | 1.582*** (0.096) | 1.461*** (0.100) | 1.847*** (0.121) |
| Official Language (English) | -3.083*** (0.072) | -1.793*** (0.072) | -1.292*** (0.073) | -0.944*** (0.079) |
| Education Level (Less than High School Diploma) | | | | |
| High School Diploma | 2.081*** (0.060) | 1.900*** (0.055) | 1.921*** (0.051) | 1.272*** (0.053) |
| Some Postsecondary | 3.457*** (0.074) | 2.885*** (0.070) | 2.503*** (0.070) | 1.520*** (0.075) |
| College Diploma | 3.722*** (0.074) | 3.184*** (0.070) | 3.154*** (0.068) | 1.862*** (0.073) |
| Bachelor Degree | 5.257*** (0.070) | 4.344*** (0.066) | 3.598*** (0.065) | 2.109*** (0.070) |

| Independent Variable | Very Good | Good | Fair | Poor |
|---|----------------------|----------------------|----------------------|----------------------|
| | [No Knowledge] | | | |
| Postsecondary Degree | 6.455*** (0.102) | 4.931*** (0.100) | 3.858*** (0.101) | 1.642*** (0.117) |
| Immigration Category (Skilled Worker) | | | | |
| Family Sponsorship | -1.628*** (0.046) | -1.182*** (0.045) | -0.849*** (0.045) | -0.649*** (0.051) |
| Refugee Claim | -2.358*** (0.071) | -1.775*** (0.068) | -1.191*** (0.067) | -1.114*** (0.074) |
| Work Experience in Source Country (Yes) | -1.183*** (0.046) | -0.572*** (0.044) | -0.233*** (0.044) | -0.053 (0.048) |
| Linguistic Distance (English) | | | | |
| Same Family | -0.419*** (0.110) | -0.498*** (0.109) | -0.498*** (0.112) | -0.212 (0.127) |
| Different Family | 0.359** (0.113) | 0.002 (0.112) | 0.115 (0.115) | -0.083 (0.131) |
| Religion (Christian) | | | | |
| No Religion | -1.418*** (0.063) | -1.053*** (0.063) | -0.951*** (0.064) | -1.217*** (0.071) |
| Jewish | -0.415*** (0.060) | -0.480*** (0.060) | 0.027 (0.060) | -0.006 (0.065) |
| Muslim | -0.559*** (0.068) | -0.449*** (0.068) | 0.056 (0.068) | -0.373*** (0.075) |
| Age | -0.102*** (0.002) | -0.083*** (0.002) | -0.065*** (0.002) | -0.050*** (0.002) |
| Gender (Female) | 0.604*** (0.037) | 0.486*** (0.037) | 0.166*** (0.038) | 0.319*** (0.042) |
| Marital Status (Married) | 0.604*** (0.050) | 0.333*** (0.050) | 0.068 (0.051) | -0.225*** (0.059) |
| Constant | 5.138*** (0.147) | 4.121*** (0.143) | 2.656*** (0.146) | 1.349*** (0.166) |
| Sample Size | 8515 | | | |
| Chi-Square | 67221.43 | | | |

*p<0.05, **p<0.01, ***p<.001

Note: Numbers in parentheses are standard errors.

Table 3.6

Coefficients from a Multinomial Logit Model Predicting Writing Language Proficiency Category

| Independent Variable | Very Good | Good | Fair | Poor |
|---|----------------------|----------------------|----------------------|----------------------|
| | [No Knowledge] | | | |
| Economic Development (GNI per capita < \$2,000) | | | | |
| GNI per capita \$2,000 - \$3,000 | 0.187* (0.073) | -0.103 (0.073) | -0.400*** (0.073) | -0.078 (0.076) |
| GNI per capita \$3,001 - \$9,000 | 0.945*** (0.087) | 0.835*** (0.086) | 0.469*** (0.087) | 0.187* (0.094) |
| GNI per capita \$9,001 - \$17,000 | -0.314* (0.141) | 0.631*** (0.139) | 0.396** (0.140) | 0.657*** (0.147) |
| GNI per capita >\$17,000 | 0.677*** (0.174) | 0.580** (0.176) | 0.958*** (0.175) | 0.871*** (0.185) |
| Political Stability (<25%) | | | | |
| 25%-50% (Less Stable) | -1.992*** (0.058) | -1.762*** (0.058) | -1.354*** (0.057) | -0.634*** (0.060) |
| 51%-75% | -0.537*** (0.092) | -0.409*** (0.091) | -0.031 (0.091) | 0.062 (0.099) |
| >75% (More Stable) | 1.288*** (0.180) | 1.341*** (0.181) | 0.323 (0.184) | 0.367 (0.194) |
| Level of Democratization (<25%) | | | | |
| 25%-50% | 0.216*** (0.051) | -0.174*** (0.051) | -0.194*** (0.051) | -0.268*** (0.054) |
| 51%-75% | -0.655*** (0.077) | -0.994*** (0.077) | -1.071*** (0.078) | -0.557*** (0.080) |
| >75% | -0.594*** (0.140) | -1.500*** (0.139) | -1.395*** (0.140) | -0.885*** (0.145) |
| Geographic Distance (Up to 5000 km) | | | | |
| 5001-10000 km | 0.757*** (0.081) | 1.205*** (0.082) | 1.062*** (0.084) | 0.351*** (0.086) |
| 10001-20000 km | 1.288*** (0.092) | 1.713*** (0.093) | 1.104*** (0.094) | 0.851*** (0.096) |
| Official Language (English) | -2.994*** (0.068) | -1.591*** (0.068) | -1.339*** (0.068) | -0.700*** (0.072) |
| Education Level (Less than High School Diploma) | | | | |
| High School Diploma | 2.198*** (0.059) | 1.974*** (0.055) | 1.872*** (0.052) | 1.462*** (0.051) |
| Some Postsecondary | 3.329*** (0.071) | 2.812*** (0.069) | 2.345*** (0.066) | 1.534*** (0.069) |
| College Diploma | 3.466*** (0.070) | 2.965*** (0.067) | 2.681*** (0.064) | 2.182*** (0.064) |
| Bachelor Degree | 4.973*** (0.066) | 4.320*** (0.064) | 3.513*** (0.061) | 2.387*** (0.062) |

| Independent Variable | Very Good | Good | Fair | Poor |
|---|----------------------|----------------------|----------------------|----------------------|
| | [No Knowledge] | | | |
| Postsecondary Degree | 6.382*** (0.098) | 5.245*** (0.096) | 4.212*** (0.095) | 2.513*** (0.101) |
| Immigration Category (Skilled Worker) | | | | |
| Family Sponsorship | -1.552*** (0.044) | -1.130*** (0.043) | -0.824*** (0.043) | -0.787*** (0.045) |
| Refugee Claim | -2.112*** (0.068) | -1.599*** (0.065) | -1.330*** (0.064) | -1.169*** (0.067) |
| Work Experience in Source Country (Yes) | -1.050*** (0.044) | -0.429*** (0.043) | -0.444*** (0.043) | -0.095* (0.044) |
| Linguistic Distance (English) | | | | |
| Same Family | -0.243* (0.100) | -0.143 (0.101) | -0.196 (0.102) | -0.327** (0.104) |
| Different Family | 0.557*** (0.104) | 0.393*** (0.104) | 0.519*** (0.106) | -0.060 (0.109) |
| Religion (Christian) | | | | |
| No Religion | -1.275*** (0.059) | -0.881*** (0.058) | -0.710*** (0.058) | -0.981*** (0.061) |
| Jewish | -0.206*** (0.056) | -0.512*** (0.056) | 0.032 (0.056) | 0.160** (0.059) |
| Muslim | -0.183** (0.065) | -0.335*** (0.064) | 0.124 (0.064) | -0.083 (0.067) |
| Age | -0.094*** (0.002) | -0.082*** (0.002) | -0.073*** (0.002) | -0.049*** (0.002) |
| Gender (Female) | 0.551*** (0.035) | 0.443*** (0.035) | 0.223*** (0.035) | 0.211*** (0.037) |
| Marital Status (Married) | 0.670*** (0.049) | 0.546*** (0.049) | 0.262*** (0.049) | 0.187*** (0.052) |
| Constant | 4.453*** (0.141) | 3.083*** (0.139) | 2.949*** (0.138) | 2.011*** (0.139) |
| Sample Size | 8515 | | | |
| Chi-Square | 67433.3 | | | |

*p<0.05, ** p<0.01, ***p<.001

Note: Numbers in parentheses are standard errors.

Appendix 3.3

Language Proficiency for Immigrants with Work Experience from Countries with Globalization Ranking

Descriptive statistics for all independent variables are presented in Table 3.7.

Table 3.8 builds on the model presented in Table 3.3 by testing the determinants of language proficiency at arrival for a specific sub-sample of immigrants. The sub-sample includes only immigrants who reported employment in the source country that has reported globalization ranking. The model includes the following additional language proficiency predictors: the immigrant's occupation type in the source country and the source country's globalization ranking.

Since the results for the other variables are similar to the model presented in Table 3.3, only the relationships between occupation type, globalization ranking, and English proficiency as well as any results inconsistent between the two models are discussed.

Constrained by availability of published indexes of globalization, the analysis includes 101 (out of 165 presented in the LSIC) source countries. I expected to find a positive relationship between the level of globalization of the source country and immigrant language proficiency at arrival, arguing that globalization stimulates exposure to English. When comparing immigrants from the source countries with the lowest level of globalization (0-20), those from countries with a higher level of globalization demonstrate significantly lower English proficiency at arrival. The effect is not significant for immigrants with fair, good and very good English skills from countries with the medium globalization ranking (41-60). When compared to language skills of other immigrants, immigrants from the most globalized countries (81-101) are 60 to 85 percent less likely to know English at any level (poor, fair, good, or very good) than not at all ($e^{-1.976} = 0.14$, $e^{-1.816} = 0.16$, $e^{-.790} = 0.45$, and $e^{-0.961} = 0.38$ respectively). The results do not lend support to the hypothesis that immigrants from nations with lower globalization rankings are less proficient in English at arrival to Canada.

Occupational group is found to be significantly related to English proficiency at arrival.

Irrespective of the occupational group, any occupation above primary industry is associated with significantly higher language skills. The magnitude of the effect is greatest for higher-status

occupations, such as service, professional, and management positions. These findings support the hypothesis that higher-status occupations serve as an economic incentive to invest in destination country language learning.

For most other predictors, the results are consistent with the model presented in Table 3.3. The only exceptions include the level of the country's economic development, political stability, immigrant's religion, and linguistic distance of mother tongue from English.

When the source country's globalization ranking and occupation are included in the model, the relationship between economic development of the source country and language knowledge becomes stronger, especially at a lower level of economic development. Immigrants from countries with GNI per capita of \$2,000 to \$3,000 are significantly more likely to know English at any level at arrival than to not know any at all when compared to individuals from the least economically developed countries. The same effect is observed for the political stability variable. Immigrants from moderately stable countries (51-75%) are significantly more likely to know English at any level than not at all.

Linguistic distance plays a positive and significant role in language proficiency. Immigrants whose mother tongue belongs to the same language family as English have either no different or significantly better English knowledge than immigrants for whom English is their mother tongue. Inclusion of globalization and occupation variables reversed the role of religion. Jewish immigrants are found to have no different language skills and Muslims significantly better skills when compared to Christians. As discussed above, religion may serve as a proxy of cultural distance. Further analysis is required to disentangle the relationship between religion, cultural distance, and English proficiency at arrival.

Table 3.7

Globalization and Occupation Related Characteristics of the Sample

| Variable | N =5,999 |
|-----------------------------------|-----------------|
| Economic Development | |
| GNI per capita < \$2,000 | 68.9% |
| GNI per capita \$2,000 - \$3,000 | 5.8% |
| GNI per capita \$3,001 - \$9,000 | 11.3% |
| GNI per capita \$9,001 - \$17,000 | 5.5% |
| GNI per capita >\$17,000 | 8.6% |
| Political Stability | |
| <25% | 43.4% |
| 25%-50% | 36.9% |
| 51%-75% | 17.2% |
| >75% | 2.5% |
| Level of Democratization | |
| <25% | 37.6% |
| 25%-50% | 23.9% |
| 51%-75% | 29.8% |
| >75% | 8.7% |
| Geographic Distance | |
| Up to 5000 km | 6.7% |
| 5001-10000 km | 25.6% |
| 10001-20000 km | 67.7% |
| Official Language | |
| English | 37.0% |
| Not English | 63.0% |
| Globalization Ranking | |
| 0-20 (Least Globalized) | 7.5% |
| 21-40 | 28.6% |
| 41-60 | 14.7% |
| 61-80 | 41.5% |
| 81-101 (Most Globalized) | 7.7% |
| Occupation | |
| Primary | 2.7% |
| Industry | 6.9% |
| Clerical | 16.7% |
| Service | 3.4% |
| Professional | 58.8% |
| Management | 11.6% |

| Variable | N =5,999 |
|-------------------------------|-----------------|
| Education Level | |
| Less than High School Diploma | 4.4% |
| High School Diploma | 6.5% |
| Some Postsecondary | 7.5% |
| College Diploma | 10.6% |
| Bachelor Degree | 46.2% |
| Postsecondary Degree | 24.8% |
| Immigration Category | |
| Skilled Worker | 80.1% |
| Family Sponsorship | 18.4% |
| Refugee Claim | 1.5% |
| Linguistic Distance | |
| English | 8.9% |
| Same Family | 39.2% |
| Different Family | 51.9% |
| Religion | |
| Christian | 39.0% |
| No Religion | 29.3% |
| Jewish | 14.5% |
| Muslim | 17.2% |
| Age | 35.4 |
| Female | 44.4% |
| Married | 84.5% |

Table 3.8

Coefficients from a Multinomial Logit Model Predicting English Language Proficiency Category for Immigrants with Work Experience from Countries with Globalization Ranking

| Independent Variable | Very Good | Good | Fair | Poor |
|---|----------------------|----------------------|----------------------|----------------------|
| | [No Knowledge] | | | |
| Economic Development (GNI per capita < \$2,000) | | | | |
| GNI per capita \$2,000 - \$3,000 | 1.186*** (0.142) | 0.515*** (0.141) | 0.315* (0.141) | 0.749*** (0.150) |
| GNI per capita \$3,001 - \$9,000 | 2.681*** (0.230) | 1.971*** (0.229) | 1.366*** (0.231) | 1.272*** (0.247) |
| GNI per capita \$9,001 - \$17,000 | -0.334 (0.278) | 0.337 (0.277) | 1.392*** (0.277) | 1.702*** (0.293) |
| GNI per capita >\$17,000 | 1.999*** (0.322) | 1.040** (0.320) | 1.807*** (0.321) | 2.299*** (0.344) |
| Political Stability (<25%) | | | | |
| 25%-50% | -1.304*** (0.142) | -1.440*** (0.141) | -1.075*** (0.141) | 0.002 (0.151) |
| 51%-75% | 1.822*** (0.202) | 1.689*** (0.202) | 1.674*** (0.202) | 1.712*** (0.217) |
| >75% | 5.216*** (0.306) | 4.436*** (0.306) | 3.500*** (0.308) | 2.468*** (0.331) |
| Level of Democratization (<25%) | | | | |
| 25%-50% | 0.426** (0.134) | 0.130 (0.134) | -0.070 (0.134) | -0.388** (0.143) |
| 51%-75% | -1.073*** (0.172) | -1.562*** (0.172) | -1.471*** (0.172) | -1.340*** (0.180) |
| >75% | -3.952*** (0.355) | -3.657*** (0.352) | -3.520*** (0.356) | -2.656*** (0.379) |
| Geographic Distance (Up to 5000 km) | | | | |
| 5001-10000 km | -0.057 (0.144) | 0.338* (0.144) | 0.566*** (0.144) | -0.142 (0.152) |
| 10001-20000 km | 1.654*** (0.174) | 1.403*** (0.173) | 0.983*** (0.172) | 0.383* (0.185) |
| Official Language (English) | -5.159*** (0.175) | -3.846*** (0.174) | -2.946*** (0.174) | -2.150*** (0.188) |
| Globalization Ranking (0-20 - Least Globalized) | | | | |
| 21-40 | -2.412*** (0.167) | -1.951*** (0.166) | -1.482*** (0.166) | -0.986*** (0.178) |
| 41-60 | -0.195 (0.218) | 0.279 (0.216) | -0.109 (0.216) | -0.565* (0.232) |
| 61-80 | -3.175*** (0.196) | -2.340*** (0.195) | -2.167*** (0.194) | -1.669*** (0.206) |
| 81-101 - Most Globalized | -0.961** (0.370) | -0.790* (0.368) | -1.816*** (0.370) | -1.976*** (0.393) |

| Independent Variable | Very Good | Good | Fair | Poor |
|---|----------------------|----------------------|----------------------|----------------------|
| | [No Knowledge] | | | |
| Occupation (Primary) | | | | |
| Industry | 1.779*** (0.131) | 0.535*** (0.109) | 0.518*** (0.104) | -0.082 (0.104) |
| Clerical | 3.344*** (0.135) | 1.638*** (0.115) | 1.410*** (0.110) | 0.361** (0.112) |
| Service | 3.910*** (0.164) | 2.100*** (0.148) | 1.547*** (0.144) | 0.900*** (0.144) |
| Professional | 4.106*** (0.135) | 2.439*** (0.114) | 2.005*** (0.111) | 0.914*** (0.112) |
| Management | 3.132*** (0.139) | 1.181*** (0.120) | 0.827*** (0.116) | 0.226 (0.118) |
| Education Level (Less than High School Diploma) | | | | |
| High School Diploma | 2.185*** (0.106) | 1.955*** (0.097) | 1.698*** (0.086) | 1.525*** (0.086) |
| Some Postsecondary | 3.551*** (0.117) | 3.214*** (0.110) | 2.383*** (0.102) | 1.624*** (0.107) |
| College Diploma | 3.774*** (0.115) | 3.335*** (0.108) | 2.914*** (0.099) | 2.445*** (0.101) |
| Bachelor Degree | 5.194*** (0.112) | 4.615*** (0.105) | 3.485*** (0.097) | 2.360*** (0.100) |
| Postsecondary Degree | 6.593*** (0.151) | 5.475*** (0.147) | 3.953*** (0.141) | 2.379*** (0.152) |
| Immigration Category (Skilled Worker) | | | | |
| Family Sponsorship | -1.772*** (0.064) | -1.201*** (0.062) | -0.940*** (0.061) | -0.452*** (0.065) |
| Refugee Claim | -3.794*** (0.130) | -3.027*** (0.121) | -2.762*** (0.119) | -1.949*** (0.127) |
| Linguistic Distance (English) | | | | |
| Same Family | 0.384* (0.160) | 0.311 (0.159) | 0.177 (0.159) | 0.431* (0.174) |
| Different Family | 1.444*** (0.163) | 1.219*** (0.161) | 1.070*** (0.161) | 0.816*** (0.179) |
| Religion (Christian) | | | | |
| No Religion | -0.555*** (0.087) | -0.153 (0.085) | -0.161 (0.085) | -0.425*** (0.091) |
| Jewish | -0.137 (0.129) | -0.155 (0.128) | -0.096 (0.128) | 0.047 (0.137) |
| Muslim | 0.883*** (0.119) | 0.852*** (0.118) | 0.973*** (0.117) | 0.759*** (0.123) |
| Age | -0.127*** (0.003) | -0.117*** (0.002) | -0.092*** (0.002) | -0.063*** (0.003) |
| Gender (Female) | 0.908*** (0.052) | 0.931*** (0.052) | 0.506*** (0.052) | 0.325*** (0.055) |

| Independent Variable | Very Good | Good | Fair | Poor |
|--------------------------|---------------------|---------------------|---------------------|---------------------|
| | [No Knowledge] | | | |
| Marital Status (Married) | 0.548*** (0.083) | 0.439*** (0.083) | 0.116 (0.083) | -0.088 (0.091) |
| Constant | 4.485*** (0.279) | 5.209*** (0.264) | 4.772*** (0.259) | 3.264*** (0.276) |
| Sample Size | 5999 | | | |
| Chi-Square | 6010 | | | |

*p<0.05, **p<0.01, ***p<.001

Note: Numbers in parentheses are standard errors.

Appendix 3.4

Macro-Level Factors of the Source Countries

| Country | Economic Development | | | | | Political Stability | | | | Level of Democratization | | | |
|----------------------------------|----------------------|-------------------|-------------------|--------------------|-----------|---------------------|-------|-------|-----|--------------------------|-------|-------|-----|
| | <\$2,000 | \$2,000 - \$3,000 | \$3,001 - \$9,000 | \$9,001 - \$17,000 | >\$17,000 | <25 | 25-50 | 51-75 | >75 | <25 | 25-50 | 51-75 | >75 |
| United States | | | | | 1 | | | 1 | | | | | 1 |
| Costa Rica | | | 1 | | | | | | 1 | | | | 1 |
| El Salvador | | 1 | | | | | 1 | | | | | 1 | |
| Guatemala | | 1 | | | | 1 | | | | | 1 | | |
| Honduras | 1 | | | | | | 1 | | | | 1 | | |
| Mexico | | | 1 | | | | 1 | | | | | 1 | |
| Nicaragua | 1 | | | | | | 1 | | | | 1 | | |
| Antigua and Barbuda | | | | 1 | | | | | 1 | | | 1 | |
| Bahamas | | | | 1 | | | | | 1 | | | | 1 |
| Bermuda | | | | | 1 | | | | 1 | | | | 1 |
| Cuba | 1 | | | | | | | 1 | | 1 | | | |
| Dominica | | | 1 | | | | | | 1 | | | | 1 |
| Dominican Republic | | 1 | | | | | 1 | | | | | 1 | |
| Grenada | | | 1 | | | | | | 1 | | | 1 | |
| Guadeloupe (France) | | | | | 1 | | | 1 | | | | | 1 |
| Haiti | 1 | | | | | 1 | | | | 1 | | | |
| Jamaica | | | 1 | | | | 1 | | | | | 1 | |
| Saint Lucia | | | 1 | | | | | | 1 | | | | 1 |
| Saint Vincent and the Grenadines | | | 1 | | | | | | 1 | | | | 1 |
| Trinidad and Tobago | | | | 1 | | | 1 | | | | | 1 | |
| West Indies, N.O.S. | | | 1 | | | | | 1 | | | | 1 | |
| Argentina | | | 1 | | | | 1 | | | | | 1 | |
| Bolivia | 1 | | | | | | 1 | | | | 1 | | |
| Brazil | | | 1 | | | | 1 | | | | | 1 | |
| Chile | | | 1 | | | | | | 1 | | | | 1 |
| Colombia | | 1 | | | | 1 | | | | | 1 | | |
| Ecuador | | 1 | | | | 1 | | | | | 1 | | |
| Guyana | 1 | | | | | | 1 | | | | | 1 | |
| Paraguay | 1 | | | | | | 1 | | | | 1 | | |
| Peru | | 1 | | | | | 1 | | | | 1 | | |
| Suriname | | 1 | | | | | | 1 | | | | 1 | |
| Uruguay | | | 1 | | | | | 1 | | | | | 1 |
| Venezuela | | | 1 | | | 1 | | | | | 1 | | |

| Country | Economic Development | | | | | Political Stability | | | | Level of Democratization | | | |
|------------------------|----------------------|-------------------|-------------------|--------------------|-----------|---------------------|-------|-------|-----|--------------------------|-------|-------|-----|
| | <\$2,000 | \$2,000 - \$3,000 | \$3,001 - \$9,000 | \$9,001 - \$17,000 | >\$17,000 | <25 | 25-50 | 51-75 | >75 | <25 | 25-50 | 51-75 | >75 |
| South America, N.O.S. | | 1 | | | | | 1 | | | | | 1 | |
| Austria | | | | | 1 | | | | 1 | | | | 1 |
| Belgium | | | | | 1 | | | | 1 | | | | 1 |
| France | | | | | 1 | | | 1 | | | | | 1 |
| Germany | | | | | 1 | | | | 1 | | | | 1 |
| Netherlands | | | | | 1 | | | | 1 | | | | 1 |
| Switzerland | | | | | 1 | | | | 1 | | | | 1 |
| Bulgaria | | | 1 | | | | | 1 | | | | 1 | |
| Czechoslovakia, N.I.E. | | | 1 | | | | | 1 | | | | | 1 |
| Czech Republic | | | | 1 | | | | 1 | | | | | 1 |
| Hungary | | | | 1 | | | | 1 | | | | | 1 |
| Latvia | | | 1 | | | | | | 1 | | | | 1 |
| Lithuania | | | 1 | | | | | 1 | | | | | 1 |
| Poland | | | 1 | | | | | 1 | | | | | 1 |
| Romania | | | 1 | | | | | 1 | | | | 1 | |
| Slovakia | | | 1 | | | | | 1 | | | | | 1 |
| U.S.S.R., N.I.E. | 1 | | | | | 1 | | | | 1 | | | |
| Belarus | | 1 | | | | | 1 | | | 1 | | | |
| Republic of Moldova | 1 | | | | | | 1 | | | | 1 | | |
| Russian Federation | | | 1 | | | 1 | | | | | 1 | | |
| Ukraine | 1 | | | | | | 1 | | | | 1 | | |
| Ireland, N.I.E. | | | | | 1 | | | | 1 | | | | 1 |
| United Kingdom | | | | | 1 | | | 1 | | | | | 1 |
| Denmark | | | | | 1 | | | | 1 | | | | 1 |
| Finland | | | | | 1 | | | | 1 | | | | 1 |
| Iceland | | | | | 1 | | | | 1 | | | | 1 |
| Sweden | | | | | 1 | | | | 1 | | | | 1 |
| Albania | | 1 | | | | 1 | | | | | 1 | | |
| Bosnia and Herzegovina | | 1 | | | | 1 | | | | | 1 | | |
| Croatia | | | 1 | | | | | 1 | | | | 1 | |
| Greece | | | | | 1 | | | 1 | | | | 1 | |
| Italy | | | | | 1 | | | 1 | | | | | 1 |
| Macedonia | | 1 | | | | 1 | | | | | 1 | | |
| Malta | | | | 1 | | | | | 1 | | | | 1 |

| Country | Economic Development | | | | | Political Stability | | | | Level of Democratization | | | |
|-----------------------------|----------------------|-------------------|-------------------|--------------------|-----------|---------------------|-------|-------|-----|--------------------------|-------|-------|-----|
| | <\$2,000 | \$2,000 - \$3,000 | \$3,001 - \$9,000 | \$9,001 - \$17,000 | >\$17,000 | <25 | 25-50 | 51-75 | >75 | <25 | 25-50 | 51-75 | >75 |
| Montenegro | | | 1 | | | 1 | | | | | 1 | | |
| Portugal | | | | | 1 | | | | 1 | | | | 1 |
| Spain | | | | | 1 | | | 1 | | | | | 1 |
| Yugoslavia, N.O.S. | | | 1 | | | | 1 | | | | 1 | | |
| Macedonia (Region) | | 1 | | | | 1 | | | | | 1 | | |
| Kosovo | | | 1 | | | 1 | | | | | 1 | | |
| Benin | 1 | | | | | | 1 | | | | | 1 | |
| Burkina Faso | 1 | | | | | | 1 | | | | 1 | | |
| Côte d'Ivoire | 1 | | | | | 1 | | | | 1 | | | |
| Gambia | 1 | | | | | | | 1 | | | 1 | | |
| Ghana | 1 | | | | | | 1 | | | | | 1 | |
| Liberia | 1 | | | | | 1 | | | | 1 | | | |
| Nigeria | 1 | | | | | 1 | | | | | 1 | | |
| Senegal | 1 | | | | | | 1 | | | | | 1 | |
| Sierra Leone | 1 | | | | | | 1 | | | | 1 | | |
| Togo | 1 | | | | | | 1 | | | 1 | | | |
| Western Africa, N.O.S. | 1 | | | | | | 1 | | | | 1 | | |
| Burundi | 1 | | | | | 1 | | | | 1 | | | |
| Djibouti | 1 | | | | | | 1 | | | 1 | | | |
| Eritrea | 1 | | | | | | 1 | | | 1 | | | |
| Ethiopia | 1 | | | | | 1 | | | | 1 | | | |
| Kenya | 1 | | | | | 1 | | | | | 1 | | |
| Mauritius | | | 1 | | | | | | 1 | | | 1 | |
| Reunion | | | | | 1 | | | 1 | | | | | 1 |
| Rwanda | 1 | | | | | 1 | | | | 1 | | | |
| Somalia | 1 | | | | | 1 | | | | 1 | | | |
| United Republic of Tanzania | 1 | | | | | | 1 | | | | 1 | | |
| Uganda | 1 | | | | | 1 | | | | | 1 | | |
| Zambia | 1 | | | | | | 1 | | | | 1 | | |
| Zimbabwe | 1 | | | | | 1 | | | | 1 | | | |
| Eastern Africa, N.O.S. | 1 | | | | | | 1 | | | | 1 | | |
| Algeria | | 1 | | | | 1 | | | | 1 | | | |
| Egypt | 1 | | | | | 1 | | | | 1 | | | |
| Libya | | | 1 | | | | 1 | | | 1 | | | |
| Morocco | 1 | | | | | | 1 | | | | 1 | | |

| Country | Economic Development | | | | | Political Stability | | | | Level of Democratization | | | |
|--|----------------------|-------------------|-------------------|--------------------|-----------|---------------------|-------|-------|-----|--------------------------|-------|-------|-----|
| | <\$2,000 | \$2,000 - \$3,000 | \$3,001 - \$9,000 | \$9,001 - \$17,000 | >\$17,000 | <25 | 25-50 | 51-75 | >75 | <25 | 25-50 | 51-75 | >75 |
| Sudan | 1 | | | | | 1 | | | | 1 | | | |
| Tunisia | | 1 | | | | | | 1 | | 1 | | | |
| Angola | 1 | | | | | 1 | | | | 1 | | | |
| Cameroon | 1 | | | | | 1 | | | | 1 | | | |
| Republic of the Congo | 1 | | | | | 1 | | | | | 1 | | |
| Democratic Republic of the Congo (Zaire) | 1 | | | | | 1 | | | | 1 | | | |
| Central Africa | 1 | | | | | 1 | | | | 1 | | | |
| Southern Africa | 1 | | | | | 1 | | | | 1 | | | |
| Africa, N.O.S. | 1 | | | | | | 1 | | | | 1 | | |
| Afghanistan | 1 | | | | | 1 | | | | 1 | | | |
| Iran | | 1 | | | | 1 | | | | 1 | | | |
| Turkey | | | 1 | | | | 1 | | | | 1 | | |
| Bahrain | | | | 1 | | | 1 | | | | 1 | | |
| Iraq | 1 | | | | | 1 | | | | 1 | | | |
| Israel | | | | | 1 | 1 | | | | | | 1 | |
| Jordan | | 1 | | | | | 1 | | | | 1 | | |
| Kuwait | | | | | 1 | | | 1 | | | 1 | | |
| Lebanon | | | 1 | | | 1 | | | | | 1 | | |
| Palestine | 1 | | | | | 1 | | | | 1 | | | |
| Qatar | | | | | 1 | | | | 1 | | 1 | | |
| Saudi Arabia | | | | 1 | | | 1 | | | 1 | | | |
| Syria | 1 | | | | | | 1 | | | 1 | | | |
| United Arab Emirates | | | | | 1 | | | | 1 | 1 | | | |
| West Bank/Gaza Strip | 1 | | | | | 1 | | | | 1 | | | |
| Yemen | 1 | | | | | 1 | | | | 1 | | | |
| Armenia | 1 | | | | | | 1 | | | | 1 | | |
| Azerbaijan | 1 | | | | | 1 | | | | 1 | | | |
| Georgia | 1 | | | | | 1 | | | | | 1 | | |
| Kazakhstan | | 1 | | | | | 1 | | | 1 | | | |
| Kyrgyzstan | 1 | | | | | 1 | | | | 1 | | | |
| Tajikistan | 1 | | | | | 1 | | | | 1 | | | |
| Turkmenistan | 1 | | | | | 1 | | | | 1 | | | |
| Uzbekistan | 1 | | | | | 1 | | | | 1 | | | |

| Country | Economic Development | | | | | Political Stability | | | | Level of Democratization | | | |
|-------------------|----------------------|-------------------|-------------------|--------------------|-----------|---------------------|-------|-------|-----|--------------------------|-------|-------|-----|
| | <\$2,000 | \$2,000 - \$3,000 | \$3,001 - \$9,000 | \$9,001 - \$17,000 | >\$17,000 | <25 | 25-50 | 51-75 | >75 | <25 | 25-50 | 51-75 | >75 |
| China | 1 | | | | | | 1 | | | 1 | | | |
| Hong Kong | | | | | 1 | | | | 1 | | | 1 | |
| Japan | | | | | 1 | | | | 1 | | | | 1 |
| North Korea | 1 | | | | | | 1 | | | 1 | | | |
| South Korea | | | | 1 | | | | 1 | | | | 1 | |
| Korea, N.O.S. | | 1 | | | | | 1 | | | | 1 | | |
| Macau | | | | | 1 | | | | 1 | | 1 | | |
| Mongolia | 1 | | | | | | | 1 | | | | 1 | |
| Taiwan | | | | 1 | | | | 1 | | | | | 1 |
| Brunei Darussalam | | | | 1 | | | | | 1 | 1 | | | |
| Cambodia | 1 | | | | | | 1 | | | 1 | | | |
| Indonesia | 1 | | | | | 1 | | | | | 1 | | |
| Laos | 1 | | | | | 1 | | | | 1 | | | |
| Malaysia | | | 1 | | | | | 1 | | | 1 | | |
| Myanmar (Burma) | 1 | | | | | 1 | | | | 1 | | | |
| Philippines | 1 | | | | | 1 | | | | | 1 | | |
| Singapore | | | | | 1 | | | | 1 | | 1 | | |
| Thailand | | 1 | | | | | 1 | | | | | 1 | |
| Vietnam | 1 | | | | | | | 1 | | 1 | | | |
| Bangladesh | 1 | | | | | 1 | | | | | 1 | | |
| Bhutan | 1 | | | | | | | 1 | | 1 | | | |
| India | 1 | | | | | 1 | | | | | | 1 | |
| Maldives | | 1 | | | | | | 1 | | 1 | | | |
| Nepal | 1 | | | | | 1 | | | | 1 | | | |
| Pakistan | 1 | | | | | 1 | | | | 1 | | | |
| Sri Lanka | 1 | | | | | 1 | | | | | 1 | | |
| Australia | | | | | 1 | | | | 1 | | | | 1 |
| Fiji | | | 1 | | | | | 1 | | | | 1 | |
| New Zealand | | | | | 1 | | | | 1 | | | | 1 |
| Total | 71 | 21 | 31 | 11 | 30 | 55 | 45 | 32 | 32 | 50 | 48 | 28 | 38 |

Source: World Bank, 2005, Kaufmann et al., 2005.

CHAPTER 4.

LINGUISTIC INTEGRATION OF RECENT IMMIGRANTS TO CANADA: THE DETERMINANTS OF ENGLISH LANGUAGE PROFICIENCY AFTER MIGRATION

4.1 INTRODUCTION

The previous chapter considered English language proficiency of immigrants upon arrival in Canada. This chapter explores linguistic integration at four years following migration.¹³ Since linguistic integration is an important aspect of labour-market integration, it is essential to investigate the factors that influence its success and those that serve as barriers.

Two broad theoretical frameworks examine linguistic integration in detail: human capital theory and macro-level factors perspective. The models, premises, summary, and discussion of past research for both approaches are discussed in detail in Chapter 2. This chapter integrates human capital theory with the macro-level factors perspective by considering the impact of human capital and macro-level factors of the destination country on the linguistic integration of immigrants after arrival in Canada.

The remainder of this chapter is divided into five sections: the second section focuses on the development of the theoretical framework; the third section describes data source and sample; and sections four, five, and six concentrate on design of the empirical model, research findings, and discussion and recommendations.

4.2 THEORETICAL FRAMEWORK

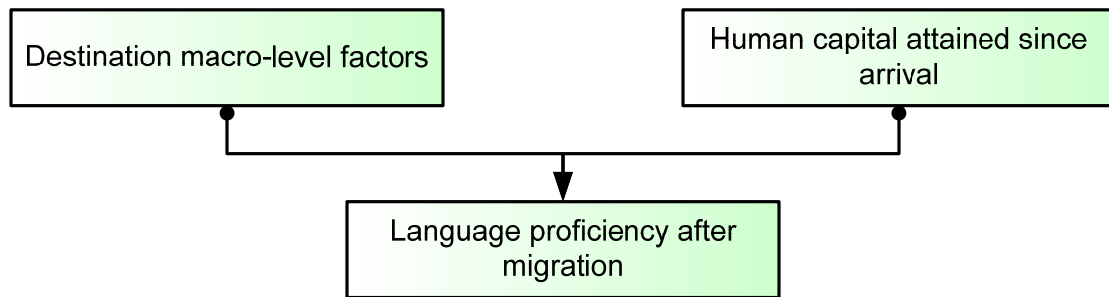
4.2.1 THE DETERMINANTS OF ENGLISH LANGUAGE PROFICIENCY FOUR YEARS AFTER MIGRATION

The Model of Linguistic Integration After Migration focuses on the role of the immigrant's human capital characteristics (both pre- and post-migration) and macro-level factors of the destination country in linguistic integration after migration (see Figure 4.1).

¹³ Two sets of models are estimated: first, measuring language proficiency at two years after migration, and second, four years after migration. The earlier comparison indicates that the relationship between language proficiency and the predictors included in both sets of models is similar. Consequently, this chapter concentrates on the discussion of the model at four years following migration.

Figure 4.1

Model of Linguistic Integration After Migration



Macro-Level Characteristics

The past research (review conducted in Chapter 2) suggests that the destination country’s macro-level factors may contribute to the success of linguistic integration after migration. Since immigrants settle in different regions of Canada, their experiences may vary depending on the economic, political, and labour-market conditions of a particular region (Portes and Borocz, 1989). Due to variation in provincial political, social, economic, and labour-market conditions across Canada, it is proposed that linguistic integration outcomes depend on the macro-level factors of the province of residence. The destination country’s macro-level factors to be included in the post-migration model are gross domestic product (GDP) growth, labour-force participation rate, provincial unemployment rate, and political party in power.

Human Capital Characteristics

From a human capital perspective, and as described in Chapter 2, linguistic integration in the destination country is a function of efficiency, economic incentive, and exposure to the destination language (Chiswick and Miller, 1999, 2001; Chiswick et al., 2004). Innate human capital characteristics and those attained both in the source country and in Canada are included in the model.

Before migration, language exposure may occur through formal education and use of the language. After migration, the degree of exposure may depend on use of English at home, work experience, volunteering, and place of residence. The level of efficiency is determined by individual learning ability, indicated by number of already learned languages, age at migration,

and level of education. The migration motives are considered a proxy for economic incentive, where immigrants intend to settle in Canada and obtain economic benefits.

Language proficiency after arrival in Canada may also be influenced by the extent to which immigrants assimilate into broader Canadian society as opposed to limiting their associations to residential and social ethnic enclaves.

English Language Proficiency Four Years After Migration

The analysis concentrates on overall language fluency after migration using the English Language Proficiency Index as the dependent variable (see Chapter 3). Proficiency in English after migration is measured at four years after arrival in Canada (Wave 3).

The next section provides a detailed description of the independent variables included in the model of English proficiency four years following migration.

4.2.2 INDEPENDENT VARIABLES

The independent variables to be included in the model of English proficiency at four years following immigration are divided into three groups: destination macro-level factors, human capital, and ethnic-enclave variables.

4.2.2.1 DESTINATION MACRO-LEVEL FACTORS

Economic Growth

Even though the influence of the source country's economic development has been widely analyzed, the role of the economic differences either between or within the destination country has not been examined. The rate of the economic growth for different Canadian provinces may fluctuate noticeably, with some provinces experiencing more rapid growth or decline than others. Higher levels of economic growth may be related to higher demand and, consequently, lower competition in the labour market. In such cases, employers may be inclined to overlook lower English proficiency of otherwise qualified candidates. Under such circumstances, immigrants have lower economic incentive to invest in language improvement. At the same time, immigrants with good language skills may be drawn to provinces with high economic growth to find better career opportunities. Consequently, the direction of the relationship between economic growth and English proficiency after migration is ambiguous.

Economic growth is measured as the percentage change in real GDP per capita over the 1996 to 2002 period (Statistics Canada, 2002).

Labour-Force Participation Rate

Labour-force participation may be associated with English knowledge after migration. A higher labour-force participation rate may encourage immigrants with good and poor language skills to enter the workforce in hopes of securing employment. Those with substandard language knowledge who participate in the labour market may attempt to find employment that does not require language proficiency and therefore may not invest in language improvement. If this is the case, then the higher participation rate should be inversely related to language proficiency.

The labour-force participation rate for each province was obtained from Census Canada 2001 (Statistics Canada, 2001). The value is expressed as a percentage of those aged 15 or older who participate in the workforce. The labour force includes individuals who are employed and those who are not employed but are actively seeking work.

Unemployment Rate

When the unemployment rate in a province is high, immigrants may face tougher competition from other qualified unemployed individuals. In this situation of increased labour-market competition, immigrants with lower English skills are at a disadvantage. I expect that this group would attempt to minimize this disadvantage by investing in language learning. Employed immigrants, however, would not be expected to invest in language learning, having already obtained work. At the same time, immigrants with poor language skills may temper their employment goals and search for jobs not requiring language proficiency. Some immigrants with good language skills may relocate to other provinces with lower unemployment rates. Given these competing alternatives, no hypothesis is advanced for the impact of the unemployment rate on English skills after migration.

The unemployment rate for each province was obtained from Census Canada 2001 (Statistics Canada, 2001). The value is expressed as a percentage of individuals who are not employed but are actively seeking employment.

Group Size

The larger the immigrant group in a destination country, the easier it is to access an ethnic network or ethnic community. Such access may affect the rate of linguistic integration by limiting exposure and decreasing the economic incentive to learn English. Increased size of an immigrant group within a region may also be associated with formation of social, cultural, residential, and economic ethnic enclaves.

Immigrants may settle in neighbourhoods where all or most neighbours are of the same ethnic background. These immigrants could then form social relationships within their community by choosing friends from the same ethnic or cultural background. In addition to these social interactions, ethnic enclaves may offer employment opportunities to the newcomers with similar linguistic and cultural background. By satisfying the economic and social needs of immigrants, ethnic enclaves limit exposure to the official language and decrease the incentive to learn it. Consequently, it is proposed that the relative ethnic group size would negatively influence linguistic integration.

Immigrant group size is equal to the number of immigrants who settled in each province between 1996 and 2002, divided by the total number of immigrants admitted to Canada during this period.

Political Party in Power

Although the federal government retains jurisdiction over immigration policies regarding admittance of immigrants to Canada, provincial governments play a role in immigrants' integration process after their arrival. To illustrate, the mandate of the Ontario Ministry of Citizenship and Immigration includes provision of "services for successful economic and social integration of newcomers" as well as promotion of "greater social inclusion, civic and community engagement and recognition among all Ontarians" (Ontario Ministry of Citizenship and Immigration).

In each Canadian province (with the exception of Quebec), voters may elect one of three major political parties to form a provincial government: Progressive Conservative, Liberal, or New Democratic. These parties differ in their platforms, ideology, and governance models. While more conservative parties may concentrate on creating conditions favourable for industry and

commerce, more liberal parties may pay greater attention to the welfare of individual citizens, including immigrants. For example, a mandate of the New Democratic Party, a left-wing party in Canada is "...to promote tolerance and understanding between cultural, racial and religious communities throughout the country" (New Democratic Party of Canada). By embracing multiculturalism, facilitating more favourable attitudes towards immigrants, and creating an atmosphere of acceptance, left-wing parties typically stimulate development of a linguistic pluralism model of integration. As a consequence, immigrants settling in a province governed by a left-wing government may have lower incentives to learn English.

Information related to the political party in power between 2001 and 2004 in Canadian provinces was gathered from the provincial government and political party websites as well as other Internet sources (similar to van Tubergen and Kalmijn, 2004). The summary Table 4.3 and Table 4.4 of the provincial government in each of the provinces and the year the party was elected are included in Appendix 4.2. As a result of provincial elections in 2003, the party in power changed in Ontario and in Newfoundland and Labrador. Assuming that legislation and policies are slow to change, the results of the 2003 elections are not taken into consideration.

4.2.2.2 HUMAN CAPITAL, ETHNIC-ENCLAVE FACTORS AND CONTROL VARIABLES

Following the human capital approach, which deems English proficiency to be a function of exposure, efficiency, and economic incentives, I consider the role of pre-migration human capital and post-migration human capital attained in the destination country in linguistic integration after migration. The definitions and rationale for inclusion of human capital factors in the analysis are discussed in detail in Chapter 2.

Efficiency is the ability to improve language knowledge per unit of exposure. I expect that while knowledge of multiple languages assists the efficiency of language learning, use of a language other than English at home decreases the efficiency of language learning.

Labour-market and consumption benefits are among the economic incentives of language proficiency. An immigrant's wage is not a suitable measure of these incentives because of its endogeneity with language proficiency. Chiswick et al. (2004) utilized other proxies for economic incentives, such as intention to return to the country of origin and citizenship plans. I utilize migration motives as an alternative proxy for economic incentive to learn English. Such immigration motives as economic, social, and convenience are expected to produce higher

incentives for immigrants to learn English after migration when compared to family reunification and political reasons for migration.

With respect to human capital gained in Canada, I expect that immigrants who have been employed in Canada, have volunteered, and are living outside census metropolitan areas (CMAs) would have greater exposure to English language. Such increased exposure is expected to be associated with higher levels of language knowledge. On the other hand, living or socializing within ethnic enclaves is expected to decrease the intensity of exposure, thus diminishing English knowledge.

Fixed human capital factors include education in the source country as well as such control variables as age, gender, marital status, and religion.

For the operationalization of the independent variables, refer to Appendix 4.1.

4.3 DATA AND MEASURES

The data are from Wave 3 of the Longitudinal Survey of Immigrants to Canada (LSIC). The data were collected at four years (2004–05) after arrival in Canada. Suitability and benefits of the survey are discussed in detail in Chapter 3.

The sample includes respondents aged 20 to 64 and excludes immigrants to Quebec.

The analyses that follow are based on the Wave 3 data.¹⁴

¹⁴ The results of the analyses based on the Wave 2 data are similar to the results presented below and are available upon request.

4.4 EMPIRICAL FRAMEWORK

4.4.1 ORDERED LOGIT MODEL

English proficiency, the dependent variable, is ordered from the lowest (the inability to speak, read, or write) to the highest category (the ability to do it very well). The Language Proficiency Index consists of five categories combining scores in each (speaking, reading, writing) competency:

No knowledge = 0-1

Poor knowledge = 2-4

Fair knowledge = 5-7

Good knowledge = 8-10

Very good knowledge = 11-12

While an ordered logit model is appropriate, given the ordered nature of the dependent variable, the proportional odds assumption is not supported by the data (the chi-square score for the Proportional Odds Assumption equals 7380.23 and is significant at $p < 0.0001$). Consequently, the following Multinomial Logit Model is estimated:

$$\Pr(ELP_m) = \frac{e^{b_m x}}{1 + \sum_{m=1}^3 e^{b_m x}}$$

Where:

ELP_m – English-language proficiency with m categories “poor,” “fair,” “good,” and “very good,” with “no knowledge” as a reference category;

b_x - Vector of characteristics thought to influence the probability of English language proficiency after migration: $X = HC + DML + C$,

Where:

HC – Human capital characteristics

DML – Destination country macro-level characteristics

C – Control variables

Two separate language proficiency analyses are conducted: for overall English proficiency and for each of speaking, reading and writing competencies. The results for each competency as summarized Appendix 4.3.

4.5 RESULTS

4.5.1 THE DISTRIBUTION OF ENGLISH LANGUAGE SKILLS FOUR YEARS AFTER MIGRATION

Table 4.1 summarizes and reports the overall English proficiency frequencies as well as frequencies of all independent and control variables.

4.5.2 MULTINOMIAL LOGIT ANALYSIS

4.5.2.1 ENGLISH LANGUAGE PROFICIENCY FOUR YEARS AFTER MIGRATION

Results of the multinomial logit model of the immigrants' English proficiency four years after migration are presented in Table 4.2.

Human Capital Factors

Immigrants who do not speak English at home are generally less likely to report proficiency in English. When compared to immigrants who speak English at home, those who speak other languages have significantly lower odds of advanced English knowledge. Immigrants have 0.05 times the odds of knowing English very well and 0.11 times of knowing it well compared to not at all ($e^{-3.082} = 0.05$ and $e^{-2.174} = 0.11$ respectively).

Multilingualism as expected, significantly contributes to higher odds of English language proficiency. Multilingual respondents are 1.3 and 1.7 times more likely to know English respectively well and very well than not at all when compared to immigrants who know only one language. Once an individual masters a second language, it may be easier to learn a third.

Migration motives are significantly related to English proficiency. Immigrants who decided to come to Canada for economic or social and convenience reasons are significantly more likely to know English at any level than not know it at all. These immigrants are more than twice as likely to know English very well than not at all compared to those whose migration motive was to join family and friends ($e^{0.776} = 2.17$ for economic and $e^{0.858} = 2.36$ for social motives). The odds of higher language proficiency at any level (with the exception of poor English skills) for political immigrants are not significantly different than for family-class immigrants. These findings support the hypothesis that immigrants who entered the country for economic and social reasons have higher language skills than family joiners or those who immigrated for political reasons.

Having worked in Canada significantly increases the odds of knowing English well and very well. These working immigrants are 1.2 and 1.7 times more likely to know the language well and very well than not at all. On the other hand, having been employed in Canada decreases the odds of knowing English fairly well and poorly than not at all. The benefit of having employment appears to be significant only at higher levels of language proficiency.

Volunteers are significantly more likely to be in any English proficiency category above poor than are non-volunteers. Immigrants who volunteer are almost three times more likely to know English well and very well than not all when compared to non-volunteers ($e^{1.061} = 2.9$ and $e^{1.081} = 3.0$ respectively).

Those who live in urban areas are significantly less likely to have fair, good, and very good English knowledge than no knowledge, when compared to immigrants who settle in rural areas ($e^{-0.848} = 0.43$, $e^{-1.205} = 0.3$, $e^{-1.955} = 0.14$ respectively). This result supports the hypothesis that living in urban areas, where large number of immigrants of the same ethnicity and culture reside, may decrease the intensity of exposure, thus diminishing English knowledge. Similarly, Chiswick and Miller (2001) found that living in a CMA is associated with significantly lower probability of speaking English, which was attributed to a higher concentration of immigrants in the same area of the city.

Ethnic-Enclave Factors

Individuals who do not reside in ethnic enclaves (none or few of the same ethnicity) have significantly higher odds of knowing English well and very well than those with all neighbours of the same ethnicity or culture ($e^{0.273} = 1.3$ and $e^{0.388} = 1.5$ respectively for none of the same ethnicity and $e^{0.259} = 1.3$ and $e^{0.205} = 1.2$ respectively for few of the same ethnicity). Immigrants with half of their neighbours of the same ethnicity are not more likely to know English well and very well than individuals who live in higher-density ethnic enclaves. The odds of having poor and fair English skills are reversed. Those who live with none or few neighbours of the same ethnicity have no significantly higher odds of knowing English poorly or fairly well than those who reside in ethnic enclaves. Immigrants with half of their neighbours of the same ethnicity are significantly less likely to have poor or fair English skills than no skills at all when compared to immigrants who reside in ethnic enclaves (most or all of their neighbours are of the same ethnicity).

Socializing outside an ethnic enclave is associated with significantly higher odds of knowing English poorly, fairly well, well, and very well than not at all. The effect is not only significant, but also large. Immigrants who only socialize outside their ethnic enclave (no friends of the same ethnicity) are almost 19 times more likely to know English very well when compared to those who socialize only within their ethnic enclave. Even those with only a few friends outside their ethnic enclave (most friends of the same ethnicity) are more than three times more likely to know English well and very well than those who socialize exclusively within their ethnic enclave ($e^{1.237} = 3.4$ and $e^{1.508} = 4.5$ respectively).

These findings support the hypothesis that residential and social ethnic enclaves reduce linguistic integration.

Macro-Level Factors

Provincial GDP growth is associated with significantly higher odds of being proficient in English at any level other than fairly well. The effect, while not large, is significant. Immigrants who settle in provinces that experience higher GDP growth are 1.1 times more likely to have very good English skills than have no knowledge of English ($e^{0.098} = 1.1$). With respect to poor English knowledge, the results show that in provinces with higher economic growth, immigrants are 1.14 times more likely to have limited English skills than no skills ($e^{0.135} = 1.14$).

In areas where labour-force participation rates are relatively high, immigrants are significantly less likely to report knowing English at any level than not knowing it at all. The magnitude of the inverse relationship is similar across all categories of English, ranging from 10 to 25 percent lower odds of having any knowledge. For example, immigrants from provinces with higher labour-force participation rates are 27 percent less likely to know English very well than not at all ($e^{-0.318} = 0.73$).

The provincial unemployment rate is inversely related to English knowledge. Immigrants who settle in provinces with higher unemployment rates are significantly less likely to know English at any level than not at all. For example, such immigrants are 33 percent less likely to know English very well than not at all.

The greater the size of the immigrant group, the lower the odds of an individual knowing the official language poorly, fairly well, well, or very well than not knowing it at all. The magnitude

of the effect is similar across all language categories. These results are consistent with previous findings that established that the larger the size of the group, the less likely immigrants are to be proficient in English (Chiswick and Miller, 2001; van Tubergen and Kalmijn, 2005).

When compared to provinces with an NDP government, immigrants living in provinces with liberal or conservative governments are significantly more likely to know English poorly, fairly well, well, or very well than not at all. Immigrants who settled in provinces with a liberal government are 3.5 and 4.6 times more likely to know English well and very well when compared to respondents from NDP-governed provinces ($e^{1.245} = 3.47$ and $e^{1.529} = 4.61$ respectively). Immigrants from provinces with a conservative government are 8.1 times more likely to know English very well than not at all compared to immigrants from NDP-governed provinces ($e^{2.094} = 8.12$). The magnitude of the relationship is not as strong for the immigrants who reported poor English knowledge. Such immigrants are 3.6 times more likely to have poor rather than no English knowledge when compared to immigrants from NDP-governed provinces ($e^{1.270} = 3.56$). These results are similar to those found by van Tubergen and Kalmijn (2005), who, in a multinational comparative study, found that left-wing government is associated with significantly poorer command of the destination country's language.

Control Variables

Younger, better-educated individuals have significantly higher odds of knowing English at any level than not at all. The odds are similar across all age categories, where older immigrants are approximately 5 to 10 percent less likely to know English than not know it at all. Male and single individuals are also more likely to know English fairly well, well, and very well than not at all. At the same time, male and single immigrants have lower odds of knowing English poorly than not at all when compared to female and married immigrants ($e^{-0.074} = 0.93$ and $e^{-0.147} = 0.86$ respectively). When compared to Christians, immigrants with no or other religion have lower likelihood of having poor, fair, good and very good English knowledge than no knowledge. These results lend support to those of previous studies (Espenshade and Fu, 1997; Dustman 1997; Espinosa and Massey, 1997; Carliner, 2000; Gonzalez, 2000; Shields and Price, 2002).

4.6 DISCUSSION AND RECOMMENATIONS

This research tested premises of both human capital theory and macro-level perspective to explain English proficiency four years following migration.

In contrast to past research, the determinants of overall English proficiency were examined. Past studies considered only spoken English and did not examine reading and writing proficiencies. To examine the determinants of overall language proficiency, an English Language Proficiency Index was calculated that accounts for speaking, reading, and writing skills.

Several human capital characteristics were included in the model as proxies for efficiency, exposure, and economic incentive for learning English. It was found that speaking a non-official language at home, a proxy for exposure to English, was negatively related to reported English knowledge four years after migration. This result corroborates earlier findings (Chiswick and Miller, 2001). Knowledge of multiple languages was included as a proxy for the degree to which an immigrant can efficiently learn another language. The results indicate that knowledge of multiple languages increases the efficiency with which immigrants may learn another language.

Migration motives were proposed and tested as a proxy for economic incentives of linguistic integration. It was found that individuals who migrated to Canada for economic and social reasons report advanced English knowledge four years after migration when compared to individuals who had political and family reunification motives for migration.

Employment, volunteering, living outside CMAs, and living and socializing outside ethnic social enclaves were included as proxies for exposure to English. The results show that having employment or volunteering in Canada increase the odds of higher English proficiency four years after migration. Living in CMAs was found to be associated with lower English knowledge, possibly due to higher probability of exposure to non-official languages. Living outside ethnic enclaves is associated with good and very good English proficiency. Some previous studies found an inverse and significant relationship between residential enclaves and language proficiency (Espenshade and Fu, 1997; Shields and Price, 2002) while others did not (Carliner, 2000). Socializing outside ethnic enclaves was found to be positively related to English proficiency four years after migration to Canada.

The effects of macro-level factors of the destination country were isolated from those of the source country. Van Tubergen and Kalmijn (2005) tested the relationship between both source and destination countries' macro-level factors and language proficiency. Faced with data constraints, they were unable to include Canada in the comparative analysis; they were also unable to test the role of the destination country's macro-level factors separately. Applying van Tubergen's and Kalmijn's premises to the Canadian context, this research examined macro-level

factors associated with each Canadian province and English fluency four years after migration. Overall, macro-level factors associated with the location of residence in Canada were found to be significantly related to language proficiency after migration.

Specifically, the measures of the destination country's macro-level factors, such as provincial unemployment rate, provincial labour-force participation rate, provincial GDP growth, and political party in power in each province were explored. It was found that provincial GDP growth significantly increases the odds of immigrants knowing English at any level than not knowing it at all. The labour-force participation rate and provincial unemployment rate were found to be inversely related to language proficiency. It was found that in provinces with a left-wing government, immigrants report lower language proficiency than in provinces with a liberal or conservative government. These results corroborate van Tubergen and Kalmijn's (2005) findings. It may be argued that, while left-wing governments instil an atmosphere of tolerance, acceptance, and multiculturalism, such conditions offer less incentive to immigrants to learn English.

This research suggests important implications for policies that focus on linguistic integration of recent immigrants to Canada by identifying the barriers to (living in a province with high unemployment rate) and the opportunities for (volunteering or socializing outside ethnic enclaves) increasing English proficiency. The findings may assist in the development of a comprehensive strategy that would take into account both the individual characteristics of immigrants and their surrounding environment upon arrival to Canada.

Table 4.1

Characteristics of the Sample, Wave 3, Four Years after Migration

| Variable | N=5273 |
|-----------------------------------|--------|
| English Language Proficiency | |
| No Knowledge | 7.2% |
| Limited Knowledge | 9.3% |
| Fair Knowledge | 21.2% |
| Good Knowledge | 27.8% |
| Very Good Knowledge | 34.6% |
| Non-official Language at Home | 85.1% |
| Multilingual | 45.9% |
| Migration Motives | |
| Family/Friends | 34.0% |
| Economic | 49.8% |
| Political | 6.7% |
| Social/Convenience | 9.6% |
| Employment in Canada | 52.1% |
| Volunteering in Canada | 10.3% |
| CMA Location of Residence | 93.5% |
| Residential Enclave | |
| None of the Same Ethnicity | 34.4% |
| Few of the Same Ethnicity | 46.6% |
| Half of the Same Ethnicity | 8.4% |
| Most or All of the Same Ethnicity | 10.6% |
| Social Enclave | |
| No Friends | 7.6% |
| Few Friends | 18.0% |
| Half Friends | 12.3% |
| Most Friends | 38.1% |
| All Friends of the Same Ethnicity | 24.0% |
| GDP Growth | 8.2% |
| Province LFPR | 65.8% |
| Province Unemployment Rate | 10.1% |
| Group Size | 10.8% |
| Political Party in Power | |
| NDP | 3.1% |
| Liberal | 19.7% |
| Conservative | 77.2% |
| Age | 35.5 |
| Education Level | |
| Less than High School Diploma | 14.1% |
| High School Diploma | 12.1% |
| Some Postsecondary | 9.6% |

| | |
|----------------------|-------|
| | |
| College Diploma | 10.1% |
| Bachelor Degree | 36.0% |
| Postsecondary Degree | 18.1% |
| Female | 50.5% |
| Married | 76.3% |
| Religion | |
| Christian | 38.6% |
| No Religion | 22.5% |
| Other Religion | 38.9% |

Table 4.2

Coefficients From a Multinomial Logit Model Predicting English Language Proficiency at Four Years after Migration

| Independent Variable | Very Good | Good | Fair | Poor |
|--|----------------------|----------------------|----------------------|----------------------|
| | [No Knowledge] | | | |
| Non-official Language at Home (English) | -3.082*** (0.214) | -2.174*** (0.214) | -1.229*** (0.215) | 0.235 (0.250) |
| Multilingual (Not) | 0.518*** (0.042) | 0.264*** (0.042) | 0.074 (0.041) | 0.247*** (0.043) |
| Migration Motives (Family/Friends) | | | | |
| Economic | 0.776*** (0.050) | 0.637*** (0.049) | 0.636*** (0.048) | 0.415*** (0.050) |
| Political | -0.047 (0.085) | 0.059 (0.083) | 0.071 (0.082) | 0.242** (0.084) |
| Social/Convenience | 0.858*** (0.103) | 0.738*** (0.102) | 0.581*** (0.102) | 0.443*** (0.107) |
| Employment in Canada (No) | 0.507*** (0.043) | 0.192*** (0.043) | -0.250*** (0.042) | -0.180*** (0.044) |
| Volunteering in Canada (No) | 1.081*** (0.131) | 1.061*** (0.131) | 0.909*** (0.131) | 0.653*** (0.135) |
| Location of Residence (non-CMA) | -1.955*** (0.286) | -1.205*** (0.276) | -0.848** (0.278) | -0.033 (0.277) |
| Residential Enclave (Most or All Neighbours) | | | | |
| None of the Same Ethnicity | 0.388*** (0.066) | 0.273*** (0.065) | -0.053 (0.063) | 0.127 (0.065) |
| Few of the Same Ethnicity | 0.205*** (0.053) | 0.259*** (0.052) | -0.112* (0.050) | 0.048 (0.052) |
| Half of the Same Ethnicity | -0.133 (0.069) | 0.060 (0.067) | -0.257*** (0.065) | -0.181** (0.068) |
| Social Enclave (All Friends of the Same Ethnicity) | | | | |
| No Friends | 2.931*** (0.216) | 2.171*** (0.216) | 1.743*** (0.217) | 0.870*** (0.228) |
| Few Friends | 2.548*** (0.142) | 2.127*** (0.142) | 1.794*** (0.142) | 1.552*** (0.144) |
| Half Friends | 1.572*** (0.111) | 1.084*** (0.110) | 0.730*** (0.111) | 0.148 (0.118) |
| Most Friends | 1.508*** (0.057) | 1.237*** (0.056) | 1.005*** (0.056) | 0.641*** (0.058) |
| GDP Growth | 0.098*** (0.022) | 0.083*** (0.022) | 0.024 (0.022) | 0.135*** (0.024) |
| Province LFPR | -0.318*** (0.048) | -0.256*** (0.047) | -0.120* (0.047) | -0.339*** (0.051) |

| Independent Variable | Very Good | Good | Fair | Poor |
|---|----------------------|----------------------|----------------------|----------------------|
| | [No Knowledge] | | | |
| Province Unemployment Rate | -0.407*** (0.061) | -0.329*** (0.061) | -0.268*** (0.060) | -0.432*** (0.067) |
| Group Size | -0.117*** (0.010) | -0.095*** (0.010) | -0.082*** (0.010) | -0.093*** (0.010) |
| Political Party in Power (NDP) | | | | |
| Liberal | 1.529*** (0.108) | 1.245*** (0.102) | 1.126*** (0.098) | 0.662*** (0.103) |
| Conservative | 2.094*** (0.107) | 1.890*** (0.104) | 1.477*** (0.101) | 1.270*** (0.105) |
| Age | -0.097*** (0.002) | -0.096*** (0.002) | -0.081*** (0.002) | -0.059*** (0.002) |
| Education Level (Less than High School Diploma) | | | | |
| High School Diploma | 2.613*** (0.072) | 2.108*** (0.061) | 1.942*** (0.054) | 1.450*** (0.055) |
| Some Postsecondary | 5.354*** (0.142) | 4.612*** (0.137) | 3.796*** (0.135) | 3.376*** (0.135) |
| College Diploma | 4.253*** (0.086) | 3.044*** (0.078) | 2.608*** (0.074) | 2.092*** (0.075) |
| Bachelor Degree | 5.913*** (0.085) | 4.631*** (0.077) | 3.699*** (0.073) | 2.458*** (0.075) |
| Postsecondary Degree | 7.883*** (0.182) | 6.341*** (0.179) | 5.044*** (0.178) | 3.468*** (0.182) |
| Gender (Female) | 0.762*** (0.044) | 0.777*** (0.044) | 0.270*** (0.043) | -0.074 (0.045) |
| Marital Status (Married) | 0.328*** (0.065) | 0.239*** (0.065) | 0.091 (0.064) | -0.147* (0.066) |
| Religion (Christian) | | | | |
| No Religion | -4.004*** (0.076) | -3.034*** (0.075) | -2.703*** (0.075) | -2.758*** (0.076) |
| Other Religion | -0.832*** (0.066) | -1.180*** (0.066) | -0.839*** (0.066) | -0.941*** (0.066) |
| Intercept | 28.637*** (3.553) | 24.391*** (3.532) | 15.184*** (3.509) | 28.415*** (3.769) |
| Sample Size | 5273 | | | |
| Chi-Square | 61496 | | | |

*p<0.05, **p<0.01, ***p<.001

Note: Numbers in parentheses are standard errors

Appendix 4.1

Definitions for Variables Used in Chapter 4.

| Variable | Definition/Question | Coding |
|-------------------------------|---|---|
| Non-Official Language at Home | Speaking non-official language at home. | 0 = English 1 = Non-official |
| Multilingual | Proficiency in more than one language, excluding English and mother tongue | 0 = no 1 = yes |
| Migration Motives | Dummy variables are constructed for each of the 4 mutually exclusive categories | 1) Reunite with family or friends (Reference Category) 2) Economic 3) Political 4) Social reasons |
| Employment in Canada | Having been employed in Canada | 0 = no 1 = yes |
| Volunteering in Canada | Having volunteered in Canada | 0 = no 1 = yes |
| Location of Residence | Residing in a CMA | 0 = no 1 = yes |
| Residential Enclave | A categorical variable represented by 4 mutually exclusive categories | 1) No neighbours of the same ethnic or cultural background 2) Few neighbours 3) Half neighbours 4) Most or all neighbours (Reference Category) |
| Social Enclave | A categorical variable represented by 5 mutually exclusive categories | 1) No friends of the same ethnic or cultural background 2) Few friends 3) Half friends 4) Most friends 5) All friends (reference category) |
| GDP Growth | A continuous variable as a percentage change in GDP per capita over the 1996-2002 period (Statistics Canada, 2002) | |
| Province LFPR | A continuous variable. Percentage of those who participate in labour force in the population of 15 years of age and older (Statistics Canada, 2001) | |
| Province Unemployment Rate | A continuous variable. Percentage of those who are not employed but actively seeking employment (Statistics Canada, 2001) | |

| Variable | Definition/Question | Coding |
|--------------------------|---|--|
| Group Size | A continuous variable. Equal to the number of immigrants who settled in each province between 1996 and 2002, divided by the total number of immigrants admitted to Canada during this period. (CIC, 2006) | |
| Political Party in Power | A categorical variable, represented by the mutually exclusive categories (see Appendix 4.2) | NDP (Reference Category) Liberal Party Conservative Party |
| Age | A continuous variable measured in years. | 20-64 |
| Education Level | A categorical variable, represented by the mutually exclusive categories | 1) Less than high school (Reference Category) 2) High school diploma 3) Some postsecondary education 4) College diploma 5) Bachelor's degree 6) Postgraduate degree |
| Gender | | 0 = female 1 = male |
| Marital Status | | 0 = married 1 = single, divorced, widowed or separated |
| Religion | A categorical variable represented by the mutually exclusive categories | 1) Christian (Reference Category) 2) No religion 3) Other religion (Jewish, Muslim, Eastern, other) |

Appendix 4.2

Definition of Political Party in Power

Table 4.3

Political Party in Power in Canadian Provinces between 2001 and 2004

| Province | Party | Years in Power |
|-------------------------|--------------------------|-----------------------|
| Ontario | Liberal | 2003 - Present |
| | Progressive Conservative | 1995-2003 |
| Newfoundland & Labrador | Progressive Conservative | 2003 - Present |
| | Liberal | 2001-2003 |
| Prince Edward Island | Progressive Conservative | 1996-2007 |
| Nova Scotia | Progressive Conservative | 1999-2006 |
| New Brunswick | Progressive Conservative | 1999-2006 |
| Manitoba | New Democratic Party | 1999 - Present |
| Saskatchewan | New Democratic Party | 2001-2007 |
| Alberta | Progressive Conservative | 1992-2006 |
| British Columbia | Liberal | 2001 - Present |

Note. The information is current on September 1, 2008.

Table 4.4

Summary of Political Party in Power

| Progressive Conservative | Liberal | New Democratic Party |
|---------------------------------|-------------------------|-----------------------------|
| Ontario | Newfoundland & Labrador | Manitoba |
| Prince Edward Island | British Columbia | Saskatchewan |
| Nova Scotia | | |
| New Brunswick | | |
| Alberta | | |

Appendix 4.3

Determinants of Speaking, Reading, and Writing Proficiency Four Years after Migration

Three models were estimated for speaking, reading, and writing proficiency four years after migration. The specification of the models is the same as that of the model presented in Table 4.2.¹⁵ The results for each language dimension are presented in Tables 4.5, 4.6, and 4.7.

Speaking Skills Model

Findings of the speaking language skills model show that speaking English at home is not related to English proficiency four years after migration. Multilingualism is positively and significantly related to English knowledge. Individuals who came to Canada for economic, political, and social reasons have better speaking English skills than those who came to join their families.

As expected, having worked or volunteered in Canada is positively and significantly related to better speaking English skills (with one exception — those who worked in Canada are less likely to speak poorly than not at all). Living in a rural area as well as living or socializing outside of ethnic enclave is significantly related to higher English proficiency.

Those who live and socialize predominantly outside ethnic enclaves report significantly better speaking skills than those who reside and interact solely within ethnic enclaves. Residing with none or few neighbours of the same ethnicity significantly increases the odds of speaking English well and very well. No difference is found between immigrants who report poor or fair speaking skills and those who cannot speak English at all. Immigrants who live in neighbourhoods where half of the residents are of the same ethnicity are significantly less likely to speak English at any level than not at all when compared to immigrants who live in predominantly ethnic enclaves (most or all neighbours are of the same ethnicity).

At the same time, all macro-level predictors with the exception of economic growth are significantly related to speaking language proficiency. A higher provincial labour-force participation rate, unemployment rate, and immigrant group size all significantly decrease the odds of speaking English at any level when compared to not at all. Finally, when compared to

¹⁵ The OLS and Multinomial Logit models for each competency (speaking, reading, and writing) were estimated. The estimates for each empirical model have similar direction and magnitude. For easier comparison and discussion between speaking, reading and writing models, the Multinomial Logit model results are presented. The OLS regression results are available on request.

provinces with an NDP government, living in provinces with a liberal or conservative government is associated with better speaking skills.

Reading and Writing Skills Models

The findings of the models estimating reading and writing skills are similar to the findings of the spoken language skills model; therefore, the following discussion will concentrate only on the few notable exceptions. The coefficients in the speaking skills model generally have higher magnitude than coefficients in the reading and writings skills models, with few differences.

Speaking language other than English at home appears to be negatively and significantly related to reading and writing skills when compared to speaking skills. Immigration for political reasons, while positively and significantly related to good and very good speaking skills, is not significantly or negatively related to good and very good reading and writing skills. Having employment in Canada increases the odds of reading and writing proficiency but only at the advanced level (very good) of reading and writing. Higher provincial GDP growth is found to be positively and significantly related to higher reading and writing skills, but not to speaking skills.

Table 4.5

Coefficients from a Multinomial Logit Model Predicting Speaking Language Proficiency Category at Four Years after Migration

| Independent Variable | Very Good | Good | Fair | Poor |
|--|----------------------|----------------------|----------------------|----------------------|
| | [No Knowledge] | | | |
| Non-official Language at Home (English) | -14.284 (36.738) | -13.380 (36.738) | -12.439 (36.738) | -11.445 (36.738) |
| Multilingual (Not) | 0.591*** (0.042) | 0.281*** (0.041) | 0.165*** (0.040) | 0.247*** (0.040) |
| Migration Motives (Family/Friends) | | | | |
| Economic | 0.785*** (0.049) | 0.680*** (0.048) | 0.612*** (0.047) | 0.404*** (0.046) |
| Political | 0.487*** (0.093) | 0.807*** (0.091) | 0.481*** (0.090) | 0.502*** (0.090) |
| Social/Convenience | 0.615*** (0.094) | 0.578*** (0.093) | 0.350*** (0.093) | 0.020 (0.094) |
| Employment in Canada (No) | 0.616*** (0.043) | 0.474*** (0.042) | 0.114** (0.041) | -0.121** (0.041) |
| Volunteering in Canada (No) | 1.082*** (0.124) | 0.948*** (0.123) | 0.849*** (0.123) | 0.583*** (0.124) |
| Location of Residence (non-CMA) | -1.698*** (0.294) | -0.893** (0.282) | -1.223*** (0.286) | -0.442 (0.276) |
| Residential Enclave (Most or All of Neighbours) | | | | |
| None of the Same Ethnicity | 0.534*** (0.065) | 0.451*** (0.064) | -0.010 (0.063) | -0.028 (0.061) |
| Few of the Same Ethnicity | 0.194*** (0.053) | 0.184*** (0.051) | -0.035 (0.050) | -0.087 (0.048) |
| Half of the Same Ethnicity | -0.358*** (0.068) | -0.366*** (0.066) | -0.335*** (0.063) | -0.540*** (0.062) |
| Social Enclave (All Friends of the Same Ethnicity) | | | | |
| No Friends | 2.917*** (0.214) | 2.153*** (0.214) | 1.536*** (0.215) | 1.214*** (0.216) |
| Few Friends | 2.655*** (0.142) | 2.156*** (0.141) | 1.790*** (0.141) | 1.551*** (0.141) |
| Half Friends | 1.848*** (0.115) | 1.467*** (0.115) | 0.959*** (0.114) | 0.364** (0.117) |
| Most Friends | 1.534*** (0.057) | 1.242*** (0.056) | 0.923*** (0.055) | 0.774*** (0.055) |
| GDP Growth | 0.043 (0.022) | 0.005 (0.022) | 0.032 (0.022) | 0.034 (0.022) |
| Province LFPR | -0.333*** (0.048) | -0.199*** (0.048) | -0.203*** (0.047) | -0.235*** (0.048) |
| Province Unemployment Rate | -0.435*** (0.062) | -0.244*** (0.061) | -0.290*** (0.061) | -0.364*** (0.062) |

| Independent Variable | Very Good | Good | Fair | Poor |
|---|----------------------|----------------------|----------------------|----------------------|
| | [No Knowledge] | | | |
| Group Size | -0.100*** (0.011) | -0.065*** (0.011) | -0.082*** (0.010) | -0.088*** (0.010) |
| Political Party in Power (NDP) | | | | |
| Liberal | 0.940*** (0.113) | 0.463*** (0.107) | 0.566*** (0.102) | 0.739*** (0.103) |
| Conservative | 1.530*** (0.111) | 1.258*** (0.108) | 0.989*** (0.105) | 1.021*** (0.105) |
| Age | -0.081*** (0.002) | -0.092*** (0.002) | -0.077*** (0.002) | -0.048*** (0.002) |
| Education Level (Less than High School Diploma) | | | | |
| High School Diploma | 2.215*** (0.072) | 1.919*** (0.064) | 1.733*** (0.053) | 1.262*** (0.049) |
| Some Postsecondary | 4.508*** (0.127) | 4.239*** (0.123) | 3.369*** (0.119) | 2.859*** (0.117) |
| College Diploma | 3.886*** (0.087) | 3.098*** (0.081) | 2.633*** (0.074) | 2.030*** (0.071) |
| Bachelor Degree | 5.379*** (0.084) | 4.723*** (0.078) | 3.570*** (0.071) | 2.712*** (0.069) |
| Postsecondary Degree | 6.605*** (0.141) | 5.698*** (0.138) | 4.580*** (0.134) | 2.932*** (0.135) |
| Gender (Female) | 0.620*** (0.043) | 0.678*** (0.043) | 0.375*** (0.042) | -0.060 (0.042) |
| Marital Status (Married) | 0.450*** (0.064) | 0.184** (0.063) | 0.177** (0.062) | -0.027 (0.061) |
| Religion (Christian) | | | | |
| No Religion | -3.384*** (0.073) | -2.671*** (0.072) | -2.268*** (0.071) | -2.375*** (0.071) |
| Other Religion | -0.852*** (0.065) | -1.325*** (0.065) | -0.971*** (0.064) | -0.953*** (0.063) |
| Intercept | 40.696 (36.917) | 31.039 (36.915) | 31.912 (36.911) | 33.535 (36.914) |
| Sample Size | 5273 | | | |
| Chi-Square | 59943.6 | | | |

*p<0.05, **p<0.01, ***p<.001

Note: Numbers in parentheses are standard errors.

Table 4.6

Coefficients From a Multinomial Logit Model Predicting Reading Language Proficiency Category at Four Years after Migration

| Independent Variable | Very Good | Good | Fair | Poor |
|--|----------------------|----------------------|----------------------|----------------------|
| | [No Knowledge] | | | |
| Non-official Language at Home (English) | -2.230*** (0.187) | -1.455*** (0.187) | -0.781*** (0.189) | 0.679** (0.232) |
| Multilingual (Not) | 0.378*** (0.041) | 0.181*** (0.041) | -0.077 (0.041) | 0.201*** (0.043) |
| Migration Motives (Family/Friends) | | | | |
| Economic | 0.917*** (0.049) | 0.867*** (0.049) | 0.674*** (0.048) | 0.402*** (0.052) |
| Political | -0.001 (0.084) | 0.359*** (0.083) | 0.114 (0.084) | 0.545*** (0.086) |
| Social/Convenience | 1.078*** (0.105) | 0.977*** (0.105) | 0.699*** (0.106) | 0.737*** (0.111) |
| Employment in Canada (No) | 0.235*** (0.042) | -0.141*** (0.042) | -0.421*** (0.042) | -0.292*** (0.045) |
| Volunteering in Canada (No) | 0.886*** (0.122) | 0.941*** (0.122) | 0.492*** (0.123) | 0.666*** (0.127) |
| Location of Residence (non-CMA) | -1.764*** (0.274) | -1.191*** (0.274) | -0.246 (0.265) | -0.173 (0.298) |
| Residential Enclave (Most or All of Neighbours) | | | | |
| None of the Same Ethnicity | 0.416*** (0.064) | 0.304*** (0.064) | 0.135* (0.063) | 0.231*** (0.066) |
| Few of the Same Ethnicity | 0.283*** (0.051) | 0.419*** (0.051) | 0.102* (0.050) | 0.117* (0.053) |
| Half of the Same Ethnicity | -0.168* (0.066) | 0.083 (0.066) | -0.259*** (0.065) | -0.232*** (0.070) |
| Social Enclave (All Friends of the Same Ethnicity) | | | | |
| No Friends | 2.328*** (0.179) | 1.571*** (0.180) | 1.005*** (0.182) | 0.751*** (0.192) |
| Few Friends | 2.463*** (0.138) | 2.057*** (0.139) | 1.673*** (0.139) | 1.530*** (0.141) |
| Half Friends | 2.105*** (0.137) | 1.886*** (0.137) | 1.244*** (0.138) | 1.033*** (0.144) |
| Most Friends | 1.542*** (0.056) | 1.329*** (0.056) | 0.750*** (0.056) | 0.752*** (0.059) |
| GDP Growth | 0.111*** (0.022) | 0.117*** (0.022) | 0.022 (0.022) | 0.126*** (0.025) |
| Province LFPR | -0.365*** (0.046) | -0.367*** (0.046) | -0.154** (0.047) | -0.415*** (0.051) |
| Province Unemployment Rate | -0.456*** (0.058) | -0.450*** (0.058) | -0.335*** (0.059) | -0.514*** (0.068) |

| Independent Variable | Very Good | Good | Fair | Poor |
|---|----------------------|----------------------|----------------------|----------------------|
| | [No Knowledge] | | | |
| Group Size | -0.121*** (0.010) | -0.098*** (0.010) | -0.085*** (0.010) | -0.088*** (0.010) |
| Political Party in Power (NDP) | | | | |
| Liberal | 1.740*** (0.104) | 1.174*** (0.100) | 1.527*** (0.101) | 0.631*** (0.108) |
| Conservative | 2.125*** (0.103) | 1.798*** (0.101) | 1.605*** (0.102) | 1.326*** (0.106) |
| Age | -0.097*** (0.002) | -0.085*** (0.002) | -0.073*** (0.002) | -0.058*** (0.002) |
| Education Level (Less than High School Diploma) | | | | |
| High School Diploma | 2.284*** (0.064) | 1.902*** (0.059) | 1.923*** (0.054) | 1.290*** (0.055) |
| Some Postsecondary | 4.353*** (0.114) | 3.663*** (0.112) | 3.094*** (0.111) | 2.519*** (0.113) |
| College Diploma | 3.657*** (0.079) | 2.688*** (0.076) | 2.605*** (0.072) | 1.571*** (0.076) |
| Bachelor Degree | 5.419*** (0.078) | 4.268*** (0.075) | 3.471*** (0.073) | 2.089*** (0.076) |
| Postsecondary Degree | 7.325*** (0.179) | 5.719*** (0.178) | 4.628*** (0.178) | 3.426*** (0.182) |
| Gender (Female) | 0.767*** (0.043) | 0.707*** (0.043) | 0.153*** (0.043) | -0.116* (0.046) |
| Marital Status (Married) | 0.274*** (0.063) | 0.115 (0.063) | -0.014 (0.063) | 0.020 (0.065) |
| Religion (Christian) | | | | |
| No Religion | -3.607*** (0.073) | -2.828*** (0.073) | -2.460*** (0.073) | -2.614*** (0.076) |
| Other Religion | -0.846*** (0.065) | -1.110*** (0.065) | -0.708*** (0.065) | -0.893*** (0.066) |
| Intercept | 31.939*** (3.437) | 31.535*** (3.452) | 16.858*** (3.488) | 33.364*** (3.834) |
| Sample Size | 5273 | | | |
| Chi-Square | 58351.1 | | | |

*p<0.05, **p<0.01, ***p<.001

Note: Numbers in parentheses are standard errors.

Table 4.7

Coefficients From a Multinomial Logit Model Predicting Writing Language Proficiency
Category at Four Years after Migration

| Independent Variable | Very Good | Good | Fair | Poor |
|--|----------------------|----------------------|----------------------|----------------------|
| | [No Knowledge] | | | |
| Non-official Language at Home (English) | -2.440*** (0.176) | -1.526*** (0.176) | -1.197*** (0.177) | 0.127 (0.197) |
| Multilingual (Not) | 0.503*** (0.039) | 0.163*** (0.039) | 0.131*** (0.039) | 0.168*** (0.039) |
| Migration Motives (Family/Friends) | | | | |
| Economic | 0.599*** (0.045) | 0.573*** (0.045) | 0.418*** (0.045) | 0.394*** (0.046) |
| Political | -0.155* (0.075) | 0.017 (0.074) | -0.031 (0.074) | 0.264*** (0.075) |
| Social/Convenience | 0.705*** (0.093) | 0.649*** (0.093) | 0.625*** (0.092) | 0.606*** (0.095) |
| Employment in Canada (No) | 0.457*** (0.040) | 0.018 (0.039) | -0.222*** (0.039) | -0.196*** (0.040) |
| Volunteering in Canada (No) | 1.050*** (0.119) | 1.064*** (0.119) | 0.776*** (0.120) | 1.064*** (0.120) |
| Location of Residence (non-CMA) | -1.477*** (0.271) | -0.509 (0.260) | -0.725** (0.271) | 0.310 (0.258) |
| Residential Enclave (Most or All of Neighbours) | | | | |
| None of the Same Ethnicity | 0.179** (0.060) | 0.251*** (0.060) | -0.111 (0.059) | -0.008 (0.060) |
| Few of the Same Ethnicity | 0.062 (0.049) | 0.231*** (0.049) | -0.171*** (0.048) | -0.160** (0.049) |
| Half of the Same Ethnicity | -0.216*** (0.065) | 0.054 (0.064) | -0.324*** (0.062) | -0.424*** (0.065) |
| Social Enclave (All Friends of the Same Ethnicity) | | | | |
| No Friends | 2.288*** (0.170) | 1.823*** (0.170) | 1.236*** (0.172) | 0.676*** (0.180) |
| Few Friends | 1.272*** (0.090) | 1.137*** (0.090) | 0.808*** (0.090) | 0.473*** (0.093) |
| Half Friends | 1.300*** (0.096) | 1.026*** (0.096) | 0.543*** (0.097) | 0.407*** (0.100) |
| Most Friends | 1.351*** (0.052) | 1.187*** (0.052) | 1.013*** (0.051) | 0.661*** (0.053) |
| GDP Growth | 0.104*** (0.019) | 0.015 (0.019) | 0.058** (0.019) | 0.080*** (0.021) |
| Province LFPR | -0.283*** (0.039) | -0.134*** (0.039) | -0.147*** (0.039) | -0.196*** (0.043) |
| Province Unemployment Rate | -0.384*** (0.049) | -0.236*** (0.049) | -0.273*** (0.049) | -0.321*** (0.056) |

| Independent Variable | Very Good | Good | Fair | Poor |
|---|----------------------|----------------------|----------------------|----------------------|
| | [No Knowledge] | | | |
| Group Size | -0.092*** (0.008) | -0.055*** (0.008) | -0.064*** (0.008) | -0.049*** (0.008) |
| Political Party in Power (NDP) | | | | |
| Liberal | 1.734*** (0.099) | 1.450*** (0.096) | 1.139*** (0.092) | 0.965*** (0.095) |
| Conservative | 2.173*** (0.094) | 1.882*** (0.092) | 1.551*** (0.090) | 1.374*** (0.093) |
| Age | -0.083*** (0.002) | -0.085*** (0.002) | -0.075*** (0.002) | -0.054*** (0.002) |
| Education Level (Less than High School Diploma) | | | | |
| High School Diploma | 2.260*** (0.061) | 1.824*** (0.058) | 1.711*** (0.052) | 1.372*** (0.051) |
| Some Postsecondary | 4.201*** (0.106) | 3.697*** (0.103) | 3.021*** (0.102) | 2.638*** (0.102) |
| College Diploma | 3.506*** (0.074) | 2.599*** (0.071) | 2.176*** (0.067) | 1.867*** (0.066) |
| Bachelor Degree | 5.227*** (0.073) | 4.310*** (0.070) | 3.393*** (0.067) | 2.389*** (0.068) |
| Postsecondary Degree | 7.227*** (0.168) | 5.960*** (0.166) | 5.043*** (0.165) | 3.265*** (0.169) |
| Gender (Female) | 0.692*** (0.041) | 0.597*** (0.040) | 0.231*** (0.040) | 0.004 (0.042) |
| Marital Status (Married) | 0.357*** (0.058) | 0.285*** (0.058) | 0.047 (0.059) | -0.083 (0.060) |
| Religion (Christian) | | | | |
| No Religion | -3.427*** (0.063) | -2.384*** (0.062) | -2.022*** (0.062) | -2.003*** (0.063) |
| Other Religion | -0.359*** (0.056) | -0.787*** (0.057) | -0.562*** (0.057) | -0.543*** (0.057) |
| Intercept | 24.565*** (2.885) | 13.833*** (2.893) | 15.496*** (2.889) | 16.852*** (3.156) |
| Sample Size | 5273 | | | |
| Chi-Square | 56654.8 | | | |

*p<0.05, **p<0.01, ***p<.001

Note: Numbers in parentheses are standard errors.

CHAPTER 5.

LABOUR-MARKET INTEGRATION OF RECENT IMMIGRANTS: THE ROLE OF ENGLISH LANGUAGE PROFICIENCY IN LABOUR-MARKET INTEGRATION OUTCOMES

5.1. INTRODUCTION

Recent studies have provided ample evidence of a strong relationship between official language proficiency and labour-market integration. They found lower English proficiency to be one of the explanatory factors for the declining labour-market integration rate of recent immigrants to Canada (Aydemir and Skuterud, 2005; Chiswick and Miller, 1999; Picot, 2004).

Human capital theory, originated by Becker (1975), investigates the role of language knowledge in labour-market integration outcomes. The theory considers official language proficiency as one of the acquired human capital attributes that increase labour-market returns (Borjas, 1994a; Chiswick and Miller, 1999, 2001, 2002; Dustmann, 1997; Espenshade and Fu, 1997).

Applying human capital theory, researchers examined the role of immigrants' human capital characteristics in labour-market integration, as measured by labour-market participation and incidence of employment (Chiswick et al., 2005; Green, 1999; van Tubergen et al., 2004). Research found that immigrants with better quality human capital have a higher probability of successful labour-market outcomes, such as labour force participation and employment (McDonald and Worswick, 1997; Kahn, 2004; van Tubergen et al., 2004). According to human capital theory, proficiency in the official language of the destination country is a key skill that immigrants must master to succeed in the labour market (Carnevale et al., 2001; Dustmann, 1997; Waxman 2001).

Human capital theorists also propose that English knowledge is required for participation in the mainstream as opposed to the ethnic-enclave labour market, since immigrants who speak little or no English have greater difficulty finding jobs in the mainstream economy (Carliner, 2000; Thomas, 2009a, 2009b). Research indicates that immigrants, who demonstrate good language skills, including individuals arriving from English-speaking countries, perform better in the labour market (Borjas, 1994a; Dustmann, 1997; Dustmann and Fabri, 2003; Chiswick et al.,

2003). In Canada, however, the subject of English proficiency and its role in immigrant labour-market integration has received little attention.

Most studies have not differentiated between the effects of various dimensions of English proficiency, speaking, reading and writing, on labour-market integration. They also have not explored the role of overall language fluency, instead concentrating only on the effect of speaking.

Moreover, past research has not examined the nature of the relationship between official language proficiency and non-standard types of employment, such as employment within ethnic enclaves. Analysis of non-standard employment types becomes imperative in light of the increasing importance of non-standard employment arrangements in the contemporary labour market.

This research seeks to advance understanding of the role of English proficiency in the labour-market integration of recent immigrants by extending the propositions of human capital theory; determining the role of overall English proficiency in employment outcomes; and broadening the measure of employment outcomes by examining the incidence of employment in ethnic enclaves.

More specifically, this chapter investigates the following questions:

Does English language proficiency influence the probability of:

1. *labour-market participation?*
2. *obtaining employment?*
3. *obtaining employment within ethnic enclaves?*

To address these questions, The Effect of English Language Proficiency on Labour-Market Integration Model has been developed and tested.

The structure of this chapter is as follows: first, the predictions and empirical evidence of human capital theory are examined; second, limitations of the past research are summarized and the theoretical framework is outlined; and finally the design of the empirical model is presented, followed by the findings and discussion of results.

5.2. THEORY REVIEW

5.2.1 LABOUR-MARKET PARTICIPATION TRENDS

Labour-market participation is a key component of successful integration in the destination country. The data from the 2001 Census indicate that, when compared to earlier cohorts, integration of recent immigrants is marked by deteriorating labour-market performance (see Table 5.1). From 1991 to 2001, immigrant men and women exhibited lower labour-force participation and employment rates than during previous decades. In fact, the unemployment rate of more recent immigrants increased during the 1980s and especially during the 1990s.

Table 5.1

Labour Force Participation, Employment and Unemployment Rates among Immigrant Men and Women, between prior to 1961 and 2001 (Population Aged 25 to 44, in %)

| Canada | Immigrant Men | | | | | |
|---------------------------------|-----------------|---------|---------|---------|-----------|-------|
| | Before 1961 | 1961-70 | 1971-80 | 1981-90 | 1991-2001 | Total |
| Labour Force Participation Rate | 92.2 | 93.4 | 92.1 | 91.3 | 87.4 | 89.8 |
| Employment Rate | 88.1 | 89.4 | 87.7 | 86.1 | 79.3 | 83.6 |
| Unemployment Rate | 4.5 | 4.2 | 4.8 | 5.6 | 9.2 | 6.9 |
| | Immigrant Women | | | | | |
| | Before 1961 | 1961-70 | 1971-80 | 1981-90 | 1991-2001 | Total |
| Labour Force Participation Rate | 84.6 | 84.1 | 82.9 | 79 | 68.3 | 75 |
| Employment Rate | 81.8 | 80.3 | 78.3 | 73.3 | 59.9 | 68.4 |
| Unemployment Rate | 3.5 | 4.6 | 5.5 | 7.2 | 12.3 | 8.9 |

Source: Statistics Canada, Census Analysis Series, Male and Female Labour Force Distribution (Catalogue No. 97F0009XCB01042).

Canadian research on unemployment of immigrants based on data collected between 1982 and 1993 found no difference in patterns between Canadian-born workers and immigrants during periods of economic expansion (McDonald and Worswick, 1997). The authors found that during recessions, however, immigrants were more likely to be unemployed than native-born workers.

Espenshade et al. (2001) examined labour-force participation of foreign-born scientists and engineers in the United States using data from the 1970 to 1990 U.S. Census and 1997 Current Population Survey. The authors found that within a market characterized by stable demand for scientists and engineers, immigrants experienced about 50 percent higher unemployment rates than their native-born counterparts.

A recent cross-country comparative study examined employment rates of immigrants to the United States, Canada, New Zealand, and Switzerland using logit and probit estimates (Kahn, 2004). While male immigrants to the United States were more likely to be employed than native-born men, both men and women who settled in Canada, New Zealand, and Switzerland were less likely to hold jobs than native-born men and women. Similarly, Lewin-Epstein et al. (2003), in a comparative study, found that immigrants to Canada were more likely to be unemployed or out of the labour force than employed when compared to immigrants to Israel. The authors utilized data from the 1995 Israeli Census and the 1991 and 1996 Canadian Censuses and estimated a multinomial logit regression model of labour-force participation.

Deteriorating labour-market participation and higher unemployment rates of recent immigrants may be associated with many factors, including lower education attainment or quality, inadequate experience, challenges with credential recognition, and lack of understanding of the labour market.

Lower English proficiency has been found to be an important factor in the declining labour-market participation rate (Aydemir and Skuterud, 2005; Borjas, 1994a; Chiswick and Miller, 1999; Picot, 2004).

5.2.2 ROLE OF OFFICIAL LANGUAGE KNOWLEDGE IN INTEGRATION OUTCOMES

Official Language Proficiency

Investment in human capital includes learning the official language of the destination country. Improvement of language proficiency is expected to result in better employment outcomes. Supporting these predictions, recent research has found that individuals with greater official language proficiency have a significantly higher probability of being employed (Borjas, 1994a; Dustmann, 1997; Carliner, 2000; Carnevale et al., 2001; Chiswick and Miller, 1999, 2002).

Van Tubergen et al. (2004) analyzed the International File of Immigration Surveys, comprising cross-national census data collected from 18 countries (including Canada) between 1980 and 2001. The authors, utilizing logit as well as multi-level regression, examined the probability of immigrants being in the labour force and being employed. They found that immigrant men and women who spoke the official language very well were more likely to be in the labour force than non-fluent immigrants. The authors also found a significant and positive relationship between

official language knowledge and the probability of being employed. Contrary to human capital theory predictions, however, van Tubergen et al. found that exposure to the language of the destination country before migration did not enhance labour-market outcomes for either men or women. The only notable exception was an increase in the probability of employment for men who arrived from countries with the same official language as the destination country. The last finding confirmed results of earlier research, which indicated that immigrants arriving from English-speaking countries perform better in the labor market (Borjas, 1994a).

English Language Proficiency

Human capital theorists propose that proficiency in English is a requirement for mainstream labour-market participation (Carliner, 2000; Alba and Nee, 2003). Research indicates that expertise in English is significantly and positively related to employment. Waxman (2001), when interviewing Bosnian, Afghan, and Iraqi refugees to Australia, found that an inability to speak English was the major reason for unemployment. Similarly, English proficiency was statistically significantly associated with the likelihood of being employed. For the survey, the author developed a questionnaire and used two-way ANOVA as a statistical tool for the data analysis.

Dustmann and Fabbri (2003), when examining the labour force participation of immigrants to the United Kingdom, analyzed two surveys — the Fourth National Survey on Ethnic Minorities (FNSEM) and the Family and Working Lives Survey (FWLS). While FNSEM measured only spoken English proficiency, FWLS contained information about reading and writing skills. The study concentrated on individuals who were in the labour force, either working or actively seeking employment. Using ordinary least squares regression as well as an instrumental variables estimator, the authors found that speaking fluency significantly increased the probability of employment. Additional analysis of speaking and writing abilities using data from FWLS suggested that literacy skills (reading and writing) were more important than speaking fluency when seeking a job.

Chiswick et al. (2003), examining labour force participation of recent immigrants to Australia, found that immigrants are less likely to participate in the labour market than the native born. The differential is much greater for immigrants from non-English-speaking countries. They also found that immigrants from English-speaking countries bridge the difference in labour-force participation after seven years of residence in Australia, while immigrants from non-English-speaking countries never catch up.

Thomas (2009a, 2009b), examining data from the 2006 Canadian Census, noted that labour-market participation rates are lower and unemployment rates are higher for immigrants who do not speak English.

These findings are not surprising since job applicants must communicate with potential employers, verbally or in writing, to demonstrate their qualifications and expertise. Accordingly, an immigrant with poor language skills would find it challenging to convince an employer that he or she is the best candidate for the job. Past research, however, did not take into account that different jobs may require different levels of English proficiency. The literature is lacking in an examination of the moderating role of occupation in the relationship between language proficiency and employment outcomes.

5.2.3 OFFICIAL LANGUAGE AND ETHNIC-ENCLAVE EMPLOYMENT

Considering that the share of employment in ethnic enclaves, a non-standard employment arrangement, has been rising steadily, analysis of the relationship between English proficiency of recent immigrants and probability of such employment is merited (Thomas, 2009a). Ethnic enclaves are defined as workplaces where employees, supervisors, and often clients share language, ethnic background, and common experience (Thomas, 2009a). In such workplaces, employees may use a common non-official language known to the entire group.

According to the 2006 Census of Canada, 76 percent of all employees in Canada use English most frequently at work (see Table 5.2). Twenty-four percent of all employees, irrespective of their country of birth, use a language other than English at work. About 22 percent most often use French only or a mixture of English and French at work. In total, 273,825 or 1.5 percent of the Canadian labour force uses a non-official language most often at work. About 0.5 percent (102,900) of all employees use a combination of English and/or French and a non-official language most often.

Table 5.2

Language Used at Work Most Frequently, Immigrant and Native Born, Both Men and Women, Ages 25-64

| Language used most often at work | Total - language used regularly at work | |
|---|---|---------|
| | Total | % |
| Total - Language used most often at work | 18,418,100 | 100.00% |
| English | 14,064,105 | 76.36% |
| French | 3,724,970 | 20.22% |
| Non-official language | 273,825 | 1.49% |
| English and French | 252,295 | 1.37% |
| English and non-official language | 86,820 | 0.47% |
| French and non-official language | 5,055 | 0.03% |
| English, French and non-official language | 11,025 | 0.06% |

Source: Statistics Canada, 2006 Census of Population, Statistics Canada, Languages Used Most Often at Work (Catalogue No. 97-555XCB2006032).

The proportion of employees who also use non-official language at work while using an official language most of the time is much higher. Thomas (2009a) indicates that according to 2006 Census data, immigrants are 10 times more likely to use a non-official language at work than Canadian-born workers. To illustrate, in the 2006 Census, close to 831,000 employees reported using a language other than English (or French) on a regular basis; most of these workers (611,400) were immigrants (Thomas, 2009a).

Recent research has explored the role that ethnic enclaves play in immigrant labour-market integration.

To understand the concept of ethnic-enclave employment, it is important to examine the pattern of immigrant settlement. Recent cohorts settle primarily in urban centres: of 2.2 million immigrants who arrived to Canada in 1990s, 94 percent settled in Census Metropolitan Areas (CMAs) (Grant and Sweetman, 2004). Such heavy concentration of immigrants in urban areas may lead to development of ethnic clusters — social, cultural, and economic. Massey (1988) proposed that ethnic network formation is the most important structural mechanism supporting migrants' choice of destination. MacDonald (2004) found that the choice of residence for recent immigrants depends on the existence of an ethnic enclave in a particular city. It appears that ethnic enclaves grow over time by stimulating the arrival of new immigrants who seek to settle in a linguistically and culturally familiar neighbourhood.

With growth, an ethnic enclave may develop its own labour market, offering employment to immigrants of the same ethnicity or culture. Research examining the determinants and impact of working in ethnic enclaves is sparse.

Reitz and Sklar (1997) found that in situations where immigrants face employment barriers in the mainstream economy, ethnic communities may provide employment and other forms of social association. Evans (2005), when analyzing the 1981 Australian Census data, found that ethnic enclaves offer substandard employment security and decreased economic mobility. The most recent insight into Canadian employment ethnic enclaves indicates that use of a non-official language at work is associated with older, less educated, recently arrived immigrants (Thomas, 2009a, 2009b).

These studies concentrated purely on use of non-official languages by immigrants working in ethnic enclaves. They did not take into account the impact of official language proficiency on the probability of working in ethnic enclaves versus mainstream economy workplaces. Expanding on the Thomas (2009a, 2009b) study, I propose that employment in ethnic enclaves may be associated with, among other things, lower official language proficiency. It may be reasonable to suggest that in ethnic-enclave workplaces, the importance of English knowledge is reduced since immigrants can use a language other than English.

5.3. LIMITATIONS OF PAST RESEARCH

Past studies faced various challenges when examining the role of English proficiency in immigrant labour-market integration. These challenges were associated with data limitations, inadequate English proficiency measures, and inconsistencies in measures of labour-market integration. In summary:

1. due to the limitations of the language measures in the Census, most earlier studies concentrated only on the influence of spoken language on labour-force participation and the probability of employment; they did not consider the effects of other language dimensions (such as reading and writing) or overall language proficiency;
2. the relationship between official language proficiency and probability of ethnic enclave employment has not been studied;
3. ethnic enclaves are a form of social capital that may provide social, cultural, and economic supports. To date, no study has clearly examined the effect of social and cultural support as it relates to employment outcomes.

4. no known research has examined the role of occupation in the relationship between English proficiency and labour-force participation and employment. Not all occupations necessarily require the same degree of English skills.

5.4. THEORETICAL FRAMEWORK

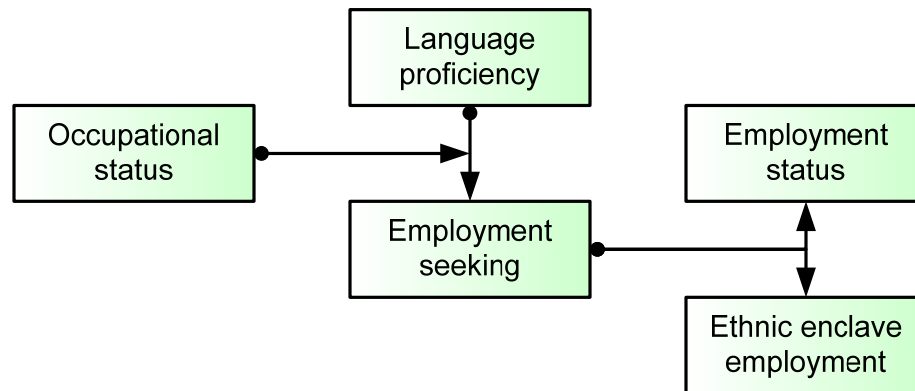
5.4.1 CONCEPTUAL MODEL

This study endeavours to determine whether a relationship exists between English proficiency and labour-market participation and, more specifically, employment seeking and incidence of employment. It broadens the measure of employment outcomes by examining the incidence of employment in ethnic enclaves.

The conceptual model (see Figure 5.1), *The Effect of English Language Proficiency on Labour-Market Integration*, explores the relationship between English proficiency and such labour-market outcomes as workforce participation (employment seeking), incidence of employment (employment status), and non-standard employment (employment within ethnic enclaves).

Figure 5.1

The Effect of English Language Proficiency on Labour-Market Integration



Definitions

English Language proficiency is defined as the ability to speak, read, and write in English. Knowledge of the language may range from the inability to speak, read, or write in English to the ability to do it very well.

Employment seeking is defined as having been looking for work at any time since arrival in Canada.

Employment status is defined as having been employed in Canada at any time since arrival in Canada.

Ethnic enclave employment is defined as having been working in a workplace with most or all employees of the same ethnic origin or culture at any time since arrival in Canada.

Occupational status is defined as the status of the occupation that immigrants intended to obtain after arrival in Canada.

Hypotheses

I expect that individuals with superior language knowledge are more likely to enter the labour market and look for work than those with inferior English skills (Language Proficiency → Employment Seeking relationship). Immigrants with adequate language skills would have greater economic incentives as well as capacity to enter the labour market. Immigrants with

limited language skills would have greater incentive to master English before deciding to seek employment. In other words,

Hypothesis 1: Immigrants with greater English knowledge will have a higher probability of seeking employment at any time after migration.

I expect that immigrants who demonstrate higher English proficiency are more likely to be employed (Language Proficiency → Employment Status relationship). At the same time, immigrants with inadequate language knowledge may have considerably less ability to search and find job opportunities. Such individuals may not fully understand the job description, have difficulty writing a resume or written assessment, and perform poorly during interviews when compared to immigrants or other candidates with superior English skills. In other words,

Hypothesis 2: Immigrants with greater English language knowledge will have a higher probability of employment.

The role of English proficiency in obtaining employment is expected to diminish for employment opportunities within ethnic enclaves (Language Proficiency → Ethnic Enclave Employment relationship). Employers in ethnic-enclave workplaces are less likely to require their employees to be proficient in English. In other words,

Hypothesis 3: The role of English language proficiency will be less important for individuals who have found employment in ethnic enclaves than for those who have been employed in the mainstream economy.

The importance of English proficiency in employment search and outcomes depends on the type of employment the immigrant intended to obtain after arrival in Canada. Employers, when hiring individuals for high-status occupations (such as managerial and technical positions), are more likely to require higher language skills than when hiring for lower-status occupations (such as labourers). While some knowledge of English is important in all jobs, its importance is expected to be greater in higher-status occupations. In other words,

Hypothesis 4: The positive effect of language proficiency will be most pronounced in: a) the higher probability of looking for employment, and b) incidence of employment, when the intended occupation is a high-status occupation.

5.5. DATA AND VARIABLES

5.5.1 DATA SOURCE

This study utilizes Waves 1, 2, and 3 of the Longitudinal Survey of Immigrants to Canada (LSIC). Wave 1 of the survey was conducted at six months (2001–02), Wave 2 at two years (2002–03), and Wave 3 at four years (2004–05) after landing in Canada. The LSIC contains a representative sample from the target population and includes immigrants arriving in Canada between October 1, 2000 and September 30, 2001 who were aged 15 or older at the time of landing. A core sample of 20,300 respondents was selected from the target population of 164,200 (Statistics Canada, 2003). Those who received their permanent residence visa in Canada were not included in the sample frame since the objective was to consider the adaptation of newly arrived immigrants. Those who applied within Canada could have had experiences different from those who had just arrived and may have been at another stage in the integration process.

The LSIC is the most suitable source for the present research because it includes information unavailable through other data sources. First, the English-language variable is superior as it contains information about the immigrant's speaking, reading, and writing abilities, allowing examination of the effect of all dimensions of English proficiency on the integration process. Second, the LSIC provides comprehensive information about various employment types by differentiating between employment in the mainstream labour market and employment in ethnic enclaves.

5.5.2 SAMPLE

The sample is limited to respondents between the ages of 21 and 64. This restriction is made because the employment patterns for individuals under age 21 (school attendance) and over age 64 (retirement) may profoundly differ from those for other age groups.

The following observations are also excluded:

1. respondents who have not answered questions on English knowledge; and
2. immigrants residing in Quebec, since the importance of English may differ from that for the rest of Canada.

5.5.3 DEPENDENT VARIABLES

The three dependent variables are employment seeking, employment status, and ethnic-enclave employment. The dependent variables are constructed as follows:

Employment Seeking

Employment Seeking is coded 1 if the immigrant declared looking for employment since coming to Canada; otherwise coded 0.

Employment Status

Employment status is coded 1 if the immigrant has ever been employed since coming to Canada; otherwise coded 0. This includes all those who had paid employment during each wave or between the waves.

Ethnic-Enclave Employment

Two categories of ethnic enclave are identified: pure and mixed. “Pure ethnic enclave” is defined as a workplace where all co-workers are of the same ethnic or cultural background. “Mixed ethnic enclave” is defined as a workplace where most co-workers are of the same ethnicity or culture. Organizations within the mainstream economy are assumed to have none (“pure mainstream economy workplaces”) or few employees of the same ethnicity or culture as the immigrant (“mixed mainstream economy workplaces”).

To summarize, the ethnic-enclave employment variable consists of the following four mutually exclusive categories:

1. Pure Ethnic Enclave — All coworkers are of the same ethnicity (Reference Category);
2. Mixed Ethnic Enclave — Most coworkers are of the same ethnicity;
3. Mixed Mainstream Economy — Some coworkers are of the same ethnicity;
4. Pure Mainstream Economy — No coworkers are of the same ethnicity.

5.5.4 INDEPENDENT VARIABLES

The two key explanatory variables in this analysis are immigrants’ self-reported English proficiency at arrival and language of highest level of education completed.

English Language Proficiency is measured by the English Language Proficiency Index:

$$ELP = LP_S + LP_R + LP_W$$

Where,

ELP — Overall English language proficiency;

LP_S — Speaking proficiency;

LP_R — Reading proficiency;

LP_W — Writing proficiency.

The analysis concentrates on overall language fluency at arrival (Wave 1).¹⁶ Each of the above language proficiency dimensions is measured on a five-point scale, with 0 meaning cannot (speak, read, write) at all, 1 meaning can do it poorly, 2 – can do it fairly well, 3 – can do it well, and 4 meaning can (speak, read, write) very well. Responses for the three proficiency dimensions are added, with resulting scores ranging from 0 (“not at all” in all competencies) to 12 (“very well” in all competencies). The internal consistency score is quite high, with $\alpha = .90$.

Language at School is measured using a set of three dummy variables representing: 1) education obtained in English; 2) education obtained in English and other language; and 3) education obtained in a language other than English (reference category).

Status of *Intended Occupation* is coded into five mutually exclusive categories (National Occupational Classification, HRSDC, 2006): 1) Elemental Sales and Service Occupations and Labourers; 2) Clerical and Intermediate Occupations; 3) Skilled Administrative and Technical Occupations; 4) Professional Occupations; and 5) Managerial Occupations. Elemental sales, service occupations, and labourers are the reference group.

The following are also included as independent variables: the *level of education*, *work experience obtained in a source country*, *professional credentials obtained in a source country*, and *immigration category* (skilled worker, family reunion, refugee claim). In the literature, these variables have been found to be associated with employment outcomes (Carliner, 2000);

¹⁶ The relationship between labour-market outcomes and language proficiency may not be unidirectional. For example, job incumbents may find employment or be selected for particular positions on the basis of superior language skills. Alternatively, they may be required to improve their language knowledge after attaining the position (Espinosa and Massey, 1997; Espenshade and Fu, 1997). To address the potential causality problem, language proficiency is based on data from Wave 1 (at arrival), while the employment-related details are taken from Wave 3. The time differential in measuring language proficiency makes it exogenous to subsequent employment seeking and its outcomes.

Chiswick and Miller, 1999, 2001, 2002; Dustmann, 1997; Dustmann and Fabbri, 2003; Espenshade and Fu, 1997; McDonald and Worswick, 1997; van Tubergen et al., 2004).

To test the role of social and residential enclaves in the relationship between English fluency and labour-market integration, the variables *social enclave* and *residential enclave* are included in the analysis. Both measures of enclaves are coded into five mutually exclusive categories: 1) no friends/neighbours of the same ethnicity (reference category); 2) few friends/neighbours; 3) half friends/neighbours; 4) most friends/neighbours and 5) all friends/neighbours of the same ethnicity.

Other independent variables included in the model are *age*, *gender*, *marital status*, *location of residence*, *language (spoken) at home*, and *ethnicity* (Chiswick and Miller, 1999, 2001, 2002; Dustmann, 1997; Espenshade and Fu, 1997; van Tubergen et al., 2004). Language spoken at home was extensively used in prior research as a proxy for English proficiency (Chiswick and Miller, 2001).

The coding of the independent variables included in the analysis is summarized in Appendix 5.1.

5.6. EMPIRICAL FRAMEWORK AND RESULTS

To test the hypotheses associated with the Language Proficiency and Labour Market Integration Theoretical Model, three empirical models are estimated. The models examine the effect of English proficiency on:

1. the probability of employment seeking;
2. the probability of employment; and
3. the probability of employment within ethnic enclaves.

The empirical framework and results for each of the models are presented separately. In the discussion section, the findings from all models are summarized.

5.6.1 DESCRIPTIVE STATISTICS

Table 5.3 reports the distribution of English proficiency measured in Wave 1 as well as all relevant characteristics of the sample. The employment related characteristics are reported in Table 5.4 in three subsets: employment-seeking status, employment status, and proportion of immigrants working in the mainstream and ethnic-enclave economies.

5.6.2 MULTIVARIATE ANALYSIS

5.6.2.1 EMPLOYMENT-SEEKING MODEL

Empirical Model

The following logistic regression model is utilized in this analysis to estimate the probability of employment seeking:

$$\text{Pr (ES)} = 1/(1+e^{-bx})_2$$

Where:

ES – Employment Seeking

bx - Vector of characteristics thought to influence the probability of employment seeking:

$$x = LP_j + OS_i + HC_k + C,$$

Where:

LP — Language Proficiency

OS — Occupation Status

HC – Human Capital Variables

C — Control Variables

Results

The estimation results for the Employment-Seeking Model are presented in the first panel of Table 5.5.

The results indicate that English proficiency is associated with a higher likelihood of employment-seeking behaviour. The odds of seeking employment increase by a factor of $e^{0.058}=1.059$ for each additional level of language proficiency. For a person who knows English very well, the odds of employment seeking are higher by $e^{0.058*12} = 2.01$ when compared to an individual with no language knowledge. Immigrants who are proficient in overall English are twice as likely to look for work as immigrants with no language knowledge.

Similarly, completion of any level of education in English significantly increases the likelihood of looking for work. Immigrants who studied in English are 1.4 times more likely to be looking for work compared to those who obtained their education in another language only. Those who

completed their education in English and another language are less likely to look for work compared to immigrants who obtained their education in a language other than English ($e^{-0.128} = 0.880$).

Together, these findings reflect Thomas' (2009b) findings and offer partial support to Hypothesis 1, which states that immigrants with more advanced English language knowledge will have a higher probability of seeking employment at any time after migration.

Immigrants who intended to obtain an occupation at any level above labourer are significantly more likely to look for work after migration, with odds ranging from 1.7 times for skilled administrative and technical occupations to 2.6 times for professional occupations when compared to labourers.

Each additional level of education significantly increases the odds of employment seeking for respondents with a high school diploma, or a college diploma. Individuals with bachelor and postgraduate degrees have the biggest advantage as they are respectively 1.7 and 2.2 times more likely to look for work than those who did not complete high school.

Having work experience in the source country increases the odds of looking for work by 1.8 times ($e^{0.584} = 1.8$). However, immigrants with professional credentials are less likely to look for work at any time since migration. Having credentials decreases the odds of employment seeking by 11.5 percent ($e^{-0.122} = 0.885$) compared to not having credentials. Immigrants with professional credentials are required to pass professional written and oral examinations and accumulate experience in a particular field before receiving a license to practise. To receive accreditation, they may need to obtain additional education in Canada or non-paid employment in their respective field to gain Canadian experience. These requirements may preclude immigrants of certain professions from looking for work immediately upon arrival.

Immigrants who arrived under the family reunification and refugee categories are significantly less likely to be looking for work, with odds of 0.83 and 0.92 respectively, when compared to skilled workers.

Social and residential ethnic enclaves appear to play some role in the likelihood of looking for work after migrating to Canada. When compared to individuals with no friends of the same ethnic or cultural origin, immigrants who have few or all friends are not more likely to look for

work, while those with half of friends of the same ethnicity are significantly less likely, and those with most friends are significantly more likely to look for work after migration. With respect to residential ethnic enclaves, immigrants with half of their neighbours of the same ethnic origin have 0.9 times the odds of looking for work than immigrants who live in neighbourhoods with no residents of the same origin. Immigrants with most neighbours of the same origin are 1.2 times more likely to look for work than individuals in the control group.

When compared to respondents between the ages of 21 and 29, immigrants in their thirties, forties, and fifties are significantly more likely to look for work. Being over age 60 decreases the odds of employment seeking by 23 percent ($e^{-0.263} = 0.77$). Men, single immigrants, those who reside in CMAs, and those who speak English at home are more likely to look for employment. These results are in line with past studies.

Ethnicity also appears to be related to employment seeking. When compared to European immigrants, Asians, Latin Americans, and Aboriginals are significantly more likely to be looking for work, while Arab immigrants are significantly less likely to seek employment.

To further explore the relationship among language proficiency, skill level of the immigrant, and the probability of job seeking, the model that includes interaction terms between language proficiency and occupational status of the intended occupation was estimated. Results of the analysis are presented in the left panel of Table 5.7 (Appendix 5.2). Since the direction of the relationships and the magnitude of the odds for both the human capital characteristics and the control variables are similar to the Employment-Seeking Model outlined above, only the results for the interaction terms are discussed.

When compared to immigrants who intend to obtain occupations in the lowest-status category (labourers), respondents who intend to obtain clerical occupations or trades, with more advanced English skills, are significantly more likely to look for work ($e^{0.037} = 1.04$). Immigrants who intend to gain employment in professional and skilled and technical occupations, with more advanced English skills, are not more likely to look for work than labourers. For immigrants who intend to obtain managerial occupations, each additional level of English proficiency is associated with significantly higher odds of looking for work when compared to labourers ($e^{0.121} = 1.13$). These findings lend partial support to Hypothesis 4, which states that the positive effect of language proficiency will be the most pronounced in the higher probability of looking for employment when the intended occupation is a high-status occupation.

5.6.2.2 EMPLOYMENT STATUS MODEL

Empirical Model

The odds of an immigrant being employed at any time during the first four years after migration are estimated with the following logit model:

$$\text{Pr}(E) = 1/(1+e^{-bx}),$$

Where:

E – 1 if the immigrant obtained employment in Canada at any time during the first four years after migration; 0 otherwise

bx - Vector of characteristics thought to influence probability of obtaining employment:

$$x = LP_j + OS_i + HC_k + C,$$

Where:

LP — Language Proficiency

OS — Occupation Status

HC — Human Capital Variables

C — Control Variables

Results

The second panel of Table 5.5 presents the logit results for the Employment Status Model. All human capital and control variables that were used in the Employment-Seeking Model are also included in this model.

English proficiency is associated with significantly higher odds of employment. The odds of employment increase by a factor of $e^{0.048}=1.05$ for each additional level of language knowledge. For a person who knows English very well, the odds of finding employment are higher by $e^{0.048*12}=1.78$ when compared to an individual with no language skills. Proficiency in overall English increases the chances of employment by almost two-thirds when compared to no language knowledge.

The role of English as a language in which education was obtained is also positive and significant. Individuals who obtained education in English or English and other languages are more likely to have been employed since coming to Canada than those who studied in other

languages. The odds of employment for immigrants who completed their education in English are $e^{0.402}=1.49$, and for those who studied in English and another language, the odds are $e^{0.341}=1.41$.

These results fully support Hypothesis 2, which states that immigrants with advanced English knowledge will have a higher probability of employment. The findings also corroborate past research results (Dustmann and Fabbri, 2003; Thomas, 2009b; van Tubergen et al., 2004).

With respect to other human capital characteristics, the results are also consistent with the findings of previous studies (Aydemir and Skuterud, 2005; Borjas, 1994a; Carliner, 2000; Carnevale et al., 2001; Chiswick and Miller, 1999, 2002; Dustmann, 1997). Immigrants whose intended occupation requires a higher skill level than service, labourer, and sales occupations are significantly more likely to gain employment. Education, work experience, and professional credentials increase the odds of obtaining employment. Immigrants with a high school diploma or above are 1.3 to 1.5 times more likely to find work than those with less than a high school education. Those with work experience in the source country are more than twice as likely to find work in Canada ($e^{0.787}=2.20$) than those without such experience.

Immigrants under the family-reunion category are found to have significantly higher odds of being employed than individuals in the skilled-worker category. This may be attributed to the availability of social networks upon arrival for those who join family members. In line with past research, refugees are less likely to be employed than skilled-worker immigrants. Being a refugee reduces the odds of employment by more than 66 percent ($e^{-0.828}=0.44$).

Having friends or neighbours of the same ethnicity or culture increases the chances of employment. Having few or half of friends versus no friends of the same ethnicity increases the odds of employment by 1.3 and 1.5 times respectively. The advantage decreases slightly when the person has most or all friends of the same ethnicity, with respective odds being 1.2 and 1.1. Having only a few neighbours of the same ethnicity versus no neighbours is associated with a lower likelihood of employment. The odds of employment increase significantly when the individual has half or most neighbours of the same ethnicity. Immigrants who have all neighbours of the same ethnicity are 2.5 times more likely to be employed than immigrants with no such neighbours. While social and residential networks appear to be beneficial with respect to employment, further analysis is necessary to investigate the types of employment that immigrants obtain.

The signs of the control variables' coefficients are in line with past research (Chiswick and Miller, 1999, 2002; van Tubergen et al., 2004). Age reduces the odds of being employed. Each additional decade is associated with a progressively lower likelihood of employment. Individuals in their sixties are least likely to have been employed ($e^{-1.458} = 0.23$) compared to those in their twenties. Men are twice as likely to be employed as women. Single immigrants and those who live in rural areas are more likely to be employed than married immigrants and those living in urban centres. Language spoken at home is not associated with greater odds of finding employment. Arabs and Asians are significantly less likely to have been employed than Europeans, while African and Latin American immigrants are not statistically different. Aboriginals and immigrants of other ethnic origins have higher odds of being employed compared to Europeans.

A second Employment Status Model was estimated, which introduces interaction terms between English proficiency and skill level of the intended occupation. The findings are presented in the right panel of Table 5.7 (Appendix 5.2). Since the direction and magnitude of all coefficients are similar to the Employment Status Model in Table 5.5, only findings associated with the interactions are discussed.

Additional English knowledge is not associated with higher odds of employment for immigrants who intended to obtain clerical and trades occupations when compared to labourers ($e^{-0.001} = 0.999$). The role of language proficiency in obtaining employment is significantly higher for professional immigrants and those with intended technical and skilled administrative occupations. Each additional level of language knowledge increases the odds of employment by a factor of 1.1 for intended skilled administrative occupations as well as for intended professional occupations.

For immigrants with intended managerial occupations, additional language knowledge is associated with somewhat lower odds of obtaining employment, $e^{-0.028} = 0.97$. This finding is unexpected and it is plausible to suggest that recent immigrants who intended to obtain managerial occupations face increased competition from native-born managers or immigrants who gained their managerial experience in Canada. These findings partially support Hypothesis 4, which states that the positive effect of language proficiency will be the most pronounced in incidence of employment, when the intended occupation is a high-status occupation.

5.6.2.3 ETHNIC-ENCLAVE EMPLOYMENT MODEL

Empirical Model

Ethnic-enclave employment is a mutually exclusive, readily ordered, categorical variable. However, an ordered logit model was rejected by the data test. Multinomial logit analysis, therefore, is appropriate for the ethnic-enclave employment analysis.

The following multinomial logit regression model is estimated:

$$\Pr(EE_m) = \frac{e^{b_m x}}{1 + \sum_{m=1}^3 e^{b_m x}}$$

Where:

EE – Ethnic-Enclave Employment

m – Ethnic-Enclave Employment categories (pure ethnic enclave; mixed ethnic enclave; mixed mainstream economy; pure mainstream economy).

b_x - Vector of characteristics thought to influence probability of obtaining employment within ethnic enclave: $x = LP_j + OS_i + HC_k + C$,

Where:

LP — Language Proficiency

OS — Occupation Status

HC — Human Capital Variables

C — Control Variables

Results

To test Hypothesis 3, that the role of English language proficiency will be less important for individuals who have found employment in ethnic enclaves than for those who are employed in the mainstream economy, a multinomial logit model is estimated. The key language proficiency predictors are the level of language knowledge and the language of education. Another main predictor associated with human capital is the status of the intended occupation. This model utilizes the same human capital variables as previous models of employment seeking and employment status. Additionally, social and residential enclave variables are included in the model. The results are summarized in Table 5.6.

English proficiency significantly increases the likelihood of obtaining employment in the mainstream economy workplace versus ethnic enclaves. Immigrants who are proficient in English are significantly more likely to be employed in pure or mixed mainstream economy workplaces than in pure ethnic enclaves. When compared to pure ethnic-enclave workplaces, each additional level of linguistic proficiency is associated with 1.26 times the odds of being employed in the pure mainstream economy, and 1.13 times the odds of employment in a mixed mainstream economy workplace. Immigrants who declare the highest level of the overall English proficiency (able to speak, read, and write “very well”) have almost 16 times the odds of employment in pure mainstream economy workplaces than in pure ethnic enclaves ($e^{0.230*12}=15.8$). English proficiency has no statistically significant relationship with employment in mixed ethnic enclaves versus pure ethnic enclaves.

Having obtained education in English significantly increases the odds of employment in mainstream economy workplaces as well as within mixed ethnic enclaves. Immigrants whose language at school was English are significantly more likely to work in pure ($e^{0.755}=2.1$) and mixed ($e^{1.043}=2.8$) mainstream economies or mixed ethnic enclaves ($e^{0.976}=2.7$) than in pure ethnic enclaves when compared to those who studied exclusively in another language. Education obtained in English and other language also significantly increases the chances of working in a mixed mainstream economy ($e^{0.413}=1.5$), as well as mixed ethnic-enclave workplaces ($e^{0.588}=1.8$), as opposed to pure ethnic enclaves. At the same time, education obtained in English and another language has no significant impact on the odds of being employed in a pure mainstream economy ($e^{0.034}=1.03$) when compared to pure ethnic enclaves. Overall, the above results are in line with Hypothesis 3, which states that the role of English proficiency will be less important for individuals who have found employment in ethnic enclaves than for those who have been employed in the mainstream economy.

Immigrants with intended clerical and trades occupations and with intended skilled administrative and technical occupations are significantly more likely to be employed in the mainstream economy, both pure and mixed, than in ethnic enclaves when compared to intended labourers. Intended professional immigrants are more likely to be employed in the mainstream economy when compared to labourers. Intending to obtain employment as a professional increases the odds of being employed by pure and mixed mainstream economy organizations by 1.56 and 1.37 times respectively when compared to pure ethnic-enclave employment. Intended

professionals are also more likely to be employed in a mixed ethnic enclave than in a pure ethnic enclave.

Immigrants who intended to become managers, on the other hand, are significantly less likely to be employed in the pure and mixed mainstream economies and mixed ethnic enclaves than in pure ethnic enclaves. It might be easier for intended managers to find a job in an ethnic enclave than in the mainstream economy where they may face greater competition from colleagues with Canadian work experience.

While having a high school diploma does not affect the odds of employment in mainstream economy workplaces versus a pure ethnic enclave, completion of some postsecondary education, college, bachelor, and postgraduate degree significantly increases the odds of working in mainstream economy workplaces. Completion of high school, college degree, or postgraduate degree significantly decreases the likelihood of being employed in mixed than in pure ethnic-enclave workplaces. Completion of other levels of education (some postsecondary, bachelor degree) has no impact on the likelihood of working in mixed versus pure ethnic enclaves.

Work experience in the source country significantly decreases the chances of employment in mainstream economy. Immigrants who worked in the source country are significantly less likely to work in pure or mixed mainstream economy workplaces and mixed ethnic enclaves than in pure ethnic enclaves ($e^{-0.125}=0.88$, $e^{-0.345}=0.71$, and $e^{-0.484}=0.62$ respectively).

Immigrants with professional credentials are significantly more likely to work in the mainstream economy than in ethnic enclaves. The odds that a professional is employed in a pure or mixed mainstream economy workplace are respectively $e^{0.235}=1.26$ and $e^{0.151}=1.16$ times greater than employment in pure ethnic enclaves.

Immigrants who arrived under the family reunification category are less likely to be employed in the mainstream economy than individuals who came to Canada as skilled workers. This result is not surprising as family members may more readily secure employment through the family's local ethnic network, as was found in the employment status model. While refugees have significantly lower odds of being employed, they are more likely to work in the mainstream economy — in fact, almost twice as likely to be in pure mainstream economy workplaces ($e^{0.566}=1.76$) than in pure ethnic enclaves. They are also significantly more likely to be employed in pure, rather than mixed, ethnic enclaves.

Having few or half of friends of the same ethnic background is associated with significantly greater odds of obtaining employment in the mainstream economy compared to employment in a pure ethnic enclave than having no friends of the same ethnic background. Immigrants with half of friends from the same ethnic background are more than twice as likely to be employed in a mixed mainstream economy or mixed ethnic enclave than in a pure ethnic enclave. Respondents with most friends of the same ethnicity are less likely to be employed in a pure mainstream economy workplace ($e^{-0.69}=0.50$). Immigrants who socialize exclusively within an ethnic enclave have significantly lower odds of finding employment within the mainstream economy than those with no friends of the same ethnicity.

Living in a predominantly ethnic neighbourhood reduces the likelihood of integration into the mainstream economy. Living in a progressively concentrated residential enclave, with few, half, most, or all neighbours of the same background, significantly decreases the odds of being employed in the mainstream economy. For example, having only half of neighbours of the same ethnic origin decreases the odds of working in the mainstream economy by 71 percent ($e^{-1.252}=0.29$).

Younger, male, married immigrants have significantly higher chances of being employed outside ethnic enclaves. Living in a rural area significantly increases the odds of employment in pure mainstream economy workplaces when compared to pure ethnic enclaves. While immigrants of Arab ethnicity are more likely to be employed in pure rather than mixed ethnic enclaves, they are also more likely to be in mixed mainstream economy workplaces than immigrants of European descent. The odds of being employed in the mainstream economy for immigrants of Arab ethnicity are not different when compared to the odds of working in pure ethnic-enclave organizations. When compared to immigrants of European descent, immigrants of Asian, Aboriginal and other ethnicity are significantly less likely, while individuals of African or Latin American background are significantly more likely, to be employed in the mainstream economy.

5.7. DISCUSSION AND IMPLICATIONS

Research investigating language proficiency and labour-market outcomes has found a significant relationship between knowledge of the official language and employment seeking and employment. Most research, however, has concentrated only on the speaking dimension of language knowledge, in part due to limitations of the available data sets. While some studies have attempted to include other dimensions of language proficiency in the analysis of labour-

market outcomes (Dustmann and Fabbri, 2003), none of them has analyzed the relationship between overall language proficiency and employment seeking, employment, or employment in ethnic enclaves.

English Language Proficiency

In this research, an overall language knowledge scale, which encompasses speaking, reading, and writing proficiency, was constructed. It was found that overall language proficiency is associated with higher odds of employment seeking and employment in Canada. The effects are statistically significant and large. Further, greater English proficiency significantly increases the likelihood of finding employment in the mainstream economy.

The results associated with language of education, a proxy for English proficiency, are noteworthy. Having completed education in English significantly increases the odds of looking for work and being employed in Canada. Education in English and other language also significantly and positively affects likelihood of employment. This effect was not found for employment search activities — immigrants who completed their education in English and another language are not significantly more likely to look for work when compared to those who completed their education exclusively in a language other than English. Immigrants who received education in English or English and another language are more likely to be employed outside ethnic enclaves than immigrants whose language of education was other than English.

Status of Intended Occupation

The higher the status of the intended occupation, the more likely the immigrant is to look for employment after migration and be employed in Canada. Immigrants whose intended occupation is of higher status are also more likely to be employed in the mainstream economy, with the exception of managers. Managers are more likely to find work in ethnic enclaves than in the mainstream economy.

Other Independent Variables

Immigrants who arrived under the family category are significantly less likely to look for work after migration. Family-category immigrants who have been searching for a job since coming to Canada are more likely to find employment or be employed in ethnic enclaves than those in the skilled-worker category. It appears that those who reunite with their family benefit from the

social and employment networks developed by their relatives. While refugees are less likely to look for work after migration or to be employed, those who find employment are more likely to be employed in mainstream economy workplaces than individuals in the skilled-worker category.

Immigrants with work experience in the source country have higher odds of looking for work and being employed when compared to those without such experience. While the advantage of having work experience translates into employment-seeking behaviour and the likelihood of obtaining employment, the job found is more likely to be in ethnic enclaves than in the mainstream economy.

Having professional credentials is associated with lower odds of job seeking after migration. This result may be explained by difficulties that recent immigrants experience in gaining recognition for their international credentials (Picot and Hou, 2003; Reitz, 2005). During the lengthy accreditation process, immigrants may be required or may choose to take additional education or perform volunteer work in their field to gain Canadian professional experience.

Extending past research, two social capital variables — living and socializing within ethnic enclaves — were included in the analysis. Immigrants with strong social and residential ethnic networks are more likely to be employed, which suggests that ethnic enclaves play an important role in labour-market integration of recent immigrants to Canada. It was also found that socializing and residing in ethnic enclaves significantly increase the odds of working in ethnic enclaves.

Although the analysis of social and residential enclaves and their role in different types of employment was not a primary goal of this research, the results have important research implications. Social networks serve as a hub of information on various topics, including food, shelter, job information and contacts, social services, and health care (Boyd, 1989; Thomas, 2009a). Residential networks may provide similar resources to recent immigrants of the same ethnicity or cultural origin. Results also indicate that social and residential enclaves contribute to labour-market integration of recent immigrants; the integration, however, occurs primarily within the enclaves only. While some researchers consider ethnic enclaves to be beneficial for economic integration, others find that this type of employment has negative implications (Boyd, 1989; Portes and Back, 1985; Thomas, 2009a, 2009b; Hou and Picot, 2002; Chiswick and Miller, 2002). Future research is necessary to consider the extent to which social and residential ethnic enclaves may benefit or hinder immigrant employment integration.

Table 5.3

Characteristics of the Sample

| Variable | N=7,146 |
|--|----------------|
| English Language Proficiency | 8.43 |
| Language At School | |
| English | 37.2% |
| English and Other | 8.1% |
| Other | 54.7% |
| Intended Occupation | |
| Labourer | 3.2% |
| Clerical and Trades | 17.3% |
| Skilled Admin and Technical | 17.8% |
| Professional | 57.7% |
| Managerial | 4.1% |
| Education | |
| <High School | 14.6% |
| High School | 12.6% |
| Some Postsecondary | 8.7% |
| College Degree | 10.0% |
| Bachelor Degree | 35.9% |
| Postgraduate Degree | 18.2% |
| Work Experience in a Source Country | 77.3% |
| Professional Credentials in a Source Country | 15.1% |
| Immigration Category | |
| Skilled Worker | 66.0% |
| Family Reunion | 28.4% |
| Refugee | 5.6% |
| Social Enclave | |
| No Friends of the Same Ethnicity | 7.1% |
| Few Friends | 16.9% |
| Half Friends | 12.3% |
| Most Friends | 38.3% |
| All Friends | 25.3% |
| Residential Enclave | |
| No Neighbours of the Same Ethnicity | 32.4% |
| Few Neighbours | 47.1% |
| Half Neighbours | 9.0% |
| Most Neighbours | 10.1% |
| All Neighbours | 1.4% |
| Age | |
| 21-29 | 27.4% |
| 30-39 | 42.4% |
| 40-49 | 20.8% |
| 50-59 | 7.0% |
| 60-64 | 2.5% |

| Variable | N=7,146 |
|-----------------------------|----------------|
| Female | 50.1% |
| Married | 76.8% |
| Location of Residence (CMA) | 85.9% |
| English Language at Home | 93.4% |
| Ethnicity | |
| European | 15.5% |
| Arab | 3.5% |
| Asian | 72.1% |
| African | 3.7% |
| Latin-American | 3.5% |
| Aboriginal and other | 1.7% |

Table 5.4

Work Related Characteristics of the Sample

| Variable | |
|---------------------------|-------|
| Employment Seeking | |
| Yes | 36.9% |
| No | 63.2% |
| Employment Status | |
| Employed | 54.4% |
| Not Employed | 45.6% |
| Ethnic Enclave Employment | |
| Pure Mainstream Economy | 25.3% |
| Mixed Mainstream Economy | 47.7% |
| Mixed Ethnic Enclave | 15.3% |
| Pure Ethnic Enclave | 11.7% |

Note: For employment seeking model, only those who did not work in Canada are included in the sample, reducing sample size to 2,972.

Table 5.5

Logit Coefficient Estimates for Employment Seeking and Employment Status

| Variable | Employment Seeking | | Employment Status | |
|---|--|---------------|--|---------------|
| | Parameter Estimate (Standard Error) | Odds Ratio | Parameter Estimate (Standard Error) | Odds Ratio |
| English Language Proficiency | 0.058 *** (0.004) | 1.059 | 0.048 *** (0.002) | 1.049 |
| Language At School (Other) | | | | |
| English | 0.349 *** (0.029) | 1.418 | 0.402 *** (0.016) | 1.494 |
| English and Other | -0.128 ** (0.040) | 0.880 | 0.341 *** (0.022) | 1.406 |
| Intended Occupation (Labourer) | | | | |
| Clerical and Trades | 0.871 *** (0.036) | 2.39 | 0.415 *** (0.021) | 1.515 |
| Skilled Admin and Technical | 0.530 *** (0.040) | 1.698 | 0.454 *** (0.021) | 1.575 |
| Professional | 0.952 *** (0.026) | 2.591 | 0.251 *** (0.015) | 1.285 |
| Managerial | 0.545 *** (0.076) | 1.725 | 0.292 *** (0.041) | 1.339 |
| Education (<High School) | | | | |
| High School | 0.189 *** (0.039) | 1.208 | 0.316 *** (0.024) | 1.371 |
| Some Postsecondary | 0.065 (0.047) | 1.067 | 0.391 *** (0.026) | 1.479 |
| College Degree | 0.134 ** (0.046) | 1.143 | 0.295 *** (0.027) | 1.343 |
| Bachelor Degree | 0.555 *** (0.040) | 1.742 | 0.418 *** (0.024) | 1.520 |
| Postgraduate Degree | 0.769 *** (0.045) | 2.159 | 0.362 *** (0.026) | 1.437 |
| Work Experience in a Source Country (no) | 0.584 *** (0.028) | 1.793 | 0.787 *** (0.018) | 2.196 |
| Professional Credentials in a Source Country (no) | -0.122 *** (0.031) | 0.885 | 0.108 *** (0.016) | 1.114 |
| Immigration Category (Skilled Worker) | | | | |
| Family Reunion | -0.190 *** (0.028) | 0.827 | 0.358 *** (0.016) | 1.430 |
| Refugee | -0.087 * (0.041) | 0.917 | -0.828 *** (0.029) | 0.437 |
| Social Enclave (No Friends of the Same Ethnicity) | | | | |
| Few Friends | -0.006 (0.037) | 0.994 | 0.252 *** (0.020) | 1.286 |
| Half Friends | -0.207 *** (0.043) | 0.813 | 0.405 *** (0.023) | 1.499 |
| Most Friends | 0.079 ** (0.030) | 1.082 | 0.138 *** (0.017) | 1.148 |
| All Friends | -0.018 (0.031) | 0.982 | 0.064 *** (0.019) | 1.066 |
| Residential Enclave (No Neighbours of the Same Ethnicity) | | | | |
| Few Neighbours | -0.018 (0.024) | 0.982 | -0.032 * (0.013) | 0.969 |
| Half Neighbours | -0.113 ** (0.039) | 0.893 | 0.133 *** (0.022) | 1.143 |
| Most Neighbours | 0.185 *** (0.037) | 1.203 | 0.110 *** (0.023) | 1.116 |
| All Neighbours | -0.132 (0.127) | 0.876 | 0.927 *** (0.056) | 2.527 |
| Age (21-29) | | | | |
| 30-39 | 0.313 *** (0.029) | 1.368 | -0.130 *** (0.016) | 0.878 |
| 40-49 | 0.326 *** (0.034) | 1.385 | -0.205 *** (0.019) | 0.815 |
| 50-59 | 0.394 *** (0.044) | 1.482 | -0.455 *** (0.028) | 0.634 |
| 60-64 | -0.263 *** (0.068) | 0.769 | -1.458 *** (0.052) | 0.233 |
| Gender (Female) | 0.970 *** (0.022) | 2.638 | 0.736 *** (0.012) | 2.088 |
| Marital Status (Married) | 0.137 *** (0.033) | 1.147 | 0.192 *** (0.016) | 1.212 |
| Location of Residence (CMA) | -0.204 *** (0.052) | 0.816 | 0.238 *** (0.029) | 1.268 |
| Language at Home (Other) | 0.269 *** (0.040) | 1.308 | -0.001 (0.022) | 0.999 |
| Ethnicity (European) | | | | |
| Arab | -0.119 * (0.055) | 0.888 | -0.981 *** (0.026) | 0.375 |
| Asian | 0.171 *** (0.031) | 1.186 | -0.041 * (0.017) | 0.96 |
| African | -0.052 (0.063) | 0.949 | -0.031 (0.037) | 0.969 |
| Latin-American | 0.204 ** (0.068) | 1.226 | -0.060 (0.032) | 0.942 |
| Aboriginal and other | 0.635 *** (0.124) | 1.887 | 0.235 *** (0.065) | 1.265 |

| Variable | Employment Seeking | | Employment Status | |
|-----------|--|---------------|--|---------------|
| | Parameter Estimate (Standard Error) | Odds Ratio | Parameter Estimate (Standard Error) | Odds Ratio |
| Intercept | -2.884 *** (0.062) | | -1.981 *** (0.035) | |
| Chi-sq | 13888 | | 24159 | |
| N | 2972 | | 7146 | |

*p<0.05, **p<0.01, ***p<.001

Note: Numbers in parentheses are standard errors.

Table 5.6

Coefficients From a Multinomial Logit Model predicting Employment Within Ethnic Enclave

| Variable | Pure Mainstream Economy | Mixed Mainstream Economy | Mixed Ethnic Enclave |
|---|-------------------------|--------------------------|----------------------|
| | [Pure Ethnic Enclave] | | |
| English Language Proficiency | 0.230*** (0.007) | 0.122*** (0.006) | 0.009 (0.006) |
| Language At School (Other) | | | |
| English | 0.755*** (0.047) | 1.043*** (0.043) | 0.976*** (0.049) |
| English and Other | 0.034 (0.061) | 0.413*** (0.052) | 0.588*** (0.057) |
| Intended Occupation (Labourer) | | | |
| Clerical and Trades | 0.201*** (0.059) | 0.310*** (0.052) | -0.109 (0.059) |
| Skilled Admin and Technical | 0.189** (0.059) | 0.231*** (0.054) | -0.221*** (0.063) |
| Professional | 0.410*** (0.044) | 0.317*** (0.040) | 0.234*** (0.045) |
| Managerial | -0.427*** (0.106) | -0.570*** (0.095) | -1.117*** (0.133) |
| Education (<High School) | | | |
| High School | -0.146 (0.075) | -0.029 (0.057) | -0.260*** (0.059) |
| Some Postsecondary | 0.778*** (0.084) | 0.363*** (0.071) | 0.117 (0.075) |
| College Degree | 0.076 (0.082) | 0.169* (0.066) | -0.293*** (0.071) |
| Bachelor Degree | 0.499*** (0.073) | 0.431*** (0.059) | 0.073 (0.063) |
| Postgraduate Degree | 0.323*** (0.079) | 0.376*** (0.066) | -0.481*** (0.073) |
| Work Experience in a Source Country (no) | -0.125* (0.054) | -0.345*** (0.045) | -0.484*** (0.046) |
| Professional Credentials (no) | 0.235*** (0.044) | 0.151*** (0.040) | 0.060 (0.046) |
| Immigration Category (Skilled Worker) | | | |
| Family Reunion | -0.676*** (0.048) | -0.278*** (0.042) | -0.028 (0.046) |
| Refugee | 0.566*** (0.106) | 0.756*** (0.097) | -0.523*** (0.130) |
| Social Enclave (No Friends of the Same Ethnicity) | | | |
| Few Friends | 0.298*** (0.068) | 0.833*** (0.066) | 0.086 (0.079) |
| Half Friends | 0.182* (0.074) | 0.977*** (0.071) | 0.717*** (0.078) |
| Most Friends | -0.690*** (0.049) | 0.316*** (0.045) | 0.331*** (0.050) |
| All Friends | -1.427*** (0.052) | -0.378*** (0.044) | -0.033 (0.048) |
| Residential Enclave (No Neighbours of the Same Ethnicity) | | | |
| Few Neighbours | -0.445*** (0.040) | -0.037 (0.037) | 0.178*** (0.042) |
| Half Neighbours | -1.252*** (0.058) | -0.874*** (0.049) | -0.393*** (0.054) |
| Most Neighbours | -0.931*** (0.060) | -0.547*** (0.050) | -0.112* (0.054) |
| All Neighbours | -0.379** (0.132) | -0.292** (0.103) | 0.037 (0.106) |
| Age (21-29) | | | |
| 30-39 | 0.024 (0.045) | -0.029 (0.041) | 0.060 (0.046) |
| 40-49 | -0.377*** (0.052) | -0.388*** (0.047) | -0.200*** (0.051) |
| 50-59 | -0.833*** (0.095) | -0.425*** (0.067) | -0.1060 (0.064) |
| 60-64 | -1.996*** (0.241) | -0.679*** (0.110) | -1.433*** (0.143) |
| Gender (Female) | 0.313*** (0.034) | 0.678*** (0.030) | 0.567*** (0.034) |
| Marital Status (Married) | -0.452*** (0.045) | -0.329*** (0.040) | -0.430*** (0.046) |
| Location of Residence (CMA) | 0.327*** (0.077) | -0.287*** (0.075) | 0.043 (0.081) |
| Ethnicity (European) | | | |
| Arab | 0.083 (0.143) | 0.386** (0.139) | -0.663*** (0.189) |
| Asian | -1.457*** (0.054) | -0.647*** (0.052) | -0.262*** (0.062) |
| African | 1.511*** (0.283) | 1.399*** (0.282) | 0.906** (0.309) |
| Latin-American | 0.935*** (0.167) | 0.916*** (0.165) | -0.945*** (0.251) |
| Aboriginal and other | -2.117*** (0.174) | -1.405*** (0.153) | -0.205 (0.165) |
| Intercept | 0.244* (0.116) | 0.301** (0.101) | 0.327** (0.111) |
| Chi-sq | 23023.80 | | |
| N | 2896 | | |

*p<0.05, **p<0.01, ***p<.001. Note: Numbers in parentheses are standard errors.

Appendix 5.1

Definitions for Variables Used in Chapter 5.

| Variable | Definition/Question | Coding |
|--|---|--|
| Employment Seeking | Looking for employment since coming to Canada | 0 = no 1 = yes |
| Employment Status | Being employment since coming to Canada | 0 = no 1 = yes |
| Employment within Ethnic Enclaves | Having had employment where none/some/most/all coworkers were of the same ethnicity | 1) Pure Ethnic Enclave - All coworkers are of the same ethnicity (Reference Category) 2) Mixed Ethnic Enclave - Most coworkers are of the same ethnicity 3) Mixed Mainstream Economy - Some coworkers are of the same ethnicity 4) Pure Mainstream Economy - No coworkers are of the same ethnicity |
| English Language Proficiency | Ability to speak, read, and write in English language | Responses to all three categories are summed, with resulting scores ranging from 0 ("not at all" in all competencies) to 12 ("very well" in all competencies) |
| Language at School | A language in which education was obtained | 1) Education obtained in English 2) Education obtained in English and other language 3) Education obtained in a language other than English (Reference Category) |
| Intended Occupation | An intended occupation in Canada | 1) Elemental Sales and Service Occupations and Labourers (Reference Category) 2) Clerical and Intermediate Occupations 3) Skilled Administrative and Technical Occupations 4) Professional Occupations 5) Managerial Occupations |
| Education | The highest level of education obtained | 1) Less than High School (reference category) 2) High School 3) Some postsecondary 4) College Degree 5) Bachelor's Degree 6) Postgraduate Degree |
| Work Experience in a Source Country | Having work experience in a source country | 0 = no 1 = yes |
| Professional Credentials in the Source Country | Having professional credentials in the source country | 0 = no 1 = yes |

| Variable | Definition/Question | Coding |
|-----------------------|---|---|
| Immigration Category | An immigration category as used by the Citizenship and Immigration Canada | 1) Skilled worker/provincial nominees/business class (reference category) 2) Family Reunion 3) Refugee |
| Social Enclave | Having new friends that are of the same ethnic background | 1) No friends are of the same ethnicity (reference category) 2) Few friends 3) Half friends 4) Most friends 5) All friends |
| Residential Enclave | Having neighbours that are of the same ethnic background | 1) No neighbours are of the same ethnicity (reference category) 2) Few neighbours 3) Half neighbours 4) Most neighbours 5) All neighbours |
| Age | | 1) 21 – 29 (reference category) 2) 30 – 39 3) 40 – 49 4) 50 – 59 5) 60 – 64 |
| Gender | | 0 = female 1 = male |
| Marital Status | | 0 = married 1 = single, divorced, widowed or separated |
| Location of Residence | Living within Census Metropolitan Area | 0 = yes 1 = no |
| Language at Home | Language spoken at home is English | 0 = no 1 = yes |
| Ethnicity | | 1) European (Reference Category) 2) Arab 3) Asian 4) African 5) Latin-American 6) Aboriginal and Other |

Appendix 5.2

Employment Seeking and Employment of Recent Immigrants to Canada for Different Status Occupations

Table 5.7

Logit Coefficient Estimates for Employment Seeking and Employment Status for Different Status Occupations

| Variable | Employment Seeking | | Employment Status | |
|--|--|---------------|---|---------------|
| | Parameter Estimate (Standard Error) | Odds Ratio | Parameter Estimate (Standard Error) | Odds Ratio |
| English Language Proficiency | 0.052 *** (0.005) | 1.054 | 0.024 *** (0.003) | 1.025 |
| Language At School (Other) | | | | |
| English | 0.356 *** (0.029) | 1.427 | 0.381 *** (0.016) | 1.464 |
| English and Other | -0.123 ** (0.040) | 0.884 | 0.341 *** (0.022) | 1.407 |
| Intended Occupation (Labourer) | | | | |
| Clerical and Trades | 0.561 *** (0.101) | 1.753 | 0.440 *** (0.054) | 1.552 |
| Skilled Admin and Technical | 0.656 *** (0.110) | 1.927 | -0.409 *** (0.055) | 0.664 |
| Professional | 0.980 *** (0.077) | 2.664 | -0.308 *** (0.044) | 0.735 |
| Managerial | -0.536 * (0.211) | 0.585 | 0.584 *** (0.125) | 1.793 |
| English Knowledge * Intended Occupation (English Knowledge * Labourer) | | | | |
| English Knowledge * Clerical and Trades | 0.037 ** (0.011) | 1.038 | -0.001 (0.006) | 0.999 |
| English Knowledge * Skilled Admin/Technical | -0.015 (0.013) | 0.985 | 0.105 *** (0.006) | 1.111 |
| English Knowledge * Professional | -0.002 (0.008) | 0.998 | 0.063 *** (0.005) | 1.065 |
| English Knowledge * Managerial | 0.121 *** (0.022) | 1.129 | -0.028 * (0.013) | 0.972 |
| Education (<High School) | | | | |
| High School | 0.197 *** (0.039) | 1.217 | 0.347 *** (0.024) | 1.415 |
| Some Postsecondary | 0.066 (0.047) | 1.068 | 0.434 *** (0.027) | 1.543 |
| College Degree | 0.128 ** (0.046) | 1.136 | 0.341 *** (0.027) | 1.406 |
| Bachelor Degree | 0.556 *** (0.040) | 1.744 | 0.455 *** (0.024) | 1.575 |
| Postgraduate Degree | 0.775 *** (0.045) | 2.170 | 0.385 *** (0.026) | 1.470 |
| Work Experience In a Source Country (no) | 0.588 *** (0.029) | 1.800 | 0.776 *** (0.018) | 2.173 |
| Professional Credentials in a Source Country (no) | -0.120 ** (0.031) | 0.887 | 0.115 *** (0.016) | 1.121 |
| Immigration Category (Skilled Worker) | | | | |
| Family Reunion | -0.195 *** (0.028) | 0.823 | 0.334 *** (0.017) | 1.397 |
| Refugee | -0.097 * (0.041) | 0.908 | -0.825 *** (0.029) | 0.438 |

| Variable | Employment Seeking | | Employment Status | |
|---|--|---------------|---|---------------|
| | Parameter Estimate (Standard Error) | Odds Ratio | Parameter Estimate (Standard Error) | Odds Ratio |
| Social Enclave (No Friends of the Same Ethnicity) | | | | |
| Few Friends | -0.001 (0.037) | 0.999 | 0.258 *** (0.020) | 1.295 |
| Half Friends | -0.203 *** (0.043) | 0.816 | 0.414 *** (0.023) | 1.513 |
| Most Friends | 0.077 ** (0.030) | 1.080 | 0.147 *** (0.017) | 1.158 |
| All Friends | -0.026 (0.031) | 0.974 | 0.059 ** (0.019) | 1.060 |
| Residential Enclave (No Neighbours of the Same Ethnicity) | | | | |
| Few Neighbours | -0.016 (0.024) | 0.985 | -0.032 * (0.013) | 0.968 |
| Half Neighbours | -0.108 ** (0.039) | 0.897 | 0.136 *** (0.022) | 1.146 |
| Most Neighbours | 0.197 *** (0.038) | 1.218 | 0.098 *** (0.023) | 1.103 |
| All Neighbours | -0.138 (0.127) | 0.871 | 0.914 *** (0.056) | 2.495 |
| Age (21-29) | | | | |
| 30-39 | 0.319 *** (0.029) | 1.376 | -0.129 *** (0.016) | 0.879 |
| 40-49 | 0.337 *** (0.034) | 1.401 | -0.220 *** (0.019) | 0.803 |
| 50-59 | 0.395 *** (0.044) | 1.485 | -0.487 *** (0.028) | 0.615 |
| 60-64 | -0.256 ** (0.068) | 0.774 | -1.466 *** (0.052) | 0.231 |
| Gender (Female) | 0.973 *** (0.022) | 2.646 | 0.743 *** (0.012) | 2.102 |
| Marital Status (Married) | 0.150 *** (0.033) | 1.162 | 0.193 *** (0.016) | 1.213 |
| Location of Residence (CMA) | -0.209 *** (0.052) | 0.811 | 0.247 *** (0.029) | 1.281 |
| Language at Home (Other) | 0.265 *** (0.040) | 1.303 | -0.007 (0.023) | 0.993 |
| Ethnicity (European) | | | | |
| Arab | -0.118 * (0.055) | 0.889 | -0.962 *** (0.026) | 0.382 |
| Asian | 0.168 *** (0.031) | 1.183 | -0.052 ** (0.017) | 0.950 |
| African | -0.056 (0.063) | 0.946 | -0.035 (0.037) | 0.966 |
| Latin-American | 0.213 ** (0.068) | 1.237 | -0.051 (0.032) | 0.950 |
| Aboriginal and other | 0.624 *** (0.125) | 1.866 | 0.263 *** (0.065) | 1.301 |
| Intercept | -2.856 *** (0.064) | | -1.809 *** (0.036) | |
| Chi-sq | 13937 | | 24613 | |
| N | 2972 | | 7146 | |

*p<0.05, **p<0.01, ***p<.001

Note: Numbers in parentheses are standard errors.

CHAPTER 6.

LABOUR-MARKET INTEGRATION OF RECENT IMMIGRANTS: ENGLISH LANGUAGE INFLUENCE ON SKILLS UTILIZATION

6.1 INTRODUCTION

6.1.1 OVERVIEW

The degree of utilization of skills and qualifications is an important indicator of successful labour-market integration of immigrants. An individual's skills are adequately used if he or she is employed in an occupation that is consistent with their level of useful education, skill, and experience¹⁷ (Boyd and Thomas, 2001; Green, 1999; Reitz, 2001; Reitz, 2005). Research conducted in Canada and other countries indicates that the skills of recent immigrants, particularly those who are highly qualified, are underutilized in the labour market (Boyd and Thomas, 2001; Chiswick et al., 2005; Lewin-Epstein et al., 2003; Reitz, 2001; Reitz, 2005). Two distinct theoretical approaches for examining the role of official language proficiency in immigrants' skills utilization are human capital theory and sociological theories of ethnicity.

Originated by Becker (1975), human capital theory emphasizes that investment in human capital is associated with higher economic returns. Human capital encompasses education, health, experience, mobility, and other factors that may influence labour-market returns. Research has identified official language proficiency as one such factor (Borjas, 1994a; Dustmann, 1997; Espenshade and Fu, 1997; Chiswick and Miller, 1999, 2001, 2002).

Findings of numerous studies suggest that a positive relationship exists between official language proficiency and such labour-market outcomes as labour-force participation, employment, and earnings (Borjas, 1994a; Espenshade and Fu, 1997; Dustmann, 1997; Chiswick and Miller, 1999, 2001, 2002; Green, 1999; van Tubergen et al., 2004; Chiswick et al., 2005).

While the role of English proficiency in labour-market outcomes has been extensively analyzed, its role in immigrants' skills utilization is yet to be fully explored.

¹⁷ Several terms are used for the concept of being employed in occupations consistent with the individual's level of useful education, skill and experience. In some research, the concept is formulated as "skills utilization," in others, "occupational attainment," "occupational status" of the position after migration, or "occupational mobility." To preserve language used in other research, these terms are used interchangeably in the theory review section. In all other sections, "skills utilization" is the main term used.

Research investigating skills utilization found that the acquired human capital characteristics obtained in the source country might not be fully transferable to the destination country (Reitz, 2001; Reitz, 2005; Boyd and Thomas, 2001; Chiswick et al., 2005). This limited transferability of human capital leads to skills underutilization and a decline in occupational status. Since the concept of skills utilization is not clearly defined in the literature, it has been difficult to determine the extent of skills underutilization of recent immigrants.

Language proficiency influences the degree of skills transferability. Recent studies investigating the relationship between language proficiency and skills utilization have used speaking ability as a proxy for language proficiency. It was found that immigrants with poor English-speaking skills experience the most noticeable decline in occupational status (Wanner, 1998; Chiswick et al., 2005; Constant and Massey, 2005). Moreover, immigrants who arrive with poor speaking English knowledge also demonstrate lower occupational mobility and lower upward mobility in occupational status over time (Green, 1999). These results suggest that the ability to speak English contributes to greater skills transferability and skills utilization.

The effects of other dimensions of language proficiency, such as reading and writing, on occupational attainment have received little attention. Since language proficiency requirements may vary based on occupation this makes the relationship between language proficiency and skills utilization even more complex. Individuals seeking lower-status jobs may not be required to demonstrate superior English knowledge. Alternatively, immigrants targeting higher-status jobs might be expected to demonstrate advanced levels of overall language proficiency, including speaking, reading, and writing (Green, 1999; Gonzalez, 2000). To date, limited research has examined the role of overall English proficiency in attainment of occupational status (Chiswick and Taengnoi, 2007).

Sociological research emphasizes that the economic outcomes of immigrants largely depend on their ethnic background. This approach considers language to be a dimension of ethnic identity alongside religion, descent, and tradition (Espenshade and Fu, 1997; Kalbach and Kalbach, 1995; Li, 2001; Pendakur and Pendakur, 2002; Wang, 2002). While there is no overarching theory, several frameworks examining the role of language proficiency in labour-market integration have been developed. These frameworks may be grouped into three categories: cognitive categorization theories, non-standard language or accent, and social distance theory.

While a conceptual understanding of official language proficiency as a dimension of ethnicity has been well developed, research on the role of language in labour-market integration has been sparse. Much of the work analyzing the relationship between language and labour-market outcomes has been in the form of case studies and qualitative analysis. The current study considers the possibility that, as a dimension of ethnicity, language proficiency may affect labour-market outcomes, including skills utilization.

This chapter examines the role of English proficiency in immigrants' ability to utilize their skills in the Canadian labour market. Further, this research integrates the propositions of two schools of thought: one that concentrates on language as a human capital factor and one that treats it as an indicator of ethnicity.

6.1.2 RESEARCH QUESTIONS

This chapter addresses the following research questions:

1. Does English language proficiency facilitate skills utilization?
2. Does English language knowledge, treated as a dimension of ethnicity, affect the level of immigrants' skills utilization?

The structure of the chapter is as follows. First, the predictions and empirical evidence of human capital theory and sociological theories of language as a dimension of ethnicity are summarized. Second, the limitations of past research are highlighted and the theoretical framework outlined. Then the design of each empirical model is presented, followed by a discussion of the estimation results. The chapter concludes with a brief summary.

6.2 THEORY REVIEW

6.2.1 HUMAN CAPITAL THEORY

According to human capital theory, investment in human capital leads to improvement of skills transferability and utilization. Such investment minimizes the probability of a decline in occupational status after migration (Chiswick et al., 2005; Constant and Massey, 2005). One type of investment in human capital is learning the official language of the destination country. This learning can take place when planning to emigrate or after arrival in the destination country. Language learning is accomplished through exposure to the destination language, economic incentives associated with knowing the destination language, and efficiency of destination language learning (Chiswick et al., 2002).

Research indicates that knowledge of the official language is, in fact, associated with higher skills transferability, thus facilitating skills utilization. When analyzing the occupational attainment of recent male immigrants to Australia, Chiswick et al. (2005) utilized data from the Longitudinal Survey of Immigrants to Australia. Using ordinary least squares (OLS) regression, the authors found that, upon arrival, immigrants experienced a significant decline in their occupational status due to lower skills transferability. Non-English-speaking immigrants experienced the most noticeable decline in occupational status. At the same time, greater pre-immigration human capital mitigated the extent of the decline.

Chiswick et al. (2005) argued that as immigrants' knowledge of a destination country's labour market, employment-related networks, and language knowledge increases, their occupational status should also improve. They found, however, that the proportion of immigrants in lower-skilled occupational groups increased with time spent in the destination country. For immigrants who spoke no English at arrival, the decline persisted 3.5 years after migration. In contrast, the ability to speak English at arrival was associated with greater improvement in occupational status between the waves.

Arriving from a country that is linguistically, culturally, and economically similar to the destination country is also associated with higher skills transferability (Chiswick et al., 2005). Immigrants from such countries may not experience downward mobility in occupational status. For Canada, those born in developed English-speaking countries would be expected to have better skills transferability. Similarly, immigrants from non-English-speaking countries who are able to demonstrate high English proficiency would enjoy a similar advantage.

Constant and Massey (2005), using data from the German Sociological Panel (a longitudinal survey) examined the role of language knowledge on immigrant attainment of the initial occupation as well as the last recorded occupation. Results of OLS estimation indicated that immigrants had lower returns on human capital than their native-born counterparts. Immigrants' ability to speak German significantly increased their chances of being in higher-status occupations. The effect of language proficiency was found to be even stronger for the latest obtained occupation; its importance was second only to education.

Research conducted on Canadian data by Wanner (1998) supports general human capital theory predictions. The author analyzed the 1991 Census of Canada and found that weak English-speaking ability had a significant negative effect on an individual's occupational standing.

Green (1999) examined data from the 1981, 1986, and 1991 Canadian Censuses, supplemented with 1973–1991 Citizenship and Immigration Canada (CIC) records. Initially, immigrants were either unemployed or employed in less skilled occupations. With time spent in Canada, they transitioned to higher-skilled occupations. Green found that immigrants who arrived with poor English skills showed lower levels of upward occupational mobility over time. Those who demonstrated weak language fluency at the time of the Census were more likely to be employed in low-skilled occupations. These findings suggest that language proficiency plays an important role in the occupational mobility of immigrants. Green was unable to match the intended and obtained occupations due to data limitations.

The effect of other dimensions of language proficiency or overall language proficiency on occupational attainment also merits exploration. To obtain a job, an incumbent must possess a set of relevant skills required to carry out job-specific tasks (Gonzalez, 2000; Green, 1999); language proficiency is among these essential skills. Individuals in lower-status jobs may not be required to demonstrate superior language knowledge, either overall or in specific dimensions. While for low-status and (or) low-skill occupations the importance of spoken language may be most pronounced, higher-status occupations usually require incumbents to be proficient in all aspects of the language (Dustmann and Fabbri, 2003; Gonzalez, 2000; Green, 1999).

Chiswick and Taengnoi (2007) examined the role of language proficiency in the occupational attainment of highly skilled immigrants. Analyzing data from the 2000 U.S. Census, the authors found that highly skilled immigrants with limited English proficiency or those whose first language is linguistically distant from English were more likely to be in less language-demanding jobs. Specifically, such immigrants were more likely to obtain IT-related or engineering occupations, for which communication skills may be less important. They also found that speaking and writing skills were not equally important for all occupations. Speaking skills were important for all professional occupations, especially for occupations in management, social services, law, education, and health care. Writing skills were generally less important than speaking skills, with the exception of positions in engineering, science, and law. Unfortunately, the sample was limited to professional (high-status) occupations; hence, the authors were unable to discern the importance of the language proficiency for lower-status occupations. To date, no study has examined the role of English proficiency for both low- and high-status occupations.

In summary, past research findings suggest that a significant relationship exists between immigrant's official language proficiency and skills utilization. The literature, however, mainly considered the relationship between spoken English proficiency and skills utilization of recent immigrants.

6.2.2 LANGUAGE AS A DIMENSION OF ETHNICITY FRAMEWORKS

Sociological research emphasizes that the ethnic background of immigrants influences their economic outcomes. This body of literature treats language as a dimension of ethnic identity (Pendakur and Pendakur, 2002; Wang, 2002). The concept of ethnicity implies that identity is based on the commonality of factors, such as descent, religion, tradition, and language. The latter, according to Weber (1968) and Li (2001), is the "primary marker" of ethnicity.

The major frameworks examining the role of language proficiency in labour-market integration are discussed next.

6.2.2.1 THE EFFECT OF NON-STANDARD ENGLISH

A body of research explores the social construction of language by investigating the relationship between accent and ethnic distinctiveness. Accent is defined as a specific pattern of pronunciation classified as standard or non-standard within a particular linguistic community. A language standard is a set of norms that establishes the correct way of speaking and writing in a given language. The particular characteristics of standard speaking incorporate cultural conventions, syntax, and shifts in stress or accent used by the dominant language group (Scassa, 1994). Standard speech, being associated with higher educational level and socioeconomic status, is favoured, while non-standard speech is marginalized (Davila, 1998; Scassa, 1994).

A type of non-standard speech may be attributed to a particular race, ethnicity, and national origin (Lindemann, 2005; Lippi-Green, 1997; Scassa, 1994). Non-standard English, therefore, serves as a marker of ethnicity through observed or perceived discrepancies in pronunciation (Greese and Kambere, 2003; Pendakur and Pendakur, 2002; Wang, 2002).

Several studies suggest that the speaker's dialect and accent influence the receiver's perceptions about speaker's ethnic identity and such personality traits as knowledge and honesty (Davila, 1998; Scassa, 1994). Moreover, deviation from "Canadian English" also implies incompetence of a speaker (Greese and Kambere, 2003). It is important to note that not all accents evoke

negative reactions — only those associated with particular groups. Lindermann (2005), when developing a rating system of non-standard English, found that such ratings were based on country of origin. Without exception, speakers of non-standard English from Western Europe were labelled as more “correct” than speakers from Mexico, China, Japan, India, and Russia. The speech of the latter group was described as broken, hard or slurred, and difficult to understand.

Lippi-Green (1997) argued that negative reactions are most pronounced when non-standard English is associated with a visible minority group member or a person from a developing source country. Therefore, non-standard pronunciation could lead to different levels of success in the integration process depending on whether or not an immigrant’s accent is perceived as “correct.” Similarly, an employer’s perception of personal traits of an immigrant based on immigrant’s pronunciation may affect employment outcomes due to stereotyping against certain ethnic groups (Davila et al. 1993; Lang, 1993; Scassa, 1994).

Empirical research investigating the role of non-standard English language proficiency in skills utilization is sparse. The remainder of this section will review the qualitative and case-study research that addresses non-standard English pronunciations and accents.

A qualitative study conducted by Greese and Kambere (2003) found that foreign or non-standard accents seem to elicit different attitudes depending on the speaker’s country of origin. The authors interviewed immigrant women from six African English-speaking countries. Most women reported proficiency in English as well as advanced postsecondary degrees completed in English. The authors argued that speaking non-standard English with an “African accent” communicates to a receiver that the person is from Africa, thus merging ethnicity and language. When speaking “African English,” the women were ignored or corrected rather than given a response to the content of their speech. This differential treatment also affected respondents’ labour-market outcomes. Respondents identified their “African accent,” not their inferior English proficiency, as the reason for not being hired. Accent or pronunciation may be socially defined and, overlapping with ethnicity, may produce divergent labour-market outcomes.

It appears that accents may shape perceptions of language competency, thus creating a barrier to immigrants’ labour-market integration. Assessing a perceived discriminatory impact of speaking English with an accent, Reitz and Sklar (1997) found that discrimination is greatest when members of a minority group spoke English with an identifiable non-Canadian accent.

According to a Canadian Bar Association report (Sparks, 1993) on the status of women of colour

in the legal profession in Canada, visible minority women believed that, regardless of their professional skills, clients and judges would give less weight to their opinions than to the opinions of speakers whose pronunciation was closer to Canadian standard English. Because of this perceived differential treatment, when visible minority women chose to obtain employment in the legal profession, they were often limited to the field of legal search (Sparks, 1993).

Although the research examining skills utilization of immigrants whose mother tongue is non-standard English is sparse, the evidence suggests that speaking with an accent may negatively affect their labour-market outcomes.

6.2.2.2 COGNITIVE CATEGORIZATION THEORIES

Cognitive categorization theories propose that society divides individuals into social categories. This division is based on salient perceptual dimensions, such as gender, age, ethnicity, and race (Fiske, 1998; Sears et al., 2003). Language, being an obvious attribute representing collective social or in-group identity, indicates who should be included or excluded from a particular social category (Wang, 2002). In-group members are preferred and out-group members are treated as outsiders. Being part of the out-group may result in negatively differential treatment, including separation, stereotyping, and discrimination.

Kalbach and Kalbach (1995) analyzed data from the 1981 and 1991 Canadian Censuses to investigate the relationship between ethnic identity and socioeconomic status of immigrants. They found that immigrants who reported higher ethnic commitment through greater use of their mother tongue at home were more likely to achieve lower educational and economic status.

Applying cognitive categorization theory propositions to employment, it is plausible to suggest that better opportunities tend to be offered to the in-group members, with out-group members relegated to lower positions or even refusal of employment (van Tubergen et al., 2004).

Consequently, those who become members of the out-group because of their language, an attribute of ethnicity, may face skills underutilization.

6.2.2.3 SOCIAL DISTANCE THEORY

Social distance refers to the degree of sympathetic understanding between people or groups. People may feel more distant from some groups than others (Bogardus, 1959). Early research conducted in Canada and the United States suggests that the social distance between native-born

individuals and immigrants depends on the ethnic origin of the latter (Owen et al., 1981; Pineo, 1977).

Portes and Rumbaut (2001) extended the argument, stating that social distance depends on the perceived distinction in physical appearance and culture. Moreover, greater social distance may result in adverse labour-market integration conditions, including potential discrimination.

This chapter examines the role of English proficiency of immigrants as an indicator of social distance. Language, as one marker of ethnicity, may influence an immigrant's placement in the social distance hierarchy. Consequently, if language were a proxy for social distance, then labour-market outcomes including skills utilization would depend on the "correctness" of English.

6.3 PAST RESEARCH LIMITATIONS

Past studies have encountered challenges when examining the role of English proficiency in immigrant skills utilization. These include data limitations, inadequate measures of English proficiency, and inconsistent measures of labour-market integration. To summarize:

1. to date, no known research has examined the role of overall English proficiency in skills utilization;
2. empirical research investigating the role of non-standard English proficiency in skills utilization is sparse; and
3. no empirical link has been drawn between the propositions of the cognitive categorization and social distance theories, language as a dimension of ethnicity theory, and such employment outcomes as skills utilization.

6.4 THEORETICAL FRAMEWORK

6.4.1 CONCEPTUAL MODEL

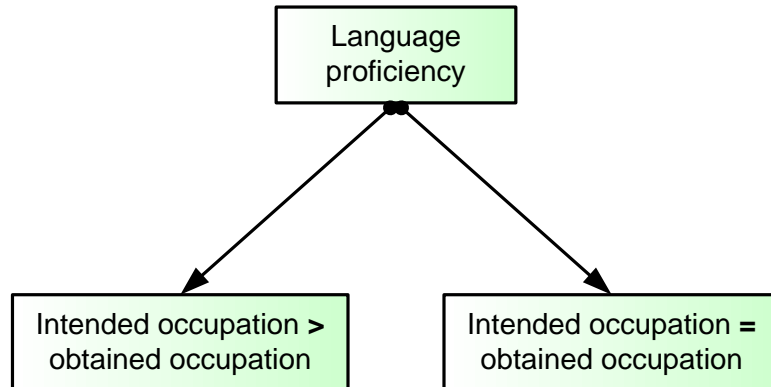
This research expands the conceptual framework that examines the role of English proficiency in labour-market integration, in particular, skills utilization of recent immigrants. It integrates human capital theory with sociological theories of language as a dimension of ethnicity.

A conceptual model is developed, capturing the role of English proficiency in skills utilization (see Figure 6.1). The objectives of the model are twofold: to examine the relationship between immigrants' English proficiency and skills utilization from a human capital theory perspective;

and to examine the effect of non-standard language on immigrants' skills utilization by considering language as a dimension of ethnicity.

Figure 6.1

The Effect of English Language Proficiency on Skills Utilization



In the model, English proficiency is defined as the ability to speak, read, and write in English. While in the existing literature it is customary to use ability to speak as a proxy for English proficiency, such an approach may be misleading. Employers customarily require job applicants to demonstrate a certain degree of overall language knowledge, speaking, reading, and writing. To investigate the role of English proficiency more broadly, an English proficiency scale that combines all language dimensions is developed.

Measurement of occupational attainment only in the destination country is inadequate since this approach excludes factors such as transferability of qualifications, abilities, motivation, and other unobserved individual characteristics. To address this issue, the difference between the occupation that the immigrant intended and the one that he or she actually managed to obtain in Canada is used in this study to measure the degree of skills utilization. While it is possible to measure skills utilization as the difference between an immigrant's occupation in Canada and the source country, such an approach may be biased. Poor economic conditions, instability of the labour market, uncertainty of the government, war, or other factors may have forced an individual to accept a lower-status occupation in the source country or may prevent him or her from finding employment at all. The declared intended occupation in Canada may therefore be a more objective measure of skills utilization.

Since there are thousands of occupations and hundreds of occupational groups, measuring the difference can be challenging. As an alternative, Chiswick et al. (2005) proposed to measure the

status of the occupation rather than the occupational group. An advantage of this approach is that it allows for the possibility that immigrants may find positions that are at exactly the same level of skill and status, but just different in title or duties and responsibilities.

In summary, in this study skills utilization is defined as a positive or non-existent difference between the statuses of the intended and obtained occupations in Canada. Conversely, skills underutilization is defined as a negative difference in the status of the intended and obtained occupations.

6.4.2 HYPOTHESES

Two sets of hypotheses are advanced: one associated with predictions of human capital theory and the other focused on predictions of language as a dimension of ethnicity framework.

6.4.2.1 HYPOTHESES BASED ON HUMAN CAPITAL THEORY

Immigrants who are proficient in English are more likely to utilize skills, which should be reflected in obtaining employment in the intended occupation (Language Proficiency → Intended Occupation ~ Obtained Occupation relationship). Conversely, immigrants with substandard language skills are likely to experience skills underutilization (Language Proficiency → Intended Occupation > Obtained Occupation relationship). In other words:

Hypothesis 1: Immigrants with greater English language proficiency will be more likely to utilize their skills.

6.4.2.2 HYPOTHESES BASED ON LANGUAGE AS A DIMENSION OF ETHNICITY FRAMEWORKS

I expect that, in line with theory, perception of ethnicity is based on the immigrant's accent. Immigrants who learned English either as a mother tongue with non-standard pronunciation or as a second language may be unable to integrate into the labour market as easily as native speakers despite their actual English proficiency.

For immigrants who learned English as a second language, the effect of English proficiency on skills utilization (the distance between the intended and the obtained occupation) is expected to depend on the mother tongue. It is reasonable to assume that an immigrant's accent as well as the strength of the accent is reflective of or related to the linguistic origins of his or her mother tongue (Scassa, 1994). The first language is also expected to be related to the degree and/or strength of the accent.

Mother tongue therefore is a proxy for perceived social, cultural, socioeconomic, and ethnic distance. As argued by the cognitive categorization and social distance approaches, the further the language group is from English, the lower the levels of skills utilization (Intended Occupation > Obtained Occupation). In other words:

***Hypothesis 2:** The impact of English language proficiency on skills utilization will vary depending on the language group of the mother tongue. Immigrants whose mother tongue belongs to a language group more distant from English will experience lower skills utilization levels.*

Following the arguments of the non-standard language knowledge research, individuals who speak the types of non-standard English that indicate higher perceived cultural or social distance from the mainstream Canadian society are expected to have lower skills utilization levels. In other words:

***Hypothesis 3:** Immigrants whose mother tongue is non-standard English will experience lower skills utilization levels.*

6.5 DATA AND VARIABLES

6.5.1 DATA SOURCE

This study utilizes Waves 1, 2, and 3 of the Longitudinal Survey of Immigrants to Canada (LSIC). The LSIC contains a representative sample of the target population and includes immigrants arriving in Canada between October 1, 2000 and September 30, 2001, aged 15 or older at the time of landing. A core sample of 20,300 respondents was selected from the target population of 164,200 (Statistics Canada, 2003). Immigrants who received their permanent residence visa within Canada were excluded, as the objective of the survey was to consider the adaptation of newly arrived immigrants. Those who applied within Canada could have had experiences different from those who had just arrived, and may have been at another stage in the integration process. This data source is most suitable for the present research since it includes information unavailable through other sources. First, the English language variable information includes the immigrant's mother tongue as well as self-reported levels of speaking, reading, and writing abilities. These data enable examination of the effect of non-standard English on the integration process. In addition, both pre-migration (i.e., intended) and post-migration (i.e.,

obtained) occupation types were recorded, allowing examination of the effect of language on skills utilization.

6.5.2 SAMPLE

I restrict the sample to respondents aged 21 to 64 due to a high probability that patterns of employment for individuals under age 21 (education) and over 65 (retirement) are profoundly different from other demographic groups.

The following observations were also excluded:

- respondents who have not answered questions about English knowledge;
- immigrants residing in Quebec, since the importance of English proficiency in the province may differ from that in the rest of Canada;
- respondents who did not answer questions about either intended or obtained occupation in Canada;
- respondents who have not had employment in Canada; and
- respondents who did not specify the obtained occupation.

6.5.3 DEPENDENT VARIABLE

Skills utilization, the dependent variable, is measured as the difference between the status of the intended and actual occupation in Canada. The variable is coded 1 if the difference between the status of the intended and obtained occupation in Canada is positive or nil (Obtained Occupation – Intended Occupation ≥ 0); the variable is coded 0 if the difference is negative (Obtained Occupation – Intended Occupation < 0).

The status of the occupation is obtained from the National Occupational Classification, HRSDC (2006):

- Managerial Occupations (Skill Level 0)
- Professional Occupations (Skill Level A)
- Skilled Administrative and Technical Occupations (Skill Level B)
- Clerical and Intermediate Occupations (Skill Level C)
- Elemental Sales and Service Occupations and Labourers (Skill Level D)

6.5.4 INDEPENDENT VARIABLES

English Language Proficiency is measured by the English Language Proficiency Index:

$$ELP = LP_S + LP_R + LP_W,$$

Where:

ELP – Overall English language proficiency

LP_S – Speaking proficiency

LP_R – Reading proficiency

LP_W – Writing proficiency

To calculate overall language fluency at arrival (Wave 1),¹⁸ each dimension of proficiency is measured on a five-point scale, with 0 meaning cannot (speak, read, or write) at all, 2 — can do it poorly, 3 — fairly well, 4 — well, and 5 — very well. Then the results for all three dimensions are combined. The resulting overall language proficiency ranges from 0 (“not at all” in all competencies) to 12 (“very well” in all competencies).

Mother Tongue is measured as a language branch or a language family, depending on its distance from English language. English language belongs to the Germanic Branch of the Indo-European language family. Languages of all branches within the Indo-European language family are measured and reported, including Germanic, Romance, Celtic, Slavic, Baltic, Greek, Armenian, and Indo-Iranian. Languages outside the Indo-European language family are grouped and reported based on their respective language families, without distinguishing language branches within these families. For example, Semitic, Sino-Tibetan, Niger-Congo, and Tai are other linguistic families into which the mother tongues of immigrants are coded.

Since the data do not differentiate between different Indo-European language branches and other language families, the branches within the Indo-European language family as well as classification of other language families are taken from the *Encyclopaedia Britannica* (2007).

¹⁸ The relationship between skills utilization and language proficiency may not be unidirectional. Job incumbents may find employment or be selected for particular positions based, among other qualifications, on superior language knowledge. Alternatively, they may be required to improve language skills after attaining a position. Finally, being employed in a language intensive job may contribute to the improvement of language knowledge. The occupational niche occupied by immigrants in the destination country is expected to positively influence the probability of English proficiency (Espinosa and Massey, 1997; Espenshade and Fu, 1997). To address the potential causality problem, language proficiency is based on Wave 1 (at arrival), while the employment-related details are taken from Wave 3 (at four years). The time differential in measuring language proficiency makes it exogenous to subsequent labour-market participation and skills utilization.

Appendix 6.1 provides a summary of definitions and coding for the other independent and control variables included in the analysis.

6.6 EMPIRICAL FRAMEWORK AND RESULTS

6.6.1 DESCRIPTIVE STATISTICS

Table 6.1 reports the mean value of the English language proficiency measured in Wave 1 as well as characteristics of human capital and control variables.

Distribution of mother tongue types is reported in Table 6.2 as a proportion of immigrants in English as mother tongue category, distinguishing between standard and non-standard English language speakers as well as other declared mother tongues.

6.6.2 MULTIVARIATE ANALYSIS

To test the hypotheses associated with influence of English language proficiency on skills utilization, two empirical models are estimated. The empirical framework and results for each model are presented separately.

6.6.2.1 HYPOTHESIS BASED ON HUMAN CAPITAL THEORY

Empirical Model

Since the dependent variable is binary, binomial logit model is a suitable tool. To investigate whether immigrants with greater English proficiency are more likely to be employed within the intended occupation, the following model is estimated:

$$\text{Pr}(SU) = 1 / (1 + e^{-bx})_x$$

Where:

SU (Skills Utilization): When the difference between the status of intended and obtained occupation is positive or nil - equals 1; when negative – equals 0.

bx - Vector of characteristics thought to influence probability of skills utilization:

$$x = LP_j + HC_i + C,$$

Where:

LP - Language Proficiency

HC – Human Capital Variables

C – Control Variables

Results

Estimation results are presented in Table 6.3. The dependent variable, skills utilization, represents the difference between the occupational statuses of the intended and obtained jobs in Canada. The model includes the language proficiency variables; human capital variables such as education, work experience, credentials, and immigration category; and a vector of control variables. Finally, a categorical variable indicating the incidence of employment in an ethnic-enclave workplace is also included in the model.

English Language Proficiency

English knowledge is statistically significantly related to skills utilization. Each additional level of language proficiency increases the odds of skills utilization 1.02 times ($e^{0.015}=1.02$). Respondents who reported the highest proficiency in speaking, reading, and writing (ELP = 12) are 1.2 times more likely to utilize their skills than those with no language knowledge ($e^{0.015*12}=1.2$).

Immigrants who obtained education in English are also significantly more likely to utilize their skills. The odds of skills utilization for individuals who completed education in English are 1.3 times ($e^{0.248}=1.3$) higher when compared to immigrants who completed education in a language other than English. Immigrants whose education language was “English as well as other” are significantly less likely to utilize their skills after migration to Canada. The odds are lower when compared to immigrants who completed education exclusively in a language other than English. These results suggest that completion of education in only English contributes positively to skills utilization.

These results partially support Hypothesis 1 that states that immigrants with greater English language proficiency will be more likely to utilize their skills.

Human Capital Variables

Each additional level of schooling significantly increases the likelihood of skills utilization when compared to not having finished high school. The magnitude of odds increases with each additional completed level of education. Having a high school diploma increases the odds of

skills utilization 1.15 times ($e^{0.143}=1.15$). The largest magnitude is associated with obtaining a postgraduate degree. Such immigrants are almost 1.7 times more likely to utilize their skills as immigrants in the reference category ($e^{0.503}=1.65$).

Having work experience from the source country increases the odds of skills utilization. Immigrants with work experience are three times more likely to utilize their skills than immigrants who did not work in the source country ($e^{1.09}=2.98$). Similarly to work experience, having professional credentials significantly increases the likelihood of skills utilization; however, the magnitude is not as large ($e^{0.193}=1.2$).

Economically assessed immigrants are significantly more likely to utilize their skills when compared to immigrants who were not assessed. Joining families reduces the odds of skills utilization by one-third ($e^{-0.42}=0.66$). Being a refugee reduces the odds of skills utilization by almost half ($e^{-0.759}=0.47$) when compared to immigrants from the skilled-worker category.

Control Variables

Middle-aged immigrants between 30 and 49 years of age are more likely to utilize their skills when compared to younger immigrants aged 20 to 29. Immigrants in their fifties have significantly lower odds of skills utilization than younger immigrants in their twenties ($e^{0.089}=0.92$). While it was expected that with age skills utilization would decrease, the results for immigrants in their sixties suggest that such expectations were not supported ($e^{0.406}=1.5$).

Immigrants who are male, single, living in a small town or rural area, and speaking English at home have significantly higher odds of skills utilization.

Immigrants of European ethnic origin are significantly more likely to secure comparable-status occupations when compared to immigrants of Arab, Asian, and Latin-American descent. Immigrants of African and Aboriginal ethnicity have higher odds of skills utilization when compared to European immigrants.

Immigrants who work outside ethnic enclaves with none and some coworkers of the same ethnicity as well as those who work in ethnic enclaves (most employees are of the same ethnic and cultural origin) are significantly more likely to utilize their skills than immigrants who work in pure ethnic enclaves (all employees of the same ethnicity).

6.6.2.2 LANGUAGE AS A DIMENSION OF ETHNICITY HYPOTHESES

To test the hypotheses associated with the relationship between language as a dimension of ethnicity and skills utilization, two empirical models are estimated.

Empirical Model

Since the dependent variable is dichotomous, the binomial logit model is estimated. Similar to the skills utilization analysis discussed above, this analysis concentrates on the role of non-standard English in skills utilization. The logit model is:

$$\text{Pr (SU)} = 1/(1+e^{-bx})$$

Where:

SU – Skills Utilization: When the difference between the status of intended and obtained occupation is positive or nil equals 1; when negative - 0.

bx - Vector of characteristics thought to influence probability of skills utilization:

$$x = LP_j + MT_k + HC_i + C,$$

Where:

LP – Language Proficiency

MT – Mother Tongue

HC – Human Capital Variables

C – Control Variables

Results

The model of immigrant skills utilization considers the relationship between language as a dimension of ethnicity and the degree of skills utilization. English proficiency and the language in which education was obtained are the main independent variables. The linguistic groups of the mother tongue are also included. This model uses the same human capital characteristics variables as the model in Section 6.6.2.1. The vector of the control variables is consistent with the other model in this chapter.

The estimation results are summarized in the first panel of Table 6.4. Since the estimates for human capital and control variables are similar to those reported in the human capital model, only the coefficients on the English language knowledge and mother tongue variables are discussed.

English knowledge is significantly related to skills utilization when the linguistic group of the mother tongue is included in the analysis ($e^{0.018}=1.02$). Immigrants whose education was completed in English are 1.38 times more likely to use their skills than those whose education was completed in a different language. Having obtained education in both English and other language is, as previously found, associated with significantly lower skills utilization ($e^{-0.107}=0.9$).

With respect to the linguistic group of the mother tongue, immigrants whose mother tongue belongs to the Germanic language branch are significantly more likely to utilize skills than those who report English as their mother tongue ($e^{0.328}=1.39$). Immigrants from other linguistic branches of Indo-European language family have either equal (Romance, Slavic and Armenian), significantly higher (Finno-Ugric) or significantly lower (Indo-Iranian) odds of skills utilization when compared to the reference group.

Immigrants whose mother tongue is more distant from English, including Semitic (Arabic, Hebrew), Dravidian (Tamil, Telugu), Sino-Tibetan (Mandarin, Cantonese), Tai (Saek, Lao, Phu Thai), Malayo-Polynesian (Tagalog, Samoan), and other language groups have lower likelihood of skills utilization in relation to those whose mother tongue is English. However, speakers of mother tongues that belong to other similarly distant language families (Turkic, Korean, African, Creole) are significantly more likely to use their skills than immigrants whose mother tongue is English. Speakers of Austro-Asiatic (Bahnaric, Bengal) and Niger-Congo (Swahili) languages are not significantly different from English speakers. As such, these results lend only limited support to Hypothesis 2.

It is important to note that the reference category includes all native English speakers, irrespective of their country of origin. However, some immigrants for whom English is a first language may come from countries perceived to be linguistically and socially more distant. As a result, their English may be perceived and treated as non-standard.

To further disentangle the relationship between language as a dimension of ethnicity and skills utilization, a distinction is made between native English speakers. Standard English speakers are those immigrants whose mother tongue is English, and who moved to Canada from countries that previous research identified as being linguistically and culturally closest to Canada – Australia, New Zealand, Great Britain, Ireland, and the United States (Chiswick and Miller, 2001). Non-standard English speakers are those immigrants whose mother tongue is English, but who arrived from more linguistically and culturally distant countries.

The results of the model where non-standard English language speakers are separated from standard speakers are presented in the second panel of Table 6.4. Only the coefficients on the refined mother tongue variables are discussed.

Speaking a non-standard form of English decreases the odds of skills utilization by a quarter ($e^{-0.284} = 0.75$), compared to those who speak standard English. These results are in line with Hypothesis 3.

Immigrants whose mother tongue belongs to the Germanic branch are more likely to use their skills than are standard English speakers, presumably, because immigrants from Western European countries are politically, socially, religiously, and culturally similar to Canadians ($e^{0.176} = 1.19$). At the same time, immigrants whose mother tongue belongs to a different language branch of the Indo-European linguistic family have varied skills utilization outcomes. Immigrants with Finno-Ugric and Armenian mother tongues are respectively more likely or as likely to use their skills as standard English speakers. Immigrants with Romance, Slavic, and Indo-Iranian mother tongues are significantly less likely to utilize their skills. Speaking a Romance or Slavic language is associated with a reduction of skills utilization by almost one-quarter ($e^{-0.214} = 0.81$ and $e^{-0.244} = 0.78$ respectively) and speaking Indo-Iranian – by forty two percent ($e^{-0.548} = 0.58$).

With respect to immigrants whose mother tongue belongs to a language family different from Indo-European, the results indicate that immigrants from most of the examined language families are significantly less likely to use their skills. Immigrants with Tai mother tongues are least likely to utilize their skills when compared to standard English speakers ($e^{-0.942} = 0.39$), followed by speakers of other languages ($e^{-0.501} = 0.61$), and Dravidian languages ($e^{-0.463} = 0.63$). Irrespective of level of education, experience, immigration category, age, gender and, most importantly, English proficiency, these immigrants are least likely to have skills fully utilized in

the labour market. Immigrants who speak Semitic, Sino-Tibetan, Malayo-Polynesian, or Niger-Congo languages are also significantly less likely to use their skills when compared to standard English speakers. At the same time, immigrants whose mother tongue belongs to Turkic, Korean, Austro-Asiatic, and African languages are not significantly different from standard English speakers. Immigrants who spoke Creole languages are more likely to utilize their skills than standard English speakers. African and Creole languages are composites of many different languages that may belong to multiple language families; however, the data do not permit a more detailed classification of these languages.

Further analysis (not presented here but available on request) groups all languages into four categories, based on language branch and family. The results are similar to the findings discussed above. Speakers of languages that belong to the same branch of the Indo-European family have similar odds of skills utilization. Speakers of all other languages (non-standard English speakers, different branch of Indo-European linguistic family, different linguistic family) have significantly lower odds of skills utilization.

These results further support Hypothesis 2, which states that the impact of English proficiency on skills utilization will vary depending on the language group of the mother tongue. Immigrants from a language group that is more distant from English will experience lower skills utilization levels.

6.7 SUMMARY

This chapter examined the role of English proficiency in skills utilization of recent immigrants to Canada by integrating predictions of two theoretical frameworks – human capital theory and sociological frameworks of language as an ethnic indicator.

Skills Utilization from the Human Capital Perspective

Unlike previous research, which considered only speaking proficiency, this study included a more comprehensive measure of language proficiency (speaking, reading, and writing). Job descriptions define proficiency in English as the ability to speak, read, and write. Language proficiency was found to be positively and significantly related to level of skills utilization. Immigrants proficient in English are significantly more likely to utilize their skills when compared to individuals with no language ability.

Immigrants who completed their education in English are noticeably ahead of those who were taught in a language other than English. Surprisingly, having completed education in English and other language reduces the odds of skills utilization when compared to completion of education in another language only.

Other human capital factors, such as education, experience, professional credentials, and arriving in Canada under the skilled-worker immigration category are found to significantly contribute to skills utilization.

Skills Utilization from the Language as a Dimension of Ethnicity Perspective

An immigrant's mother tongue does not negate the importance of English proficiency in skills utilization. This result contradicts both cognitive categorization theory and non-standard English framework predictions. Mother tongue, however, appears to influence skills utilization, even where the immigrant is proficient in English. It was found that non-standard English speakers are significantly less likely to utilize their skills. The findings also indicate that immigrants whose mother tongue belongs to the same branch as English are more likely to use their skills than immigrants who speak standard English. Some immigrants whose mother tongue belongs to a different branch but the same linguistic family and most immigrants whose mother tongue is from a different linguistic family are significantly less likely to use their skills. These results partially support the predictions of the social distance, non-standard English, and cognitive categorization theoretical frameworks.

Table 6.1

Characteristics of the Sample

| Variable | N=12,320 |
|--|-----------------|
| Skills Utilized | 21.3% |
| English Language Proficiency | 8.9 |
| Language At School | |
| English | 40.2% |
| English and Other | 8.0% |
| Other | 51.8% |
| Education | |
| <High School | 12.6% |
| High School | 11.6% |
| Some Postsecondary | 8.9% |
| College Degree | 9.6% |
| Bachelor Degree | 38.3% |
| Postgraduate Degree | 18.9% |
| Work Experience in a Source Country | 79.9% |
| Professional Credentials in a Source Country | 16.5% |
| Immigration Category | |
| Skilled Worker | 68.6% |
| Family Reunion | 26.3% |
| Refugee | 5.1% |
| Age | |
| 21-29 | 29.8% |
| 30-39 | 42.4% |
| 40-49 | 20.6% |
| 50-59 | 5.6% |
| 60-64 | 1.7% |
| Female | 46.2% |
| Married | 75.4% |
| Location of Residence (CMA) | 86.3% |
| English Language at Home | 93.5% |
| Ethnicity | |
| European | 15.3% |
| Arab | 2.8% |
| Asian | 72.6% |
| African | 4.0% |
| Latin-American | 3.9% |
| Aboriginal and other | 1.5% |
| Ethnic Enclave Employment | |
| No Ethnic | 25.7% |
| Some Ethnic | 47.9% |
| Most Ethnic | 15.1% |
| All Ethnic | 11.4% |

Table 6.2

Mother Tongue Related Characteristics of the Sample

| Mother Tongue Group | N=12,320 |
|----------------------------|-----------------|
| Standard English | 2.6% |
| Non standard English | 6.1% |
| Germanic | 1.3% |
| Finno-Ugric | 0.3% |
| Armenian | 0.2% |
| Romance | 6.3% |
| Slavic | 7.4% |
| Indo-Iranian | 29.3% |
| Turkic | 0.4% |
| Semitic | 3.7% |
| Dravidian | 3.7% |
| Korean | 3.3% |
| Sino-Tibetan | 20.9% |
| Tai | 0.1% |
| Austro-Asiatic | 0.2% |
| Malayo-Polynesian | 10.6% |
| Niger-Congo | 1.0% |
| African | 0.3% |
| Creoles | 0.3% |
| Other Tongue | 1.6% |

Table 6.3

Logit Coefficient Estimates of Language Proficiency as a Human Capital Factor Affecting Skills Utilization

| Variable | Parameter Estimate (Standard Error) | Odds Ratio |
|---|--|---------------|
| English Language Proficiency | 0.015*** (0.003) | 1.015 |
| Language At School (Other) | | |
| English | 0.248*** (0.014) | 1.281 |
| English and Other | -0.143*** (0.022) | 0.867 |
| Education (<High School) | | |
| High School | 0.143*** (0.034) | 1.154 |
| Some Postsecondary | 0.281*** (0.034) | 1.324 |
| College Degree | 0.479*** (0.033) | 1.614 |
| Bachelor Degree | 0.495*** (0.030) | 1.641 |
| Postgraduate Degree | 0.503*** (0.032) | 1.654 |
| Work Experience in a Source Country (no) | 1.090*** (0.024) | 2.975 |
| Professional Credentials in a Source Country (no) | 0.193*** (0.013) | 1.212 |
| Immigration Category (Skilled Worker) | | |
| Family Reunion | -0.420*** (0.017) | 0.657 |
| Refugee | -0.759*** (0.037) | 0.468 |
| Age (21-29) | | |
| 30-39 | 0.143*** (0.014) | 1.154 |
| 40-49 | 0.057** (0.018) | 1.058 |
| 50-59 | -0.089* (0.036) | 0.915 |
| 60-64 | 0.406*** (0.059) | 1.5 |
| Gender (Female) | 0.031** (0.011) | 1.031 |
| Marital Status (Married) | 0.094*** (0.016) | 1.099 |
| Place of Residence (CMA) | 0.070** (0.027) | 1.073 |
| Language Spoken at Home (Other) | 0.126*** (0.017) | 1.134 |
| Ethnicity (European) | | |
| Arab | -0.247*** (0.039) | 0.781 |
| Asian | -0.227*** (0.015) | 0.797 |
| African | 0.368** (0.112) | 1.445 |
| Latin-American | -0.098** (0.034) | 0.906 |
| Aboriginal and other | 0.155* (0.061) | 1.167 |
| Ethnic Enclave Employment (All Ethnic) | | |
| Most Ethnic | 1.736*** (0.021) | 5.673 |
| Some Ethnic | 1.844*** (0.016) | 6.321 |
| No Ethnic | 1.938*** (0.018) | 6.941 |
| Intercept | -4.149*** (0.042) | |

| Variable | Parameter Estimate (Standard Error) | Odds Ratio |
|-----------------|--|-----------------------|
| Chi-sq | 44226.85 | |
| N | 12320 | |

*p<0.05, **p<0.01, ***p<.001

Note: Numbers in parenthesis are standard errors

Table 6.4

Logit Coefficient Estimates of Language as a Dimension of Ethnicity Affecting Skills Utilization

| Variable | Mother Tongue | | Non-Standard Tongue | |
|---|--|---------------|--|---------------|
| | Parameter Estimate (Standard Error) | Odds Ratio | Parameter Estimate (Standard Error) | Odds Ratio |
| English Language Proficiency | 0.018*** (0.003) | 1.018 | 0.018*** (0.003) | 1.018 |
| <i>Language At School (Other)</i> | | | | |
| English | 0.318*** (0.017) | 1.375 | 0.323*** (0.017) | 1.381 |
| English and Other | -0.107*** (0.023) | 0.899 | -0.107*** (0.023) | 0.899 |
| <i>Mother Tongue Group (English)</i> | | | | |
| Non standard English | | | -0.284** (0.087) | 0.753 |
| Germanic | 0.328*** (0.062) | 1.388 | 0.176* (0.077) | 1.193 |
| Finno-Ugric | 0.574*** (0.091) | 1.775 | 0.420*** (0.102) | 1.523 |
| Armenian | 0.122 (0.122) | 1.13 | -0.034 (0.131) | 0.967 |
| Romance | -0.061 (0.047) | 0.941 | -0.214** (0.066) | 0.807 |
| Slavic | -0.091 (0.048) | 0.913 | -0.244*** (0.066) | 0.783 |
| Indo-Iranian | -0.392*** (0.045) | 0.676 | -0.548*** (0.065) | 0.578 |
| Turkic | 0.285*** (0.081) | 1.329 | 0.133 (0.093) | 1.142 |
| Semitic | -0.197*** (0.053) | 0.821 | -0.351*** (0.071) | 0.704 |
| Dravidian | -0.308*** (0.051) | 0.735 | -0.463*** (0.069) | 0.629 |
| Korean | 0.133* (0.056) | 1.142 | -0.020 (0.072) | 0.981 |
| Sino-Tibetan | -0.214*** (0.045) | 0.808 | -0.367*** (0.064) | 0.693 |
| Tai | -0.792*** (0.192) | 0.453 | -0.942*** (0.198) | 0.39 |
| Austro-Asiatic | -0.128 (0.147) | 0.88 | -0.282 (0.154) | 0.754 |
| Malayo-Polynesian | -0.261*** (0.046) | 0.77 | -0.417*** (0.066) | 0.659 |
| Niger-Congo | -0.058 (0.066) | 0.944 | -0.212** (0.081) | 0.809 |
| African | 0.323** (0.120) | 1.381 | 0.169 (0.128) | 1.184 |
| Creoles | 0.670*** (0.094) | 1.954 | 0.516*** (0.105) | 1.674 |
| Other Tongue | -0.348*** (0.060) | 0.706 | -0.501*** (0.076) | 0.606 |
| <i>Education (<High School)</i> | | | | |
| High School | 0.177*** (0.035) | 1.193 | 0.175*** (0.035) | 1.191 |
| Some Postsecondary | 0.289*** (0.034) | 1.336 | 0.290*** (0.034) | 1.336 |
| College Degree | 0.465*** (0.034) | 1.592 | 0.464*** (0.034) | 1.59 |
| Bachelor Degree | 0.503*** (0.031) | 1.653 | 0.502*** (0.031) | 1.651 |
| Postgraduate Degree | 0.525*** (0.032) | 1.69 | 0.524*** (0.032) | 1.688 |
| Work Experience in a Source Country (no) | 1.047*** (0.024) | 2.849 | 1.047*** (0.025) | 2.85 |
| Professional Credentials in a Source Country (no) | 0.187*** (0.013) | 1.206 | 0.187*** (0.013) | 1.206 |
| <i>Immigration Category (Skilled Worker)</i> | | | | |
| Family Reunion | -0.382*** (0.018) | 0.682 | -0.380*** (0.018) | 0.684 |
| Refugee | -0.721*** (0.038) | 0.486 | -0.720*** (0.038) | 0.487 |
| <i>Age (Age 21-29)</i> | | | | |
| 30-39 | 0.141*** (0.015) | 1.152 | 0.140*** (0.015) | 1.15 |
| 40-49 | 0.057** (0.018) | 1.059 | 0.056** (0.018) | 1.057 |
| 50-59 | -0.052 (0.036) | 0.95 | -0.053 (0.036) | 0.949 |
| 60-64 | 0.393*** (0.059) | 1.481 | 0.391*** (0.059) | 1.478 |
| Gender (Female) | 0.039*** (0.012) | 1.039 | 0.039*** (0.012) | 1.04 |
| Marital Status (Married) | 0.076*** (0.016) | 1.078 | 0.073*** (0.016) | 1.076 |
| Location of Residence (CMA) | 0.013 (0.028) | 1.013 | 0.013 (0.028) | 1.013 |

| | Mother Tongue | | Non-Standard Tongue | |
|---|-------------------|-------|---------------------|-------|
| | | | | |
| Language at Home (Other) | 0.097*** (0.018) | 1.102 | 0.091*** (0.018) | 1.095 |
| <i>Ethnic Enclave Employment (All Ethnic)</i> | | | | |
| Most Ethnic | 1.772*** (0.021) | 5.882 | 1.771*** (0.021) | 5.875 |
| Some Ethnic | 1.889*** (0.017) | 6.609 | 1.890*** (0.017) | 6.62 |
| No Ethnic | 1.963*** (0.018) | 7.121 | 1.965*** (0.018) | 7.138 |
| Intercept | -4.165*** (0.060) | | -4.012*** (0.075) | |
| Chi-sq | 44759.16 | | 44769.81 | |
| N | 12320 | | 12320 | |

*p<0.05, **p<0.01, ***p<.001

Note: Numbers in parenthesis are standard errors

Appendix 6.1

Definitions for Variables Used in Chapter 6

| Variable | Definition/Question | Coding |
|--|--|--|
| English Language Proficiency | A continuous variable | Min = 0 Max =12 |
| Language at School | A categorical variable that includes three mutually exclusive categories | 1) Education obtained in a language other than English (reference category) 2) Education obtained in English language 3) Education obtained in English and other language |
| Mother Tongue Group | All mother tongues listed in the LSIC. | 1) English (reference category) 2) Non-standard English 3) All Other Languages |
| Education | A categorical variable, represented by the mutually exclusive categories | 1) Less than high school (reference category) 2) High school diploma 3) Some postsecondary education 4) College diploma 5) Bachelor's degree 6) Postgraduate degree |
| Work Experience in a Source Country | Having work experience in a source country | 0 = no 1 = yes |
| Professional Credentials in the Source Country | Having professional credentials is coded | 0 = no 1 = yes |
| Immigration Category | A categorical variable represented by the mutually exclusive categories | 1) Skilled worker/provincial nominees/business class (reference category) 2) Family class 3) Refugees |
| Age | A categorical variable represented by the mutually exclusive categories | 1) 21 – 29 (reference category) 2) 30 – 39 3) 40 – 49 4) 50 – 59 5) 60 – 64 |
| Gender | | 0 = female 1 = male |
| Marital Status | | 0 = married 1 = single, divorced, widowed or separated |
| Location of Residence | Living within CMA | 0 = yes 1 = no |
| Language at Home | The language spoken at home is English | 0 = no 1 = yes |

| Variable | Definition/Question | Coding |
|---------------------------|---|--|
| Ethnicity | A categorical variable represented by the mutually exclusive categories | 1) European (reference category) 2) Arab 3) Asian 4) African 5) Latin-American 6) Aboriginal and Other |
| Ethnic Enclave Employment | A categorical variable represented by the mutually exclusive categories | 1) All employees are of the same ethnic and cultural background (reference category) 2) Most Employees 3) Some Employees 4) No Employees of the same ethnic and cultural background |

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