

Modeling Immigrant Language Acquisition and Integration
Toward an Integrated Micro-Macro Modeling

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Abstract

This thesis aims to address the following key question: “What affects immigrants to acquire capital and how is it generated?” This can be addressed by the following: (1) identifying micro-level determinants of immigrant language acquisition and integration; (2) assessing macro-level effects and micro-macro joint effects on immigrant language acquisition; and (3) reassessing the overall empirical findings based on theoretically derived micro-macro interactive mechanisms in the integration process.

The research literature concerned with the determinants of immigrant/second language acquisition is reviewed to bring classic theories and models from economics and psychology together and initiate the construction of an economic-psychological modeling frame for immigrant language acquisition. Based on the modeling frame, an empirically testable model of immigrant language acquisition is formulated to identify the determinants of destination language proficiency. Furthermore, conceptually locating language as an antecedent of immigrant integration outcomes in a theoretical modeling framework, a model of immigrant integration is devised with three sub-models: (1) a model of immigrant economic integration; (2) a model of immigrant citizenship acquisition; and (3) a model of immigrant political integration. The models are tested using OLS regression and data from the Multicultural Democracy and Immigrants’ Social Capital in Europe: Participation, Organisational Networks, and Public Policies at the Local Level (LOCALMULTIDEM).

Analysis results suggest that the economic model is robust in predicting immigrant language acquisition and integration outcomes. Educational attainment is found to be the most critical and consistent predictor of outcomes across cities and empirical models. Although the psychological model has relatively weak power in explaining the variation in language proficiency, the presumed mediating effect via attitudinal factors is detected in some cases. However, such mediation effect is barely identified in the sub-models of immigrant integration with an exception of political integration. Destination language proficiency is found to be the most consistent mediator that positively influences all of the integration outcomes. In the concluding chapters, further analyses and (re)interpretations are conducted as an overarching summary of the multivariate regression analyses to examine the role of institutions and propose a micro-macro integrative model that could suggest options for institutional design and directions for future research.

Dedication

To my love who lets me dream

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Chapter 1. Introduction

1. The Problem

Why language matters? Why is language acquisition worth considering for immigrant integration? Admittedly these questions are not new, but they are becoming more and more important in recent years as these issues take on increasing relevance for a larger number of people. Some say that we are living in “the age of migration” (Castles & Miller, 2003, 2009). With the increasing economic integration and political democratization, more and more people move from one place to another. Likewise, thanks to technological advancements we communicate and move with more ease at a smaller cost. This trend is empirically supported by the United Nations Data. According to the United Nations, in 2013, there are 232 million international migrants worldwide, which account for 3.2 percent of the world population, compared with 175 million in 2000 and 154 million in 1990. More than half (59 percent) of international migrants move to the North or developed countries (136 million), compared to 96 million migrants whose destination is in the South. Although the United States remains to be the most popular destination country (45.8 million), Europe, by region, receives the largest number of international migrants (72 million), followed by Asia (71 million), and North America (53 million) (UN-DESA, 2013).

The dynamics of migration often brings change to the basic fiber of every society. The diversity that new members bring to the society can be a fountain of opportunity, vitality, knowledge, wisdom, and creativity. Yet, at the same time, differences in physical appearances, cultural background, economic interests, social categories, and perceptions can be sources of tension among different groups of people in our modern societies. Historically, every country that has experienced mass migration has also experienced a wide variety of racial conflicts that at times have exploded into mass riots. The United States, France, and Australia have gone through intense tensions with respect to immigration (Broward, 2009). The United States, a country with a comparatively long history of immigration, has gone through a series of racial confrontations and bloody riots. After WWII, European nations faced a scarcity of workers and accepted immigrants to elevate economic growth. Nonetheless, these countries have also faced difficulty in managing their diversity. For instance, the riots in the Paris suburbs in 2005 highlighted the many problems plaguing France. The accidental killings of two teenagers of African origin caused civil unrest, and the death of two Muslim teenagers whose motorcycle crashed into a police patrol car triggered another massive civil outrage in 2007. Anger erupted into chaos, hundreds of cars were set ablaze across France, and the youth went out on the streets, throwing Molotov cocktails, setting police barricades on fire, and injuring dozens of police officers (CBC news, 2007). Growing xenophobia, racial discrimination, and the recent rise of right-wing populist parties across Europe illustrate the escalated tensions and confrontations between the majority and minorities. In 2011, the horrible massacre in Norway sent shockwaves of horror around the globe. Norway, which prides itself for being open and friendly to immigrants, had been

regarded as one of the most ideal destinations for immigrants. A right-wing extremist murdered 77 innocent citizens to protest a massive influx of Muslim migrants and to punish lawmakers for embracing multiculturalism (VOA news, 2011). Diversity is the common trend in many parts of the globe, but this trend simultaneously raises serious challenges for those nations' capacity of future sustainable development.

Consequently, these challenges posed by the increasing share of immigrants in various societies have been the focus of public debates. Policymakers are especially concerned about the economic status of migrants in terms of labor market participation, employment, and earnings (Van Tubergen, Mass, & Flap, 2004). Esser (2006, p.1) stresses that "the emergence and consolidation of vertical ethnic inequalities¹" in host countries as the most problematic consequence of international migration because it often leads to inequalities in income, education, access to institutions, and recognition in a given society by systematically associating them with ethnic and cultural characteristics. From this perspective, functional integration, integration through market economy, is stressed to prevent the escalation of social or racial conflicts. At the same time, recent policy innovations, such as mandatory language and civic integration courses for immigrants throughout Europe, and formalization and extension of naturalization tests in several nations, show an ever-increasing concern with socio-cultural aspects of immigrant integration (Ersanilli & Koopmans, 2011). From this perspective, state-centered approaches are preferred to realize social equality and cohesion. The Netherland's civic integration programs, for example, which is known to be the strictest among European countries, made it mandatory for adult non-EU immigrants to attend and participate in 'social orientation' courses in 1998 (which was later modified into an obligatory exam requirement in 2007). In 2006, the Dutch government took a step further to control the flow of immigration and the level of diversity by introducing a new citizenship test for people waiting to immigrate to the country (Jacobs & Rea, 2007). All of these attempts have been made to improve the disadvantaged position of immigrants and lessen social inequalities (Van Tubergen, Mass, & Flap, 2004), and provide every member of society "the opportunity to achieve his or her potential" (OECD, 2012).

The question one may ask here is: Why do we care about immigrant integration? One simple answer may be because we care about our lives. Esser (2006) points out the correlation that exists between immigrants' activities and their social environment. He says immigrant integration can be understood as "the consequence of the interaction of the activities of immigrants, on the one hand, and certain social conditions, on the other, which in turn shape the incentives, opportunities or restrictions and costs associated with the corresponding activities" (p.9-10). Today, many studies especially in the field of behavioral economics have found the link between institutional environment and people's social behavior. For instance, an institutional environment may shape development and salience of group identity attitudes and generate in-group effects. People tend to cooperate more with their in-

¹ Vertical ethnic inequalities are also referred to as ethnic stratifications (Esser, 2006)

group; therefore, cooperation among heterogeneous groups is generally lower than among homogeneous groups (Londono, Croson, & Li, 2014). Research demonstrates that ethnically heterogeneous groups and societies typically have “lower level of cooperation, and lower investments in public goods both via public funding (e.g., Alesina, Baquir, & Easterly, 1999; Banerjee & Somanathan, 2007) and private funding (e.g., Miguel & Gugerty, 2005; Habyarimana, Humphreys, Posner, & Weinstein, 2007; Clark & Kim, 2009; Hungerman, 2009; Chakravarty & Fonseca, 2010)” (Londono, Croson, & Li, 2014, p.2). The findings provide insights and implications for understanding not only problems associated with immigrant integration, but also the perpetuation of poverty and violence, degradation of social welfare and productivity, and inequality in income distribution and social participation. Hence, we are concerned about the issue because it is intimately connected to our daily lives, and our quality of life depends on, first and foremost, having a safe and peaceful environment that enables fostering of our well-being. And, the realization of an effective social system that promotes peace and human well-being depends on having well-functioning multiple subsystems that allow people to participate in the democratic deliberation, decision-making, implementation, and evaluation processes.

Then, why does language matter in immigrant integration? According to the UNESCO (2012):

Language is the key to inclusion. Language is at the center of human activity, self-expression and identity. Recognizing the primary importance that people place on their own language fosters the kind of true participation in development that achieves lasting results (p.1).

This statement clearly indicates that linguistic competence facilitates cohesion in society and the growth of human potential. Although the UNESCO (2012) report stresses the importance of linguistic competence in the native language, the lack of language ability (either in the native or non-native language used in the situated context) often incurs huge human and social costs, including poverty, poor health, family violence, drug and alcohol abuse, and suicide; it also makes those without the capability vulnerable to exclusion and marginalization in decision-making processes and participation in society. Likewise, it is commonly believed that acquiring language(s) of the destination country is critical to all aspects of the integration of immigrants—economic, social, cultural, and political. The EU’s Common Basic Principles states: “basic knowledge of the host society's language [...] is indispensable to integration” (Council of European Union, 2004, p.20). Recognizing the key role that language plays in integration, the governments set learning the local language as one of the principal goals in integration policies and back up this commitment with the provision of courses and/or tests (Huddleston & Tjaden, 2012). Despite such effort and commitment, many European countries today are still struggling with challenges brought by a rising immigration flow, particularly from non-EU countries. A few years ago, the Eurobarometer conducted a migrant

integration qualitative survey² to improve the situation by understanding the perceptions and views of the general public (majority) and non-EU migrants (minority). The findings demonstrate that the general public and non-EU migrants both consider local language fluency (“can speak the language”) as the most important factor that facilitates integration³ (see Figure 1-1) and allows further improvements in integration of newcomers⁴. Contrarily, the lack of destination language competence is perceived by both groups as the impediment to integration. Moreover, another interesting result revealed by the survey is that both the general public and migrants regard “being able to speak or wanting to learn the local language and having a job or job offer” as the most important criteria in deciding who should be eligible to stay in the country (European Commission, 2011). The Canadian experience with immigrants suggests that language often operates as “a barrier to labour market success for many newcomers, including skilled workers. A mismatch exists between employers’ expectations and newcomers’ perceptions of requisite linguistic ability for many occupations” (Metropolis, 2009).

Aspect	Average importance (0-10) General Public	Average importance (0-10) Non-EU migrants
Can speak the language	8.80	9.54
Have a job	8.31	8.70
Vote in elections	4.35	5.33
Bring families with them	5.52	6.67
Have good level of education	7.04	7.29
Get involved in local community	7.05	7.40
Respect local cultures	8.30	8.40
Share in local cultures	6.69	7.08
Enjoy legal status	7.25	8.71

Figure 1-1: Average Importance in Integration among General Public and Non-EU Migrants
(Source: European Commission, 2011, p.49)

Due to the strong correlation between language skills and labor market success that exist in the peoples’ perceptions and actual evidence available in reality, the mainstream idea has focused on this particular link. Accordingly, a myriad of institutions and policies have been devised in an attempt to positively influence the end result (i.e. earnings). But, is this the only possible way to realize integration? In a capitalist market economy, integration through the market is often accompanied by a powerful homogenizing force. Hence, diversity under this paradigm tends to be seen as something that must be controlled to preserve social prosperity and harmony. But, why does diversity need to be

² This qualitative survey used a combination of focus groups and in-depth individual interview methods. The study includes the views of both the general public and non-EU migrants in 14 EU Member States (Austria, Belgium, Czech Republic, Denmark, Germany, Greece, Spain, France, Italy, Poland, Portugal, Sweden, the Netherlands, and UK). More than 500 EU citizens and 200 non-EU migrants participated in the survey (European Commission, 2011).

³ Among general public, on average, the top four most important factors that facilitate integration are: (1) can speak the language; (2) have a job; (3) respect local cultures; and (4) enjoy legal status. Among migrants, the factors in order of priority are: (1) can speak the language; (2) enjoy legal status; (3) have a job; and (4) respect local cultures (European Commission, 2011).

⁴ When asked about “what works best to improve integration?” both the general public and migrants feel that having an understanding of the local language is the most helpful. “However, they differ in terms of what they believe undermines integration the most. Among the general public the perception is that it is the segregation and specifically the formation of ‘ghettos’ which is most detrimental, while migrants consider that negative attitudes of local people towards them is the main issue” (European Commission, 2011, p.8).

controlled to realize social prosperity and harmony? Are there any other ways that make our lives more beautiful and content? Are there alternative ways to diversity control so as to liberate people from the control and manipulation and let them be who they are but still benefit from their differences? If there are any, what are some of the possible ways to induce people to willingly contribute their uniqueness to others? How could such intent manifest in reality?

Realistically speaking, it might be too much to even dream about. Some knowledgeable people might warn that “we’ve been trying this throughout history but no one has managed to find a right formula.” Despite the enormous uncertainties and challenges that accompany carrying out the task, we can perhaps agree that nothing happens unless we dream and we will never realize our dreams unless we try. Canada, a country with exceptionally high rates of immigration⁵ and of bilingualism, is well aware of the complexities that are posed to the mainstream society and the costs and benefits of maintaining and promoting cultural and linguistic diversity. The conference’s flyer, *Language Matters: A Policy-Research Seminar on Language Acquisition and Newcomer Integration*, mentions:

Passing on the ancestral language to subsequent generations is an important way for linguistic minorities to maintain their cultural diversity. On the other hand, heavy dependence on the enclave may weaken linguistic and overall integration into mainstream society. In an era marked by increasing globalization and international trade, knowledge of languages other than English and French could also be an asset to Canadian institutions and individuals (Metropolis, 2009).

What the message is trying to convey is that ‘we’ know the threats and problems of diversity but ‘we’ equally recognize the immense potential that diversity can present to the Canadian society. To further investigate the issue and examine the relationships between language and immigrant integration, it seems necessary to take a closer look at the following questions: What is language? What is language acquisition? What is integration? What are some of the perspectives on language, language acquisition, and integration at macro and micro levels?

2. Major Concepts & General Orientation

2.1. Language

A dictionary defines language as “the method of human communication, either spoken or written, consisting of the use of words in a structured and conventional way” (Oxford University Press, 2014). Another dictionary states that language is “a system of communication consisting of sounds, words, and grammar, or the system of communication used by people in a particular country or type of work” (Cambridge University Press, 2014). However, these succinct definitions often fail adequately explaining deep, complicated, intriguing, and mysterious aspects of language.

We cannot conceive of human beings without language. We form our thoughts, analyze

⁵ In 2011, Canada had a foreign-born population of about 6,775,800 people. They represented 20.6% of the total population, the highest proportion among the G8 countries (Statistics Canada, 2011).

problems, and understand our world through language. Since we are social in nature, we communicate our thoughts, feelings, and desires, and interact through language. Furthermore, language made a way for us to accumulate our knowledge—improving our ancestors’ good ideas and passing them down to our future generations—and communicate beyond time and space.

These different facets of language are also illustrated by a number of scholars. The most common view is to see language as a system. As defined in dictionaries, linguists have traditionally seen language as a complex communication system and categorized a language into different levels of scientific description and analysis: lexicon (vocabulary), phonology (sound system), morphology (word structure), semantics (meanings), syntax (grammar), and discourse (Saville-Troike, 2006; Mitchell & Myles, 2004). Ludwig Wittgenstein (1922) whose major concern was the intra-personal aspect of language wrote “the limits of my language mean the limits of my world” (p.149). He seems to believe in the existence of things that are beyond our human mental capability and language as a rigid system sets that boundaries and limits. Moreover, in proposing his theory of linguistic relativity, Benjamin Lee Whorf famously said “language shapes the way we think, and determines what we can think about.” As the famous philosopher and linguist note, language may place constraints on our potential to imagine, conceive, and create by framing our perceptions to remain in the past and serving as a stumbling block to our future development.

Yet, others suggest different angles on human language; language is viewed as a more autonomous and flexible system and a means of creation rather than a set of constraints. For instance, to Noam Chomsky (2005) “language is a process of free creation; its laws and principles are fixed, but the manner in which the principles of generation are used is free and infinitely varied. Even the interpretation and use of words involves a process of free creation” (p.113). In other words, Chomsky points out another characteristic of language, which makes the “process of free creation” possible—an intermediary that networks the inner mental system and a receptor that links an individual to the outer world. The Chomsky’s Universal Grammar approach is concerned with knowledge of language called competence; however, it neglects its performance, which is about how language is used in real life. This is well illustrated in his argument that theoretical linguists’ job is not to study the performance data of actual utterances that people have produced but to investigate and model language competence, which is “the abstract and hidden representation of knowledge held inside our minds, with its potential to create and understand original utterances in a given language” (Chomsky, 1965; cited in Mitchell & Myles, 2004, p. 10).

Another view on language sees it as a system of communication by acknowledging the dynamic interactions that exist at intrapersonal as well as interpersonal levels. By emphasizing the universal characteristics of inner mental mechanisms, the Universal Grammar produces a homogeneous image of a human as an information processor (Mitchell & Myles, 2004). However, the problem of this type of approach is that it cannot account for the variability in linguistic outcomes or performance (except for age factor, but it is arguable because the critical age theory remains

controversial). Having the greatest interest in performance, the functional approach shifts its focus to external factors (Spolsky, 1989; Saville-Troike, 2006). One way of explaining such variability is to turn to individual differences (including cognitive and affective factors) and another one is to see humans as social beings, involved in structured social networks and practices (Mitchell & Myles, 2004). This aspect of language is expressed by Mitsuko Saito (1992), a specialist in communication, in an informal private conversation. Her original Japanese words can be translated into English: “Communication is an exchange of human warmth” or “communication is a warm-hearted exchange between/among people”⁶ Here, if language is viewed as a system of communication, language takes its root in the real world as a medium for exchanging not only information but also our thoughts and affections.

Language has an even more magnificent feature. This feature is beautifully expressed by an anthropologist-linguist, Edward Sapir, that “language is an anonymous, collective and unconscious art; the result of the creativity of thousands of generations.” This particular aspect of language somehow incorporates the other facets of language and can be a gift to humanity; if released in good condition, it enables the formulation of a massive creative energy by simultaneously employing both unifying and decomposing forces of intangible (e.g., thoughts, emotions, inspirations, intuitions) and tangible (e.g., sound, symbols, letters, scripts) worlds that continue to exist across time and space. In sum, language represents human mind and character, human relations and society, and human civilization and history. Due to its entwined and inseparable relationship that humanity has with language, research on language may open avenues for remembering a hitherto neglected or forgotten aspect of human life.

2.2. Language Acquisition

According to the *MIT Encyclopedia of Cognitive Sciences* (Wilson & Keil, 1999), “language acquisition refers to the process of attaining a specific variant of human language, such as English, Navajo, American Sign Language, or Korean. The fundamental puzzle in understanding this process has to do with the open-ended nature of what is learned” (p.434). The acquisition of linguistic competence can be considered a special form of learning (Esser, 2006). However, the use of vocabulary ‘*language acquisition*’ and ‘*language learning*,’ requires some caution since some studies by linguists and scholars of language make a distinction between the two. Language acquisition refers to the “subconscious process identical in all important ways to the process children utilize in acquiring their first language” (Krashen, 1985, p.1) while language learning refers to the “conscious process that results in ‘knowing about’ language” (Krashen, 1985, p.1). In other words, acquisition is the result of

⁶ Original Japanese words by Dr. Mitsuko Saito: 「コミュニケーションとは、人と人との、心の温かさの交換」 Dr. Saito passed away in 2004. She was a professor emerita at the International Christian University, the late founder of Communicators (an interpreting & translation services company and training school), and my mentor who had guided and supported me since my childhood.

informal, natural interaction with the language, and learning is the result of formal, classroom experience, in which the learning focuses on the linguistic rules of the target language. However, this distinction has attracted much criticism especially when used in its rigid form proposed by Stephen Krashen; therefore, it still remains open to discussion (Mitchell & Myles, 2004). In this thesis, I use the term ‘acquisition’ to refer to the concept which encompasses Krashen’s language acquisition and learning because once immigrants are in the country of destination, immigrants acquire the language(s) through both conscious and formal learning as well as natural and informal acquisition pathways. Simply put, the term, ‘acquisition’ used in this thesis includes the concept of learning.

Researchers classify language acquisition into two categories: *first language acquisition* and *second language acquisition*. According to the psycho-linguistic theories of language acquisition, first language acquisition is known to be a universal process and language is generally acquired in an undirected way. The acquisition experience tends to be passive and unconsciously attained through other activities, opportunity, and reinforcement structures in the absence of conscious motivation (Esser, 2006). Language acquisition typically means first language acquisition and the research typically studies how infants or children acquire their *first language* (L1). Alternatively, second language acquisition includes both children and adults to survey how they learn and acquire additional languages. “The additional language is called a *second language* (L2), even though it may actually be the third, fourth, or tenth to be acquired. It is also commonly called a *target language* (TL), which refers to any language that is the aim or goal of learning” (Saville-Troike, 2012, p.2). Second language acquisition has surfaced as a field of study principally from within linguistics and psychology (and their subfields of applied linguistics, psycholinguistics, sociolinguistics, and social psychology). Each discipline has its own focus and way of analysis: for instance, linguists emphasize the differences and similarities in language characteristics and linguistic competence and performance of learner at different phases of language acquisition; psychologists and psycholinguists are interested in the mental and cognitive processes of language acquisition; sociolinguists mainly examine variability in linguistic performance of learners; social psychologists focus on the group-related issues, such as identity, motivation, and the interactional and macro-scale contexts of learning; and applied linguists are the ones who combine some of the approaches and are also concerned with the implication of second language theories and research for teaching second languages (Saville-Troike, 2012).

This thesis restricts itself to second language acquisition. This leaves out the challenges of dealing with the distinct problems of first language acquisition⁷. In other words, the restriction to second language acquisition allows a deliberation not on “the universality that is the concern of the

⁷ The first language acquisition research typically asks the following questions: “how a child differentiates language from noise, the critical role of innate mechanisms in developing a grammar for the first language, the problem of how children come to acquire the grammatical, semantic, and pragmatic rules that they do with their first language” (Spolsky, 1989, p.11).

first language acquisition study but on the explanation of individual differences that is the focus of second language acquisition research” (Spolsky, 1989, p.11). Hence, ‘language acquisition’ in this thesis means second language acquisition among immigrants, which accompanies active action and intentional learning efforts and investment (e.g., particularly, if immigrants arrive in the destination country at an old age and if they enroll in language courses that involve material costs) and assumes individual variations in ultimate accomplishment. By definition, second language refers to any language subsequently learned after acquiring the first language. However, a second language can be different from the language of the host country. This thesis is specifically interested in surveying the acquisition of destination language among immigrants; therefore, the term ‘destination language acquisition’ is used preferably to ‘second language acquisition’ to avoid possible confusion.

To define and measure the ultimate accomplishment (i.e., the goals and outcomes of language acquisition), it seems essential to ask and answer another question: What does it mean to know or acquire a language? Language acquisition can vary almost without constraint in both kind and amount. There is no clear and simple criterion according to which one can be said to acquire a language. Spolsky (1989) recognizes the complexity of the concept of “knowing a language” and describes it as follows:

There are varying criteria for successful learning that can be described in terms of linguistic knowledge (as the items of a grammar or a lexicon, for instance); in terms of generalized skills (reading, writing, speaking, listening); in terms of pragmatic or communicative functions (persuading, asking, apologizing, etc.); in terms of topic (for example, ‘He knows enough French to read a sports page,’ ‘She can give a lecture in Japanese on nuclear physics’), situation (for example, ‘He knows kitchen French’), or interlocutor (for example, ‘She know enough German to talk to a Swiss banker’); or in terms of ability to perform a described task, usually a test (for example, ‘He scored 625 on TOEFL, but the students in his section still cannot understand him’) (p.11-12).

Economists and sociologists have traditionally measured the outcomes of immigrant language acquisition by self-assessment. This is because they typically make use of existing datasets, such as censuses and special national, regional or world surveys, to conduct their analyses, and self-assessed level of language skills and/or frequency of language use are normally the only available indicators. The countries that receive a large number of immigrants tend to collect such information and researchers have used the data to perform their academic studies. For instance, Chiswick and his colleagues⁸ have done much of their work on the United States (Chiswick, 1978; Chiswick & Miller, 2007), Canada (Chiswick & Miller, 2001), Australia (Chiswick, Lee, & Miller, 2002, 2005), and Israel (Beenstock, Chiswick, & Repetto, 2001). Dustmann (1996) and Esser (2006) have focused on cases in Germany. Van Tubergen and his colleague(s) primarily conduct cross-country analyses (Van Tubergen, Maas, & Flap, 2004; Van Tubergen & Kalmijn, 2005).

Some examples of specific measurements used in the previous studies are as follows.

⁸ See the article “The Endogeneity between Language and Earnings: International Analyses” (Chiswick & Miller, 1995) for a comparative analysis of Australia, the United States, Canada, and Israel.

Chiswick, Lee, and Miller (2005) used English-speaking skills from the Longitudinal Survey of Immigrants to Australia (LSIA), Panel 1, to examine how family factors (e.g., language skills of spouses, language skills of parents, and number of children) influence destination language proficiency among immigrants. The LSIA asks immigrants to self-assess their level of English speaking, reading, and writing skills (“How well would you say you speak/read/write English?”) on a five-point scale, with answer categories: (1) English best (or English Only); (2) Very well; (3) Well; (4) Not well; (5) Not at all. In another study by Beenstock, Chiswick, and Repetto (2001), the census of Israel, the 1972 Census, was used because it included the following questions about Hebrew language skills: “Do you know how to write at least a simple letter in Hebrew?” and “Which language or languages do you use in daily conversation? Note first, second and third.” In their analysis, they ordered the responses as follows: as for the Hebrew writing skills, “ $H_W = 0$ if illiterate, $H_W = 1$ if can write a simple letter in a language other than Hebrew, $H_W = 2$ if can write in Hebrew and another language, and $H_W = 3$ if can write only in Hebrew”; and as for the Hebrew speaking skills, “ $H_S = 0$ if Hebrew is not spoken at all, $H_S = 1$ if Hebrew is the secondary or tertiary language, $H_S = 2$ if it is the primary but not only language, and $H_S = 3$ if it is the only language spoken” (Beenstock, Chiswick, & Repetto, 2001, p.38). However, in reality, censuses and surveys that include the questions asking immigrants to rate their levels of language capability are rare. Some existing surveys only ask the interviewers to rate their interviewees’ level of understanding of the language they used for data collection; yet, it is assessed mainly for data quality assurance reasons—to avoid error-ridden answers to be included in the analyses through identifying the respondents who have very poor language ability (Huddleston & Tjaden, 2012). Due to the limited availability of data on the indicators that directly measure language performance, some academic studies have used the interviewer-assessed language skills information as an indirect measure; for example, Van Tubergen (2010)⁹ used the information rated by the interviewers on a three-point scale, with answer categories (1) bad, (2) moderate, (3) well, for assessing immigrants’ speaking skills. This thesis uses self-assessed destination language proficiency. Details on the measures are described in Chapter 4 (*Data & Methods*).

2.3. Integration

The Longman Dictionary (2014) defines ‘integration’: (1) the combining of two or more things so that they work together effectively; (2) when people become part of a group or society and are accepted by them; and (3) the process of getting people of different races to live and work together instead of separately. Other definitions more specific to the current research, integration of migrants or immigrants, are provided by the organizations currently working on this topic. For instance, the IOM

⁹ As opposed to Dutch speaking skills, reading skills were evaluated by self-assessment of the respondents in the study among refugees’ in the Netherlands. The respondents were asked if they could read “Dutch newspapers, letters or folders” and rate the answer categories: (1) no, not at all; (2) no, difficult; (3) yes, fairly well; (4) yes, very well. The Pearson correlation between the self-assessed reading skills and the speaking skills assessed by the interviewer was 0.62 (Van Tubergen, 2010).

(International Organization for Migration) defines integration as “the process of mutual adaptation between host society and migrant.” Similarly, the European Union states in its “Common Basic Principles for Immigrant Integration Policy” that:

Integration is a dynamic two-way process of mutual accommodation by all immigrants and residents of Member States. Integration is a dynamic, long-term, and continuous two-way process of mutual accommodation, not a static outcome. It demands the participation not only of immigrants and their descendants but of every resident. The integration process involves adaptation by immigrants, both men and women, who all have rights and responsibilities in relation to their new country of residence. It also involves the receiving society, which should create the opportunities for the immigrants' full economic, social, cultural, and political participation (Council of the European Union, 2004, p.19).

Furthermore, the Migration Policy Institute, a US-based think tank specialized in migration policies states:

Immigrant integration is the process of economic mobility and social inclusion for newcomers and their children. As such, integration touches upon the institutions and mechanisms that promote development and growth within society, including early childhood care; elementary, postsecondary, and adult education systems; workforce development; health care; provision of government services to communities with linguistic diversity; and more. Successful integration builds communities that are stronger economically and more inclusive socially and culturally¹⁰.

Nonetheless, there is no consensus built around the definition and the indicators that measure the concept. Therefore, it is especially challenging for researchers to theoretically conceptualize the concept and empirically operationalize into measurable indicators. The measurements of immigrant integration used in this thesis are described in Chapter 4 (*Data & Methods*).

The lack of consensus is probably due to the complexity of the concept and its association with multiple factors at different levels of analysis. For instance, in social psychology, Berry (2001) defines integration as a cultural and psychological process and distinguishes integration from assimilation¹¹; in political and social sciences, some conceive of integration as political integration (e.g., Jacobs & Tillie, 2004; Jacobs, Phalet & Swyngedouw, 2004, 2006) and others see it as more socio-cultural (e.g., Alba, 2005), and still others view it as socio-economic integration (i.e., labor market participation; e.g., Benton, 2013). As will be seen later in this thesis, instead of relying on one particular perspective, I place these different aspects of integration sometimes as an independent and other times as a dependent variable. Indeed, as will be seen in the next few sections of this chapter as well as later in the thesis, the link between language and integration is difficult to explain from a single perspective and requires the “integration” of many variables into a complex multi-dimensional

¹⁰ Quotation from the Migration Policy Institute webpage: <http://www.migrationpolicy.org/topics/immigrant-integration>.

¹¹ Integration and assimilation are some of the acculturation strategies that immigrants use in reference to their orientations toward their own group and other group. Immigrants who employ integration strategy show preference toward interacting with both groups and having identities of both cultures whereas immigrant who employ assimilation strategy show preference toward interacting with both groups and having identities of other group (Berry, 2001).

modeling framework.

2.4. Macro Perspective: Language and Integration

If integration is something that is intimately related to human life, it is natural to assume that the problems of integration would have direct and strong impacts on immigrants' lives. There are potentially many things that can disintegrate people within a social entity. Differences in groups—race, ethnicity, religion, socioeconomic class, and profession—can be frontiers of division. Similarly, differences in individual beliefs, values, perceptions, economic interests, and political preferences can separate one individual from another. Then, how do these divisive tendencies manifest in society? And, how do differences in language, more precisely, linguistic group differences or individual differences in destination language fluency influence the degrees of integration? To better analyze the phenomenon from a macro-systemic perspective, I borrow theoretical models from electoral studies.

There exist two rival ideal-typical models that explain the political dynamics in democracies: the Downsian model of individual differences (Downs, 1957) and the Lipset and Rokkan model of group differences (Lipset & Rokkan, 1967). Downs (1957) articulates that a nation's politics is determined by voter preference distributions while Lipset and Rokkan (1967) argue that the determinant of a nation's politics is people's collective identity and interests formed around a set of social cleavages—specifically, territorial-cultural group, religious affiliation, class, and economic sector. On the one hand, the Downsian model marketizes politics and produces the political market in which games are played according to the democratic rule and the principle of electoral competition; the purpose of politics (or political parties) is to play the game to maximize gains, based on the assumption of perfect rational voters who know their exact personal preferences and are capable of accurately placing themselves along the left-right political scale. On the other hand, the Lipset and Rokkan model views social cleavages—which are produced through the chain of events and the mixture of cohesive and divisive forces—determine the voters' group identities, ideologies, interests and give rise to a wide range of political parties that represent diverse group interests.

The two models seem to suggest our individual and collective interests both matter in a nation's politics for they are interconnected and can serve as unifying as well as disruptive forces that affect the whole social organism. Then, does the divide remain or change over time? If we follow Lipset and Rokkan's cleavage-based, group-centered view, social cleavages remain stable because collective interests hardly change over time. However, the Downsian issue-based, individualistic view claims that social cleavages are volatile because people's preferences change over time. If both statements are true, it is important to understand how we can utilize the different nature of individual and collective interests for the betterment of society as a whole.

In applying the framework to the case of immigrant integration in host countries, several questions logically arise: Which difference, namely 'individual differences' or 'group differences,' more or less influences and shapes the integration process? Do they affect each other, and if they do,

how? Can the problems that arise from differences be better managed? Esser (2006) tries to answer the questions by distinguishing two different, yet interrelated aspects of immigrant integration: social integration and system integration. Social integration concerns “the inclusion of actors in an existing social system, for example an educational facility or occupational activity in a company” while system integration means “the cohesion of entire social systems and refers to the cohesion beyond different elements of a society, for example, groups of ethnic minorities or functional subsystems” (Esser, 2006, p.7). In other words, the emphasis is placed on individual actors and individual interests in social integration, and on groups and collective interests in system integration.

Esser (2006) further splits social integration into four different dimensions: (1) the cultural dimension, which focuses on the acquisition of skills and knowledge; (2) the structural dimension, which concerns the placement in position, such as in the education system and labor market; (3) the social dimension, which deals with the issues regarding social relations and contacts; and (4) the emotional dimension, which involves psychological aspects like identification. By looking at the dimensions, one can easily recognize that language relates to all categories of social integration. The most salient connection may be the cultural dimension, but it is also closely connected not only to the relational and emotional aspects but also the structural aspect of social integration.

Social inequalities arise when differences in the social integration of individuals are translated into aggregates or categories (e.g., ethnicity, race, age, and gender) and differences in vertically evaluated characteristics (e.g., level or quality of education, professional prestige, and average income) become apparent. Conversely, social equality exists when there are no such differences among different social groups and ‘diversity’ is maintained as long as the differences are limited to horizontally evaluated characteristics (e.g., religious beliefs, cultural habits) (Esser, 2006). Applying the logic to the issue of language, if the aspect of linguistic diversity is the sole concern, social equality may be realized among different linguistic communities; however, once language starts influencing vertically evaluated areas, it gives rise to social inequalities and stratification. This is why policymakers are generally very sensitive and concerned about the issue and try to find ways to reduce the existing inequalities and prevent new forms of inequalities to emerge by executing various integration measures and mechanisms, such as policies, regulations, laws, and institutions.

There are basically two different approaches to activate such integration mechanisms in plural societies. The first approach is to rely on the external coercive measures, such as seizing military control and imposing a comprehensive value system, to sustain and enhance social cohesion. This method of governance was common in the past, but in the modern societies, the other form of diversity management, functional integration, is more actively practiced. In this approach, social cohesion is achieved through functional interdependencies, mutually beneficial economic transactions, and shared interests of actors in the market. On the subject of language and integration, functional integration deserves special attention because the market today plays an important role not only in the social integration of individual immigrants, but also in the system integration of diverse

groups in host societies. Severe and extreme forms of social conflicts may emerge if integration mechanisms fail to function properly (Esser, 2006). This is the typical mainstream argument for promoting functional integration.

As demonstrated above, the mainstream literature on immigrant integration claims that functional integration is crucial in reducing and preventing social inequalities and social conflicts. In other words, if we take care of different individual interests, society will run smoothly because social equality will be realized and cleavages among different groups or systematic ethnic stratification will not appear. In relation to language and integration, if immigrants as individuals manage to acquire a certain level of fluency in destination language and be successful in school and the labor market, we will achieve prosperity and social cohesion. But, is it enough? Does immigrant integration through the labor market offer the fundamental solution to problems? And, does the market based solution alone provide the sufficient condition even in countries with highly capitalized market? Even if it is the panacea to all problems we are currently facing, is this really the life we desire? Integrate into the labor market so that we become efficient producers and consumers who strive to extract as much profits as we can to satisfy our self-interest and become good taxpayers so as to maintain the whole management (governing) system, which is believed to provide the environment to maximize our self-interest in return? In other words, if we obediently follow and pursue the path laid by the mainstream ideology, does it really navigate us to where we want to go? If we have some doubts and if we think that some other ways are possible, what are the alternatives? If there are more things to be considered in search of alternatives, what are the missing components we must be looking at? In my attempt to answer the questions, I will look at the interplay between language and integration from a micro-individual perspective because the macro-systemic perspective alone may not suffice to find the missing elements that are crucial for designing effective institutions that can foster the immigrant integration process. Also, seeing from a different perspective may help bridging the gaps between the two if there are any to be filled.

2.5. Micro Perspective: Language and Integration

If we pause for a second and examine our mundane interactions, it is not difficult to recognize the intimate relationship we have with language. We practically use language everyday and everywhere; we use it to eat at restaurants, shop at grocery stores, see a doctor at a hospital, chat with friends at school, and interact with coworkers at the office. In this sense, language capability has a profound effect on the quality of our lives.

The significance of language in the context of immigrant integration is related to its multiple functions. According to Esser (2006), there are three main functions of language: resource, symbol, and medium. Firstly, language is a *resource* or human capital through which one obtains access to other resources and in which one can choose to make investment. Secondly, language is a *symbol* which defines situations (e.g., activation of stereotypes, prejudices), triggers cultural ideas and values,

and provides collective identification. Lastly, language is a *medium* of general social communication through which transactions, coordination, and mutual understanding are secured.

These different functions of language can be easily identified through our own experiences or by observing the ways people interact with each other. The function of language as a resource is the most well-surveyed area pertaining to immigrant integration. A number of studies, especially in the field of migration research, have also proved the relationships between language and integration. For instance, language skills play a critical role in shaping immigrants' socio-economic status (Chiswick & Miller, 2001; Delander, Hammarstedt, Mansson, & Nyberg, 2005), and those who are better equipped in the language of the destination have a higher probability of getting a job and attaining higher incomes (Chiswick & Miller, 2002). Moreover, immigrants obtaining destination language skills establish more social contacts with the native population (Martinovic, Van Tubergen, & Maas, 2009) and better interethnic relations in a society (Espenshade & Calhoun, 1993; Gordon 1964; cited in Van Tubergen & Kalmijn, 2005). In addition, immigrants' language skills are closely related to the educational and occupational careers of their children (Heath, Rethon & Kilpi, 2008), thereby playing a major role in the integration of future generations. On the contrary, limited language proficiency encumbers access to government agencies, health care services, and schools; demotes workers to low-paying jobs with reduced odds of upward mobility; and leads to early school dropout and a lower level of educational attainment on the part of the young (Fennelly & Palasz, 2003). Immigrants who are more proficient in the language of the destination also receive "consumption benefits" by lowering prices through a more efficient search or a broader market for goods and services, and improving the chances for greater participation in the political, social, and cultural life of the destination country (Chiswick & Miller, 2001).

These research outcomes are often used to support the instrumental view on language, in which language is treated as an instrument that allows individuals to communicate and as a valuable resource to achieve some non-language related aspects of life, such as socioeconomic mobility and opportunities for democratic participation (Patten, 2001). From this perspective, people's incentive mechanism decides their behavior; hence policy focus becomes the creation of opportunity structures that increases or decreases material costs and benefits attached to destination language acquisition. If we follow this argument, on the one hand, policies that protect and promote diversity (for instance, by providing ethnic language education, or by subsidizing ethnic schools) increase the benefits of not learning a new language and decrease the costs of retaining the native language. Policies that support immigrants' assimilation into host societies, on the other hand, increase overall efficiency by maximizing material benefits and minimizing material costs.

However, for many people, language is a fundamental and defining feature of identity. This view is also commonsensical when we find its embeddedness with human activities. Mental activities and affective interactions among intimate members are performed using language. Songs and poems carry symbols and meanings to the people. Historical manuscripts transmit values across generations.

This aspect corresponds to the Esser's (2006) second function of language as a symbol. As a symbol, language can activate identities and loyalties through forming collective definitions of situations. This activation mechanism may display positive and negative reactions; language may provide a sense of belongingness, pride, and purpose among a community of people, but it can also generate a sense of discrimination and demarcation. In this view, language cannot be confined to a mere communication tool to achieve some other objectives but becomes an embodiment of the self and what makes people who they are. Here, the main issue is people's self-preserving non-material costs and benefits. Consequently, if language is viewed as a purely communicative tool employed by individual users to pursue narrowly defined self-interests, the approach toward language and integration policies would be instrumental, and efficiency wins over other alternative values. However, if language is associated with identity, the problem would become much more complicated because the instrumental approach is no longer applicable, thereby calling for another device that could incorporate other values such as fairness to deal with the most sensitive human affairs.

Furthermore, if language is seen as a medium of general societal communication, language becomes a public good. In economics, a public good is a good that is non-excludable (which means no individual can be excluded from use) and non-rivalrous (which means the use by one individual does not reduce availability to others). Having both characteristics of a public good and an additional trait often called the "network effects" (that its value increases with the number of people using it), some scholars refer to language as a "super public" or "hypercollective" good (see Church & King, 1993; De Swann, 2001; Van Parijs, 2002, 2004; Grin, 2006, 2008). Hence, like many other public good problems, *laissez-faire* would increase the likelihood of free riding. To correct such problems, game theoretic approaches are normally employed to devise fair social arrangements through redistributive (compensation) schemes and realize what Van Parijs calls "linguistic justice." Despite the elegant and sophisticated theorization and extensive discussions that this line of research (language as a public good, linguistic justice) presents, its limitation comes from the fundamental assumption that language is a simple communication tool or valuable capital. In other words, the existing literature may provide answers to those who see their language as a resource for attaining economic gains and the associated benefits and costs can be allocated and (re)distributed just like other goods and services; yet, such an approach is often incapable of providing viable solutions to those who view their language as an embodiment of themselves or a *sine qua non* of their identity.

My research endeavor is relied on the merger of academic disciplines—especially economics and psychology—that will provide some much-needed answers to the inquiry and redesign effective social arrangements. Three decades ago, in October 1985, a group of economists, psychologists, and other social scientists gathered at the University of Chicago to rethink how the future of their disciplines should be rearranged by asking the following question:

The modern disciplines of economics and psychology are the direct descendants of a common body of philosophical ideas. As a result of their separate evolutions, however, the

two disciplines interpret their ideas quite differently and generally pursue different research objectives using disparate methods of investigation and analysis. Nonetheless, since there are many areas of human activity where economists and psychologists study the same phenomena, it seems natural to ask whether the present separation is in the better interest of both disciplines. [...] In other words, can the modern disciplines of psychology and economics learn from each other, and, if so, what? (Hogarth & Reder, 1987, p.1)

Three decades after the conference, the question of whether the two long-separated disciplines can come together for their mutual interests is unequivocally answered: “Yes, they can.” Today, we are observing several vigorous research areas in which economists and psychologists work together to make significant contributions. They include behavioral economics, game theory, motivational determinants of human behavior (e.g., altruism and fairness), the role of intrinsic motivation, and the determinants of human happiness. Furthermore, the research methods used in the two disciplines have become less dissimilar; there is a growing sense of acknowledgement that experimentation (which is the bread and butter of psychology) is a legitimate method in economics and the number of actual applications is increasing (Hertwig, 2005).

Nonetheless, what we need today is not to be content with the past and current accomplishment, but to go beyond. This is especially relevant from a political science point of view, aimed at investigating the processes and mechanisms of immigrant language acquisition and integration and identifying the role of institutions in shaping such processes, because immigrant integration is related to many aspects of creating and maintaining a well-functioning democratic system. In other words, the research on immigrant language acquisition and integration essentially requires a micro-individual and macro-systemic integrative perspective. However, before espousing a more integrated micro-macro perspective, reconciling and resolving the micro-level tension between economic and psychological approaches seems inevitable. As the above quote indicates, if there is something very special about bringing the two approaches together, what is it? So, I rephrase the question above and ask: Can the modern disciplines of psychology and economics be brought together, and, if so, how? How can it be applied to this thesis? I rephrase it once again to be more specific: Can the missing elements that are crucial in formulating alternatives be identified and can they be combined and incorporated into a model that is capable of generating intended outcomes?

2.6. Economics and Psychology in Language Acquisition and Integration

In order to organize the thoughts and perspectives on language acquisition and integration, and provide a micro-macro integrative political science point of view, it is perhaps advisable to first recount the history of economics and psychology. This is partly because this thesis attempts to build a more comprehensive model by borrowing the ideas and models mainly from the two disciplines and partly because the issue of language acquisition and integration cannot be discussed meaningfully without reviewing the evolutionary paths of the two disciplines.

When classical economics was initially developed by well-known figures like Adam Smith, David Ricardo, Thomas Malthus, and John Stuart Mill, microeconomics was strongly linked to

psychology. They proposed psychological explanations of individual behavior in collective institutions, such as markets, communities, and organizations. Adam Smith who is referred to as ‘the father of modern economics’ is many times misunderstood for preaching selfishness and promoting laissez-faire economics. According to Meier (2005), “Adam Smith who praised the selfishness of individuals in *The Wealth of Nations*, did not believe that only selfish motives matter for human beings” (p.53). In his earlier work, *The Theory of Moral Sentiments*, Smith (1759) wrote: “How selfish soever man may be supposed, there are evidently some principles in his nature, which interest him in the fortune of others, and render their happiness necessary to him, though he derives nothing from it, except the pleasure of seeing it” (p.3). In the past, there was no clear-cut distinction between economics and psychology and the two were connected to explain complex human behavior.

Why did the divergence occur, establishing two distinct scientific disciplines as a result? To answer this question, we need to go back to what happened in the first half of the twentieth century. During the period, economics and psychology both went through “a conceptual revolution that redefined their respective foundations” (Hertwig, 2005, p.244-245). The two revolutions are: the behavioristic revolution in psychology that started in about 1913 (Hertwig, 2005); and the neoclassical economics revolution that originally started in the late nineteenth century¹² yet an important transformation, the “scientificization” or “mathematization” of economics, occurred in the twentieth century (Weintraub, 2002). Even though they shared “a kindred epistemological spirit (i.e., positivist philosophy of science),” each revolution took its unique path side by side and barely paid attention to events in the other domain (Hertwig, 2005, p.245).

As some of the early psychologists, Wilhelm Wundt and William James, defined psychology as “the quest for the understanding of conscious experience,” consciousness was the major topic when psychology was being founded in the nineteenth century (Baars, 2011, p.13). Yet, consciousness by itself was not enough to explain human behavior toward the end of the nineteenth century and other thinkers like Sigmund Freud started investigating “even more elusive processes, and conjectured that unconscious processes can be inferred by analyzing psychological products such as slips of the tongue, motivated forgetting phenomena, dreams, and the like” (Hertwig, 2005, p.245). While not totally refusing the existence of mental activities, some psychologists began to argue that, whether conscious or unconscious, mental activities were not observable. This was the beginning of the behavioristic revolution of the early twentieth century; it was the revolution against the then-mainstream scientific psychology that advocated unobservable activities as a legitimate scientific subject. By limiting itself to the study of observables, every human activity in behaviorism was interpreted according to what B.F. Skinner (1953) had termed, “the organism’s present stimulation, its

¹² Neoclassical economics is an approach to economics that relates supply and demand to an individual's rationality and his or her ability to maximize utility or profit. This approach was originally developed in the late-nineteenth century, based on books by William Stanley Jevons, Carl Menger and Leon Walras (Weintraub, 2002).

history of reinforcement, and its present response” (Hertwig, 2005, p.245). Behaviorism revolutionized and overhauled psychology and remained dominant until the 1950s. During the transformation process, “perception became discrimination, memory became learning, language became verbal behavior, intelligence became what intelligence tests *test*” (Miller, 2003, p.141).

Contrary to the early psychologists whose concern was always publicly unobservable mental activities, economists were never interested in the topic per se. Instead, economists considered unobservable things—whether feelings or thoughts—instrumental in the prediction of actual behavior (Hertwig, 2005). They gradually became futile intervening constructs, and then they were eventually ignored because feelings and thoughts were directly immeasurable constructs which could only be assessed from behavior. This was when neoclassical economics emerged as the dominant theory and started explaining everything by utility maximizing behavior in the 1940s. Unobservable and immeasurable things all together became unnecessary at best and unscientific at worst. Camerer, Loewenstein, and Prelec (2005) detail how unobservable human psychology became neglected in economics with the excuse of being immeasurable:

In the 1940s, the concepts of ordinal utility and revealed preference eliminated the superfluous intermediate step of positing immeasurable feelings. Revealed preference theory simply equates unobserved preferences with observed choices. Circularity is avoided by assuming that people behave consistently, which makes the theory falsifiable; once they have revealed that they prefer A to B, people should not subsequently choose B over A. Later extensions [...] provided similar “as if” tools which sidestepped psychological detail. The “as if” approach made good sense as long as the brain remained substantially a black box (p.10).

The history of economics and psychology illustrates that there was a short period in the middle of the twentieth century, during which both disciplines focused on the study of observable behavior at the cost of unobservable mental and emotional aspects of human beings. In the evolutionary process, a theory in economics became a set of mathematical tools and theorems as theorists like Paul Samuelson, Kenneth Arrow, and Gérard Debreu formalized economics mathematically, drawing inspiration from physics. Likewise, psychologists who were equally enthused by experimentation methods used in natural sciences came to regard a theory as “a verbal construct or theme that organizes experimental regularity” (Camerer, 1999, p.10575). Although this divergence in ways of expressing knowledge during the time appears to be the beginning of the disciplinary divergence, there was still a common concern between the two, which was to investigate observable human behavior. What marked the end of parallel evolution and the commencement of divergence, according to Hertwig (2005), was when Noam Chomsky embarked on a strike against “the supreme reign of behaviorism in American experimental psychology” (p.246).

In 1957, B.F. Skinner, the most eminent behaviorist of his time, published *Verbal Behavior*.

Skinner stressed the notion of S-R-R (stimuli-response-reinforcement)¹³ and conjectured that external factors suffice to expound how children acquire complex verbal behavior (Hertwig, 2005; Saville-Troike, 2006). Chomsky (1959), in his review of Skinner's book, challenged many of the assumptions therein and the behavioristic explanation of language and communication. Chomsky's main argument was that the behaviorist theory is wrong because it cannot explain the creative aspects of human linguistic ability (Saville-Troike, 2006). Chomsky also criticized Skinner's account of language acquisition as "completely devoid of any reference to the built-in information-processing structures of the speaker" (Hertwig, 2005, p.246). Chomsky believed in human "innate capacity" for language acquisition and developed a linguistic framework called Universal Grammar¹⁴ (Saville-Troike, 2006). To support his claim, he wrote: "the fact that all normal children acquire essentially comparable grammars of great complexity with remarkable rapidity suggests that human beings are somehow specially designed to do this" (Chomsky, 1959, p.57). The fight between Chomsky and Skinner is the argument of nature versus nurture. Chomsky, on the one hand, has defended the nature argument by firmly believing in that all humans are born with innate capacity and are designed to acquire language. Skinner, on the other hand, has espoused the nurture position by assuming that all human beings are born as blank slates, thus language is a set of habits to be learned through repeated Stimuli-Response-Reinforcement sequences.

In short, as Hertwig (2005) analyzes, "Chomsky's critique of Skinner's attempt to generalize laws of operant behavior to linguistic behavior has often been viewed as the beginning of the end of behaviorism" (p.246-247). In the wake of a wave of criticisms, psychologists realized that behaviorism could not succeed, and "[i]f scientific psychology were to succeed, mentalistic concepts would have to integrate and explain the behavioral data" (Miller, 2003, p.142). That was exactly what happened in reality. To revive as a scientific discipline once again, psychology underwent the cognitive revolution in the 1950s, the second conceptual transformation of the twentieth century¹⁵. Psychologist brought back unobservable events as a legitimate object of study through the cognitive revolution, and with the regained power, they started disclosing the mind's information-processing system and the workings of the brain, which once thought as the impenetrable black box (Miller, 2003). Influenced by this general trend, by the 1960s, neurolinguistics, the interdisciplinary domain between biology and psychology that studies the locations and representation of language in the brain,

¹³ The sequence of factors which account for the learning process according to behaviorism: stimuli from the environment (such as linguistic input), response to those stimuli, and reinforcement (positive if desirable and negative if not) (Saville-Troike, 2006, p.194)

¹⁴ A linguistic framework developed most prominently by Chomsky which claims that first language acquisition can be accounted for only by innate knowledge that the human species is genetically endowed with. This knowledge includes what all languages have in common. (Saville-Troike, 2006, p.195)

¹⁵ Miller (2003) notes that "[...] it is important to remember that the mind had never disappeared from social or clinical psychology. It was only experimentalists in the US who really believed that behaviorism would work" (p.142). In his case, he turned to Jerome Bruner's social psychology when he became dissatisfied at Harvard between B.F. Skinner's strict behaviorism and S.S. Stevens' psychophysics. Miller recounts that this approach adopted from social psychology led to the creation at Harvard of the Center for Cognitive Studies in 1960 (Miller, 2003).

expanded its influence, and information processing models of learning¹⁶ became popular among second language acquisition scholars (Saville-Troike, 2006). While psychology experienced a shock and lived through a revolution, economics, which obstinately attached to the concept of observable ‘revealed preference’ and paid no heed to unobservable concepts, continued to advance and became gloriously successful. The result of the divergence is what we observe in the academic world today: Economists who stubbornly focus on overt and measurable behavior have neglected internal psychological processes while psychologists who excel in modeling human mind have lost its capability of “engineering social institutions” (Hertwig, 2005).

This is precisely what has ensued in the studies related to (immigrant/second) language acquisition and integration. Economic models are capable of examining how observable, external factors affect each other, but they rule out unobservable, internal factors. Economists’ analyses examine how the determinants of immigrant language acquisition (e.g., level of education, age, social distance, linguistic distance, institutional factors) influence their linguistic ability, but they do not inform the inner mechanism of human mind and how our external behavior is associated with our internal mechanism. Accordingly, it is natural for economists to exclude psychological variables (e.g., attitudes, personality, motivation, identity) from their analyses and measure only observable outcomes like earnings as the consequence of language acquisition. In contrast, cognitive psychologists whose aim is to model universal mental processes applicable to all normal human beings minimize or disregard social and contextual differences. Thus, their models of our time thoroughly and meticulously show how our mind works, but they rarely explain the link between unobservable psychological variables and observable behavioral variables; for instance, they do not show how psychological variables are related to input and output of macro-level variables, especially institutional-level ones that are required for designing effective social systems. Likewise, there are many models in cognitive and educational psychology that illustrate the internal processes and mechanisms of second language acquisition. Nevertheless, to my knowledge, there is no psychologically-oriented model that explains how unobservable psychological factors affect the second language acquisition process and how the measured linguistic performance mediates and correlates with the outcomes in the real world.

Consequently, the convergence and reunification seem indispensable if the two disciplines are to overcome their weaknesses and mutually benefit from their strengths. In undertaking such an endeavor, social psychological approach with reference to behavioral economics may become beneficial because they view both social contextual (macro) and individual (micro) factors affecting behavioral outcomes. As the classical definition states, “social psychology is the scientific study of how people's thoughts, feelings, and behaviors are influenced by the actual, imagined, or implied

¹⁶ Information processing models of learning: this approach has been “[...] especially productive in addressing the question of how learners acquire knowledge of L2, and in providing explanations for sequencing in language development” (Saville-Troike, 2006, p.26).

presence of others” (Fiske, 2013, p.4), human behavior in social psychology is considered a result of the interaction of social context and individual psychology. Behavioral economics, as opposed to standard economic theory, sees that people can behave in ways inconsistent with the assumptions of perfect rationality and unbridled narrow self-interest because humans are prone to cognitive biases. The inclusive approach taken toward psychology without abandoning its historical roots grounded in the behaviorist tradition, behavioral economics can be helpful in smoothly connecting macro elements with micro elements and gaining more realistic human image. In addition, political science, which has a comparative advantage in analyzing and interpreting observable phenomena and processes from a systemic perspective, enables to capture the importance of institutions, assess policy impacts, and offer potential policy recommendations. I believe that by taking both macro and micro factors into account and thoroughly surveying the interplay between them will lay foundations for constructing more effective social systems and producing alternative social realities. A general model of second language learning proposed by Spolsky (1989; see Figure 1-2) can be a starting point for building a consensus among different disciplines and perspectives involved in this project.

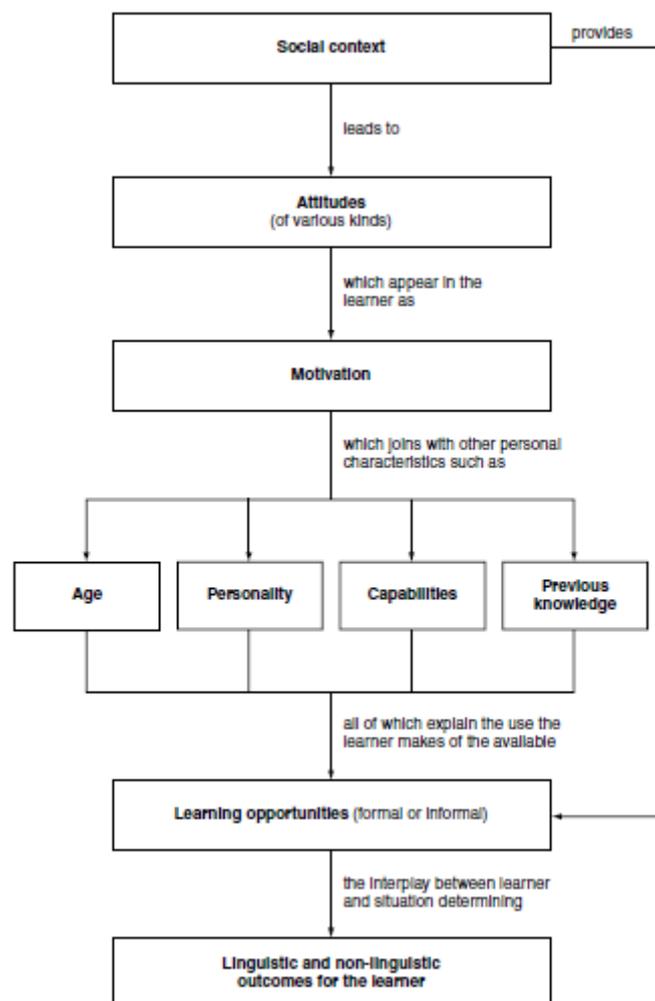


Figure 1-2: Spolsky’s General Model of Second Language Learning
(Source: Spolsky, 1989, p.28)

2.7. *Universalism and Particularism in Language Acquisition and Integration*

Besides the economics (a representation of science that studies external or observable events) versus psychology (a representation of science that studies internal or unobservable events) controversy, there is one more important aspect worth considering when discussing matters pertaining to language acquisition and integration. As Spolsky (1989) mentions, “[l]anguage learning is individual, but occurs in society, and while social factors are not necessarily direct in their influence, they have strong and traceable indirect effects” (p.14). He continues to delineate two different ways in which social context affects language learning: first, through the provision of opportunities for language learning and second, through a learner’s attitudes¹⁷ (Spolsky, 1989). For this reason, a number of social psychologists have argued constantly that social and contextual influences as well as individual differences of learners need to be considered in explaining the variations in linguistic attainment (Mitchell & Myles, 2004). The first social influence that Spolsky specifies is connected to the formation of opportunity structure at a macro-level. The second social influence, attitudes of learners, requires a micro-level analysis and is somewhat related to another on-going phenomenon observed in the realm of second language acquisition. This trend is succinctly illustrated by Dörnyei (2005) in the first paragraph of his book, *The Psychology of Language Learner: Individual Differences in Second Language Acquisition*: “Ever since the early days of its existence, the field of psychology has been trying to achieve two different and somewhat contradictory objectives: to understand the *general principles of the human mind* and to explore the *uniqueness of the individual mind*” (p.1; italics added). Similarly, the tension between, on the one hand, universalism (homogeneity) that aims to uncover the internal information processing and language acquisition mechanisms and theories valid for all human beings and, on the other hand, particularism (heterogeneity) that seeks alternatives to account for particularities that deviate from the universally applicable principles, has existed in this specific academic domain for a long time. In a nutshell, economists who assume a homogeneous image of human beings (as *homines economici*) treat individual differences (or unobserved heterogeneity) as something that needs to be separated and eliminated for the sake of estimation accuracy and prediction power. For many psychologists who try to draw conclusions and generalizations universally applicable to the entire human species, individual differences constitute mere distractions to their work. Those social psychologists who recognize macro-level social influences on human behavior tend to focus on examining intergroup relations and explaining group differences (e.g., differences in ethnicity, nationality, gender, language community). However, human behavior (even that of identical twins) may vary significantly from an individual to another while the molecules of a cell will show the same response if treated identically. Therefore,

¹⁷ According to Gardner (1985), a learner’s attitudes toward the community speaking the target language (integrativeness) and toward the learning situation (e.g., classroom situation) affect the learner’s linguistic outcome. Spolsky (1989) adds learning goals (“the learner’s expectation and perception of the learning task and its possible outcomes”) to the general category of attitude that lead to the development of motivation (Spolsky, 1989, p.26).

unlike natural sciences which seek the natural order, Dörnyei (2005) argues that the particularity of social sciences springs from the existence of individual differences.

As briefly explained in the macro perspective on language and integration section, the tension between the individual differences and the group differences is also present in language acquisition studies. Although variability is a critical feature of human beings, individual differences are often treated unfavorably by social scientists. They are believed to cause detrimental effects to the spheres of social sciences and the same applies to educational studies. Alexander and Murphy (1999) reveal that a major trend in educational psychology has been to characterize the teachers and students in classrooms as 'learning communities' and to consider in terms of the collective rather than the individual. The authors claim that, from this perspective, a focus on individual differences is seen as counterproductive to building communities that work together for the educational good. The underlying assumption in this group dynamics oriented approach may be that the learner group as a social entity can and does supersede definite individual differences. However, what this approach implicitly assumes is homogeneity in a specific group. The same logic employed by economists to produce the image of human beings is at work, but on a different scale. To clarify my argument, I rearticulate: The economists' image of human beings assumes homogeneity among individuals who share neoclassical economic traits (*homogeneous individuals*); alternatively, the image of human beings proposed by psychologists with a group-dynamics perspective assumes homogeneity within groups based on processes of social or collective identity (*homogeneous collectives*). And, what the individual difference research is bringing into the dichotomous paradigm of individual versus collective is an alternative image of human beings, which allows for heterogeneity between/among individuals within a group or society (*heterogeneous individuals*).

I believe the third view holds the key to gaining a deeper understanding of human nature and managing the tension between universalism and particularism. It is not a blind faith but a faith with reason. First, there is empirical evidence that suggests reliable and consistent individual differences in second language acquisition. These research findings indicate that individual differences are the most consistent predictors of second language learning achievement, "yielding multiple correlations with language attainment in instructed settings within the range of 0.50 and above (cf. Dörnyei & Skehan, 2003; Sawyer & Ranta, 2001). No other phenomena investigated within SLA have come even close to this level of impact" (Dörnyei, 2005, p.2). Another reason is that there is an increasing awareness in behavioral economics to regard heterogeneity in individuals as an important factor to explain and predict human behavior. Although behavioral economists acknowledge the strength of homogeneous preferences in generating powerful prediction of human behavior, recent findings continuously show significant individual differences in prosocial attitudes. For instance, Andreoni and Miller (2002) have found in repeated dictator games that approximately 47 percent of individuals can be classified as selfish while the remaining 53 percent can be classified as "other regarding." Also, a one-shot public good game study conducted by Fischbacher, Gächter, and Fehr (2001) shows that while one third of

the participants behave like free riders, 50 percent can be portrayed as conditional cooperators. In the study of prosocial behavior, Meier (2005) points out that the interaction of different types of people influences the aggregate outcome of collective institutions (e.g., societies, markets, and organizations), emphasizing the significance of individual heterogeneity in understanding the human interaction in institutional settings. He writes:

Whether a pro-social individual will cause an egoist to behave pro-socially or, conversely, a few egoists cause pro-social individuals to start free riding, is a question that depends crucially on the institutional setting. To analyze the institutions that lead to one of the two situations, one has to understand how heterogeneous individuals interact (p.72).

In addition to the survey results analyzed by Fehr and Fischbacher (2002) that demonstrate the presence of a small number of reciprocal types of people may have a huge effect on the aggregate result, Meier (2007) supports his claim by showing field experiment evidence. In his analysis of the effects of subsidies on charitable giving, Meier (2007) shows that only particular types of people respond to a change in relative prices¹⁸ and people may behave rather differently to the introduction of monetary incentives. External incentives may decrease the intrinsic motivation among other-regarding people to behave pro-socially while the same incentives may increase the likelihood of pro-social behavior among more selfishly inclined people. The evidence exemplifies that individual differences exist in social behavior and the same institutional environment may affect individuals differently. Therefore, when designing policies and institutions at a macro-level, the internal mechanisms of human behavior at a micro-level have to be considered. Furthermore, when attempting to understand the interplay between social environments and human behavior, all three aspects of human images, namely, homogeneous individuals, homogeneous collectives, and heterogeneous individuals, have to be taken into account. If not, the institutions may not realize their intended goals.

3. Objectives & Research Questions

As considerable challenges remain in designing and engineering effective institutions, it is not enough to be content with the status quo using the reality-checking type of approach. What seems necessary instead is to search for other ways to create alternative social realities that we desire. Therefore, this thesis endeavors to develop a comprehensive model that could suggest possible ways to generate intended outcomes by highlighting key attitudinal, behavioral, and institutional factors involved in successful immigrant integration. To this end, immigrants are chosen as the target population to empirically identify the elements that are essential in realizing better immigrant integration. This thesis is devoted to particularly investigate the significance of language in relation to the integration of immigrants into destination societies and the assessment of related policy impacts in a quest to identify policy choices for successful integration. In addition, it aims to contribute to the

¹⁸ “The relative price of giving is only important if people are not only concerned with their own utility or payoff, but have, for example, a utility function of the following form: $U_s = u_s((1-\alpha)\pi_s, \alpha\pi_0)$. A person's utility depends on his or her own payoff, π_s , and the payoff of other people, π_0 . α indicates the degree of altruism, where people with $\alpha = 0$ are not altruistic at all” (Meier, 2007, p.1208).

existing literature by examining the determinants of immigrant language acquisition and the effects of acquired language capital on immigrant integration outcomes.

Numerous studies on immigrant language acquisition have focused on the socio-economic aspects (e.g., earnings) as its effect, but comparatively little study has been done to investigate how psychological factors affect the immigrants' language acquisition and integration process. Traditionally, language factors have been bounded in a cultural adaptation or acculturation category in social psychology and the mediating effects of language variables have not attracted much attention. To my knowledge, there has been no study conducted to systematically examine how psychological factors affect the level of linguistic success among immigrants, and how the variability in linguistic achievement mediates and influences the degree of integration into destination societies. Moreover, little is known about the extent to which public policies or institutional arrangements affect the immigrants' acquisition of language and actual degrees of immigrant integration.

In this thesis, I aim to address the following key question: "What affects immigrants to acquire capital and how is it generated?" This can be addressed by the following: (1) identifying micro-level determinants of immigrant language acquisition and integration; (2) assessing macro-level effects and micro-macro joint effects on immigrant language acquisition; and (3) reassessing the overall empirical findings based on theoretically derived micro-macro interactive mechanisms in the integration process. At the end of this research work, I wish to provide a meaningful source for public discussion regarding immigration, language, integration issues, and how institutions (especially policies aimed at language acquisition for immigrants) can shape and foster the integration process. Therefore, it is my sincere hope that the empirical findings and insights derived from this research will provide additional resources not only for gaining a deeper understanding of language acquisition of immigrants and the impact of integration policies but also understanding plausible ways to attain a better life for all.

4. The Plan

This thesis is concerned with the role of language in developing achievement in a social system. In order to set the stage, however, it is first necessary to review the research literature concerned with the determinants of immigrant/second language acquisition. Chapter 2 (*Foundations for Modeling Immigrant Language Acquisitions & Integration*) is devoted to this task. This introduction is necessary to bring classic theories and models from economics and psychology together and initiate the construction of an economic-psychological modeling frame for immigrant language acquisition. The economic modeling frame bases its theoretical foundation on the economics of language and model of immigrant language proficiency proposed by Barry Chiswick (1978) while the psychological modeling frame is built based on the traditional socio-educational model of second language acquisition proposed by Robert Gardner (1985) and several other exiting psychological theories and models. Throughout the entire process of modeling, required negotiations,

reconciliations, and transformations are performed with a help of Csizér and Dörnyei's (2005) internal structure of language learning motivation. The constructed modeling frame becomes the foundation for all subsequent modeling.

Chapter 3 (*Modeling Immigrant Integration*) considers the research evidence on the effects of immigrant language acquisition. Conceptually locating language as an antecedent of immigrant integration outcomes in a theoretical modeling framework with consideration of temporality, human capital and social capital approaches, and models of naturalization are brought in to devise a model of immigrant integration with three sub-models: (1) a model of immigrant economic integration; (2) a model of immigrant citizenship acquisition; and (3) a model of immigrant political integration. In addition, psychological pathways are conceptually incorporated into the modeling framework by extending the economic-psychological modeling frame for immigrant language acquisition and appending existing psychological models.

Chapter 4 gives the general information on the *Data & Methods* employed to empirically test the hypotheses developed in each model. This thesis utilizes data from the Multicultural Democracy and Immigrants' Social Capital in Europe: Participation, Organisational Networks, and Public Policies at the Local Level (LOCALMULTIDEM). The cross-sectional survey data include ten European metropolitan cities—Barcelona, Budapest, Geneva, London, Lyon, Madrid, Milan Oslo, Stockholm, and Zurich. Using ten datasets allows conducting comparable analyses to check the robustness of the results obtained. The chapter provides the descriptions of the cities, samples, and measures as well as the methods applied and justifications for the methodological choice.

Chapter 5 (*Determinants of Immigrant Language Acquisition*) shifts emphasis on strategic empirical modeling and multivariate regression analyses. An empirically testable model of immigrant language acquisition is formulated from the previously constructed economic-psychological modeling frame for immigrant language acquisition to identify the determinants of destination language proficiency. I use OLS regression to assess the effects of tangible resources (personal characteristics) and intangible resources (attitudes) on destination language acquisition of immigrants.

Chapter 6 (*Determinants of Immigrant Integration*) continues the empirical investigation to identify the determinants of immigrant integration outcomes. Empirically testable models are formulated based on the theoretical modeling framework delineated in Chapter 3. I use OLS regression to estimate the effects of tangible resources and intangible resources, and acquired capital (e.g., language skills) on the three different dimensions (i.e., economic, legal, and political dimensions) of immigrant integration.

In the concluding chapters, further analyses and (re)interpretations are conducted as an overarching summary of the statistical analysis results. In Chapter 7 (*Macro Effects on Immigrant Language Acquisition*), macro-level institutional effects as well as micro-macro joint effects on immigrant language acquisition are assessed using the political opportunity structure approach (Koopmans & Statham, 2000) as the theoretical framework to interpret the empirical analysis. The

chapter focuses on examining the role of institutions by specifically assessing how city-wide differences in general institutional opportunity structure (i.e., citizenship and integration regime) and specific institutional opportunity structure (i.e., cultural requirements to access the community and provision of destination language programs) relate to variation in immigrant language acquisition. Finally, modeling exercises are performed in Chapter 8 (*Toward an Integrated Micro-Macro Modeling*) to develop a conceptual model of immigrant language acquisition and integration and propose a micro-macro integrative model that could suggest options for institutional design and directions for future research.

Chapter 2. Foundations for Modeling Immigrant Language Acquisition & Integration

1. Introduction

In the introductory chapter, one of the main questions I asked was: “Can the modern disciplines of psychology and economics be brought together, and, if so, how?” Now, it seems relevant to take a step further and ask: “Where do I start? What are the available options applicable to this thesis?” There are different approaches that can be utilized, but one way to potentially answer the key inquiry and start the evaluation of immigrants’ lives is to look for and identify some possibilities to respond to “what” and “how” questions in chorus. Generally, in science, “what” questions ask what determines and predicts an outcome of interest (e.g., what makes people choose, decide, and behave in a certain way) whereas “how” questions look into the procedure or process that generates the outcome of interest (e.g., decision-making process). Hence, a variable-based approach, which is commonly applied in a model, is a useful tool in determining the elements that affect human choice, decision, and behavior while a case-based approach, which is frequently utilized for exploring mechanisms, provides procedural evidence by revealing the causal links that are concealed in the “black box” in a model. Models, particularly aggregate-level models commonly applied in macro-quantitative studies, are interested in estimating output and predicting the future with law-like principles found by deductive reasoning whereas mechanisms are principally interested in explaining current phenomena with inductive support observed in the past and its consequences in the future. In other words, an integrative approach—combining a model with mechanisms—may provide a better scientific explanation, which must account for antecedents, explain the reality, and predict the future with reasoning and observations.

One way to fill this gap between an aggregate-level model (which use is most prevalent in economics) and a mechanism (which use is most common in psychology) is to treat individuals as the unit of analysis in a process-oriented model nested within a larger process-oriented modeling framework. The first part of the modeling strategy that aims to develop “a process-oriented model” will be outlined when modeling a model of immigrant language acquisition in Chapter 5. The latter part of the modeling strategy that endeavors to construct “a model nested within a larger process-oriented modeling framework” will be applied while developing a model of immigrant integration in Chapter 3. This chapter is intended to lay the foundations on top of which all of the conceptual and empirical modeling are conducted and orchestrated.

2. Modeling Strategy

Figure 2-1 presents the building blocks for the fundamental modeling frame I propose. This modeling frame named “an economic-psychological modeling frame for immigrant language acquisition” serves as the foundation for developing all of the empirical models in the subsequent chapters. I lay the groundwork principally by bringing together classic theories and models from economics and psychology. More specifically, it is built by reconciling the two competing views on

immigrant/second language acquisition: economic view and psychological view. The former bases its theoretical foundation on the economics of language and a model of immigrant language proficiency proposed by Barry Chiswick (1978) while the latter framework is built based on several exiting psychological theories and models. As for the psychological building blocks, I use the traditional socio-educational model of second language acquisition proposed by Robert Gardner (1985) as the cornerstone on the basis of which transformations are executed. Throughout the entire process of modeling, required negotiations, reconciliations, and transformations are performed with a help of Csizér & Dörnyei's (2005) internal structure of language learning motivation¹⁹.

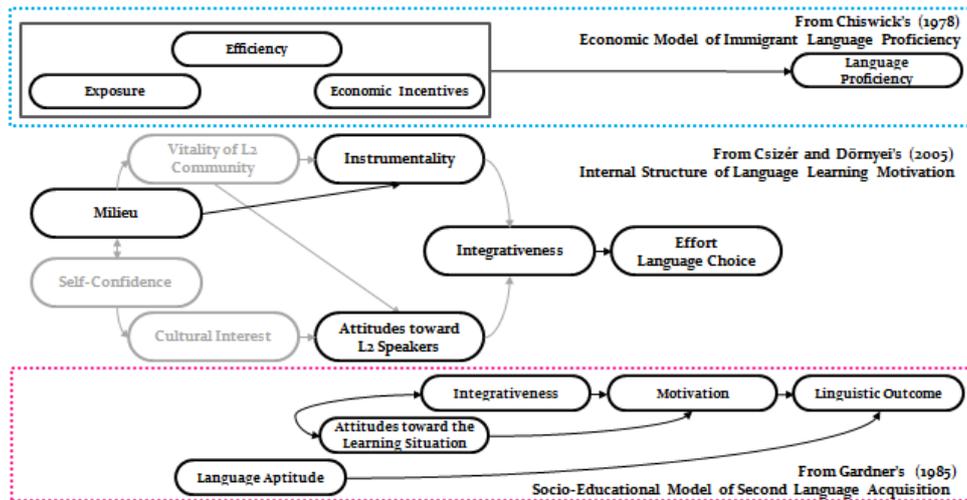


Figure 2-1: Building Blocks for Developing an Economic-Psychological Modeling Frame

In the following, the theoretical background and empirical findings on the determinants of immigrant/second language acquisition are reviewed from two different angles. After reviewing the literature on the reference models (i.e. Chiswick's economic model and Gardner's psychological model) to formulate the first economic-psychological modeling frame, I will transform the initial model through integrating other psychological theories and models to create interlinks among the variables that are known to affect linguistic outcome. The transformation is implemented with a special reference to the internal structure of language learning motivation, which is a theoretically constructed model that has been empirically tested and confirmed using structural equation modeling technique²⁰.

3. Economic View on the Determinants of Immigrant Language Acquisition

3.1. Theoretical Background

¹⁹ More detailed information on the internal structure of language learning motivation (Csizér & Dörnyei, 2005) is provided later in this chapter (see 4.2.1. *Developing an Economic-Psychological Modeling Frame for Immigrant Language Acquisition*). See also Figure 2-7 for the full schematic representation of Csizér & Dörnyei's (2005) final model.

²⁰ Structural equation modeling (SEM) is a multivariate statistical technique that is used to interpret the relationship among multiple variables within a single framework. Unlike explanatory factor analysis, SEM takes a theory confirmatory approach; the technique is especially appropriate for testing grand theories or comprehensive models consisted of complex, interrelated variables.

3.1.1. *Economics of Language*

“According to psycho-linguistic theories of language acquisition, in the case of the first language (L1), in particular, language learning takes place in an undirected way and tends to be the passively experienced and (hence) unintended by-product of other activities [...] in the absence of any particular (conscious) motivation” (Esser, 2006, p.16). However, language can be or, in some cases, needs to be acquired through an intentional act. Acquiring literacy in the first language and second language acquisition by adult learners are the most obvious examples because it incurs costs (e.g., enrolling in language courses, buying learning materials, and time and effort spent for language learning). Here, language acquisition is not a mere by-product shaped by the given environment or structural reinforcement, but seen as “the result of active action” and “an intentional investment” (Esser, 2006, p.16). In other words, language acquisition is considered a process of acquiring resources and an act of personal and economic investments, and thus, immigrants’ behavior and social outcomes are explained and predicted by their economic incentives.

The economics of language²¹ espouses the position. The founder of the theory, Barry Chiswick (2008), states that “[t]he “Economics of Language” is the study of the determinants and consequences of language proficiency using the methodology and tools of economics. The methodology of economics is the scientific method applied to maximizing behavior (Freidman, 1953)” (p.2-3). Basically, economics is the study of how to allocate scarce resources among competing uses to satisfy human desires. As its theoretical tool, economics employs models of maximizing behavior, where individuals are expected to maximize their “utility” or well-being, and as for its empirical tool, economists use econometrics to test the hypotheses against the reality using empirical datasets (Chiswick, 2008).

Chiswick’s economics of language theoretically relies on human capital theory (Becker, 1964). Historically, the concept of human capital started gaining importance in the 1960s with the emphasis on schooling and on-the-job training, health, and information. Then, immigrants’ language proficiency as a form of human capital was first introduced by economists in the 1980s (Carrier, 1981; McManus, Gould, & Welch, 1983; Tainer, 1988; cited in Chiswick, 2008) because language skills satisfy the three requirements for human capital—that is “productive, costly to produce, and embodied in the person” (Chiswick, 2008, p. 4). Chiswick (1978) applied human capital theory specifically to the field of immigrants’ language acquisition and proposed a model of immigrant language proficiency as: *Language proficiency = f {economic incentives (+), exposure (+), efficiency (+)}*.

First, the model of immigrant language proficiency claims that language proficiency is a product of economic incentives. Since economics is built around the assumption that individuals

²¹ For more details, also refer to Chiswick, 1978, 1998; Chiswick & Miller, 1995, 2001, 2007; Chiswick & Repetto, 2001; Chiswick, Lee, & Miller, 2002, 2005.

maximize their utilities, individuals' economic incentives are generally the center of analysis in the discipline. The expected increment in earnings, the expected duration or rate of employment, or the expected duration of staying in the destination country are considered the economic incentives for destination language proficiency (Chiswick & Miller, 2001). Acquiring a new language is costly: for example, the learning process is demanding and time-consuming; and there are costs of learning such as tuition and course materials fee, and opportunity costs such as forgone hours of work. These costs have to be offset by the expected economic gains in the future. Due to the difficulty in identifying specific indicators that directly measure the theoretical construct, economists commonly employ not-so-perfect measurements or proxies, such as visa/permit categories, settlement intentions in the destination, geographic distance between the country of origin and destination.

However, acquiring new language skills is not determined by economic incentives alone. Language proficiency is also contingent on the amount of exposure to the target language. Immigrants can be exposed to the destination language prior to migration—for instance, the destination language is their mother tongue or official language in the country of origin—and they can be exposed after migration through the language use of their partner, children, friends, neighbors, and colleagues, or by listening to the radio, watching television, or reading newspapers (Stevens, 1992). Similarly, Chiswick and Miller (2001) categorize the theoretical concept of exposure into two: exposure *before* migration and exposure *after* migration. Exposure before migration deals with the contexts of the countries of origin, such as the extent to which the destination language is used in the homeland country (e.g., destination language as official language, former colonies) or immigrants' history of prior visit to the destination country. Furthermore, they sub-divide the post-migration experience into two: time units of exposure and intensity of exposure per unit. While the former is measured by the number of years since immigrating to the destination, the latter is typically measured by observable or quantifiable “neighborhood” (e.g., the size of linguistic community or ethnic concentration rate) and/or “family” (e.g., language use at home, marriage before/after migration, co-ethnic spouse and/or number of children) characteristics.

Lastly, efficiency with which immigrants obtain a new language plays an important role in determining language proficiency. Efficiency specifically refers to “the ability to convert exposure into language learning” (Chiswick, 2008, p.14). Not all people are inherently endowed or equally capable of learning and acquiring a new language. Besides, people's life histories and their current social context can either facilitate or hamper their language acquisition process (Chiswick & Miller, 2001). There are four measurable efficiency factors that are considered crucial in the development of destination language competency among immigrants: age at migration, educational attainment, reasons for migrating (commonly operationalized using visa categories/permit status), and linguistic distance (Chiswick & Miller, 2001; Chiswick & Miller, 2007).

In summary, the model postulates that economic incentives of immigrants, exposure to the destination language, and efficiency in acquiring the destination language affect their language acquisition. Furthermore, it assumes that if immigrants are rational, then they would invest in attaining the destination language skills to the degree that such investments are attractive economically (Chiswick, 2008). In other words, immigrants—like other rational individuals—would invest in language learning if the expected economic benefits from acquiring the language outweigh its economic costs.

3.1.2. From Theory to Empirical Research: “Bridge Hypotheses”

Because direct measures of the theoretical constructs are normally unavailable in the empirical world, researchers have devised “bridge hypotheses” to indirectly test the mechanism of immigrants’ language acquisition (Van Tubergen, 2010; Esser, 2006). This approach is common among the researchers (particularly, economists and sociologists) who use existing datasets (e.g., national censuses and international surveys) for their analytical studies. Therefore, the aim of “bridge hypotheses” is to bridge the theoretical and empirical worlds by creating links between unobservable theoretical constructs and observable empirical measures. Esser (2006), for instance, delineates four different empirical contexts (family and migration biography, country of origin, receiving country, and ethnic group) with empirical measures and then systematically assigns them to the theoretical elements of the model of language acquisition (motivation, access, efficiency, and cost). Moreover, Van Tubergen (2010) utilizes the theoretical components of Chiswick’s economic model of immigrant language proficiency²²—economic incentives, efficiency, and exposure—to formulate bridge hypotheses. In many cases, the theoretical concepts and empirical measures cannot be matched on one-to-one basis; for example, researchers have hypothesized about the function of age at migration using economic incentives, efficiency, and exposure²³ (Stevens, 1999; Esser, 2006). This shows that researchers usually treat the distinct theoretical constructs as interrelated constituents of or part of a single theory, the economics of language.

Chiswick and his colleagues empirically proved the robustness of the model using a variety of data (e.g., cross-sectional international surveys, longitudinal national censuses, or panel data) with different contexts, such as different destination countries (e.g., U.S., Canada, Australia, and Israel) and countries of origin (Chiswick, 2008). The theoretical and methodological approach set the standard and was unremittingly extended later on by other scholars; their results further confirmed the

²² Van Tubergen (2010) refers to Chiswick’s economic model of language acquisition as “the standard empirical model of second language proficiency”

²³ “It is assumed that immigrants who arrive at a younger age are more sensitive to learning new languages (i.e., efficiency argument), that they are more strongly exposed to L2 after immigration—such as at school—(i.e., exposure argument), and they have more incentives to invest in L2, because the expected time period in which they could benefit from L2 investments is large (i.e., incentives argument)” (Van Tubergen, 2010, p.517). Even though age at migration is used as the indicator for all of the three constructs in previous studies, this study includes age at migration under the opportunity (efficiency and exposure) variable. Since the opportunity variable is treated as the situational variable, age at migration is applied to all of the theoretical models.

robustness of the model (e.g., Dustmann, 1996; Esser, 2006; Stevens 1999; Hwang & Xi 2008; Van Tubergen, Mass, & Flap, 2004; Van Tubergen & Kalmijin, 2005; Van Tubergen, 2010). Today, this economic model of immigrant language proficiency is known to be the most robust and reliable model in the field of immigrant language acquisition. Previous empirical findings on the determinants of immigrant language proficiency are reviewed in the following.

3.1.3. Macro-Level and Micro-Level Determinants of Immigrant Language Proficiency

The determinants of immigrant language proficiency can be classified into two different levels of variables, namely macro-level variables and micro-level variables. Macro-level variables typically include contextual factors related to immigrants' countries of origin and destination²⁴. As for micro-level variables, there are largely two categories of variables: socio-demographic variables and psychological variables. Socio-demographic variables normally contain age, level of education, marital status, gender, birthplace, ethnicity, and socioeconomic status while psychological variables include aptitude, motivations, attitudes, orientations, personality, perceptions, and identity. All of these variables can be considered the determinants of language acquisition. However, careful selection of variables and organizing and grouping them in a structured manner are crucial for constructing a model that can provide insight into the behavior of language acquisition and integration of immigrants.

Immigrants' destination language acquisition has been studied from both macro and micro perspectives. While a micro perspective views differences in immigrants' language proficiency by their different individual characteristics, a macro perspective assumes that language proficiency varies depending on where immigrants come from (e.g., country of origin effect) or where they go to (e.g., country of destination effect), even after individual differences of immigrants are taken into account. Naturally, this perspective difference is extended to the variables that each line of research considers, includes, and focuses in the analysis. For example, on the one hand, the micro-level research is interested in surveying the micro-level determinants of immigrants' destination language skills, such as age of migration, length of residence in the host country, and educational attainment (see Carliner, 2000; Espenshade & Fu, 1997; Stevens, 1986, 1999; Chiswick, 2008). On the other hand, the macro-level research aims to explain group differences in acquisition of language skills and focuses on studying the macro-level variables, such as geographic distance between the country of origin and the destination (see Chiswick & Miller, 2001; Jasso & Rosenzweig, 1990), linguistic distance between the origin language and the destination language (see Chiswick & Miller, 2001; Chiswick & Miller, 2004; Beenstock, Chiswick, & Repetto, 2001), the role of economic conditions in the country of origin (country of origin effect), immigrant integration policies (see Erasanilli & Koopmans, 2011), the role

²⁴ The macro-level contextual factors typically include: socio-economic factors (e.g., immigrants from developed vs. developing countries); socio-cultural factors (e.g., from post-colonial countries, linguistic/cultural distance between the country of origin and destination); or political factors (e.g., political stability of country of origin, destination country's policies, laws, regulations, institutional arrangements).

of political regimes, anti-immigrant sentiments (country of destination effects), and the neighborhood characteristics (e.g., size of an immigrant group relative to the host population; see Van Tubergen & Kalmijn, 2005).

Researchers have studied the two different types of determinants and both are found to influence immigrant language proficiency. Here, the priority is given to the literature review on the micro-level determinants of language acquisition because the unit of analysis applied in the empirical modeling is individual. However, some of the macro-level factors are briefly reviewed so as to help interpret the empirical results through making plausible links between the macro and micro determinants of immigrant language acquisition in Chapter 5.

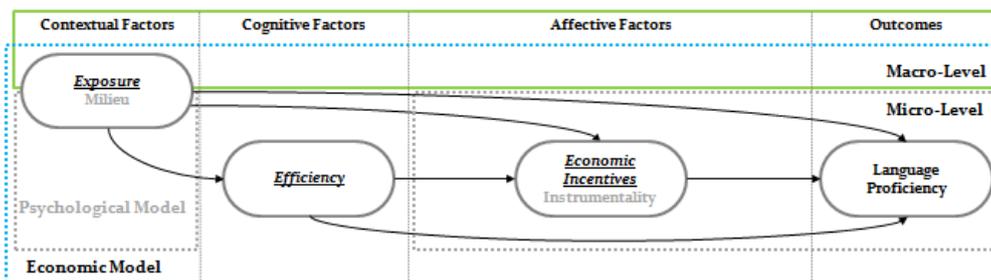


Figure 2-2: Schematic Representation of an Economic Model of Immigrant Language Proficiency

Figure 2-2 illustrates the schematic representation of an economic model of immigrant language proficiency constructed based on Chiswick’s economic model of immigrant language proficiency. To group identical or similar ingredients of the building blocks derived from different models (see Figure 2-1), I put together *exposure* and *milieu*²⁵ in one and *economic incentives* and *instrumentality*²⁶ in another group. To enhance the conceptual clarity in relation to the variables involved, I created a framework to classify the variables into four different categories: contextual factors, cognitive factors, affective factors, and outcomes. I classify *exposure* as a contextual factor, and *economic incentives* as an affective factor. Furthermore, I locate *efficiency* as a cognitive factor as well as a mediator between exposure and language proficiency because efficiency, according to Chiswick (2008), is “the ability to convert exposure into language learning.” Further concerning the issue of interconnections among the variables, the economics of language assumes direct effects of the three theoretical constructs on immigrant language proficiency; thus, three separate lines are directly connected to the outcome. Based on the relationship found in the internal structure of language learning motivation (Csizér & Dörnyei, 2005), a line from *exposure (milieu)* to *economic incentives (instrumentality)* can be drawn. Finally, I draw an arrow from *efficiency* to *economic incentives* with

²⁵ “*Milieu* has been used in L2 motivation research to refer to the social influences stemming from the immediate environment as opposed to the macrocontext (cf. Gardner’s [1985] socio-educational model), and it is usually operationalized as the perceived influence of significant others, such as parents, family, and friends. [...] [T]he standard conception of milieu only covers the “civil sphere,” that is, it does not encompass education-specific motives [...]” (Csizér & Dörnyei, 2005, p.22)

²⁶ Instrumentality refers to the perceived pragmatic benefits of L2 proficiency, such as achieving some practical goals like academic or career advancement (Gardner, 1985; Csizér & Dörnyei, 2005).

an assumption that cognitive factors are more stable over time than affective factors to indicate the interrelations among the constructs (see Figure 2-2).

3.2. Hypothesis Development

3.2.1. Micro-Level Determinants

3.2.1.1. Educational Attainment (*economic incentives, efficiency, and exposure*)

According to Chiswick and Miller (2001), level of education can serve as a proxy for *economic incentives* because it may reflect the expected economic returns for the investment in destination language skills. Immigrants with a higher level of education have more economic incentives to invest in learning language because they can anticipate higher economic returns to destination language proficiency through successful, long-term labor market participation in the destination (Chiswick & Miller, 2001, 2002). As Geissler (2005; cited in Fossati, 2011) claims, education is the vital resource that allows participation in political, economic, social and cultural life, making it an important indicator for achievable status and life chances of social mobility. Educational attainment is related to *efficiency* because immigrants with a higher level of education may have a greater capacity to learn, and this general learning capability may carry over to language. Related to literacy in general, those with more education tend to be more proficient in one's own language and have a fuller and deeper knowledge and understanding of one's native tongue. Moreover, Dustmann (1994) reports an apparent influence of literacy in native language on second language acquisition; the absence of reading and, especially, writing skills in native language has a negative effect on language acquisition. Thus, education is often considered an indicator of cognitive and cultural capital (Esser, 2006). Educational attainment may also have *exposure* effects. If the destination language possesses a value (such as having a strong presence in the region or global status or connected socioeconomic status), those with higher levels of education in the country of origin may have been exposed more to the destination language in school prior to immigration. Moreover, post-migration educational attainment may be associated with higher levels of destination language skills because proficiency is required for entry into school and those who go to school in the destination are more likely to be exposed to the destination language thereby enhancing their proficiency (Chiswick & Miller, 2001).

Previous empirical findings demonstrated a consistent strong positive correlation between immigrants' levels of education and their destination language proficiency (e.g., Fennelly & Palasz, 2003; Espenshade & Fu, 1997; Van Tubergen & Kalmijn, 2009; Van Tubergen, 2010). Furthermore, Chiswick and his colleagues proved this strong correlation between education and language skills using multiple datasets from the U.S., Canada, Australia, and Israel (Chiswick, 2008; Chiswick & Miller, 1995, 2001, 2002, 2006). Concerning the relationship, more detailed, specific findings were reported in the study of immigrants residing in the Minneapolis/St. Paul "Twin Cities" metropolitan area in the U.S.; in comparison to those without a high-school diploma, immigrants with college

degrees were 29 times more likely to speak English well, and 20 times more likely to read well (Fennelly & Palasz, 2003). Therefore, I hypothesize that *the level of education is positively related to destination language proficiency*.

3.2.1.2. Age at Migration (efficiency, exposure, and economic incentives)

Age at migration is one of the most researched elements in the field of immigrant language acquisition. The general conclusion is that age at migration is a significant factor that affects immigrants' destination language proficiency and the correlation²⁷ is found to be one of the most consistent findings in various contexts²⁸ (Chiswick, 2008; Chiswick & Miller, 2001; Esser, 2006). The age factor in language acquisition seems to be explained partially from a biological perspective; as an individual becomes older, the brain loses some of its plasticity in learning new languages. Another way of explaining the phenomenon is from a cognitive perspective; as a person ages, the effectiveness in mental capability, such as problem-solving and other learning capacities decline. Viewing from a socioeconomic perspective, people who arrive at a younger age are normally more competent at and efficient in acquiring new languages and participate less frequently in ethnic-based organizations and more often locate themselves in the destination country's mainstream institutional settings, such as school (Stevens, 1999). Generally, younger immigrants have more economic incentives to invest in learning language than older people. For older immigrants, language investments may be too costly—the costs are not outweighed by the returns on the investments—and/or may take too long (Van Tubergen & Kalmijin, 2005). These facts signify that those who arrived at a younger age use destination language more frequently outside the home setting and have more opportunities to practice the language, thereby efficiently improving their language skills.

In general, it is agreed that learning a language is quicker and easier for younger people than older people. Numerous research of language acquisition has hypothesized a critical period for language learning. A critical period for language learning is normally described as a sharp decline in learning outcomes with age (Chiswick & Miller, 2007). The critical period hypothesis can be described as follows: “even with sufficient access and appropriate motivation for the acquisition of perfect language proficiency, certain age limits exist in relation to the efficiency of acquisition, and this applies to both first and second language acquisition” (Esser, 2006, p.58). In simpler words, at ages below the critical period, language skill acquisition is easier, exposure to the target language leads to language acquisition, and native-like proficiency is attainable; on the contrary, at ages above the critical period, language acquisition becomes much more difficult. There have been attempts to

²⁷ The younger they are at the age of migration, the more proficient they become in destination language; the older they are at the age of migration, the less proficient they become in destination language.

²⁸ A statistically significant negative correlation between age at migration and destination language proficiency was found in the Australian context (Chiswick, 2008) and the Canadian context (Chiswick & Miller, 2001). For more empirical findings, see for example, Johnson and Newport, 1989, Jasso and Rosenzweig, 1990, Dustmann and Fabbri, 2003, Rumbaut, 2004; cited in Esser, 2006, p.23.

demark the critical period, but they have been unsuccessful. The findings tend to differ from one another: Some argue that the critical period is from age two to puberty (Lenneberg, 1967), but others claims that the terminal age is earlier than puberty (Krashen, 1973) and it is up to around age nine (Penfield & Roberts, 1959) since a major decline in learning efficiency is observed from around age ten (Esser, 2006).

While some studies say successful second language learning is possible at an advanced age (Birdsong, 1999; Bongaerts, 1999; cited in Esser, 2006), other studies espouse the critical period hypothesis, stating the rate of language learning drastically declines after the critical period (Long, 1990; Patkowski, 1980, 1990; Scovel, 2000; cited in Esser, 2006). Some researcher take a middle approach between the two extreme stances; they acknowledge the negative correlation between age and language learning, but do not support the critical period hypothesis, by saying that the decline is gradual rather than abrupt (Bialystock & Hakuta, 1999²⁹; Chiswick & Miller, 2007). Today, the age factor in immigrant language acquisition, such as whether a critical period in language acquisition exists and how the age affects language acquisition, is still subject to debate. Yet, at least, there seems to be a consensus that age affects learning and language acquisition is easier up to puberty and greater effort and motivation are required afterwards. Thus, I expect that *age at migration is negatively related to immigrants' destination language proficiency*.

3.2.1.3. Migration Motives (economic incentives and efficiency)

Migration motives are typically assessed by immigrants' visa categories or permit status. Economic incentives could be associated with migration motives, but traditionally this indicator is considered more of an efficiency factor in immigrants' language acquisition process (Chiswick & Miller, 2001). Immigrants who migrate to a host nation for study purposes are presumably most fluent in destination language as they are required an advanced level of language proficiency to enter and attend school (efficiency element); practically, the dominant language is the language of instruction in almost all educational programs once they are in the destination country (post-migration exposure: this effect can be better measured by the level of education). Language skills are less required for the labor market; specially, lower quality jobs can be implemented with a limited understanding of the destination language. Hence, it is presumed that labor migrants have less efficient means to acquire the destination language and fewer economic incentives to invest in learning a new language than those migrated for study purposes. In addition, some immigrants come for family reasons, such as family reunification or marriage. It is most likely that they are less efficient in learning in general and

²⁹ “Bialystock and Hakuta (1999) provide a study of cross-tabulations from the 1990 US Census covering tens of thousands of observations. They focus on Spanish and Chinese speaking immigrants in New York, with ages of arrival between zero and 70 or above, who have 10 years or more residence in the US. The analyses were conducted disaggregated by level of education, with educational attainment being shown to be positively related to English proficiency. They show that English proficiency declines more or less continuously with age at arrival. This evidence was interpreted as rejecting the critical period hypothesis” (Chiswick & Miller, 2007, p.3-4).

have weaker incentives to invest in acquiring a new language because they are “less favorably self-selected for labor-market success” and their migration motives are less related to economic incentives (Chiswick & Miller, 2001, p.394). Finally, some people migrate for humanitarian reasons. This group, typically referred to as ‘refugees,’ leaves their country primarily because of “war, discrimination, oppression, or other violations of political rights and civil liberties” (Van Tubergen & Kalmijn 2005, p.1419). Refugees are generally less prepared and equipped to efficiently acquire a new language compared to voluntary migrants due to having a lesser ability (e.g., a lower level of education) (Chiswick & Miller, 2001). Many refugees have extreme psychological stress and traumatic experiences of poverty, oppression, war, and losing their beloved ones in countries of origin (Marsella, Bornemann, Ekblad, & Orley, 1994). These psychological factors may also hamper their learning process.

Previous research confirms the theoretical assumptions. Researchers found that refugees had the poorest proficiency in the destination language among the immigrants in Canada³⁰ (Chiswick & Miller, 2001) and in nine Western countries³¹ (Van Tubergen & Kalmijn, 2005). Other studies also observed the similar results. Chiswick and Miller (1995) reported that language fluency was higher among economic migrants than those with refugee backgrounds. Chiswick, Lee, and Miller (2006) studied the impact of visa category on the immigrants’ English-language skills using the Longitudinal Survey of Immigrants to Australia (LSIA 1: Wave 1, 2, 3)³². They found that skill-based, economic migrants had the highest destination language proficiency shortly after immigration, followed by family-based migrants, with refugees having the lowest level of proficiency. Therefore, I hypothesize that *immigrants who migrated for study reasons have the highest level of destination language skills, followed by economic migrants and family migrants while those migrated for humanitarian reasons³³ have the poorest language skills³⁴*. Yet, most research finds that the differences in migration motives

³⁰ Chiswick and Miller (2001) used the 1991 Census of Canada, Public Use Microdata File for the study.

³¹ Van Tubergen and Kalmijn(2005) collected and standardized 19 existing censuses and immigrant surveys for nine Western countries. The nine countries included in the study are: Australia, Belgium, Denmark, Germany, Great Britain, Italy, the Netherlands, Norway, and the United States. (For more details on data sets, see Van Tubergen and Kalmijn, 2005, p. 1423: Table 1)

³² The Longitudinal Survey of Immigrants to Australia (LSIA) is a longitudinal study of immigrants who received their visas before entry into Australia. The population represented in the sample is all Principal Applicants, aged 15 years and over, who arrived in Australia with immigrant visa in the two-year period of September 1993 to August 1995. Immigrants were interviewed three times in this survey. The first interview took place approximately five or six months after arrival, the second interview one year later, and the third interview a further two years later. The first, second, and third waves of interviews commenced in March 1994, March 1995, and March 1997, respectively (Chiswick, Lee, & Miller, 2006, p.421).

³³ The data used for the empirical analyses in this thesis (i.e., LOCALMULTIDEM; see Chapter 4 for the description on the data) contain a very small number of cases for refugees. Retaining the original category (‘refugee’) is found inappropriate, thus they are pooled into the category named ‘other purposes.’

³⁴ The LOCALMULTIDEM data include a permit category named EEA. EEA stands for the European Economic Area. The Agreement on the European Economic Area brings together the EU Member States and the three EEA EFTA States — Iceland, Liechtenstein and Norway — in a single market. “The EEA Agreement provides for the inclusion of EU legislation covering the four freedoms — the free movement of goods, services, persons and capital — throughout the 31 EEA States” (EFTA, 2016). In the LOCALMULTIDEM data, a

(visa categories) tend to decrease and disappear with increasing duration of time in the destination country³⁵ and notes that other variables, such as education and age at migration, have statistically larger effects on language proficiency (Chiswick, Lee, & Miller, 2002, 2006).

3.2.1.4. Length of Stay in the Host (exposure)

A number of studies have reported that length of stay in the destination has a significant effect on destination language acquisition (Esser, 2006). Fennelly and Palasz (2003), for example, found that immigrants' length of stay in the destination country (U.S.) was one of the most significant predictors of their destination language (English) use at home and its proficiency, regardless of age at migration, and immigrants' English proficiency steadily increased as more time spent in the United States. Similarly, Espenshade and Fu (1997) confirmed the positive relationship among immigrants to the U.S. using another dataset (the November 1989 Current Population Survey). This significant positive correlation was also proven among immigrants to Canada (Chiswick & Miller, 2001). Based on the finding, therefore, I expect that *immigrants' length of stay in the destination is positively related to their destination language proficiency*.

Some studies suggest, however, the intensity of the exposure effects on destination language proficiency diminish with the increased duration of stay in the host (Esser, 2006). Fennelly and Palasz (2003) comments on the diminishing nature of the post-migration exposure effects and highlight the significant influence that pre-migration individual characteristics (e.g., skills that immigrants bring with them to the destination country, pre-migration exposure to the destination language³⁶) have on the rates of acquisition and ultimate linguistic outcome.

3.2.1.5. "Family" Characteristics (exposure)

There are many possible factors that determine the opportunity to be exposed to and practice destination language vis-à-vis minority language. One way to look at such post-migration effect is the intensity of exposure per unit of time in the destination. "Family" and "neighborhood" characteristics are the most typical measures. Language use at home may be more direct measure of exposure intensity at home. However, in most cases, proxies such as marriage before/after migration, nationality/ethnicity of spouse/partner, number of children, are used to measure family characteristics due to lack of measures in existing datasets.

comparatively large number of EEA permit holders are found in Geneva (n=146) and Zurich (n=222) but only a small number (or none) of EEA permit holders are found in other cities. This category does not provide a specific migration motive; therefore, I exclude the category from the hypothesis because it is not clear whether the variable will have a positive or negative effect on destination language proficiency.

³⁵ The differences in the impact of visa categories disappear by 3.5 years after immigration for speaking skills; although they diminish, and they persist longer for reading and writing skills (Chiswick, Lee, & Miller, 2006, p.419)

³⁶ For more details, refer to the sections on the country of origin effects: *Chapter 2: 3.2.2.1. Exposure to Destination Language prior to Migration (Country of Origin Effect: exposure)* and *Chapter 2: 3.2.2.2. Linguistic Distance (Country of Origin-Destination Effect: efficiency)*.

Some researchers studied immigrants' language skills as an outcome of language exposure in the family, including the impact of the language of the partner (Van Tubergen & Kalmijin, 2005; Espenshade & Fu, 1997; Stevens, 1992). They assumed that immigrants who are married to a co-ethnic spouse would use the dominant language less often with their partner than immigrants married outside the group, thus immigrants married to a co-ethnic spouse would have a lower level of language proficiency. Their hypothesis was supported with empirical evidence. Similarly, other findings also suggest that: destination language fluency increases if a couple does not speak the same mother tongue (Chiswick & Miller, 1995); marriage before migration is negatively associated with destination language proficiency (Chiswick, Lee, & Miller, 2002); and there is a considerable correlation between the language skills of spouses (Chiswick, Lee, & Miller, 2005). These empirical findings are usually interpreted in the following manner: if immigrants are married prior to migration (which is an indicator of an intra-ethnic marriage), the accompanying spouse is most likely to be someone from the same ethnic/linguistic group, there would be greater use of and proficiency in the language of origin, the couple or family would continue to use their origin language at home after migration, thereby significantly reducing the opportunity to be exposed to destination language; conversely, if immigrants are married after migration (which is an indicator for an inter-group marriage), the spouse is more likely to be a fluent/native speaker of the destination language; thus, the destination language would be the means of communication at home, achieving higher language proficiency due to a greater amount of exposure.

Another typically used proxy measure is the number of children, yet the effect has demonstrated rather inconsistent results. Some research reported no significant relationships³⁷ between the number of children and destination language proficiency (of the parents), but others found positive relationships³⁸ as well as negative relationships³⁹. These incoherent findings may be related to many possible ways in which children influence their parents' language skills. First, children have a greater capacity to learn new languages and their extensive exposure to the language and culture of the destination society in school can hasten their linguistic adjustment. By bringing home their superior destination language competency and encouraging its use, children may serve as "teachers" for their parents, which would facilitate their parents' language acquisition. Second, children may impede their parents' language acquisition by acting as "interpreters," especially exerting a larger negative effect on the destination language proficiency of mothers than that of

³⁷ The relationship between the number of children and destination language proficiency of the parents was found statistically insignificant with an exception of a very slight positive impact only in the case of children over six years old (e.g., Chiswick & Miller, 1995; Dustmann, 1994).

³⁸ For the findings on a positive correlation between the number of children and their parents' language skills, refer to: Chiswick, 1998; Chiswick and Repetto, 2001; Dustmann 1999 (a very slight positive impact only in the case of children over six years old); Shields and Price, 2002.

³⁹ For the findings on a negative correlation between the number of children and their parents' language skills, refer to: Chiswick, Lee, and Miller, 2005 (article title: *Parents and children talk: the family dynamics of English language proficiency*).

fathers. This huge negative effect on mother's proficiency is expected because this interpreter role is more relevant for consumption and home production activities than for labor market participation. Third, children also may decrease expected labor supply, primarily that of their mothers. In this situation, a negative effect on their destination language skills is expected because not participating in the labor market in the destination implies a lower level of exposure to the destination language and a lower level of economic incentives to invest in learning the destination language. Here again, a larger negative effect of children is expected on destination language proficiency of mother than that of father. Finally, a negative impact is expected on the parents' destination language skills if the parents use the language of origin at home in order to transmit the cultural identity and practices of their country of origin to their children (Chiswick & Miller, 2001; Chiswick, Lee, & Miller, 2005).

In connection to the number of children, previous research findings suggest gender difference in linguistic attainment, not due to biological or other given characteristics, but due to the difference in the amount of opportunity to be exposed to the destination language. Because of the time input by mothers in the rearing of children and making home (implying less time spent outside home), the correlation between the parent's and child's destination language proficiency is much stronger for the mother than father (Chiswick, 2008); and a number of studies has demonstrated that the number of children has no effect on their father's language proficiency, but is negatively associated with proficiency among mothers (Chiswick, Lee, & Miller, 2005). Thus, based on the previous findings, it can be hypothesized that *immigrants' family characteristics affect their destination language proficiency*. Due to the limited availability of indicators in the datasets used for the empirical analysis, two variables from family characteristics are used as control variables: gender and marital status. I expect *that being female is negatively associated with their destination language proficiency*. However, pertaining to marital status, it is not clear whether the variable would have a positive or negative effect on language proficiency because the data do not provide the information whether immigrants are married to a co-ethnic spouse or they are married before or after migration.

3.2.1.6. Settlement Intentions⁴⁰ (economic incentives)

Economic incentives could be related to immigrants' settlement intentions in the destination country because they reflect the expected future duration in the destination labor market (Chiswick & Miller, 2001) and more economic gains are expected from learning destination language skills (Dustmann, 1994; Espenshade & Fu, 1997). Therefore, a longer stay is associated with a greater incentive to invest in destination-specific skills. Dustmann (1999), for instance, demonstrated the

⁴⁰ Due to the limited availability of indicators in the datasets used for the empirical analysis (the questionnaire does not ask the respondents to specify their intention to stay in the host or leave the host country), intention to stay is not included in the empirical model. However, I view this variable as a particularly important indicator for several reasons; (1) previous studies have confirmed a consistent effect on immigrant language acquisition; and (2) although it will be remained as an "unobserved" omitted variable in the empirical models, it is assumed to significantly affect other immigrant integration outcomes, such as employment, naturalization, and political participation.

effects of immigrants' settlement intentions on their destination language acquisition using the first wave (1984) of the German Socio-Economic Panel (SOEP) data. He found that those who intended to stay for a long time or permanently were more willing to invest in acquiring language skills; as a result, they attained a higher level of fluency in destination language. Similarly, using the Longitudinal Survey of Immigrants to Australia (LSIA), Chiswick and Miller (2006) showed that destination language proficiency was greater among those who came with an expectation to stay permanently in Australia. Espenshade and Fu (1997) measured the degree of long-term commitment to living in the destination (the United States) through a number of different indicators, such as the presence in the United States of any immediate relatives, owning a home, and becoming a naturalized U.S. citizen. Their study found that immigrants who had a strong intention to stay for a long time were most likely to achieve a high level of English proficiency. Thus, based on the previous findings, it can be hypothesized that *the longer immigrants intend to stay in the destination country, the more proficient they become in their destination language.*

3.2.2. Macro-Level Determinants

In this section, I will focus on the macro-level effects that can be estimated using group-level variables (e.g., group categorized on the basis of ethnicity, place of birth, and language of origin) because they are widely used in the studies that apply Chiswick's theory of economics of language. Destination country/city-level effects will be introduced in Chapter 7 using Koopmans and Statham's (2000) political opportunity structure approach as the theoretical framework to assess the effects.

3.2.2.1. Exposure to Destination Language prior to Migration (Country of Origin Effect: exposure)

In the existing literature, characteristics of the country of origin are generally employed as proxies to measure exposure to destination language prior to migration. For example, if immigrants' country of origin is a former colony of Britain or the U.S., they tend to be more exposed to English before migration than those who are coming from any other countries. Likewise, if the country of origin uses destination language as its official language, immigrants receive a greater amount of exposure to the language prior to migration, and thus, they are presumed to be more proficient in the language of destination. Empirically, Chiswick, Lee, and Miller (2002) found that destination language proficiency of immigrants in Australia was greater among those who came from a former British colony and visited Australia prior to immigrating. The same trend was confirmed with Canadian census data; those with more exposure to English and/or French prior to migration were more proficient in English and/or French (Chiswick & Miller, 2001). Moreover, Espenshade and Fu (1997) who investigated the pre- and post- migration exposure effects on language proficiency in the U.S. context found that immigrants from English-speaking countries had significant advantages in English proficiency, and immigrants from Arabic-speaking countries had higher levels of English proficiency than those from Spanish-speaking countries. Overall, the effects of language of country of origin remained significant after all other background factors were controlled in their full regression

model. Thus, I expect that *immigrants' exposure to destination language prior to migration is positively related to their destination language proficiency*. However, the effect might be short-term because there is evidence that the country of origin effect decreases in intensity as the time in the destination increases while age at migration, length of stay in the destination country, and educational attainment tend to have more lasting effects on their destination language proficiency (Espenshade & Fu, 1997; Chiswick, Lee, & Miller 2002). This thesis uses cross-sectional data, thus this temporal effect cannot be empirically tested.

3.2.2.2. Linguistic Distance (Country of Origin-Destination Effect: efficiency)

Immigrants from certain countries of origin appear to be more fluent in the destination language than others. Even if one instinctively knows that English is closer to German than it is to Japanese, it is difficult to state how much closer or farther it is. To identify such a relationship, linguists have developed “language trees.” However, the problem of language trees is that they may be useful in tracing the evolution of languages and the historical relationship between languages, but they do not provide an effective quantitative indicator that measures linguistic distance, which is the distance between the immigrant’s origin language and the destination language (Chiswick & Miller, 2004). The difficulty of quantifying linguistic distance is well illustrated in the *Cambridge Encyclopedia of Language*:

The structural closeness of languages to each other has often been thought to be an important factor in FLL (foreign language learning). If the L2 [the foreign language] is structurally similar to the L1 [the original language], it is claimed, learning should be easier than in cases where the L2 is very different. However, it is not possible to correlate linguistic difference and learning difficulty in any straightforward way, and even the basic task of quantifying linguistic difference proves to be highly complex, because of the many variables involved (Crystal, 1987, p.371).

In the quest for a scalar measure of linguistic distance, Chiswick and Miller (1998, 2004) developed an index from “a measure of the difficulty, for English-speaking Americans, of learning a foreign language” with an assumption that the language is more distant if it is more difficult to learn (Chiswick & Miller, 2001, p.407). Furthermore, from an economic perspective, a greater linguistic distance between the origin language and the destination languages implies a higher cost of acquiring destination language proficiency (Chiswick & Miller, 2001).

Previous studies on immigrants’ linguistic adjustment to the destination country demonstrate that the country of origin effects have a significant impact on this adjustment process even after controlling for the immigrant’s personal characteristics. For instance, Beenstock, Chiswick, and Repetto (2001) found that immigrants from Arabic-speaking countries became the most proficient in Hebrew while immigrants from English-speaking origins were the least proficient in Hebrew among

immigrants in Israel⁴¹. The authors claimed that the variation in the outcome among different language groups can be explained by linguistic distance, highlighting the closest linguistic distance between Hebrew and Arabic (both being Semitic languages). Similarly, linguistic distance was confirmed to be negatively associated with their destination language (English) use at home and its proficiency among adult immigrants in the United States and Canada (Chiswick & Miller, 2004) and among immigrants to Australia (Chiswick, 2008; Chiswick & Miller, 1995). Moreover, empirical evidence suggests that linguistic distance influences the choice of destination among immigrants and the language they adopt in multilingual destination countries. For example, among immigrants to Canada, immigrants with a Romance language background tend to settle in Quebec and are more likely to become French-speakers while those from other (non-English) linguistic origins are more likely to become English-speakers (Chiswick & Miller, 1994). Thus, I expect that *immigrants whose language of origin is linguistically closer to the destination language attain a higher level of proficiency in the destination language*.

However, counterarguments also exist. Carliner (2000) used data from the 1980 and 1990 censuses to study the determinants of English proficiency among immigrants from seven different categories of countries of origin: (1) English-speaking countries; (2) Mexico; (3) other Western Hemisphere countries; (4) other continental European countries; (5) Africa and the Middle East; (6) South Asia; and (7) East Asia. His main findings were:

Other things equal, Mexican immigrants are 32 percentage points less likely than continental Europeans (the reference group), to speak English fluently. Immigrants from other Western Hemisphere non-English speaking countries are about 2 percentage points less likely to be fluent, and East Asians are 17 percentage points less likely. However, immigrants from Africa and the Middle East, and especially from South Asia, are more likely than otherwise similar continental Europeans to speak only English or to speak it well (Carliner, 2000, p.175).

His analysis showed large group differences in English proficiency by region of birth, even after statistically controlling for education, gender, age at migration, and years in the United States. Based on the evidence found, he argued that the large group differences in destination language skills could be better explained by a stronger correlation with geographic distance, rather than with linguistic distance.

3.2.2.3. Geographic Distance (Country of Origin-Destination Effect: economic incentives and efficiency)

Economists who employ geographic distance as a proxy of economic incentives usually find supporting evidence for its positive correlation with immigrants' destination language proficiency. Chiswick and Miller (2001) reported that those migrating from a geographically more distant country

⁴¹ The study was carried out to identify the determinants of Hebrew language proficiency among immigrants in Israel using two different datasets: (1) the 1972 Census of Israel; and (2) the Immigration Absorption Surveys of the 1970s (panel data). The study particularly focused on surveying the effects of linguistic distance and country of origin on destination language proficiency. The result confirmed that linguistic distance and country of origin both matter for proficiency in Hebrew (Beenstock, Chiswick, & Repetto, 2001).

of origin to Canada were more likely to attain a higher level of language proficiency. Chiswick (1999) explains the reality using the logic of the economics of language: geographic distance of the country of origin from the destination implies a greater cost of migrating; a greater cost of migrating entails the tendency that immigrants are more favorably self-selected (efficiency) and distance is related to a lower expectation of return migration; and a lower expectation of return migration is associated with a larger incentive to invest in destination language skills. Therefore, based on the theoretical claim and empirical findings, it can be hypothesized that *the greater the geographic distance between the country of origin and the country of destination, the more proficient immigrants become in their destination language; conversely, the greater the geographic distance between the country of origin and the country of destination, the less proficient immigrants become in their destination language.*

However, unlike the Canadian case, some contrary findings exist among the immigrants to the United States, and the effect of geographic distance has shown incoherent results. For instance, Jasso and Rosenzweig (1990) reported a negative correlation between geographic distance and language proficiency among the immigrants to the US. Correspondingly, Van Tubergen and Kalmijn (2005) found a negative correlation in their cross-country data analysis, even after controlling for other possible effects. Furthermore, a sociological analysis conducted by Espenshade and Fu (1997) observed no significant effects of geographic distance on immigrants' destination language proficiency. In other words, the economists' argument that economic incentives affect immigrants to invest in destination-specific skill acquisition has not been fully corroborated, and thus, the above authors with a sociological background generally conclude that exposure effects on immigrants' language acquisition have a considerably greater impact. One of the economists' counterarguments and explanations for the incoherency is that when other distance related factors (e.g., linguistic, cultural, and social distance) are put into a model, they may interact and give unsystematic results⁴² (Chiswick & Miller, 2001). Therefore, linguistic distance and geographic distance remain as the controversial empirical measures among many researchers.

3.2.2.4. Social Distance: "Neighborhood" Characteristics (Country of Destination Effect: exposure)

⁴² For example, Chiswick and Miller (2001) build three different models to separately examine the effects of birthplace and of birthplace dummy variables: a base model (without birthplace dichotomous variable or variables with behavioral interpretations (geographic distance, linguistic distance, minority language concentration rate, refugee, and former British, American, or French colony), a model with birthplace, and a model with the five variables with behavioral interpretations. "They show that the addition of the five variables with behavioral interpretations (Table 5) substantially increases the fit over the equations without these variables (Table 2). The improvement in fit is even greater if these five variables are replaced by a set of birthplace dichotomous variables (Table 3). In the analysis for Canada as a whole, the pseudo-R² is 0.002 when no birthplace variables are present (Table 2); it increases to 0.245 (Table 5), but only to 0.267 when they are replaced by the birthplace dichotomous variables (Table 3). The five behavioral variables account for about two-thirds of the explanatory power attributable to the birthplace dichotomous variables. Thus the models containing the birthplace variables provide a better "fit"; this is most important for prediction, but is clearly inferior for testing hypotheses and for understanding the underlying behavioral phenomena" (Chiswick & Miller, 2001, p.400-401).

Social distance (or neighborhood characteristics) is a concept widely used for measuring the intensity of exposure per unit of time in the destination. The empirical measures include: the minority language concentration rate⁴³, size of linguistic community, and ethnic concentration rate of immigrants' area of residence. They are all not-so-perfect proxy measures to quantify the concept, but they are typically used in the empirical analyses based on the following reasoning: a high level of language/ethnic concentration rate and a large size of linguistic community imply greater ease of avoiding use of the destination languages, thereby lowering the magnitude of exposure effects of destination language (Chiswick & Miller, 2001). Empirical evidence found from varied national census and survey data (e.g., Australia, the U.S. Canada, and Israel) suggests that fluency in the destination language increases less with minority language concentration rate (Chiswick & Miller, 1995) and significantly decreases with living in a linguistically or ethnically concentrated area, such as ethnic enclaves (Chiswick, 2008). Also, barriers to successful linguistic attainment are particularly high for linguistically and geographically isolated ethnic groups⁴⁴ (Fennelly & Palasz, 2003). Therefore, I expect that *the greater the social distance between the immigrant group and the native population in a destination country, the less proficient immigrants become in their destination language*⁴⁵.

4. Psychological View on the Determinants of Second Language Acquisition

The aim of introducing the psychological view to the mainstream economic view on the determinants of immigrant language acquisition is to offer better understanding to the question many of us ask at least once in life: "Why do individuals differ so much in second language attainment success?" (Segalowitz, 1997, p. 85; cited in Dornyei, 2005, p.1). The history of second language (L2) studies has shown that individual differences such as personality, language aptitude, and motivation cause wide variations in language learning. These psychological factors are known to play a significant role in determining the level of linguistic outcome and there is a considerable amount of literature on them. I recognize the relevance of including as many potential factors as possible in a model of second language acquisition, yet such inclusion of vast amounts of literature is most likely to add uncontrollable complexities and divert the focus of this thesis. Therefore, the literature review here focuses on the affective dimension (e.g., attitudes, orientations, and motivations) of second language acquisition⁴⁶. I will provide a concise overview of the research field with three historical

⁴³ "Measures of the language concentration of individuals with whom the immigrant shares a mother tongue have been developed by Chiswick and Miller (1995, 2007a), and are incorporated into the estimating equation in the form of a measure of minority language concentration" (Chiswick & Miller, 2007, p.7).

⁴⁴ According to Fennelly and Palasz (2003) social distance explains the low level of English proficiency among Hmong in the US.

⁴⁵ Social distance (neighborhood characteristics) is not included in the empirical model; therefore, the hypothesis is not empirically tested.

⁴⁶ In this thesis, I am interested in examining to what extent learners' attitudes and motivations play a role in generating variation in linguistic outcomes. Yet, as described in the modeling strategy, I will bring personality variables into play when developing the economic-psychological modeling frame based on the causal paths

phases: (1) the social psychological period (1959-1990); (2) the cognitive-situated period (during the 1990s); and (3) the process-oriented period (from 2000)⁴⁷.

4.1. L2 Motivation Research

4.1.1. Phase 1: The Social Psychological Period (1959-1990)

Socio-Educational Model of Second Language Acquisition

The study on L2 motivation, that is essentially the motivation to learn a second language, is known to have a long history. The traditional L2 motivation research prior to the period focused solely on individuals. A new social psychological approach emerged to the research domain in an effort to supplement the existing theoretical framework with the inclusion of social or community-level aspects. Canadian social psychologists, most notably Wallace Lambert and Robert Gardner (1959, 1972), made the first move toward the theoretical shift. They were interested in surveying the Canadian social condition characterized by the “often confrontational coexistence of the Anglophone and Francophone communities” (Dörnyei, 2005, p.67). They regarded second languages as mediators between different linguistic communities and viewed the second language learning motivation as a principal factor in enhancing or hindering intercultural communication (Gardner & Lambert, 1972).

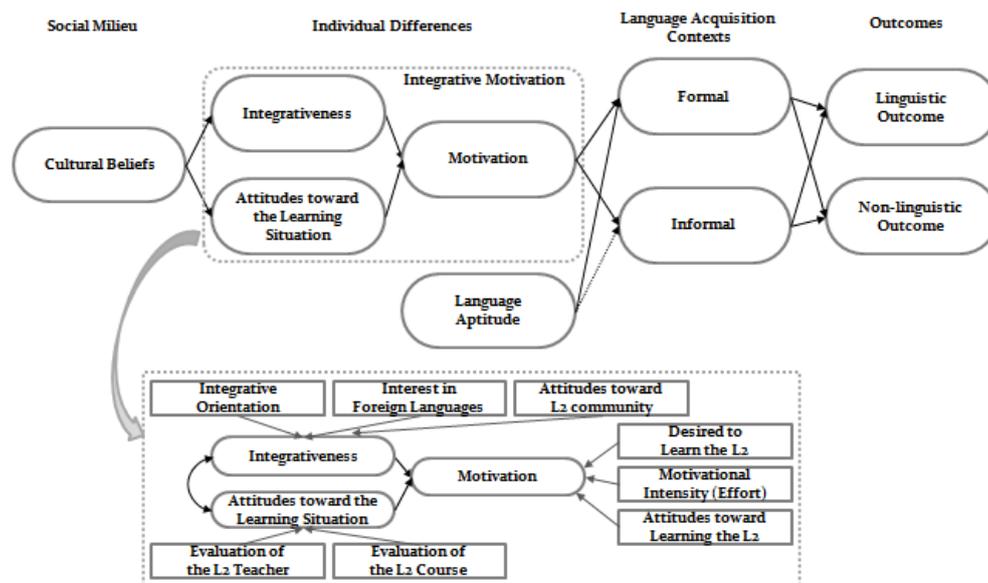


Figure 2-3: Gardner’s Socio-Educational Model of Second Language Acquisition & Conceptualization of the Integrative Motivation

(Source: Gardner, 1985, p.153 [Top]; Dörnyei, 2005, p.69 [Bottom])

The socio-educational model of second language acquisition proposed by Gardner (1985) postulates that language aptitude and integrative motivation affect second language acquisition. Figure 2-3 shows a schematic representation of the model (top) and the conceptualization of

illustrated in the internal structure of language learning motivation. With regard to language aptitude, I will not do the literature review on the subject, but language aptitude will be placed as a cognitive factor in the modeling framework to make interconnections with other variables.

⁴⁷ The description of the L2 motivation research with three historical phases follows the approach used by Dörnyei (2005).

integrative motivation⁴⁸ (bottom). The model emphasizes the affective dimension and proposes that the motivation to learn a second language is characterized by three aspects, the desire to achieve a *goal* (or learn the language), the *effort* expended to learn the language (or motivational intensity), and the *pleasure* associated with a task (attitudes toward learning the language). This tripartite complex is what Gardner refers to as motivation⁴⁹. Thus, simply working hard is not enough to signify motivation. Likewise, enjoying the activity in and of itself does not indicate motivation. A motivated individual is one who desires to achieve a goal, works hard to achieve that goal, and enjoys the activity involved.

The model proposes that motivation is influenced by at least two attitudinal constructs: integrativeness and attitudes toward the learning situation. Gardner (2001) characterizes integrativeness as follows: “At one level, this implies *an openness to, and respect for other cultural group* and ways of life. In the extreme, this might involve complete *identification with the community* [...], but more commonly it might well involve *integration within both communities*” (p.5; italics added). Attitudes toward the learning situation is the learners’ reactions to the classroom environment, such as language teacher, language course, and materials. Gardner’s findings demonstrated that the language learning involves both aptitude and motivation components, and he concluded that the basis of motivation involves the extent to which the individual is able or willing to identify with the other ethnolinguistic community. This implies that in-group identification with the destination language community or integrativeness influences linguistic outcome. Therefore, it can be hypothesized that *the more immigrants demonstrate their willingness to integrate or identify with the destination language speakers/community (integrativeness), the more they are likely to acquire the destination language*. However, later research on the relationship between integrativeness and language learning outcome has shown inconsistent results. In the following, first, I briefly describe the criticisms on Gardner’s theory, and then turn to some other research findings to seek alternatives.

Criticisms and Alternate Theoretical Approaches

Gardner’s theory has been well acclaimed in the field of second language acquisition, but the popular interpretation has been somewhat different from the real theory because many researchers often pay attention only to two motivational components: (1) integrativeness or integrative orientation or integrative motivation⁵⁰, which relates to an interpersonal or affective dimension; and (2) instrumentality or instrumental orientation or instrumental motivation, which is associated with a practical or utilitarian dimension. This oversimplification of motivation into the instrumental-

⁴⁸ ‘Integrative motivation’ is a complex multi-componential construct, comprised of three main constituents: ‘integrativeness,’ ‘attitudes toward the learning situation,’ and ‘motivation.’ ‘Motivation’ is seen as the driving force of motivated behavior, including effort, desire, and affect (Gardner, 2001); in other words, it concerns “a central motivational engine that needs to be ignited by some specific learning goal such as an integrative orientation” (Dörnyei, 2009, p.23).

⁴⁹ ‘Motivation’ and ‘integrative motivation’ are conceptually different; the ‘motivation’ is a subcomponent the overarching construct of ‘integrative motivation’ (see *Figure 2-3*).

⁵⁰ In Gardner’s (1985) model, the term ‘integrative’ appears three times at three different levels of abstraction: integrative orientation, integrativeness, and integrative motive/motivation. For the conceptual clarification, see *Figure 2-3*.

integrative dichotomy is partly related to the terminological difficulty (especially, the use of ‘integrative’ three times at three different levels and unclear conceptualization of ‘motivation’), which has caused a great deal of confusion and led to misunderstandings, and is partly attributable to the intellectual preference of applied linguistics, which traditionally classifies complex psychological variables into simplified categories (Dörnyei, 2005).

Another limitation of the socio-educational model is the constant mismatch between the theory and empirical research findings. Gardner and Lambert (1972; cited in Noels et al. 2000) hypothesized that individual with an integrative orientation would show a stronger motivation in learning L2, and thus, attain better L2 competence. Nevertheless, the actual empirical findings had been inconsistent with Gardner’s original interpretation of integrativeness/integrative motivation, and several scholars had questioned its validity and relevance (Dörnyei, 2005, 2009). Those critics had typically argued that motivation should be studied from more diverse perspectives because Gardner’s theory ignored a number of important variables in motivational psychology, such as extrinsic rewards, self-efficacy, expectancy, and attributions⁵¹ (MacIntyre, MacMaster, & Baker, 2001). Accordingly, other theories such as self-determination, attribution, and task motivation, had surfaced to complement the limitations and expand the model. These theories put more emphasis on intrinsic and extrinsic motivation and the role of attribution of past success and failures in shaping motivational tendencies (Dörnyei, 2005; Ghapanchi, Khajavy, & Asadpour 2011). Moreover, as Dörnyei (2005) points out, Gardner’s theory has remained rather unchanged over time and “this lack of development contrasts with the dynamic changes that took place in mainstream motivation research in the 1980s following the ‘cognitive revolution’ in psychology” (p.71). The time was ripe for the dawn of a new research phase.

4.1.2. Phase 2: The Cognitive-Situated Period (during the 1990s)

Two big trends at the turn of the 1980s and 1990s characterize the cognitive-situated period in L2 motivation research. First, the change in the air was brought by the desire to catch up with progresses made in motivational psychology and to better understand L2 motivation. By importing some of the major concepts evolved during the cognitive revolution in psychology, motivational psychologists raised the importance of cognitive aspect of motivation (e.g., individual abilities, possibilities, potentials, limitations, past performance, and task/goal attainment) and convincingly argued the effects of the cognitive variables. Second, the shift was made by the desire to narrow down the social psychological macro-perspective of L2 motivation to more cognitively oriented micro-perspective of L2 motivation. This move did not mean that researchers rejected the work of the

⁵¹ Gardner and Tremblay (1994) responded to these criticisms that the socio-educational model of second language acquisition makes a distinction between instrumental and integrative orientations, not motivations. Even after the response, the conceptual abstraction of the model had remained. Integrative motivation is the essential and foremost concept in the model, but instrumental motivation is not discussed in his theory and appears only in the Attitude/Motivation Test Battery (AMTB: It is a multicomponential motivation questionnaire made up of over 130 items; the questionnaire is reprinted in the Appendix of Gardner, 1985).

previous period, but rather it needed to somehow be supplemented by the motivations associated with the learners' immediate learning contexts. Accordingly, the focus of analysis is geared towards situation-specific motives to extend understandings of motivational features in actual language learning situations (such as classrooms). This newly emerged research had also found various situation-specific resources and tools in classroom contexts (e.g., the quality of language teaching programs, perceptions of classroom practices, and classroom/school learning experiences) could override attitudinal dispositions (Dörnyei, 2003, 2005).

In the following, I introduce some of the L2 motivational theories developed during the period. This thesis focuses not on situation-specific motives but on generalized motives that stem from a succession of immigrants' past experiences in the social world. It is because the target population is immigrants who are living in the real social world, rather than language learners in formal classroom settings. Therefore, those immigrants' language learning takes place in a variety of social contexts both formally and informally, and chances of informal learning are much more likely once they are in the country of destination. Furthermore, I use existing survey data for the empirical analysis, which makes it almost impossible to operationalize situation-specific motives that are rooted in the immediate learning environment (e.g., language classroom). This is because the measures in the survey questionnaires are not constructed for the analysis while operationalization of generalized motives in macro-level settings is feasible by using proxy variables.

Self-Determination Theory

Self-determination theory (Deci & Ryan, 1985, 2002) focuses on a variety of intrinsic and extrinsic motivations (Dörnyei, 2005). The theory was applied to the L2 motivation to connect the various intrinsic and extrinsic components in motivational psychology to orientations in L2 research, and to study how environmental influences (such as classroom practices) affect the learners' level of self-determination. The researchers found that Gardner's integrative orientation was strongly related to more self-determined types of motivation (i.e., identified regulation⁵² and intrinsic motivation⁵³) and instrumental orientation was highly associated with external regulation⁵⁴ (Noels, 2001b). Based on these findings, Noels (2003) later proposed a motivation construct consisting of three substrates: (1) intrinsic reasons (e.g., learning language for fun, engaging, or challenging); (2) extrinsic reasons (e.g., learning language due to external pressures); and (3) integrative reasons (e.g., learning language

⁵² Noels, Pelletier, Clement, and Vallerand (2000) describe the '*identified regulation*' as "[t]he person engages in an activity because he/she highly values and identifies with the behavior, and sees its usefulness (e.g., learning a language which is necessary to pursue one's hobbies or interests)" (cited in Dörnyei, 2005, p.78).

⁵³ Noels, Pelletier, Clement, and Vallerand (2000) describe the three aspects of the '*intrinsic motivation*' as: (1: *knowledge*) "doing the activity for the feelings associated with exploring new ideas and acquiring knowledge"; (2: *accomplishment*) "sensations related to attempting to master a task or achieve a goal"; and (3: *stimulation*) "sensations stimulated by performing the task, such as aesthetic appreciation or fun and excitement" (cited in Dörnyei, 2005, p.78).

⁵⁴ Noels, Pelletier, Clement, and Vallerand (2000) describe the '*external regulation*' as "[t]he least self-determined form of extrinsic motivation, coming entirely from external sources such as rewards or threats (e.g., teacher's praise or parental confrontation)" (cited in Dörnyei, 2005, p.78).

for positive contact with L2 group). With regard to the classroom situational influences, a consistent pattern was found: the more learners perceived their teachers as controlling, the less they were intrinsically motivated (Noels, 2001a). In other words, there is a positive correlation between learners' sense of autonomy (self-determination) and intrinsic motivation.

Attribution Theory

The unique contribution of attribution theory to L2 motivation is that it allowed establishing a causal relationship between people's past experiences and future achievement efforts by introducing causal attributions as the mediators. The theory suggests that the subjective reasons to which people attribute their past successes and failures significantly influence their motivational disposition underlying future action (Weiner, 1992; cited in Dörnyei, 2005). Applying the theory to motivation in language studies, Ushioda (2001) found that positive motivational thinking is positively related to attributing positive L2 outcomes to personal ability or other internal factors (e.g., innate ability) and attributing negative L2 outcomes to temporary faults that can be overcome (e.g., inadequate learning strategies, insufficient effort). Evidence indicates that attributions play an essential role in shaping L2 motivation, and a wide range of attributional factors are related to structural/contextual factors (e.g., classroom environment, exposure to the language, support from others) and cognitive factors (e.g., interest, learning strategy) (Dörnyei, 2005). Thus, the study of attribution is expected to provide possible explanations for the high rate of second language learning failure worldwide (Ushioda, 2001). Further research is much anticipated to provide hints to improve the current second language learning situation.

Task Motivation

Task motivation became popular among second language acquisition scholars because it permits them to divide the complex L2 learning process into discrete parts with clear boundaries, thereby making each part a researchable behavioral unit. Thus, task motivation focuses on analyzing the motivational attributes of language learning tasks. The theory views task motivation not merely as the sum of various sources of motivational influences but as "a dynamic *task processing system* that consists of three interrelated mechanisms: *task execution*, *appraisal*, and *action control*" (Dörnyei, 2005, p. 8; see Figure 2-4). Task execution means the learners' engagement in task-supportive learning activities is in accordance with the action plan. In the appraisal process, the learners' process the multitude of stimuli coming from the outer world and appraise the progress made by comparing the actual learning outcomes with the predicted or expected outcomes that alternative action sequences would offer. The action control process refers to the self-regulatory mechanisms that sustain or enhance learning-specific action. In sum, the dynamic interplay of the three mechanisms characterizes task motivation: "When learners are engaged in executing a task, they continuously appraise the process, and when the ongoing monitoring reveals that progress is slowing, halting, or backsliding, they activate the action control system to save or enhance the action" (Dörnyei, 2005, p. 81). The main contribution of task motivation to the development of L2 motivation theory is the

emphasis it puts on the dynamic characteristics of motivation. This important aspect of motivation builds a bridge that takes the research to the next evolutionary phase.

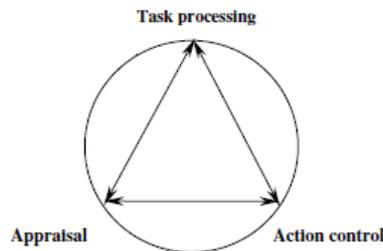


Figure 2-4: Three Mechanisms of the Task Process System
(Source: Dörnyei, 2005, p.82)

4.1.3. Phase 3: The Process-Oriented Period (from 2000)

Another paradigm shift took place to compensate a commonly neglected aspect of motivation—“ups” and “downs” of motivation over time. While the dynamic nature of motivation was indicated in task motivation during the previous cognitive-situated period, there was an insufficient temporal awareness in L2 motivation research. The incorporation of a temporal perspective into the dynamic language learning process was the main aim of the new theoretical development. Dörnyei and Ottó (1998) introduced a process model of L2 motivation to operationalize the process-oriented conception of L2 motivation, which is not a static but a dynamic attribute that fluctuates at different learning stages. In brief, the model divides the motivational process into three temporal stages (i.e., preactional stage, actional stage, and postactional stage) and describes “how initial *wishes* and *desires* are first transformed into *goals* and then into operationalized *intentions*, and how these intentions are *enacted*, leading (hopefully) to the accomplishment of the goal and concluded by the final *evaluation* of the process” (Dörnyei, 2005, p. 84; see Figure 2-5).

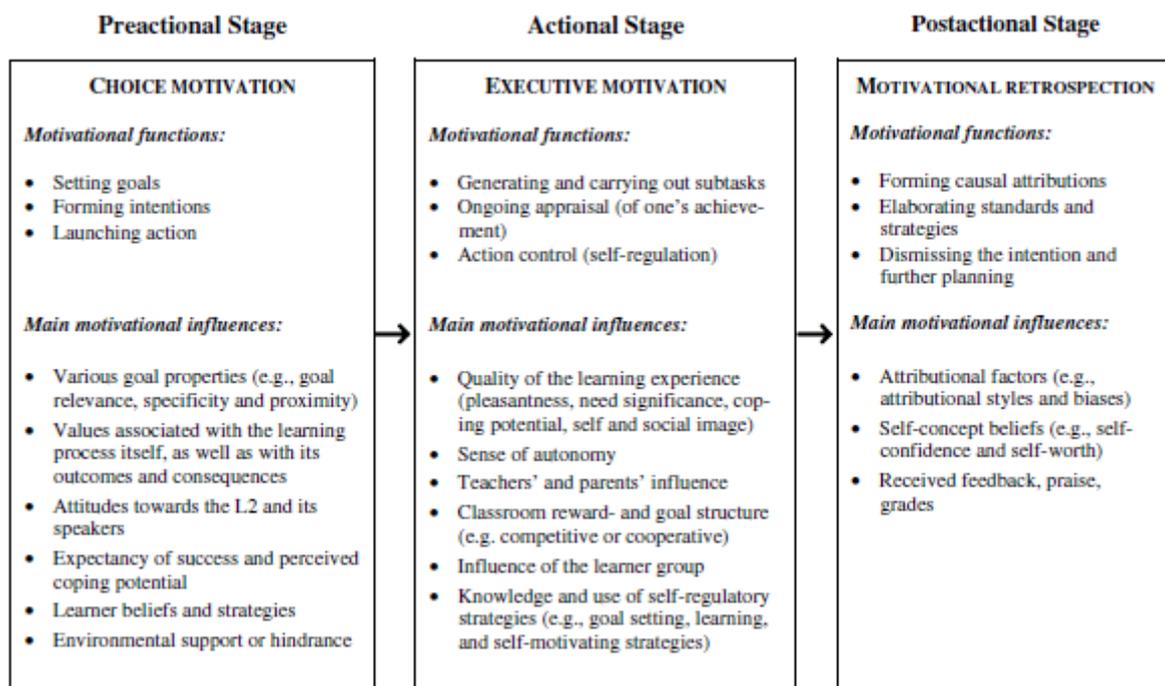


Figure 2-5: A Process Model of L2 Motivation
(Source: Dörnyei, 2005, p.84)

The theory's temporal perspective has also opened possibilities to bring different or even seemingly contradictory L2 motivation theories together by relating each of the theoretical components to different phases of the motivational process. As task motivation illustrates its dynamic feature of motivation, the three actional stages can be associated with different types of motivation. In view of that, it appears Gardner's socio-educational model is useful in explaining how motivation is generated at the initial phase while the situation-specific approaches (e.g., self-determination theory) are helpful in explaining how motivation is maintained when actions are being executed in a situated context. Attribution theory may give insights to the last stage of learners' retrospective evaluation. All of the theoretical developments in psychology on L2 motivation are more or less attempted to complement and/or expand Gardner's socio-education model of second language acquisition. Albeit numerous advances and achievements made in the field, dissatisfaction with the classic model did not dissipate and there was a growing need for an alternative that goes beyond the existing conceptual paradigm.

4.2. Hypothesis Development

4.2.1. Developing an Economic-Psychological Modeling Frame for Immigrant Language Acquisition

In this section, an economic-psychological modeling frame for immigrant language acquisition is formulated (see Figure 2-6). The initial step is implemented by introducing Gardner's socio-educational model of second language acquisition as the keystone of the psychological model and placing it in parallel with the economic model developed earlier (see Figure 2-2). Afterward, I will transform the initial modeling frame by integrating relevant variables that are known to affect second language acquisition to derive empirically testable hypotheses. The internal structure of language learning motivation investigated by Csizér and Dörnyei (2005)⁵⁵ serves as the basis for the

⁵⁵ Csizér and Dörnyei (2005) evaluated a proposed theoretical model of the internal structure of language learning motivation using survey data collected in Hungary from 8,593 students aged between 13 and 14 in 1993 and 1999. The survey questionnaire targeted students' attitudes towards five target languages: English, German, French, Italian, and Russian. The model was tested using structural equation modeling (SEM) for it is the statistical technique appropriate for empirically confirming grand theories or testing comprehensive models with multitude of interrelated variables. They submitted the data from different waves of the survey to structural equation modeling, treating each language and each year separately. The results showed that the structure underlying the examined variables was very stable across time and language and the structural equation models displayed fine goodness of fit with the data (Csizér & Dörnyei, 2005; Dörnyei, 2009). The following instrument items were adopted from established motivation questionnaires with sufficient validity and reliability coefficients to ensure their appropriate psychometric properties: (Csizér & Dörnyei, 2005): *Self-Confidence*: (1) Sure to be able to learn a L2 well; (2) Would feel anxious to speak a L2; (3) Learning a L2 is a difficult task
Vitality of the L2 Community: (1) Country: developed; (2) Country: important
Attitudes toward the L2 Speakers/Community: (1) Travel to country; (2) Meet L2 speakers; (3) Like L2 speakers
Integrativeness: (1) Like L2; (2) Get to know the culture; (3) Become similar to L2 speakers
Milieu: (1) People around me think it is good to know a L2; (2) L2s are important school subjects; (3) Parents think L2s are important school subjects; (4) I will feel less Hungarian when learning L2s.
Cultural Interest: (1) Like films; (2) Like TV programs; (3) Like magazines; (4) Like pop music
Instrumentality: (1) Become knowledgeable; (2) L2 important in the world; (3) Useful for travel; (4) Useful for career
Intended Effort: The amount of effort willing to put into learning a L2 (a representation of the magnitude of motivated human behavior)

transformation (see Figure 2-7 for their final model; the footnote for a summary of the study and instrument items). In the following, I will first give a brief summary of the L2 motivational self system on the basis of which the theoretical model of the internal structure of language learning motivation is built. Second, I will develop hypotheses based on previous empirical findings and examine how cognitive/personality-related variables may be linked to other elements within the proposed modeling frame. Lastly, I will present the transformed modeling frame to show the changes made during the hypothesis development process.

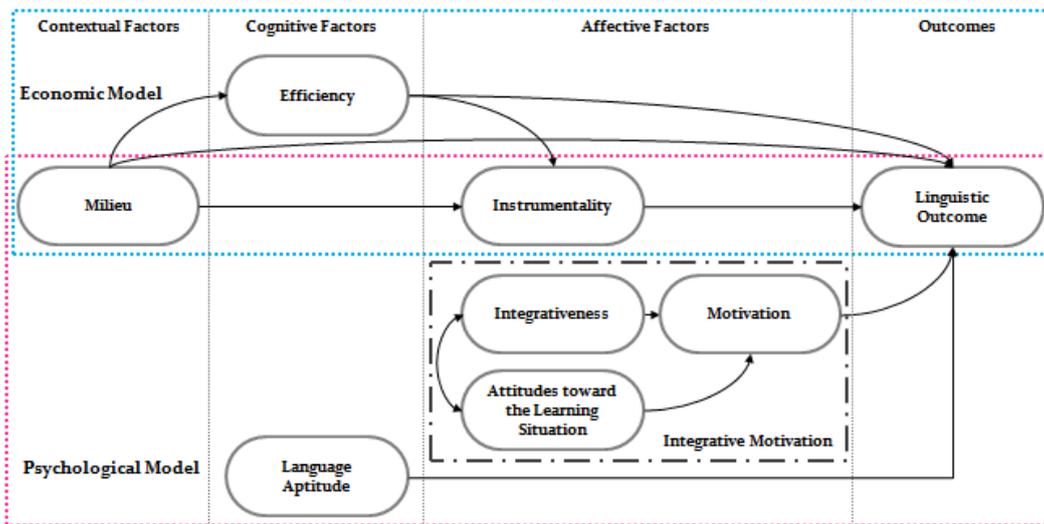


Figure 2-6: An Initial Economic-Psychological Modeling Frame for Immigrant Language Acquisition

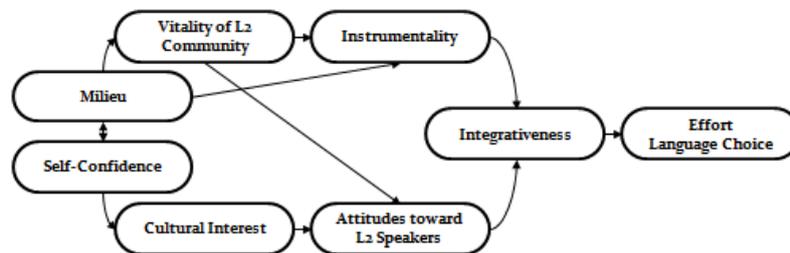


Figure 2-7: Internal Structure of Language Learning Motivation
(Source: Csizér & Dörnyei, 2005, p.28)

4.2.2. L2 Motivational Self System

A growing dissatisfaction with the highly influential L2 motivation concept of integrativeness/integrative motivation raised awareness for receptualization. The process began through the convergence of two related fields of psychology, cognitive-oriented motivational psychology (e.g., self-determination theory or goal theories) and psychological research on the self. Dörnyei (2005) proposed L2 motivational theory, the so-called “L2 motivational self system,” based on his firm belief that “a foreign language is more than a mere communication code that can be learnt similarly to other academic subjects, and have therefore typically adopted paradigms that linked the L2 to the individual’s personal ‘core,’ forming an important part of one’s identity” (Dörnyei, 2009,

Language Choice: Students were asked to name three languages they were intended to study the next school year (a representation of the direction of motivated human behavior)

p.9). He tried to move beyond integrative disposition⁵⁶ and find a way to incorporate Gardner's original concept of *identification process* with the *L2 community* into a new interpretation paradigm, "*identification process* within the individual's *self-concept*" (Dörnyei & Csizér, 2002, p.456). During the actual theorizing process, he found a promising way forward in psychological research on the self and credited heavily to some of the major concepts, such as "*possible selves*"⁵⁷ developed by Markus and Nurius (1986) and "*ideal self*"⁵⁸ and "*ought self*"⁵⁹ originally introduced in Higgins' (1987) *self-discrepancy theory*⁶⁰.

The idea for the reconceptualization originated from his personal realization that emerged in the midst of large-scale Hungarian longitudinal survey data analysis⁶¹ to provide a meaningful interpretation of the observed pattern. He was also well aware of the academic reality that reinterpretation of the key L2 motivational variables was crucial for bridging the theory-practice gap and drawing a fuller and clearer picture on the subject matter. He shared the experience later in his publication that "[l]anguage learning is a sustained and often tedious process with lots of temporary ups and downs, and I felt that the secret of successful learners was their possession of superordinate *vision* that kept them on track" (Dörnyei, 2009, p.25; italics added). He saw a possibility for reconceptualizing 'integrativeness' as the 'Ideal L2 Self.'

⁵⁶ In broad terms, an integrative disposition concerns "a positive interpersonal/affective disposition toward the L2 community and the desire for affiliation with its members. [...] in the extreme, it might involve complete identification with the community [...]. Thus, a core aspect of the integrative disposition is some sort of a psychological and emotional *identification*." (Dörnyei, 2005, p.96)

⁵⁷ Possible selves represent "individuals' ideas of what they *might* become what they *would like* to become, and what they are *afraid* of becoming, and thus provide a conceptual link between cognition and motivation" (Markus & Nurius, 1986, p.954; italics added). Also, positive 'possible selves' are closely related 'visions' or 'imaginings' (e.g., imaging achieving one's desired goal). Olympic athletes and top sportspeople in general share the following account of the motivation disposition of a former Olympic athlete, Marilyn King: "[...] most people think that Olympic athletes have a lot of *will-power* and *determination* and that's what enables them to work so hard. [...] it's not that; it's the vision. It's the power of an image that inspires great passion and excitement [...]" (Murphey, 1998, p.62; cited in Dörnyei, 2005, p.99). Markus & Ruvolo (1989) thus articulates that "imaging one's own actions through the construction of elaborated possible selves achieving the desired goal may thus directly facilitate the translation of goals into intentions and instrumental actions" (p.213). A more powerful motivational state is generated through a dynamic balance between one's expected and feared selves than either an expected self or a feared self alone (Markus & Ruvolo, 1989).

⁵⁸ The ideal self refers to the representation of the attributes that someone would ideally like to possess (i.e., representation of hopes, aspirations, or wishes). Its predilection is associated with ideal self-guides that have a *promotion* focus, concerned with hopes, aspirations, advancements, growth, and accomplishments (Higgins, 1998).

⁵⁹ The ought self refers to the attributes that one believes one ought to possess (i.e., a representation of sense of duty, obligations, or responsibilities). Its predilection is associated with ought self-guides that have a *prevention* focus, regulating the absence or presence of negative outcomes, and are concerned with safety, responsibilities, and obligations (Higgins, 1998).

⁶⁰ Higgins' self-discrepancy theory (1987) postulates that people are motivated to reach a condition where their self-concept is coherent with their personally relevant self-guides. Accordingly, motivation in this sense involves the desire to decrease discrepancy between one's actual and ideal or ought selves. Higgins' work on selves precedes that of Markus and Nurius (1986); the latter authors acknowledging Higgins' contribution.

⁶¹ See Dörnyei & Csizér, 2002; Csizér & Dörnyei, 2005; Dörnyei, Csizér, & Németh, 2006 for the actual empirical research. The longitudinal survey data were collected amongst teenage language learners in Hungary in 1993, 1999, and 2004 involving more than 13,000 learners (Dörnyei, 2009). Structural equation modeling revealed a consistent relationship between the key variables of integrativeness, instrumentality, attitudes toward L2 speakers, and learning behavioral measures (Dörnyei, 2005, 2009).

Possible selves theory views vision, dream, or image of a desired future as the decisive factor that moves an individual from the present toward the future (Dörnyei, 2009). Similarly, Markus and Ruvolo (1989) notes: “imaging one’s own actions through the construction of elaborated possible selves achieving the desired goal may thus directly facilitate the translation of goals into intentions and instrumental actions” (p.213). Combining the possible selves theory (Markus & Nurius, 1986) with the *ideal self* and *ought self* from self-discrepancy theory (Higgins, 1987, 1998), the L2 motivational self system is comprised of the following three dimensions: (1) *Ideal L2 Self* that is an image of how L2 learners want to see themselves (in this case, as fluent L2 speakers), which is a powerful motivator that stems from the desire to reduce discrepancy between actual and ideal selves; (2) *Ought-to L2 Self* that is the characteristics that L2 learners believe ought to acquire due to obligations and responsibilities to avoid possible negative consequences; and (3) *L2 Learning Experience*⁶² relates to situation-specific motives in immediate learning settings (e.g., the impact of L2 teachers, peer group, and curriculum) (Dörnyei, 2005).

4.2.3. Adding Cognitive/Personality Factors

There are several personality measures frequently used in L2 research: Myers Briggs Type Indicator (MBTI), Eysenck Personality Questionnaire (EPQ), Five Factor Model (FFM), and Big Five Personality Model (Dörnyei, 2005; Ghapanchi, Khajavy, & Asadpour, 2011). Although defining the major stable dimensions of personality is a big advance made in personality psychology, these personality dimensions are commonly considered static individual characteristics and give little hint on dynamic doing side of personality. In other words, using static personality traits as explanatory variables in relation to language acquisition often fails to explain how individual differences in personality are translated into behavioral characteristics. Such unfavorable views have been widely shared by a number of researchers, and thus personality has never been popular in second language studies (Ożańska-Ponikwia & Dewaele, 2012) since its association with language acquisition has been controversial (Ghapanchi, Khajavy, & Asadpour, 2011). In search for possible explanations, according to Markus and Ruvolo (1989), “the traditionally static concept of self-representation was gradually replaced with a self-system that mediates and controls ongoing behavior, and various mechanisms [...] have been put forward to link the self with action” (cited in Dörnyei, 2005, p.98). Dörnyei (2005) also mentions that the link between personality and L2 learning is not direct, and is rather mediated by other factors like anxiety and perceived competence. In other words, “the static concept of self-representation” or personality trait needs to be considered together with other psychological variables to “link the self with action,” such as linguistic behavioral outcome.

Empirical evidence showed that L2 language proficiency was positively and significantly

⁶² “For some language learners the initial motivation to learn a language does not come from internally or externally generated self images but rather from successful engagement with the actual language learning process” [...] Thus, “[t]his component is conceptualized at a different level from the two self-guides” (Dörnyei, 2009, p.29).

related to ideal L2 self; students who had an ideal self-image as a competent L2 speaker were more proficient than those who had an ought-to self image and learned L2 (English) due to obligatory reasons (Dörnyei, 2009; Ghapanchi, Khajavy, & Asadpour, 2011). Furthermore, an ideal L2 self was found to be significantly correlated with integrativeness (Dörnyei, 2005; Taguchi, Magid, & Papi, 2009). These empirical results hint that motivation or self-image affects people's decision-making process and actual learning behavior. Ghapanchi, Khajavy, and Asadpour (2011) also proved in their research that an ideal L2 self was positively related to personality traits such as openness, extroversion, and conscientiousness. Moreover, other empirical findings found that openness and self-esteem were the significant predictors of destination language use among immigrants while openness was the best predictor of self-perceived language proficiency (Ożańska-Ponikwia & Dewaele, 2012). All in all, the history of second language acquisition research suggests that self-esteem and openness are the critical psychological factors that affect learning outcome. Thus, I expect that *self-esteem and openness are positively related to immigrants' destination language acquisition*.

However, due to the limited availability of indicators in the questionnaire used for the empirical analysis, I faced a difficulty in operationalizing *self-esteem* and *openness*. So, I tried to resolve the problem through a different approach, and looked for plausible ways to link crucial personality variables with other elements of L2 motivation. It was the internal structure of language learning motivation constructed by Csizér and Dörnyei (2005) that gave me the greatest insights for drawing potential causal links among them. The schematic representation of the model (Figure 2-7) informs that self-esteem⁶³ and openness⁶⁴ can be placed as the antecedents of attitudes toward L2 speakers⁶⁵ (particularly somewhere along the causal chain from milieu to attitudes toward L2 speaker). Here, I add the two personality-related variables of the internal structure of language learning motivation (i.e., self-confidence and cultural interest) to the initial economic-psychological modeling frame for immigrant language acquisition (see Figure 2-8). Through this strategic transformation with a hypothetical assumption of the full/partial mediation effects, 'attitudes toward L2 speakers' (operationalized as *attachment to host country people*⁶⁶) becomes the consequence and cumulative representation of the cognitive/personality variables. Hence, I hypothesize once again *positive attitudes toward L2 speakers (attachment to host country people) are positively related to*

⁶³ Although self-esteem and self-confidence are different concepts, self-esteem can be placed in the place of/near self-confidence in *Figure 2-8*. Having self-confidence means to trust in oneself, particularly, in one's ability; it is more cognitive in nature. Having self-esteem involves human cognition, yet it is above all, emotional appraisal of one's self-worth. Thus, the two concepts might not overlap completely, but the relationship between the two can be established.

⁶⁴ Openness can be situated as a cognitive/personality factor, somewhere along the causal chain from Milieu to attitudes toward L2 speakers in *Figure 2-8*.

⁶⁵ The original 'attitudes toward the learning situation' in Gardner's socio-educational model of second language acquisition (and the initial economic-psychological modeling frame for second language acquisition) is replaced with 'attitude toward L2 speakers.'

⁶⁶ I selected '*attachment to host country people*' among the empirically available indicators that adequately measure 'attitudes toward L2 speakers.' Thus, attachment to host country people is used for the empirical analysis to represent the concept of attitudes toward L2 speakers.

*immigrants' destination language acquisition*⁶⁷.

4.2.4. Transforming the Initial Economic-Psychological Modeling Frame

In this part, I will use John Bowlby's (1969) theory of attachment to derive an empirically testable hypothesis. Before introducing the theory, a brief note on Gardner's integrative motivation might be useful in understating the theoretical background of the hypothesized relationship. As mentioned earlier, integrative motivation is composed of three main constructs (i.e., *attitudes toward the learning situation* [which I replace it with *attitudes toward L2 speakers* in Figure 2-8], *integrativeness*, and *motivation*; see Figure 2-3). A bidirectional relationship exists between '*attitudes toward L2 speakers*' (*attitudes toward the learning situation* in Gardner's [1985] model) and '*integrativeness*,' and the two attitudinal variables are linked to *motivation*. A bidirectional arrow assumes the factors linked with the arrow have mutual effects onto the other. Conceptually speaking, the relationship between the empirical measures selected for the latent constructs (i.e., *attitudes toward L2 speakers* and *integrativeness*) may be unidirectional (one causing the other) or bidirectional (mutual influence)⁶⁸. Thus, the hypothesized relationship I derive based on Bowlby's theory of attachment can be better conceptualized if I apply Gardner's conceptual framework of integrative motivation. In other words, even though the selected empirical measures may represent distinct theoretical constructs, they all become part of a larger conceptual entity called '*integrative motivation*' within the new paradigm.

From an evolutionary perspective, attachment is considered a primal necessity for survival. John Bowlby (1969, 1982) theorized that attachment was an evolutionary adaptation designed to keep newborn infants close to its caregiver. Because the infants will not survive without a caregiver, they seek the attention of their caregiver, and cognitively, they create a schema of relationships based on whether the caregiver behaves sensitively and responsively to their needs. For example, when an infant cries for a bottle of milk and the caregiver comes with a bottle, the infant learns to connect the response of crying and the caregiver bringing the bottle. Through this process, the infant has formed what Bowlby (1982) calls an internal working model, where he/she can cognitively understand what to expect from an attachment figure. The internal working model can therefore be considered a helpful schema as well as a necessary tool for survival especially during infancy (Bowlby, 1982).

⁶⁷ Conceptually, motivation is situated between attitudes to L2 speakers and linguistic outcome. In the study conducted by Csizér and Dörnyei (2005), the latent variable was measured with two motivated behaviors (i.e., intended effort and language choice). However, this thesis uses existing large-scale survey data for the empirical analysis; measures for operationalizing motivation are unavailable in the survey questionnaire, thus motivation variable is omitted.

⁶⁸ In many cases, a bidirectional arrow between two variables indicates there is a third omitted factor. In social science, this statistical association is commonly referred to as 'spuriousness,' or the possibility that the observed association exists because both variables depend upon a third variable. According to Gardner's (1985) original conceptual model (*Figure 2-3*), 'cultural belief' is the third variable omitted in his empirical analysis. In other words, without operationalizing and including the omitted factor 'cultural belief' in the social milieu in the statistical analysis, the causal relationship between the two variables (and between/among other variables in the model) remains spurious.

Bowlby's attachment theory describes not only how attachments are formed in early human development, but also how these attachment relationships later form relationships in adulthood, such as romantic relationships and friendships. All things considered, the gist of the theory can be expressed that attachment is crucial for human survival because it is the connector between the self and others, the essence of any relationship.

Why attachment matters in language acquisition? It is because emotional and cognitive developments are intimately related, and cognitive development of infancy is basically about language learning. Accordingly, a number of hypotheses about the relationship between attachment and cognitive development have been generated from the attachment theory. In a series of meta-analyses on 32 studies, van IJzendoorn, Dijkstra, and Bus (1995) found that differences in intelligence did not play a major role in shaping attachment relationships, and differences in quality of attachment were not confounded with differences in intelligence. What mattered most to children are qualities that foster emotional safety and security. Consequently, emotionally secure children were inclined to be more competent in the language domain than insecure children. They concluded that "language development appears to be stimulated in the context of a secure attachment relationship because secure parents may be better 'teachers' and secure children may be better motivated 'students'" (van IJzendoorn, Dijkstra, & Bus, 1995, p.115). Therefore, it can be hypothesized that *the degree of emotional safety is positively related to immigrants' destination language acquisition*. However, it is almost impossible to find an indicator that directly measures the abstract construct like emotional safety in existing survey data. This type of operationalization problem is very common to many researchers who utilize existing data for their empirical analyses. One of the ways to resolve the challenge is to look for the measures that could serve as proxies. Accordingly, I use *attachment to host country people, social trust, and institutional trust* as the proxies or operationalized measures of immigrants' emotional safety toward the destination society. Hence, I hypothesize that *attachment to host country people, social trust, and institutional trust are positively related to immigrants' destination language acquisition*.

In this thesis, I extend the economic-psychological modeling frame for immigrant language acquisition to immigrant integration as I view the integration of immigrants into destination societies as the consequence of their destination language acquisition. Therefore, the relationships hypothesized for immigrant language acquisition is also expected for immigrant integration.

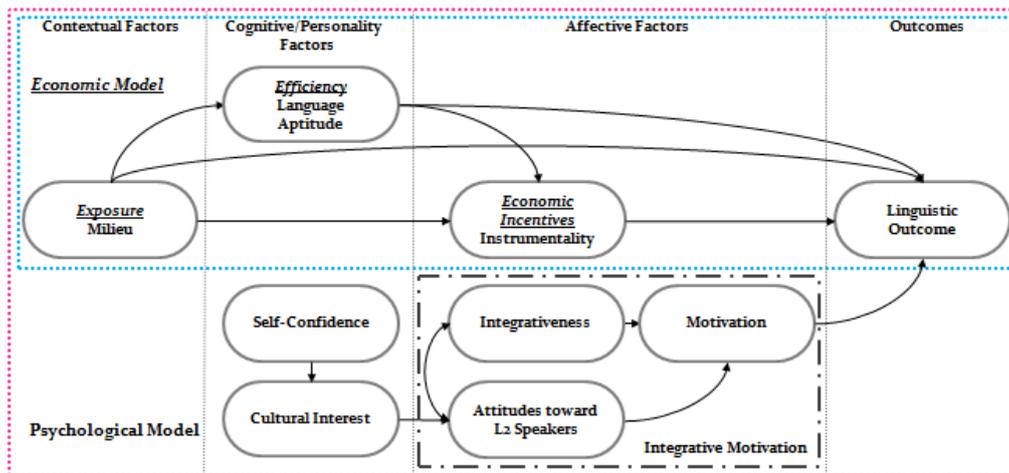


Figure 2-8: Transformed Economic-Psychological Modeling Frame for Immigrant Language Acquisition

Figure 2-8 shows the transformed economic-psychological modeling frame for immigrant language acquisition. I group two cognitive factors from two separate research traditions together: *efficiency* and *language aptitude*⁶⁹. With this transformation, all of the constructs derived from the economic model are incorporated into a broader psychological model. Yet, the question of “how to bring economics and psychology together?” has not been fully answered because the interrelations between/among some of the key elements are still absent. One of them is the missing link between the representative affective factors of the two disciplines (namely, instrumental motivation and integrative motivation [in Gardner’s terminology]), which keeps the motivational pathways separate and disconnected. Another remaining issue concerns the problems related to the interface of contextual and psychological constructs; the approaches presented so far do not specify the causal relations or interactive mechanisms of social context and human psychology in producing linguistic outcome. I will leave the matter aside for now due to a number of complexities involved; especially, testing such a comprehensive model is implausible with the empirical data at hand and methodological issues unsolvable within the given timeframe. In this thesis, therefore, empirical models are developed based on the theoretical grounds of the dichotomous motivational pathways, one representing the economic view and another corresponding to the psychological view. Furthermore, considerations pertaining to social influence and human behavior will be by and large left out of the empirical modeling strategy and process. Nonetheless, I will return to the subject later and continue the theoretical modeling exercises to propose a more encompassing conceptual model in the final concluding chapter.

⁶⁹ According to Gardner (1985), *language aptitude* concerns “an ability dimension” of second language acquisition while motivation involves “an affective dimension.”

Chapter 3. Modeling Immigrant Integration

1. Introduction

The primary purpose of modeling immigrant integration is to provide a temporal perspective in the integration process in order to understand the mechanisms that might lead to a desired outcome. To achieve a goal, a desired outcome needs to be chosen and specified. The choice of a goal varies according to the contexts and circumstances as well as needs and preferences. In academic research, goal selection is about choosing a focal variable(s) of research. Moreover, the specification of a goal in scientific studies requires the processes called conceptualization and operationalization. Conceptualization involves the process of defining abstract concepts and forming theoretical constructs while operationalization refers to the process of translating the theoretical constructs into measurable variables.

As the title indicates, this thesis is devoted to particularly investigate the significance of language in relation to the integration of immigrants into destination societies. More specifically, I view immigrant integration outcomes as the consequences of their language acquisition. The challenge remains when specifying the goals within the research design since there is no consensus on the definition and measures of ‘integration’ and the vocabulary is conceptualized and operationalized differently. Likewise, different academic disciplines take different approaches and set their own goals. In economics, immigrant integration is conceptualized as integration in the economy, and thus the intended outcome is usually measured in income or employment probabilities. In political science, immigrant integration is conceptualized as integration in the polity; hence the concept is commonly quantified in terms of levels of political/civic engagement, voting, and/or political interests. In psychology, the vital goal of immigrant integration is conceptualized as psychological integration within an individual (the construct commonly used in social psychology includes psychological adaptation and acculturation), and thus, the concept is often operationalized as social/collective identification, attachment, and/or psychological well-being.

In short, while some disciplines like economics and political science focus more on exploring causal factors that influence a certain phenomenon or people’s social behavior, psychology is interested in the mechanisms underlying complex human behavior. Therefore, the focal variable in the former disciplines is customarily treated as dependent variable whereas in psychology it is used as independent, dependent, and intervening variables⁷⁰. Moreover, regarding the types of outcomes, the former disciplines are generally interested in examining externally observable objective outcomes achieved by engaging in social institutions whereas psychology is interested in surveying unobservable subjective outcomes at an individual level. In other words, structural integration of

⁷⁰ In psychology, independent, dependent, and intervening variables are often, interchangeably called predictors, outcomes, and mediator/moderators.

immigrants in the economy (economic integration) or polity (political integration) of the destination is the ultimate goal and chief dependent variable in economics and political science, and psychological integration is the main concern of psychology.

Because each discipline has pursued its own way of conceptualizing and operationalizing its objective and paid little attention to the happenings in other fields, interconnections among the ultimate goals have been habitually overlooked. Hence, a straightforward question like “how are they connected?” often remains unanswered to this day. This query can be rephrased and turned into a series of potential research questions, but one key question I try to address throughout the conceptual modeling and empirical investigation processes is: What affects immigrants to acquire capital⁷¹ and how is it generated? As an experimental attempt to explore the question through generating empirically testable hypotheses, I develop a conceptual model of immigrant integration to lay the groundwork.

2. Modeling Strategy

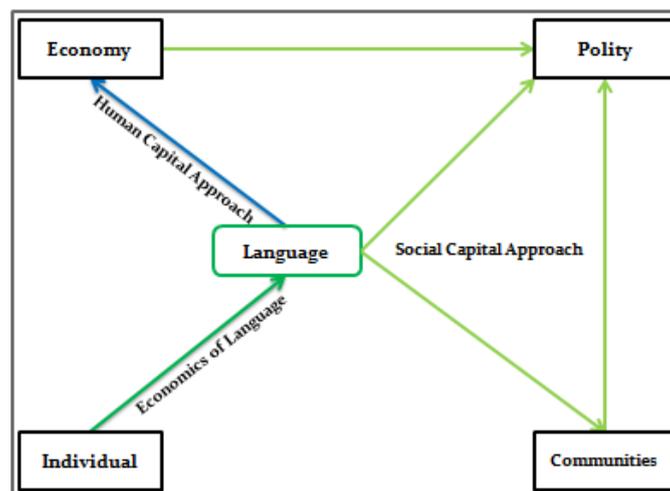


Figure 3-1: Pictorial summary of Existing Literature

Figure 3-1 shows a pictorial summary of the existing literature on the economics of language (discussed in Chapter 2) and the effects of language proficiency on the immigrant integration process. Chiswick and his colleagues’ model of immigrant language proficiency is built based on the

⁷¹ According to Luthans, Luthans, and Luthans (2004), capital is “the resources withdrawn from consumption that are invested for future anticipated return” (p.45). They also describe the main characteristics of different types of capital as follows: traditional economic capital is “what you have”; human capital is “what you know”; social capital is “who you know”; and positive psychological capital is “who you are” (p.46). Accordingly, the term of “capital” used here refers to different forms of capital, including traditional economic capital (e.g., finances and tangible assets), human capital (e.g., experience, education, skills, knowledge), social capital (e.g., relationships, friends, network of contacts), and positive psychological capital (e.g., confidence, hope, optimism). More specifically, in this thesis, integration into the economy (employment status) is conceptualized as economic capital acquisition behavior, language acquisition as human capital acquisition behavior, and social group involvement as social capital acquisition behavior. In addition, acquisition of citizenship of the host country and integration into the polity (political interest) are also considered as capital acquisition behavior. The concept of positive psychological capital is reflected in the psychological model (especially, in terms of emotional security or healthy psychological attachment).

economics of language to identify and estimate the determinants of immigrants' destination language skills. There are basically two streams of research that are complementary in establishing necessary connections for my modeling strategy. One is the human capital approach, which extends the link from language to the economy. Another one is the social capital approach, which provides supplementary links: from language to the polity; from language to communities to the polity; and from the economy to the polity.

In the previous chapter (Chapter 2), the foundations for modeling immigrant language acquisition and integration were laid out. In the later chapter (Chapter 5), I will formulate an empirically testable model of immigrant language acquisition based on the economic-psychological modeling frame for immigrant language acquisition⁷² constructed in Chapter 2. Here, I only provide the figure below (Figure 3-2) to visually illustrate the centrality of immigrant language proficiency in this research and the use of its literature as the grounding for the model construction.

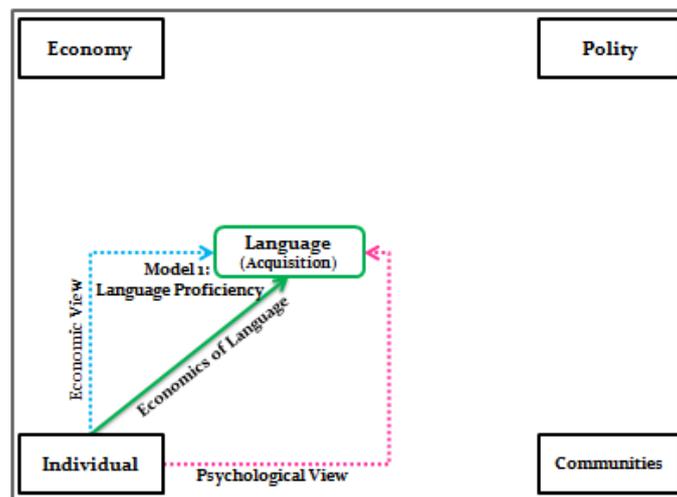


Figure 3-2: Modeling Framework: A Model of Immigrant Language Acquisition

In this chapter, a model of immigrant integration is developed with three sub-models: (1) a model of immigrant economic integration; (2) a model of immigrant citizenship acquisition; and (3) a model of immigrant political integration. I take a step-by-step approach and use different theoretical approaches in an additive manner to complete the model building process. First, the human capital approach is brought into the modeling framework and the economic-psychological modeling frame for immigrant language acquisition is extended to the economy to devise a model of immigrant economic integration. Second, taking an inspiration from a social psychology model, the so-called dual-pathway model of collective action (Sturmer & Simon, 2004), an applied dual-pathway model of immigrant integration is created from which to formulate a model of immigrant citizenship acquisition. The aim of the inventive approach in the model formulation process is to make individual choice of citizenship acquisition more explainable based on the logic of the dual-pathway model. I

⁷² The economic-psychological modeling frame for immigrant language acquisition is constructed by combining the two competing views—economic view vs. psychological view—on immigrant/second language acquisition (see *Figure 2-8*).

also use the socioeconomic-determinant model and non-socioeconomic-determinant model of naturalization in an attempt to integrate the existing studies and empirical findings to the modeling process. Lastly, Kelman's three-process model of social influence is introduced for modeling political integration to add a third motivational pathway along with the behavioral links investigated by the social capital approach to finalize the whole model construction⁷³.

The purpose of this chapter is to provide some of the key theoretical foundations for strategic empirical modeling and interpreting the empirical results in two different ways: one is a behavioral interpretation by tracing the observable or behavioral links (e.g., the human and social capital approaches and socioeconomic-determinants model and non-socioeconomic-determinants model of naturalization) and another is an attitudinal interpretation by tracing the unobservable or motivational pathways (e.g., the dual-pathway model and three-process model of social influence). The behavioral interpretation is integrated in the subsequent empirical chapter on the determinants of immigrant integration (Chapter 6). However, the attitudinal interpretation of the empirical results is not the center of discussion in the empirical chapters and is presented in Chapter 8.

3. Modeling Process

3.1. Step 1: Developing a Model of Immigrant Economic Integration

As the first step of the modeling process, the human capital approach is introduced to examine the effect of destination language proficiency on immigrant economic integration. In the immigrant integration modeling framework, language proficiency is conceptualized as a type of acquired capital that can be invested in a given society for achieving desired goals. The two paths derived from the economic-psychological modeling frame for immigrant language acquisition is extended to the economy.

3.1.1. Human Capital Approach

There has been a long tradition in economics to apply human capital theory to analyze labor market outcomes. Referring to Becker's (1964) work on human capital theory, Chiswick (1978) introduced a model of immigrant language proficiency. Since then, immigrants' destination language acquisition has been studied as a crucial factor for the socioeconomic integration of immigrants in their destination country. In this theoretical approach, language is viewed as a human capital, and the

⁷³ In the modeling, a causal link between language and immigrant integration is conceptually presumed. It is primarily done so by creating language variable with two different concepts based on the existing literature: one for language acquisition and another for language as acquired capital. This conceptual difference is important because while the former variable is devised as a dependent variable to examine the determinants of immigrant language acquisition, the latter is devised with an aim to examine the effect of language (as capital embodied in the person) in immigrant integration process. However, in the real world, the conceptually presumed causal relationship between language (e.g., language acquisition, language proficiency or language use) and immigrant integration could go both ways; the relationships between language and economic integration, between language and citizenship acquisition, between language and political integration, as well as the interrelations among the factors concerned (i.e., language, the economy, citizenship, and the polity) may interact one another and/or be influenced by other external factors. Thus, a multi-deterministic approach may be more relevant and useful in understanding and modeling immigrant integration.

intended consequence of language acquisition is labor market participation or economic assimilation; thus, the effect of language acquisition is typically measured by immigrants' earnings. Early works by Carliner (1981) and McManus, Gould, and Welch (1983) as well as more recent studies estimate strong effects of immigrants' destination language on their earnings (Chiswick & Miller, 1995; Chiswick, 2008; Dustmann & Van Soest, 2002; Bleakley & Chin, 2004). Apart from earnings, language proficiency is known to play a role in additional economic outcomes, such as employment probabilities (Dustmann & Fabbri, 2003; Chiswick & Miller, 2008) and occupational choice (Chiswick & Miller, 2010).

Specifically pertaining to the empirical findings of the link between destination language proficiency and employment probabilities, Dustmann and Fabbri (2003) found that the coefficient estimates for language variables were rather large and statistically highly significant in the two British national survey datasets⁷⁴. Because the authors used a counterfactual model as their modeling strategy by transforming language proficiency variable into a binary variable (0=not proficient, 1=proficient), the substantive effect of language skills on employment could be reported in percentage points; the results showed that language fluency (English speaking ability) was associated with a 15-17 percentage point higher employment probability.

3.1.2. Hypothesis

Therefore, I hypothesize that *destination language proficiency is positively associated with immigrant economic integration (employment status) in the destination*. Extending the two paths derived from the economic-psychological modeling frame for immigrant language acquisition to the economy, a model of immigrant economic integration is developed to examine the connections highlighted in Figure 3-3.

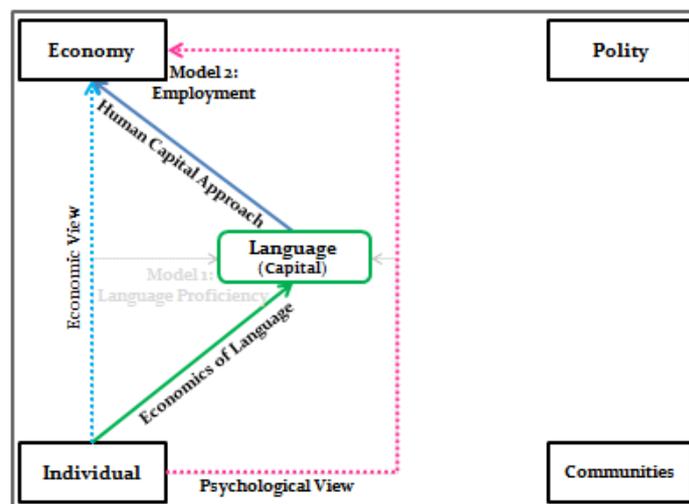


Figure 3-3: Modeling Framework: A Model of Immigrant Economic Integration

3.2. Step 2: Developing a Model of Immigrant Citizenship Acquisition

⁷⁴ The two datasets the authors used were: (1) The Family Working Lives Survey (FWLS) collected in 1994 and 1995; and (2) The Forth National Survey on Ethnic Minorities (FNSEM) (Dustmann & Fabbri, 2003).

In the second step of the modeling process, a model of immigrant citizenship acquisition⁷⁵ is formulated to identify the effects of language proficiency, employment, and social group involvement on destination citizenship acquisition. The dual-pathway model of collective action⁷⁶ (Sturmer & Simon, 2004) is introduced to provide a foundation for devising an applied dual-pathway model of immigrant integration. In the framework, individual choice of citizenship acquisition can be interpreted based on the logic of the dual-pathway model and I use employment and social group involvement as the indicators that represent each of the pathways to reach to the outcome. Finally, the major naturalization models and empirical findings are reviewed to try to integrate the existing literature in the modeling framework.

3.2.1. Dual-Pathway Model of Collective Action

The dual-pathway model of collective action is employed as the theoretical foundation to explain how different types of motivation affect behavior. Motivation is a concept that elucidates ‘why’ people behave as they do. The dual-pathway model is originally proposed by Sturmer and Simon (2004) in an effort to provide a better explanation of people’s collective behavior in social movement contexts. It is done through an integration of two different lines of research: sociologically-oriented social movement research⁷⁷ and social-psychologically-oriented research on inter-group relations and collective identification processes⁷⁸ (Sturmer & Simon, 2004). These two traditions of research address different determinants of group members’ motivation to participate: one motivation based on cost-benefit calculation and another motivation based on collective identification.

The social movement literature has classically focused on the perceived costs and benefits of participation as the motivation to participate⁷⁹. If people are rational and self-interested, they are

⁷⁵ The determinants of citizenship acquisition can be categorized into two different levels of variables, namely macro-level and micro-level variables. The former typically includes institutional conditions for acquiring citizenship imposed by the external entities (e.g., state). From this macro perspective, institutional conditions determine the outcome; hence, citizenship is associated with voting rights and citizenship acquisition can be considered a dimension of political integration. Another set of determinants of citizenship acquisition is more related to micro-individual or psychological variables. From a micro perspective, citizenship acquisition may indicate immigrants’ intention or preference for acquiring citizenship (which may also suggest their ‘intention to stay in the host country’). Both levels of factors influence the outcome, but it is often difficult to clearly link the two levels. In the modeling framework, citizenship acquisition is viewed as a stepping stone toward political integration, thus constituting a separate dimension. More specifically, citizenship is regarded as legal capital and a mediating factor between economic/social integration and political integration.

⁷⁶ The main aim of introducing the dual-pathway model of collective action is to create an applied model of immigrant integration to examine how different types of motivation may affect behavioral outcomes. I conceive of citizenship acquisition as an ‘observable’ behavioral outcome/consequence of internal psychological processes. The ‘unobservable’ motivational processes (of becoming a member of a host society) are investigated by creating the cost-benefit calculation pathway and collective identification pathway in the modeling framework.

⁷⁷ Some references on the sociologically-oriented research include: Klandermans, 1984, 1997; Olson, 1986; Opp, 1989 (cited in Sturmer & Simon, 2004).

⁷⁸ Some references on the social-psychologically-oriented research include: Haslam, 2001; Tajfel & Turner, 1979; Turner, Hogg, Oakes, Reicher, & Wetherell, 1987 (cited in Sturmer & Simon, 2004).

⁷⁹ Some references on the social movement research on motivation to participate: refer to Klandermans, 1984, 1997; Oberschall, 1980; Olson, 1968; Opp, 1989, 2001 (cited in Sturmer & Simon, 2004).

expected to participate in a social movement only when they perceive the expected benefits outweigh the costs. However, a general problem of the cost-benefit approach is that it overemphasizes the power of individuals and their decision-making and undermines the effects of external influences on people's decision-making process in a given context (Sturmer & Simon, 2004). In other words, motivation purely based on rationality and cost-benefit calculation does not suffice to explain people's social behavior, and thus, gives only a partial picture of human behavior. In the context of social movement participation, for example, Sturmer and Simon (2004) note that an increase in costs does not always lead to decreased participation. To explain the 'why' of the human behavior, other components that can overcome the limitation of individualistic analyses seem necessary. For this, the researchers have turned to social psychological research on inter-group relations, which stresses the role of collective identification processes as the underlying motivation.⁸⁰ Social identity theory (Tajfel & Turner, 1979) and self-categorization theory (Turner et al., 1987) highlight "the pivotal role of self-categorization or self-interpretation processes in mediating the transition from individual (interpersonal) perception and behavior to collective perception and behavior, and vice versa" (Sturmer & Simon, 2004, p.66). This theoretical development has made it possible to draw a distinction between individual identity and collective identity and establish the psychological basis of individual and collective behavior. For example, Sturmer and Simon (2004, p.66) note:

From a social identity perspective, members of disadvantaged groups should prefer individual strategies of individual social mobility or "exit," when their identity as a unique individual is salient (Lalonde & Silvermann, 1994; Wright et al., 1990). Conversely, when their collective identity as an interchangeable group member is salient, members of disadvantaged groups should be motivated to engage in collective strategies of social change or "voice"—unless easy individual exit or legitimising ideologies undermine their collective identity (e.g., Ellemers, 1993; Ellemers, Spears, & Doosje, 1997; Kawakami & Dion, 1993; Sidanius & Pratto, 1999; Tajfel & Turner, 1979).

Therefore, the dual-pathway model is built to show a broader and fuller picture of human behavior by combining the two different psychological origins that make people's collective action possible: one pathway processes cost-benefit calculations (hereafter called the "cost-benefit calculation pathway") and another one deals with collective identification (hereafter called the "collective identification pathway").

3.2.2. Applied Dual-Pathway Model of Immigrant Integration

On the basis of the dual-pathway model of collective action, along with a special reference to the basic structure of the Parsonian Paradigm of Societal Interchanges (Figure 3-4), I develop an applied dual-pathway model of immigrant integration (Figure 3-5). In the applied dual-pathway model, the cost-benefit calculation pathway links the individual to the economy while the collective identification pathway connects the individual to communities. Then, the cost-benefit calculation pathway is prolonged from the economy to the polity and the collective-identification pathway is

⁸⁰ Some references on the social psychological research on motivation to participate: refer to Haslam, 2001; Simon, 1998; Tajfel & Turner, 1979; Wright, 2001; Wright et al., 1990 (cited in Sturmer & Simon, 2004).

stretched from communities to the polity. In a few paragraphs below, I will explain the rationales for the extension of the motivational pathways to the polity.

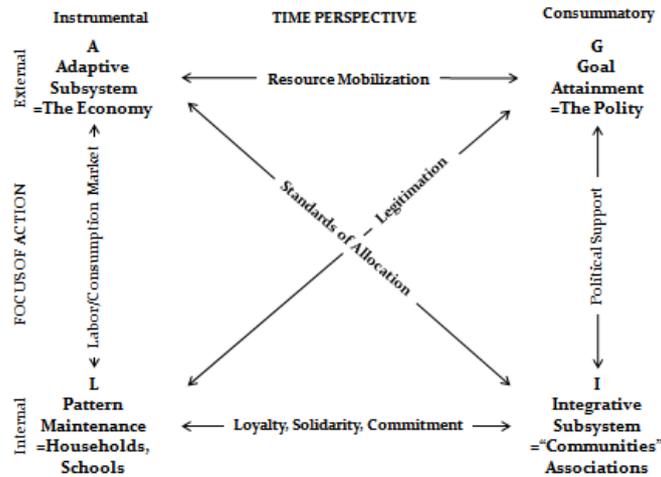


Figure 3-4: Personian Paradigm of Social Interchanges
(Source: Lipset & Rokkan, 1967, p.7)

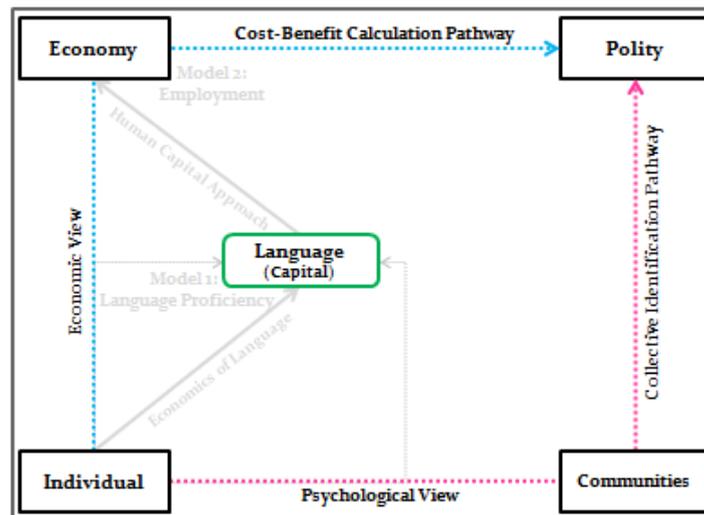


Figure 3-5: Applied Dual-Pathway Model of Immigrant Integration

In the cost-benefit calculation pathway, it is assumed that individuals are rational and self-interested, thus the availability of material incentives or extrinsic rewards decides their behavior. The ideal image of an individual in this view is the independent self (e.g., free, independent, unique), thus individual freedom and efficiency in society become the highest values. In the collective identification pathway, it is assumed that collective identity is the source of what makes collective behavior possible. Moreover, this approach assumes that intrinsic motivation (such as an inner obligation to enact collective identity) is enough to produce collective behavior. The ideal image of an individual in this perspective is the interdependent self (e.g., cooperative, loyal, compromising), thus equality in relation to others and fairness in society become the premier values.

An implication that can be derived from the applied dual-pathway model of immigrant integration is that the two pathways seem to well illustrate human characteristics. People desire to be

free, independent, and unique to pursue freedom since freedom enables them to direct their lives, expand their choices, and develop their individualities, so that they can live up their full potentials. However, at the same time, people are inclined to be cooperative, loyal, and compromising to seek recognition and acceptance because this enables them to maintain respect and affection for themselves and others. Similarly, in the field of language acquisition and immigrant integration, people may choose to be independent or interdependent. In the former case, people may learn destination language to integrate into a new society using individual strategies of social mobility through the economy; in the latter case, they may acquire destination language to integrate into communities using collective strategies of social change, such as social group involvement.

Likewise, people's motivation for participating in the arenas of society, such as immigrants' participation in the polity, can also be explained by extending the dual pathways. To be more specific, it can be assumed that: those whose motivation is based on cost-benefit calculation are more likely to participate in the polity using individual strategies of social mobility through the economy (employment); and those whose motivation is based on collective identification are more likely to participate in the polity using collective strategies of social change through communities (social group involvement). Thus, employment and social group involvement can be the indicators for the cost-benefit calculation pathway and collective-identification pathway, respectively, that signify the individuals' motivational routes to participate in the polity. I conceive of citizenship acquisition as the psychological sign of commitment to the host society and a stepping stone toward immigrant political integration. Thus, I first extend the dual-pathways to citizenship acquisition in order to examine the motivational factors influencing naturalization.

3.2.3. Models of Naturalization

There are principally two research traditions within the naturalization literature. One is the *socioeconomic-determinants model*,⁸¹ which emphasizes the role of socioeconomic status in the naturalization process, and another is the *non-socioeconomic-determinants model*,⁸² which stresses the socio-cultural influences on naturalization (DeSipio, 1987; Yang, 1994). As Yang (1994) notes, the two traditions are "essentially noncontradictory; rather, they complement each other" because "both traditions use immigrants' individual characteristics as predictors of their naturalization and both view naturalization as an outcome of immigrants' successful integration or assimilation into the host society either culturally, economically, or socially" (p.450). This is in line with the additive perspective that the dual-pathway model takes.

A body of research has found positive and significant relationships of citizenship with employment and earnings (see, for example, DeVoretz & Pivnenko 2004; Bevelander & Pendakur

⁸¹ See for example: Bejborn, 1971; Bernard, 1936; Krassowski, 1963(cited in Yang, 1994)

⁸² Ramirez (1979) interviewed Mexican Americans to examine why the naturalization rate is low for the ethnic group; Fernandez (1984) interviewed 60 naturalized resident Mexican immigrants in Los Angeles to access their perceptions of the naturalization process and individual behavior toward the process (DeSipio, 1987).

2011; Shierholz, 2010; cited in Pastor & Scoggins, 2012, p.2). Combining the empirical evidence with the applied dual-pathway model, immigrants may take the cost-benefit calculation pathway and choose to naturalize because they see citizenship as a means to maximize their self-interests in the economy. Yet, the other sets of survey results⁸³ suggest that when facing the decision to naturalize a desire for a sense of belonging along with political and social rights (particularly, the right to vote) are the main motivation for becoming a citizen (Sumption & Flamm, 2012). In this case, taking a route via the collective identification pathway, immigrants' naturalization decision may be influenced by a sense of belonging that may be developed through social networking and taking part in social activities. Additionally, previous studies have found that destination language proficiency is positively associated with immigrants' propensity to naturalize in the US (Chiswick & Miller, 2008; Johnson, Reyes, Mameesh, & Barbour, 1999) and in Australia (Evans, 1988).

3.2.4. Hypothesis

Therefore, I hypothesize that *employment status, social group involvement, and destination language proficiency are positively related to immigrant citizenship acquisition*. Further extending the two paths derived from the economic-psychological modeling frame for immigrant language acquisition to citizenship and interchangeably replacing them with the cost-benefit calculation pathway and collective identification pathway, a model of immigrant citizenship acquisition is developed to examine the connections highlighted in Figure 3-6.

⁸³ “A 2009 Public Agenda poll lists the right to vote as one of the two most commonly cited major reasons for seeking citizenship, alongside the desire to gain equal rights and responsibilities. See Scott Bittle and Jonathan Roch, *A Place to Call Home: What Immigrants Say Now About Life In America* (New York: Public Agenda, Carnegie Corporation of New York, 2009), www.publicagenda.org/files/pdf/Immigration.pdf. A survey of over 800 Latino immigrants who had attended a citizenship application workshop in 2010 found that the right to vote was the most important factor, as did an earlier poll of recently naturalized Latinos in Texas. See Richard Ramirez and Olga Medina, *Catalysts and Barriers to Attaining Citizenship: An Analysis of ya es hora Ciudadania!* (Washington, DC: National Council of La Raza, 2010), www.nclr.org/images/uploads/publications/Naturalization_YaEsHora_Cuidadania_2010.pdf” (Sumption & Flamm, 2012, p.4)

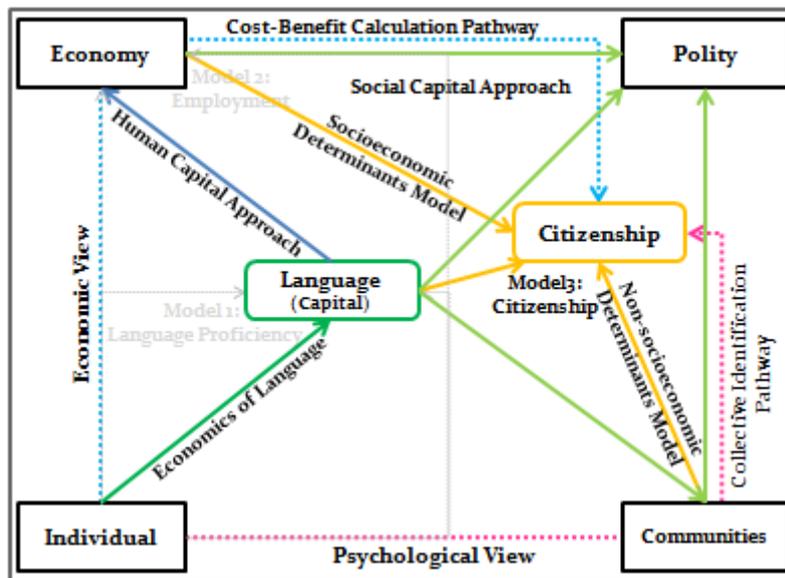


Figure 3-6: Modeling Framework: A Model of Immigrant Citizenship Acquisition

3.3. Step 3: Developing a Model of Immigrant Political Integration

In the third step of the modeling process, a model of immigrant political integration is developed to examine the effects of language proficiency, employment, and social group involvement, and citizenship on political interest. First, the social capital approach is reviewed to connect a few missing links: one from destination language proficiency to communities to the polity; another from the economy to the polity; and the last link from destination language proficiency to the polity. Later, Kelman’s three-process model of social influence is introduced to include a third motivational pathway and complete the model construction.

3.3.1 Social Capital Approach

Dutch political scientists, Fennema and Tillie (1999, 2001), contend that ‘ethnic civic community’ (civic community within ethnic groups) is the source of political trust and political participation⁸⁴. Inspired by Robert Putnam’s (2000, 2003) earlier work on social capital, they hypothesized “the denser the network of associations of a particular ethnic group, the more political trust they will have and the more they will participate politically” (Jacobs & Tillie, 2004, p.420). In their research in Amsterdam, Fennema and Tillie found a positive correlation between the size of ‘ethnic social capital’ (i.e., the amount of participation in ethnic associational life) and the intensity of political participation and trust. However, there were limitations in generalizing their findings; for

⁸⁴ The items Fennema and Tillie used to measure political participation are: (1) visiting meetings where matters concerning the neighbourhood one lives in are discussed; (2) active lobbying with respect to issues which refer to the neighbourhood or city; (3) participation in a so-called ‘neighbourhood council’; (4) the probability of voting at local elections ‘if they would be held now’ and (5) the likelihood that one will visit a public meeting concerning the neighbourhood if one is invited. Together these five items formed the so-called Mokken scale (Fennema & Tillie, 1999, p.709; cited in Jacobs, Phalet, & Swyngedouw, 2004, p. 557). In addition, the followings are the questions Fennema and Tillie used to measure political interest: (1) If there is Amsterdam news in the newspaper, how often do you read this? (2) If one is discussing Amsterdam news at a party, do you join the conversation, listen with interest or are you not interested? (3) To what extent are you interested in local politics? (Jacobs, Phalet, & Swyngedouw, 2004, p. 557)

example, as opposed to the Fennema and Tillie's hypothesis, studies conducted among ethnic minority groups in Brussels⁸⁵ (Jacobs, Phalet, & Swyngedouw, 2004) and Denmark (Togeby, 2004) did not find a straightforward correlation between ethnic social capital (operationalized as participation in ethnic associations) and political participation (operationalized as informal political involvement and political interest).

Overall, the empirical results confirmed inconsistent and inconclusive evidence of the impact of membership in ethnic associations on informal political participation and political interest. In order to investigate why ethnic social capital could not account for group differences in political involvement, Jacobs, Phalet, and Swyngedouw (2004) conducted further analyses using other explanatory variables⁸⁶ such as gender, education, language proficiency, and employment status. Based on the path model (see Figure 3-7), four sequential regression models⁸⁷ were formulated to test the effects on informal political participation and political interest. The multiple regression analyses consistently demonstrated that 'ethnic civic community' variable did not have much explanatory power for explaining group differences in political participation. They, instead, found that there was a consistent gender difference in the ethnic groups—both Turkish and Moroccan women participate less—and French language proficiency was an extremely important factor in explaining the variation in informal political participation and political interest⁸⁸.

⁸⁵ Jacobs, Phalet, & Swyngedouw (2004) used the Brussels Minorities Survey (BMS; Swyngedouw et al., 1999). The BMS had random sample of 587 Turkish, 391 Moroccan respondents and a matched comparison sample of 404 lower-educated Belgian nationals. The study uses two dependent variables: informal political involvement and political interest. The questions used to measure informal political involvement are: (1) When you are among friends, how often does it happen that you discuss social and political issues? (2) When you have a strong opinion about a certain political issue, do you try to convince your friends, family or colleagues? (3) When there are problems in your neighbourhood, do you help to find a solution? (Mean scale scores were computed and recoded to a seven-point scale from 1 (not at all or never) to 7 (very strong or very frequently)). For measuring political interest the authors used questions that ask about interest in national politics and Brussels politics and the frequency one reads the political news in newspapers. (Mean scale scores were computed and recoded to a seven-point scale from 1 (not at all or never) to 7 (very strong or very frequently)) (Jacobs, Phalet, & Swyngedouw, 2004, p.557-558)

⁸⁶ Jacobs and Tillie (2004, 2011) call the explanatory variables (gender, education, language proficiency, and employment status) the '*bridging social capital*' or '*bridging cultural capital*.'

⁸⁷ Additional independent variables are added on top of variables in the previous model because the authors assume that the variables in the previous model are logical antecedents to the subsequent model. Independent variables included in models are as follows: (1) Model 1: gender, low education, knowledge of French; (2) Model 2: unemployment is added; (3) Model 3: ethnic membership is added; and (4) Model 4: cross-ethnic membership and trade union membership are added.

⁸⁸ For Turks, women participate less ($\beta = -0.13$, $p < 0.05$ in model 4), education plays no significant role, but the effect of knowledge of French is significant ($\beta = 0.16$, $p < 0.001$); unemployment ($\beta = 0.12$, $p < 0.01$) does not have a detrimental effect on informal political engagement (Jacobs, Phalet, & Swyngedouw, 2004, p.552, Table 5: Model 4). For Moroccans, women participate less ($\beta = -0.14$, $p < 0.01$), education has no influence, but knowledge of French has a strong effect ($\beta = 0.32$, $p < 0.001$); unemployment hinders informal political participation ($\beta = -0.14$, $p < 0.01$) (Jacobs, Phalet, & Swyngedouw, 2004, p.553, Table 6: Model 4). As for the effects on political interest, for Turks, membership has no significant effect, women tend to show less political interest than men ($\beta = -0.13$, $p < 0.05$), knowledge of French has a significant effect ($\beta = 0.24$, $p < 0.001$), and there are small positive effects of unemployment ($\beta = 0.10$, $p < 0.05$) and education ($\beta = -0.10$, $p < 0.1$). For Moroccans, women show less political interest ($\beta = -0.16$, $p < 0.001$), knowledge of French has an important effect ($\beta = 0.43$, $p < 0.001$), education has a minor effect ($\beta = -0.10$, $p < 0.05$), and employment status does not affect political influence. No direct effect of ethnic membership or cross-ethnic membership is found, yet

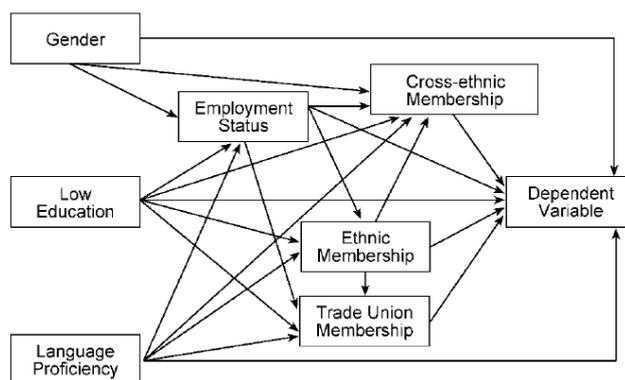


Figure 3-7: Explaining Ethnic Political Participation: Path Model
 (Source: Jacobs, Phalet, & Swyngedouw, 2004, p.550)

With regard to language proficiency in particular, knowledge of French had a significant effect on informal political participation for both Turks ($\beta^{89}=0.16$, $p<0.001$) and Moroccans ($\beta=0.32$, $p<0.001$). Similarly, a sizeable effect of knowledge of French on political interest was observed for Turks ($\beta=0.24$, $p < 0.001$) and Moroccans ($\beta=0.43$, $p < 0.001$). Language proficiency in French was found to be higher among Moroccans than among Turks; and the differences in linguistic capability could easily be explained by the historical background that Morocco was a colony of France. Hence, the variability in linguistic ability gave a reasonable explanation to the question of why Moroccans who had less associational engagement than Turks were more likely to get politically involved (Jacobs, Phalet, & Swyngedouw, 2004). Furthermore, immigrants' host language proficiency was consistently found to be the significant predictor of political participation in all of the four countries (Amsterdam, Berlin, Brussels, and Denmark⁹⁰) (Jacobs & Tillie, 2011). Hence, based on the research findings, it can be safely concluded that there is a positive correlation between destination language proficiency and political participation.

In addition, ethnic association membership either had a positive effect or at least did not demonstrate a negative effect on political participation. The findings in three of the four studies (Denmark, Berlin, and Amsterdam) also showed that inter-ethnic association membership had a statistically significant positive effect on political participation (Jacobs & Tillie, 2011). Hence, the combined results seem to indicate that even though social capital in terms of participation in ethnic organizations may not always have a direct effect on political participation, ethnic membership can indirectly influence political participation through enhancing access to more mainstream cross-ethnic associations.

Furthermore, immigrants' destination language proficiency seems to play a critical role in the entire process, functioning as what Jacobs and Tillie (2004, 2011) have termed the "bridging social

there is a positive influence from trade union membership (Jacobs, Phalet, & Swyngedouw, 2004, p.553-554, Table 7 & 8: Model 4).

⁸⁹ 'Beta' refers to standardized regression coefficient.

⁹⁰ The analyzed effects of other independent variables on political participation are as follows: Gender is significant in Brussels and Amsterdam; education is significant in Denmark; and employment status is significant in Brussels (Jacobs & Tillie, 2011).

capital” or “bridging cultural capital,” a facilitator of social capital that may promote political participation. I view language proficiency not only as the bridging social or cultural capital that enables immigrants to build better relationships in a given community and enhances their political participation, but also as human capital that bridges immigrants to participate in various spheres of host society, including the economy and polity. Nevertheless, previous studies had shown inconsistent findings on the relationship between socioeconomic status (income) and political participation. For instance, Verba and Nie (1972) found a strong correlation between the socio-economic status and political participation in the United States, but in the context of immigrants in Europe, the relationship between employment status and political participation yielded inconsistent or insignificant results (Jacobs, Phalet, & Swyngedouw, 2004).

3.3.2. Intermediary Hypothesis

Therefore, following the previous research evidence on the social capital approach, I hypothesize that *social group involvement and destination language proficiency are positively related to immigrant political integration while the association between employment status and political integration would be insignificant.*⁹¹ The hypothesized links newly drawn based on the social capital approach are shown in Figure 3-8. Establishing extra links may give a fuller picture of immigrants’ behavioral patterns, but they are not very informative in term of explaining human motivational mechanisms that allow us to predict different social behavioral patterns. Furthermore, the dual-pathway approach seems insufficient in estimating and explaining political behavior and an additional pathway may be required to fill the gap. Thus, I will now turn to another theoretical framework to seek possibilities for augmenting motivational pathways to the polity.

⁹¹ There is literature arguing that socio-economic resources (such as education and employment) affect political integration (Tam Cho, 1999; de Rooji, 2012). However, the literature also acknowledges “the explanatory mechanisms operate differently for immigrants than the majority” (de Rooji, 2012, p.455); immigrant political participation can be explained by differences in the importance of mobilization and by the amount of time spent in the destination country, but not by differences in levels of resources and engagement (de Rooji, 2012). While some research found a strong correlation between the socio-economic status and political participation (e.g., Verba & Nie, 1972), some other findings showed somewhat inconsistent or insignificant results, especially in the context of Europe (Jacobs, Phalet, & Swyngedouw, 2004). Accordingly, I hypothesized the relationship between employment and political integration to be insignificant because the datasets used for testing the hypothesis are European city cases.

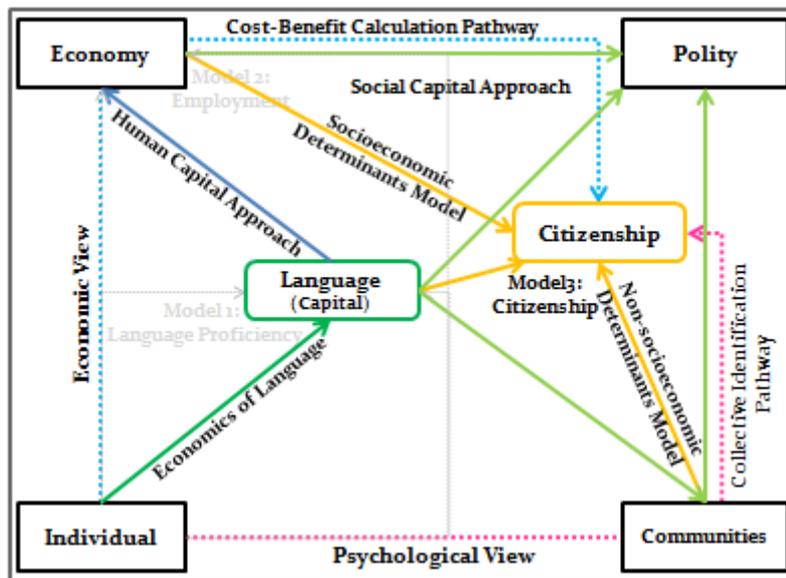


Figure 3-8: Modeling Framework: Adding Social Capital Approach

3.3.3. Three-Process Model of Social Influence

The motivational conceptual models introduced so far are built based on the dual-pathway model—the interest vs. identity and/or individual vs. group framework. Kelman (1958, 1961, 2006) introduces a third pathway, the so-called ‘internalization,’ to the dichotomous construction. ‘Internalization’ is one of the three processes of social influence that he devised as a model after being convinced that the existing theoretical paradigm (public conformity vs. private acceptance) in experimental social psychology had limitations in capturing a number of real-life social influence situations, especially extreme cases like religious or ideological “brainwashing” or “thought reform.” The model distinguishes different patterns of social behavior with three processes of social influence. They are compliance, identification, and internalization, which are conceptually coupled with individuals’ rule, role, and value orientations to a social system (Kelman, 2006).

In a social influence situation, *compliance* is said to take place when an individual adopt attitudes and behavior to gain a favorable reaction from the other (e.g., specific rewards or approval). In this case, public and private attitudes may not be congruent. *Identification* arises when an individual accepts social influence to establish or maintain a rewarding self-defining relationship to the other. In this case, an individual may feel proud to be part of a group, respecting its values without accepting them as his or her own. *Internalization* occurs when an individual accepts social influence to maintain the cognitive/affective congruence of one’s behavior with his or her own value system. In this case, the values of the individual and the society are in harmony. The three-process model of social influence, which was initially developed to experimentally test the effects of persuasive communication on attitudes, was later applied to a variety of studies, such as the relationship of individuals to social systems, involvement in the political system, attitudes toward authorities and their readiness to obey, cognitive and affective impact of psychotherapy, socialization, and the effects of conflict resolution efforts on the relationship between the former enemies.

3.3.4. Application of the Three-Process Model of Social Influence

Applying the three-process model of social influence, O'Reilly and Chatman (1986) conducted an empirical analysis on the effects of compliance, identification, and internalization on organizational commitment. The benefit of having organizational members whose commitment is based more than on simple compliance is widely known not only in the academic circle, but also in real organizational settings. Smith, Organ, and Near (1983), for example, note that many important behaviors in organizations depend on acts of cooperation, altruism, and spontaneous unrewarded help from employees. Besides, Katz (1964) observed that a set of critical behaviors for a well-functioning organization were those innovative behaviors that surpass role prescriptions. Similarly, Mowday, Porter, and Steers (1982) expresses that "there are many instances where organizations need individual members, especially those in critical positions, to perform above and beyond the call of duty for the benefit of the organization"(p.15). Accordingly, O'Reilly and Chatman (1986, p.493) state: "the motivational basis for such extra-role behavior is likely to require more than simple compliance. A failure to develop this psychological attachment among members may require the organization to bear the increased costs associated with more detailed and sophisticated control systems." Moreover, sharing the goals and values of an organization can ensure the individual members to act instinctively for the benefit of the organization (Ouchi, 1980; Willianson, 1975; cited in O'Reilly & Chatman, 1986). Hence, without a psychological attachment based on more than extrinsic rewards, the level and quality of commitment to an organization may be low.

O'Reilly and Chatman (1986) viewed the root of one's psychological commitment to an organization may be predicated on the three different psychological processes of accepting social influence delineated in Kelman's model of social influence. They introduced three classes of independent variables as the underlying dimensions of organizational commitment: (1) compliance as involvement to gain specific tangible rewards in an organization; (2) identification as involvement to satisfy a desire for affiliation; and (3) internalization as involvement to meet a need for individual-organization value congruence. Furthermore, they proposed two classes of dependent variable following the study conducted by Smith, Organ, and Near (1983): (1) intra-role or prescribed behaviors expected of all members of an organization; and (2) extra-role or prosocial behaviors that are not prescribed in a job description, and which are performed not of direct benefit to the individual but of benefit to the organization. The results suggested that psychological commitment to an organization could be predicated on compliance, identification, and internalization since identification and internalization were positively associated with extra-role or prosocial behavior and negatively related to turnover. More specifically, they found a positive relationship between identification and extra-role behavior, and a stronger positive correlation between internalization and intra-role as well as extra-role behaviors. Thus, the core hypothesis of the study, "commitment rooted in identification and internalization will be related to extra-role or prosocial behaviors whereas compliance-based commitment will not be" (O'Reilly & Chatman, 1986, p.493), was supported.

3.3.5. Hypothesis

Following the general research design above and applying it to a systemic level relevant to this research, immigrant economic integration can be conceptualized as intra-role or prescribed behavior and immigrant political integration as extra-role or prosocial behavior. Here, I focus on examining the personal involvement patterns in the polity in the conceptualized immigrant integration modeling framework. In other words, the main focus of the hypothesis development is to identify the psychological patterns or pathways to which the motivating sources of accepting social influence are channeled to generate extra-role or prosocial behavior (i.e., political integration). This new approach is related to Kelman's sophisticated conceptualization on the subject matter. While all of the previous approaches assume the affective factor(s) of interest takes automatic one-way route, and thus, dichotomous pathways, Kelman (1969) views there are six different patterns of accepting social influence, which are derived from two different underlying sources of attachment (i.e., instrumental and sentimental attachments) and three processes of social influence described above (i.e., compliance, identification, and internalization)⁹².

The two sources of motivating factors for accepting social influence are in line with the conventional views: instrumental attachment corresponds to the economic view of language acquisition that treats economic incentives as the decisive factor for predicting human behavior; and sentimental attachment corresponds to the psychological view of language acquisition that highlights the importance of identity for maintaining a positive self-concept. Likewise, the perspective is shared by the dual-pathway model of collective action, the former corresponding to the cost-benefit calculation pathway and the latter corresponding to the collective-identification pathway. Thus, expanding the modeling framework based on the classic views and research findings, I use employment as the indicator of rule orientation (compliance) while social group involvement as the indicator of role orientation (identification) to the political system. I use language proficiency and citizenship as the indicator of value orientation (internalization) because successful language and citizenship acquisition entails not only simple compliance to rules to attain favorable response from the other or identification with the other to maintain a positive self-concept, but also internalization of values of the other to maximize one's own values.

Earlier, based on the social capital approach, I hypothesized that *social group involvement and destination language proficiency are positively related to immigrant political integration while the association between employment status and political integration would be insignificant*. Here, one more component, citizenship, needs to be included in formulating a new hypothesis. Additionally, a third pathway needs to be defined by including citizenship and making motivational interlinks among different variables. Previous empirical findings suggest a positively related link between citizenship

⁹² For more details on the patterns of personal involvement in the national political system (Kelman, 1969), see Chapter 8: 3.2.1. *Base Matrix: Patterns of Personal Involvement in the National Political System*.

status and political participation in host societies; host-country citizenship holders are more likely engage in political activities more than those without (Brady, Verba, & Schlozman, 1995). Viewing language proficiency and citizenship as the indicators that signify value orientation (internalization), I replace the solid diagonal lines from the individual to the polity drawn from the behavioral evidence (e.g., determinants of language acquisition, effects of language proficiency, and effect of citizenship acquisition) with new dashed green lines representing internalization (see Figure 3-9). Therefore, based on the empirical evidence found in the previous studies on the social capital approach and applied studies on the three-process model of social influence, I hypothesize that *social group involvement (role orientation or identification) and destination language proficiency and citizenship (value orientation or internalization) are positively related to immigrant political integration while the association between employment status (rule orientation or compliance) and political integration would be insignificant.*

First, adding an extra path (internalization pathway), then further extending the two motivational paths (cost-benefit calculation and collective identification pathways) and interchangeably replacing them with compliance pathway and identification pathway, a model of immigrant political integration is developed to examine the connections highlighted in Figure 3-9.

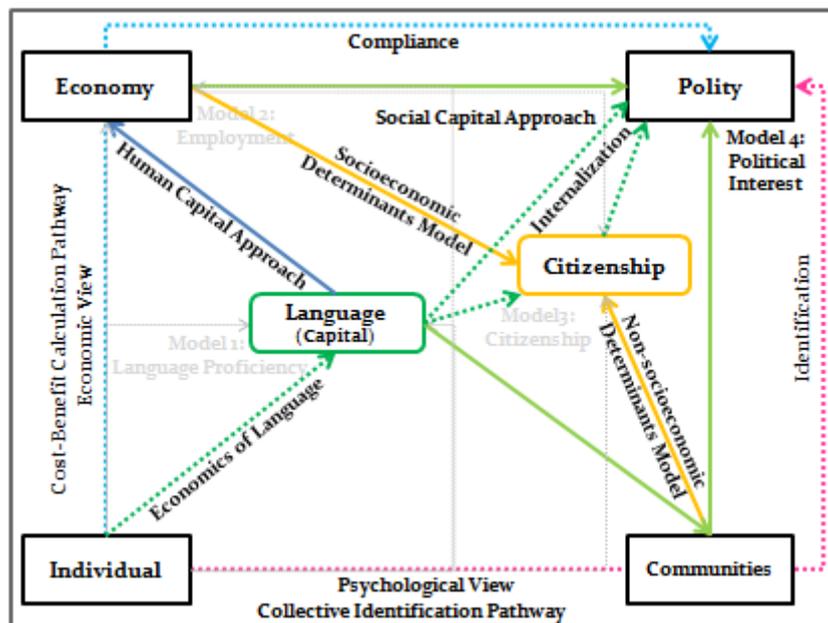


Figure 3-9: Modeling Framework: A Model of Immigrant Political Integration

Chapter 4. Data & Methods

1. Data

1.1. Overview

This thesis utilizes data from the Multicultural Democracy and Immigrants' Social Capital in Europe: Participation, Organisational Networks, and Public Policies at the Local Level⁹³ (LOCALMULTIDEM; Morales, et al., 2012). This project is designed to study multicultural democracy at the local level by collecting the information and analyzing the level of political integration of immigrants at three different levels of analysis: political and discursive opportunity structural or macro-level, organizational or meso-level, and individual or micro-level. The macro-level information was collected through the use of secondary sources and interviews with political and administrative authorities. A survey to immigrants' associations and another survey to immigrant residents of different origins were used to collect the data, respectively, at meso and micro levels (Morales & Giugni, 2011). This chapter provides the descriptions of the individual-level cross-sectional survey data which are used for conducting the main empirical research⁹⁴.

The cross-sectional data include ten European metropolitan cities that reflect a variation in terms of the magnitude of immigrant flows, timing, and composition. The study cities include cities of long-standing immigration—London, Lyon, Oslo, Stockholm, Zurich, and Geneva—as well as cities where immigration is a fairly new phenomenon—Barcelona, Budapest, Madrid, and Milan. The surveys were conducted in Oslo (Norway) and Stockholm (Sweden) in 2003-2004 with national funding and in the other eight cities in 2007-2008 with funding from the 6th Framework Programme of the European Commission for the six main cities, Budapest (Hungary), London (United Kingdom), Lyon (France), Madrid (Spain), Milan (Italy), and Zurich (Switzerland); and with national funding for Barcelona (Spain) and Geneva (Switzerland).

1.2. Cities

All cities included in the study are centers of large metropolitan regions with robust economies. Table 4-1 shows the population (in million), GDP per capita of the city/metropolitan region (in USD, thousands), GDP per capita of the country (in USD, thousand), and percentage of migrants of the city. Information on population and GDP per capita is based on the OECD Regional Statistics, 2006-2007 (TL3 level) and information on the percentage of migrants is based on

⁹³ The work of the LOCALMULTIDEM project was organized primarily around four substantive workpackages that included a distinct set of data collection strategies. Workpackage 1 (WP1) was organized around the collection and separate analysis of political opportunity structures, Workpackage 2 (WP2) was devoted to the collection and analysis of the socio-economic indicators, Workpackage 3 (WP3) was dedicated to the collection and analysis of a survey to migrant/ethnic organizations in each of the city, and Workpackage 4 (WP4) entailed conducting a survey to representative samples of around 1,200 individuals (900 of three different migrant/ethnic origin and 300 of a control group of autochthonous population) in each of the six cities.

⁹⁴ This thesis uses the macro-level data on political opportunity structures (Workpackage 1) and micro-level cross-sectional survey data (Workpackage 4) of the LOCALMULTIDEM project. The relevant information of the macro-level data on political opportunity structures (Workpackage 1) is included in Chapter 7.

respective local government statistics (Morales & Giugni, 2011). The annual per capita GDP of the cities is normally significantly higher than the national figure. This attracts migrants to the study cities in larger numbers than the respective national average.

The selection of the cities is made to maximize the variety of different political contexts for migrants. Some of the chosen cities are in the countries characterized as following pluralist or multicultural models of citizenship (London and Stockholm). Lyon is described as following universalist-republican models while some others adopt an assimilationist-differentialist model (Geneva, Zurich, and Oslo). There are also cases with less clear-cut models or ones very much in the making due to their position as new receivers of immigration (Barcelona, Madrid, Budapest, and Milan) (Morales & Giugni, 2011).

Table 4-1: Socio-Economic Indicators of the Cities
(Morales & Giugni, 2011, p.12)

City	Population ^a (million)	GDP/capita ^a (in USD, thousand)	GDP/capita of the country ^a (in USD, thousand)	Percentage of migrants ^b
London ^c	7.5	56.8	34.1	50.6
Milan	3.9	44.3	29.5	12.5
Madrid	6.1	38.7	29.6	17.9
Barcelona	5.3	34.9	29.6	17.8
Budapest	1.7	39.7	17.9	3.2
Zurich	1.3	n.a. ^d	38.6	30.2
Stockholm	1.9	46.6	34.3	20.5
Lyon	1.7	39.3	31.7	9.4
Geneva	0.4	n.a. ^d	38.6	42.8
Oslo	0.5	94.6	52.0	25

^a Population and GDP: OECD Regional Statistics, 2006-2007 (TL3 level)

^b Percentage of migrants: Respective local government statistics

^c London: only for the North Inner London boroughs of Islington, Camden, Hackney and Haringey where the study was conducted.

^d Figures not available

1.3. Sample

The LOCALMULTIDEM survey data contain 11,393 observations. 52 percent (5,894) are male and 48 percent (5,499) are female. The respondents are aged between 8 and 101 years ($M=40.47$, $SD=15.63$)⁹⁵. 7,903 respondents (69%) are of immigrant origin and 3,490 respondents (31%) are autochthonous. Of the 7,903 people forming the immigrant sample, 54 percent (4,271) are male and 46 percent (3,632) are female; about 18 percent (1,387) are born in the destination country while 82 percent (6,516) are foreign born. Those with immigrant origin are aged from 13 to 94 years ($M=37.58$, $SD=13.41$)⁹⁶. Regarding the marital status of 7,903 respondents with immigrant origin, the valid observations are 7,805; 62 percent (4,860) are in a relationship while 38 percent (2,945) are not in a relationship. The respondents with immigrant origin are generally well educated with 61% (4,715)

⁹⁵ Age was not directly measured in the Localmultidem survey. Thus, I used other available measures ('year of birth' and 'end date year of the survey') to generate a new variable called 'age': Age = (end date year – year of birth). Because there were 209 cases missing for 'year of birth,' the remaining valid observations for 'age' were 11,184.

⁹⁶ Due to the missing values ('year of birth'), the valid number of observations for age among respondents with immigrant origin was 7,720.

having at least an upper secondary education degree, 10% (815) a primary education level, 22% (1,685) a lower level of secondary education, and 24% (1,894) a first and second stage of tertiary education degree⁹⁷. Table 4-2 and Table 4-3 give the general information of the total sample and of sample of immigrant origin.

Table 4-2: Descriptive Statistics: Total Sample
n=11,393 (LOCALMULTIDEM)

Variable	Freq. (%)
Ethnic Origin	
Immigrant origin	7,903 (69%)
Autochthonous	3,490 (31%)
Missing	0 (0%)
Gender	
Male	5,894 (52%)
Female	5,499 (48%)
Missing	0 (0%)

Table 4-3: Descriptive Statistics: Sample of Immigrant Origin
n=7,903 (LOCALMULTIDEM)

Variable	Freq. (%)
Gender	
Male	4,271 (54%)
Female	3,632 (46%)
Missing	0 (0%)
Country of Birth	
Birth in foreign country	6,516 (82%)
Birth in the host country	1,387 (18%)
Missing	0 (0%)
Marital Status	
In a relationship	4,860 (62%)
Not in a relationship	2,945 (37%)
Missing	98 (1%)
Educational Attainment	
Not completed primary education	564 (7%)
Primary education	815 (10%)
Lower level of secondary education	1,685 (21%)
Upper secondary education	1,914 (24%)
Post secondary, non-tertiary education	907 (11%)
First- and second-stage of tertiary education	1,894 (24%)
Missing	124 (2%)

The LOCALMULTIDEM data include representative samples of populations in the respective cities, stratified by national/ethnic origin. In each city, the survey includes at least two—in most cases three—groups of migrant origin, and a control group of autochthonous population. The project was aimed at collecting subsamples for each of the groups of between 200 and 300 individuals in all cities, so as to be able to compare them adequately. In addition, a contrast group of autochthonous population of the same sample size was also included in all cities. The project's selection criteria for the migrant groups were made on the basis of a number of aspects that were important for the study: (1) the population size of the ethnic group that is large enough to be able to extract a sample of around 300 individuals; (2) the groups from different migration waves (more distant and more recent migration waves); (3) at least one group of predominant Muslim faith in all cities; (4) relevance of the migrant groups in each city; and (5) maximizing the comparability of

⁹⁷ Out of 7,903 respondents with immigrant origin, 124 observations were missing and the valid number of observations for educational attainment was 7,779.

ethnic origins across cities (Morales & Giugni, 2011). The resulting selection is summarized in Table 4-4. In this current investigation, autochthonous population in all cities was removed from the data analyses. Table 4-5 gives the ethnic immigrant composition by city.

Table 4-4: Ethnic Groups Selected in Each City
(Morales & Giugni, 2011, p.14)

Ethnic Groups	Groups of recent arrival	Groups of longer settlement	Muslim groups
Barcelona	Ecuadorian	Moroccan & some of the other Andean	Moroccan
Budapest	Chinese, Ethnic Hungarian	Arab/Turkish mixed group	Arab/Turkish mixed group
Geneva	Kosovar	Italian	Kosovar
London	Bangladeshi	Caribbean, Indian	Bangladeshi (some Indian)
Lyon	Tunisian	Algerian, Moroccan	Algerian, Tunisian, Moroccan
Madrid	Ecuadorian	Moroccan & some of the other Andean	Moroccan
Milan	Ecuadorian	Filipino	Egyptian
Oslo	Former Yugoslavia	Turkish	Turkish (some former Yugoslavia)
Stockholm	---	Chilean, Turkish	Turkish
Zurich	Kosovar	Italian, Turkish	Kosovar, Turkish

Table 4-5: Ethnic Immigrant Composition by City

Ethnic Groups	Freq. (%)	Ethnic Groups	Freq. (%)
Barcelona		Madrid	
Moroccan	224 (30%)	Moroccan	298 (34%)
Andean mixed group	257 (35%)	Andean mixed group	277 (32%)
Ecuadorian	259 (35%)	Ecuadorian	291 (34%)
Total	740	Total	866
Budapest		Milan	
Ethnic Hungarian	290 (35%)	Egyptian	300 (33%)
Mixed Muslim	284 (35%)	Filipino	300 (33%)
Chinese	249 (30%)	Ecuadorian	300 (33%)
Total	823	Total	900
Geneva (Swiss (n=5) is removed)		Oslo	
Italian	339 (52%)	Turkish	300 (33%)
Kosovar	310 (48%)	Pakistani	300 (33%)
Total	649	Bosnian	300 (33%)
London (Mixed Race British (n=14) is removed)		Total	900
Indian	296 (33%)	Stockholm (Missing (n=5) is removed)	
Afro-Caribbean	290 (33%)	Turkish	235 (46%)
Bangladeshi	300 (34%)	Chilean	273 (54%)
Total	886	Total	508
Lyon		Zurich	
Moroccan	114 (16%)	Italian	299 (33%)
Algerian	461 (65%)	Turkish	297 (33%)
Tunisian	130 (18%)	Kosovar	306 (34%)
Total	705	Total	902

The sample design of the surveys differs substantially by city. First, the definition and selection of individuals with migrant origin (e.g., on the basis of their country of birth, nationality, or ethnicity) was done differently depending on the available sampling frames in each city. In the case of

Barcelona, Budapest, Lyon⁹⁸, Madrid, Milan, Oslo, and Stockholm, for instance, migrants are defined as those who were either born in one of the selected foreign countries or with at least one parent born in the respective foreign country. In Geneva and Zurich, migrants were selected based on their nationality at the time of sampling, but respondents who were first classified to the autochthonous group but were either born or had parents of any of the selected foreign backgrounds were reallocated to their respective migrant groups. In London, respondents were selected and classified on the basis of the ethnic group to which they ascribe. Second, because the surveys were undertaken at different time points—2003-2004 in Oslo and Stockholm and 2007-2008 in other eight cities—the questionnaires used in the eight cities were relatively similar to one another compared to the ones administered in the two Scandinavian cities. Third, the interviews were conducted face-to-face in Barcelona, Budapest, London, Madrid, Milan⁹⁹, and Stockholm while they were carried out by telephone in Geneva, Lyon, Oslo, and Zurich due to cost issues or sampling frame availability. Fourth, different sampling strategies were employed to cope with the dissimilar availability of registers that cover the population of interest. For example, nominal individual samples were randomly drawn from the local population registers in Budapest, Geneva, Madrid, Oslo, Stockholm, and Zurich. In London, a sampling method called ‘focused enumeration within postal districts’ was used. In Milan, the migrant groups were selected through a method of random selection within centers of aggregation whereas the autochthonous group was selected from telephone registers. In Lyon, the lack of any available register that contained information on the country of birth or nationality of the individual or that of the parents directed to a special sample design; the sample was formed by first randomly generating telephone numbers (within the area code), and then screening respondents through asking questions about their country of birth and their ancestry (Morales & Giugni, 2011). Lastly, the data collection methods vary city by city. In some cities, the questionnaires were available only in local language (e.g., Budapest¹⁰⁰, London¹⁰¹, and Lyon¹⁰²) and interviews were administered in local language (e.g., London and Lyon). In other cities, however, the questionnaires were prepared and interviews were conducted both in the local language and respondents’ origin language(s) (see Table 4-6; Palacios & Morales, 2013a, 2013b, 2013c, 2013d; Morales & Giugni, 2011). These differences in the data collection process can easily be sources of bias that can distort inferences in the current research.

⁹⁸ A small number of individuals whose grandparents were of Maghrebi origin were also included in the sample in Lyon (Morales & Giugni, 2011).

⁹⁹ In Milan, the migrants were interviewed face-to-face, but the autochthonous group was interviewed by telephone (Morales & Giugni, 2011).

¹⁰⁰ In Budapest, interviews were conducted using bilingual interviewers who were fluent in the respondents’ origin language and Hungarian.

¹⁰¹ In London, immigrant groups included are Indian, Afro-Caribbean, and Bangladeshi. They come from formal British colonies. English is the official language in India and the Afro-Caribbean countries. English is prevalent in Bangladesh, though having no official status.

¹⁰² In Lyon, immigrant groups included are Moroccan, Algerian, and Tunisian. They come from formal French colonies and French is the official language in Morocco and Tunisia. French has no official status in Algeria, but a large majority of the country understands French.

Table 4-6: Language and Mode of Data Collection by City

City	Questionnaire Language	Interview Language	Mode of Data Collection
Barcelona	Spanish Arabic *Spanish & Catalan for autochthonous	Spanish Arabic	Face-to-Face interviews by professional interviewers and post-graduate students: in Spanish for autochthonous group; in Spanish/Arabic for Moroccan group; and in Spanish for all other ethnic groups (Ecuadorian and Andean mixed group samples).
Budapest	Hungarian	Hungarian Arabic Chinese	Face-to-Face interviews: in Hungarian for autochthonous and Ethnic Hungarian samples; in Chinese for Chinese group conducted by university students studying Chinese; in Hungarian or Arabic for Arab/Turkish-sample conducted by immigrants from Muslim countries who speak fluent Hungarian.
Geneva	French Albanian Italian	Albanian Italian	Telephone interviews by professional interviewers speaking respondents' language of origin (Italian and/or Albanian) and French
London	English	English	Face-to-Face interviews in English
Lyon	French	French	Telephone interviews through 'CATI system'
Madrid	Spanish Arabic	Spanish Arabic	Face-to-Face interviews by professional interviewers and post-graduate students: in Spanish for autochthonous group; in Spanish/Arabic for Moroccan group; and in Spanish for all other ethnic groups (Ecuadorian and Andean mixed group samples).
Milan	Italian English Arabic Spanish	Italian English Arabic Spanish	Face-to-Face interviews in the respondents' origin language or Italian for immigrant group; telephone interviews through 'CATI system' for autochthonous group in Italian.
Oslo	English Norwegian	English Norwegian	Telephone interviews (No specific information is available)
Stockholm	Swedish Spanish Turkish	Swedish Spanish Turkish	Computer assisted face-to-face interviews: in Swedish for autochthonous sample; in Spanish for Chilean sample; and in Turkish for Turkish group.
Zurich	Swiss German Albanian Italian Turkish	Swiss German Albanian Italian Turkish	Telephone interviews through 'CATI system' in either the original language of immigrant population (Italian, Albanian or Turkish) or local language (Swiss German)

1.4. Measures

Before introducing the specific variables of the research, some of the limitations this research has faced must be noted. This research has relied on the use of existing survey data. This implies that the measures used in the study are constrained by the questions asked in the survey. Therefore, I used proxies for many of the theoretical constructs in my models. I derived them by referring to the previous studies. In the following section, I explain how the theoretical constructs are operationalized in the datasets and how the conceptual framework provides the grounds for sequential model development.

1.4.1. Independent Variables

I take an incremental approach to the model building and the economics of language and economic model of immigrant language proficiency are employed to lay the groundwork for the construction. Chiswick (1978) was the first one to apply human capital theory specifically to the field of immigrant language acquisition and propose a model of immigrant language proficiency: $Language\ proficiency = f\{economic\ incentives\ (+),\ exposure\ (+),\ efficiency\ (+)\}$. Due to lack of direct measures of economic incentives, efficiency, and exposure, however, there has been a considerable difficulty in

directly testing the three theoretical mechanisms of destination language proficiency in empirical research. Accordingly, researchers have tested these mechanisms indirectly by generating bridge assumptions and then developing a series of “bridge hypotheses”¹⁰³ on the basis of observable individual and contextual determinants of destination language proficiency. In many cases, however, theoretical constructs and empirical measures cannot be matched on one-to-one basis. Therefore, researchers generally treat all of the constructs as part of a single economic theory of language. While acknowledging the interconnections among the constructs and difficulty of drawing clear-cut lines and putting the variables into separate boxes, some researchers have attempted to draw a distinction between attitudinal variables (incentives) and situational variables (opportunities) to examine the separate effects of the constructs (e.g., Van Tubergen & Kalmijn, 2009). In other words, a distinction between ‘economic incentives’ and ‘efficiency and exposure’ is made to place attitudinal variables into ‘economic incentives’ and situational variables into ‘efficiency and exposure’ variables. In the study of language proficiency and usage among immigrants in the Netherlands, Van Tubergen & Kalmijn (2009) used migration motives and settlement intentions to represent the construct of economic incentives based on the findings from the previous studies that suggest economic incentives could be related to migration motives (Chiswick & Miller, 2007) and settlement intentions in the host (Dustmann, 1994; Espenshade & Fu, 1997; Esser, 2006).

My models follow the general ‘bridge hypotheses’ approach and see the three theoretical constructs as one set to represent the economic model of immigrant language proficiency. I combine them into a category called ‘personal characteristics’ because the selected indicators that represent economic incentives—for example, ‘permit categories’ as a proxy for migration motives—are not direct measures of subjective attitudes but they are rather objective measures that represent the given socio-demographic features of immigrants. Therefore, in the models I formulate in the following chapters, the category called ‘personal characteristics’ represents the economic model with the three theoretical constructs of economic incentives, efficiency, and exposure; and the indicators of personal characteristics used in the analysis include: educational attainment, length of stay in the host country, age at migration, birth in the host country¹⁰⁴, and permit categories¹⁰⁵. Furthermore, ‘attachment to

¹⁰³ Also, refer to *Chapter 2: 3.1.2. From Theory to Empirical Research: “Bridge Hypotheses”*.

¹⁰⁴ A dummy variable, ‘birth in host country’ (1=born in host country, 0=else), is included in all models except a model of immigrant language acquisition.

¹⁰⁵ Permit categories are used as a proxy for immigrants’ migration motives. In the questionnaires administered in the eight cities, respondents were asked to respond to the question on their permit status. It was answered by choosing one of the following categories: 1=An EEA national (or relative of EEA national) residence/work permit, 2=for work, 3=for study only, 4=for family reunification/marriage, 5=for tourism, 6= as a refugee/asylum-seeker, 7=for residence only (not linked to family reunification/marriage), and 8=other. For regression analyses, I transformed the answers into five dummy variables: (1) An EEA national (or relative of EEA national) residence/work permit; (2) for work; (3) for study; (4) for family reunification/marriage; and (5) for other purposes. Permit categories are included in all models except a model of immigrant citizenship acquisition. Permit categories are absent in the Oslo and Stockholm cases because the permit or visa category question is not included in the survey conducted in the two cities.

host country people,¹⁰⁶ ‘social trust,’¹⁰⁷ and ‘institutional trust’¹⁰⁸, form the ‘attitudes’ category, which represents the psychological model. Based on the theoretical framework¹⁰⁹, these two blocks of variables plus the control variables are sequentially introduced to a nested regression model to examine the separate and combined effects as well as presumed mediating effects on the dependent variable of each model.

1.4.2. Control Variables

In addition to the theoretically essential sets of independent variables described above, I control for socio-demographic characteristics known to influence the outcomes (i.e., destination language proficiency, citizenship acquisition, and economic and political integration). Throughout the analyses, gender, marital/cohabitation status, and ethnic group are included as the control variables. At first, I also included age, but it was highly correlated with one of the independent variables, age at migration; therefore, age was excluded to ensure no violation of the assumptions of multicollinearity. Each city includes two or three ethnic groups. To compare ethnic group differences in predicting outcome, one group (group of recent arrival) is used as the reference category, and thus, is excluded from the model. Gender is recoded into new values, where 0 represents male and 1 indicates female. Furthermore, marital/cohabitation status is transformed from a categorical variable with five categories (1=married, 2=cohabiting/living with partner, 3=never married, 4=divorced, 5=widowed) into a dichotomous variable, where 0 represents ‘not in a relationship’ (which is a merge of the old values 3, 4, and 5) and 1 denotes ‘in a relationship’ (which is a merge of the old values 1 and 2).

¹⁰⁶ In Barcelona, Budapest, Geneva, London, Lyon, Madrid, Milan, and Zurich, ‘attachment to host country people’ is measured on an 11-point Likert scale ranging from 0 (no attachment at all) to 10 (very strong attachment). In Oslo and Stockholm, ‘attachment to host country people’ is measured by a country-specific variable using a four-point scale. Refer to *Appendix I: Measures* for more details.

¹⁰⁷ In Barcelona, Budapest, Geneva, London, Lyon, Madrid, Milan, Stockholm, and Zurich, ‘social trust’ is measured using an 11-point Likert scale ranging from 0 (you cannot be too careful) to 10 (most people can be trusted). In Oslo, ‘social trust’ is measured by a dichotomous variable with a value of 1 indicating that ‘most people can be trusted,’ and 2 indicating that ‘you cannot be too careful.’ The original variable is recoded with a value 1 indicating ‘most people can be trusted,’ and 0 otherwise. Refer to *Appendix I: Measures* for more details.

¹⁰⁸ In Barcelona, Budapest, Geneva, London, Lyon, Madrid, Milan, and Zurich, the institutional trust variable is constructed using five indicators (trust in city government, trust in city assembly, trust in country government, trust in the legal system, and trust in national parliament) that are measured on an 11-point Likert scale ranging from 0 (I do not trust at all) to 10 (I totally trust). In Oslo and Stockholm, ‘institutional trust’ is measured by country-specific variables. In the Oslo case, there are three relevant indicators (trust in city government, trust in legal system, and trust in national parliament) available in the questionnaire to construct an institutional trust index while two relevant indicators (trust in city government and trust in national parliament) are found in the Stockholm survey. All of the indicators of the two Scandinavian cities are measured using a range of 1-4. The reliability statistics of Cronbach's alpha ranges from 0.616 to 0.928, which is reliable and acceptable since they exceed the minimum recommended level of 0.6 (Sekaran, 2003). Cronbach's alpha of all five items which are measured on a 11-point scale are: Barcelona: 0.836, Budapest 0.903, Geneva: 0.893, London: 0.928, Lyon: 0.835, Madrid: 0.832, Milan: 0.904, Zurich: 0.869. Cronbach's alpha of the two Scandinavian cities that used country-specific variables for measuring institutional trust are: Oslo: 0.753 (3 items) and Stockholm: 0.616 (2 items).

¹⁰⁹ For more details on the theoretical framework, refer to Chapter 2.

1.4.3. Dependent Variables/Mediators

As for the dependent variables, the effects of the independent variables are tested first on destination language proficiency (Chapter 5) and then on immigrant integration outcomes (Chapter 6). Following the studies on organizational citizenship behavior by Smith, Organ, and Near (1983) and O'Reilly III and Chatman (1996), the immigrants' behavior in the integration process is represented by the following: (1) intra-role or prescribed behavior is conceptualized as the behavior engaged in for the benefit to the individual but not of direct benefit to the larger entity, and employment (which also represents the level of economic integration) is used as its indicator; and (2) extra-role or prosocial behavior is conceptualized as the behavior engaged in not of direct benefit to the individual but of benefit to the larger entity, and political interest (which also represents the level of political integration) is used as its indicator. Although political interest is not a behavioral variable, the significant endogenous relationship is expected between political interest and actual political participation. It is often considered "more interesting to look at political interest as dependent variable" because demonstrating people who are more interested in politics are politically more involved provides little informational value and "political interest represents an important dimension of the political inclusion of migrants in European cities" (Morales & Giugni, 2011, p.264). I take a special interest in immigrant integration outcomes in the economy and polity even though I use other dependent/intervening variables (i.e., destination country citizenship and social group involvement) in the framework to analyze the interconnections assumed in the existing literature.

I conceive of an individual's own capacity to integrate into a new society as having three conceptually distinct elements: tangible resources, intangible resources, and acquired capital. Tangible resources include given personal characteristics or conditions (e.g., length of stay in the host, age at migration, educational attainment) and intangible resources are psychological and emotional reservoirs that arouse people to action towards a desired goal (e.g., attachment and trust). At an individual level, acquired capital (e.g., destination language skills) is attained as a consequence of investment of resources including the former two (tangible and intangible resources), and it can be invested in a given society for achieving desired goals. At a systemic level, acquired capital specifically means immigrant integration outcomes in the cultural (e.g., destination language proficiency), economic (e.g., employment), social (e.g., social group involvement), and legal (e.g., citizenship) spheres. All of the resources may differently affect the immigrant integration outcomes; tangible resources may have direct effects or indirect effects on the outcomes, mediated through intangible resources and/or acquired capital.

For the empirical analyses in Chapter 6, the effects of the above-mentioned main independent variables plus the effects of acquired capital on employment, citizenship, and political interest are examined. In other words, the dependent variable in the previous model (depending on the incremental approach employed via conceptual paths) becomes an intervening variable(s) in the next

model(s); for example, employment is the dependent variable in a model of immigrant economic integration, but the same variable becomes an intervening variable or mediator in a model of citizenship acquisition and a model of immigrant political integration (see Figure 4-1). A special focus is given to the indirect effect of acquired capital on the relationship between tangible resources (personal characteristics) and integration outcomes in the economy (employment) and polity (political interest).

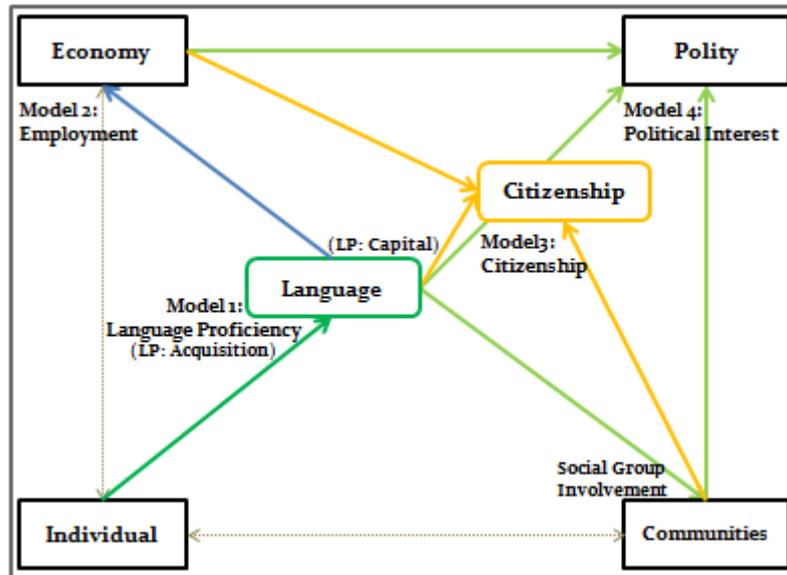


Figure 4-1: Modeling Framework

Language Proficiency

In the LOCALMULTIDEM questionnaire, self-assessed destination language proficiency¹¹⁰ is measured on a 6-point Likert scale with 1= I do not speak host country language (hereinafter, HCL), 2=I speak a little HCL, 3=I speak reasonably well HCL, 4=I speak fluently HCL, 5=I speak HCL like my native language, and 6=HCL is my first language. One special note to make on the variable is that there are two different types of language proficiency variables (which are constructed from the same question) to account for conceptual differences: one for language proficiency as an acquisition outcome and another for language proficiency as a resource or capital. Therefore, based on the former concept, one language proficiency variable is constructed excluding the response value, “6=HCL is my first language,” and it is used as the dependent variable for a model of immigrant language

¹¹⁰ There is another destination language proficiency measure included in the survey, but it was assessed by the interviewer. The question and responses for the variable used for the variable are: how would you rate the respondents’ command of host country language?; the assigned response values are 1=He/she does not speak (HCL), 2=He/she speaks a little (HCL), 3=He/she speaks reasonably well (HCL), 4=He/she speaks fluently (HCL), 5=He/she speaks (HCL) almost like a native language, and 6=(HCL) is his/her native language. The most widespread criticism of using self-assessed language proficiency may be the issue of reliability or stability and consistency of the measurement. Yet, I used the self-assessed measure because: (1) the existing literature traditionally uses self-assessed measurement; and (2) interviewer-assessed language proficiency is used mainly for data quality assurance reasons.

The common practice in the existing studies is to turn the self-assessed language proficiency into a binary variable: 1=proficient in HCL, 0=else. However, I did not follow this practice for I see language acquisition as a process and the validity of destination language proficiency is higher if it is measured with an interval or ratio scale (For a ratio scale, one probably needs a standardized language test score).

acquisition. Likewise, based on the latter concept, another language proficiency variable is constructed including the response value, “6=HCL is my first language,” and it is used as one of the intervening variables for all of the sub-models of immigrant integration. However, the same language proficiency variable was used throughout the analyses for those cities that measured the destination language skills with their own country-specific variable—London, Oslo, and Stockholm—since they did not include the response that denotes that the host country language is the first or native language.

Employment

Employment¹¹¹ is used as the indicator for immigrant economic integration. I originally used ‘household income’ because ‘income’ is the most commonly employed measure within the literature on immigrant language proficiency and socioeconomic assimilation (integration). Income is seen as an indicator of successful integration and widely used as an effect measure of destination language proficiency. Furthermore, income is the measure most extensively used to assess the labor market outcome in general. However, I decided to use ‘employment’ over ‘household income’ as the empirical indicator of immigrant economic integration due to the following reasons. First, the level of language proficiency differs from individual to individual; hence, it is normal to assume that its effect changes accordingly. This implies that the effect of language proficiency can be more accurately evaluated if the measurement is measured on the individual-level rather than some other levels, such as household or family level. Whereas employment meets the criterion, income variable in the datasets are measured only on a household scale. In addition, household income is a difficult measure to apply for comparative analyses because the unit of measurement and scales are not coherent across the cities. Some of the examples are: (1) the household income is measured in different currencies (since not all cities use Euros); (2) the income is measured as the net household income in some cities while it is measured as the gross household income in others (and the rates of taxation differ by county or city); and (3) the income is measured on a ratio scale (numeric number) in most of the cities but some use interval categories (e.g., 0-999 Euros, 1000-1999 Euros) for its measurement. Lastly, the household income in the LOCALMULTIDEM data has a large number of missing cases. The percentages of missing values range from 0% (Oslo) to 80% (London)¹¹².

¹¹¹ Considering employment only may be problematic, especially for those countries with highly segmented and fragmented labor markets. In such cases, employment probabilities of immigrants may be high but they may be mostly employed in the secondary segments of the labor market, in low paid and low status jobs. This may affect the relationship studied. For instance, language may have different effects on economic integration as language of the host country may not be at all necessary for migrants working in some of these sectors. For these reasons, other than income, I also attempted using ‘occupational status’ available in the LOCALMULTIDEM questionnaire: [Q.59] what is/was the name or title of your main job? The answers were coded using ISCO88. However, some cities did not ask the question, and some cities used country-specific variables, which made ‘occupational status’ difficult to use as an indicator for immigrant economic integration.

¹¹² Percentages of missing cases for household income in each city are: Barcelona (29%), Budapest (68%), Geneva (47%), London (80%), Lyon (6%), Madrid (28%), Milan (34%), Oslo (0%), Stockholm (0.2%), and Zurich (29%). Applying multiple imputation technique is not advisable in this case because the percentages of missing cases are beyond the level of multiple imputation applicability.

The measure of employment¹¹³ comes from the response to the question: “Which of these descriptions best describes your situation in the last seven days?” Employment is transformed from a categorical variable with nine categories (1=in paid work, 2=in education, 3=unemployed and actively looking for a job, 4=unemployed, wanting a job but not actively looking for a job, 5=permanently sick or disabled, 6=retired, 7=in community or military service, 8=doing housework, looking after children or other persons, 9=other) into a dichotomous variable. The composite value of the measure ranges from 0 to 1, where 0 represents ‘not in paid work’ and 1 denotes ‘in paid work.’ The old values 2, 3, 4, 5, 6, 7, 8, and 9 are pooled into a single category, ‘not in paid work,’ whereas the old value 1 ‘in paid work’ is retained as it is.

*Social Group Involvement*¹¹⁴

The measure of social group involvement or non-political associational involvement comes from the response to the question: “Have you have participated in any activity arranged by any such organisation during the last 12 months?” The list includes 18 associations/associational activities; after excluding politically oriented ones, 10 items are retained to create a single social group involvement variable. The items included in the variable are: (1) sports club or club for outdoor activities; (2) organisation for cultural activities, tradition preserving or any hobby activities; (3) organisation for humanitarian aid, charity or social welfare; (4) religious or church organisation; (5) immigrants’ organisation; (6) ethnic group organisation; (7) educational organisation, teachers’, parents’ etc.; (8) youth organisation; (9) organisation for the retired/elderly; and (10) residents, housing or neighborhood organisation. The constructed variable indicates the number of associational activities that each respondent has participated in during the last 12 months.

Citizenship

In the questionnaire, respondents are asked to provide information on their current citizenship. Respondents are asked their first, second, and third citizenship. Since they are coded with alphabetical country codes, I have transformed the responses to create a numeric binary variable using the country of immigration. The new variable, citizenship of the host country, is recoded as 1 if the current citizenship matches with the country of immigration and 0 if the current citizenship does not match with the country of immigration. Thus, the variable ranges from 0 to 1, 0 denoting having citizenship other than the host country and 1 denoting having citizenship of the host country.

Political Interest

As noted earlier, as an indicator of the level of immigrant political integration, I conceptualize political participation as the behavior engaged in not of direct benefit to the individual but of benefit

¹¹³ A country-specific variable was used for Oslo. Nearly identical categories were used and recoded to a binary variable: 1= ‘in paid work,’ 0= ‘not in paid work.’ For more details, refer to *Appendix I: Measures*.

¹¹⁴ A country-specific variable was used for social group involvement in London, Lyon, Milan and Oslo. For more details, refer to *Appendix I: Measures*.

to the larger entity. In the existing literature, political participation is operationalized in several different ways, such as electoral voting behavior, political involvement, and political interest¹¹⁵. In this thesis, I use political interest as the empirical measure of political participation as well as immigrant political integration. The political interest index is constructed from two measurements: (1) interest in country politics and (2) interest in city politics, which are measured on a four-point scale with values “1=very interested,” “2=fairly interested,” “3=not very interested” and “4=not at all interested.” The answers are reverse coded to match the positive valence of the other questions. The reliability test result found a Cronbach's alpha of 0.861; hence the two indicators of political interest are reliable with a high level of internal consistency. Each measure is first normalized to the unit interval 0-1, and then they are added and divided by two to construct the political interest index.

1.4.4. Description of Variables

Table 4-7 gives the description of all variables used in the analyses. The information provides with the original variables in the survey and how the original values are transformed before conducting data analyses. One important note on data transformation is that I have normalized all of the variables to the unit interval 0-1 in order to make regression coefficients comparable across variables—even when variables are measured in different units of measurement. In normalization¹¹⁶ (or alternatively called ‘rescaling’), an analyst decides the unit of measurement by identifying the max-min theoretical range for each variable and then dividing by the range. The general formula is given as:

$$X' = \frac{X - X_{\text{MIN}}}{X_{\text{MAX}} - X_{\text{MIN}}}$$

where X' is the normalized value, X is an original value, X_{MIN} is the minima, and X_{MAX} is the maxima among all the data points. In some cities, country-specific variables are used and they are indicated in the table. More detailed information on the survey items used for this thesis is found in *Appendix I: Measures*. The descriptive statistics of all variables (such as mean, standard deviation, min-max, frequencies, and number of observations) used in the analyses are also reported in *Appendix*

¹¹⁵ In order to maximize the use of a wide variety of items related to political actions included in the LOCALMULTIDEM dataset, I first created political participation index using ‘political interest’ and ‘political group involvement’ measures. However, the reliability test suggested the Cronbach’s alpha was low between ‘political interest’ and ‘political group involvement.’ Between the two, ‘political interest’ is chosen because “political interest represents an important dimension of the political inclusion of migrants in European cities” (Morales & Giugni, 2011, p.264).

¹¹⁶ After normalization, comparison of regression coefficients in the same sample and across different samples becomes feasible (provided that the same min-max range of the same variable is adopted in all samples). Each regression coefficient represents the effect produced on a dependent variable by a change of an independent variable from the minimum to the maximum. This implies that the substantive effects cannot be inferred from the normalized values. The substantive effects can only be inferred from the original units of measurement. However, with normalization, qualitative interpretations are possible, such as: (1) if a variable has a statistically significant effect; (2) the sign of the effect; and (3) whether some variables have a larger effect than others. A cross-city comparison is possible if the variables have the same minima and maxima in all cities.

II: Descriptive Statistics of All Variables. The use of country-specific variables in the survey makes it difficult to present the descriptive statistics of the pooled sample, thus they are organized by city.

Table 4-7: Description of Variables

Variable	Measurement
Language Proficiency	1=I do not speak (HCL), 2=I speak a little (HCL), 3=I speak reasonably well (HCL), 4=I speak fluently (HCL), 5=I speak (HCL) like my native language, 6=(HCL) is my first language
Language Proficiency (1)	* Country-specific: London, Oslo, Stockholm (measured on a 4-point scale) Keep the response values 1-5, drop the response value 6. The original variable is normalized to the unit interval 0-1. It is used as the dependent variable for a model of immigrant language acquisition. * Only for Barcelona, Budapest, Geneva, Lyon, Madrid, Milan, and Zurich
Language Proficiency (2)	Keep all of the response values 1-6. The original variable is normalized to the unit interval 0-1. It is used as an intervening variable for a model of immigrant economic integration, a model of immigrant citizenship acquisition, and a model of immigrant political integration. * Country-specific: London, Oslo, and Stockholm (measured on a 4-point scale)
Social Group Involvement	It is constructed from the number of non-political associational activities participated. The original count number is normalized to the unit interval 0-1. * Country-specific: London, Lyon, Milan, Oslo
Political Interest	Political interest (PolInt) is an index created from two political interest variables (interest in country politics and city politics) measured on a four-point scale. The answers are reverse coded. Each measure is first normalized to the unit interval 0-1, and then they are added and divided by two.
Educational Attainment	0=not completed primary education, 1=primary education or first stage of basic education, 2=lower level secondary education or second stage of basic education, 3=upper secondary education, 4=post secondary, non-tertiary education, 5=first stage of tertiary education, and 6=second stage of tertiary education. The original variable is normalized to the unit interval 0-1.
Age at Migration	Years; The original variable is normalized to the unit interval 0-1.
Length of Stay in HC	Years; The original variable is normalized to the unit interval 0-1.
Attachment to Host Country People	0-10 point scale, where 0='no attachment at all' and 10='very strong attachment.' The original variable is normalized to the unit interval 0-1. * Country-specific: Oslo, Stockholm (measured on a 4-point scale)
Social Trust	0-10 point scale, where 0='you can't be too careful' and 10='most people can be trusted.' The original variable is normalized to the unit interval 0-1. * Country-specific: Oslo (binary response)
Institutional Trust	0-10 point scale, where 0='I do not trust at all' and 10='I totally trust.' Five indicators used to create the institutional trust index are: trust in city government, city assembly, country government, the legal system, and national parliament. The original variable is normalized to the unit interval 0-1. * Country-specific: Oslo, Stockholm (measured on a 4-point scale)
Employment	1=in paid work, 0=else * Country-specific: Oslo
Citizenship	1=citizen, 0=else
Country of Birth	1=birth in the host country, 0=else
Permit Category	* Not asked in Oslo & Stockholm
EEA	1=EEA, 0=else
Work	1=for work, 0=else (reference category)
Study	1=for study, 0=else
Family reunification	1=for family reunification, 0=else
Other purposes	1=for other purposes, 0=else
Gender	1=female, 0=male,
Marital Status	1=in a relationship, 0=else
Ethnic Group	1=ethnic group, 0=else * Each city sample includes 2-3 ethnic groups; one of them (group of recent arrival) is used as the reference category.

2. Methods

2.1. Overview

There are four empirical models that will be tested: (1) a model of immigrant language acquisition; (2) a model of immigrant economic integration; (3) a model of immigrant citizenship acquisition; and (4) a model of immigrant political integration. Models 1 and 4 use a continuous variable¹¹⁷ as its dependent variable. For these two models, I use ordinary least squares (OLS) regression to estimate the effects of a set of independent variables on destination language acquisition and on political integration. Model 2 and 3 use a discrete, dichotomous variable as its dependent variable. For these two models, I use OLS regression with standard errors adjusted for heteroskedasticity as a linear probability model (LPM)¹¹⁸ to measure the probability of labor market participation or the probability of acquiring citizenship of the destination country. The coefficient represents the change in probability of ‘being employed’ or ‘acquiring citizenship’ as each resumes characteristic changes from 0 to 1. In the following, I explain the reasons opting for this particular methodological choice.

2.2. Justifications for the Methodological Choice: LPM vs. Logistic Regression

In this section, I provide the justifications for choosing linear probability model over nonlinear estimation methods¹¹⁹, logistic regression¹²⁰ in particular, for analyzing models with a

¹¹⁷ The most commonly used scale of measurement classification system is developed by Stevens (1946) and four different scales (nominal, ordinal, interval, and ratio scales) are specified. However, choice of the statistical analyses in the social sciences typically rests on a more general classification of measures, “continuous” and “discrete.” Continuous variables include ordinal variables with more than 4 categories, interval variables, and ratio variables while discrete variables include nominal and ordinal variables with 2, 3, or 4 levels. Generally, a classification matrix of independent and dependent variables determines the type of statistical analyses, yet here I only consider the dependent variable for choosing appropriate statistical analyses for the models under study. The main question to be asked is if linear regression or generalized linear model (e.g., logistic regression) should be used. In general, OLS regression is used if the dependent variable is continuous and GLM is used if the dependent variable is discrete.

In a model of immigrant language acquisition, the dependent variable (language proficiency) is measured on a five-point Likert scale with values with 1=I do not speak HCL, 2=I speak a little HCL, 3=I speak reasonably well HCL, 4=I speak fluently HCL, 5=I speak HCL like my native language. Although some are critical of treating a five-response-categories variable as interval because the intervals may not be equally spaced, the five response categories are often believed to represent an interval level of measurement. In any case, the dependent variable is considered continuous.

A model of immigrant political integration uses a political interest index as its dependent variable. The political interest index is constructed from two ordinal variables (‘interest in city politics’ and ‘interest in host country politics’, both measured on a four-point Likert scale with values with 1=very interested, 2=fairly interested, 3=not very interested, and 4=not at all interested). First, the answers of political interest variables are reverse coded, and each measure is normalized to the unit interval 0-1, and then they are added and divided by two: political interest index = (interest in country politics + interest in city politics)/2. The index is considered continuous.

¹¹⁸ Linear probability model (LPM) is a linear regression where dependent variable is either 0 or 1 (i.e. a dichotomous or binary variable).

¹¹⁹ The most commonly used nonlinear estimation methods are logit and probit models. In a logit model, ϵ_i (error term) is assumed to be distributed logistically with a mean=0 and a variance= $\frac{\pi^2}{3}$. In a probit model, ϵ_i is assumed to be distributed normally with a variance=1.

¹²⁰ In statistics, logistic regression is also referred to as logit regression or logit model. They all mean the same thing—a regression model where a dependent variable is categorical. It is the most commonly used statistical

binary dependent variable. When dealing with a dichotomous dependent variable, the prevailing practice is to automatically turn to logistic regression because it is the most universally used method and often recommended in textbooks in quantitative methodology. However, logistic regression estimates do not behave in the same manner as linear regression estimates and interpreting results from logistic regression is not as straightforward as ones from linear regression. Why is that so and what is the origin of the problem? The simplest answer is: it is due to unobserved heterogeneity, that is, “the variation in the dependent variable that is caused by variables that are not observed (i.e., omitted variables)” (Mood, 2010, p.67). This problem arises because researchers can hardly ever include in a model all variables that affect an outcome; hence, there is always room for the variations attributable to ‘unobservables’.

Many researchers with a quantitative orientation are aware of what econometricians often refer to as ‘endogeneity’¹²¹ caused by unobserved heterogeneity—the bias in effect estimates that arises if unobservables are correlated with the observed independent variables. This problem is comparatively well-known because it is a common problem in OLS regression. However, as Mood (2010) explains, few are aware of another mechanism specific to logistic regression that unobservables affect regression coefficients regardless of whether omitted variables are correlated to the independent variables or not.

In the next few paragraphs, I illustrate the logic behind the effect of unobserved heterogeneity on logistic regression coefficients. Before jumping into logistic regression, I will first demonstrate how OLS regression works to elucidate their discrepancy. When regression estimates models where an observed, continuous dependent variable (y) is regressed on one or more independent variables, the variance of observed variable (y) stays the same (or fixed) even when extra independent variables are added. Because the unexplained variance¹²² is uncorrelated with the independent variables, as the explained variance goes up, the unexplained variance goes down by an equivalent amount. Such relationship can be expressed in an equation as:

$$V(y_i) = V(\alpha + \sum x_i \beta) + V(\varepsilon_i) \quad (1)$$

where $V(y_i)$ is the variance of y_i or the total variance, $V(\alpha + \sum x_i \beta)$ represents the explained variance, and $V(\varepsilon_i)$ represents the unexplained variance.

method when facing a binary dependent variable, especially in political and social sciences. When facing more than two categories, multinomial logistic regression is used for the dependent variable with multiple categories, and ordinal logistic regression is used for the dependent variable with ordered categories.

¹²¹ ‘Endogeneity’ is a term commonly used in econometrics. The problem discussed here can be classified as a type of endogeneity because ‘endogeneity’ is said to arise when an independent variable is correlated with the error term in a regression model, and its main causes are: (1) measurement error; (2) autoregression with autocorrelated errors; (3) simultaneity; (4) omitted variables; and (5) sample selection.

¹²² Some other names for ‘unexplained variance’ are ‘residual variance’ and ‘residuals.’

However, if the observed dependent variable (y) is not continuous but collapsed into a binary or smaller number of unobserved latent factors, the estimate no longer gives the exact value, but the probability of being in one category as opposed to another. Logistic regression can be seen as a way of modeling the dichotomous outcome (y) as the observed consequence of an unobserved propensity or latent variable¹²³ (y^*), so that when $y^* > 0$, $y=1$, and when $y^* \leq 0$, $y=0$. The latent variable is in turn linearly associated with the independent variables in the model (Long, 1997; See Figure 4-2).

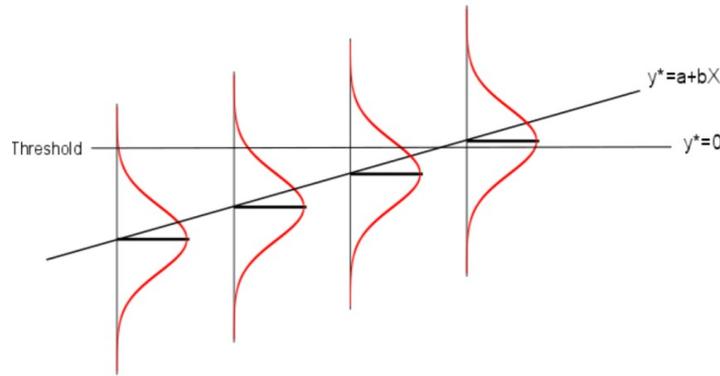


Figure 4-2: Linearity Assumption of Latent Variable (y^*) to Independent Variable (x)
(Source: Bernardi, 2015, p.12)

For example, if the observed binary outcome is citizenship acquisition (1=yes, 0=no), it is easy to assume that among those who acquire citizenship, there are some who are eager to be a citizen of the destination country while others are less willing; similarly, among those without citizenship, the degrees of resistance toward citizenship acquisition differ. Thus, in this example, the latent variable can be perceived as a ‘preference for acquiring citizenship’ that underlies the acquisition choice. There are potentially multiple other latent factors that can influence the behavioral choice (e.g., intention to stay in the destination country and psychological attachment or commitment to the destination country). For a simplicity reason, if only one independent variable is assumed, the latent variable model can then be written as:

$$y_i^* = \alpha + x_{1i}\beta_1 + \varepsilon_i \quad (2)$$

where y_i^* is the unobserved individual propensity, x_{1i} is the independent variable observed for individual i , α and β_1 are parameters, and the errors ε_i are unobserved but assumed to be independent of x_1 . What we can observe is only y_i , whether the individual i has actually acquired the destination country citizenship (=1) or not (=0). For clarity, the probabilistic conditions can be shown in a mathematical equation as:

$$\begin{aligned} P(y_i = 1 | x) &= P(y_i^* > 0 | x) \\ &= P(\alpha + x_{1i}\beta_1 + \varepsilon_i > 0 | x) \\ &= P[\varepsilon_i > -(\alpha + x_{1i}\beta_1) | x] \end{aligned} \quad (3)$$

¹²³ As opposed to observables, latent variables (“latent” literally means “lie hidden”) are unobservables that are inferred (through a mathematical model) from other variables that are directly observed or measured.

where P denotes probability and $P(y_i = 1 | x)$ is the probability that y_i is 1 when x is known. Accordingly, the probability $P(y_i = 1 | x)$ depends on the distribution of the error term ε_i , and a certain distribution of ε_i must be assumed to estimate the model. In logistic regression, ε_i is assumed to have a standard logistic distribution with a mean of 0 and a fixed variance of $\frac{\pi^2}{3}$ or roughly 3.29. This distribution is handy because it results in predictions of the logit, which can be interpreted as the natural logarithm of the odds of having $y=1$ versus $y=0$. Accordingly, logistic regression assumes the logit to be linearly related to the independent variables:

$$\text{Ln} \left[\frac{P}{1-P} \right] = \alpha + x_{1i}b_1 \quad (4)$$

where Ln indicates logit and P is the probability that $y=1$. The logit deviates from $-\infty$ to $+\infty$, but it always translates to probabilities above 0 and below 1. The logistic regression estimates in Equation 4 are presented in terms of log-odds ratios.¹²⁴

Then, why comparisons of coefficients across nested models and across groups do not work the same way in logistic regression as they do in OLS regression? The shortest answer to the question is: This is because the dependent variable in logistic regression is scaled differently in each model or group. In the following, I introduce an equation for logistic regression to clarify why such comparisons can be misleading. Since it is assumed that, as in the case of OLS regression (Equation 1), the unexplained variance in logistic regression is uncorrelated with the independent variables, it follows:

$$V(y_i^*) = V(\alpha + x_i\beta) + V(\varepsilon_{yi^*}) = V(\alpha + x_i\beta) + \frac{\pi^2}{3} \quad (5)$$

where $V(y_i^*)$ is the total variance, $V(\alpha + x_i\beta)$ is the explained variance, and $V(\varepsilon_{yi^*})$ is the unexplained variance. However, in logistic regression with a latent variable (y^*), the unexplained variance is fixed so the explained variance and total variance vary when variables are added to the model. Under such condition with a fixed unexplained variance ($\frac{\pi^2}{3}$), any increase in the explained variance forces the total variance of the dependent variable (and hence its scale¹²⁵) to increase. When the scale of the dependent variable increases, b_1 in Equation 4 also increases. In other words, the coefficient (b_1) estimates not only the effect of x_1 but also the level of unobserved heterogeneity in the model. This can be seen in the following equation:

¹²⁴ Log-odds ratios correspond to b_1 in Equation 4 and tell how much the logit increases if x_1 increases by one unit. Because log-odds ratios are hard to interpret, it is common to report logistic regression results as ‘odds ratios,’ which are obtained by e^{b_1} . Odds ratios tell how many times higher the odds of $y=1$ is if x_1 increases by one unit. However, ‘odds ratios’ are equally difficult to interpret.

¹²⁵ ‘Scale’ here means unit of measurement. Analogy can be: scale is changed from measuring in hours to minutes.

$$y_i^* = \alpha + x_{1i}\beta_1 + \delta\varepsilon_i \quad (6)$$

where everything is the same as Equation 2, except that the variance ε_i is now fixed and the factor δ ¹²⁶ corrects ε_i to reveal its true variance. Because δ is not observed and because the unexplained variance (ε_i) is fixed, b_1 in the logistic regression model (Equation 4) estimates β_1/δ , rather than the true coefficient β_1 (refer to Gail, Wieand & Piantadosi, 1984; Wooldridge, 2002: pp. 470–472; cited in Mood, 2010).

Consequently, Mood (2010) highlights three critical yet habitually overlooked problems that stem from unobserved heterogeneity in logistic regression: (1) interpreting coefficients (which are expressed in log-odds ratios or odds ratios) as effect measures is problematic because they reflect both effect sizes and the magnitude of unobserved heterogeneity; (2) comparing coefficients across models with different independent variables is problematic because the unobserved heterogeneity is prone to vary across models; and (3) comparing coefficients across samples, across groups within samples, or over time—even when using models with the same independent variables—is problematic because the unobserved heterogeneity can fluctuate across the samples, groups, or points in time.

Then, the question is “what does an analyst do to test the models with a binary dependent variable using cross-sectional data and nested models?” There are several alternative methods that could be utilized to overcome the problem of logistic regression, such as y-standardization¹²⁷ (Winship & Mare 1984; Long 1997; cited in Kohler, Karlson, & Holm, 2011) and average marginal effect (AME)¹²⁸, and average partial effect (APE)¹²⁹ (Wooldridge, 2002), but there are no simple all-purpose solutions that simultaneously satisfy the four criteria: (1) capture the non-linearity of the relation, (2) are comparable over samples, groups within samples, or over time (3) are comparable over models, and (4) indicated conditional effects (Mood, 2010). Therefore, when choosing a statistical method for analyzing models with a binary dependent variable, analysts should carefully consider the different characteristics of estimates and select the estimate that gives the most relevant outcome with available data. In the present research, the key questions to be asked and answered are: Am I interested in the non-linearity of the relation per se or am I interested in sign and significance of an effect and/or average effect estimate? Which estimate satisfies the comparability across samples and groups and comparability across models?

¹²⁶ δ is the ratio of the true standard deviation of the errors to the assumed standard deviation of the errors.

¹²⁷ The estimates of Y-standardization are the coefficients (expressed in Odds Ratios or Log-Odds Ratios) that are “made comparable across models by dividing them with the estimated standard deviation for the latent variable (sdY*) for each model” (Mood, 2010, p.73).

¹²⁸ Average marginal effect (AME) expresses the average effect of x1 on P(y=1).

¹²⁹ Average partial effect (APE) differs from AME by averaging the marginal effects across the distribution of other variables at different given values of x1.

From the table below (Table 4-8), it seems that the estimates that satisfy the most criteria are AME or APE or LPM. However, I have chosen LPM over the others for several reasons. First, the existing literature in the field of immigrant language acquisition, labor market integration (using employment as the dependent variable), and naturalization rates¹³⁰ tends to use LPM over logistic regression (see, for example, Dustmann & Fabbri, 2003; Chiswick & Miller, 2008). Second, the interpretation of LPM results is much easier because the coefficients are expressed in probabilities rather than log-odds ratios. Third, LPM is comparable across models. Forth, LPM is comparable across samples and groups. Fifth, LPM is an efficient alternative to other methods and deriving AME from logistic regression is normally considered a complicated detour¹³¹.

Table 4-8: Characteristics of Estimated Effects on Binary Dependent Variables
(Source: Mood, 2010, p.80)

	Capture nonlinearity	Comparable across groups, samples, etc.	Comparable across models	Conditional effect estimate^a
Measures based on odds & log-odds				
Odds ratio	Yes	No	No	Yes
Log-odds ratio	Yes	No	No	Yes
y-standardization	Yes	No	Yes	No
Allison's procedure	Yes	Yes ^b	No	Yes
Heterogeneous choice model	Yes	Yes ^c	No	Yes
Measures based on percentages				
Average Marginal Effect	No	Yes	Yes	No
Average Partial Effect	Yes ^d	Yes	Yes	No
Marginal Effect	Yes ^d	No	No	Yes
ΔP	Yes ^d	No	No	Yes
Linear Probability Model	No	Yes	Yes	No ^e

^a In a multivariate model

^b If assumption that one variable has same effect in group etc. is correct.

^c If assumption about the functional form of the relationship is correct.

^d If estimated at several places in the distribution.

^e If the true relationship is nonlinear.

Nonetheless, LPM is not free from problems or criticisms. Three problems are usually pointed out for LPMs: (1) “the possibility of predicted probabilities higher than 1 or lower than 0”; (2) “heteroscedastic and non-normal residuals, leading to inefficiency and invalid standard errors”; and (3) “misspecified functional form” (Mood, 2010, p.78). However, regarding the first problem, the occurrence of out-of-range predicted values is also well-known in linear regression with non-binary dependent variables. And, the second problem, which is the problem of heteroscedasticity, can be easily corrected for—by using robust standard errors. This leaves the third problem of misspecification the most critical issue as “it is often theoretically plausible that binary outcome variables are related to the independent variables in a non-linear fashion with smaller increments in the probability of the outcome at the extreme ends of the distribution” (Mood, 2010, p.78). On this issue, however, unless the modeled probability is extreme (close to 0 or 1), the linear model should fit

¹³⁰ However, there are existing studies that use logistic regression for analyzing the determinants of immigrant citizenship acquisition (e.g., Portes & Curtis, 1987; Yang, 1994).

¹³¹ Coefficients of linear probability models are known to be almost identical to average marginal effect of logit (Mood, 2010). Yet, deriving AME adds complexity in practice; AME requires running the logistic regression first, and then compute the average marginal effects. The statistical software used for data analysis (Stata 12.0) has commands that automatically produce regression output tables for LPM and logit model, but not for AME.

fine because if the probability is more moderate, between 0.20 and 0.80, then the log odds are almost a linear function of the probability (Long, 1997; see Figure 4-3). Thus, Mood (2010) suggests that “as long as the misspecification of functional form does not alter [...] the substantive conclusions that are relevant to the questions asked, it is reasonable to choose LPM over logistic regression” because the LPM effect estimates are nearly identical to the AME derived from logistic regression (p.78).

There seems to be a disciplinary divide in the methodological choice. This is well illustrated in the quote: “Using LPM is almost unthinkable in sociology, while it is common in economics” (Mood, 2010, p.78). Due to the above-mentioned reasons, the main analyses in the thesis are conducted using linear probability model to account for the dichotomous dependent variables. However, I have also analyzed the models using logistic regression. The findings from logistic regression analysis do not demonstrate contradictory results. The estimates from logistic regression are not included in the empirical chapter for ease of interpretation and to reduce the complexity but they are reported and commented in *Appendix IV: Determinants of Immigrant Integration*.

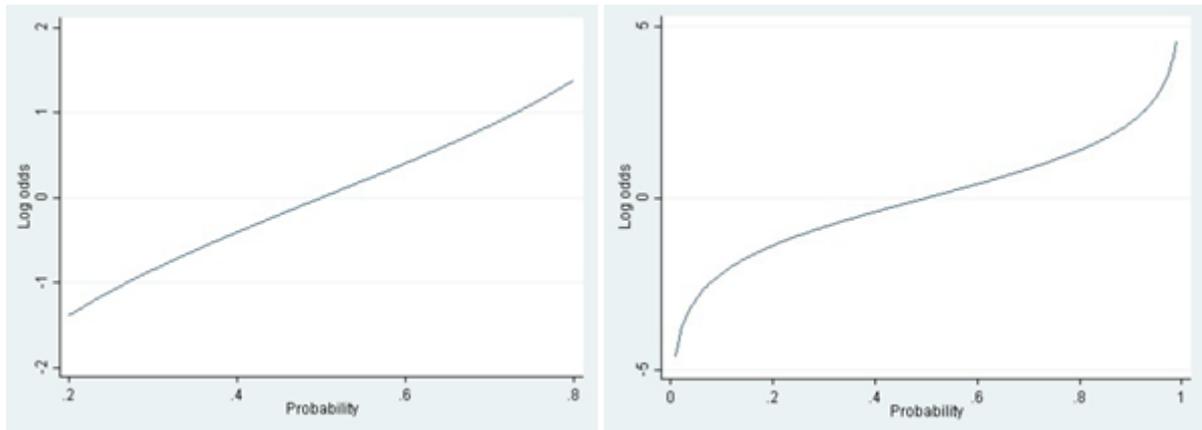


Figure 4-3: Modeled Probability between 0.20 and 0.80 (Left), Modeled Probability between 0 and 1 (Right)

Chapter 5. Determinants of Immigrant Language Acquisition

1. Modeling Immigrant Language Acquisition

1.1. Introduction

In this chapter, I develop and statistically test a model of immigrant language acquisition to seek the elements that might give some answers to the following overarching question: What affects immigrants to acquire capital and how is it generated? The capital of focus here is human capital, and the degrees of human capital acquisition are represented by the levels of destination language proficiency achieved by immigrants. Thus, a more exhaustive question asked throughout this chapter is: What are the determinants of immigrant language acquisition and how are they related?

As claimed “language is social” (Clark, 2003, p.19) and “learning a word is a social act” (Bloom, 2000, p.55), social and emotional characteristics of learners in their social environment may affect the outcome and process of language acquisition. A number of previous studies tell a correlation between learners’ attitudes and language learning outcome. For example, developmental psychology research suggests that psychologically secure children acquire language better than insecure children, and thus language development is stimulated in the context of a secure psychological relationship with their caregivers (van IJzendoorn, Dijkstra, & Bus, 1995). In the field of second language acquisition, evidence indicates that motivated language learners have higher chances of attaining a target language than those with lower level of motivation, and integrative motivation¹³² is consistently found to be one of the most significant factors in second language attainment (Gardner, 1985). The economics of language (Chiswick, 1978) views economic incentives as one of the most critical factors that determine immigrants’ language proficiency and empirical evidence has confirmed the theoretical claim¹³³. Different models postulate different attitudes and motivations as the vital determinants of language acquisition. But, can attitudinal/motivational factors solely explain the variability in linguistic outcome? If not, what could be the other factors that might influence the outcome? Csizér and Dörnyei (2005) note that “motivation is only indirectly related to learning outcomes/achievement because it is, by definition, an antecedent of behavior rather than of achievement” (p.20). Spolsky’s (1989) general model of language learning (see Figure 1-2) also sees that attitudes combined with various other factors, such as learners’ individual characteristics and learning contexts, may generate differences in linguistic outcomes.

¹³² Integrative motivation is consisted of three elements: integrativeness, attitude toward learning situation, and motivation (Gardner, 1985). For more details, refer to *Chapter 2: 4.1.1. Phase 1: The Social Psychological Period (1959-1990)* and *Figure 2-3: Gardner’s Socio-Educational Model of Second Language Acquisition & Conceptualization of the Integrative Motivation*.

¹³³ Refer to Chapter 2 for the empirical evidence from previous studies.

I conceive of an individual's own capacity to acquire a new language as having two conceptually distinct elements: tangible and intangible resources¹³⁴. On the one hand, tangible resources refer to personal characteristics (e.g., lengths of stay in the host, age at migration, educational attainment). On the other hand, intangible resources are psychological and emotional reservoirs that arouse people to action towards a desired goal (e.g. attitudes). Both resources may affect immigrant destination language acquisition and the effects of tangible resources may be partially or totally mediated by intangible resources.

To examine the interrelations, economic and psychological views on immigrant/second language acquisition are compared to develop a model of immigrant language acquisition. To be more specific, I develop a nested regression model based on the economic-psychological modeling frame for immigrant language acquisition¹³⁵. A set of selected variables are sequentially introduced to the regression model: First, a subset or reduced model comprised of personal characteristics variables (the economic model [plus controls]) is introduced; subsequently, a subset of attitudinal variables (the psychological model [plus controls]) is introduced; and lastly, all subsets are combined into the final full model. The reduced models and final full model are compared to examine the effects of independent variables contained in each subset and the mediation effects of attitudinal variables on immigrants' language proficiency.

In sum, the purpose of this empirical chapter is twofold: First, it is to examine the robustness of the economic model of immigrant language proficiency in ten European cities; second, it is to investigate whether immigrants' attitudes influence the linguistic outcome or not, and if there is an association between attitudes and destination language proficiency, is it mostly a reflection of given personal characteristics or do attitudes explain the variability in linguistic outcome independent of those given factors? These are the main questions to be addressed in developing a model of immigrant language acquisition and empirically testing the model using ten-city-wide cross-sectional survey datasets from the Multicultural Democracy and Immigrants' Social Capital in Europe: Participation, Organisational Networks, and Public Policies at the Local Level (LOCALMULTIDEM).

1.2. Two Views of Immigrant Language Acquisition

¹³⁴ I follow the classification typically used in corporate strategic management. In management, 'tangible resources' denote "assets that are physical in nature, visible and can be quantified" (e.g., financial assets, organizational, technological resources, and human resources as number of employees or years of education and experience) while 'intangible resources' represent "those that are not physical or visible in nature. Some of these resources are subjective in nature" (e.g., human resources as experience and capabilities of employees and trust among employees) (Sengupta & Chandan, 2013, p.92).

¹³⁵ The economic-psychological modeling frame for immigrant language acquisition (see *Figure 2-8*) is constructed based on the existing models of immigrant/second language acquisition. The economic model (Chiswick, 1978) and psychological model (Gardner, 1985) are used as the reference models; they represent economic view and psychological view, respectively, delineated in the next section (*1.2. Two Views of Immigrant Language Acquisition*). The detailed modeling strategy and processes are described in Chapter 2. The constructed modeling frame serves as the theoretical foundation for developing all of empirical models.

1.2.1. Economic View

Chiswick (1978) proposed a model of immigrant language proficiency. The model postulates that *economic incentives* of immigrants, *efficiency* in acquiring the destination language, and *exposure* to the destination language affect their language acquisition. The model is built based on the logic of what he calls ‘the economics of language.’ Furthermore, the model theoretically relies on human capital theory (Becker, 1964) since language skills satisfy the three requirements for human capital—that is “productive, costly to produce, and embodied in the person” (Chiswick, 2008, p. 4). As Chiswick (2008) states: “the economics of language is the study of the determinants and consequences of language proficiency using the methodology and tools of economics. The methodology of economics is the scientific method applied to maximizing behavior” (p.2-3). Thus, the model also assumes that if immigrants are rational, then they would invest in attaining the host-language skills to the degree that such investments are attractive economically (Chiswick, 2008). In other words, immigrants—like other rational individuals—would invest in language if the expected economic benefits from acquiring the language outweigh its economic costs. In this cost-benefit calculation paradigm, language acquisition is considered a process of acquiring resources (benefits) and an act of allocating scarce resources among competing uses (costs) to maximize one’s utility. In an economic term, ‘utility’ is the satisfaction an individual gains from his/her consumption of goods and services. Derived from neoclassical economics, the idea of human capital theory presumes that individuals seek to maximize their material gains because utility increases with wealth. Therefore, the economic view assumes that tangible resources (e.g., personal characteristics) predict behavioral outcomes.

1.2.2. Psychological View

As seen in the economic model, economists normally use ‘observable’ variables, but they tend to exclude ‘unobservable,’ psychological variables. This is partly due to lack of data and valid measures applicable for their disciplinary practice and partly due to the core assumption of *homo economicus* that runs through the discipline. In actual practice, economists or more precisely econometricians take ‘unobserved’ factors rather seriously and acknowledge their heterogeneous nature. Nevertheless, they view such unseen heterogeneous factors as sources of bias (that are often referred to as a type of ‘endogeneity’ in their technical language) in their estimation, thus something that needs to be isolated and eradicated. This is why econometricians employ multiple strategies and techniques to eliminate endogeneity (which is, in this particular case, caused by ‘unobserved heterogeneity’¹³⁶ in the language of econometrics or ‘individual differences’ which might be the closest translation of the term familiar to psychologists) in order to come up with clean and ‘pure’ estimates. To attain truer estimates (and then ultimately to reach the truth), homogeneity must be assumed as the true image of human beings. Therefore, the economic model is built upon the

¹³⁶ Unobserved heterogeneity in econometrics in general refers to unobserved omitted variables that are fixed for an individual (at least over a long period of time), such as an individual’s innate ability.

underlying assumption that human beings are *homines economici* who maximize their immediate economic gains. However, people do not always acquire a new language or engage in certain social behavior simply for the sake of economic gains but also for a number of other reasons. To offer better explanation for the complexity of human behavior, I turn to other disciplines such as linguistics and psychology to search for relevant theories, evidence, and insights.

For example, the socio-educational model of second language acquisition (Gardner, 1985) postulates that language aptitude and motivation affect second language acquisition and proposes that motivation is influenced by at least two attitudinal constructs, namely integrativeness and attitudes toward learning situation. Integrativeness reflects an openness or willingness to integrate and socialize with the target language group and other ethnic groups in general. Attitudes towards the learning situation is the learners' reactions to the classroom environment, such as language teacher, language course, and materials. Gardner's findings suggest that the language learning involves both aptitude and motivation components, and the basis of motivation involves the extent to which the individual is able or willing to identify with the other ethnolinguistic community. This implies that attitudes and emotions influence linguistic outcome. Therefore, the psychological view assumes that intangible resources (such as attitudes) predict behavioral outcomes.

To my knowledge no research has simultaneously examined the effects of personal characteristics and learning attitudes on immigrant language acquisition. Therefore, I draw on the economic and psychological models of immigrant/second language acquisition to derive hypotheses about the role of personal characteristics and attitudinal-motivational factors in generating differences in destination language proficiency.

1.3. Hypotheses

These propositions can be stated more formally in terms of the following hypotheses: From the *economic view*, it can be hypothesized that tangible resources (personal characteristics) have a direct effect on language proficiency, and the direct effect of the socio-demographic characteristics on language proficiency is greater than the direct effect of attitudes (H1). Concerning the mediation effect of attitudes, most of the association between attitudes and language proficiency is due to its association with the given personal characteristics, thus it assumes an insignificant indirect effect through attitudes (H2). From the *psychological view*, it can be hypothesized that intangible resources (attitudes) have a positive, direct effect on language proficiency, and the direct effect of attitudes on language proficiency is greater than that of personal characteristics (H3). Concerning the mediation effect of attitudes, most of the association between personal characteristics and language proficiency is due to its indirect association with attitudes, thus it assumes that the total effect of personal characteristics is mediated mostly by attitudes (H4).

In summary, Hypotheses 1 and 2 are the rival hypotheses of Hypotheses 3 and 4. Support for Hypothesis 1 would indicate that the economic view better explains language acquisition behavior of

immigrants; on the contrary, support for Hypothesis 3 would signify that the psychological view better explains the outcome. On the issue of the hypothesized mediation effect of attitudes, such effect is absent if Hypothesis 2 is supported (i.e., the direct effect of personal characteristics [the economic view] alone explains the outcome). Conversely, if Hypothesis 4 is supported, there are two possible ways in which such mediation effect is transmitted: (1) in case of full mediation, all effect of personal characteristics is mediated through attitudes (i.e., the effect of attitudes [the psychological view] alone explains the outcome); and (2) in case of partial mediation, a portion of the effect of personal characteristics is mediated through attitudes, simultaneously supporting the direct effect of personal characteristics and the indirect effect of attitudes on the outcome.

2. A Model of Immigrant Language Acquisition

2.1. Model

Based on the economic-psychological modeling frame for immigrant language acquisition (constructed in Chapter 2), an empirically testable model of immigrant language acquisition is formulated to identify the determinants of language proficiency of immigrants. Thus, a model of immigrant language acquisition can be described as:

$$\text{Language Proficiency} = f \{ \text{Educational attainment, Age at migration, Length of stay in the host country, Permit category, Attachment to host country people, Social trust, Institutional trust, Gender, Marital status, Ethnic group} \}$$

The theoretically expected signs of their effects on language proficiency are summarized in the last column of Table 5-3.

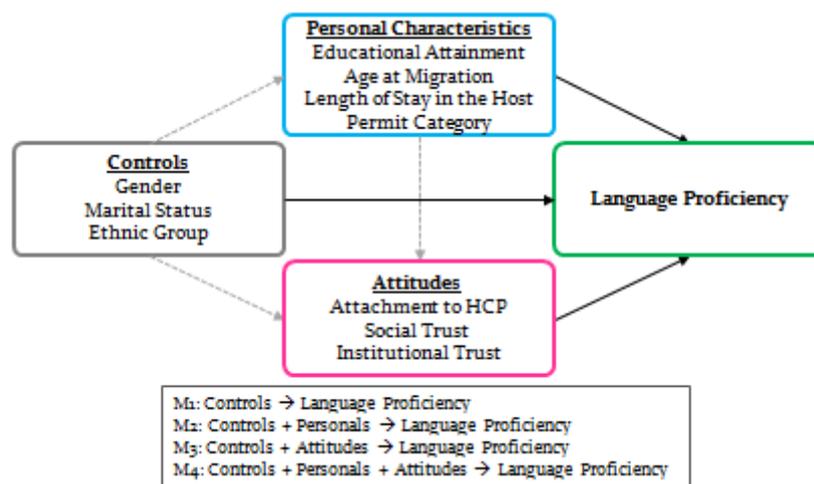


Figure 5-1: A Model of Immigrant Language Acquisition (For OLS Regression)

A schematic representation of the hypothesized mechanism is illustrated in Figure 5-1. The causal links (or the directions of arrows in the figure) are suggested by the theoretical framework and presumed temporal order. While the solid arrows signify that the links are observable from regression results, the dashed arrows indicate that the links are unobservable from regression output and the presumed relationships may be inferred from comparing the changes in the R-squared values and coefficients across the models. An important reminder is that a regression analysis can only indicate

correlation, not causation. This is because one can hardly include all variables that determine the outcome in a model, and thus, there are always omitted factor, whether observed or unobserved. One of the major problems with observational data is that there are a countless number of unobserved variables which could render an observed relationship endogenous (i.e., the problem of unobserved heterogeneity). Even when factors are observed, there are other potential sources of bias (e.g., measurement errors). In short, as long as the sources of endogeneity remain uncontrolled, the estimated conditional association does not necessary warrant a causal interpretation. To move from correlation to causation, endogeneity bias must be reduced if not eliminated. There are certain techniques¹³⁷ that aim to eliminate endogeneity bias, yet establishing causation from observational data analysis remains a challenging task. Because none of the advanced techniques are applied in the empirical analysis here, causality cannot be established even if the data analysis results may suggest the presence of the hypothesized causal relations shown in the figure using arrows.

2.2. Measures¹³⁸

Table 5-1 gives the descriptive statistics of the variables included in the model¹³⁹. Means for dummy variables can be interpreted as proportions. Since all of the variables are normalized to the unit interval of 0-1, observed central tendencies of all variables (regardless of dummy or non-dummy variables) reflect the relative activity of the variables. For example, the means and standard deviations of language proficiency¹⁴⁰ (whose values are normalized) among non-native speakers in the seven cities are: Barcelona ($M=0.66$, $SD=0.22$), Budapest ($M=0.46$, $SD=0.27$), Geneva ($M=0.67$, $SD=0.24$), Lyon ($M=0.79$, $SD=0.23$), Madrid ($M=0.48$, $SD=0.25$), Milan ($M=0.45$, $SD=0.19$), and Zurich ($M=0.44$, $SD=0.31$). The means and standard deviations of language proficiency (whose values are normalized) among respondents with migrant origin (including native speakers) in the three cities are: London ($M=0.88$, $SD=0.21$), Oslo ($M=0.69$, $SD=0.25$), and Stockholm ($M=0.67$, $SD=0.24$). Even though they are measured on different scales (on a 5-point scale in the seven cities; on a 4-point scale in London, Oslo, and Stockholm), they become comparable across cities after normalization (See Table 5-1). The larger the mean, the higher the language proficiency; the smaller the mean, the lower the language proficiency.

¹³⁷ To establish causal relationships, using experiments is advised. To counter the difficulty and try to establish causation using observational data, there are several quasi-experimental methods and statistical techniques invented and used by econometricians. Some of the examples are: instrumental variables-estimation, difference-in-differences, regression discontinuity, and fixed effect models. While instrumental variables-estimation can be implemented using cross-sectional data, other advanced methods normally require time-series or panel data.

¹³⁸ All variables used in the data analyses are normalized to the unit interval of 0-1. For more details, refer to *Appendix I: Measures* and/or *Chapter 4: 1.4. Measures*, where all variables used in the analyses are described.

¹³⁹ .

Table 5-1 gives only means and standard deviations by city. For more detailed information, refer to *Appendix II: Descriptive Statistics of All Variables*.

¹⁴⁰ The variable is reported as “language proficiency (Nor 1)” in *Appendix II: Descriptive Statistics of All Variables*.

Table 5-1: Descriptive Statistics: A Model of Immigrant Language Acquisition

City ^a	BAR	BUD	GEN	LON	LYO	MAD	MIL	OSL	STO	ZUR
Variable ^b	Mean (SD)									
<i>DV</i>										
Language proficiency (1)	0.66 (0.22)	0.46 (0.27)	0.67 (0.24)	0.88 (0.21)	0.79 (0.23)	0.48 (0.25)	0.45 (0.19)	0.69 (0.25)	0.76 (0.24)	0.44 (0.31)
<i>IVs</i>										
Educational attainment	0.57 (0.31)	0.75 (0.24)	0.57 (0.31)	0.72 (0.30)	0.59 (0.32)	0.49 (0.28)	0.64 (0.21)	0.50 (0.35)	0.63 (0.32)	0.50 (0.30)
Age at migration	0.39 (0.14)	0.32 (0.14)	0.23 (0.15)	0.11 (0.16)	0.07 (0.12)	0.37 (0.13)	0.34 (0.13)	0.29 (0.18)	0.21 (0.17)	0.26 (0.14)
Length of stay in HC	0.09 (0.08)	0.10 (0.08)	0.26 (0.17)	0.23 (0.14)	0.29 (0.12)	0.07 (0.05)	0.09 (0.07)	0.15 (0.10)	0.22 (0.07)	0.25 (0.14)
Permit category										
EEA	0.03 (0.18)	0.01 (0.08)	0.22 (0.42)	X	X	0.02 (0.15)	0.01 (0.07)	X	X	0.25 (0.43)
Work (ref. category.)	0.56 (0.50)	0.25 (0.43)	0.10 (0.30)	0.08 (0.28)	0.05 (0.22)	0.58 (0.49)	0.56 (0.50)	X	X	0.26 (0.44)
Study	0.02 (0.15)	0.27 (0.44)	0.01 (0.01)	0.07 (0.26)	0.01 (0.08)	0.02 (0.15)	0.03 (0.16)	X	X	0.004 (0.07)
Family reunification	0.02 (0.14)	0.14 (0.35)	0.10 (0.30)	0.02 (0.13)	0.03 (0.18)	0.03 (0.18)	0.14 (0.35)	X	X	0.10 (0.30)
Other purposes	0.03 (0.17)	0.08 (0.28)	0.37 (0.48)	0.20 (0.40)	0.04 (0.21)	0.04 (0.19)	0.03 (0.18)	X	X	0.12 (0.32)
Attachment to HCP	0.68 (0.24)	0.56 (0.25)	0.79 (0.22)	0.54 (0.23)	0.77 (0.22)	0.68 (0.23)	0.57 (0.25)	0.58 (0.23)	0.64 (0.24)	0.72 (0.25)
Social trust	0.48 (0.26)	0.61 (0.20)	0.51 (0.27)	0.49 (0.22)	0.34 (0.29)	0.52 (0.26)	0.47 (0.24)	0.58 (0.49)	0.45 (0.29)	0.49 (0.28)
Institutional trust	0.58 (0.19)	0.45 (0.22)	0.67 (0.22)	0.52 (0.19)	0.52 (0.21)	0.60 (0.20)	0.52 (0.19)	0.54 (0.23)	0.50 (0.22)	0.67 (0.22)
<i>Controls</i>										
Gender	0.44 (0.50)	0.39 (0.49)	0.46 (0.50)	0.48 (0.50)	0.56 (0.50)	0.51 (0.50)	0.48 (0.50)	0.48 (0.50)	0.51 (0.50)	0.33 (0.47)
Marital status	0.61 (0.49)	0.53 (0.50)	0.71 (0.46)	0.50 (0.50)	0.54 (0.50)	0.55 (0.50)	0.48 (0.50)	0.76 (0.43)	0.60 (0.49)	0.78 (0.41)
Ethnic group ^c										
G1	0.30 (0.46)	0.35 (0.48)	0.52 (0.50)	0.33 (0.47)	0.16 (0.37)	0.34 (0.48)	0.33 (0.47)	0.33 (0.47)	0.46 (0.50)	0.33 (0.47)
G2	X	0.35 (0.48)	X	0.33 (0.47)	0.65 (0.48)	X	0.33 (0.47)	0.33 (0.47)	X	0.33 (0.47)
G3 (ref. category)	X	0.30 (0.46)	0.48 (0.50)	0.34 (0.47)	0.18 (0.39)	X	0.33 (0.47)	0.33 (0.47)	0.53 (0.50)	0.34 (0.47)

^a BAR: Barcelona, BUD: Budapest, GEN: Geneva, LON: London, LYO: Lyon, MAD: Madrid, MIL: Milan, OSL: Oslo, STO: Stockholm, ZUR: Zurich

^b The Mean and SD of all variables are expressed in normalized values. DV: Dependent variable, IVs: independent variables.

^c Ethnic groups: Barcelona (G1: Moroccan, G2: Andean mixed group, G3: Ecuadorian), Budapest (G1: Ethnic Hungarian, G2: Mixed Muslim, G3: Chinese), Geneva (G1: Italian, G2: N/A, G3: Kosovar), London (G1: Indian, G2: Afro-Caribbean, G3: Bangladeshi), Lyon (G1: Moroccan, G2: Algerian, G3: Tunisian), Madrid (G1: Moroccan, G2: Andean mixed group, G3: Ecuadorian), Milan (G1: Egyptian, G2: Filipino, G3: Ecuadorian), Oslo (G1: Turkish, G2: Pakistani, G3: Bosnian), Stockholm (G1: Turkish, G2: N/A, G3: Chilean), Zurich (G1: Italian, G2: Turkish, G3: Kosovar)

The dependent variable in this analysis is *language proficiency*, which is the respondent's own assessment of destination language proficiency ranging from 1 (I do not speak host country language) to 5 (I speak host country language like my native language) in Barcelona, Budapest, Geneva, Lyon, Madrid, Milan, and Zurich. This variable is constructed by excluding the answer 6 (host country language is my first language) from the original response values that range from 1 to 6. The variable transformation is done specifically for the empirical model of immigrant language acquisition in order to meet the purpose of this chapter, which is to examine the effects of explanatory variables on destination language acquisition¹⁴¹. The outcome of interest is the acquisition of new

¹⁴¹ The response value 6 (host country language is my first language) is dropped for constructing the dependent variable (language proficiency). This is because language proficiency is conceptualized as an acquisition outcome in the model of immigrant language acquisition. However, the response value is kept for constructing another language proficiency variable (a mediator for the three sub-models of immigrant integration). This is

language skills other than the first or native language. London, Oslo, and Stockholm use their own country-specific variable to measure language skills of immigrants on a four-point scale. Unlike other cities, the three cities do not include a response that denotes that the host country language is the first language. Therefore, the country-specific language proficiency variable was used for the three cities without deletion.

The independent variables in the model of immigrant language acquisition include personal characteristics and attitudes. The *personal characteristics* include: *educational attainment* measured as a categorical variable indicating whether the respondent had incomplete primary education, primary education, lower level secondary education, upper secondary education, post secondary (non-tertiary) education, first- and second-stage tertiary education; *age at migration* measured in years; *length of stay in the host country* measured in years; and *permit categories* measured as five dummy variables (an EEA national residence; for work; for study; for family reunification/due to marriage; and for other purposes) which are transformed from the original eight dummy variables. The *attitudes* include *attachment to host country people*, *social trust*, and *institutional trust*. These three variables are the respondent's subjective assessment of his/her levels of attachment to host country people, of social trust, and of institutional trust. In general, they are measured on an 11-point scale with a higher number indicating higher levels of attachment or trust. There are differences in the items and scales measured in some cities (such as Oslo and Stockholm) because some questions or items are not asked in the survey and country-specific variables are employed for certain items that are measured using different scales. The control variables in the model of immigrant language acquisition include: *gender*, coded 1 for females and 0 for males; *marital status*, coded 1 for married or cohabiting and 0 for single, widowed, or divorced; and *ethnic groups*, dummy-coded 1 for the selected ethnic group and 0 for all others.

2.3. Analysis

I use OLS regression¹⁴² to estimate the effects of tangible resources (externally observable personal characteristics) and intangible resources (learning attitudes) on destination language acquisition. Table 5-2 presents the regression results with four models¹⁴³ (all adjusted for demographic characteristics of gender, ethnic group, and marital status¹⁴⁴). Model 1 shows the effect of the control variables; Model 2 shows the effect of the personal characteristics on language proficiency; Model 3 shows the effect of the attitudes on language proficiency; and Model 4 shows

because the latter immigrants' destination language proficiency is conceptualized as a resource or capital in the modeling framework.

¹⁴² Preliminary analyses were conducted to ensure no violation of the assumptions of normality, linearity, multicollinearity and homoscedasticity.

¹⁴³ Table 5-2 provides the results only for Milan. Regression results of all cities are reported in *Appendix III: Determinants of Immigrant Language Acquisition*.

¹⁴⁴ Age is typically included as a control variable. However, correlation analysis indicated the problem of multicollinearity between age and age at migration (which is one of the independent variables). Hence, age was excluded from the control.

the combined effect of the variables included in the previous model blocks (i.e., controls, personal characteristics, and attitudes). I first look at Model 2 to examine how much the personal characteristics predict the outcome and what factors have significant effects on language proficiency. Secondly, I check Model 3 to see if learning attitudes affect language proficiency. Thirdly, I compare Model 2, 3, and 4 to confirm the relative effects of personal characteristics and attitudes and to determine whether the relationship between personal characteristics and language proficiency is independent and direct or indirectly related through learning attitudes. All analyses are carried out in Stata 12.0.

2.4. Results

Table 5-2: Determinants of Immigrant Language Acquisition: Milan
(OLS Regression, LOCALMULTIDEM)

	(M1) Controls		(M2) +Personals		(M3) +Attitudes		(M4) +Personals +Attitudes	
Female	0.0331	(0.0179)	0.00133	(0.0153)	0.0178	(0.0171)	-0.00496	(0.0152)
Marital status	-0.0506**	(0.0185)	-0.0558***	(0.0160)	-0.0511**	(0.0176)	-0.0538***	(0.0159)
Ethnic group (Ref.: Ecuadorian)								
Egyptian	0.0819***	(0.0234)	-0.0593**	(0.0221)	0.0400	(0.0239)	-0.0637**	(0.0225)
Filipino	0.0165	(0.0195)	-0.0695***	(0.0174)	0.00568	(0.0219)	-0.0607**	(0.0198)
Education			0.168***	(0.0331)			0.154***	(0.0333)
Age at migration			-0.512***	(0.0634)			-0.463***	(0.0637)
Length of stay in HC			1.042***	(0.119)			0.933***	(0.121)
Permit category (Ref.: For Work)								
EEA			0.222**	(0.0768)			0.220**	(0.0761)
Study			-0.0777	(0.0533)			-0.0417	(0.0533)
Family reunification			0.0236	(0.0229)			0.0240	(0.0227)
Other purposes			0.0309	(0.0431)			0.0451	(0.0428)
Attachment to HCP					0.284***	(0.0379)	0.142***	(0.0352)
Social trust					-0.0901*	(0.0390)	-0.0674*	(0.0342)
Institutional trust					-0.0232	(0.0500)	-0.0183	(0.0439)
Constant	0.487***	(0.0205)	0.529***	(0.0358)	0.393***	(0.0310)	0.486***	(0.0398)
Observations	465		465		465		465	
R ²	0.045		0.354		0.151		0.378	

Standard errors in parentheses
* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

The regression results of the Milan case (see Table 5-2) show that the personal characteristics model explains 0.345 of the total variance while the attitudes model explains 0.151 of the total variance in the levels of linguistic achievement. The higher percentage of the explained variance of the economic model signals the effect of personal characteristics is larger than that of attitudes. Even though the variance is shared between the two blocks as the final model only explains 0.378 of the total variance, the coefficient estimates of personal characteristics retain most of their size and statistical significance even after controlling for attitudes in Model 4, implying that the direct effect of personal characteristics is larger than that of attitudes. Therefore, Hypothesis 1 is supported, suggesting that the economic view better explains language acquisition behavior of immigrants.

The final full model shows that all of the four indicators of the personal characteristics block remain statistically significant in the final model, with length of stay in the host country recording the highest coefficient value ($b=0.933$, $p<0.001$), followed by age at migration ($b=-0.463$, $p < 0.001$), permit category (EEA: $b=0.220$, $p < 0.001$; reference category; for work), and educational attainment

($b=0.154$, $p < 0.001$). Among the attitudes variables, attachment to host country people has a positive, significant effect ($b=0.142$, $p < 0.001$) and social trust has a negative, significant effect ($b=-0.067$, $p < 0.05$) on language proficiency. Consequently, the results of the Milan case support Hypothesis 4, confirming the presence of partial mediation of personal characteristics on language proficiency through attachment to host country people.

Table 5-3: Determinants of Immigrant Language Acquisition: 10 Cities
(OLS Regression, LOCALMULTIDEM)

Model 1: A Model of Immigrant Language Acquisition											
City ^a	BAR	BUD	GEN	LON	LYO	MAD	MIL	OSL	STO	ZUR	Expected Sign ^d
Controls (C)											
Gender (Female)	+										—
Marital status							—***				?
Ethnic group ^b	Reference category: G3 (group of recent arrival)										
G1	X	+***		+		X	—**	—***		—***	+
G2	X	**	X	****		X	—**	—***	X	—**	+
Personal characteristics (P)											
Educational attainment		+***	+***	+***	+**	+***	+***	+***	+***	+***	+
Age at migration	—**	—***	—***	—***	—***	—**	—***	—***	—***	—***	—
Length of stay in HC	+	+***				+***	+***	+			+
Permit category	Reference category: Work										
EEA				X	X		+**	X	X	+***	?
Study				—*				X	X		+
Family reunification	—*		—*					X	X		—
Other purposes								X	X		—
Attitudes (A)											
Attachment to HCP		+***		+***			+***		+**		+
Social trust							—*			+**	+
Institutional trust		—**		—*		—**					+
Observations	102	233	277	526	165	150	465	565	396	454	X
R² ^c											
M1: C	0.069	0.131	0.071	0.125	0.062	0.027	0.045	0.088	0.037	0.034	X
M2: C+P	0.400	0.385	0.351	0.405	0.268	0.429	0.354	0.304	0.379	0.347	
M3: C+A	0.114	0.191	0.095	0.192	0.082	0.092	0.151	0.102	0.085	0.068	
M4: C+P+A	0.405	0.444	0.357	0.429	0.270	0.471	0.378	0.309	0.391	0.360	

^a $p < 0.05$, ^{**} $p < 0.01$, ^{***} $p < 0.001$

^a BAR: Barcelona, BUD: Budapest, GEN: Geneva, LON: London, LYO: Lyon, MAD: Madrid, MIL: Milan, OSL: Oslo, STO: Stockholm, ZUR: Zurich

^b Ethnic groups: Barcelona (G1: Moroccan, G2: Andean mixed group, G3: Ecuatorian), Budapest (G1: Ethnic Hungarian, G2: Mixed Muslim, G3: Chinese), Geneva (G1: Italian, G2: N/A, G3: Kosovar), London (G1: Indian, G2: Afro-Caribbean, G3: Bangladeshi), Lyon (G1: Moroccan, G2: Algerian, G3: Tunisian), Madrid (G1: Moroccan, G2: Andean mixed group, G3: Ecuatorian), Milan (G1: Egyptian, G2: Filipino, G3: Ecuatorian), Oslo (G1: Turkish, G2: Pakistani, G3: Bosnian), Stockholm (G1: Turkish, G2: N/A, G3: Chilean), Zurich (G1: Italian, G2: Turkish, G3: Kosovar)

^c R² of all models are reported: M1: Controls, M2: Controls + Personal characteristics, M3: Controls + Attitudes, and M4 (full model): Controls + Personal characteristics + Attitudes

^d A question mark under the expected sign column indicates that it is not clear whether the variable will have a positive or negative effect on the outcome.

Table 5-3¹⁴⁵ presents the summary of the ten-city analysis on the determinants of immigrant language acquisition. The overall results show a general trend: the personal characteristic model (the

¹⁴⁵ The plus (+) and minus (—) signs indicate the direction of the effect on the outcome, and the number of asterisks signifies the statistical significance levels: * $p < 0.05$, ** $p < 0.01$, and *** $p < 0.001$. In addition, the number of observations and the coefficient of determination or more commonly known as R-squared (R²) are indicated at the bottom. The table summarizes the direction of the effect and the statistical significance levels of the full model (i.e., the output of Model 4 in Table 5-2). The theoretically expected signs of the effects on the dependent variable are included in the last column to help interpretation of the results. The summary table does not contain the results of the reduced models except the R² values (R² values of all models are included to help interpretation of the hypothesized mediation effects). The regression coefficients are unreported. However, the

economic model) explains a higher share of the total variance of the dependent variable than the attitudes model (the psychological model). In some cities, the variance is shared between the two blocks while the coefficient estimates in the full model maintain the statistical significance. This suggests that the effect of personal characteristics is mediated via attitudinal variables. However, the coefficient estimates of personal characteristics retain most of their size and statistical significance (observed in Model 2) even after controlling for attitudes in Model 4. This implies that the direct effect of personal characteristics is much greater than that of attitudes. This trend is commonly observed across the ten cities. Hypothesis 1 is, therefore, supported, suggesting that the economic view better explains language acquisition behavior of immigrants.

While no statistically significant effect of attitudinal variables is observed in some cities (Budapest, Geneva, Lyon, and Oslo), bidirectional indirect effects through attitudes can be presumed in some other cities: On the one hand, the presence of positive indirect effects through attitudinal variables is supported—an indirect effect through attachment to host country people in Budapest ($b=0.267$, $p<0.001$), London ($b=0.110$, $p<0.001$), Milan ($b=0.142$, $p<0.001$), and Stockholm ($b=0.107$, $p<0.01$), and through social trust in Zurich ($b=0.120$, $p<0.01$); on the other hand, the presence of negative indirect effects through attitudinal variables is observed—through social trust in Milan ($b=-0.067$, $p<0.01$) and institutional trust in Budapest ($b=-0.184$, $p<0.01$), London ($b=-0.093$, $p<0.05$), and Madrid ($b=-0.255$, $p<0.01$)¹⁴⁶. Thus, the results of some cities (Budapest, London, Milan, Stockholm, and Zurich) support Hypothesis 4, which proposed a positive mediation effect through the attitudinal variables whereas the results of some other cities (Barcelona, Geneva, Lyon, Madrid, Oslo) support Hypothesis 2, which proposed the absence of such mediation effect.

Those cities that do not have a long history of immigration tend to demonstrate a statistically significant positive effect of length of stay in the host country on destination language proficiency; within the samples included in the datasets, the effect is apparent in Barcelona ($b=0.639$, $p<0.05$), Budapest ($b=0.923$, $p<0.001$), Madrid ($b=2.242$, $p<0.001$), Milan ($b=0.933$, $p<0.001$), and Oslo ($b=0.255$, $p<0.05$). In Budapest, Madrid, and Milan, length of stay in the host country has the largest effect relative to other independent variables included in the model. The most consistent predictors of destination language proficiency across ten cities are, however, age at migration and educational attainment. Age at migration shows a statistically significant negative effect in all of the ten cities¹⁴⁷.

information is available in the raw regression output tables presented in *Appendix III: Determinants of Immigrant Language Acquisition*.

¹⁴⁶ b indicates unstandardized coefficient, yet all variables are normalized prior to the regression. For the regression results of other cities, refer to *Appendix III: Determinants of Immigrant Language Acquisition*.

¹⁴⁷ The regression results of age at migration in the nine other cities are: Barcelona ($b=-0.709$, $p<0.01$), Budapest ($b=-0.590$, $p<0.001$), Geneva ($b=-0.787$, $p<0.001$), London ($b=-0.591$, $p<0.001$), Lyon ($b=-0.588$, $p<0.001$), Madrid ($b=-0.469$, $p<0.01$), Oslo ($b=-0.594$, $p<0.001$), Stockholm ($b=-0.704$, $p<0.001$), and Zurich ($b=-0.921$, $p<0.001$).

A statistically significant positive effect of educational attainment is present in nine out of ten cities (Barcelona is the only exception)¹⁴⁸.

The model for Lyon has shown the smallest R-squared value ($R^2=0.270$). This may be related to the relatively small number of observations included in the model in Lyon ($n=165$) because the number of observations per predictor variable is an important factor in coming up with a model with a higher R-squared value. The number of observations in Barcelona ($n=102$) and Madrid ($n=150$) is also small, but the Spanish city cases contain only one ethnic group in the model when Lyon includes three ethnic groups.

Therefore, the LOCALMULTIDEM data seem to prove the robustness and effectiveness of the economic model of language proficiency. In substantive terms, personal characteristics of immigrants do matter in acquiring destination language skills and its direct effect remains strong. This implies that even though there is room for another explanation (attachment to host country people or social trust positively influences the level of linguistic outcome through making immigrants feel more attached to host country people), they may acquire the destination language regardless of their level of attachment to host country people or social trust.

2.5. Discussion

In this chapter, I have investigated the determinants of immigrant language acquisition. The main purpose is to develop a model to empirically test the competing views (i.e., economic view vs. psychological view) on immigrant language acquisition in the European context. A special attention has been paid to the presumed causal mechanism in producing the outcome—whether the economic model alone explains the variability in linguistic skills or the effect of the economic model on linguistic outcome is mediated through the psychological model.

Results show that the economic model is robust in predicting immigrant language acquisition outcome in the ten European metropolitan cities. Among the factors included in the economic model, length of stay in the host country have a comparatively large effect, yet the statistically significant sizable effect is observed in a limited number of cities—five cities (Barcelona, Budapest, Madrid, Milan, and Oslo). A closer view reveals that the effect size tends to be larger in the cities that are relatively new to immigration. The most consistent predictors across the cities are age at migration and educational attainment: the younger the age at migration, the higher the language fluency; and the higher the level of education, the higher the level of language proficiency. These findings are in line with the existing literature on the determinants of language proficiency of immigrants, given that most of the studies conclude that language proficiency is negatively related to age at migration and

¹⁴⁸ The regression results of educational attainment in the eight other cities are: Budapest ($b=0.245, p<0.001$), Geneva ($b=0.174, p<0.001$), London ($b=0.170, p<0.001$), Lyon ($b=0.144, p<0.01$), Madrid ($b=0.247, p<0.001$), Oslo ($b=0.168, p<0.001$), Stockholm ($b=0.147, p<0.001$), and Zurich ($b=0.310, p<0.001$).

positively associated with educational attainment, and language skills improve substantially with the time spent in the destination.

Regression results also tell that some presumed mediating effects via attitudinal factors seem to be present although the psychological model has relatively weak power in explaining the variation in language proficiency. Among the attitudinal variables, attachment to host country people has shown the steadiest positive effect on language acquisition among immigrants (in four of the ten cities: Budapest, London, Milan, and Stockholm); and a positive effect of social trust is also confirmed (in Zurich). Therefore, the presence of partial mediation can be supposed. In ordinary language, those who have attained a higher level of education, migrated to the destination country at younger age, and spent more time in the destination are likely to be more proficient in destination language. These personal characteristics may affect the outcome directly or indirectly via attitudes. If the effects are indirectly transmitted, it is most likely to be through attachment to host country people; those who have stronger attachment to host country people are inclined to acquire a higher level of language skills. The result corroborates the previous studies in developmental psychology that those children who are emotionally secure and have successfully formed psychological attachment to their caregivers are more inclined to attain a higher level of linguistic capabilities.

Contrary to the predicted direction, a negative effect of institutional trust is observed in three cities (Budapest, London, and Madrid). Some plausible explanations can be: those who are proficient in destination language tend to be more critical on the public institutions because they are more capable of obtaining accurate information and deeper knowledge through a variety of sources; and those who have lower language proficiency give a relatively generous evaluation of their public institutions because they are still in the process of learning the 'reality'; or those with a low level of language skills trust the public institutions more because they may be socioeconomically vulnerable and receive better social benefits from the respective country or municipality than those who possess destination-country specific skills, most notably language. Moreover, macro-level contextual factors (e.g., government performance, historical traditions, levels of corruption and socioeconomic inequality) may make a difference in the development of institutional trust. The complex interplay between/among the economy, polity, and culture may also influence micro-level psychological and behavioral outcomes (Zmerli & Hooghe, 2013). There can be multiple elements affecting the relationship between institutional trust and language acquisition, thus making it difficult to deliver straightforward explanations. Hence, further theoretical as well as empirical research is suggested to adequately explain the negative effect (or simple association) of institutional trust on destination language proficiency.

In addition, there are ethnic group differences in destination language acquisition in Budapest, London, Milan, Oslo, and Zurich. On the one hand, in Budapest and London¹⁴⁹, the groups of longer settlement (Arab/Turkish Mixed Muslim in Budapest; Indian and Afro-Caribbean in London) are more fluent speakers than the group of recent arrival¹⁵⁰ (Chinese in Budapest; Bangladeshi in London). The regression results confirm that Ethnic Hungarians¹⁵¹, most of whom are new comers to the city, are the most proficient Hungarian speakers (for details, refer to *Appendix III: Determinants of Immigrant Language Acquisition [Budapest]*); the evidence is indicated by the positive sign of the two ethnic groups in comparison to the reference group (Chinese), the larger positive effect vis-à-vis that of the mixed Muslim group, and having the largest coefficient size among the predictors. Yet, it is logical to assume their language proficiency is due to their close link to their ethnicity and cultural origin. Although they might not be native speakers (because the sample used in this model excluded the native speakers of the destination language), Hungarian is most likely to be the language spoken at home and learned at an early age. Thus, the trend in the two cities are in line with the hypothesized prediction that the longer the settlement, the more exposure to the destination language, the higher the linguistic skills. On the other hand, in Milan, Oslo, and Zurich, the group of recent arrival (Ecuadorian in Milan; Bosnian in Oslo and Kosovar in Zurich) have a higher level of linguistic mastery than that of the long-time settlers (Filipino and Egyptians in Milan; Turkish in Oslo; Italian and Turkish in Zurich). Linguistic distance can be a plausible explanation for the city cases. Previous studies have found that linguistic distance is negatively associated with their destination language (English) among adult immigrants in the United States and Canada (Chiswick and Miller, 2004) and among immigrants to Australia (Chiswick, 2008; Chiswick and Miller, 1995). Italian and Spanish¹⁵² share a common root in Latin and they are known to be rather similar to one another. Pertaining to the fact Bosnian and Kosovar having a comparatively high linguistic capability in Oslo and Zurich may be that for some reasons or another they acquire other languages more easily than their counterparts (e.g., the official or commonly used languages in Bosnia [Bosnian, Croatian, Serbian] and Kosovo [Albanian or Serbian] might be linguistically closer to Norwegian or German than Arabic or Italian; or

¹⁴⁹ Ethnic groups included for the London sample are: Indian, Afro-Caribbean, and Bangladeshi. All groups come from the countries of origin where destination language is used as official, dominant, or common language. This fact is well illustrated in the city's high average score for immigrant language proficiency (see .

Table 5-1).

¹⁵⁰ In Budapest, two groups are classified as the groups of recent arrival (Chinese and Ethnic Hungarian) whereas one group is classified as the groups of longer settlement (Arab/Turkish mixed group). For the comparative purpose, one group (Chinese) is used as the reference category. For the summary of ethnic groups and their selection categories, refer to *Table 4-4: Ethnic Groups Selected in Each City*.

¹⁵¹ In Hungary, foreign citizens living in Hungary for more than a year are about 1.2-1.6% of the population. Of these immigrants, more than 85% of people are from European countries, and more than 60% are Ethnic Hungarians who know the language and familiar with the culture. The sending countries of Ethnic Hungarians are the neighboring countries: Romania, Ukraine, Slovakia, Serbia, and Croatia. Estimations support that at least 80% of the Ethnic Hungarian migrants are from one of the given countries. Only 11% of the immigrants in Hungary come from Asia, half of them from China. Migration from other parts of the world is rather marginal. (LOCALMULTIDEM, 2007: City reports on socio-economic indicators [WP2])

¹⁵² Spanish is the predominant and official language of Ecuador.

multilinguals learn other languages more easily), but it needs further and more thorough analysis and research. A closer examination on the country-of-origin and/or host-country specific contextual factors may be appropriate and further investigations in that direction might be beneficial in providing explanations for the ethnic group differences in linguistic outcome.

Chapter 6. Determinants of Immigrant Integration

1. Introduction: A Model of Immigrant Integration

Language is known to be associated with immigrant economic and political integration. Previous studies provide evidence that immigrants who are fluent in destination language are more likely to be economically integrated and have higher levels of socio-economic status (Chiswick & Miller, 2001; Delander, Hammarstedt, Mansson, & Nyberg, 2005) and a higher probability of finding a job and attaining higher incomes than those with less or without the language skills (Chiswick & Miller, 2002). Moreover, those with higher levels of destination language proficiency are more socially and politically integrated than those with less of the capability, as indicated by having more social contacts with the native population (Martinovic, Van Tubergen, & Maas, 2009), better interethnic relations (Espenshade & Calhoun, 1993; Gordon, 1964; cited in Van Tubergen & Kalmijn, 2005), lower levels of perceived discrimination (Holger, 2004; cited in Fossati, 2011), and greater chances for participation in the political, social, and cultural life of the destination country (Chiswick & Miller, 2001). If language fluency is related to structural integration of immigrants, is the association between language skills and integration in the economy and polity mostly a reflection of advantaged personal characteristics on the one hand, of psychologically driven motivation on the other? Or does immigrants' destination language proficiency improve the degrees of integration independent of privileged personal characteristics and subjective attitudes and orientations?

In this chapter, I continue the attempt to address the key question of the empirical chapters of the thesis: "What affects immigrants to acquire capital and how is it generated?" To this end, based on the theoretical modeling framework laid out in Chapter 3, I develop empirically testable models to identify the determinants of three different dimensions of immigrant integration. Accordingly, I devise three sub-models of immigrant integration: (1) a model of immigrant economic integration; (2) a model of immigrant citizenship acquisition; and (3) a model of immigrant political integration.

I conceive of an individual's own capacity to integrate into a new society as having three conceptually distinct elements: tangible resources, intangible resources, and acquired capital. Tangible resources include given personal characteristics or conditions (e.g., length of stay in the host, age at migration, educational attainment) and intangible resources are psychological and emotional reservoirs that arouse people to action towards a desired goal (e.g. attachment and trust). Acquired capital (e.g., destination language skills) is produced as a consequence of investment of resources including the former two (tangible and intangible resources), and it can be invested in a given society for achieving desired goals. All of the resources may affect the immigrant integration outcomes differently; tangible resources may have direct or indirect effects on the outcomes, mediated through intangible resources and/or acquired capital. A special focus is given to the mediation effect of acquired capital on the relationship between tangible resources (personal characteristics) and integration outcomes in the economy (labor market participation) and polity (political participation).

In summary, the purpose of this chapter is twofold: First, it is to identify the determinants of immigrant integration in the European context; second, it is to investigate whether immigrants' personal characteristics (tangible resources or the economic model) alone affect the integration outcomes of immigrants or attitudes (intangible resources or the psychological model) and/or acquired capital also influence the outcomes. In other words, if there is an association between attitudes and/or acquired capital and immigrant integration, is it mostly a reflection of the given personal characteristics or do attitudes and/or acquired capital explain the variability in outcomes independent of those given factors? These are the main issues to be addressed through the empirical investigation. The formulated empirical models are tested using ten-city-wide cross-sectional survey datasets from the Multicultural Democracy and Immigrants' Social Capital in Europe: Participation, Organisational Networks, and Public Policies at the Local Level (LOCALMULTIDEM).

2. A Model of Immigrant Economic Integration

2.1. Hypotheses

A model of immigrant economic integration is formulated to test the following hypotheses: Extending the economic-psychological modeling frame¹⁵³ used for developing the model of immigrant language acquisition, from the *economic view*, it can be hypothesized that tangible resources (personal characteristics) have a direct effect on immigrant economic integration, and the direct effect of the socio-demographic characteristics on immigrant economic integration is greater than that of attitudes (H1). Concerning the mediation effect of attitudes, the direct effect of personal characteristics on immigrant economic integration remains significant, thus it assumes an insignificant indirect effect through attitudes (H2). From the *psychological view*, it can be hypothesized that intangible resources (attitudes) have a positive, direct effect on immigrant economic integration, and the direct effect of attitudes on immigrant economic integration is greater than that of personal

¹⁵³ For the pictorial summary of the modeling frame, refer to: *Figure 2-8: Transformed Economic-Psychological Modeling Frame for Immigrant Language Acquisition*. By extending the economic-psychological modeling frame for immigrant language acquisition to immigrant integration, destination language proficiency is conceptually placed as an antecedent of immigrant integration outcomes. Therefore, the relationships hypothesized for immigrant language acquisition is also expected for immigrant integration (refer to the hypotheses developed in Chapter 2). One thing that is worth reminding is that there are two different types of language proficiency variables, which are constructed to account for conceptual differences: one for language proficiency as an acquisition outcome and another for language proficiency as acquired capital (see Chapter 4: *1.4.3. Dependent Variables/Mediators*). The former is used as the dependent variable of a model of immigrant acquisition while the latter is used as the independent variable in a model of immigrant integration. An incremental approach is taken in the theoretical modeling to give a temporal perspective in the integration process (For more details, refer to Chapter 3). On the basis of the theoretical modeling (performed in Chapter 3), in this chapter, empirically testable three sequential sub-models of immigrant integration (i.e., a model of immigrant economic integration; a model of immigrant citizenship acquisition; a model of immigrant political integration) are developed in accordance with the temporal order presumed in the integration process. Yet, the conceptually presumed causal link between language and immigrant integration could go both ways; the relationships between language and economic integration, between language and citizenship acquisition, between language and political integration, as well as the interrelations assumed among language, the economy, citizenship, and the polity may be influenced by multiple other factors. Thus, a multi-deterministic approach may be more relevant and useful in understanding 'integration.'

characteristics (H3). Concerning the mediation effect of attitudes, most of the association between personal characteristics and immigrant economic integration is due to its indirect association with attitudes, thus it assumes that the total effect of personal characteristics is mediated mostly by attitudes (H4).

For the sake of clarity, a few remarks on the hypotheses are given in the following. Hypotheses 1 and 2 are the rival hypotheses of Hypotheses 3 and 4. Support for Hypothesis 1 would indicate that the economic view better explains immigrant economic integration; on the contrary, support for Hypothesis 3 would signify that the psychological view better explains the outcome. On the issue of the hypothesized mediation effect of attitudes, such effect is absent if Hypothesis 2 is supported (i.e., the direct effect of personal characteristics [the economic view] alone explains the outcome). Conversely, if Hypothesis 4 is supported, there are two possible ways in which such mediation effect is transmitted: (1) in case of full mediation, all effect of personal characteristics is mediated through attitudes (i.e., the effect of attitudes [the psychological view] alone explains the outcome); and (2) in case of partial mediation, a portion of the effect of personal characteristics is mediated through attitudes, simultaneously supporting the direct effect of personal characteristics and the indirect effect of attitudes on the outcome.

On the basis of the theoretical framework and empirical findings based on the *human capital approach*, it can be hypothesized that acquired capital (language proficiency) is positively related to immigrant economic integration (employment) (H5). Concerning the mediation effect of acquired capital (language proficiency), most of the association between personal characteristics and immigrant economic integration is due to its indirect association with acquired capital, thus it assumes that the total effect of personal characteristics is mediated mostly by acquired capital (H6). In other words, if Hypothesis 6 is supported, there are two possible ways in which such mediation effect is transmitted: (1) in case of full mediation, all effect of personal characteristics is mediated through acquired capital; and (2) in case of partial mediation, a portion of the effect of personal characteristics is mediated through acquired capital, simultaneously supporting the direct effect of personal characteristics and the indirect effect of acquired capital on the outcome.

2.2. Model

In order to formulate an empirical model of immigrant economic integration that aims to identify the determinants of structural adaptation in the economy (economic capital acquisition), the economic-psychological modeling frame for immigrant language acquisition is extended to the economy by incorporating the human capital approach. Thus, a model of immigrant economic integration can be described as:

P (Employment) = f {Educational attainment, Age at migration, Length of stay in the host country, Country of birth, Permit category, Attachment to host country people, Social trust, Institutional trust, Language proficiency, Gender, Marital status, Ethnic group}

The theoretically expected signs of their effects on employment probabilities are summarized in the last column of Table 6-3. A schematic representation of the hypothesized mechanism is illustrated in Figure 6-1¹⁵⁴.

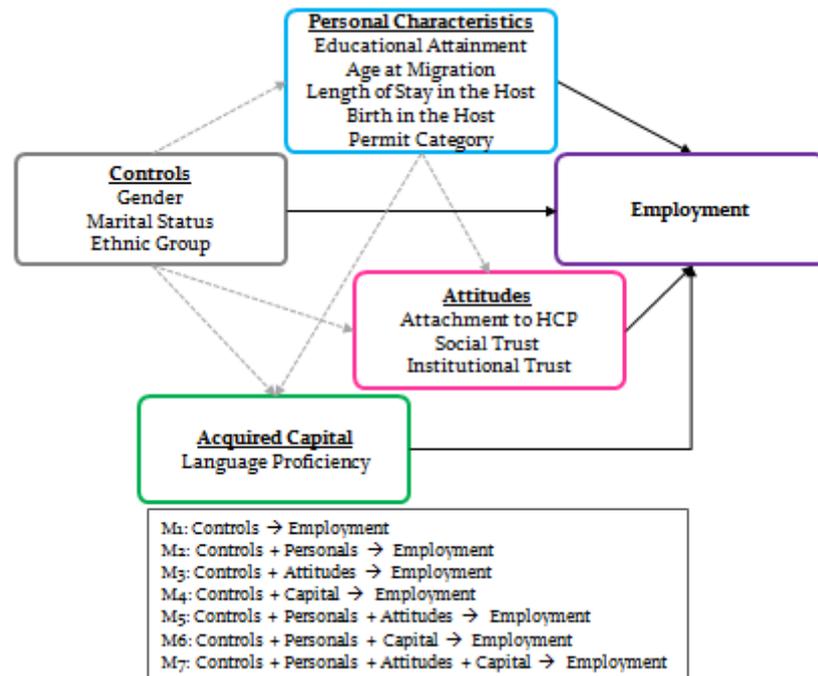


Figure 6-1: A Model of Immigrant Economic Integration (For LPM/Logistic Regression)

2.3. Measures¹⁵⁵

Table 6-1 gives the descriptive statistics of the variables included in the model¹⁵⁶. Means for dummy variables can be interpreted as proportions. Since all of the variables are normalized to the unit interval of 0-1, observed central tendencies of all variables (regardless of dummy or non-dummy variables) reflect the relative activity of the variables. For example, the means and standard deviations of employment are: Barcelona ($M=0.79$, $SD=0.41$) Budapest ($M=0.59$, $SD=0.49$), Geneva ($M=0.54$, $SD=0.50$), London ($M=0.61$, $SD=0.49$), Lyon ($M=0.54$, $SD=0.50$), Madrid ($M=0.78$, $SD=0.42$), Milan ($M=0.74$, $SD=0.44$), Oslo ($M=0.62$, $SD=0.49$), Stockholm ($M=0.70$, $SD=0.47$), and Zurich ($M=0.63$, $SD=0.48$) (See Table 6-1). The larger the mean, the higher the employment; the smaller the mean, the lower the employment.

¹⁵⁴ For the description and interpretation of the diagram, refer to *Chapter 5: 2.1. Model*.

¹⁵⁵ All variables used in the data analyses are normalized to the unit interval of 0-1. For more details, refer to *Appendix I: Measures* and/or *Chapter 4: 1.4 Measures*, where all variables used in the analyses are described.

¹⁵⁶ Table 6-1 gives only means and standard deviations by city. For more detailed information, refer to *Appendix II: Descriptive Statistics of All Variables*.

Table 6-1: Descriptive Statistics: A Model of Immigrant Economic Integration

City ^a	BAR	BUD	GEN	LON	LYO	MAD	MIL	OSL	STO	ZUR
Variable^b	Mean (SD)									
DV										
Employment	0.79 (0.41)	0.59 (0.49)	0.54 (0.50)	0.61 (0.49)	0.54 (0.50)	0.78 (0.42)	0.74 (0.44)	0.62 (0.49)	0.70 (0.47)	0.63 (0.48)
IVs										
Educational attainment	0.57 (0.31)	0.75 (0.24)	0.57 (0.31)	0.72 (0.30)	0.59 (0.32)	0.49 (0.28)	0.64 (0.21)	0.50 (0.35)	0.63 (0.32)	0.50 (0.30)
Age at migration	0.39 (0.14)	0.32 (0.14)	0.23 (0.15)	0.11 (0.16)	0.07 (0.12)	0.37 (0.13)	0.34 (0.13)	0.29 (0.18)	0.21 (0.17)	0.26 (0.14)
Length of stay in HC	0.09 (0.08)	0.10 (0.08)	0.26 (0.17)	0.23 (0.14)	0.29 (0.12)	0.07 (0.05)	0.09 (0.07)	0.15 (0.10)	0.22 (0.07)	0.25 (0.14)
Country of birth	0.01 (0.09)	0.24 (0.15)	0.15 (0.36)	0.57 (0.50)	0.60 (0.49)	0.005 (0.07)	0.03 (0.18)	0.09 (0.29)	0.21 (0.17)	0.12 (0.32)
Permit category										
EEA	0.03 (0.18)	0.01 (0.08)	0.22 (0.42)	X	X	0.02 (0.15)	0.01 (0.07)	X	X	0.25 (0.43)
Work (ref. category)	0.56 (0.50)	0.25 (0.43)	0.10 (0.30)	0.08 (0.28)	0.05 (0.22)	0.58 (0.49)	0.56 (0.50)	X	X	0.26 (0.44)
Study	0.02 (0.15)	0.27 (0.44)	0.01 (0.01)	0.07 (0.26)	0.01 (0.08)	0.02 (0.15)	0.03 (0.16)	X	X	0.004 (0.07)
Family reunification	0.02 (0.14)	0.14 (0.35)	0.10 (0.30)	0.02 (0.13)	0.03 (0.18)	0.03 (0.18)	0.14 (0.35)	X	X	0.10 (0.30)
Other purposes	0.03 (0.17)	0.08 (0.28)	0.37 (0.48)	0.20 (0.40)	0.04 (0.21)	0.04 (0.19)	0.03 (0.18)	X	X	0.12 (0.32)
Attachment to HCP	0.68 (0.24)	0.56 (0.25)	0.79 (0.22)	0.54 (0.23)	0.77 (0.22)	0.68 (0.23)	0.57 (0.25)	0.58 (0.23)	0.64 (0.24)	0.72 (0.25)
Social trust	0.48 (0.26)	0.61 (0.20)	0.51 (0.27)	0.49 (0.22)	0.34 (0.29)	0.52 (0.26)	0.47 (0.24)	0.58 (0.49)	0.45 (0.29)	0.49 (0.28)
Institutional trust	0.58 (0.19)	0.45 (0.22)	0.67 (0.22)	0.52 (0.19)	0.52 (0.21)	0.60 (0.20)	0.52 (0.19)	0.54 (0.23)	0.50 (0.22)	0.67 (0.22)
Language proficiency (2)	0.86 (0.24)	0.59 (0.35)	0.56 (0.21)	0.88 (0.21)	0.90 (0.19)	0.79 (0.31)	0.38 (0.19)	0.69 (0.25)	0.76 (0.24)	0.37 (0.26)
Controls										
Gender	0.44 (0.50)	0.39 (0.49)	0.46 (0.50)	0.48 (0.50)	0.56 (0.50)	0.51 (0.50)	0.48 (0.50)	0.48 (0.50)	0.51 (0.50)	0.33 (0.47)
Marital status	0.61 (0.49)	0.53 (0.50)	0.71 (0.46)	0.50 (0.50)	0.54 (0.50)	0.55 (0.50)	0.48 (0.50)	0.76 (0.43)	0.60 (0.49)	0.78 (0.41)
Ethnic group ^c										
G1	0.30 (0.46)	0.35 (0.48)	0.52 (0.50)	0.33 (0.47)	0.16 (0.37)	0.34 (0.48)	0.33 (0.47)	0.33 (0.47)	0.46 (0.50)	0.33 (0.47)
G2	0.35 (0.48)	0.35 (0.48)	X	0.33 (0.47)	0.65 (0.48)	0.32 (0.47)	0.33 (0.47)	0.33 (0.47)	X	0.33 (0.47)
G3 (ref. category)	0.35 (0.48)	0.30 (0.46)	0.48 (0.50)	0.34 (0.47)	0.18 (0.39)	0.34 (0.47)	0.33 (0.47)	0.33 (0.47)	0.53 (0.50)	0.34 (0.47)

^a BAR: Barcelona, BUD: Budapest, GEN: Geneva, LON: London, LYO: Lyon, MAD: Madrid, MIL: Milan, OSL: Oslo, STO: Stockholm, ZUR: Zurich

^b The Mean and SD of all variables are expressed in normalized values. DV: Dependent variable, IVs: independent variables.

^c Ethnic groups: Barcelona (G1: Moroccan, G2: Andean mixed group, G3: Ecuatorian), Budapest (G1: Ethnic Hungarian, G2: Mixed Muslim, G3: Chinese), Geneva (G1: Italian, G2: N/A, G3: Kosovar), London (G1: Indian, G2: Afro-Caribbean, G3: Bangladeshi), Lyon (G1: Moroccan, G2: Algerian, G3: Tunisian), Madrid (G1: Moroccan, G2: Andean mixed group, G3: Ecuatorian), Milan (G1: Egyptian, G2: Filipino, G3: Ecuatorian), Oslo (G1: Turkish, G2: Pakistani, G3: Bosnian), Stockholm (G1: Turkish, G2: N/A, G3: Chilean), Zurich (G1: Italian, G2: Turkish, G3: Kosovar)

The dependent variable in this analysis is *employment*¹⁵⁷, dummy-coded 1 for ‘in paid work’ and coded 0 for all others (‘not in paid work’). The independent variables in the model of immigrant economic integration include personal characteristics, attitudes, and acquired capital. The *personal characteristics* include: *educational attainment* measured as a categorical variable indicating whether the respondent had incomplete primary education, primary education, lower level secondary education, upper secondary education, post secondary (non-tertiary) education, first- and second-stage tertiary education; *age at migration* measured in years; *length of stay in the host country* measured in years; *country of birth*, dummy-coded 1 for birth in the host country and coded 0 for all others ; and

¹⁵⁷ Country-specific variable was used for Oslo. Nearly identical categories were used and recoded to a binary variable: 1= ‘in paid work,’ 0= ‘not in paid work.’ For more details, refer to *Appendix I: Measures*.

permit categories measured as five dummy variables (an EEA national residence; for work; for study; for family reunification/due to marriage; and for other purposes) which are transformed from the original eight dummy variables. The *attitudes* include *attachment to host country people*, *social trust*, and *institutional trust*. These three variables are the respondent's subjective assessment of his/her levels of attachment to host country people, of social trust, and of institutional trust. In general, they are measured on an 11-point scale with a higher number indicating higher levels of attachment or trust. There are differences in the items and scales measured in some cities (such as Oslo and Stockholm) because some questions or items are not asked in the survey and country-specific variables are employed for certain items that are measured using different scales. The indicator for the *acquired capital* in the model is *language proficiency*¹⁵⁸ measured on a 6-point scale with a higher number indicating a higher level of destination language proficiency. The control variables in the model of immigrant economic integration include: *gender*, coded 1 for females and 0 for males; *marital status*, coded 1 for married or cohabiting and 0 for single, widowed, or divorced; and *ethnic groups*, dummy-coded 1 for the selected ethnic group and 0 for all others.

2.4. Analysis¹⁵⁹

I use linear probability model (LPM) with heteroskedasticity-consistent robust standard error estimates to identify the determinants of immigrant economic integration and estimate the mediation effects of attitudes and acquired capital on economic integration of immigrants. Table 6-2 presents the regression results with seven models¹⁶⁰ (all adjusted for demographic characteristics of gender, ethnic group, and marital status¹⁶¹). Model 1 shows the effect of the control variables; Model 2 shows the effect of personal characteristics on immigrant economic integration; Model 3 shows the effect of attitudes on immigrant economic integration; Model 4 shows the effect of acquired capital on immigrant economic integration; Model 5 shows the effect of personal characteristics and attitudes on immigrant economic integration; Model 6 shows the effect of personal characteristics and acquired capital on immigrant economic integration; and Model 7 shows the combined effect of the variables included in the previous model blocks (i.e., controls, personal characteristics, attitudes, and acquired

¹⁵⁸ In the survey, language proficiency is measured by a question "how well do you speak host country language (HCL)?" on a six-point scale (1=I do not speak HCL, 2=I speak a little HCL, 3=I speak HCL reasonably well, 4=I speak HCL fluently, 5=I speak HCL like my native language, 6=HCL is my first language). All of the response values are kept (including the response value 6=HCL is my first language) because language proficiency is conceptualized as a resource or capital in the model of immigrant integration. The newly constructed variable is used as an intervening variable for all three sub-models of immigrant integration.

¹⁵⁹ The main analysis for the model of immigrant economic integration is carried out using LPM, but I have also analyzed the model using logistic regression. The findings from logistic regression do not demonstrate contradictory results. All of the data analysis output tables, either from LPM or logistic regression, are reported in *Appendix IV: Determinants of Immigrant Integration (1. Determinants of Immigrant Economic Integration)*.

¹⁶⁰ Table 6-2 provides the results only for Lyon. Regression results of all cities are reported in *Appendix IV: Determinants of Immigrant Integration (1. Determinants of Immigrant Economic Integration)*.

¹⁶¹ Age is typically included as a control variable. However, correlation analysis conducted when developing the previous model of immigrant language acquisition indicated the problem of multicollinearity between age and age at migration (which is one of the independent variables). To maintain the coherence in the sequential model development, age was excluded from the control.

capital). To address the above-mentioned questions, I first look at Model 2, 3, and 4 to examine how much the personal characteristics, attitudes, and acquired capital, respectively, predict the outcome, and what factors have significant effects on immigrant economic integration. Secondly, I compare Model 2, 3, 4, 5, 6, and 7 to confirm the relative effects of personal characteristics, attitudes, and acquired capital, and to determine whether the relationship between personal characteristics and immigrant economic integration is independent and direct or indirectly related through attitudes and/or acquired capital. All analyses are carried out in Stata 12.0.

2.5. Results

Table 6-2: Determinants of Immigrant Economic Integration: Lyon
(LPM, LOCALMULTIDEM)

	(M1) Controls	(M2) +Personals	(M3) +Attitudes	(M4) +Capital	(M5) +Personals +Attitudes	(M6) +Personals +Capital	(M7) +Personals +Attitudes +Capital
Female	-0.206*** (0.0404)	-0.210*** (0.0397)	-0.206*** (0.0406)	-0.200*** (0.0402)	-0.212*** (0.0398)	-0.204*** (0.0398)	-0.206*** (0.0399)
Marital status	0.0925* (0.0404)	0.0867* (0.0425)	0.105* (0.0412)	0.117** (0.0407)	0.0954* (0.0427)	0.0929* (0.0425)	0.103* (0.0428)
Ethnic group (Ref.: Tunisian)							
Moroccan	-0.0614 (0.0666)	-0.0923 (0.0656)	-0.0556 (0.0666)	-0.0675 (0.0663)	-0.0845 (0.0655)	-0.0977 (0.0658)	-0.0895 (0.0656)
Algerian	0.0202 (0.0524)	0.00306 (0.0505)	0.0268 (0.0524)	0.00159 (0.0518)	0.0127 (0.0503)	-0.00293 (0.0506)	0.00718 (0.0503)
Education		0.288*** (0.0628)			0.294*** (0.0638)	0.268*** (0.0637)	0.273*** (0.0648)
Age at migration		0.133 (0.263)			0.189 (0.271)	0.255 (0.279)	0.326 (0.290)
Length of stay in HC		0.603** (0.203)			0.637** (0.206)	0.552** (0.204)	0.587** (0.207)
Birth in HC		-0.0416 (0.0626)			-0.0538 (0.0638)	-0.0538 (0.0629)	-0.0682 (0.0642)
Permit category* (Ref.: For Work)							
Study		-0.581*** (0.107)			-0.583*** (0.104)	-0.605*** (0.110)	-0.609*** (0.107)
Family		-0.261* (0.107)			-0.268* (0.109)	-0.254* (0.111)	-0.260* (0.113)
Other purposes		-0.238* (0.106)			-0.251* (0.107)	-0.238* (0.103)	-0.253* (0.104)
Attachment to HCP			-0.0360 (0.0931)		-0.0607 (0.0901)		-0.0751 (0.0902)
Social trust			0.0481 (0.0747)		-0.0123 (0.0712)		-0.0149 (0.0709)
Institutional trust			-0.149 (0.0971)		-0.150 (0.0966)		-0.158 (0.0968)
Language proficiency				0.372*** (0.104)		0.241* (0.121)	0.261* (0.122)
Constant	0.619*** (0.0565)	0.330** (0.108)	0.696*** (0.0942)	0.281* (0.111)	0.439*** (0.132)	0.138 (0.147)	0.246 (0.159)
Observations	598	598	598	598	598	598	598
R ²	0.059	0.133	0.063	0.078	0.138	0.139	0.145

Robust standard errors in parentheses

* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

*Permit category: EEA omitted because of no observation

The regression results of the Lyon case (see Table 6-2) show that the higher percentage of the explained variance of the economic model signals the direct effect of personal characteristics is larger than that of attitudes. Regarding the hypothesized mediation effect of personal characteristics through attitudes and/or acquired capital blocks, personal characteristics (the economic model) explains 0.133 of the total variance in employment probabilities while attitudes (the psychological model) explains 0.063 of the total variance. Moreover, acquired capital (language proficiency) explains 0.078 of the total variance. The variance is shared among the three blocks as the final model explains 0.145 of the total variance, which is a little more than that of the personal characteristics block. This supports the presence of some partial mediation. Whereas none of the attitudes variables retains a statistically significant effect in the full model, language proficiency has a positive, significant effect ($b=0.261$, $p<0.05$). Consequently, the results of the Lyon case support the presence of some indirect effects of personal characteristics on employment probabilities through acquired capital (language proficiency).

Table 6-3: Determinants of Immigrant Economic Integration: 10 Cities
(LPM, LOCALMULTIDEM)

Model 2: A Model of Immigrant Economic Integration (LPM)											
City ^a	BAR	BUD	GEN	LON	LYO	MAD	MIL	OSL	STO	ZUR	Expected Sign ^d
Controls (C)											
Gender (Female)		—***		—***	—***			—***		—**	—
Marital status		***	***	***	+		+			***	?
Ethnic group ^b	Reference category: G3 (group of recent arrival)										
G1											+
G2		—***	X	***				—***	X		+
Personal characteristics (P)											
Educational attainment			+	**	***	**		**	**	***	+
Age at migration								*		—***	—
Length of stay in HC			—***		**				+	—***	+
Birth in HC	—**						—***		*	*	+
Permit category	Reference category: Work										
EEA				X	X			X	X		?
Study		—***			—***	—***		X	X		—
Family reunification		*			*	—***	—***	X	X		—
Other purposes					*			X	X		—
Attitudes (A)											
Attachment to HCP											+
Social trust									+	—**	+
Institutional trust											+
Capital (CL)											
Language proficiency			+		+					+	+
Observations	447	420	291	519	598	531	479	565	396	446	X
R² ^c											
M1: C	0.033	0.237	0.055	0.122	0.059	0.011	0.087	0.104	0.023	0.111	X
M2: C+P	0.080	0.389	0.190	0.167	0.133	0.140	0.288	0.146	0.090	0.285	
M3: C+A	0.039	0.246	0.060	0.126	0.063	0.018	0.090	0.110	0.054	0.127	
M4: C+CL	0.033	0.251	0.107	0.124	0.078	0.013	0.095	0.129	0.033	0.159	
M5: C+P+A	0.084	0.393	0.202	0.172	0.138	0.146	0.293	0.150	0.110	0.303	
M6: C+P+CL	0.084	0.392	0.210	0.168	0.139	0.142	0.288	0.152	0.097	0.295	
M7: C+P+A+CL	0.087	0.396	0.220	0.172	0.145	0.149	0.293	0.155	0.116	0.310	

* p < 0.05, ** p < 0.01, *** p < 0.001

^a BAR: Barcelona, BUD: Budapest, GEN: Geneva, LON: London, LYO: Lyon, MAD: Madrid, MIL: Milan, OSL: Oslo, STO: Stockholm, ZUR: Zurich

^b Ethnic groups: Barcelona (G1: Moroccan, G2: Andean mixed group, G3: Ecuatorian), Budapest (G1: Ethnic Hungarian, G2: Mixed Muslim, G3: Chinese), Geneva (G1: Italian, G2: N/A, G3: Kosovar), London (G1: Indian, G2: Afro-Caribbean, G3: Bangladeshi), Lyon (G1: Moroccan, G2: Algerian, G3: Tunisian), Madrid (G1: Moroccan, G2: Andean mixed group, G3: Ecuatorian), Milan (G1: Egyptian, G2: Filipino, G3: Ecuatorian), Oslo (G1: Turkish, G2: Pakistani, G3: Bosnian), Stockholm (G1: Turkish, G2: N/A, G3: Chilean), Zurich (G1: Italian, G2: Turkish, G3: Kosovar)

^c R² of all models are reported: M1: Controls, M2: Controls + Personal characteristics, M3: Controls + Attitudes, M4: Controls + Capital, M5: Controls + Personal characteristics + Attitudes, M6: Controls + Personal characteristics + Capital, and M7 (full model): Controls + Personal characteristics + Attitudes + Capital.

^d A question mark under the expected sign column indicates that it is not clear whether the variable will have a positive or negative effect on the outcome.

Economic View vs. Psychological View

Table 6-3¹⁶² presents the summary of the ten-city analysis on the determinants of immigrant economic integration. The results demonstrate that the economic model (personal characteristics)

¹⁶² The plus (+) and minus (–) signs indicate the direction of the effect on the outcome, and the number of asterisks signifies the statistical significance levels: * p < 0.05, ** p < 0.01, and *** p < 0.001. In addition, the number of observations and the coefficient of determination or more commonly known as R-squared (R²) are indicated at the bottom. The table summarizes the direction of the effect and the statistical significance levels of the full model (i.e., the output of Model 7 in Table 6-2). The theoretically expected signs of the effects on the dependent variable are included in the last column to help interpretation of the results. The summary table does not contain the results of the reduced models except the R² values (R² values of all models are included to help interpretation of the hypothesized mediation effects). The regression coefficients are unreported. However, the

accounts for a higher share of the total variance in the outcome than the psychological model (attitudes). Although the attitudinal block has shown a statistically significant effect on employment in two cities, the directions of the effect are mixed (a positive effect of social trust in Stockholm and a negative effect of social trust in Zurich). Furthermore, the direct effect of personal characteristics retains most of the coefficient size and statistical significance in the final full model. Comparison of the R-squared values across the models also shows evidence. First, comparison of Model 2 (which shows the effect of personal characteristics alone plus controls) and Model 3 (which shows the effect of attitudes alone plus controls) shows that the variance explained by personal characteristics is larger than the variance explained by attitudes. The variance explained by Model 3 is the smallest among the reduced models¹⁶³ across all ten cities. Second, comparison of Model 2 and Model 7 (the full model, which shows the combined effect of personal characteristics, attitudes, and acquired capital) shows that the variance in employment probabilities is explained largely by personal characteristics. Additionally, comparison of Model 6 (which shows the effect of personal characteristics and acquired capital) and Model 7 indicates very small changes in the variance explained. For instance, the Lyon data inform that Model 6 explains 0.139 of the variance whereas Model 7 explains 0.145 of the total variance. This implies that attitudes add a very small effect.

Hypothesis 1 is, therefore, supported, suggesting that the economic view is robust in explaining the variation in immigrant economic integration across the ten cities. This means personal characteristics have a direct effect on employment propensity, and the direct effect of the given characteristics remains much greater than that of attitudes. While no statistically significant effect of attitudinal variables is observed in many of the LOCALMULTIDEM cities (Barcelona, Budapest, Geneva, London, Lyon, Madrid, Milan, and Oslo), bidirectional indirect effects through social trust (an attitudinal variable) can be presumed in a few: On the one hand, the presence of a positive indirect effect through social trust is supported in Stockholm ($b=0.206, p<0.05$)¹⁶⁴; on the other hand, the presence of a negative indirect effect through social trust is observed in Zurich ($b=-0.190, p<0.01$). Thus, only the Stockholm case supports Hypothesis 4 (partial mediation), which proposed a positive mediation effect through the attitudinal block; and most of the other cases (i.e., Barcelona, Budapest, Geneva, London, Lyon, Madrid, Milan, and Oslo) support Hypothesis 2, which proposed the absence of such mediation effect. In a nutshell, the evidence found does not provide a firm basis for drawing conclusions to support the presence of mediation effects of personal characteristics on immigrant economic integration through attitudes.

information is available in the raw regression output tables presented in *Appendix IV: Determinants of Immigrant Integration (1. Determinants of Immigrant Economic Integration)*.

¹⁶³ “[A]mong the reduced models” here means all of the reduced models except Model 1, which shows the effect of controls only.

¹⁶⁴ b indicates unstandardized coefficient, yet all variables are normalized prior to the regression. For the regression results of other cities, refer to *Appendix IV: Determinants of Immigrant Integration (1. Determinants of Immigrant Economic Integration)*.

If the economic model is better at estimating employment likelihood and its direct effect remains strong across the samples, what are the strongest predictors among the personal characteristics indicators? Comparison of the regression coefficients¹⁶⁵ across the models suggests that educational attainment is one of the most powerful predictors of employment, which shows a positive effect on employment in seven cities: Geneva ($b=0.268, p<0.05$), London ($b=0.249, p<0.01$), Lyon ($b=0.273, p<0.001$), Madrid ($b=0.180, p<0.01$), Oslo ($b=0.197, p<0.01$), Stockholm ($b=0.241, p<0.01$), and Zurich ($b=0.300, p<0.001$). Among the permit categories, categories other than for work—for study, for family unification, and for other purposes—show negative effects on employment. Birth in the host country is negatively related to employment in some cities: Barcelona ($b=-0.584, p<0.01$), Milan ($b=-0.559, p<0.001$), Stockholm ($b=-0.194, p<0.05$), and Zurich ($b=-0.206, p<0.05$). This negative relationship may be explained if we assume that those who are born in the country tend to be younger and still in education, especially in non-traditional immigrant cities like Barcelona, and Milan.

In addition, marital status has a statistically significant positive effect in six cities (Budapest, Geneva, London, Lyon, Milan, and Zurich) while women tend to be less integrated in the labor market (which is indicated by the negative effect of being female on employment in Budapest, London, Lyon, Oslo, and Zurich). Altogether, it seems natural to assume that those who are married tend to be older in age, and they are more likely to be employed, and among those who are in paid work are more likely to be men.

Effect of Language Proficiency and Hypothesized Mediation

Results show that language proficiency has a statistically significant positive effect on employment in three cities: Geneva ($b=0.442, p<0.05$), Lyon ($b=0.261, p<0.05$), and Zurich ($b=0.219, p<0.05$). Hypothesis 5 is, thus, supported at least in some cases, signifying the presence of a positive association between destination language skills and employment. As the positive effect of acquired capital (language proficiency) remains in the final full model in the three cities, the effect of personal characteristics retains most of the coefficient size and significance even after controlling for attitudes and acquired capital. This supports Hypothesis 6, which predicted the presence of partial mediation of personal characteristics on employment probabilities through language proficiency.

While the presence of some mediation effects can be inferred from the analysis results, the data also inform that none of the factors in the attitudes or acquired capital block has a statistically significant effect in six other cities (Barcelona, Budapest, London, Madrid, Milan, and Oslo). This implies that immigrant economic integration can be solely predicted by the direct effect of personal characteristics variables, supporting Hypothesis 2 and failing to support Hypothesis 6. Nonetheless, in

¹⁶⁵ The regression coefficient is not standardized regression coefficient (i.e., beta), but the value is obtained after normalization. Thus, the coefficients can be comparable and indicate relative effects.

a limited number of cities (Geneva, Lyon, Stockholm, and Zurich), the hypothesized positive mediation effects through attitudes (social trust¹⁶⁶) or acquired capital (destination language proficiency¹⁶⁷) are found, supporting Hypothesis 4 (partial mediation via attitudes) and Hypothesis 6 (partial mediation via acquired capital). However, such indirect effects of attitudes and/or acquired capital on employment tend to be relatively weak as the effect of personal characteristics retains most of the coefficient size and significance in the full model. Thus, the evidence found does not allow to draw firm conclusions on the hypothesized mediation effects; yet, if the mediation occurs, the effect of personal characteristics are more likely to be mediated via acquired capital (language proficiency) than via attitudes (social trust) to influence the outcome. In substantive terms, personal characteristics of immigrants do matter in their economic integration, and their chances for employment can be enhanced through forming a higher level of trust to the destination society and having attained a good command of language, but they may gain a paid job without acquiring the latter two resources.

2.6. Discussion

The main aim of this section was to develop a model to empirically identify the determinants of immigrant economic integration in the European context. Specially, the nested model approach was employed to investigate whether immigrants' personal characteristics (the economic model) alone affect the economic integration outcome (employment probabilities) or attitudes (the psychological model) and/or acquired capital (language proficiency) also influence the outcome.

As the previous empirical findings suggest, the present analysis results also confirm the robustness of the economic model in estimating immigrants' employment probabilities. Among the indicators contained in the economic model, educational attainment has the most consistent statistically significant effect across cities. Its positive effect has proven to be comparatively substantive, especially in the seven cities (Geneva, London, Lyon, Madrid, Oslo, Stockholm, and Zurich). These findings are in line with the previous research that education helps social upward mobility and positively and significantly affects employment and chances of labor market success (Chiswick, Lee, & Miller, 2003; Kanas & Van Tubergen, 2009; Fossati, 2011).

A negative correlation between permit categories other than 'for work' (which was the reference category; other categories include 'for study,' 'for family unification,' and 'for other purposes') and employment in the host societies is found. This may be related to the legal stability that ensures access to opportunities in the labor market, but it may also be interpreted using the logic of the human capital approach; having a work permit can be a sign of having higher economic incentives to invest their resources in acquiring economic gains.

¹⁶⁶ There is a positive correlation between social trust and employment probabilities in Stockholm and a negative correlation between social trust and employment probabilities in Zurich.

¹⁶⁷ A positive correlation between language proficiency and employment probabilities is found in Geneva, Lyon, and Zurich.

Birth in the host country is negatively associated with employment in some cities (Barcelona, Milan, Stockholm, and Zurich). This may be simply because those who are born in the host country are still too young in age to actively participate in the labor market, but the result can also be interpreted as the evidence broadly corroborates the exiting empirical findings, especially in the European context; being second or third generation immigrants does not guarantee successful economic integration and may face limited opportunities in participating in the labor market of the destination (Crul, 2007). Here, further study on a macro-level opportunity structure would be valuable in providing thorough explanations for the negative correlation between birth in the host country and immigrant economic integration.

Among the socio-demographic factors, marital status and gender show a consistent trend. Marital status has a statistically significant positive effect in six cities (Budapest, Geneva, London, Lyon, Milan, and Zurich) while women tend to be less integrated in the labor market (which is indicated by the negative effect of being female on employment in Budapest, London, Lyon, Oslo, and Zurich). In other words, married immigrant men have a higher likelihood of being employed.

Regression results also suggest that attitudes¹⁶⁸ have very weak power in explaining the variation in employment probabilities. Among the attitudinal factors, social trust has a positive as well as negative effect but the effect is observed only in two cities (a positive effect in Stockholm and a negative effect in Zurich). Similarly, acquired capital (language proficiency)¹⁶⁹ has relatively weak power in explaining the variation in the outcome. Nonetheless, language proficiency has a statistically significant positive effect on employment in three cities (Geneva, Lyon, and Zurich) and its effect tends to be large in those cities. Therefore, pertaining to the presumed mediation effect on employment probabilities via attitudes and/or acquired capital, the effect of personal characteristics are more likely to be mediated via acquired capital (language proficiency) than via attitudes (social trust) to produce the outcome. Putting the results together, those with a higher level of education and a work permit have higher chances of being employed than those without. Furthermore, destination language proficiency is conducive to obtaining a paid job, but they may do so regardless of having achieved a good command of destination language or building social trust. This is in line with the existing literature that education is the consistent determinant of labor market success and destination language fluency of immigrants influences the level of labor market integration.

The proposed model of immigrant economic integration, however, might need respecification for improvement. In some cities, like Barcelona, have little explanatory power because the overall explained variance of the full model is not very high ($R^2 = 0.087$). The respecification may be done by including or excluding some of the micro-level factors, but for the improvement to be real and

¹⁶⁸ See R^2 values of Model 3 (which shows the effect of attitudes plus controls)

¹⁶⁹ See R^2 values of Model 4 (which shows the effect of acquired capital plus controls)

substantive, it is most likely to demand the inclusion of macro-level structural and contextual factors, and thus, transforming the statistical model into a multi-level one.

3. A Model of Immigrant Citizenship Acquisition

3.1. Hypotheses

A model of immigrant citizenship acquisition is formulated to test the following hypotheses: Extending the economic-psychological modeling frame used for developing the model of immigrant language acquisition, from the *economic view*, it can be hypothesized that tangible resources (personal characteristics) have a direct effect on immigrant citizenship acquisition, and the direct effect of the socio-demographic characteristics on immigrant citizenship acquisition is greater than that of attitudes (H1). Concerning the mediation effect of attitudes, the direct effect of personal characteristics on immigrant citizenship acquisition remains significant, thus it assumes an insignificant indirect effect through attitudes (H2). From the *psychological view*, it can be hypothesized that intangible resources (attitudes) have a positive, direct effect on immigrant citizenship acquisition, and the direct effect of attitudes on immigrant citizenship acquisition is greater than that of personal characteristics (H3). Concerning the mediation effect of attitudes, most of the association between personal characteristics and immigrant citizenship acquisition is due to its indirect association with attitudes, thus it assumes that the total effect of personal characteristics is mediated mostly by attitudes (H4).

For the sake of clarity, a few remarks on the hypotheses are given in the following. Hypotheses 1 and 2 are the rival hypotheses of Hypotheses 3 and 4. Support for Hypothesis 1 would indicate that the economic view better explains immigrant citizenship acquisition; on the contrary, support for Hypothesis 3 would signify that the psychological view better explains the outcome. On the issue of the hypothesized mediation effect of attitudes, such effect is absent if Hypothesis 2 is supported (i.e., the direct effect of personal characteristics [the economic view] alone explains the outcome). Conversely, if Hypothesis 4 is supported, there are two possible ways in which such mediation effect is transmitted: (1) in case of full mediation, all effect of personal characteristics is mediated through attitudes (i.e., the effect of attitudes [the psychological view] alone explains the outcome); and (2) in case of partial mediation, a portion of the effect of personal characteristics is mediated through attitudes, simultaneously supporting the direct effect of personal characteristics and the indirect effect of attitudes on the outcome.

On the basis of the theoretical framework and empirical findings based on the *human capital approach* as well as the *socioeconomic-determinants* and *non-socioeconomic-determinants models of naturalization*, it can be hypothesized that acquired capital (destination language proficiency, employment status, and social group involvement) is positively related to immigrant citizenship acquisition (H5). Concerning the mediation effects of acquired capital, most of the association between personal characteristics and immigrant citizenship acquisition is due to its indirect

association with acquired capital, thus it assumes that the total effect of personal characteristics is mediated mostly by acquired capital (H6). In other words, if Hypothesis 6 is supported, there are two possible ways in which such mediation effect is transmitted: (1) in case of full mediation, all effect of personal characteristics is mediated through acquired capital; and (2) in case of partial mediation, a portion of the effect of personal characteristics is mediated through acquired capital, simultaneously supporting the direct effect of personal characteristics and the indirect effect of acquired capital on the outcome.

3.2. Model

In order to formulate an empirical model that aims to identify the determinants of immigrant citizenship acquisition, the economic-psychological modeling frame for immigrant language acquisition is extended to the economy and communities by incorporating the *socioeconomic-determinants model* and the *non-socioeconomic-determinants model of naturalization*. Thus, a model of immigrant citizenship acquisition can be described as:

$$P(\text{Citizenship}) = f \{ \text{Educational attainment, Age at migration, Length of stay in the host country, Country of birth, Attachment to host country people, Social trust, Institutional trust, Language proficiency, Employment, Social group involvement, Gender, Marital status, Ethnic group} \}$$

The theoretically expected signs of their effects on naturalization probabilities are summarized in the last column of Table 6-6. A schematic representation of the hypothesized mechanism is illustrated in Figure 6-2¹⁷⁰.

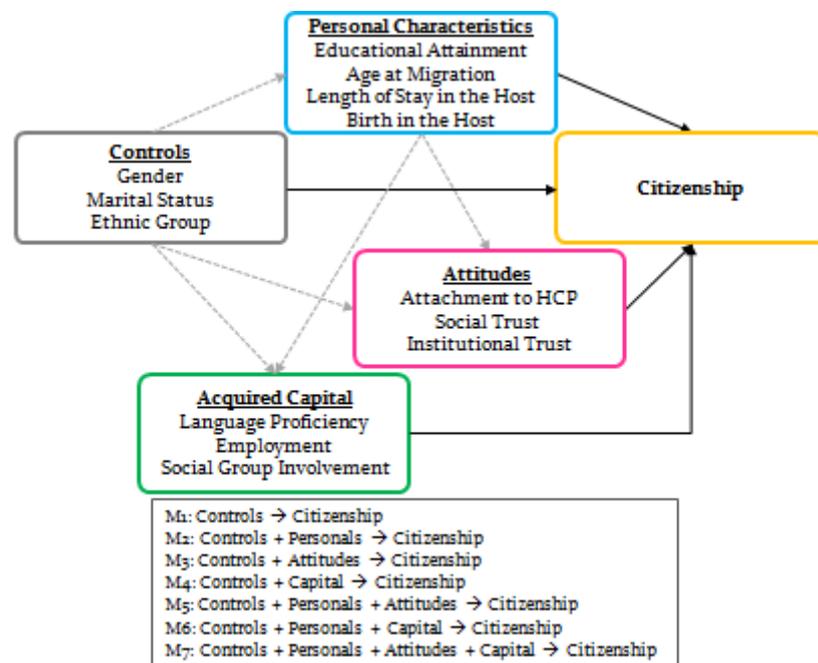


Figure 6-2: A Model of Immigrant Citizenship Acquisition (For LPM/Logistic Regression)

¹⁷⁰ For the description and interpretation of the diagram, refer to *Chapter 5: 2.1. Model*.

3.3. Measures¹⁷¹

Table 6-4 gives the descriptive statistics of the variables included in the model¹⁷². Means for dummy variables can be interpreted as proportions. Since all of the variables are normalized to the unit interval of 0-1, observed central tendencies of all variables (regardless of dummy or non-dummy variables) reflect the relative activity of the variables. For example, the means and standard deviations of citizenship acquisition of the ten cities are: Barcelona ($M=0.20$, $SD=0.40$) Budapest ($M=0.17$, $SD=0.38$), Geneva ($M=0.16$, $SD=0.36$), London ($M=0.76$, $SD=0.43$), Lyon ($M=0.80$, $SD=0.40$), Madrid ($M=0.16$, $SD=0.37$), Milan ($M=0.06$, $SD=0.23$), Oslo ($M=0.65$, $SD=0.48$), Stockholm ($M=0.80$, $SD=0.40$), and Zurich ($M=0.12$, $SD=0.32$) (See Table 6-4). The larger the mean, the higher the naturalization; the smaller the mean, the lower the naturalization.

Table 6-4: Descriptive Statistics: A Model of Immigrant Citizenship Acquisition

City ^a	BAR	BUD	GEN	LON	LYO	MAD	MIL	OSL	STO	ZUR
Variable ^b	Mean (SD)									
<i>DV</i>										
Citizenship	0.20 (0.40)	0.17 (0.38)	0.16 (0.36)	0.76 (0.43)	0.80 (0.40)	0.16 (0.37)	0.06 (0.23)	0.65 (0.48)	0.80 (0.40)	0.12 (0.32)
<i>IVs</i>										
Educational attainment	0.57 (0.31)	0.75 (0.24)	0.57 (0.31)	0.72 (0.30)	0.59 (0.32)	0.49 (0.28)	0.64 (0.21)	0.50 (0.35)	0.63 (0.32)	0.50 (0.30)
Age at migration	0.39 (0.14)	0.32 (0.14)	0.23 (0.15)	0.11 (0.16)	0.07 (0.12)	0.37 (0.13)	0.34 (0.13)	0.29 (0.18)	0.21 (0.17)	0.26 (0.14)
Length of stay in HC	0.09 (0.08)	0.10 (0.08)	0.26 (0.17)	0.23 (0.14)	0.29 (0.12)	0.07 (0.05)	0.09 (0.07)	0.15 (0.10)	0.22 (0.07)	0.25 (0.14)
Country of birth	0.01 (0.09)	0.24 (0.15)	0.15 (0.36)	0.57 (0.50)	0.60 (0.49)	0.005 (0.07)	0.03 (0.18)	0.09 (0.29)	0.21 (0.17)	0.12 (0.32)
Attachment to HCP	0.68 (0.24)	0.56 (0.25)	0.79 (0.22)	0.54 (0.23)	0.77 (0.22)	0.68 (0.23)	0.57 (0.25)	0.58 (0.23)	0.64 (0.24)	0.72 (0.25)
Social trust	0.48 (0.26)	0.61 (0.20)	0.51 (0.27)	0.49 (0.22)	0.34 (0.29)	0.52 (0.26)	0.47 (0.24)	0.58 (0.49)	0.45 (0.29)	0.49 (0.28)
Institutional trust	0.58 (0.19)	0.45 (0.22)	0.67 (0.22)	0.52 (0.19)	0.52 (0.21)	0.60 (0.20)	0.52 (0.19)	0.54 (0.23)	0.50 (0.22)	0.67 (0.22)
Language proficiency (2)	0.86 (0.24)	0.59 (0.35)	0.56 (0.21)	0.88 (0.21)	0.90 (0.19)	0.79 (0.31)	0.38 (0.19)	0.69 (0.25)	0.76 (0.24)	0.37 (0.26)
Employment	0.79 (0.41)	0.59 (0.49)	0.54 (0.50)	0.61 (0.49)	0.54 (0.50)	0.78 (0.42)	0.74 (0.44)	0.62 (0.49)	0.70 (0.47)	0.63 (0.48)
Social group involvement	0.04 (0.08)	0.004 (0.02)	0.04 (0.07)	0.03 (0.05)	0.20 (0.19)	0.03 (0.06)	0.02 (0.06)	0.02 (0.05)	0.07 (0.11)	0.03 (0.08)
<i>Controls</i>										
Gender	0.44 (0.50)	0.39 (0.49)	0.46 (0.50)	0.48 (0.50)	0.56 (0.50)	0.51 (0.50)	0.48 (0.50)	0.48 (0.50)	0.51 (0.50)	0.33 (0.47)
Marital status	0.61 (0.49)	0.53 (0.50)	0.71 (0.46)	0.50 (0.50)	0.54 (0.50)	0.55 (0.50)	0.48 (0.50)	0.76 (0.43)	0.60 (0.49)	0.78 (0.41)
Ethnic group ^c										
G1	0.30 (0.46)	0.35 (0.48)	0.52 (0.50)	0.33 (0.47)	0.16 (0.37)	0.34 (0.48)	0.33 (0.47)	0.33 (0.47)	0.46 (0.50)	0.33 (0.47)
G2	0.35 (0.48)	0.35 (0.48)	X	0.33 (0.47)	0.65 (0.48)	0.32 (0.47)	0.33 (0.47)	0.33 (0.47)	X	0.33 (0.47)
G3 (ref. category)	0.35 (0.48)	0.30 (0.46)	0.48 (0.50)	0.34 (0.47)	0.18 (0.39)	0.34 (0.47)	0.33 (0.47)	0.33 (0.47)	0.53 (0.50)	0.34 (0.47)

^a BAR: Barcelona, BUD: Budapest, GEN: Geneva, LON: London, LYO: Lyon, MAD: Madrid, MIL: Milan, OSL: Oslo, STO: Stockholm, ZUR: Zurich

^b The Mean and SD of all variables are expressed in normalized values. DV: Dependent variable, IVs: independent variables.

^c Ethnic groups: Barcelona (G1: Moroccan, G2: Andean mixed group, G3: Ecuatorian), Budapest (G1: Ethnic Hungarian, G2: Mixed Muslim, G3: Chinese), Geneva (G1: Italian, G2: N/A, G3: Kosovar), London (G1: Indian, G2: Afro-Caribbean, G3: Bangladeshi), Lyon (G1: Moroccan, G2: Algerian, G3: Tunisian), Madrid (G1: Moroccan, G2: Andean mixed group, G3: Ecuatorian), Milan (G1: Egyptian, G2: Filipino, G3: Ecuatorian), Oslo (G1: Turkish, G2: Pakistani, G3: Bosnian), Stockholm (G1: Turkish, G2: N/A, G3: Chilean), Zurich (G1: Italian, G2: Turkish, G3: Kosovar)

¹⁷¹ All variables used in the data analyses are normalized to the unit interval of 0-1. For more details, refer to *Appendix I: Measures* and/or *Chapter 4: 1.4 Measures*, where all variables used in the analyses are described.

¹⁷² Table 6-4 gives only means and standard deviations by city. For more detailed information, refer to *Appendix II: Descriptive Statistics of All Variables*.

The dependent variable in this analysis is *citizenship*, dummy-coded 1 for ‘having citizenship of the host country’ and coded 0 for all others. The independent variables in the model of immigrant economic integration include personal characteristics, attitudes, and acquired capital. The ***personal characteristics*** include: *educational attainment* measured as a categorical variable indicating whether the respondent had incomplete primary education, primary education, lower level secondary education, upper secondary education, post secondary (non-tertiary) education, first- and second-stage tertiary education; *age at migration* measured in years; *length of stay in the host country* measured in years; and *country of birth*, dummy-coded 1 for birth in the host country and coded 0 for all others. The ***attitudes*** include *attachment to host country people*, *social trust*, and *institutional trust*. These three variables are the respondent’s subjective assessment of his/her levels of attachment to host country people, of social trust, and of institutional trust. In general, they are measured on an 11-point scale with a higher number indicating higher levels of attachment or trust. There are differences in the items and scales measured in some cities (such as Oslo and Stockholm) because some questions or items are not asked in the survey and country-specific variables are employed for certain items that are measured using different scales. The indicators for the ***acquired capital*** in the model are: *language proficiency* measured on a 6-point scale with a higher number indicating a higher level of destination language proficiency; *employment*, coded 1 for ‘in paid work’ and coded 0 for all others; and *social group involvement*, which is constructed from the number of non-political associational activities participated in the last 12 months. The control variables in the model of immigrant citizenship acquisition include: *gender*, coded 1 for females and 0 for males; *marital status*, coded 1 for married or cohabiting and 0 for single, widowed, or divorced; and *ethnic groups*, dummy-coded 1 for the selected ethnic group and 0 for all others.

3.4. Analysis¹⁷³

I use linear probability model (LPM) with heteroskedasticity-consistent robust standard error estimates to identify the determinants of immigrant citizenship acquisition and estimate the mediation effects of attitudes and acquired capital on citizenship acquisition of immigrants. Table 6-5 presents the regression results with seven models¹⁷⁴ (all adjusted for demographic characteristics of gender, ethnic group, and marital status). Model 1 shows the effect of the control variables; Model 2 shows the effect of personal characteristics on immigrant citizenship acquisition; Model 3 shows the effects of attitudes on immigrant citizenship acquisition; Model 4 shows the effects of acquired capital on immigrant citizenship acquisition; Model 5 shows the effect of personal characteristics and attitudes on immigrant citizenship acquisition; Model 6 shows the effect of personal characteristics and

¹⁷³ The main analysis for the model of immigrant citizenship acquisition is carried out using LPM, but I have also analyzed the model using logistic regression. The findings from logistic regression do not demonstrate contradictory results. All of the data analysis output tables, either from LPM or logistic regression, are reported in *Appendix IV: Determinants of Immigrant Integration (2.Determinants of Immigrant Citizenship Acquisition)*.

¹⁷⁴ Table 6-5 provides the results only for Budapest. Regression results of all cities are reported in *Appendix IV: Determinants of Immigrant Integration (2.Determinants of Immigrant Citizenship Acquisition)*.

acquired capital on immigrant citizenship acquisition; and Model 7 shows the combined effects of the variables included in the previous model blocks (i.e., controls, personal characteristics, attitudes, and acquired capital). To address the above-mentioned questions, I first look at Model 2, 3, and 4 to examine how much the personal characteristics, attitudes, and acquired capital, respectively, predict the outcome, and what factors have significant effects on immigrant citizenship acquisition. Secondly, I compare Model 2, 3, 4, 5, 6, and 7 to confirm the relative effects of personal characteristics, attitudes, and acquired capital, and to determine whether the relationship between personal characteristics and immigrant citizenship acquisition is independent and direct or indirectly related through attitudes and/or acquired capital. All analyses are carried out in Stata 12.0.

3.5. Results

Table 6-5: Determinants of Immigrant Citizenship Acquisition: Budapest (LPM, LOCALMULTIDEM)

	(M1) Controls		(M2) +Personals		(M3) +Attitudes		(M4) +Capital		(M5) +Personals +Attitudes		(M6) +Personals +Capital		(M7) +Personals +Attitudes +Capital	
Female	0.0387	(0.0453)	0.000690	(0.0389)	0.0279	(0.0454)	0.0638	(0.0443)	-0.00274	(0.0389)	0.00972	(0.0392)	0.00473	(0.0392)
Marital status	0.0932*	(0.0420)	-0.00032	(0.0408)	0.0843*	(0.0417)	0.0482	(0.0494)	-0.00117	(0.0409)	-0.0213	(0.0444)	-0.0204	(0.0447)
Ethnic group (Ref.: Chinese)														
Ethnic Hungarian	0.291***	(0.0373)	0.331***	(0.0379)	0.326***	(0.0409)	0.00297	(0.0739)	0.331***	(0.0385)	0.213**	(0.0726)	0.217**	(0.0724)
Mixed	0.246***	(0.0417)	0.126***	(0.0374)	0.224***	(0.0418)	0.215***	(0.0431)	0.113**	(0.0369)	0.118**	(0.0395)	0.107**	(0.0405)
Muslim														
Education			0.152*	(0.0765)					0.146	(0.0789)	0.136	(0.0776)	0.125	(0.0807)
Age at migration			0.269	(0.183)					0.268	(0.190)	0.312	(0.186)	0.297	(0.190)
Length of stay in HC			2.656***	(0.316)					2.648***	(0.318)	2.505***	(0.330)	2.488***	(0.332)
Birth in HC			0.0313	(0.219)					0.0329	(0.220)	0.0317	(0.212)	0.0295	(0.213)
Attachment to HCP					0.0826	(0.0824)			0.0931	(0.0683)			0.0571	(0.0668)
Social trust					0.0234	(0.117)			-0.0475	(0.0965)			-0.0553	(0.0941)
Institutional trust					0.212*	(0.103)			0.0417	(0.0902)			0.0923	(0.0914)
Language proficiency							0.503***	(0.0995)			0.213*	(0.0992)	0.222*	(0.102)
Employment							0.143**	(0.0491)			0.0689	(0.0439)	0.0654	(0.0445)
Social group involvement							-0.306	(0.897)			-0.925	(0.699)	-0.963	(0.707)
Constant	-0.0597	(0.0349)	-0.458***	(0.0803)	-0.217**	(0.0822)	-0.331***	(0.0572)	-0.491***	(0.0936)	-0.561***	(0.0905)	-0.588***	(0.101)
Observations	419		419		419		419		419		419		419	
R ²	0.065		0.334		0.079		0.136		0.337		0.350		0.352	

Robust standard errors in parentheses
* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

The regression results of the Budapest case (see Table 6-5) show that the higher percentage of the explained variance of the economic model signals the direct effect of personal characteristics is larger than that of attitudes. Pertaining to the hypothesized mediation effect of personal characteristics through attitudes and/or acquired capital blocks, the personal characteristics block (the economic model) explains 0.334, the attitudes block (the psychological model) explains 0.079, and the acquired capital block explains 0.136 of the total variance. The variance is shared among the three blocks as the final full model only explains 0.352 of the total variance, which is a little more than that of the personal characteristics block. Moreover, while maintaining the statistical significance, there is a general tendency that the size of regression coefficients of all three blocks (i.e., personal characteristics, attitudes, and acquired capital) is reduced in the full model. All of these results support the presence of partial mediation of personal characteristics on citizenship acquisition through attitudes and/or acquired capital. Whereas none of the attitudes variables retains a statistically significant effect in the full model, language proficiency has a positive, significant effect ($b=0.222$,

$p < 0.05$). Consequently, the analysis results of the Budapest case support the presence of some indirect effects of personal characteristics on citizenship acquisition through the acquired capital block (i.e., through language proficiency).

Table 6-6: Determinants of Immigrant Citizenship Acquisition: 10 Cities
(LPM, LOCALMULTIDEM)

Model 3: A Model of Immigrant Citizenship Acquisition (LPM)											
City ^a	BAR	BUD	GEN	LON	LYO	MAD	MIL	OSL	STO	ZUR	Expected Sign ^d
Controls (C)											
Gender (Female)						+					–
Marital status											?
Ethnic group ^b	Reference category: G3 (group of recent arrival)										
G1		***	–*				+		***	–**	+
G2	+	***	X					–*	X	+	+
Personal characteristics (P)											
Educational attainment	+			–***	***						+
Age at migration				–**		+		–*	***		–
Length of stay in HC	***	***		***		***	***	***	+		+
Birth in HC	+				***		***	–*	***		+
Attitudes (A)											
Attachment to HCP							+				+
Social trust							–*	–**			+
Institutional trust											+
Capital (CL)											
Language proficiency		+		***		***	+	+	***		+
Employment				–***	+		–*				+
Social group involvement			–**								+
Observations	439	419	278	518	539	528	479	565	396	445	X
R² ^c											
M1: C	0.030	0.065	0.039	0.209	0.015	0.035	0.108	0.011	0.031	0.072	X
M2: C+P	0.342	0.334	0.057	0.580	0.230	0.301	0.389	0.218	0.076	0.118	
M3: C+A	0.051	0.079	0.045	0.242	0.030	0.044	0.175	0.022	0.039	0.075	
M4: C+CL	0.070	0.136	0.068	0.316	0.086	0.102	0.324	0.068	0.057	0.099	
M5: C+P+A	0.347	0.337	0.061	0.583	0.232	0.304	0.406	0.228	0.083	0.120	
M6: C+P+CL	0.346	0.350	0.074	0.603	0.241	0.314	0.417	0.226	0.103	0.121	
M7: C+P+A+CL	0.351	0.352	0.080	0.605	0.243	0.318	0.428	0.237	0.108	0.123	

^a $p < 0.05$, ^{**} $p < 0.01$, ^{***} $p < 0.001$

^a BAR: Barcelona, BUD: Budapest, GEN: Geneva, LON: London, LYO: Lyon, MAD: Madrid, MIL: Milan, OSL: Oslo, STO: Stockholm, ZUR: Zurich

^b Ethnic groups: Barcelona (G1: Moroccan, G2: Andean mixed group, G3: Ecuatorian), Budapest (G1: Ethnic Hungarian, G2: Mixed Muslim, G3: Chinese), Geneva (G1: Italian, G2: N/A, G3: Kosovar), London (G1: Indian, G2: Afro-Caribbean, G3: Bangladeshi), Lyon (G1: Moroccan, G2: Algerian, G3: Tunisian), Madrid (G1: Moroccan, G2: Andean mixed group, G3: Ecuatorian), Milan (G1: Egyptian, G2: Filipino, G3: Ecuatorian), Oslo (G1: Turkish, G2: Pakistani, G3: Bosnian), Stockholm (G1: Turkish, G2: N/A, G3: Chilean), Zurich (G1: Italian, G2: Turkish, G3: Kosovar)

^c R² of all models are reported: M1: Controls, M2: Controls + Personal characteristics, M3: Controls + Attitudes, M4: Controls + Capital, M5: Controls + Personal characteristics + Attitudes, M6: Controls + Personal characteristics + Capital, and M7 (full model): Controls + Personal characteristics + Attitudes + Capital.

^d A question mark under the expected sign column indicates that it is not clear whether the variable will have a positive or negative effect on the outcome.

Economic View vs. Psychological View

Table 6-6¹⁷⁵ presents the summary of the ten-city analysis on the determinants of immigrant citizenship acquisition. Overall, the results show that the economic model (personal characteristics)

¹⁷⁵ The plus (+) and minus (–) signs indicate the direction of the effect on the outcome, and the number of asterisks signifies the statistical significance levels: * $p < 0.05$, ** $p < 0.01$, and *** $p < 0.001$. In addition, the number of observations and the coefficient of determination or more commonly known as R-squared (R²) are indicated at the bottom. The table summarizes the direction of the effect and the statistical significance levels of the full model (i.e., the output of Model 7 in Table 6-5). The theoretically expected signs of the effects on the dependent variable are included in the last column to help interpretation of the results. The summary table does not contain the results of the reduced models except the R² values (R² values of all models are included to help interpretation of the hypothesized mediation effects). The regression coefficients are unreported. However, the

explains a larger fraction of the total variance in the outcome than the psychological model (attitudes). Although the attitudinal block has shown a statistically significant effect on citizenship acquisition in two cities, the directions of the effect are mixed (a positive effect of attachment to host country people in Milan and a negative effect of social trust in Milan and Oslo) and the direct effect of personal characteristics retains most of the coefficient size and significance in the final full model. Comparison of the R-squared values across the models also shows evidence. First, comparison of Model 2 (which shows the effect of personal characteristics plus controls) and Model 3 (which shows the effect of attitudes plus controls) shows the variance explained by personal characteristics is always greater than the variance explained by attitudes or acquired capital. The variance explained by Model 3 is the smallest among the reduced models¹⁷⁶ across the cities of analysis. Second, comparison of Model 2 and Model 7 (the full model, which shows the combined effect of personal characteristics, attitudes, and acquired capital) shows that the variance in immigrant citizenship acquisition is explained mostly by personal characteristics. Furthermore, comparison of Model 6 (which shows the effect of personal characteristics and acquired capital plus controls) to Model 7 indicates an infinitesimal increase in the variance explained (R^2). For instance, the Budapest case informs that Model 6 explains 0.350 of the variance while Model 7 explains 0.352 of the total variance, implying that attitudes add a minute effect on citizenship acquisition.

Hypothesis 1 is, therefore, supported, suggesting that the economic view is robust in explaining the variation in immigrant citizenship acquisition across the ten cities. In other words, personal characteristics have a direct effect on citizenship acquisition, and the direct effect of the given characteristics remains much greater than that of attitudes. While no statistically significant effect of attitudinal variables is observed in many of the cities (Barcelona, Budapest, Geneva, London, Lyon, Madrid, Stockholm, and Zurich), bidirectional indirect effects through attitudinal variables can be assumed in couple of the cities: On the one hand, the presence of a positive indirect effect through attachment to host country people is found in Milan ($b=0.118, p<0.05$)¹⁷⁷; on the other hand, the presence of a negative indirect effect through social trust is found in Milan ($b=-0.111, p<0.05$) and Oslo ($b=-0.102, p<0.01$). Thus, only the Milan case supports Hypothesis 4 (partial mediation), which proposed a positive mediation effect through the attitudinal block; and most of the other cases (i.e., Barcelona, Budapest, Geneva, London, Lyon, Madrid, Stockholm, and Zurich) support Hypothesis 2, which proposed the absence of such mediation effect. In summary, the direct effect of personal characteristics appears more important since the evidence found suggests that its effect

information is available in the raw regression output tables presented in *Appendix IV: Determinants of Immigrant Integration (2. Determinants of Immigrant Citizenship Acquisition)*.

¹⁷⁶ “[A]mong the reduced models” here means all of the reduced models except Model 1, which shows the effect of controls only.

¹⁷⁷ b indicates unstandardized coefficient, yet all variables are normalized prior to the regression. For the regression results of other cities, refer to *Appendix IV: Determinants of Immigrant Integration (2. Determinants of Immigrant Citizenship Acquisition)*.

remains strong and the effect of attitudes is almost negligible. Hence, it is insufficient to allow any conclusion to be drawn on the potential mediation effect of personal characteristics on citizenship acquisition through attitudes.

If the economic model is better at explaining the variation in citizenship acquisition behavior and its direct effect remains strong across the samples, what are the strongest predictors among the personal characteristics indicators? Comparison of the regression coefficients¹⁷⁸ across the models suggests that, among the personal characteristics indicators, length of stay in the host country is one of the strongest predictors of citizenship acquisition, showing a positive effect in the most consistent manner. The statistically significant effect is present in seven cities: Barcelona ($b=2.904$, $p<0.001$), Budapest ($b=2.488$, $p<0.001$), London ($b=1.103$, $p<0.001$), Madrid ($b=3.436$, $p<0.001$), Milan ($b=1.079$, $p<0.001$), Oslo ($b=2.321$, $p<0.001$), and Stockholm ($b=0.839$, $p<0.05$). Birth in the host country demonstrates a positive effect on citizenship acquisition in several cities: Barcelona ($b=0.360$, $p<0.05$), Lyon ($b=0.276$, $p<0.001$), Milan ($b=0.300$, $p<0.01$), and Stockholm ($b=0.195$, $p<0.01$). Quite contrarily to the analysis results of the earlier models, some of the most consistent and strong predictors, such as educational attainment (in a model of immigrant language acquisition and a model of immigrant economic integration) and age at migration (in a model of immigrant language acquisition) have much weaker power in estimating naturalization propensity.

Effects of Acquired Capital and Hypothesized Mediation

Among the indicators included in the acquired capital block, language proficiency has shown the most coherent pattern across the cities and its statistically significant positive effect on citizenship acquisition is found in six cities included in the LOCALMULTIDEM data: Budapest ($b=0.222$, $p<0.05$), London ($b=0.254$, $p<0.01$), Madrid ($b=0.376$, $p<0.01$), Milan ($b=0.255$, $p<0.05$), Oslo ($b=0.195$, $p<0.05$), and Stockholm ($b=0.352$, $p<0.01$)¹⁷⁹. However, for the other acquired capital variables, there is insufficient firm indication for drawing any conclusive statement from the patterns observed: Employment status has a positive effect in Lyon ($b=0.083$, $p<0.05$) and a negative effect in London ($b=-0.092$, $p<0.001$) and Milan ($b=-0.067$, $p<0.05$); and social group involvement has a negative effect in Geneva ($b=-0.343$, $p<0.05$). Hypothesis 5 is, thus, supported at least in the seven city cases (i.e., Budapest, London, Madrid, Milan, Oslo, Stockholm, and Lyon), signifying the presence of a positive association between acquired capital and citizenship acquisition. While the positive effect of acquired capital remains in the final full model in the above-mentioned cities, the effect of personal characteristics retains most of the coefficient size and significance even after

¹⁷⁸ The regression coefficient is not standardized regression coefficient (i.e., beta), but the value is obtained after normalization. Thus, the coefficients can be comparable and indicate relative effects.

¹⁷⁹ See *Appendix IV: Determinants of Immigrant Integration (2. Determinants of Immigrant Citizenship Acquisition)* for the detailed results of the ten-city analysis.

controlling for attitudes and acquired capital. This supports Hypothesis 6, which predicts the presence of partial mediation of personal characteristics on citizenship acquisition through acquired capital.

While the presence of some mediation effects can be inferred from the analysis results, the data also show that none of the factors in the attitudes or acquired capital block has a statistically significant effect in some city cases (i.e., Barcelona and Zurich). This suggests that immigrant citizenship acquisition can be solely predicted by the direct effect of personal characteristics variables, supporting Hypothesis 2 and failing to support Hypothesis 6. Nonetheless, in a number of the LOCALMULTIDEM cities (Budapest, London, Lyon, Madrid, Milan, Oslo and Stockholm), the supposed positive mediation effects through attitudes (attachment to host country people¹⁸⁰) and/or acquired capital (destination language proficiency¹⁸¹ and employment status¹⁸²) are found, supporting Hypothesis 4 (partial mediation via attitudes) and Hypothesis 6 (partial mediation via acquired capital).

After confirming the presence of some partial mediation, it seems natural to ask the following question: How are the effects transmitted? Several model comparisons can help assessing the hypothesized mediation effect in a more detailed manner. There are primarily two ways to identify the effect. One way is to examine how much the variance is explained and shared by a certain variable or a block of variables, and another way is to see the changes in regression coefficients. To the extent that the effect of personal characteristics diminishes from Model 2 to Model 5 when attitudes are added, we can interpret the effect as being mediated through attitudes. Similarly, to the extent that the effect of personal characteristics diminishes from Model 2 to Model 6 when acquired capital is added, we can interpret the effect as being mediated through acquired capital. And, to the extent the effect of personal characteristics diminishes from Model 2 to Model 7 when both attitudes and acquired capital are added, we can interpret the effect as being mediated through the joint effect of attitudes and acquired capital. Looking across the coefficients and explained variances, when the presumed mediation effect is present, much of the indirect effect of personal characteristics on the outcome (citizenship acquisition) operates through acquired capital (principally through destination language proficiency, not much through employment or social group involvement) rather than through attitudes.

If the mediation effect is predominantly transmitted through language proficiency in the above-mentioned six cities, can we estimate the “pure” indirect effect? Comparison of the regression coefficients for language proficiency in Model 4 (which shows the effect of acquired capital plus

¹⁸⁰ A positive correlation between attachment to host country people and citizenship acquisition is found in Milan.

¹⁸¹ A positive correlation between language proficiency and citizenship acquisition is found in Budapest, London, Madrid, Milan, Oslo, and Stockholm.

¹⁸² A positive correlation between employment status and citizenship acquisition is found in Lyon.

controls) to that in Model 7 (which shows the combined effect of personal characteristics, attitudes, and acquired capital plus controls) indicates that, on average, slightly more than the half of the effect of respondent's language proficiency on citizenship acquisition is an artifact of personal characteristics and attitudes when holding other acquired capital (employment and social group involvement) constant. What percent of the apparent effect of language proficiency is spurious due to other factors in the model (i.e., personal characteristics and attitudes after controlling for employment and social group involvement)? The answer ranges from a low of 56 percent to a high of 62 percent: Budapest: 56 percent ($([0.503-0.222]/0.503=0.56)$), London: 61 percent ($([0.656-0.254]/0.656=0.61)$), Madrid: 56 percent ($([0.851-0.376]/0.851=0.56)$), Milan: 62 percent ($([0.670-0.255]/0.670=0.62)$), and Oslo: 56 percent ($([0.442-0.195]/0.442=0.56)$)¹⁸³. Therefore, these results indicate that a large part of apparent effect of language proficiency is accountable to other factors in the model.

Although the presence of the hypothesized mediation effects are confirmed in a number of cases, the indirect effect tends to be weak and the direct effect of personal characteristics remains strong across the cities. Consequently, personal characteristics of immigrant highly influence their naturalization decision. In particular, immigrants who are born in the host country and/or have spent longer time in the destination are more likely to naturalize, but they may decide to do so without necessary forming psychological attachment or trust to the host society or acquiring the ascribed capital.

3.6. Discussion

The main aim of this section was to develop a model to empirically identify the determinants of immigrant citizenship acquisition in ten European metropolitan cities. Specially, the nested model approach was used to investigate whether immigrants' personal characteristics (the economic model) alone affect the naturalization outcome or attitudes (the psychological model) and/or acquired capital also affect the outcome.

Analysis results demonstrate that compared to the psychological model (attitudes), the economic model (personal characteristics) has stronger power in estimating immigrants' naturalization propensity. Amongst the indicators of the economic model, length of stay in the host country is one of the strongest predictors of citizenship acquisition, and shows a fairly coherent positive association with citizenship acquisition as shown in the seven cities (Barcelona, Budapest, London, Madrid, Milan, Oslo, and Stockholm). The results are in line with the literature on naturalization that likelihood of immigrants' naturalization increases with the duration of stay in the destination (Chiswick & Miller, 2008). Another factor that positively affect naturalization outcome is

¹⁸³ In the case of Stockholm, the coefficients for language proficiency in Model 4 and 7 show statistically significant positive effect on citizenship acquisition, but the coefficient size increases in the full model 7: Stockholm: -21 percent ($([0.290-0.352]/0.290=-0.21)$). Therefore, a suppressor effect might be assumed, but it is generally interpreted as no change since the change in coefficients is relatively small.

birth in the host country; the effect is found in four cities (Barcelona, Lyon, Milan, and Stockholm). Citizenship regimes differ considerably from country to country. In some countries, citizenship is automatically given to those who are born in the host country while in others, citizenship is closely tied to ethnicity; and some countries are more permissive than others in accepting newcomers. Therefore, further research with a macro-level analysis is recommended to adequately explain the variations in the association between birth in the host country and citizenship acquisition. The predictive power of educational attainment is comparatively small in the current model that aims to estimate the immigrants' citizenship acquisition probabilities; this trend deviates from the general findings of the other empirical models. Additionally, this empirical result differs from what is customarily assumed in the literature—particularly, the studies conducted primarily in the United States where the level of education is highly correlated with naturalization rates (Chiswick & Miller, 2008; Johnson, Reyes, Mameesh, & Barbour, 1999).

Some of the attitudinal factors are found to be positively or negatively related to citizenship acquisition in some cities (Milan and Oslo). However, the effects of the attitudes are diminutive and the sizable direct effects of personal characteristics are retained across cities. This implies that the economic model is much more robust vis-à-vis the psychological model. Among the acquired capital included in the model (language proficiency, employment status, and social group involvement), destination language proficiency has demonstrated the most consistent positive effect on citizenship acquisition. Employment is positively related to naturalization success in Lyon, but negatively related in London and Milan. Furthermore, the relationship between social group involvement and citizenship acquisition is statistically insignificant in all cities except Geneva (but the effect is negative). The results support the conclusion of the study conducted in the United States by Johnson, Reyes, Mameesh, & Barbour (1999) that destination language speaking ability is the most important predictor of naturalization. Also, the positive association between immigrants' destination language proficiency and their naturalization success has been confirmed in other studies in the US (Chiswick & Miller, 2008) and in Australia (Evans, 1998). Many previous studies have found positive and significant relationships of citizenship with employment and earnings (DeVoretz & Pivnenko 2004; Bevelander & Pendakur 2011; Shierholz, 2010; cited in Pastor & Scoggins, 2012, p.2) and the desire for a sense of belonging through social engagements (Sumption & Flamm, 2012). Nonetheless, the current investigation does not offer adequate evidence to allow any conclusion to be drawn on the relationships of immigrant citizenship acquisition to employment and social group involvement. Accordingly, no substantive conclusion can be made from the LOCALMULTIDEM data.

Overall results also show that apart from the direct effect of personal characteristics on citizenship acquisition, much of the hypothesized mediation effect is partially transmitted through acquired capital (predominantly through destination language proficiency) and a meager effect is presumed to be mediated through attitudes. In substantive terms, therefore, immigrants who are born

in the host country and/or have spent longer time in the destination are more likely to naturalize. These personal characteristics may influence the outcome directly or indirectly through attitudes or acquired capital. If the effects are indirectly translated, it is most likely to be through their destination language skills rather than through other acquired capital or attitudinal factors; those who are more fluent in destination language are more inclined to become a citizen, yet they may decide to naturalize without necessarily forming psychological attachment or trust to the host society or acquiring any of the capital. However, the generalization may not be relevant since the proposed model has little explanatory power in some cities like Geneva (the overall explained variance of the full model is somewhat very low: $R^2 = 0.080$). Model respecification might be necessary in future research.

Additionally, ethnic group differences are found in seven cities (Barcelona, Budapest, Geneva, Milan, Oslo, Stockholm, and Zurich). In most cases, with reference to the group of recent arrival, the groups of longer settlement (or Muslim group) have higher odds of acquiring the host country citizenship (Andean mixed group in Barcelona, Ethnic Hungarian and mixed Muslim group in Budapest, Egyptian in Milan, Turkish in Stockholm, and Turkish in Zurich). However, some ethnic groups of longer settlement in several cities are less likely to gain the host country citizenship (e.g., Italian in Geneva, Pakistani in Oslo, Italian in Zurich). Many factors can be considered in order to account for the ethnic group differences across the destination countries/cities. The host society's socioeconomic conditions (e.g., GDP per capita, economic situation, business cycle) or legal and political arrangements (e.g., the host country's citizenship regimes, acceptance of dual-citizenship) may be good explanatory factors while immigrants' country of origin (e.g., developing country vs. developed country, per capita incomes, measures of political, civil, and economic freedom and/or (in)stability, dual citizenship recognition) may account for the variability in naturalization rates. Moreover, geographic distance between the country of origin and the major port of entry in the host country (and linguistic distance in connection with language) may offer additional explanations. For example, the descriptive statistics (see Table 6-4) inform that the cities of long-standing immigration with multicultural models of citizenship (London: 76% and Stockholm: 80%) and with universalist-republican models of citizenship (Lyon: 80%) have much higher rates of naturalization compared to the cities of longstanding immigration with assimilationist-differentialist models (Geneva: 16%, Zurich: 12%, and Oslo: 65%) and new receivers of immigration (Barcelona: 20%, Madrid: 16%, Budapest: 17%, and Milan: 6%). Hence, a systematic macro-level analysis and interpretation is recommended in supplementing the explanations inexplicable by the micro-level analysis alone.

4. A Model of Immigrant Political Integration

4.1. Hypotheses

A model of immigrant political integration is formulated to test the following hypotheses: Extending the economic-psychological modeling frame used for developing the model of immigrant language acquisition, from the *economic view*, it can be hypothesized that tangible resources (personal

characteristics) have a direct effect on immigrant political integration, and the direct effect of the socio-demographic characteristics on immigrant political integration is greater than that of attitudes (H1). Concerning the mediation effect of attitudes, the direct effect of personal characteristics on immigrant political integration remains significant, thus it assumes an insignificant indirect effect through attitudes (H2). From the *psychological view*, it can be hypothesized that intangible resources (attitudes) have a positive, direct effect on immigrant political integration, and the direct effect of attitudes on immigrant political integration is greater than that of personal characteristics (H3). Concerning the mediation effect of attitudes, most of the association between personal characteristics and immigrant political integration is due to its indirect association with attitudes, thus it assumes that the total effect of personal characteristics is mediated mostly by attitudes (H4).

For the sake of clarity, a few remarks on the hypotheses are given in the following. Hypotheses 1 and 2 are the rival hypotheses of Hypotheses 3 and 4. Support for Hypothesis 1 would indicate that the economic view better explains immigrant political integration; on the contrary, support for Hypothesis 3 would signify that the psychological view better explains the outcome. On the issue of the hypothesized mediation effect of attitudes, such effect is absent if Hypothesis 2 is supported (i.e., the direct effect of personal characteristics [the economic view] alone explains the outcome). Conversely, if Hypothesis 4 is supported, there are two possible ways in which such mediation effect is transmitted: (1) in case of full mediation, all effect of personal characteristics is mediated through attitudes (i.e., the effect of attitudes [the psychological view] alone explains the outcome); and (2) in case of partial mediation, a portion of the effect of personal characteristics is mediated through attitudes, simultaneously supporting the direct effect of personal characteristics and the indirect effect of attitudes on the outcome.

The social capital approach has proven a positive correlation between destination language proficiency of immigrant and their social capital acquisition (e.g., associational membership or involvement and social ties) and a positive (or at least non-negative) association between social capital and political participation (e.g., voting, political interests, and political involvement). However, the relationship between labor market participation and political participation has yielded inconsistent findings especially in the European context. On the basis of the theoretical considerations and empirical evidence based on the *social capital approach*, along with the *human capital approach* and the *socioeconomic-determinants* and *non-socioeconomic-determinants models of naturalization*, therefore, I hypothesize that among the acquired capital, destination language proficiency, citizenship, and social group involvement have positive effects on immigrant political integration (political interest) whereas the effect of employment on immigrant political integration would be insignificant (H5). Concerning the mediation effects of acquired capital, most of the association between personal characteristics and immigrant political integration is due to its indirect association with acquired capital, thus it assumes that the total effect of personal characteristics is mediated mostly by acquired

capital (i.e., partial mediation effects are assumed through language proficiency, citizenship, and social group involvement but not through employment) (H6). In other words, if Hypothesis 6 is supported, there are two possible ways in which such mediation effect is transmitted: (1) in case of full mediation, all effect of personal characteristics is mediated through acquired capital; and (2) in case of partial mediation, a portion of the effect of personal characteristics is mediated through acquired capital, simultaneously supporting the direct effect of personal characteristics and the indirect effect of acquired capital on the outcome.

4.2. Model

In order to formulate an empirical model of immigrant political integration that aims to identify the determinants of structural adaptation in the polity (political capital acquisition), the economic-psychological modeling frame for immigrant language acquisition is extended through integrating the social capital approach to the previous model developed using the human capital approach and models of naturalization. Thus, a model of immigrant political integration can be described as:

$$\text{Political Interest} = f \{ \text{Educational attainment, Age at migration, Length of stay in the host country, Country of birth, Permit category, Attachment to host country people, Social trust, Institutional trust, Language proficiency, Citizenship, Employment, Social group involvement, Gender, Marital status, Ethnic group} \}$$

The theoretically expected signs of their effects on political interest are summarized in the last column of Table 6-9. A schematic representation of the hypothesized mechanism is illustrated in Figure 6-3¹⁸⁴.

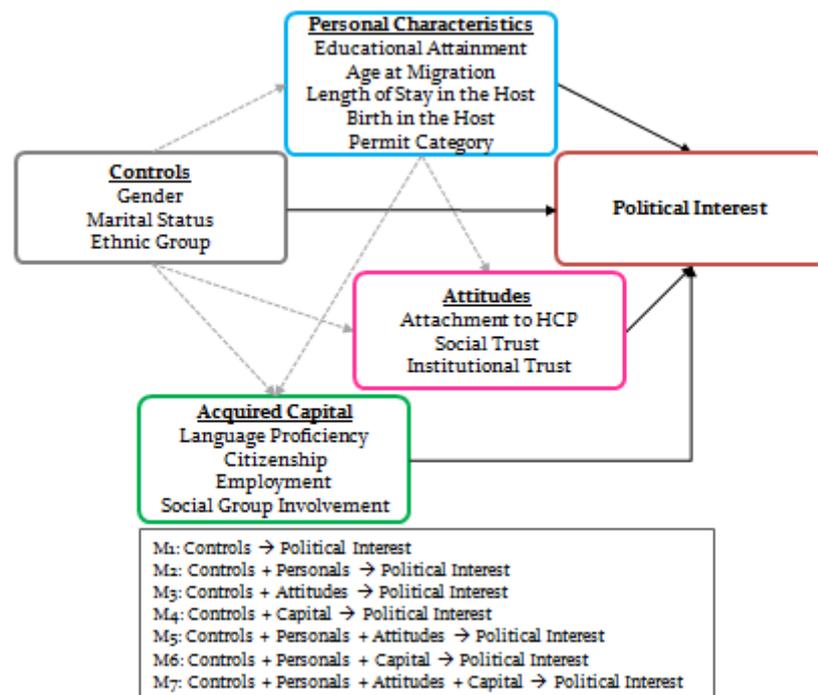


Figure 6-3: A Model of Immigrant Political Integration (For OLS Regression)

¹⁸⁴ For the description and interpretation of the diagram, refer to *Chapter 5: 2.1. Model*.

4.3. Measures¹⁸⁵

Table 6-7: Descriptive Statistics: A Model of Immigrant Political Integration

City ^a	BAR	BUD	GEN	LON	LYO	MAD	MIL	OSL	STO	ZUR
Variable ^b	Mean (SD)									
<i>DV</i>										
Political interest	0.48 (0.30)	0.54 (0.29)	0.47 (0.30)	0.40 (0.29)	0.55 (0.31)	0.42 (0.28)	0.38 (0.26)	0.36 (0.28)	0.48 (0.28)	0.48 (0.33)
<i>IVs</i>										
Educational attainment	0.57 (0.31)	0.75 (0.24)	0.57 (0.31)	0.72 (0.30)	0.59 (0.32)	0.49 (0.28)	0.64 (0.21)	0.50 (0.35)	0.63 (0.32)	0.50 (0.30)
Age at migration	0.39 (0.14)	0.32 (0.14)	0.23 (0.15)	0.11 (0.16)	0.07 (0.12)	0.37 (0.13)	0.34 (0.13)	0.29 (0.18)	0.21 (0.17)	0.26 (0.14)
Length of stay in HC	0.09 (0.08)	0.10 (0.08)	0.26 (0.17)	0.23 (0.14)	0.29 (0.12)	0.07 (0.05)	0.09 (0.07)	0.15 (0.10)	0.22 (0.07)	0.25 (0.14)
Country of birth	0.01 (0.09)	0.24 (0.15)	0.15 (0.36)	0.57 (0.50)	0.60 (0.49)	0.005 (0.07)	0.03 (0.18)	0.09 (0.29)	0.21 (0.17)	0.12 (0.32)
Permit category										
EEA	0.03 (0.18)	0.01 (0.08)	0.22 (0.42)	X	X	0.02 (0.15)	0.01 (0.07)	X	X	0.25 (0.43)
Work (ref. category)	0.56 (0.50)	0.25 (0.43)	0.10 (0.30)	0.08 (0.28)	0.05 (0.22)	0.58 (0.49)	0.56 (0.50)	X	X	0.26 (0.44)
Study	0.02 (0.15)	0.27 (0.44)	0.01 (0.01)	0.07 (0.26)	0.01 (0.08)	0.02 (0.15)	0.03 (0.16)	X	X	0.004 (0.07)
Family reunification	0.02 (0.14)	0.14 (0.35)	0.10 (0.30)	0.02 (0.13)	0.03 (0.18)	0.03 (0.18)	0.14 (0.35)	X	X	0.10 (0.30)
Other purposes	0.03 (0.17)	0.08 (0.28)	0.37 (0.48)	0.20 (0.40)	0.04 (0.21)	0.04 (0.19)	0.03 (0.18)	X	X	0.12 (0.32)
Attachment to HCP	0.68 (0.24)	0.56 (0.25)	0.79 (0.22)	0.54 (0.23)	0.77 (0.22)	0.68 (0.23)	0.57 (0.25)	0.58 (0.23)	0.64 (0.24)	0.72 (0.25)
Social trust	0.48 (0.26)	0.61 (0.20)	0.51 (0.27)	0.49 (0.22)	0.34 (0.29)	0.52 (0.26)	0.47 (0.24)	0.58 (0.49)	0.45 (0.29)	0.49 (0.28)
Institutional trust	0.58 (0.19)	0.45 (0.22)	0.67 (0.22)	0.52 (0.19)	0.52 (0.21)	0.60 (0.20)	0.52 (0.19)	0.54 (0.23)	0.50 (0.22)	0.67 (0.22)
Language proficiency (2)	0.86 (0.24)	0.59 (0.35)	0.56 (0.21)	0.88 (0.21)	0.90 (0.19)	0.79 (0.31)	0.38 (0.19)	0.69 (0.25)	0.76 (0.24)	0.37 (0.26)
Employment	0.79 (0.41)	0.59 (0.49)	0.54 (0.50)	0.61 (0.49)	0.54 (0.50)	0.78 (0.42)	0.74 (0.44)	0.62 (0.49)	0.70 (0.47)	0.63 (0.48)
Social group involvement	0.04 (0.08)	0.004 (0.02)	0.04 (0.07)	0.03 (0.05)	0.20 (0.19)	0.03 (0.06)	0.02 (0.06)	0.02 (0.05)	0.07 (0.11)	0.03 (0.08)
Citizenship	0.20 (0.40)	0.17 (0.38)	0.16 (0.36)	0.76 (0.43)	0.80 (0.40)	0.16 (0.37)	0.06 (0.23)	0.65 (0.48)	0.80 (0.40)	0.12 (0.32)
<i>Controls</i>										
Gender	0.44 (0.50)	0.39 (0.49)	0.46 (0.50)	0.48 (0.50)	0.56 (0.50)	0.51 (0.50)	0.48 (0.50)	0.48 (0.50)	0.51 (0.50)	0.33 (0.47)
Marital status	0.61 (0.49)	0.53 (0.50)	0.71 (0.46)	0.50 (0.50)	0.54 (0.50)	0.55 (0.50)	0.48 (0.50)	0.76 (0.43)	0.60 (0.49)	0.78 (0.41)
Ethnic group ^c										
G1	0.30 (0.46)	0.35 (0.48)	0.52 (0.50)	0.33 (0.47)	0.16 (0.37)	0.34 (0.48)	0.33 (0.47)	0.33 (0.47)	0.46 (0.50)	0.33 (0.47)
G2	0.35 (0.48)	0.35 (0.48)	X	0.33 (0.47)	0.65 (0.48)	0.32 (0.47)	0.33 (0.47)	0.33 (0.47)	X	0.33 (0.47)
G3 (ref. category)	0.35 (0.48)	0.30 (0.46)	0.48 (0.50)	0.34 (0.47)	0.18 (0.39)	0.34 (0.47)	0.33 (0.47)	0.33 (0.47)	0.53 (0.50)	0.34 (0.47)

^a BAR: Barcelona, BUD: Budapest, GEN: Geneva, LON: London, LYO: Lyon, MAD: Madrid, MIL: Milan, OSL: Oslo, STO: Stockholm, ZUR: Zurich

^b The Mean and SD of all variables are expressed in normalized values. DV: Dependent variable, IVs: independent variables.

^c Ethnic groups: Barcelona (G1: Moroccan, G2: Andean mixed group, G3: Ecuatorian), Budapest (G1: Ethnic Hungarian, G2: Mixed Muslim, G3: Chinese), Geneva (G1: Italian, G2: N/A, G3: Kosovar), London (G1: Indian, G2: Afro-Caribbean, G3: Bangladeshi), Lyon (G1: Moroccan, G2: Algerian, G3: Tunisian), Madrid (G1: Moroccan, G2: Andean mixed group, G3: Ecuatorian), Milan (G1: Egyptian, G2: Filipino, G3: Ecuatorian), Oslo (G1: Turkish, G2: Pakistani, G3: Bosnian), Stockholm (G1: Turkish, G2: N/A, G3: Chilean), Zurich (G1: Italian, G2: Turkish, G3: Kosovar)

Table 6-7 gives the descriptive statistics of the variables included in the model¹⁸⁶. Means for dummy variables can be interpreted as proportions. Since all of the variables are normalized to the

¹⁸⁵ All variables used in the data analyses are normalized to the unit interval of 0-1. For more details, refer to *Appendix I: Measures* and/or *Chapter 4: 1.4 Measures*, where all variables used in the analyses are described.

¹⁸⁶ Table 6-7 gives only means and standard deviations by city. For more detailed information, refer to *Appendix II: Descriptive Statistics of All Variables*.

unit interval of 0-1, observed central tendencies of all variables (regardless of dummy or non-dummy variables) reflect the relative activity of the variables. For example, the means and standard deviations of political interest of the ten cities are: Barcelona ($M=0.48$, $SD=0.30$) Budapest ($M=0.54$, $SD=0.29$), Geneva ($M=0.47$, $SD=0.30$), London ($M=0.40$, $SD=0.29$), Lyon ($M=0.55$, $SD=0.31$), Madrid ($M=0.42$, $SD=0.28$), Milan ($M=0.38$, $SD=0.26$), Oslo ($M=0.36$, $SD=0.28$), Stockholm ($M=0.48$, $SD=0.28$), and Zurich ($M=0.48$, $SD=0.33$) (See Table 6-7). The larger the mean, the higher the political interest; the smaller the mean, the lower the political interest.

The dependent variable in this analysis is *political interest*, which is operationalized as the degrees of interest in country and city politics. The reliability test result found a Cronbach's alpha of 0.861; hence, the two indicators related to political interest (interest in country politics and interest in city politics) are reliable with a high level of internal consistency. The independent variables in the model of immigrant economic integration include personal characteristics, attitudes, and acquired capital. The *personal characteristics* include: *educational attainment* measured as a categorical variable indicating whether the respondent had incomplete primary education, primary education, lower level secondary education, upper secondary education, post secondary (non-tertiary) education, first- and second-stage tertiary education; *age at migration* measured in years; *length of stay in the host country* measured in years; and *country of birth*, dummy-coded 1 for birth in the host country and coded 0 for all others; and *permit categories* measured as five dummy variables (an EEA national residence; for work; for study; for family reunification/due to marriage; and for other purposes) which are transformed from the original eight dummy variables. The *attitudes* include *attachment to host country people*, *social trust*, and *institutional trust*. These three variables are the respondent's subjective assessment of his/her levels of attachment to host country people, of social trust, and of institutional trust. In general, they are measured on an 11-point scale with a higher number indicating higher levels of attachment or trust. There are differences in the items and scales measured in some cities (such as Oslo and Stockholm) because some questions or items are not asked in the survey and country-specific variables are employed for certain items that are measured using different scales. The indicators for the *acquired capital* in the model are: *language proficiency* measured on a 6-point scale with a higher number indicating a higher level of destination language proficiency; *citizenship*, dummy-coded 1 for 'having citizenship of the host country' and coded 0 for all others; *employment*, coded 1 for 'in paid work' and coded 0 for all others; and *social group involvement*, which is constructed from the number of non-political associational activities participated in the last 12 months. The control variables in the mode of immigrant political integration include: *gender*, coded 1 for females and 0 for males; *marital status*, coded 1 for married or cohabiting and 0 for single, widowed, or divorced; and *ethnic groups*, dummy-coded 1 for the selected ethnic group and 0 for all others.

4.4. Analysis

I use OLS regression¹⁸⁷ to identify the determinants of immigrant political integration and estimate the mediation effects of attitudes and acquired capital on political integration of immigrants. Table 6-8 presents the regression results with seven models¹⁸⁸ (all adjusted for demographic characteristics of gender, ethnic group, and marital status). Model 1 shows the effect of the control variables; Model 2 shows the effect of personal characteristics on immigrant political integration; Model 3 shows the effects of attitudes on immigrant political integration; Model 4 shows the effects of acquired capital on immigrant political integration; Model 5 shows the effect of personal characteristics and attitudes on immigrant political integration; Model 6 shows the effect of personal characteristics and acquired capital on immigrant political integration; and Model 7 shows the combined effects of the variables included in the previous model blocks (i.e., controls, personal characteristics, attitudes, and acquired capital). To address the above-mentioned questions, I first look at Model 2, 3, and 4 to examine how much the personal characteristics, attitudes, and acquired capital, respectively, predict the outcome, and what factors have significant effects on immigrant political integration. Secondly, I compare Model 2, 3, 4, 5, 6, and 7 to confirm the relative effects of personal characteristics, attitudes, and acquired capital, and to determine whether the relationship between personal characteristics and immigrant political integration is independent and direct or indirectly related through attitudes and/or acquired capital. All analyses are carried out in Stata 12.0.

4.5. Results

Table 6-8: Determinants of Immigrant Political Integration: Lyon
(OLS, LOCALMULTIDEM)

	(M1) Controls		(M2) +Personals		(M3) +Attitudes		(M4) +Capital		(M5) +Personals +Attitudes		(M6) +Personals +Capital		(M7) +Personals +Attitudes +Capital	
Female	0.00810	(0.0267)	0.000196	(0.0262)	0.0145	(0.0266)	0.0233	(0.0260)	0.00279	(0.0261)	0.0120	(0.0261)	0.0145	(0.0260)
Marital status	0.00549	(0.0264)	0.000572	(0.0271)	-0.0127	(0.0267)	0.0351	(0.0256)	-	(0.0271)	0.0161	(0.0264)	0.00525	(0.0265)
Ethnic group (Ref.: Tunisian)														
Moroccan	0.0515	(0.0432)	0.0239	(0.0420)	0.0330	(0.0431)	0.0397	(0.0410)	0.0120	(0.0419)	0.0148	(0.0406)	0.00548	(0.0405)
Algerian	-0.0225	(0.0336)	-0.0193	(0.0327)	-0.0337	(0.0335)	-0.0393	(0.0320)	-0.0317	(0.0327)	-0.0280	(0.0316)	-0.0395	(0.0316)
Education			0.275***	(0.0418)					0.267***	(0.0420)	0.184***	(0.0434)	0.177***	(0.0434)
Age at migration			-0.0769	(0.184)					-0.158	(0.184)	0.0762	(0.180)	-0.00871	(0.181)
Length of stay in HC			0.265*	(0.123)					0.214	(0.123)	0.170	(0.122)	0.127	(0.122)
Birth in HC			-0.0535	(0.0418)					-0.0403	(0.0417)	-0.0754	(0.0416)	-0.0616	(0.0415)
Permit category (Ref.: For Work)														
Study			-0.0942	(0.151)					-0.0921	(0.150)	-0.0855	(0.148)	-0.0720	(0.147)
Family reunification			0.0517	(0.0781)					0.0572	(0.0778)	0.117	(0.0805)	0.128	(0.0805)
Other purposes			-0.0512	(0.0665)					-0.0349	(0.0662)	-	(0.0699)	0.0195	(0.0697)
Attachment to HCP					0.110	(0.0619)			0.106	(0.0606)	0.000574		0.0989	(0.0586)
Social trust					0.0573	(0.0481)			0.0150	(0.0470)			-0.00178	(0.0453)
Institutional trust					0.139*	(0.0655)			0.153*	(0.0650)			0.156*	(0.0631)
Language proficiency							0.184*	(0.0720)			0.216**	(0.0792)	0.193*	(0.0789)
Citizenship							0.0462	(0.0334)			0.0766	(0.0409)	0.0819*	(0.0408)
Employment							0.0120	(0.0261)			-0.00937	(0.0264)	-0.00331	(0.0262)
Social group involvement(FR)							0.466***	(0.0670)			0.394***	(0.0686)	0.395***	(0.0682)
Constant	0.566***	(0.0356)	0.371***	(0.0713)	0.407***	(0.0601)	0.247***	(0.0742)	0.235**	(0.0834)	0.115	(0.0960)	-0.00308	(0.103)
Observations	537		537		537		537		537		537		537	
R ²	0.008		0.092		0.032		0.119		0.111		0.163		0.181	

Standard errors in parentheses
* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

¹⁸⁷ Preliminary analyses were conducted to ensure no violation of the assumptions of normality, linearity, multicollinearity and homoscedasticity.

¹⁸⁸ Table 6-8 provides the results only for Lyon. Regression results of all cities are reported in *Appendix IV: Determinants of Immigrant Integration (3. Determinants of Immigrant Political Integration)*.

The regression results of the Lyon case (see Table 6-8) show that the higher percentage of the explained variance of the economic model signals the direct effect of personal characteristics is larger than that of attitudes. With regard to the hypothesized mediation effect of personal characteristics through attitudes and/or acquired capital blocks, the personal characteristics block (the economic model) explains 0.092, the attitudes block (the psychological model) explains 0.032, and the acquired capital block explains 0.119 of the total variance in political interest. The variance is shared among the three blocks as the final full model only explains 0.181 of the total variance. This suggests the presence of some partial mediation. Among the attitudes variables, institutional trust ($b=0.156$, $p<0.05$) has a statistically significant positive effect on political interest. Among the acquired capital variables, language proficiency ($b=0.193$, $p<0.05$), citizenship ($b=0.082$, $p<0.05$), and social group involvement ($b=0.395$, $p<0.001$) have a statistically significant positive effects on political interest. The results also show that while maintaining the statistical significance, there is a general tendency that the size of regression coefficients of all three blocks (i.e., personal characteristics, attitudes, and acquired capital) is reduced in the full model. In the case of Lyon, therefore, the results support the presence of partial mediation of personal characteristics on political interest through attitudes and/or acquired capital.

Economic View vs. Psychological View

Table 6-9¹⁸⁹ presents the summary of the ten-city analysis on the determinants of immigrant political integration. The results demonstrate that, in most cases, the economic model (personal characteristics) accounts for a higher share of the total variance in the outcome than the psychological model (attitudes). Comparatively larger R-squared value of Model 2 (which shows the effect of personal characteristics alone plus controls) to that of Model 3 (which shows the effect of attitudes alone plus controls) also presents evidence of a significant effect of personal characteristics on immigrant political integration. Comparison of Model 2 and Model 3 shows that the variance explained by personal characteristics tends to be larger than the variance explained by attitudes in most of the LOCALMULTIDEM cities¹⁹⁰. Hypothesis 1 is, therefore, supported, suggesting that the

¹⁸⁹ The plus (+) and minus (–) signs indicate the direction of the effect on the outcome, and the number of asterisks signifies the statistical significance levels: * $p < 0.05$, ** $p < 0.01$, and *** $p < 0.001$. In addition, the number of observations and the coefficient of determination or more commonly known as R-squared (R^2) are indicated at the bottom. The table summarizes the direction of the effect and the statistical significance levels of the full model (i.e., the output of Model 7 in Table 6-8). The theoretically expected signs of the effects on the dependent variable are included in the last column to help interpretation of the results. The summary table does not contain the results of the reduced models except the R^2 values (R^2 values of all models are included to help interpretation of the hypothesized mediation effects). The regression coefficients are unreported. However, the information is available in the raw regression output tables presented in *Appendix IV: Determinants of Immigrant Integration (3.Determinants of Immigrant Political Integration)*.

¹⁹⁰ The R^2 values of the personal characteristics model is higher than that of the attitudes model in nine cities; Stockholm is the only exception— R^2 of the personal characteristics model is lower than that of attitudes model. For more details, refer to the regression output tables in *Appendix IV: Determinants of Immigrant Integration (3.Determinants of Immigrant Political Integration)*.

economic view is better and robust in explaining the variation in immigrant political integration across the nine cities. Alternatively, personal characteristics have a direct effect on political interest, and the direct effect of the given characteristics remains much greater than that of attitudes. The findings of the Stockholm case concurrently corroborate the rivalry hypothesis, Hypothesis 3 (which proposed that the psychological view better explains the outcome).

Table 6-9: Determinants of Immigrant Political Integration: 10 Cities
(OLS, LOCALMULTIDEM)

Model 4: A Model of Immigrant Political Integration (OLS Regression)												
City ^a	BAR	BUD	GEN	LON	LYO	MAD	MIL	OSL	STO	ZUR	Expected Sign ^d	
Controls (C)												
Gender (Female)						—*					—	
Marital status				+**							?	
Ethnic group ^b	Reference category: G3 (group of recent arrival)											
G1	+**						—*			—***	+	
G2		—***	X						X		+	
Personal characteristics (P)												
Educational attainment	+***		+**	+***	+***	+**	+**	+**	+**	+**	+***	+
Age at migration				+**							—	
Length of stay in HC		+*		+*		+**				+**	+	
Birth in HC											+	
Permit category	Reference category: Work											
EEA				X	X			X	X	+**	?	
Study								X	X		—	
Family reunification								X	X		?	
Other purposes								X	X		—	
Attitudes (A)												
Attachment to HCP							+*	+*		+*	+	
Social trust								+**	+**		+	
Institutional trust	+**		+*		+*	+*	+***		+***		+	
Capital (CL)												
Language proficiency	+*			+***	+*			+***			+	
Citizenship	+**				+*		+**				+	
Employment							+**				?	
Social group involvement	+*		+*	+**	+***		+*	+***	+***	+**	+	
Observations	436	414	275	512	537	522	468	560	396	444	X	
R² ^c												
M1: C	0.032	0.057	0.026	0.047	0.008	0.008	0.006	0.067	0.012	0.023	X	
M2: C+P	0.133	0.139	0.098	0.160	0.092	0.055	0.100	0.135	0.083	0.106		
M3: C+A	0.074	0.083	0.075	0.051	0.032	0.028	0.098	0.128	0.143	0.064		
M4: C+CL	0.093	0.101	0.074	0.122	0.119	0.020	0.140	0.147	0.104	0.058		
M5: C+P+A	0.163	0.154	0.158	0.163	0.111	0.078	0.159	0.173	0.186	0.138		
M6: C+P+CL	0.174	0.151	0.125	0.193	0.163	0.063	0.167	0.180	0.143	0.132		
M7: C+P+A+CL	0.203	0.164	0.181	0.198	0.181	0.085	0.207	0.214	0.224	0.158		

^a $p < 0.05$, ^{**} $p < 0.01$, ^{***} $p < 0.001$

^b BAR: Barcelona, BUD: Budapest, GEN: Geneva, LON: London, LYO: Lyon, MAD: Madrid, MIL: Milan, OSL: Oslo, STO: Stockholm, ZUR: Zurich

^c Ethnic groups: Barcelona (G1: Moroccan, G2: Andean mixed group, G3: Ecuadorian), Budapest (G1: Ethnic Hungarian, G2: Mixed Muslim, G3: Chinese), Geneva (G1: Italian, G2: N/A, G3: Kosovar), London (G1: Indian, G2: Afro-Caribbean, G3: Bangladeshi), Lyon (G1: Moroccan, G2: Algerian, G3: Tunisian), Madrid (G1: Moroccan, G2: Andean mixed group, G3: Ecuadorian), Milan (G1: Egyptian, G2: Filipino, G3: Ecuadorian), Oslo (G1: Turkish, G2: Pakistani, G3: Bosnian), Stockholm (G1: Turkish, G2: N/A, G3: Chilean), Zurich (G1: Italian, G2: Turkish, G3: Kosovar)

^d R² of all models are reported: M1: Controls, M2: Controls + Personal characteristics, M3: Controls + Attitudes, M4: Controls + Capital, M5: Controls + Personal characteristics + Attitudes, M6: Controls + Personal characteristics + Capital, and M7 (full model): Controls + Personal characteristics + Attitudes + Capital.

^e A question mark under the expected sign column indicates that it is not clear whether the variable will have a positive or negative effect on the outcome.

Pertaining to the hypothesized mediation effects, the results support the presence of partial mediation of personal characteristics on immigrant political integration through attitudes since the variance is shared and some of the personal characteristics and psychological variables maintain their

statistical significance in the full model. Furthermore, the effect of personal characteristics (especially, educational attainment) decreases substantively whereas the effect of attitudes (particularly, institutional trust) retains most of the coefficient size and significance even after controlling for personal characteristics and acquired capital in the final full model. While no statistically significant effect of attitudinal variables is found in two cities (Budapest and London), positive indirect effects through attitudinal variables are observed in eight other cities (Barcelona, Geneva, Lyon, Madrid, Milan, Oslo, Stockholm, and Zurich). Among the indicators included in the attitudes block, institutional trust is the most powerful and consistent factor in estimating political integration outcome. The statistically significant positive effect of institutional trust is found in six cities: Barcelona ($b=0.240, p<0.01$), Geneva ($b=0.195, p<0.05$), Lyon ($b=0.156, p<0.05$), Madrid ($b=0.153, p<0.05$), Milan ($b=0.268, p<0.001$), and Stockholm ($b=0.282, p<0.001$). Other two attitudinal variables also demonstrate positive effects but in fewer cities. Attachment to host country people is positively correlated to political interest in Milan ($b=0.118, p<0.05$), Oslo ($b=0.111, p<0.05$), and Zurich ($b=0.121, p<0.05$) while social trust is positively associated with political interest in Oslo ($b=0.067, p<0.01$), and Stockholm ($b=0.160, p<0.01$). Thus, the results of the above-mentioned eight cities support Hypothesis 4, which proposed a positive mediation effect through the attitudinal variables while the findings of the Budapest and London cases corroborate Hypothesis 2, which proposed the absence of such mediation.

If the economic model is better at explaining the variability in immigrant political integration and its direct effect remains strong in the majority of the samples, what are the strongest predictors among the personal characteristics indicators? Comparison of the regression coefficients¹⁹¹ across the models suggests that among the personal characteristics variables, educational attainment is the most prominent and consistent predictors of political interest. The statistically significant effect is present in nine cities: Barcelona ($b=0.269, p<0.001$), Geneva ($b=0.170, p<0.01$), London ($b=0.216, p<0.001$), Lyon ($b=0.177, p<0.001$), Madrid ($b=0.152, p<0.01$), Milan ($b=0.149, p<0.01$), Oslo ($b=0.113, p<0.01$), Stockholm ($b=0.149, p<0.01$), and Zurich ($b=0.215, p<0.001$). In some cities, length of stay in the host country shows a positive effect on political interest: Budapest ($b=0.442, p<0.05$), London ($b=0.339, p<0.05$), Madrid ($b=0.885, p<0.01$), and Zurich ($b=0.411, p<0.01$)¹⁹². Other indicators included in the economic model, specifically, age at migration¹⁹³, birth in the host country, and permit categories¹⁹⁴, show almost no statistically significant effects on political interest across ten cities.

¹⁹¹ The regression coefficient is not standardized regression coefficient (i.e., beta), but the value is obtained after normalization. Thus, the coefficients can be comparable and indicate relative effects.

¹⁹² See *Appendix IV: Determinants of Immigrant Integration (3. Determinants of Immigrant Political Integration)* for the detailed results of the ten-city analysis.

¹⁹³ A positive correlation between age at migration and political interest is found only in London.

¹⁹⁴ A positive correlation between permit category for EEA and political interest is found only in Zurich.

Effects of Acquired Capital and Hypothesized Mediation

Among the acquired capital, social group involvement has shown the most coherent positive effect on political interest; language proficiency and citizenship also appear to be the consistent predictors of political interest. The statistically significant effect of social group involvement is present in eight cities: Barcelona ($b=0.407, p<0.05$), Geneva ($b=0.452, p<0.05$), London ($b=0.506, p<0.01$), Lyon ($b=0.395, p<0.001$), Milan ($b=0.439, p<0.05$), Oslo ($b=0.781, p<0.001$), Stockholm ($b=0.423, p<0.001$), and Zurich ($b=0.498, p<0.01$). The statistically significant effect of language proficiency on political interest is found in four cities: Barcelona ($b=0.397, p<0.05$), London ($b=0.256, p<0.001$), Lyon ($b=0.193, p<0.05$), and Oslo ($b=0.190, p<0.001$). Moreover, the effect of citizenship is found in three cities: Barcelona ($b=0.109, p<0.01$), Lyon ($b=0.082, p<0.05$), and Milan ($b=0.165, p<0.01$). With the exception of Milan ($b=0.087, p<0.01$), none of the cities confirms the presence of a statistically significant correlation between employment and political interest. Hypothesis 5 is, thus, supported at least in the eight city cases (i.e., Barcelona, Geneva, London, Lyon, Milan, Oslo, Stockholm, and Zurich), signifying the presence of a positive association between acquired capital and political interest. While the positive effect of acquired capital remains in the final full model in the above-mentioned cities, the effect of personal characteristics retains most of the coefficient size and significance even after controlling for attitudes and acquired capital. This supports Hypothesis 6, which predicted the presence of partial mediation of personal characteristics on political interest through acquired capital.

While the presence of some mediation effects can be inferred from the analysis results, the data also inform that none of the factors in the attitudes or acquired capital block has a statistically significant effect in Budapest. This suggests that immigrant political integration can be solely predicted by the direct effect of personal characteristics variables, supporting Hypothesis 2 and failing to support Hypothesis 6. Nonetheless, in the vast majority of the LOCALMULTIDEM cities (Barcelona, Geneva, London, Lyon, Madrid, Milan, Oslo, Stockholm and Zurich), the hypothesized positive indirect effects of personal characteristics on political interest through attitudes (attachment to host country people¹⁹⁵, social trust¹⁹⁶, and institutional trust¹⁹⁷) and/or acquired capital (destination language proficiency¹⁹⁸, citizenship¹⁹⁹, employment status²⁰⁰, and social group involvement²⁰¹) are

¹⁹⁵ A positive correlation between attachment to host country people and political interest is found in Milan, Oslo, and Zurich.

¹⁹⁶ A positive correlation between social trust and political interest is found in Oslo and Stockholm.

¹⁹⁷ A positive correlation between institutional trust and political interest is found in Barcelona, Geneva, Lyon, Madrid, Milan, and Stockholm.

¹⁹⁸ A positive correlation between language proficiency and political interest is found in Barcelona, London, Lyon, and Oslo.

¹⁹⁹ A positive correlation between citizenship and political interest is found in Barcelona, Lyon, and Milan.

²⁰⁰ A positive correlation between employment status and political interest is found in Milan.

²⁰¹ A positive correlation between social group involvement and political interest is found in Barcelona, Geneva, London, Lyon, Milan, Oslo, Stockholm, and Zurich.

found, supporting Hypothesis 4 (partial mediation via attitudes) and Hypothesis 6 (partial mediation via acquired capital).

Then, how are the indirect effects transmitted? By and large, the R-squared value comparison of the reduced models—the personal characteristics model (Model 2) and the acquired capital model (Model 4)—tells that the R-squared value of the acquired capital model is noticeably increased compared to the earlier models; especially, in Lyon, Milan, Oslo, and Stockholm²⁰², the explained variance of the acquired capital model is larger than that of the personal characteristics model. In addition, whereas the effects of personal characteristics decrease, the effects of the acquired capital retain most of the coefficient size and significance. In the Lyon case, for example, the effect of personal characteristics (specially, educational attainment) decreases while the effect of acquired capital (especially, language proficiency and social group involvement) retains most of the coefficient size and significance even after controlling for personal characteristics and attitudes in the final full model. This implies a strong indirect effect through acquired capital and its effect can be even greater than the direct effect of personal characteristics. This remarkable increase in the effects of acquired capital is the most salient difference observed in the analysis of a model of immigrant political integration in comparison with other earlier models. Therefore, overall results suggest that a substantial portion of the indirect effects of personal characteristics on immigrant political integration operates through acquired capital, much more than through attitudes in many of the cities. And, when such mediation takes place, there is a higher probability that the effects are translated through social group involvement as well as destination language proficiency and citizenship; the hypothesized partial mediation might take another path via employment, but the effect transmission would be insignificant or occur to much lesser extent. When partial mediation via the attitudes block occurs, there is a higher chance that such indirect effects on political interest are transmitted through institutional trust.

In substantive terms, personal characteristics of immigrants (tangible resources) do affect the degrees of interest in the destination politics and its direct effect retains its significance. Nevertheless, the indirect effects of attitudes and acquired capital are also salient across the samples. This implies that, among all variables concerned, those immigrants who have successfully acquired intangible psychological resources as well as other aspects of capital by engaging in social group activities, mastering destination language, and attaining citizenship of the host country are more inclined to possess a higher level of political interest.

²⁰² In the case of Stockholm, R-squared of the attitudes model is even larger than that of the acquired capital model.

4.6. Discussion

The main aim of this section was to develop a model to empirically identify the determinants of immigrant political integration in ten European metropolitan cities. Specially, the nested model approach was applied to investigate whether immigrants' personal characteristics (the economic model) alone affect the political integration outcome (political interest) or attitudes (the psychological model) and/or acquired capital also influence the outcome.

Results suggest that compared to the psychological model (attitudes), the economic model (personal characteristics) has stronger power in predicting immigrant political integration. Amongst the personal characteristics, educational attainment is found to be the most powerful and consistent predictor of political interest and its positive association with political interest is observed in nine cities (Barcelona, Geneva, London, Lyon, Madrid, Milan, Oslo, Stockholm, and Zurich). Other than length of stay in the host country that demonstrates a positive association with political interest in four cities (Budapest, London, Madrid, and Zurich), the effects of other personal characteristics indicators (age at migration, birth in the host country, and permit categories) across the ten cities are basically insignificant and inconsistent. The results are in line with the literature on political participation that the degrees of immigrants' political interest increase with the level of education and time spent in the destination country (Verba & Nie, 1972; Morales & Giugni, 2011).

Analysis results also show that among the attitudes, institutional trust is the strongest indicator that estimates political integration outcome of immigrants in six cities (Barcelona, Geneva, Lyon, Madrid, Milan, and Stockholm). Positive associations of other attitudinal variables with political interest are found in three cities (Milan, Oslo, and Zurich) for attachment to host country people and in two cities (Oslo and Stockholm) for social trust. The result can be interpreted by referring to developmental psychological studies. Those children who are emotionally secure and have successfully formed psychological attachment to their caregivers are more inclined to attain a higher level of linguistic capabilities (Van IJzendoorn, Dijkstra, & Bus, 1995). By applying and extending the inference to the context of immigrant political participation, it is logically possible to assume that those who have secured a wealth of psychological resources (i.e., trust and/or attachment to the host society) tend to show a higher level of willingness to partake in the polity of the host society.

One interesting finding in this current model analysis is the positive correlation between institutional trust and political interest. The effect of institutional trust on the outcome was not apparent in the previous models. It demonstrated a statistically insignificant effect on immigrant economic integration (employment status) and on citizenship acquisition in all of the ten cities; and it showed a statistically insignificant effect on immigrant language acquisition in seven cities and a negative association in three cities. Further research is suggested to investigate the positive

relationship between institutional trust and political interest. Especially, future research that endeavors to disclose the psychological inner mechanisms, particularly focusing on why institutional trust (which effect was largely insignificant or even negatively related to the other dimensions of integration) becomes an important factor in immigrant political integration, may open a new avenue toward designing better immigrant integration policies. However, it will not be an easy task because this type of approach requires an extensive and comprehensive understanding not only in human psychology and social structure but also in their interactions and (un)intended consequences.

Among the acquired capital included in the model (language proficiency, citizenship, employment, and social group involvement), social group involvement has demonstrated the most consistent pattern across the cities (Barcelona, Geneva, London, Lyon, Milan, Oslo, Stockholm, and Zurich). A positive association of other acquired capital variables with political interest is observed in four cities (Barcelona, London, Lyon, and Oslo) for language proficiency, in three cities (Barcelona, Lyon, and Milan) for citizenship, and only one city (Milan) for employment. This corroborates the previous research findings on immigrant political participation (the social capital approach detailed in Chapter 3) that destination language proficiency and social group involvement are positively related to political participation while the relationship between employment (or other indicators that signify labor market success) and political participation tends to show insignificant results, especially in the European context.

Pertaining to the hypothesized mediation effects, the overall results support the presence of indirect effects of personal characteristics on immigrant political integration both through attitudes and acquired capital. There is a higher likelihood that institutional trust is the mediator that partially transmits the effects if the hypothesized effects take the route via the attitudes block. Similarly, if the hypothesized effects take the route via the acquired capital block, the mediation effects are most likely to be partially transmitted through social group involvement as well as destination language proficiency and citizenship and much less through employment. Putting the analysis results together, a generalized interpretation can be made: Those who have attained a higher level of education are more inclined to have a higher level of interest in the host city and/or country politics. The personal characteristics (especially, the level of educational attainment that might be accompanied with some other socio-demographic factors) alone may be enough to explain the variability in immigrants' political interest, but the influence of additional factors can also be assumed. In such cases, in addition to the ascribed personal characteristics, those who have formed a higher level of institutional trust and/or psychological attachment to the host society are more likely to exhibit a higher level of interest in the destination politics. Likewise, those who have acquired a higher level of social connectivity, destination language proficiency, and/or citizenship have a higher propensity for engaging in the destination city/country's political affairs. The analysis results are not rigorous enough to make any substantive conclusion concerning the presumed mediation effect on immigrant political integration

through employment. All in all, the results provide further evidence for the previous findings that social group involvement and destination language proficiency and citizenship are positively related to immigrant political participation while the association between employment status and political participation tends to be inconsistent and insignificant.

The empirical results of the three sub-models of immigrant integration demonstrate that the economic model is robust in estimating the immigrant integration outcomes. Educational attainment is found to be the most critical and consistent predictor across the cities and the sub-models. A relatively strong and coherent effect of the attitudinal variables is detected in a model of immigrant political integration, but the effect is barely identified in other two sub-models. Among the acquired capital, destination language proficiency is the most consistent factor that positively influences all three different integration outcomes. The prominence of acquired capital increases in accordance with the temporal order presumed in the modeling framework, and thus, becomes highly relevant in explaining the variation in immigrant political integration. In the future, more comprehensive and thorough investigations are recommended to adequately explain the difference in its importance among different dimensions of integration and uncover the underlying capital generation process and mechanism.

Chapter 7. Macro Effects on Immigrant Language Acquisition

1. Introduction

In the introductory chapter, I have briefly described the interplay between social context and human behavior and how they may influence one another. Seeing language acquisition as an interactive process between society and individual may contribute to understanding how environmental contexts may facilitate or hamper learners' linguistic outcomes. This approach appears highly relevant, especially for second language acquisition:

The process of first language learning can be better understood if the social dimension is included. Social factors have even more importance in the case of second language learning because of the greater complexity of the second language learner's social context and the resulting increase in its ability to cause variability (Spolsky, 1989, p.131).

Spolsky's (1989) general model of language learning informs that one of the ways social context can affect language learning outcomes is through providing learning opportunities. To examine the contextual effect, I will analyze how city-level differences in the institutional opportunity structures might influence immigrant language acquisition outcomes. The macro-effect analysis is conducted using the data on political opportunity structure (Workpackage 1) and cross-sectional survey data (Workpackage 4) collected by the LOCALMULTIDEM project. I use the political opportunity structure approach proposed by Koopmans and Statham (2000) as the theoretical framework to interpret the empirical analysis. They view political opportunity structures as local and national integration and citizenship regimes that may "stimulate, constrain, or channel the degrees and types of migrants' political involvement" (Koopmans, 2004, p.449). This approach particularly examines how the institutional inclusiveness or exclusiveness in providing individual and group rights influence immigrant integration. In the later part of the analysis, I will analyze and interpret the micro-macro joint effects on the linguistic outcome using the results found in the analysis of the determinants of immigrant language acquisition.

2. Theoretical Framework: Political Opportunity Structure

The tenet of the political opportunity structure approach (Koopmans & Statham, 2000) is that mobilization for collective action is not a direct manifestation of social structural tensions and problems but is rather "mediated by the available opportunities and constraints set by the political environments in which mobilising groups [...] operate" (Koopmans, 2004, p.451). The political opportunity structure favors certain collective actors, expressions of collective identities, and some forms of demands over others; opportunities are provided, for example, through giving more or less favorable access to policy-making processes, public resonance, and discursive legitimacy to some types of claims-making (Koopmans, 2004). This theoretical framework is especially interested in examining the impact of the political context on patterns of political mobilization and collective action because Koopmans and Statham (2000) believe that the explanatory power of other variables (e.g., the general migration patterns and flows, socioeconomic situation of the destination country,

cultural background of immigrant groups) is comparatively small and limited. They refer to empirical evidence to demonstrate the inconsistent nature of cultural characteristics and national background of immigrants, stating that these things play a role in some countries, but not in others. What matters more instead is “the degree to which national citizenship and integration regimes offer immigrants incentives and opportunities to orient themselves politically toward the country of immigration” (Koopmans, Statham, Giugni, & Passy, 2005, p.16-17). For instance, Koopmans (2004) proves a strong and consistent positive correlation between the inclusiveness of local integration regimes and the degree to which immigrants participate proactively in public debates in sixteen German regions and cities. He then compares the correlation among three different countries (Germany, the UK, and the Netherlands) and has found the cross-national variation is much larger than local variation within a country. Furthermore, other empirical studies demonstrate that ethnic groups which share similar characteristics in terms of class, ethnicity or homeland show different forms and levels of political participation in France and Switzerland (Ireland, 2000). These findings indicate that their political behavior is determined by the political opportunity structure rather than the socioeconomic or cultural traits of the group itself. Accordingly, Koopmans and Statham (2000) claim national citizenship and integration regimes constitute the political opportunity structure in the field of immigration and ethnic relations. This is because these regimes set “a field-specific political opportunity structure that shapes migrant identities and their patterns of organisation and political participation” and play a critical role in shaping political outcomes (Koopmans, 2004, p.452).

Based on the theorization of political opportunity structure, Koopmans and Statham (2000) introduce a two-dimensional framework on different policy approaches by situating conceptions of citizenship along two different dimensions; one dimension concerns individual rights while another concerns group rights (see Figure 7-1). The first dimension (the vertical axis) characterizes the extent to which full and equal citizenship is accessible to individual immigrants. This aspect is somewhat related to the conception of individual rights and attribution of citizenship based on ethnic bonds (*jus sanguinis*) or the territorial principle (*jus soli*). Hence, the one end of the continuum represents conceptions of citizenship based on the *jus sanguinis* principle whereas the other end represents those that emphasize the *jus soli* principle.

Although such extreme conceptions hardly appear in reality, it is helpful to categorize different national policy approaches. For instance, in Western Europe, the countries that have the legal tradition of *jus sanguinis* for granting citizenship rights put up high barriers (e.g., Switzerland and until recently Germany). As a result, most immigrants (including second and third generations) have remained foreigners and excluded from full equal rights to participate in society (the right to vote, in particular). In contrast, naturalization is easy and frequent in the Netherlands and Sweden even though the countries apply *jus sanguinis* principle for attributing citizenship. Also, the countries (such as

Britain and France) that apply the *jus soli* principle automatically grant citizenship to those who are born on their land.

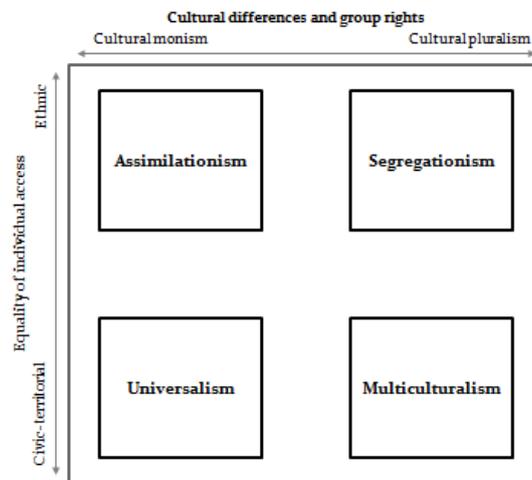


Figure 7-1: A Two-Dimensional Space for Situating Conceptions of Citizenship
 (Source: Koopmans, Statham, Giugni, & Passy, 2005, p.10)

The second dimension (the horizontal axis) characterizes the degree to which cultural group rights are accessible to immigrants. The continuum runs from a monist or assimilationist position (e.g., France) to a pluralist or multicultural position (e.g., Britain and the Netherlands) (Koopmans & Statham, 2000; Koopmans, Statham, Giugni, & Passy, 2005; Koopmans, 2004). In other words, the axis indicates the extent to which immigrants should have the right to retain their cultural traditions and to what extent the state should take measures to accommodate or even promote such differences (e.g., allowing the wearing of *hijab*—the Islamic headscarf—in public institutions, subsidizing ethnic or religious minority organizations, and promoting minority language education in the school system).

The two-dimensional matrix produces four different types of policy approaches: segregationism, multiculturalism, assimilation, and universalism. A regime under segregationism excludes newcomers who do not share the ethno-cultural background from the political community of the majority society. At the same time, immigrants are not obliged to give up their own cultures and host countries may support and promote cultural differences while discouraging assimilation to the host societies (Koopmans, Statham, Giugni, & Passy, 2005). This comes close to the classic guestworker approach. In this approach, the retention of their cultural heritage and ties to their homeland are regarded as the factors that facilitate their eventual repatriation (Koopmans, 2004). Today, however, most of the countries have moved away from segregationism as the former guestworkers have become permanent residents. No democratic country can maintain a situation in which political rights are systematically denied to permanent residents for a long time. As a result, the countries have introduced two different approaches to resolve the situation: (1) multiculturalism, which holds onto the idea of distinct and separate cultures, but gives up the formal ethno-cultural basis of citizenship so as to extend it through easier naturalization or the introduction of *jus soli*

principle to immigrants from diverse ethno-cultural backgrounds; and (2) assimilationism, which maintains ethnicity as the basis of citizenship, but citizenship is easily obtainable through naturalization on the condition that immigrants fulfill certain criteria of assimilation to the dominant culture.

The challenge of assimilationism is the potential danger of generating ‘balkanization’ and creating ‘parallel society’ if assimilation to the host society is demanded in exchange of giving up the ties with their homeland. In this scenario, it is highly likely that countervailing pressures for the right to be different emerge. The challenge of multiculturalism is that policy instruments that meant to combat disadvantage and discrimination can solidify them instead; putting immigrants within the category of disadvantaged minorities has often led to ‘racialization’ or ‘minoritization’ and reproduced ethnicity as the basis for social disadvantage and discrimination. For instance, in the Netherlands, the majority sees immigrants as a group to be helped, respected, tolerated, but not as the people who would want to hire and work with and become friends (Koopmans, Statham, Giugni, & Passy, 2005). Empirical findings confirm the trend. Despite the society’s greater tolerance for cultural diversity in the public sphere and better provision of individual rights, the degrees of ethnic segregation in the school system, ethnic residential segregation, and unemployment rate among immigrants are much higher in the Netherlands than in Germany (Thränhardt, 2000; Koopmans, 2003). To overcome the challenges, the Netherlands has moved from the multiculturalist model to the universalist model, which targets at incorporating different groups of individuals (including immigrants) into the dominant mono-cultural scheme. Consequently, the countries that have made the similar shift now prefer providing general policies for socioeconomically disadvantaged groups including the native population instead of focusing particularly on immigrants (Koopmans & Statham, 2000). The policy implementation typically comes with tighter requirements to access the community for new comers (e.g., requesting a certain level of destination language fluency prior to access the community, making attendance to language and cultural orientation programs mandatory—the programs are more commonly known as the “civic integration programs”).

3. Hypotheses

The political opportunity structure approach (Koopmans & Statham, 2000) assumes that national citizenship and integration regimes constitute the political opportunity structure in the field of immigration and ethnic relations, and the political opportunity structures influence shaping immigrant behavioral outcomes. Similarly, the general model of language learning (Spolsky, 1989) proposes that the social context provides learning opportunities, and the opportunities determine learners’ linguistic outcomes. Both theoretical approaches suggest “political/learning opportunity (structure)” has a direct effect on an outcome of interest while a larger “regime” or “social context,” which shapes the “opportunity,” affects the outcome indirectly. In order to empirically examine the direct-indirect

relationship using the available data, I use the term “general institutional opportunity structure²⁰³” to refer to the “national citizenship and integration regimes” in the language of Koopmans and Statham and “social context” in Spolsky’s terminology. Likewise, I use the term “specific institutional opportunity structure²⁰⁴” to denote “opportunity (structure)” specific to destination language learning. In sum, based on the theoretical framework, it can be hypothesized that: *Specific institutional opportunity structure has a direct effect on language learning outcome while general institutional opportunity structure, which shapes the specific institutional opportunity structure, affects the outcome indirectly.* This “big” hypothesis will be assessed at the end of this chapter.

Unlike Koopmans and Statham claim, however, national citizenship and integration regimes might not automatically lead to the adoption of specific cultural and language policies toward immigrants. Also, the hypothesized causal relations may be too abstract since the categorization into “general” and “specific” institutional opportunity structures may not be appropriate and conceptually incoherent with Spolsky’s “social context” and “learning opportunity.” Thus, it is possible to expect the general institutional opportunity structure (with an aggregation of a larger number of indicators) provides better estimates of individual behavioral outcomes than the specific institutional opportunity structure (which is measured with a limited number of indicators).

With the above in mind, I will separately assess the effects of the general and specific institutional opportunity structures and generate hypotheses accordingly. Using destination language proficiency of immigrants as the outcome of interest, I will first examine how differences in the specific institutional opportunity structure in destination societies relate to variation in immigrant language proficiency. In the analysis, I use the cultural requirements to access the community²⁰⁵ and

²⁰³ The general institutional opportunity structure is measured by two dimensions of opportunity structures in the LOCALMULTIDEM project: (1) the average score for the individual rights of immigrants, (2) the average score for the group rights of immigrants. The individual rights are measured by 36 indicators which are grouped into the following eight categories: (1) access to short-term permits; (2) access to long-term permits; (3) access to nationality; (4) access to family reunion; (5) labor market access; (6) welfare state access; (7) anti-discrimination rights; and (8) political rights. The group rights are measured by 22 indicators which are grouped into the following six categories: (1) cultural requirements to access the community; (2) language programs; (3) schooling; (4) religion; (5) media; and (6) labor market (group rights).

All indicators are measured on a 3-categorical scale, where “-1” denotes the most restrictive situation, “1” refers to the most open configuration, and “0” corresponds to intermediary potential situations. The aggregate dataset of Workpackage1 of the LOCALMULTIDEM project (excel format: WP1_InstPOS Datasheet_Public.xls: <https://dataverse.harvard.edu/dataset.xhtml?persistentId=doi:10.7910/DVN/27709>) provides detailed scores (sheet 1) and summary score (sheet 2) for all indicators of institutional political opportunity structure (POS) of nine cities –Barcelona, Budapest, Geneva, London, Lyon, Madrid, Milan, Stockholm, and Zurich (No information is available for Oslo). For all cities, POS indicators are measured and apply to 2006. (For the detailed information, refer to: LOCALMULTIDEM, 2014, Gattinara, Morales, & Morales, 2014)

²⁰⁴ The specific institutional opportunity structures are measured and computed as part of the general institutional opportunity structure. Two of the group rights categories (‘cultural requirements to access the community’ and ‘provision of destination language programs for immigrants’) are used as the specific institutional opportunity structures.

²⁰⁵ For the cultural requirements to access the community, three relevant indicators in the LOCALMULTIDEM projects (Workpackage 1) are used: Cultural requirements for obtaining short-term permits, cultural requirements for obtaining long-term permits, and cultural requirements for naturalization.

provision of destination language programs for immigrants²⁰⁶ as the specific institutional opportunity structures. Subsequently, I study the relationship between the general institutional opportunity structure and language learning outcome of immigrants.

Previous studies have found a strong positive correlation between the inclusiveness of political opportunity structure and immigrant political participation (Koopmans, 2004; Ireland, 2000). Based on the theoretical framework and empirical findings, an overarching hypothesis can be stated as: Inclusiveness of institutional opportunity structure²⁰⁷ is positively related to immigrant language acquisition. Concerning the specific institutional opportunity structures, *the cities that are more lenient on cultural requirements to access the community are more likely to achieve higher levels of destination language proficiency among immigrants (H1a)*. Similarly, *the cities that are more generous in providing destination language programs are more likely to achieve higher levels of destination language proficiency among immigrants (H1b)*. Pertaining to the general institutional opportunity structure, *the cities that have more inclusive general institutional opportunity structure are more likely to achieve higher levels of destination language proficiency among immigrants (H2)*.

4. Analysis & Interpretation

Table 7-1: Means and Standard Deviations of Language Proficiency by City

City	BAR	BUD	GEN	LON	LYO	MAD	MIL	OSL	STO	ZUR
Variable^a	Mean (SD)									
Language proficiency (1)	0.66 (0.22)	0.46 (0.27)	0.67 (0.24)	X	0.79 (0.23)	0.48 (0.25)	0.45 (0.19)	X	X	0.44 (0.31)
Language proficiency (2)	0.86 (0.24)	0.59 (0.35)	0.56 (0.21)	0.88 (0.21)	0.90 (0.19)	0.79 (0.31)	0.38 (0.19)	0.69 (0.25)	0.76 (0.24)	0.37 (0.26)

^aLanguage proficiency (1): Keep the response values 1-5, drop the response value 6. The original variable is normalized to the unit interval 0-1. It is used as the dependent variable for a model of immigrant language acquisition (Only for Barcelona, Budapest, Geneva, Lyon, Madrid, Milan, and Zurich). Language proficiency (2): Keep all of the response values 1-6. The original variable is normalized to the unit interval 0-1. It is used as an intervening variable for a model of immigrant integration (Country-specific: London, Oslo, and Stockholm—measured on a 4-point scale).

Prior to the main analysis, I conduct a preliminary analysis by running simple descriptive statistics. The descriptive statistics of language proficiency (see Table 7-1) show that there are variations in the outcome across cities, ranging from 0.37 to 0.90 (see ‘language proficiency (2)’ in Table 7-1; refer to *Chapter 4 [Data & Methods]* or *Appendix I: Measures* for more detailed variable descriptions). What could be the explanations for such high variability in the outcome? Considering the sample compositions and characteristics of ethnic groups included in the LOCALMULTIDEM project, it is highly advisable to first take a look at the descriptive statistics of language proficiency by city and ethnic group because a strong correlation between immigrants’ country of origin (or ethnic origin) and their destination language proficiency is easily assumed for some groups. This approach

²⁰⁶ For the provision of destination language programs for immigrants, two pertinent indicators in the LOCALMULTIDEM project (Workpackage 1) are employed: Host-country language programs for immigrant adults and host-country language programs for immigrant children.

²⁰⁷ I use the term “institutional opportunity structure” to refer to both “general institutional opportunity structure” and “specific institutional opportunity structure.” Also, I use the term “institutional opportunity structure” rather than “political opportunity structure” because “political opportunity structure” (especially in the LOCALMULTIDEM project) is used for different categories of indicators, such as configuration of power, participation mechanism, political representation of migrants, etc.

can be seen as a deviation from the theoretical framework, but this step is added in order to clearly set the target city and/or group of analysis through qualitatively controlling for sources of bias.

Table 7-2: Means and Standard Deviations of Language Proficiency by City and Ethnic Group

City/ Ethnic Group	Language Proficiency ^a		City/ Ethnic Group	Language Proficiency ^a	
	Freq.	Mean (SD)		Freq.	Mean (SD)
Barcelona	737	0.86 (0.24)	Madrid	860	0.79 (0.31)
Moroccan	221	0.53 (0.19)	Moroccan	292	0.39 (0.21)
Andean [†]	257	1 (0.01)	Andean [†]	277	1 (0)
Ecuadorian [†]	259	1 (0)	Ecuadorian [†]	291	1 (0)
Budapest	808	0.59 (0.35)	Milan	899	0.38 (0.19)
Ethnic Hungarian [†]	289	0.97 (0.11)	Egyptian	300	0.40 (0.22)
Mixed Muslim	280	0.44 (0.24)	Filipino	300	0.38 (0.18)
Chinese	239	0.30 (0.22)	Ecuadorian	299	0.36 (0.15)
Geneva	487	0.56 (0.21)	Oslo	897	0.69 (0.25)
Italian	228	0.56 (0.18)	Turkish	300	0.66 (0.25)
Kosovar	259	0.55 (0.23)	Pakistani	298	0.68 (0.24)
London	874	0.88 (0.21)	Bosnian	299	0.74 (0.26)
Indian [†]	295	0.86 (0.21)	Stockholm	508	0.76 (0.24)
Afro-Caribbean [†]	283	0.99 (0.07)	Turkish	234	0.76 (0.25)
Bangladeshi [†]	296	0.82 (0.26)	Chilean	273	0.77 (0.24)
Lyon	702	0.90 (0.19)	Zurich	761	0.37 (0.26)
Moroccan [†]	114	0.89 (0.18)	Italian	233	0.37 (0.21)
Algerian [†]	459	0.91 (0.18)	Turkish	259	0.36 (0.30)
Tunisian [†]	129	0.88 (0.22)	Kosovar	269	0.38 (0.27)

^a Language proficiency (2) is used. Ethnic groups with (†) indicate that: (1) the groups use language of destination country in their country of origin (e.g., country of origin was a former colony or territory or destination country, destination language is official/dominant/commonly used language in country of origin; or (2) the groups are fluent in destination language due to their ethnic tie to destination country.

The means for each city and ethnic group (see Table 7-2) show that the most of the cross-city variation can be explained by where immigrants come from and go to. For example, overall means of language proficiency of the Barcelona (0.86) and Madrid (0.79) samples are relatively high compared to other cities; when I break down the cities' overall means by ethnic group, means for Andean and Ecuadorian are 1, indicating that the destination language (Spanish) is their native language. This suggests the variability in language proficiency is solely determined by that of the Moroccan sample in Barcelona and Madrid. In Budapest, Ethnic Hungarians are fluent in Hungarian due to their intimate ethnic/cultural ties to the destination while other two immigrant groups (Muslims and Chinese) have rather low language fluency. The ethnic groups included for the London and Lyon samples are all from the countries where immigrants use language of the destination country as official, dominant, or ordinary language. This explains why the overall means of the cities are the top two (Lyon: 0.90, London: 0.88) and the variations within the city sample are reasonably small, suggesting high levels of destination language fluency across the ethnic groups. When analyzing certain destination country effects, it is very problematic to include the samples that are not the targets of specific policy measures because it obscures the focus and the treatment effect cannot be

adequately captured. Therefore, when analyzing the effectiveness of integration policies aiming at enhancing immigrants' destination language proficiency, the samples that come with a high level of fluency and do not require learning in the destination need a separate treatment. The cities that do not include the ethnic groups with the 'country of (or ethnic) origin bias' (aka, high correlations between the country of (or ethnic) origin and destination language proficiency) are: Geneva, Milan, Oslo, Stockholm, and Zurich. Among these cities, Zurich (0.37) and Milan (0.38) demonstrate relatively low overall means, followed by Geneva (0.56) with very small ethnic group variations whereas the two Scandinavian cities (Oslo: 0.69 and Stockholm: 0.76) show higher levels of language proficiency also with undersized ethnic group variations.

For the institutional-level analysis, therefore, interesting targets of comparison to assess the hypotheses may be to examine how differences in the institutional arrangements (e.g., differences in language learning opportunities) affect linguistic outcomes, focusing particularly on the comparison between the cities with lower levels of destination language proficiency after controlling for the 'country of (or ethnic) origin effects' (i.e., Zurich, Milan, Budapest [Muslims and Chinese only²⁰⁸], Barcelona and Madrid [Moroccans only²⁰⁹], and Geneva) and the cities with higher levels of destination language proficiency after controlling for the 'country of origin effects' (Oslo and Stockholm²¹⁰; see the pictorial summary of language proficiency in Figure 7-4 [left]).

4.1. Cultural Requirements to Access the Community and Immigrant Language Acquisition

The cities that are more lenient on cultural requirements to access the community are more likely to achieve higher levels of destination language proficiency among immigrants (H1a).

To qualitatively assess the hypothesis, I examine how different institutional arrangements in cultural requirements to access the community influence immigrant language acquisition. For this analysis, three relevant indicators measured in the LOCALMULTIDEM project (Workpackage 1) are used: Cultural requirements for obtaining short-term permits, cultural requirements for obtaining long-term permits, and cultural requirements for naturalization. The summary table (see Table 7-3) tells that there is almost no variability in cultural requirements for obtaining short-term and long-term permits among the nine cities (only London has language and other cultural requirements for long-term permit). This naturally leads to focus on the cultural requirements for naturalization.

²⁰⁸ Ethnic Hungarian group is ruled out because a substantial amount of bias (or the 'ethnic origin effect') is expected.

²⁰⁹ Andean and Ecuadorian groups are ruled out because a substantial amount of bias (or the 'country of origin effect') is expected.

²¹⁰ Lyon and London (which have shown the highest levels of language competence) are ruled out because a substantial amount of bias (or the 'country of origin effect') is expected. For the comparison, I will use the Stockholm case only because the LOCALMULTIDEM project does not provide the institutional-level information for Oslo.

Table 7-3: Summary of Cultural Requirements to Access the Community in the Nine Cities
(LOCALMULTIDEM, 2014 with author's modifications)

Indicator	Scale ^a		
	-1	0	1
Cultural requirements for obtaining short-term permits	Language requirement and other cultural conditions (such as knowledge of history/culture/civic knowledge)	Language requirement only or cultural requirement only for the renewal of the permit	None BAR, BUD, GEN, LON, LYO, MAD, MIL, STO, ZUR
Cultural requirements for obtaining long-term residence permits (duration of validity > 5 years)	Language requirement and other cultural conditions LON	Language requirement only or cultural requirement only for the renewal of the permit	None BAR, BUD, GEN, LYO, MAD, MIL, STO, ZUR
Cultural requirements for naturalization (first generation immigrants)	Language requirement and other cultural conditions BUD (Chinese & Muslims), LON, LYO, ZUR	Language requirement only GEN	None BAR, BUD (Ethnic Hungarian), MAD, MIL, STO

^a Scale: "The score "-1" refers to the most restrictive situation that can be envisaged, the score "1" corresponds to the most open configuration and the score "0" applies to intermediary potential situations" (Gattinara, Morales, & Morales, 2014, p.6). No information available for Oslo. Source: LOCALMULTIDEM, 2008, 2014; with author's modification

The results suggest a trend that the cities with a long immigration history (London, Lyon, Zurich, and Geneva) have stricter cultural requirements for naturalization than the new immigration cities (Barcelona, Budapest, Madrid, and Milan). Yet, it is hard to see the macro effect on the micro outcome in a consistent manner. It is not clear whether, as hypothesized, more lenient cultural requirements for naturalization (i.e., Barcelona, Budapest [Ethnic Hungarian only], Madrid, Milan, and Stockholm; see Table 7-3) would lead to higher levels of language skills (see Table 7-2 for the means; Figure 7-2 [left] for the bivariate analysis summary). It might be acceptable to conclude so if Stockholm (overall mean: 0.76) were the sole case taken into consideration. Nonetheless, the hypothesized relationship cannot be established for the Moroccan samples in Barcelona (0.53) and Madrid (0.39) as well as all for the immigrant groups in Milan (overall mean: 0.38) since they achieve a comparatively limited level of destination language skills even under the favorable condition for naturalization.

As opposed to the hypothesized relationship, it could also be assumed that immigrants who migrated to the cities which require a certain level of language fluency for community access (i.e., the cities with more restrictive access for naturalization) may attain a higher level of language skills because the immigrants are forced to attain an acceptable level of fluency to pass the language exam or meet other types of requirements. Rather than generously giving "carrots," "sticks" may work better at inducing behavior change. The analysis results, however, tell that a more restrictive approach (mandatory language and/or other cultural requirements for naturalization) does not necessarily increase the levels of destination language skills. This is well illustrated in the contradictory outcomes among the cities where the requirements for naturalization are most demanding (Budapest, Zurich, London, and Lyon; see Table 7-3). While destination language proficiency in Budapest (Muslim and Chinese) and Zurich are the two lowest, London and Lyon are the top two (see Table 7-2). As mentioned earlier, however, all immigrant groups of the London and Lyon samples come from the countries of origin where the destination language is used as official, dominant, or common language.

Thus, it is incorrect to conclude that more demanding cultural requirements for naturalization would lead to a higher level of language proficiency. Therefore, there is no consistent pattern observed in general, and the evidence found does not provide strong support for Hypothesis 1a. Consequently, the overall results suggest that the specific institutional opportunity structure—cultural requirements to access the community—does not have a significant effect on immigrant language acquisition. Yet, it may be too early to make any explicit statement on this issue since Barcelona, Madrid and Milan are relatively new destinations for immigrants and it may require some more time to estimate the real structural effect.

4.2. Provision of Destination Language Programs and Immigrant Language Acquisition

The cities that are more generous in providing destination language programs are more likely to achieve higher levels of destination language proficiency among immigrants (H1b)

Table 7-4: Summary of Host-country Language Programs for Immigrants in the Nine Cities
(LOCALMULTIDEM, 2014 with author’s modifications)

Indicator	Scale ^a		
	-1	0	1
Host-country language programs for immigrant adults	None or totally private funded programs BUD	Private programs receiving public subsidies but these only represent a part of their funding Public-funded programs but limited /rare implementation GEN, MIL	Public programs BAR, LON, LYO, MAD, STO, ZUR
Host-country language programs for immigrant children	None or totally private funded programs	Private programs receiving public subsidies but these only represent a part of their funding Public-funded programs but limited /rare implementation BUD, MIL	Public programs BAR, GEN, LON, LYO, MAD, STO, ZUR

^a Scale: “The score “-1” refers to the most restrictive situation that can be envisaged, the score “1” corresponds to the most open configuration and the score “0” applies to intermediary potential situations” (Gattinara, Morales, & Morales, 2014, p.6). No information available for Oslo. Source: LOCALMULTIDEM, 2008, 2014; with author’s modification

To qualitatively assess the hypothesis, I look at how the institutional differences in providing destination language programs affect immigrant language acquisition. For this analysis, two pertinent indicators measured in the LOCALMULTIDEM project (Workpackage 1) are employed: host-country language programs for immigrant adults and host-country language programs for immigrant children. The summary table (Table 7-4) shows that the provisions of language programs in Budapest, Milan, and Geneva are more restrictive than in other cities. This corroborates the above empirical findings that Budapest²¹¹ (overall mean: 0.59; see Table 7-2), Milan (0.38), and Geneva (0.56) have lower levels of destination language proficiency than the cities with more open configurations (i.e., open access to public language programs for immigrants). In Stockholm, (0.76) the immigrants’ relatively high levels of overall language fluency across ethnic groups can be explained by the city’s non-restrictive provision of language programs. Accordingly, the presence of the hypothesized structural effect through institutional provision of learning opportunities is supported in some of the city cases.

²¹¹ In Budapest, except for Ethnic Hungarians (0.97) who know the language and familiar with the culture, language proficiency of Muslims (0.44) and Chinese (0.30) are particularly low.

However, this structural effect alone does not suffice to explain the variability in language learning outcomes. For instance, even though Zurich provides access to publicly funded destination language programs, immigrants in Zurich (0.37) have one of the lowest language proficiency. Similarly, this approach does not offer a very clear answer to why Moroccans in Barcelona (Moroccan: 0.53) and Madrid (Moroccan: 0.39) where language learning opportunities are readily available do not attain high levels of destination language fluency (see Figure 7-2 [right] for the bivariate analysis summary). In sum, institutional provisions of language programs may increase the level of language fluency among immigrants, but such service provisions do not necessarily guarantee the success, thereby failing to provide strong support for Hypothesis 1b.

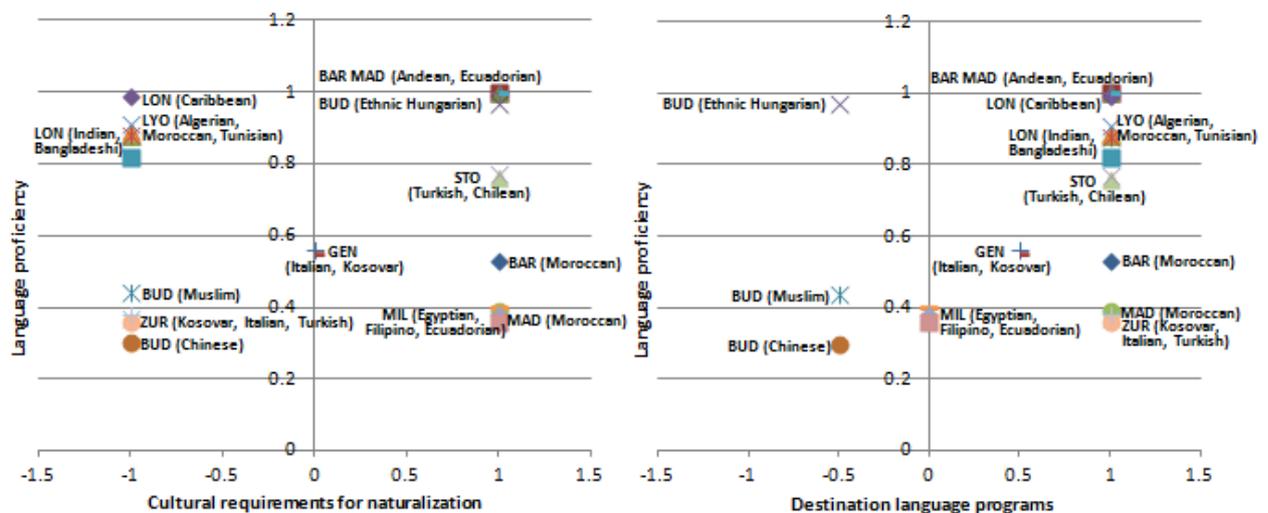


Figure 7-2: Summary of Specific Institutional Opportunity Structures and Language Proficiency in the Nine Cities

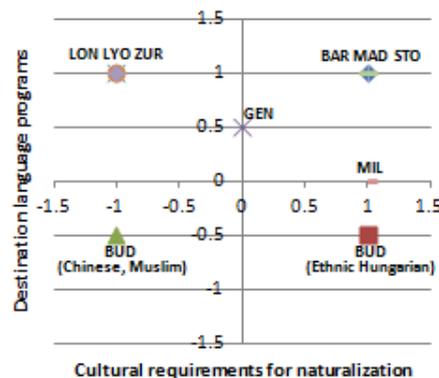


Figure 7-3: Two Dimensions of Specific Institutional Opportunity Structure in the Nine Cities

Figure 7-2 shows a summary of the previous analyses on the specific institutional opportunity structures and language proficiency in the nine cities. The x-axis represents the specific institutional opportunity structures²¹² and the y-axis represents the mean values of language proficiency. Figure 7-3 shows how the cities cluster together on the two different dimensions of specific institutional

²¹² Two categories of indicators used from the LOCALMULTIDEM data are the cultural requirements to access the community (the graph on the left in Figure 7-2) and institutional provision of host-country language programs (the graph on the right in Figure 7-2). As for the cultural requirements to access the community, there is almost no variability in cultural requirements for obtaining short-term and long-term permits among the nine cities while cultural requirements for naturalization show more variability across cities (refer to Table 7-3). Thus, only the cultural requirements for naturalization is used for the summary.

opportunity structure. The cluster analysis suggests that one way to categorize the cities may be to group them into two: a group of cities with more inclusive configurations (Barcelona, Madrid, and Stockholm) vs. the rest—a group of cities with more restrictive configurations (Budapest, Milan, Geneva, London, Lyon, and Zurich). However, ‘the rest’ seems too broad and it is not easy to make meaningful links between the macro-level clusters and the micro-level outcome variable (see Figure 7-2 and Figure 7-3 together). Consequently, I turn to the general institutional opportunity structure to look for some other possibilities for establishing links between the two levels of analysis. The rationale behind the shift is the explanatory power would be increased by including and aggregating a wide range of macro-level indicators, measuring various dimensions of institutional opportunity structure.

4.3. General Institutional Opportunity Structure and Immigrant Language Acquisition

The cities that have more inclusive general institutional opportunity structure are more likely to achieve higher levels of destination language proficiency among immigrants (H2)

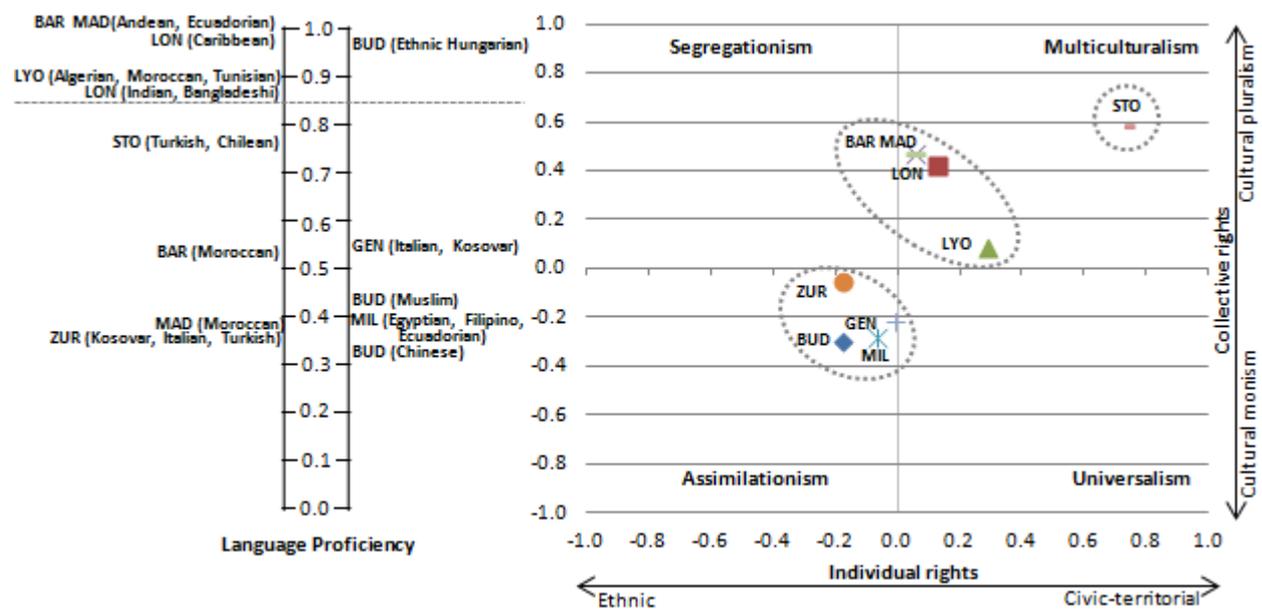


Figure 7-4: Summary of General Institutional Opportunity Structure and Language Proficiency in the Nine Cities

Figure 7-4 illustrates that Stockholm has the most inclusive general institutional opportunity structure. In the language of the political opportunity structure approach, Stockholm is the multiculturalist city par excellence owing to all-embracing promotion of both individual and group rights. Lyon partially fits with universalism because any further restriction on individual rights would push it close to the other assimilationist cities. London together with Barcelona and Madrid is located between multiculturalism and segregationism, and can probably be placed just on the edge of segregationism due to the relative mismatch between a generous provision of cultural group rights and a rather parsimonious provision of individual rights. Lastly, Milan, Zurich, Geneva, and Budapest fit well with assimilationism, providing limited opportunities for both individual and group rights.

Figure 7-4 indicates that the nine cities can be grouped into three clusters of different institutional opportunity structures: (1) a restrictive institutional opportunity structure cluster: Budapest, Geneva, Milan, Zurich; (2) an intermediate institutional opportunity structure cluster: Barcelona, London, Lyon, Madrid; and (3) an inclusive institutional opportunity structure cluster: Stockholm. After controlling for the country of origin or ethnic origin effects,²¹³ the ethnic groups in Stockholm (the city with the most inclusive institutional opportunity structure) have the highest likelihood of achieving high levels of language proficiency. The results are mixed between the restrictive and intermediate clusters. Yet, a general tendency can be cautiously drawn; the higher the inclusiveness of institutional opportunity structure, the greater the probability of learning destination language among immigrants, thereby supporting Hypothesis 2.

4.4. Macro and Micro Determinants of Immigrant Language Acquisition

The first major implication of the individual-level analysis on the determinants of immigrant language acquisition presented in Chapter 5 was that the economic model (personal characteristics) had higher explanatory power in accounting for variability in language proficiency than the psychological model (individual attitudes toward the destination society). Among the personal characteristics variables, educational attainment and age at migration were found to be the principal determinants of destination language acquisition while length of stay in the destination had shown a strong effect when present. Among the attitudinal factors, attachment to host country people showed the most consistent positive association with linguistic attainment.

What I could not explain in the micro-level analysis was the city-wide variability in the outcome. In the previous sections, I started the analyses trying to provide plausible explanations on the city-wide variability in the immigrant language acquisition outcome by incorporating some of the associated macro-level variables, namely the institutional opportunity structures of destination societies. The empirical analysis results demonstrated that, in the case of the specific institutional opportunity structures, the relationships between the macro-level structural factors and the micro-level behavioral outcome were not robust and coherent. In other words, the cross-city variation in the outcome varies case by case, and as opposed to the theoretical claims made by Koopmans and Statham (2000), the macro-level institutional differences alone do not suffice to explain the hypothesized regularities. However, in the case of the general institutional opportunity structure, the results indicate a positive relation between the inclusiveness of institutional opportunity structure and destination language proficiency even though there are some deviations from strict linearity and the generalization cannot be made for all cases.

²¹³ It specifically means after disregarding the ethnic groups that are native speakers of the destination language or use the language as official, dominant, or ordinary language in the country of origin. These ethnic groups are: Andean and Ecuadorian in Barcelona and Madrid; Ethnic Hungarian in Budapest; Caribbean, Indian, and Bangladeshi in London; Moroccan, Algerian, and Tunisian in Lyon (ethnic groups located above the dashed line in Figure 7-4 [left]).

Macro-level structural factors can be helpful, but it is conceivably natural to assume that other factors may be at work, and thus, deserve due consideration to more adequately explain the outcome. In the following, I reintroduce the summary table of the determinants of immigrant language acquisition (Table 7-5) presented in Chapter 5 to see if the results can provide any meaningful accounts in connection to the macro structural factors.

Table 7-5: Determinants of Immigrant Language Acquisition: 10 Cities²¹⁴
(OLS Regression, LOCALMULTIDEM: 10 Cities)

Model 1: A Model of Immigrant Language Acquisition													
City ^a	BAR	BUD	GEN	LON	LYO	MAD	MIL	OSL	STO	ZUR	Expected Sign ^d		
Controls (C)													
Gender (Female)	+										—		
Marital status							—	***			?		
Ethnic group ^b	Reference category: G3 (group of recent arrival)												
G1	X	+	***		+		X	—	**	—	***	+	
G2	X	+	**	X	+	***		X	—	**	—	***	+
Personal characteristics (P)													
Educational attainment		+	***	+	***	+	**	+	***	+	***	+	
Age at migration	—	**	—	***	—	***	—	***	—	***	—	***	—
Length of stay in HC	+	*	+	***			+	***	+	*		+	
Permit category	Reference category: Work												
EEA				X	X		+	**	X	X	+	***	?
Study				—	*				X	X			+
Family reunification	—	*		—	*				X	X			—
Other purposes									X	X			—
Attitudes (A)													
Attachment to HCP		+	***		+	***		+	***		+	**	+
Social trust								—	*		+	**	+
Institutional trust		—	**		—	*		—	**				+
Observations	102	233	277	526	165	150	465	565	396	454	X		
R² ^c													
M1: C	0.069	0.131	0.071	0.125	0.062	0.027	0.045	0.088	0.037	0.034	X		
M2: C+P	0.400	0.385	0.351	0.405	0.268	0.429	0.354	0.304	0.379	0.347			
M3: C+A	0.114	0.191	0.095	0.192	0.082	0.092	0.151	0.102	0.085	0.068			
M4: C+P+A	0.405	0.444	0.357	0.429	0.270	0.471	0.378	0.309	0.391	0.360			

^a $p < 0.05$, ^{**} $p < 0.01$, ^{***} $p < 0.001$

^a BAR: Barcelona, BUD: Budapest, GEN: Geneva, LON: London, LYO: Lyon, MAD: Madrid, MIL: Milan, OSL: Oslo, STO: Stockholm, ZUR: Zurich

^b Ethnic groups: Barcelona (G1: Moroccan, G2: Andean mixed group, G3: Ecuatorian), Budapest (G1: Ethnic Hungarian, G2: Mixed Muslim, G3: Chinese), Geneva (G1: Italian, G2: N/A, G3: Kosovar), London (G1: Indian, G2: Afro-Caribbean, G3: Bangladeshi), Lyon (G1: Moroccan, G2: Algerian, G3: Tunisian), Madrid (G1: Moroccan, G2: Andean mixed group, G3: Ecuatorian), Milan (G1: Egyptian, G2: Filipino, G3: Ecuatorian), Oslo (G1: Turkish, G2: Pakistani, G3: Bosnian), Stockholm (G1: Turkish, G2: N/A, G3: Chilean), Zurich (G1: Italian, G2: Turkish, G3: Kosovar)

^c R² of all models are reported: M1: Controls, M2: Controls + Personal characteristics, M3: Controls + Attitudes, and M4 (full model): Controls + Personal characteristics + Attitudes

^d A question mark under the expected sign column indicates that it is not clear whether the variable will have a positive or negative effect on the outcome.

First, the combined analysis results indicate that the time necessary for immigrant to acquire destination language may be reduced by creating more inclusive institutional opportunity structure. On the one hand, for the immigrants who migrated to the cities where more inclusive opportunity structures are institutionalized, the length of stay does not seem to matter so much in acquiring language skills (e.g., Stockholm, London, and Lyon²¹⁵) although this interpretation cannot be

²¹⁴ Replication of Table 5-3: Determinants of Immigrant Language Acquisition: 10 Cities.

²¹⁵ In the London and Lyon cases, length of stay is also statistically insignificant, but the results require caution in their interpretation because the immigrants included in the city samples are all from the countries of origin where the destination languages are commonly spoken. Thus, it is not evident that the institutional opportunity

extended to all cases; for instance, it cannot provide viable explanations for the question of why length of stay in the country of destination do matter for the immigrants under comparatively inclusive conditions (Barcelona and Madrid). On the other hand, there is a tendency that the time spent in the destination matter more for those who migrated to the cities with more restrictive structures (e.g., Budapest and Milan). It may be reasoned that immigrants in the cities that provide open access to opportunities and various support systems tend to be faster in attaining the necessary level of language fluency than those in the cities with restrictive configurations. Furthermore, the specific institutional opportunity structure, particularly the provision of destination language programs, appears to have an effect on the efficient acquisition of linguistic skills; linguistic success is more likely to be related to the amount of time invested by immigrants in the cities that have the most restrictive approach toward the public service provision (Budapest and Milan) than in the other cities. Inclusive institutional opportunity structures may be helpful in reducing the time necessary for language capital acquisition, thereby increasing social efficiency.

Second, the results also signify a probable link that exists between institutional arrangements and attitudes toward destination society. The following statement should be treated with caution²¹⁶, but the results seem to suggest that under more restrictive conditions, a higher degree of positive attitudes toward destination society is required for immigrants to successfully acquire language, while such psychological pressure can be reduced when supplemented by inclusive institutional conditions. Under more restrictive conditions, those immigrants who have higher levels of attachment to host country people or social trust are more likely to become proficient in destination language (Budapest, Milan, and Zurich; see Table 7-5). These two attitudinal variables mostly remain statistically insignificant in the cities with relatively more inclusive institutional configurations (Barcelona, Lyon, and Madrid) with some exceptions (attachment to host country people has a statistically significant effect in Stockholm and London²¹⁷). Therefore, inclusive institutional opportunity structures may

structures help immigrants' language acquisition more efficiently or some other factors (e.g., the country of origin effects) have larger impacts.

²¹⁶ There are many potential reasons for this careful treatment because the indicators used for the analysis are prone to many types of endogeneity bias. One of the most serious biases that needs due consideration is measurement error because I used proxies for measuring theoretical constructs. The not-so-perfect indicators available in existing survey datasets do not measure the theoretically "pure" or latent construct, thus the indicators are endogenous by nature. Additionally, in this current investigation, simultaneity or reverse causation is highly possible since I operationalized learning motivations using the not-so-perfect indicators (i.e., attachment to host country people, social trust, and institutional trust).

²¹⁷ In Stockholm and London, language proficiency is measured on a four-point scale using country-specific variables. There is no response value specifically assigned for native speakers of the destination language. Hence, it is highly likely that the language proficiency variable includes the responses of the immigrants who are native speakers of the destination language. If a fairly large number of native speakers are contained in the city samples (especially in the case of London), it is no longer examining the determinants of language acquisition. Moreover, in that case, reverse causation or simultaneity can also be assumed. In other words, those with higher levels of destination language proficiency have higher degrees of positive attitudes toward the destination.

effectively reduce the psychological costs necessary for successful language capital acquisition, thereby increasing social efficiency.

4.5. Assessing a Big Hypothesis

Specific institutional opportunity structure has a direct effect on language learning outcome while general institutional opportunity structure, which shapes the specific institutional opportunity structure, affects the outcome indirectly.

Combining all of the evidence together, the “big” hypothesis will be assessed to see if any interesting interpretations can be derived. Prior to the hypothesis assessment, one remaining link from the general institutional opportunity structure to the specific institutional opportunity structure needs to be first incorporated into the analysis. The political opportunity structure approach claims that national citizenship and integration regimes constitute political opportunity structures. If so, then the cities with more inclusive regimes are expected to be more lenient on cultural requirements for naturalization and generous in providing language programs. Consequently, I expect a positive correlation between inclusiveness of the general institutional opportunity structure and that of the specific institutional opportunity structure. Figure 7-5 shows the combined results of the general institutional opportunity structure and specific institutional opportunity structure of the nine LOCALMULTIDEM cities.

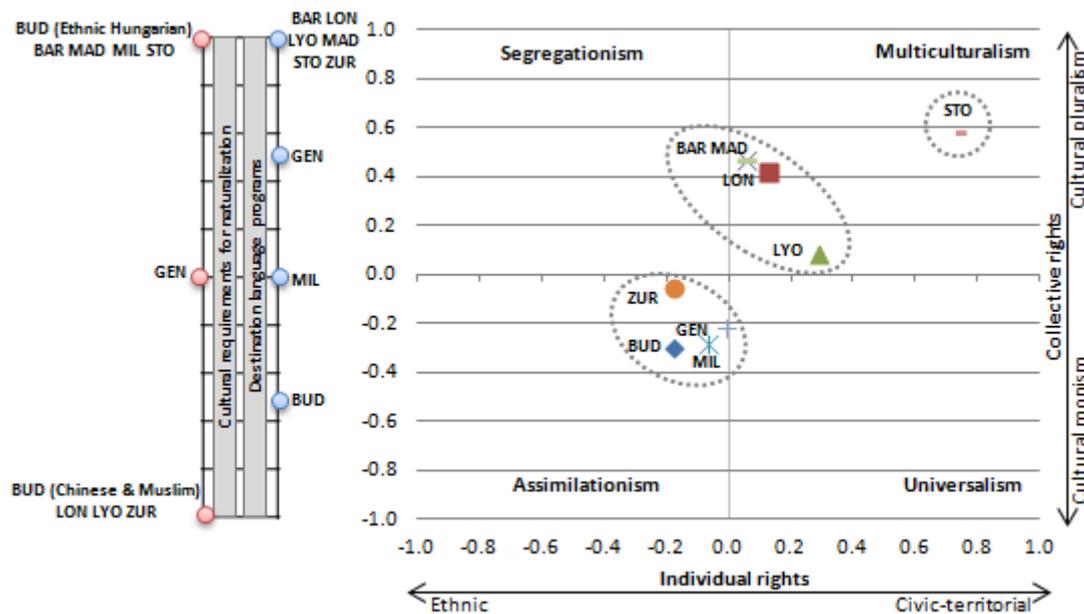


Figure 7-5: General and Specific Institutional Opportunity Structures in the Nine Cities

First, the diagram tells that multicultural Stockholm has the most relaxed cultural requirements for naturalization and is generous in providing host-country language programs. Similarly, Barcelona and Madrid that are on the verge between multiculturalism and segregationism are also lenient in terms of cultural requirements and generous in language learning opportunity provision. Conversely, the cities that provide limited opportunities both in individual and group rights and employ assimilationist integration approaches tend to be more demanding in cultural

requirements for naturalization and parsimonious in providing language programs; the most exemplary cities are Budapest (Chinese and Muslims), Milan, and Geneva. Zurich closely follows its citizenship and integration regime in terms of cultural requirements for naturalization but has an open approach for providing language learning opportunities. Nonetheless, there are some cities where the general and specific institutional opportunity structures are not in congruence. London, Lyon, and Milan cases are not in line with the expected relationship.

In sum, the overall results indicate a subtle tendency that the cities that have more inclusive citizenship and integration regimes are more likely to be lenient on cultural requirements to access the community and generous in providing destination language programs, partially supporting the expected relationship. At the same time, though, there are some cases that are incongruent with the hypothesized relationship, suggesting that the empirically observed trend in some cities cannot be generalized for all.

Figure 7-6 shows a summary of the theoretical framework and empirical analysis results of the “big hypothesis.” The two theoretical approaches used in this chapter state that a wider “national citizenship and integration regime” or “social context” directly influences shaping the “(political/learning) opportunity (structure)” that affects the end outcome. However, the empirical findings provide no strong evidence for the relationship between the general institutional opportunity structure and the specific institutional opportunity structure, as well as for the relationship between the specific institutional opportunity structure and language proficiency. In a nutshell, the empirical results indicate a *direct* effect of the general institutional opportunity structure on immigrant language proficiency, rather than the theoretically assumed *indirect* effect of the “national citizenship and integration regime” or “social context” on the outcome through the specific institutional “opportunity (structure).”



Figure 7-6: Theories and Empirical Results of the “Big Hypothesis”

If the theoretical claims are to be coherent with the empirical findings, one way to reduce the theory-data gap may be to rethink the conceptualization of the independent variables; for example, other plausible “social contexts” that indirectly affect the micro-level behavioral outcome can be conceptually established through merging the general and specific institutional opportunity structures into one category, ‘institutional opportunity structure.’ In addition, to be consistent with Spolsky’s general model of language learning, these “social contexts” should affect learning attitudes, and the

attitudinal differences should relate to variation in learning outcome. Spolsky (1989) describes various social contexts that might influence learners' attitudes and learning outcomes, such as social and political status of the target language, the number of people who speak the language, language distance, standardization, autonomy, historicity, and vitality²¹⁸. Nevertheless, the relationships between social contexts and human attitudes and behavior in second language acquisition have a much more complex basis. To understand the intricate inner workings in a situated context entails a more psychologically-oriented analysis. Having stated the necessity for adding 'depth,' it is probably advisable to turn the wheel toward the direction.

²¹⁸ For more details on this topic, refer to Chapter 9 (*The Social Context*) of *Conditions for Second Language Learning: Introduction to a general theory* (Spolsky, 1989).

Chapter 8. Toward an Integrated Micro-Macro Modeling

1. Background

I began the empirical modeling and analyses with one key question in mind. What I asked was *not* “what affects immigrants to acquire capital and *how do they acquire it?*” but “what affects immigrants to acquire capital and *how is it generated?*” If an analyst is purely interested in investigating individual behavioral outcomes (e.g., agents’ acquisition behavior), he/she can isolate the agents from the surrounding social environment and stop the analysis at the micro-level. Nonetheless, if one is interested not only in individual behavioral outcomes but also in social outcomes, then one needs to find ways to measure and evaluate them because capital generation is not a one-way process but a product of a series of interactions between the individual (micro) and the social system (macro).

Since my main interest lies in understanding capital generation rather than capital acquisition as a mechanism, I had to seek a way to establish linkages between the two. Recognizing the difficulty in empirically performing the task, however, I decided to leave the investigation aside. As a result, what I principally did in the empirical part of this thesis—through strategic empirical modeling (presented in Chapter 3 & 5) and conducting multivariate regression analyses on the determinants of immigrant language acquisition and integration outcomes (conducted in Chapter 5 & 6)—was the study of the micro-level capital acquisition mechanism. More specifically, I examined what and how individual-level factors were related to producing a certain micro-outcome by sequentially introducing the blocks of variables (named ‘personal characteristics,’ ‘attitudes,’ and ‘acquired capital’) to a nested regression model.

Overall regression analysis results showed that the economic model (‘personal characteristics’ block) was robust in predicting immigrant language acquisition (measured in ‘language proficiency’) and integration outcomes (measured in ‘employment status,’ ‘citizenship status,’ and ‘political interest’) in the ten European metropolitan cities. The most critical and consistent predictor of the outcomes across the cities and empirical models was educational attainment. Although the psychological model (‘attitudes’ block) had relatively weak power in explaining the variation in language proficiency, the presumed mediating effect via attitudinal factors was detected in some cities. Furthermore, the mediating effect was barely identified in the sub-models of immigrant integration with an exception of the last model; a relatively strong and coherent effect of the attitudinal variables (especially, ‘institutional trust’) was detected in a model of immigrant political integration. Among the acquired capital, destination language proficiency was found to be the most consistent mediator that positively influenced all of the integration outcomes. There was a general tendency that the prominence of acquired capital increased in accordance with the temporal order presumed in the immigrant integration modeling framework.

After completing the ten-city-wide cross-sectional data analysis, I was brought back to the same scholarly challenge—uncovering a capital generation mechanism in a social system—that I ignored in order to produce the initial individual-level analysis; but this time, I knew I had to somehow launch an experimental investigation. So, I started by asking: How can I link macro and micro? What are some of the macro-level factors that might affect the outcome(s) of interest? Within the quantitative research paradigm, by convention, such questions are answered through the use of multilevel modeling techniques, which enable to analyze country-/city-level effects on individual-level outcomes. Yet, I decided not to follow the usual approach partially because I did not want to complicate the analysis too much and preferred building solid individual-level analysis results to examine how individual differences might influence the outcomes. But more importantly, it was related to the fact that, even if I successfully designed and analyzed multilevel statistical models, the inherent challenge of relating the individual to the social system would be barely answered because the cross-sectional datasets I used for the empirical analysis were not fit for (and arguably the conventional statistical reasoning in social sciences has limitation in) modeling nonlinear, circulatory, dynamic individual behavior that operates in a system.

Therefore, as an alternative to quantitative modeling and analysis, I qualitatively analyzed the macro-effects of ‘institutional opportunity structures’ on immigrants’ destination language proficiency in Chapter 7. The macro-effect analysis demonstrated city-level variations in language proficiency, implying that the differences in the institutional opportunity structures influence the outcome. Results also indicated a direct effect of the general institutional opportunity structure on immigrant language proficiency, as opposed to the theoretically assumed indirect effect of “national citizenship and integration regime” or “social context” on the linguistic outcome through the specific institutional opportunity structure. Furthermore, macro-micro joint effect analysis suggested that social efficiency in terms of immigrant language acquisition can be increased by creating inclusive institutional arrangements.

However, the macro-effect analysis does not suffice to unveil the interactive mechanism of capital generation because the task execution inevitably entails a micro-macro integrative analysis with ‘depth.’ As witnessed in the current empirical investigation, given socio-demographic characteristics (which are considered objectively measurable variables) are repeatedly found to be strong predictors of individual behavioral outcomes. Yet, not only psychology but also other areas of the social sciences acknowledge the importance of the ‘depth’ or the inner subjective world of emotions and experiences. The literature on political participation, for example, stresses the role of political attitudes because attitudes are found to be one of the key explanatory factors of variability in political participation (Giugni & Morariu, 2007). A nagging question remains, however. What social factors stimulate and arouse emotions and influence people’s attitudes and behaviors? This leads to a closer look at contextual factors or social conditions that influence human psychology.

A prominent linguist's comment on the relationship between the individual and society in language learning seems worth reiteration: "Language learning is individual, but occurs in society, and while social factors are not necessarily *direct* in their influence, they have strong and traceable *indirect* effects" (Spolsky, 1989, p.14; italics added). This is because his prudent observation is intimately connected to a pervasive problem in social sciences—that is the missing or weak links between macro or systemic level and micro or individual level. In economics, for example, there is a subdivision within the discipline: macroeconomics which is the study of aggregate economics and microeconomics whose main focus is the economic choices of individual actors. One of the deep-seated problems in economic theory is directly related to the scarcity of the linkage between the two. The omnipresent macroeconomic concepts like "aggregation" and "representative agent" are some of the exemplary efforts to overcome the weakness (Coleman, 1987). On a larger scale, this problem is related to the longstanding divide between theory and empirical research. Coleman (1987) summarizes his concern for the problem as follows:

Much of social theory involves accounting for the functioning of some kind of social system. In most sociological research, however, observations focus not on the system as a whole but on some part of it. In fact, the most natural unit of observation is the individual; and in the development of quantitative methods of research dependence on individual-level data, most often in the form of interviews, sometimes in still other forms, has increased greatly. This has led to a widening gap within the discipline between theory and research: Social theory continues to be concerned with the functioning of social systems of behavior, whereas empirical research—particularly quantitative research—is largely concerned with explaining individual behavior (p.153).

Likewise, the tension between "social systems of behavior" and "individual behavior" is easily noticeable in the field of language learning. This is the reason why Spolsky (1989) cautiously advises that, in order to understand variability in learners' linguistic outcomes, one needs to first understand how languages are learned in social context²¹⁹. The current challenge is, thus, rather conceptual and theoretical because it is about conceptualizing individual behavior in a system for generating intended behavioral or social outcomes. It requires commitment, flexibility, and creativity to devise novel ways of modeling nonlinear, circulatory, dynamic individual behavior that operates in a system. Hence, it is the search for alternatives to the conventional scientific practice that has habitually shown its inadequacy in creating meaningful micro-macro links²²⁰ while exploring ways to generate capital.

²¹⁹ Furthermore, Spolsky is critical on the widespread tendency to assume direct effects of social factors on the language learning process and argues for their indirect effects through individual attitudes and social provision of learning opportunities.

²²⁰ Use of term, "micro-macro link," follows the one used by Raub, Buskens, and Van Assen(2011) in a broader sense. In this broader definition, "micro-macro link" refers to "explaining macro-outcomes (node D) or macro-regularities (arrow 4) using assumptions on individual behavior (arrow 2), macro-conditions (node A), as well as bridge assumptions (arrow 1) and transformation rules (arrow 3)" (Raub, Buskens, & Van Assen, 2011, p.5). See *Figure 8-5: Coleman's Boat*

2. Modeling Plan

At the outset of this chapter, I shared the personal experience I had gone through in the creation process of this work. There are a few more tasks to be carried out in order to keep the promise I made earlier. There are two remaining issues to tackle to finalize the economic-psychological modeling frame for immigrant language acquisition: (1) to introduce some of the missing elements related to the interface of social context and human psychology; and (2) to link the representative affective factors of economics and psychology, namely instrumentality and integrativeness. With regard to the first issue, according to Spolsky's (1989) general model of language learning, there are principally two ways in which social context can affect language learning outcomes: through influencing learners' attitudes at a micro-level and providing learning opportunities at a macro-level. To examine the latter effect, in the previous chapter, I analyzed how the differences in the institutional opportunity structures generate variation in immigrant language proficiency. Accordingly, I introduce the *institutional opportunity structures* to the economic-psychological modeling frame (see Figure 8-1).

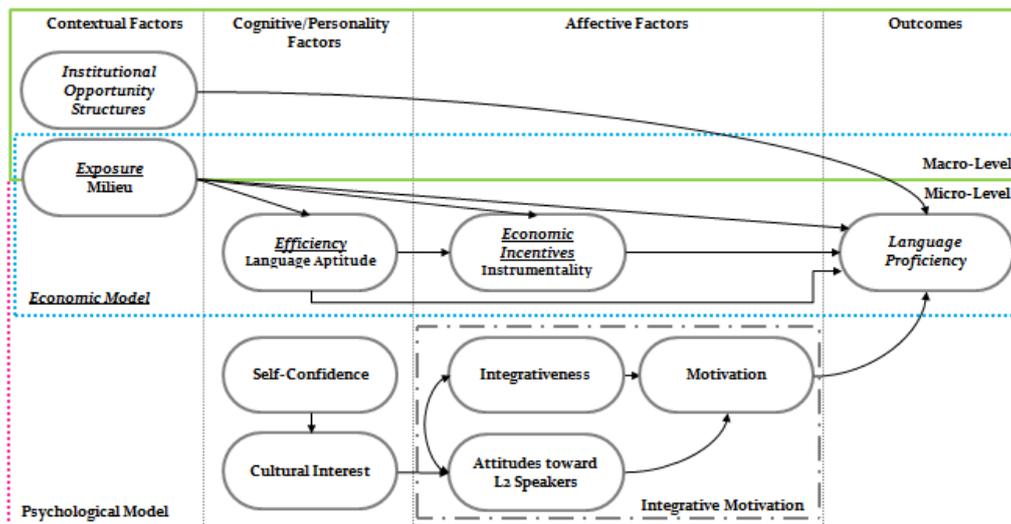


Figure 8-1: Adding Macro-Level Factors to the Economic-Psychological Modeling Frame for Immigrant Language Acquisition

In this chapter, I shift the focus of analysis to the interplay between the individual and the social system in determining the outcome to assume the theoretical challenge. I use Kelman's (1974) structure of a social influence situation as the base model and Coleman's boat (1987) as the primary transformation tool to build a micro-macro modeling scheme. Furthermore, using Kelman's (1969) patterns of personal involvement in the national political system as the base matrix, an internal process model of motivation is created through a merger of L2 motivation and social influence-control research. In so doing, I intend to transform the economic-psychological modeling frame for immigrant language acquisition and expand the modeling frame to subsume immigrant integration process. If the last transformation on the modeling frame is successfully performed, it should give birth to a model of immigrant language acquisition and integration. Upon delivery, another modeling exercise is planned as an endeavor to respond to the nagging question, "How is capital generated?"

The models to be generated are theoretically constructed conceptual models, and they have not been (nor will be) empirically tested in this thesis. The purpose of the modeling exercises is to reinterpret, reassess, and reorganize the empirical findings to develop a comprehensive conceptual model that could suggest possible options for institutional design and directions for future research.

I will be very honest; the modeling exercises involve a series of theoretical model formulations with complicated schematic diagrams to develop a comprehensive model. Each individual has different ways of perceiving the world, processing the information, and expressing one's ideas and thoughts. The essence of my internal language is comprised of diagrams, pictures, and images; hence, I often face difficulty in effectively translating the internal language to words. I personally believe that the multifaceted modeling process is indispensable to provide logical support for the resulting comprehensive model at the end, but it may be superfluous to some, and it may well be the demonstration of my underdeveloped communication skills, which might cause unnecessary confusions. So, I will try to make it a little easier by enabling readers to bypass demanding reading and diagram deciphering and head directly to the conclusion. I am not sure if it will work, but it appears the only available option to make communication more effective. For those who are not attracted to the process of successive graphic modeling and are not fascinated by the idea of going through burdensome mental exercises, it may be advisable to skip the next section on the modeling process and go straight to the conclusion.

3. Modeling Process

3.1. The First Issue: The Individual and the Social System

In Gardner's (1985) socio-educational model of second language acquisition (Figure 2-3), the influence of social context on an individual's attitudes is implicitly illustrated in the form of "cultural beliefs" in the social milieu; and a second language is acquired with a combination of the individual factors— affective factors (attitudes and motivation) and cognitive factor (language aptitude)—in the language acquisition contexts. In Spolsky's (1989) general model of language learning (Figure 1-2), social context affects a learner's attitudes and motivation as well as social provisions of learning opportunities; in the entire language learning process, the learner's affective elements join with other individual characteristics (such as ability, personality, age) and contextual factors to generate variability in linguistic/non-linguistic outcomes. Figure 8-2 gives the schematic summary of the processes of social/cultural influence in a language learning situation.

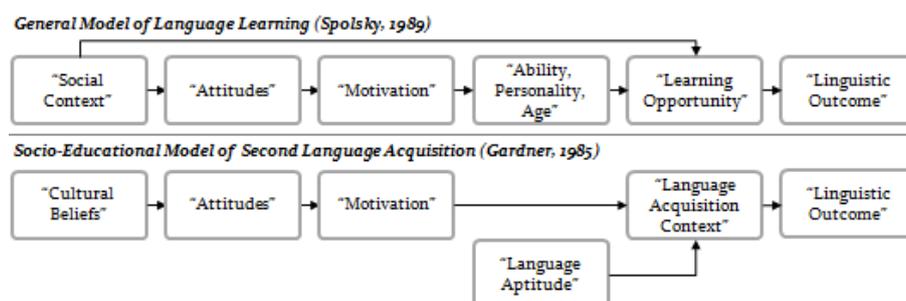


Figure 8-2: Schematic Summary of the Processes of Social/Cultural Influence in a Language Learning Situation

In Csizér & Dörnyei's (2005) internal structure of language learning motivation (Figure 2-7), perception of the outer world and its effect transmission to attitudinal variables are indicated by two arrows: one from *vitality of L2 community* to *instrumentality*, and another from *vitality of L2 community* to *attitudes toward L2 speakers*. Accordingly, I will further transform the economic-psychological modeling frame by bringing in the last remaining factor of the model, *vitality of L2 community*, as a cognitive receptor that connects the surrounding environment to the inner world of the individual. I introduce the variable to the newly transformed modeling frame, renaming it as *perceived reality*. As illustrated in the diagram below (see Figure 8-3), the effects of the contextual factors (*exposure/milieu*) are transmitted to the affective factors (*instrumentality* and *attitudes toward L2 speakers*) through the newly added cognitive factor, *perceived reality*. Other effect transmission of social contextual factors to the individual is represented by the links: from *exposure/milieu* to *instrumentality*; from *exposure/milieu* to *efficiency*²²¹; and from *exposure/milieu* to *self-confidence* to *cultural interest* and to *attitudes toward L2 speakers*²²².

Furthermore, as a first step to creating potential linkages between the individual and the social system, I subsume the above-mentioned two theoretical models to the economic-psychological modeling frame. I view the newly added element, *institutional opportunity structures*, (in Figure 8-3) as “learning opportunity” or “language acquisition context” (in Figure 8-2). Following the theoretical causal sequences illustrated in Figure 8-2, I make the following changes in Figure 8-3: (1) I draw a new arrow from *economic incentives/instrumentality* to *motivation* and put all of the affective factors in one box; (2) I replace the old arrow from *efficiency/language aptitude* to *economic incentives/instrumentality* with a new arrow from the box of affective factors to *efficiency/language aptitude* and another one from *efficiency/language aptitude* to *institutional opportunity structures*; and (3) based on Gardner's theoretical approach, rather than Spolsky's approach, new arrows from

²²¹ There is another link from *exposure* to *efficiency*. This link comes from the economic theory of language (Chiswick, 1978); it is not empirically confirmed by the internal structure of language learning motivation (Csizér & Dörnyei, 2005).

²²² The internal structure of language learning motivation (Csizér & Dörnyei, 2005) is a theoretically constructed model which is later empirically tested and confirmed using structural equation modeling. With regard to the interrelationship between social contextual variables (including ethno-linguistic vitality), self-confidence, and attitudinal/motivational factors, Csizér and Dörnyei (2005) base their theoretical construction of the model on the empirical and theoretical work conducted by Richard Clément and his associates. From a motivational perspective, the most important component surveyed by Clément is self-confidence, which generally refers to “the belief that a person has the ability to produce results, accomplish goals, or perform tasks competently” (Dörnyei, 2005, p.73). Clément, Gardner, and Smythe (1977) first introduced the construct to the L2 literature as the powerful factor that affects learners' motivation to learn and use the language of the other community. Later, more evidence was provided by Clément and his colleagues (cf. Clément, 1980; Clément & Kruidenier, 1985; cited in Dörnyei, 2005) and the findings consistently showed self-confidence was a decisive motivational factor in learning the other group's language; furthermore, self-confidence was found to determine the learners' desire for intercultural communication and the level of identification with the L2 group. Clément views that self-confidence is derived from the quality and quantity of the contact between the members of the L1 and L2 communities, and thus, is essentially a socially defined construct (differing from self-efficacy, a cognitive construct of motivational psychology). In the case of foreign language learning situations where direct contact with the L2 speakers are limited, Clément, Dörnyei, and Noels (1994) extended the applicability of the self-confidence construct by showing its effect through cultural interest (i.e., indirect contact with the L2 culture through the media) (Dörnyei, 2005).

motivation to institutional opportunity structures and from institutional opportunity structures to language proficiency are drawn, replacing all of the old arrows directly affecting the outcome.

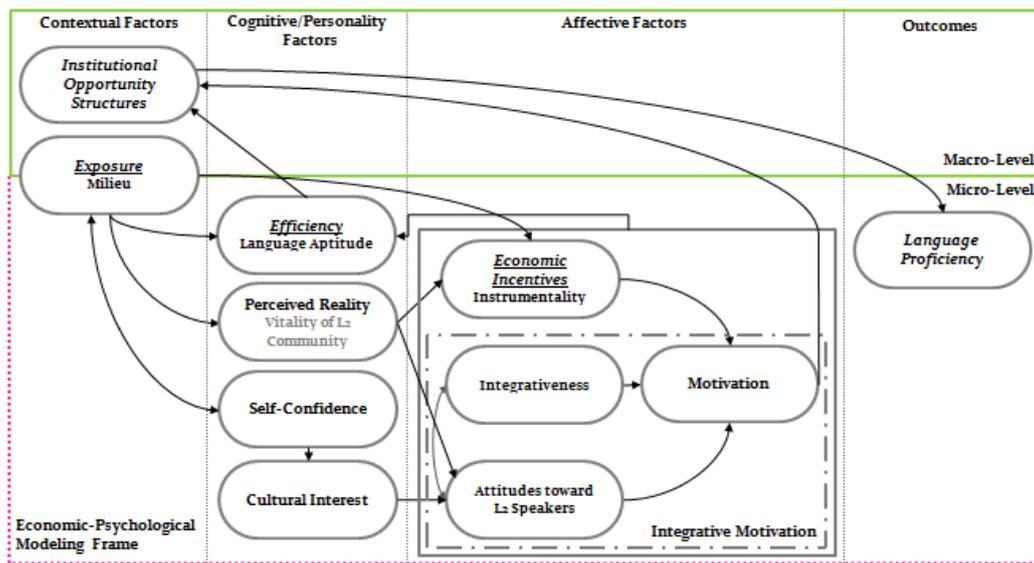


Figure 8-3: Transforming the Economic-Psychological Modeling Frame for Immigrant Language Acquisition

3.1.1. Base Model: Structure of a Social Influence Situation

In the following, I will introduce Kelman’s (1974) structure of a social influence situation which I use as the base model of the modeling exercises. Kelman (1974) defines social influence as “socially induced behavior change,” and says it occurs “whenever a person (P) changes his behavior as a result of induction by another person or group (the influencing agent)” (p.128). Figure 8-4 is a summary diagram of the theoretical model. The boxes in the diagram represent the different types of information (i.e., stimulus elements) with which the situation provides to a person (hereafter, P) whereas the channels indicate P’s responses to the information. The left-hand side of the diagram²²³ depicts P’s acceptance process of induced behavior while the right-hand side of the diagram²²⁴ shows “the psychological prerequisites for exposure, positive orientation, and adoption of the induced behavior” (Kelman, 1974, p.136).

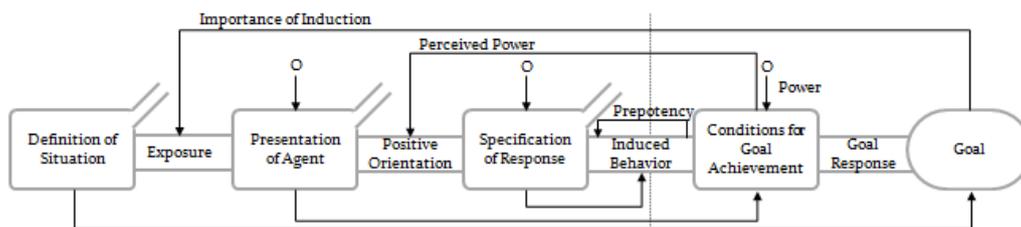


Figure 8-4: Diagram of the Structure of a Social Influence Situation²²⁵ (Source: Kelman, 1974, p.132)

²²³ “Positive social influence occurs if the situation is so defined that P exposes himself to induction, if the influencing agent is so presented that P is positively oriented to him, and if the induced behavior is so specified and facilitated that P is willing and able to adopt it in the face of various competing alternatives” (Kelman, 1974, p. 136).

²²⁴ The right-hand side of the diagram depicts P’s perception of the situation as well as anticipation of consequences upon his/her adoption of the induced behavior and tells that “P will adopt the induced behavior if he sees it as meeting the conditions for achieving a goal that he positively values” (Kelman, 1974, p. 136).

²²⁵ Power in the scheme is defined as “a basic determinant of influence, but it is defined and assessed, not in terms of ability to influence, but in terms of the relationship between P and O. Although propositions about the

The model is devised based on the assumption that three things must happen for an influence situation to culminate in positive influence and acceptance of induced behavior to emerge: (1) positive goal activation; (2) positive perception of the influencing agent; and (3) availability of a distinguished path leading to the induced behavior. At the initial stage of *definition of the situation*, the influencing agent (hereafter, O) deliberately informs P about what is at stake for him/her in the situation. Typically, O tries to communicate “an effective challenge to P’s existing beliefs, attitudes, or actions” to convince that they are not maximally conducive to his/her goal achievement by bringing some discrepancy to P’s awareness²²⁶. If the challenge is successful, P will be motivated to *expose* him/herself to the induction. If the challenge is unsuccessful P will leave the field. The broken-lined channel leading out of the first box represents the failure of the influence situation to culminate in a positive influence. In the second influence situation, *presentation of the agent*, O tries to convey a set of information (e.g., O’s status, prestige, group membership, knowledge/expertise, control of certain resources, ability to apply sanctions) that is designed to effectively persuade P that O has the relevance that is maximally conducive to P’s goal attainment. If this communication is successful, P will be *positively oriented* to O’s induction. If the communication is unsuccessful, P will remain uninfluenced by O’s induction and turn elsewhere for direction. In the third influence situation, *specification of the response*, the specific nature of the response that is being induced is communicated. At this stage, “the induced behavior is made readily available to P, both perceptually and behaviorally” (Kelman, 1974, p.135) by reducing uncertainties and ambiguities about the response content, and overcoming resistances and facilitating ways to performing the response (e.g., through step-by-step involvement or limited commitment). If the efforts are successful, P will be ready to adopt the induced behavior. If the efforts are unsuccessful, P will be inclined to opt for alternative courses of action. In other words, at this point, unless the induced behavior is transformed into a “distinguished path,” the influence situation will fail to culminate in positive influence. In summary, the generic scheme of a social influence situation informs that the steps in any given social influence situation may occur in various orders and combinations, but the above-mentioned all three conditions must be present for positive social influence to take place.

3.1.2. Transforming the Base Model

I begin the most important model transformation by reiterating the macro and micro dilemma. From a macro systemic point of view, the underlying question of the micro-macro problem may be: “How can macro phenomena be explained?” From a micro individual point of view, the same problem may be analyzed to address the following master question: “How can micro phenomena be explained?” Consequently, each camp employs different means to realize the seemingly opposing

effects of power refer to O’s power as perceived by P, it is possible to link O’s power systematically to his objective characteristics and his position within the social system relative to that of P” (Kelman, 1974, p.138).
²²⁶ Some examples of such discrepancy includes: “a discrepancy between P’s beliefs or attitudes and the evidence of reality or between P’s own attitudes and the attitudes of important others, or between P’s attitudes and his own actions” (Kelman, 1974, p. 134).

ends. On the one hand, in order to explain the instability and variability of macro phenomena, the strategy used by the macro camp is to maximize the stability and uniformity of the uncontrolled variables, and thus, minimize the micro-level assumptions on the hypothesized regularity. On the other hand, in order to explain the instability and variability of micro phenomena, the strategy utilized by the micro camp is to maximize the stability and uniformity of the uncontrolled variables, and thus, minimize the macro-level assumptions on the hypothesized regularity. Then, is there any way that can bring the two together?

A special advantage of conceptualizing social influence in terms of properties of the social system is that it helps to bridge analyses of social influence with analyses of social control. Both are concerned with linkages between the social system and the individual, except that social control analyzes these from the system point of view, while social influence analyzes from the point of view of the individual. More generally, social influence approached in this way may help to bridge a microanalysis of social behavior with a macroanalysis (Kelman, 1974, p.149).

As the above excerpt demonstrates, the key to creating linkages between the individual and the social system may lie in the integrative analysis of social influence and social control. Thus, turning Kelman's (1974) structure of a social influence situation into a model that is better fit for such an integrative macro-micro analysis may be the first step toward this end. I use Coleman's boat in the transformation process to try to bridge the two levels of analysis. I will present a concise summary of the tool and the rationales for the application.

3.1.3. Transformation Tool: Coleman's Boat

"From the point of view of a mechanism-based explanation, the basic entities that explain [social] phenomena are human agents and their relations" (Hedström & Ylikoski, 2010, p.59). Coleman (1987) introduces an analytical tool, which is commonly known as "Coleman's boat" (see Figure 8-5) to emphasize the importance of including the mechanism-based approach in the widespread (aggregate) model-based research practice in social sciences. The most common practice of macroanalysis is to put micro-level causal mechanisms into a 'black-box' and treat them as if they do not exist. Human agents are assumed to be preordained and predictable machines in order to minimize the bias in estimation and to maximize the estimation accuracy for optimizing the social system that should be designed to efficiently control the inputs and outputs of the machines. If such reasoning is the basis of hypothetical assumptions, the major research interest naturally becomes the macro-level associations (arrow 4 in Figure 8-5). On the contrary, mechanisms are built in an effort to disclose the 'black-box' and gain a deeper understanding of the causal mechanisms since the fundamental standpoint of mechanism perspectives is macro-level associations are inadequate in providing satisfactory explanations on human behavior and social outcomes.

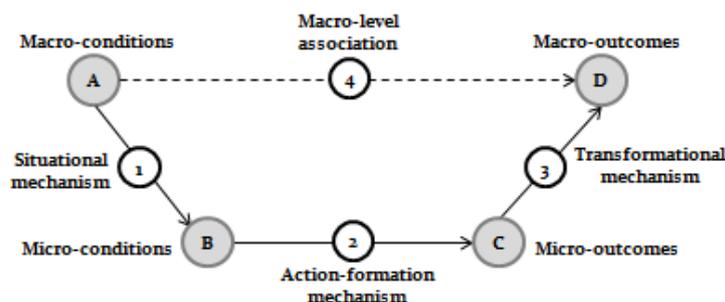


Figure 8-5: Coleman's Boat²²⁷

Therefore, Coleman's boat may provide a potential solution for overcoming the macro and micro dilemma and help us analyze these neglected aspects of social phenomena by shifting our cognitive paradigm from an exclusively macro-macro or micro-micro to a more inclusive one. In this analytical framework, situational mechanisms (arrow 1) identify how "social structures constrain individual's action and cultural environments shape their desires and beliefs," action-formation mechanisms (arrow 2) describe how individuals' desires and beliefs shape their actions, and transformational mechanisms (arrow 3) specify how their actions and interactions engender a range of "intended and unintended social outcomes" (Coleman, 1990; Hedström & Swedberg, 1998; cited in Hedström & Ylikoski, 2010, p.59). Accordingly, a macro-level association can be explained only by connecting the chain of situational (macro-micro), action-formation (micro-micro), and transformation (micro-macro) mechanisms. This perspective is highly appropriate for my endeavor to reflect on the conventional controversies between economics and psychology while pursuing an alternative to incorporate the interplay between the individual and the social system. Therefore, I use Coleman's boat as the primary tool to transform the base model by highlighting the importance of 'depth'—attitudinal/motivational factors—that functions in a social system.

3.1.4. Transformed Model and its Application

In Kelman's generic scheme of a social influence situation, the boxes represent the information with which the situation provides to an individual whereas the channels represent the individual's responses to the information (stimuli). In other words, it can be interpreted: the boxes represent the macro-level situational components of social control while the channels represent the micro-level processes of the psychological responses to the influence. Applying the Coleman's boat's macro-micro frame, the original flat model can be reorganized by sequentially placing the boxes²²⁸ above and the channels²²⁹ below. The downward dashed arrows are added to the transformed model to signify the points of intervention by the influencing agent for inducing individual behavior change (see Figure 8-5: Above).

²²⁷ Figure 8-5 (Coleman's Boat) is drawn by the author based on the figures produced by Hedström & Ylikoski (2010, p.59) and Raub, Buskens, & Van Assen, (2011, p.3).

²²⁸ Boxes are sequentially placed from 'definition of situation' to 'presentation of agent' to 'specification of response' to conditions for goal achievement' and 'goal.'

²²⁹ Channels are sequentially placed from 'exposure' to 'positive orientation' to 'induced behavior' to 'goal response.'

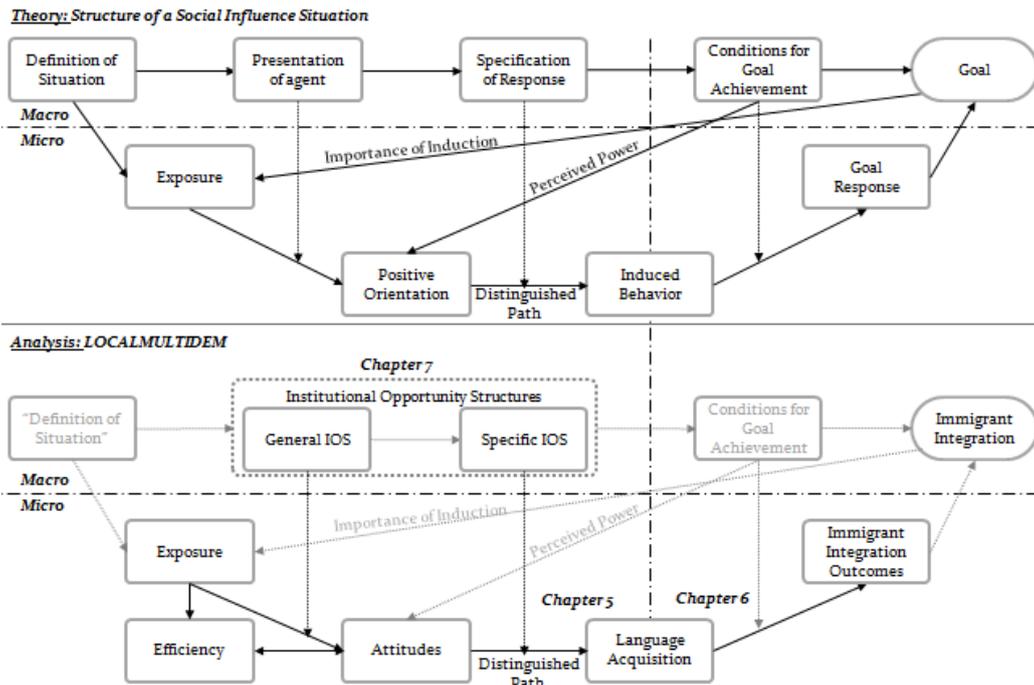


Figure 8-6: Transformed Structure of a Social Influence Situation (Above) and its Application (Bottom)

Furthermore, I apply the transformed structure of a social influence situation to organize and form interrelationships among varied factors that I have included in the empirical models. To be coherent with the theoretical framework used in the empirical investigation (i.e., the economic-psychological modeling frame for immigrant language acquisition), I add a box named *efficiency* and bring in *exposure* from the theoretical modeling frame. *Attitudes* refers to the affective factors in the modeling frame (i.e., *economic incentives/instrumentality*, *integrativeness*, *attitudes toward L2 speakers*, and *motivation*). Since immigrant integration outcomes are conceptualized as the consequences of language acquisition, *language acquisition* and *immigrant integration outcomes* can be correspondingly seen as ‘*induced behavior*’ and ‘*goal response*.’ I situate *general institutional opportunity structure* and *specific institutional structure* in the place of ‘*presentation of agent*’ and ‘*specification of response*,’ respectively. Lastly, *immigrant integration* is positioned as ‘*goal*’ although it is not included in the theoretical modeling framework or empirical analyses²³⁰ (See Figure 8-6: Bottom).

In Chapter 5, multivariate regression analyses were conducted to identify the micro-level determinants of immigrant language acquisition. Similarly, in Chapter 6, statistical analyses were carried out to identify the micro-level determinants of immigrant integration with a special focus on the mediation effect of destination language proficiency on the integration outcomes. In Chapter 7, I first analyzed the relationship between the city-level structural factors (i.e., institutional opportunity structures) and the individual-level linguistic outcome. Referring back to Coleman’s boat (Figure 8-5), what I basically did in the first part of the analysis was simply looking at the diagonal link from

²³⁰ The two remaining macro components (‘*definition of situation*’ and ‘*conditions for goal achievement*’) are not specified in the diagram, but they will be included later in the micro-macro modeling scheme.

macro-conditions (A) to micro-outcomes (C), disregarding micro-conditions (B) and macro-outcomes (D). Later, the effects of micro-conditions on immigrant language acquisition outcome analyzed in Chapter 5 were brought into the second part of the analysis to examine the micro-macro pooled effects on the micro-outcome. The pictorial illustration of the joint effect analysis is depicted in the left-hand side of Figure 8-6 (Bottom).

What I have done so far, especially with the combined analysis of Chapter 5 and 7, is to establish a macro-to-micro link or to address the so-called “bridge problem” (arrow 1 in Figure 8-5). Yet, the toughest intellectual difficulty is known to be the “micro-to-macro problem” or more commonly referred to as the “transformation problem” (arrow 3 in Figure 8-5) where the most interesting link between theory and research lies—the link showing the movement from the individual level to the systemic level (Coleman, 1987). The relevant research question to be asked for resolving the “transformation problem” of this research may be: How is the ‘induced behavior’ related to the ‘goal response’; and how these ‘micro-outcomes’ (goal response) may be related to ‘macro-outcomes’? This is the issue that I will now turn to.

3.1.5. Reinterpreting Empirical Results

With regard to the question of how is the ‘induced behavior’ (i.e., language acquisition) related to the ‘goal response’ (i.e., immigrant integration outcomes), the multivariate analysis results suggest that destination language proficiency is the most consistent factor that positively influences all of the integration outcomes²³¹. Among the ten European cities included in the cross-sectional survey datasets (LOCALMULTIDEM), language proficiency was positively associated with employment (in three cities), citizenship acquisition (in six cities), and political interest (in four cities). Thus, the induced behavior tends to be positively related to the goal response in the European city cases.

However, this examination on the induced behavior-goal response relationship alone does not give much insight to respond to another question I have raised earlier: “How these ‘micro-outcomes’ may be related to ‘macro-outcomes’?” Such a question cannot be easily answered because it inevitably requires investigators to expand their conceptual paradigm to the systemic level within which individuals act. In an effort to respond to this question, I reinterpret a general tendency observed in the empirical analysis.

In the process of modeling immigrant political integration (in Chapter 3), I hypothesized based on the empirical evidence found in the previous studies on the social capital approach and

²³¹ For examining the effect of ‘destination language proficiency’ on immigrant integration outcomes, ‘language proficiency’ as ‘a form of capital’ was used for the conceptualization (thus, the indicator used includes native speakers of the destination language). Hence, ‘language acquisition’ measured with the indicator does not perfectly fit the definition of ‘induced behavior,’ at least, in relation to goal responses (For details on the measurements, refer to *Chapter 4:1.4. Measures*). Nevertheless, the current investigation may be still worthwhile for exploring the role of language (skills) in immigrant integration process that operates in a social system.

applied studies on Kelman's three-process model of social influence that: *social group involvement (an indicator of role orientation or identification) and destination language proficiency and citizenship (indicators of value orientation or internalization) are positively related to immigrant political integration while the association between employment status (an indicator of rule orientation or compliance) and political integration would be insignificant*²³².

The empirical analysis results confirmed the hypothesized relationship; social group involvement and language proficiency and citizenship were positively related to immigrant political integration while the association between employment status and political integration tended to be inconsistent and insignificant²³³. From a behavioral perspective, the result can be interpreted that those who have acquired a higher level of social connectivity, destination language proficiency, and/or citizenship have a higher propensity for engaging in the destination city/country's political affairs whereas those only with employment status are much less inclined to show political behavior. From an attitude/motivation-oriented perspective, the same result can be alternatively interpreted that those who show role orientation (identification) and value orientation (internalization) to the polity are more inclined to involve in and commit to the political system while acceptance of political influence tends to be inconsistent for those with preference for rule orientation (compliance).

3.1.6. Designing a Micro-Macro Modeling Scheme

The underlying aim of the research design was intimately related to the question of "what affects immigrants to acquire capital and how is it generated?" The hypothesis was developed to try to identify how the individual differences in preference for psychological processes determine the level of prosocial behavior. Following O'Reilly and Chatman's (1986) general research design on organizational commitment and applying it to the level of analysis relevant to this research, I conceptualized immigrant political integration (operationalized as political interest) as extra-role or prosocial behavior²³⁴. If the goal of immigrant integration is defined as increasing the level of collective capital generation, then the conditions for goal achievement should be arranged in a way maximally conducive to the goal achievement. If prosocial behavior measured by political interest can be conceptualized as a contributing factor to capital generation, it becomes an operationalized measure of the goal. In the modeling framework, I conceptualized structural integration to the economy and polity as the means to achieve intended social goals. Therefore, I view the *economy* and *polity* as the 'conditions for goal achievement.'

²³² For more details on the hypothesis development, refer to *Chapter 3: 3.3. Step 3: Developing a Model of Immigrant Political Integration*.

²³³ In the analysis, social group involvement demonstrated the most consistent pattern across the cities (Barcelona, Geneva, London, Lyon, Milan, Oslo, Stockholm, and Zurich). A positive association of other acquired capital variables with political interest is observed in four cities (Barcelona, London, Lyon, and Oslo) for language proficiency, in three cities (Barcelona, Lyon, and Milan) for citizenship, and only one city (Milan) for employment. For more detailed analysis results, refer to *Chapter 6: 4.5. Results* and *4.6. Discussion*.

²³⁴ For more details, see *Chapter 3: 3.3.4. Application of the Three-Process Model of Social Influence* and *3.3.5. Hypothesis*.

Within the conceptualized framework, the key factors of capital generation (or the goal achievement) are the individuals in the system, thus, the conditions for goal achievement need to be linked to the goal response (micro-outcomes). After reviewing the literature on the effects of immigrant language acquisition (mainly in economics, sociology, and political science) and considering the availability and validity of indicators in the datasets, I selected employment status, citizenship, and political interest as the main goal response variables, adding social group involvement to examine its interrelations with others.

In sum, one way to resolve the “transformation problem” may be to see the different levels of outcomes from different perspectives such as: “Micro as individual interactions with limited scope and macro with societal scope (Wippler & Lindenberg, 1987)” (Munch & Smelser, 1987, p.357). In other words, from a systemic point of view, goal response variables represent sub-goals within a subsystem that are connected to the collective goal achievement (macro-outcome); from an individual point of view, goal response variables indicate the level of personal achievement in a situated context (which may also indicate the level of acceptance, involvement, or commitment to a system) through adopting the induced behavior.

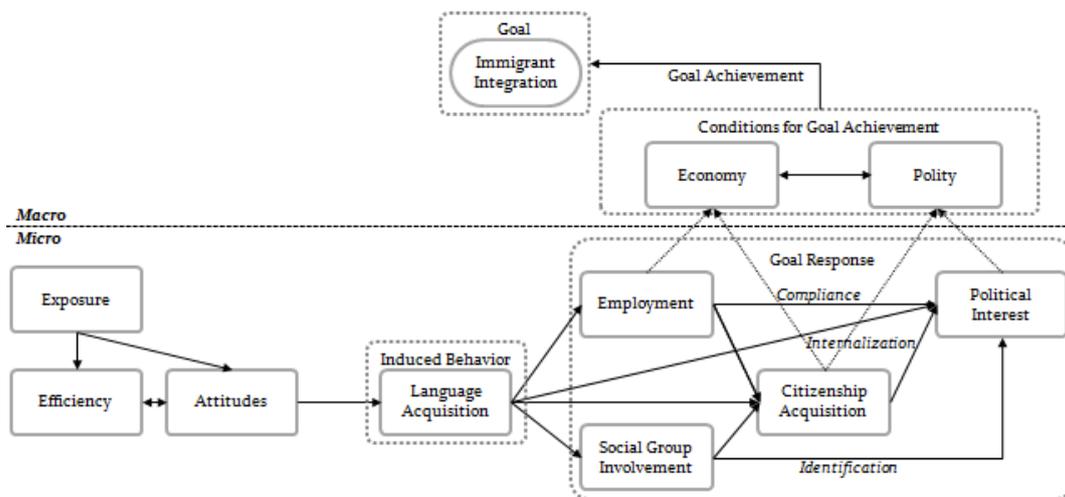


Figure 8-7: Designing a Micro-Macro Modeling Scheme

Figure 8-7 gives the schematic summary of the conceptual exercise I have conducted with an intention to design a micro-macro modeling scheme, a canvass to draw diagrams to establish micro-macro links. The work is not yet satisfactory because it does not inform how social influence affects individual attitudes to induce behavior change. Put it differently, as I view capital generation as a joint process between macro and micro dynamics, appropriate downward arrows from macro to micro should be introduced to the diagram. It requires an in-depth analysis from a systemic perspective in order to understand how socially induced behavior change may occur. Such an analysis entails careful consideration on affective/motivational factors. In other words, the ‘why’ of human behavior heeds special attention. It seems it is the right moment to engage in the second issue because the subject

matters involved in second language learning motivation and attachment to a social system are closely interrelated.

3.2. The Second Issue: Economics and Psychology

Here I return to the second issue of the economic-psychological modeling frame for immigrant language acquisition to spotlight the attitudinal/motivational factors and their interrelations. On a larger scale, the debate on ‘instrumentality’ vs. ‘integrativeness’ is related to the disciplinary divide between economics and psychology. So, finding a mediating factor and/or linkage between the two representative affective factors also means settling the dispute and building a spirit of collaboration.

The most important feature Csizér and Dörnyei (2005) found as the final outcome after conducting a series of multivariate statistical analyses was that two primary measures of motivated learning behavior (‘intended effort’ and ‘language choice’) were directly affected only by ‘integrativeness.’ Locating integrativeness at the center of the whole structure is in line with the importance attached to Gardner’s (1985) original concept. Another significant feature emerged was ‘integrativeness’ played a significant role in mediating the effects of all the other attitudinal/motivational variables on the measures of motivated learning behavior. The immediate antecedents of ‘integrativeness’ were ‘instrumentality’²³⁵ and ‘attitudes toward L2 speakers’ (see Figure 2-7 for the final model of the internal structure of language learning motivation).

Although instrumentality has never been the main theme, Gardner and his colleagues have strongly rejected the claim often made by many other L2 scholars that instrumentality and integrativeness are antagonistic counterparts (Gardner & Tremblay, 1994). To conceptualize instrumentality in his theoretical framework, Gardner (2001) later added it labeling “other support” (see Figure 8-8 for the latest version of the model). He explained the change as: “there can be other supports for motivation not directly associated with integrative motivation. Thus, there may be instrumental factors contributing to motivation, and we could label this combination of instrumental factors and motivation as Instrumental Motivation” (Gardner, 2001, p.7).

Within the L2 motivational self system, instrumentality is seen not only as a supplement of integrativeness but also as a primary contributor that feeds into integrativeness. If one’s ideal self is related to the L2 mastery, the idealized self image becomes a cognitive representation of all the incentives linked to L2 mastery. One’s ideal self image may be associated with either personally agreeable self or professionally successful self but it is often simultaneously linked to both self images (Csizér & Dörnyei, 2005). This implies that ‘integrativeness’ might be the connector between instrumental and integrative dispositions as well as between economics and psychology.

²³⁵ Instrumentality refers to the perceived pragmatic, utilitarian benefits of L2 proficiency.

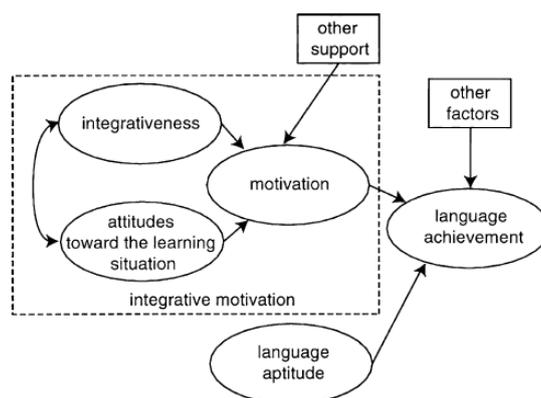


Figure 8-8: Integrative Motivation within the Socio-Educational Model of Second Language Acquisition
(Gardner, 2001, p.4)

3.2.1. Base Matrix: Patterns of Personal Involvement in the National Political System

In this section, I introduce Kelman’s (1969) patterns of personal involvement to the national political system (Figure 8-9) to deepen the understanding of the complex psychological processes in a social influence situation. I use it as the base matrix of the subsequent modeling primarily because it broadens the conceptual possibilities to connect economics (pragmatic instrumental disposition) and psychology (sentimental integrative disposition) and opens the possibilities to apply the psychological mechanism to individual behavior that operates in a system.

Kelman (1969) distinguishes two possible sources of an individual’s attachment to the political system that might motivate acceptance of influence: sentimental attachment and instrumental attachment. “Individuals are sentimentally attached to the state to the extent that they see it as representing them and reflecting the population’s (and their own) ethnic and cultural identity. Individuals are instrumentally attached to the state to the extent that they see it as meeting the population’s (and their own) needs and interests” (Kelman, 2006, p.14). This view is coherent with the dual-pathway model of collective action: One way to commit to the polity is through the collective identification pathway; and another way is through the cost-benefit calculation pathway. Such underlying concerns for accepting influence explain the ‘why’ part or motivation of human behavior.

As briefly mentioned in the process of modeling immigrant integration in Chapter 3, there are three different types of orientation that individuals accept social influence; rule orientation, role orientation, and value orientation, respectively, concern about complying with social rules, identifying with social roles, and individual-social value congruence (Kelman, 1958, 1961, 1969, 2006). Combining the two motives of involvement in the political system (i.e., sentimental and instrumental attachments) and three types of orientation in accepting social influence (i.e., rule, role, and value orientations), the following six patterns of involvement in the political system emerge (see Figure 8-9).

Sources of attachment to the political system	Types of orientation to political processes		
	Rule orientation (compliance with societal rules)	Role orientation (identification with societal roles)	Value orientation (internalization of societal values)
Sentimental	Acceptance of rules that secure person's inclusion in society	Involvement in role of national citizen which enhances person's sense of status	Commitment to basic cultural values for which the society stands
Instrumental	Acceptance of rules that protect person's interests	Involvement in societal roles that contribute to person's status	Commitment to values underlying institutional arrangements

Figure 8-9: Patterns of Personal Involvement in the National Political System
(Source: Kelman, 2006, p.14)

3.2.2. Redesigning the Base Matrix

According to Kelman (2006), these three types of political orientation can be correspondingly defined in terms of the “three components of a social system through which members may be bound to it: rules, roles, and values, which are linked to the processes of compliance, identification, and internalization, respectively” (p.14-15). Therefore, the three orientations can be better understood if they are conceived as ‘ideal types’ or ‘what’ individuals are cognitively or affectively oriented toward, and the three processes as different ‘pathways’ in which ‘how’ sentimental and instrumental attachments may be channeled and guide individuals to the different ideal types to form loyalty and support to the system. In other words, the Kelman’s matrix above generated by two qualitative dimensions of ‘why’ (motivating sources) and ‘what’ (orientations) yield ‘how’ psychological processes operate in a system. Thus, the matrix can be redesigned and pictorially summarized as in Figure 8-10. I call it an internal process model of personal involvement in a system.

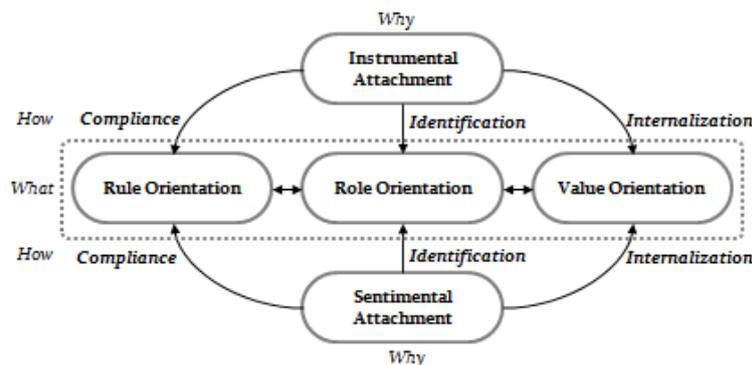


Figure 8-10: An Internal Process Model of Personal Involvement in a System

Kelman (2006) mentions that the three different types of orientation are not necessary mutually exclusive, so as the six patterns of personal involvement in the national political system; a given individual or subgroup within a given system may employ predominantly one or two, but various combinations of the patterns are possible and expected. Nonetheless, to have simplicity, I will explain the diagram based on the assumption that different individuals and groups relate themselves in different ways to a system by referring to Kelman’s (1969, 2006) original six patterns of personal involvement in the national political system. If attachment to a system is directed toward rule

orientation, individuals are inclined to take compliance pathway. Likewise, if attachment to a system is oriented toward role orientation, individuals are likely to take identification pathway; and if attachment to a system is headed for value orientation, individuals tend to take internalization pathway.

Depending on the origin of the motivating sources, different pathway is activated and used to reach to each type of orientation. On the one hand, if the motivating source of attachment is sentimental or self-maintenance concerns, an individual may accept social influence either by complying with social rules to gain approval or avoid disapproval from the other (compliance), or by enacting the role of the other to enhance one's sense of status (identification), or by internalizing cultural values to maintain the affective appropriateness of one's behavior and self-concept (internalization). On the other hand, if the motivating source of attachment is instrumental, an individual may accept social influence by complying with social rules to gain a specific reward or protect one's interests (compliance), or by meeting reciprocal-role expectations to establish or maintain a rewarding social relationship (identification), or by internalizing social values to maximize one's own values and realize the cognitive consistency of one's behavior (internalization) (Kelman, 1969, 2006).

3.2.3. Creating an Internal Process Model of Motivation

To better capture the six patterns of personal involvement in the national political system, I previously turned the matrix (see Figure 8-9) into a diagram (see Figure 8-10), locating and relating the different psychological dimensions of 'why' (two motivating sources: instrumental and sentimental attachments), 'what' (three orientations: rule, role, and value orientations), and 'how' (six patterns/pathways from 'why' to 'what'). Now, I extend and integrate the diagram (i.e., an internal process model of personal involvement in a system) with Dörnyei's (2005) theory of the L2 motivational self system²³⁶ to improve understanding of the conceptual inner workings of the affective factors.

The L2 motivational self system is comprised of three different dimensions: (1) *Ideal L2 Self* that is an image of how L2 learners want to see themselves; (2) *Ought-to L2 Self* that is the characteristics that L2 learners believe ought to acquire due to obligations and responsibilities to avoid possible negative consequences; and (3) *L2 Learning Experience* relates to situation-specific motives, which are influenced by the immediate learning environment (e.g., the impact of L2 teachers, peer group, and curriculum). The last component is conceptualized at a different level from the two self-guides, so I disregard the last one and use the former two for this theoretical exercise.

Although the two scholars' conceptual definitions might not completely overlap, Dörnyei's 'ought-to L2 self' can be placed somewhere between Kelman's 'rule orientation' and 'role orientation'

²³⁶ For the description of Dörnyei's (2005) L2 motivational self system, refer to *Chapter 2: 4.2.2. L2 Motivational Self System*.

and ‘ideal L2 self’ somewhere between ‘role orientation’ and ‘value orientation’²³⁷. I keep the six pathways that are derived from the three processes of social influence. In accordance with the traditional definition of Gardner’s ‘integrativeness’ that “might involve complete identification with the community” (Gardner, 2001, p.5), it is most relevantly grouped with role orientation. As it has already been conceptualized by Dörnyei (2005) and empirically confirmed by Csizér and Dörnyei (2005), ‘integrativeness’ is placed along with ‘ideal L2 self’ but may not totally overlap. Furthermore, situating ‘motivation’ to the diagram and making associated linkages, the three extended pathways come into sight (illustrated by dashed arrows in Figure 8-11): (1) compliance pathway that links the rule orientation to motivation; (2) identification pathway that connects the role orientation to motivation; and (3) internalization pathway that connects the value orientation to motivation. I call the conceptual model an internal process model of motivation (Figure 8-11).

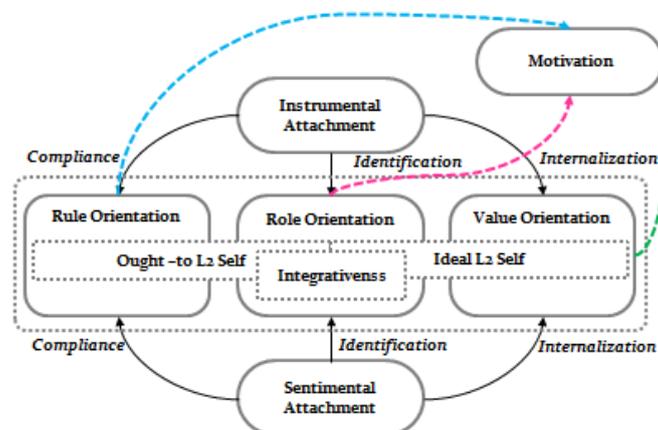


Figure 8-11: An Internal Process Model of Motivation

Dörnyei (2005) explains how different types of instrumentality can be differently channeled by applying the distinction made between an ideal self-guide’s promotion focus and an ought self-guide’s prevention focus in Higgins’ self-discrepancy theory (1987, 1998)²³⁸. Accordingly, Dörnyei (2005) formulates two types of instrumentality depending upon “the extent of *internalization*”²³⁹ of extrinsic motives that make up instrumentality” (Csizér & Dörnyei, 2005, p.29; italics added): one type associated with an ideal self and another type associated with an ought self. In the former case, if instrumental motive is internalized with an ideal self-guide’s promotion focus activated by hopes,

²³⁷ The vision, dream, or image of a desired future is the core content of the ideal self. In this sense, ‘ideal L2 self’ is associated with ‘value orientation,’ but the concept of ‘ideal L2 self’ used in the L2 motivational self system is also closely related to ‘role orientation.’

²³⁸ Higgins (1987, 1998) explains a contrasting approach/avoid tendency using future self-guides concept: “ideal self-guides have a *promotion* focus, concerned with hopes, aspirations, advancements, growth, and accomplishments (i.e. approaching a desired end-state); and ought self-guides that have a *prevention* focus, regulating the absence or presence of negative outcomes, and are concerned with safety, responsibilities, and obligations (i.e. avoidance of a feared end-state)” (Dörnyei, 2009, p.28).

²³⁹ Kelman’s definition of ‘internalization’ does not perfectly match with the Dörnyei’s use of the term. Dörnyei’s ‘internalization’ may take three different pathways (i.e., compliance, identification, and internalization) depending upon the extent of internalization of instrumental/sentimental attachment and the type and intensity of activation of the self-guide’s focus (i.e., the internal mechanism within which the instrumental/sentimental motives are channeled and linked to motivation). See *Figure 8-11* for the re-interpretation of the existing theoretical framework.

aspirations, or wishes toward a desired end-state (e.g., learning a L2 for professional advancement), it contributes significantly to generating the sustained long-term commitment that the successful mastery of a L2 requires²⁴⁰. On the contrary, in the case of non-internalized instrumental motivation with an ought self-guide's prevention focus triggered by a mere sense of duty or a fear of punishment (e.g., studying a L2 to avoid failing the exam), it is most likely to be short-term, failing to provide the sustained commitment that leads to language learning success²⁴¹. Similarly, the internalization process of instrumental motivation can be applied to explain that of sentimental motivation although Dörnyei (2005, 2009) does not mention about it in his theory. If sentimental motive (attachment) is internalized with an ideal self-guide's promotion focus (e.g., learning a L2 for maintaining a satisfying self-defining relationship), the motivation to master the language is more likely to be sustained for a long time²⁴². On the contrary, non-internalized sentimental motivation with an ought self-guide's prevention focus (e.g., learning a L2 for avoiding being ostracized) is most likely to be transitory and weak in its intensity to keep the driving force going toward a goal²⁴³.

In summary, the L2 motivational self system theorized based on cognitive-oriented motivational psychology and personality psychology highlights the missing aspect of Gardner's social-psychologically rooted model. In other words, while Gardner focused on identification pathway (more specifically, the links from personal attitudes toward L2 community to role orientation to motivation), Dörnyei (2005) explored the other possible pathways by reinterpreting the concept 'integrativenss' "in a way that goes beyond the literal meaning of the verb 'integrate'" (p.94). With an assumption that 'instrumentality' and 'attitudes toward L2 speakers' respectively correspond to 'instrumental attachment' and 'sentimental attachment,' Csizér and Dörnyei's (2005) findings that 'instrumentality' and 'attitudes toward L2 speakers' are the direct antecedents of 'integrativenss (ideal L2 self)' are theoretically coherent with the identification (internalization) pathway in terms of Kelman's three psychological processes (see Figure 8-11). Moreover, further applying the Kelman's conceptual framework, their empirical results can be reinterpreted: on the one hand, identification (and/or internalization) pathway is conducive to generating long-lasting motivated learning behavior primarily because 'integrativeness (ideal L2 self)' is the sole factor that directly affects motivated learning behavior; on the other hand, the effect of motivation generated through compliance pathway tends to be short-term, and thus, its association with motivated behavior is statistically insignificant.

²⁴⁰ Based on the assumption that 'instrumentality' corresponds to 'instrumental attachment,' the source of motivation is presumed to be channeled via the identification/internalization pathway from 'instrumental attachment' to 'ideal L2 self' to 'motivation' (see *Figure 8-11*).

²⁴¹ Based on the assumption that 'instrumentality' corresponds to 'instrumental attachment,' the source of motivation is presumed to be channeled via the compliance pathway from 'instrumental attachment' to 'ought-to L2 self' to 'motivation' (see *Figure 8-11: An Internal Process Model of Motivation*).

²⁴² Based on the assumption that attitudes toward L2 speakers' corresponds to 'sentimental attachment,' the source of motivation is presumed to be channeled via the identification/internalization pathway from 'sentimental attachment' to 'ideal L2 self' to 'motivation' (see *Figure 8-11*).

²⁴³ Based on the assumption that 'attitudes toward L2 speakers' corresponds to 'sentimental attachment,' the source of motivation is presumed to be channeled via the compliance pathway from 'sentimental attachment' to 'ought-to L2 self' to 'motivation' (see *Figure 8-11*).

This provides corroborating evidence for the previous research on organizational commitment (O'Reilly & Chatman, 1986) that identification and internalization are positively related to extra-role performance or prosocial behavior while its association with compliance tends to be insignificant.

However, what Gardner's socio-educational model of second language acquisition and Dörnyei's L2 motivational self system do not clearly specify and elaborate on is the interactions between the individual and the environment or a person-in-context relational side of the story. Second language acquisition research has a long tradition of situated approach which studies the motivations associated with the learners' immediate learning contexts (e.g., classrooms), and thus, complements the non-situation-specific or generalized motivation research. Nonetheless, it is very rare to find such studies in the case of immigrant language acquisition in the immediate social contexts (e.g., language learning behavior in destination social settings). In the following section, I will draw some attention on the missing dimension because, unlike language learners in classroom settings, the major concern of language acquisition for immigrants is not the end outcome, but is usually a possible means to attain the end within the system they are situated in. If that is the case, from a micro-macro interactive perspective, it is more appropriate to be considered as a form of induced behavior to realize personal desires and societal goals. Therefore, individual's psychological processes in a social influence situation need to be seen as "a classification of different types of linkages between individual and social system, rather than of different types of personality functions" (Kelman, 1974, p. 127-128). To situate the individual in a social influence situation, reconceptualization of Dörnyei's (2005) 'integrativeness as the ideal L2 self' seems inevitable.

3.2.4. Reconceptualizing 'Integrativeness'

If Gardner's 'integrativeness' is reconceptualized as the 'ideal L2 self' in reference to Dörnyei's (2005) L2 motivational self system, learners are motivated to master the target language in order to reduce a discrepancy between the actual self and the ideal self. However, this new concept of 'integrativeness as the ideal L2 self' somehow isolates the self that exists in relation to others. In other words, the L2 motivational self system tends to view individual's psychological processes on the basis of individual differences or different types of personality functions, thereby making it difficult to establish micro-macro links (especially, micro-to-macro links). While acknowledging the significance of the research, reconceptualization appears indispensable to widen and deepen the linkages.

To initiate the process, I first reconceptualize 'integrativeness as the ideal L2 self' as 'the ideal self in an imagined social reality.' This new conceptualization relates to the "imagined community" proposed by Norton (2001) on the basis of Wenger's (1998) conception of "imagination as a form of belonging to a community." According to Norton, the imagined community is constructed by a mixture of past experiences and factual knowledge as well as imaged factors connected to the future. Under the new definition of 'integrativeness as the ideal self in an imagined social reality,' therefore, one can be said having an integrative disposition if one's ideal self in an imagined social

reality is associated with the mastery of a second language (L2) in an imagined L2 community. In other words, the mastery of L2 is not only about a matter of the individual self but its cause (past) and effect (future) are always connected to others in the situated context (present), and thus, subject to the influences from and to the outer world, including the social system.

3.2.5. Toward a Model of Immigrant Language Acquisition and Integration

This reconceptualization opens a way to highlight the importance of the *affective motivating sources* that are aroused by the influence from others in the real world as a form of ‘perceived reality’ in relation to the *images* envisioned in the imagined world as a form of ‘imagined reality.’ To clarify, the former concerns the causal relationships between the outer and the inner worlds within the domain of perceived reality, and the latter relates to the inner mechanism of how the socially-influenced motivating sources are oriented and channeled in relation to the self images in the imagined reality. Kelman’s social influence model refers to the former as instrumental and sentimental attachments and the latter as three types of orientation. Likewise, Csizér and Dörnyei’s (2005) internal structure of language learning motivation refers to the former as instrumentality and attitudes toward L2 speakers and the latter as integrativeness or ideal L2 self. Accordingly, I group *instrumental attachment* with *instrumentality* and *sentimental attachment* with *attitudes toward L2 speakers*.

Csizér and Dörnyei’s (2005) empirical findings also inform that *instrumentality* and *attitudes toward L2 speakers* are directly influenced by *vitality of L2 community (perceived reality)*, implying social influence comes into individuals through perception and its effect is positively or negatively transmitted to the two affective motivating sources. In theory, the internal processes of learning motivation and/or of social influence can be described as follows: (1) socially-influenced drivers of motivation activate the internal processes by channeling them to different self images or types of orientation; (2) the differences in how the motivating sources are channeled (i.e., pathways) produce differences in the outcome (e.g., the intensity and quality of motivation); (3) the psychological outcome differences lead to variability in behavioral outcomes; and (4) the micro-outcome differences can be related to variation in macro-outcome. Hence, based on the empirical evidence and further theoretical assumptions made, I finalize the economic-psychological modeling frame for immigrant language acquisition by inserting the internal process model of motivation to the modeling frame (see Figure 8-12). This merger of the two theoretical works along with the extended theoretical assumptions allow the modeling frame to be expanded to include *immigrant integration outcomes* as the consequences of language acquisition (*language proficiency*); the transformed modeling frame becomes a model of immigrant language acquisition and integration (Figure 8-12). This conceptual model provides the principal rationale and foundation for the subsequent micro-macro interactive modeling.

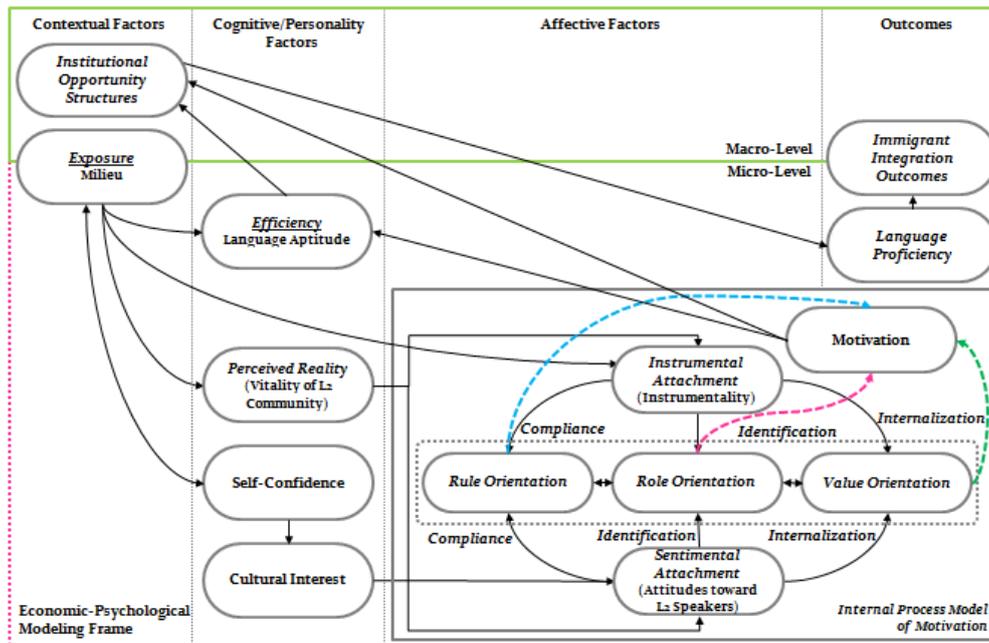


Figure 8-12: A Model of Immigrant Language Acquisition and Integration

3.3. Micro-Macro Interactive Modeling Exercise

Based on the work presented in the previous part, I will now return to the micro-macro modeling scheme (see Figure 8-7) to analyze how social influence may affect individual attitudes to induce behavior change. Such an analysis requires not only understating the intricate inner workings of human psychology from a micro individual perspective but also from a macro systemic perspective. In a simpler language, downward arrows from macro to micro need to be relevantly added to the scheme. I will initiate the process by referring to Kelman's (1974) structure of a social influence situation from a system point of view. Although I openly admit a number of limitations of the empirical measures and methods used throughout the production process of this work, I will still try and apply theory to research. As a prerequisite to carry out the trial modeling based on the empirical results, I will operationalize some of the related theoretical constructs to make crucial associations with the not-so-perfect measurements used in the empirical models.

3.3.1. Determinants of Social Influence

The task at hand is to examine how social influence may affect individual attitudes to induce behavior change. I apply a few more elements from Kelman's (1974) structure of a social influence situation to append extra components and links to the micro-macro modeling scheme. As above-mentioned, Kelman (1974) delineates three conditions for an influence situation to culminate in positive influence and an individual to accept the induced behavior: (1) positive goal activation; (2) positive perception of the influencing agent; and (3) availability of a distinguished path leading to the induced behavior. He also describes the three conditions as the three vital determinants of the probability of influence from a systemic perspective. Using his original language, they are: (1) the relative importance of the induction; (2) the relative power of the influencing agent; and (3) the

prepotency of the induced behavior²⁴⁴.

The *relative importance of the induction* refers to the extent to which a person (P) perceives the influence situation as having motivational significance for him/her. The importance of the induction is dependent on “the strength of the motives that have been aroused in the situation” and “the perceived relevance of the situation to these motives” (Kelman, 1974, p.138). This relates to the condition for the initial stage of positive goal activation to occur at a micro-level. The *relative power of the influencing agent* refers to the extent to which P sees the influencing agent (O) as instrumental to his/her goal achievement. O has power over P insofar as O is in a position to influence P’s goal attainment; therefore, the O’s power over P arises from O’s capacity to control the conditions for P’s goal achievement (e.g., controlling resources, having the right to apply certain sanctions, possessing expertise/knowledge) and the perceived or assessed intentions of O (e.g., manipulateness, ruthlessness, and trustworthiness). If the power of the influencing agent is perceived positively, the individual is more likely to accept the influence. The *prepotency of the induced behavior* refers to “the extent to which that behavior emerges as most clearly relevant in the context of the motivations that have been activated in the situation” (Kelman, 1974, p.138-9). The induced behavior becomes prepotent either by strengthening the induced behavior²⁴⁵ or weakening alternatives²⁴⁶. Prepotency is usually achieved through some combination of the two and making apparent the special advantages of the induced behavior relative to various other options. In other words, a distinguished path leading to the induced behavior must be available for the individual to accept the influence and the induced behavior to become prepotent.

3.3.2. Redesigning the Micro-Macro Modeling Scheme

In this section, I will add more elements to the micro-macro modeling scheme. I first place ‘perceived reality’ and replace the bidirectional arrow between ‘efficiency’ and ‘attitudes’ with two unidirectional arrows to be coherent with the model of immigrant language acquisition and integration (see Figure 8-12). Next, I bring in the remaining macro-level elements depicted in the transformed structure of a social influence situation (Figure 8-6): ‘definition of situation’ and ‘institutional opportunity structure’,²⁴⁷. Furthermore, applying the Kelman’s theory, three downward arrows are

²⁴⁴These three determinants are indicated respectively as ‘importance of induction,’ ‘perceived power’ and ‘prepotency’ in *Figure 8-4: Diagram of the Structure of a Social Influence Situation*.

²⁴⁵ Strengthening the induced behavior can be achieved: “for example, by making the response itself more distinctive, by linking it clearly to the conditions for goal achievement, by minimizing discomforts that inhibit its performance, by structuring the situation so that the person is gradually eased into performing it, by socially facilitating performance of the response, or by introducing situational demands and pressures that can best be met by performing the induced response” (Kelman, 1974, p.139)

²⁴⁶ Weakening alternatives can be achieved: “for example, by increasing the overall ambiguity of the situation, by demonstrating the ineffectiveness or counterproductiveness of these responses for the achievement of P’s goals, by blocking performance of such responses or making it uncomfortable, or by making it difficult for P to engage in evasive maneuvers or to leave the field” (Kelman, 1974, p.139)

²⁴⁷ For the applied model (*Figure 8-6*, bottom), I placed ‘general intuitional opportunity structures’ and ‘specific institutional opportunity structures’ in the place of ‘presentation of agent’ and ‘specification of response’ of Kelman’s original structure of a social influence situation.

newly introduced to the micro-macro modeling scheme: (1) an arrow from 'goal' to 'exposure' indicating 'importance of induction'; (2) an arrow from 'conditions for goal achievement' to 'perceived reality' indicating 'perceived power'; and (3) an arrow from 'specific institutional opportunity structures' to a 'distinguished path'²⁴⁸ indicating 'shaping prepotency' (see Figure 8-13). The focus of analysis is the hypothesized effect of 'perceived power' on 'attitudes,' though this link will not be empirically tested. I will instead focus on examining the internal processes of motivation based on the theoretical assumption that they are socially influenced. I introduce three more boxes of 'attitudes' to each immigrant integration outcome to extend the analysis.

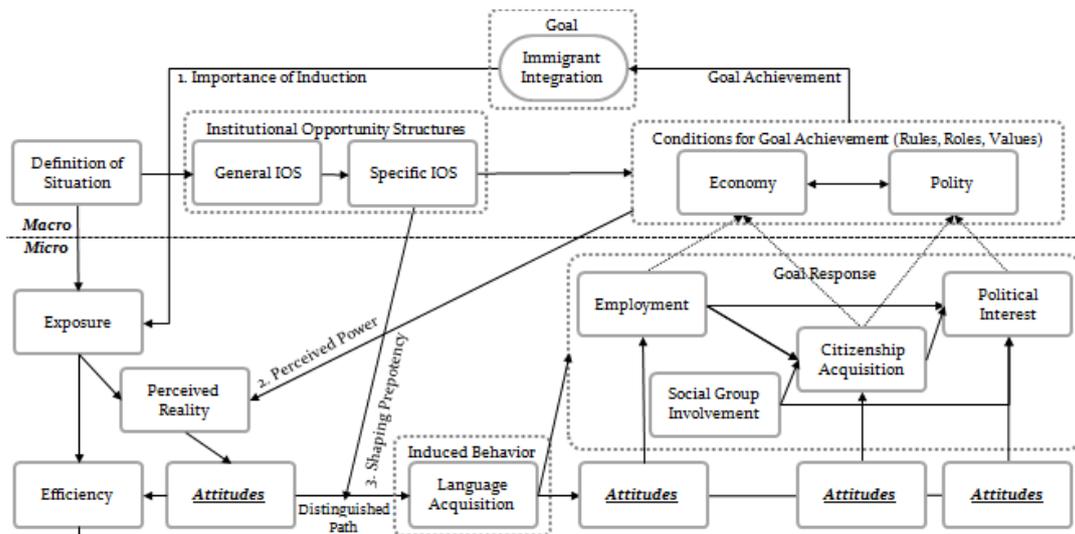


Figure 8-13: Redesigning the Micro-Macro Modeling Scheme

3.3.3. Operationalizing the Internal Process Model of Motivation

If different types of orientation are seen as self images, they are self-determinant and heterogeneous and qualitative in nature. Even if such orientations are not directly quantifiable, a non-mutually-exclusive qualitative typology serves its purpose. For example, Kelman's typology helps conceptually derive 'how' the differences in outcome may arise by tracing the motivational pathways through which the motivating sources are differently channeled. Thus, what would be interesting to operationalize is not qualitative concepts like 'integrativeness' or 'ideal L2 self' or 'orientation' but the pathways (i.e., compliance, identification, and internalization) because they are quantifiable if the degrees of discrepancy or congruence between the actual and ideal selves or the perceived and imagined realities can be measured.

If integrativeness is defined as the L2 ideal self (which covers both role and value orientations in my analysis), the key to identification/internalization is to reduce the level of conflict or discrepancy between the actual and ideal L2 selves. Likewise, if integrativeness is defined as the ideal self in an imagined social reality, the key to identification/internalization is to reduce a discrepancy

²⁴⁸ A distinguished path can be considered as "learning opportunity" in Spolsky's (1989) general model of language learning or "language acquisition context" in Gardner's (1985) socio-educational model of second language acquisition.

between the actual self in a perceived social reality and the ideal self in an imagined social reality. Thus, the essential component to be operationalized is the distance between the perceived reality and imagined reality while the self is positioned at the core in connection to the two realities.

I think for the self to reduce a discrepancy between the two realities involves trust in oneself as well as definable and indefinable others by making oneself vulnerable to strive toward ‘what can be possible’ in the envisioned world. Mayer, Davis, and Schoorman (1995) define trust as “the willingness of a party to be vulnerable to the actions of another party based on the expectation that the other will perform a particular action important to the trustor, irrespective of the ability to monitor or control that other party.” They further depict the characteristics of trust: “Being vulnerable implies that there is something of importance to be lost. Making oneself vulnerable is taking risk. Trust is not taking risk *per se*, but rather it is a willingness to take risk” (p.712). In my view, since the psychological processes (of learning motivation/social influence) occur within the self, it is not trust *per se*, but rather it is a willingness to trust. A willingness to trust is a willingness to be vulnerable based on the belief in oneself and others that it is possible to make an imagined reality ‘our’ actual reality.

Naturally, what follows is the question of how to operationalize such an abstract concept like a willingness to trust. As above-mentioned, the essential concept that needs to be operationalized is the distance between the perceived and imagined realities while positioning the self at the center. If a willingness to trust arises from the belief in oneself and others and the resulting outcome (e.g., the degree or quality of trust) is shaped according to the types of orientation (rule, role, value orientations)²⁴⁹ to which the source is channeled, ‘trust in people in the community/society’ and ‘trust in the underlying values that the social institutions uphold’ can be the potential empirical measurements of ‘identification’ and ‘internalization,’ respectively. Accordingly, I apply the operationalized concepts to the indicators I actually included in the empirical models: First, ‘social trust’ can be used as an indicator for identification since it measures the self-assessed level of trust in people in the society; second, ‘institutional trust’ can be employed as a proxy measure for internalization as it represents the level of trust in the underlying value of the public institutions. Thus, the affective measurements selected as the representations of the psychological view in the empirical models, *social trust* and *institutional trust*, correspondingly become the empirical indicators of the latent variables, identification and internalization while *attachment to host country people* remains as the indicator of *attitudes toward L2 speakers*.

²⁴⁹ Social control is the source of power of the influencing agent in relation to ‘rule orientation’; people are expected to follow the rules, rather than trust in them. Therefore, I did not extend and apply the concept of trust to ‘compliance.’ The main concern of ‘role orientation’ is maintaining satisfying self-defining interpersonal relationships whereas the main concern of ‘value orientation’ is maintaining the value congruence of one’s behavior with his/her own value system.

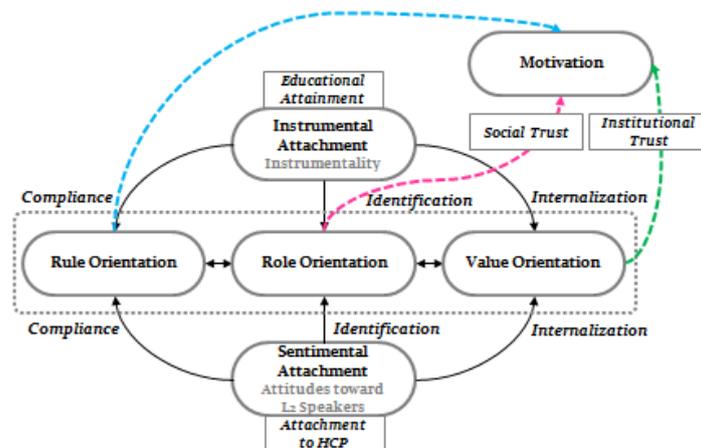


Figure 8-14: Schematic Summary of the Operationalized Internal Process Model of Motivation

Figure 8-14 gives a schematic summary of the operationalized internal process model of motivation. To complete the operationalization, the sources of attachment need to be classified into ‘instrumental attachment’ and ‘sentimental attachment,’ I use ‘educational attainment’ as the indicator to denote the former and ‘attachment to host country people’ as the indicator to signify the latter²⁵⁰.

3.3.4. Analysis & Interpretation

I will conduct an exploratory analysis to examine the internal processes of motivation based on the multivariate statistical analysis results (Chapter 5 & 6). The main focus of analysis is to identify the sources of attachment and motivational pathways of the micro-outcomes using the operationalized empirical indicators. The analysis is closely related to the second arrow of the micro-macro modeling scheme (*‘perceived power’*), but I will also briefly comment on the other two arrows—the first arrow (*‘induction of importance’*) and the third arrow (*‘shaping prepotency’*)—based on the macro-effect analysis results (Chapter 7).

Pertaining to the sources of attachment, the statistically significant and consistent effect of ‘educational attainment’ on immigrant language acquisition, economic and political integration outcomes was identified across the European cities while the effect on citizenship acquisition was largely statistically insignificant and ambiguous. More reliable factors for predicting immigrant citizenship acquisition outcome was ‘length of stay in the host country’ and ‘language proficiency,’ indicating a stronger impact of structural conditions of the destination on the outcome (e.g.,

²⁵⁰ The reasons for the indicator selection were: (1) I could not simply use the economic model vs. psychological model for the classification because many of the indicators included in each model did not measure the concept of instrumental/sentimental attachment (e.g., ‘length of stay in host country’ is an indicator that measures exposure (contextual) aspects; ‘institutional trust’ is not a good indicator of self-maintenance concerns); (2) the conceptual width and coherence with the operationalized measures were taken into account (e.g., conceptual definition of the sources of attachment must be broad enough to capture the three different aspects of orientation—among the indicators included in the economic model, ‘educational attainment’ seemed the most appropriate indicator for instrumental attachment; (3) I used ‘attachment to host country people’ as the operationalized measure for ‘attitudes toward L2 speakers/community’ as well as the cumulative representation of the associated cognitive/personality variables (see Chapter 2: 4.2.3. *Adding Cognitive/Personality Factors*); and (4) statistical consistency and coherence of the predictors were taken into consideration to try to enhance the classification validity.

opportunities for “all elements of the society to participate in the running of the system and in its benefits [...] can be expected to create instrumental attachments to the system, out of which sentimental attachments can gradually emerge” (Kelman, 1971, p.38).

Furthermore, the examination of the other arrows gives some information about the level of effectiveness of the institutional opportunity structures. The macro-effect analysis in Chapter 7 demonstrated the city-level variations in the induced behavioral outcome (i.e., language proficiency), implying that the differences in the institutional opportunity structures influence the outcome. More specifically, the variations may be related to the differences in the influencing agent’s effectiveness in activating the importance of goal at the initial stage (the first arrow—although it was not empirically surveyed) and/or communicating the specific response being induced and shaping prepotency (the third arrow).

In addition, there were some general tendencies observed among the LOCALMULTIDEM cities: (1) Comparing to the specific institutional opportunity structures, the effect of the general institutional opportunity structures was more effectively translated to inducing the behavioral outcome; and (2) the correlation between the specific and general institutional opportunity structures was ambiguous. These trends may be interpreted that even if the general institutional arrangements are well designed, some cities may be less effective than others because somewhere along the specification process of the response, they may have failed reducing ambiguities about the specific response and/or perceptually and behaviorally providing a distinguished path to facilitate the response performance.

4. Conclusion: An Unfinished Model

In this final section, I will present an initial model of capital generation (Figure 8-16) as a response to the key question I have been trying to answer. This is an unfinished model that needs to be transformed and redesigned through incorporating more diverse and refined theoretical approaches and beautifully colored and decorated by reflecting empirical realities in future research. As a “patterner,” I restructure the previous micro-macro modeling scheme²⁵¹ by replacing an arrow from ‘(re)definition of situation’ to ‘general IOS (institutional opportunity structure)’ with six new dashed arrows: (1) *evaluation of micro-outcomes*; (2) *(re)definition of goal*; (3) *designing policies*; (4) *designing institutions*; (5) *engineering policies*; and (6) *engineering institutions*. Conceptually speaking, the original arrow indicating the macro production process of instruments for social control is replaced with the micro-macro creation process of instruments for capital generation. In my view, the one-way production process can only be replaced with the loop of collective creation if the initial bottom-up stage of the *evaluation of micro-outcomes* is prioritized and the results and feedback are carefully assessed and reflected in the next process of *(re)definition of goal*. This is because once the

²⁵¹ Especially for those who decided to skip reading the modeling process, refer to *Figure 8-15* for the previous micro-macro modeling scheme.

goal is (re)defined it becomes the core essence of the entire system that affects not only the later policy-institution-making processes but also the individuals' lives; and the level of collective goal achievement depends on the level of individuals' willingness to trust²⁵². If such a view is accepted, the legitimacy of a system is justified on the basis of the effectiveness of policies and institutions, which is evaluated by the level of congruence between personal and social goal achievement. This position relates to the view expressed by Eggert and Giugni (2010) that: "legitimacy depends not only on participation, but also on the trust citizens have in institutions" (p.176). Therefore, I replace the arrows from 'goal response' to 'conditions for goal achievement' with lines.

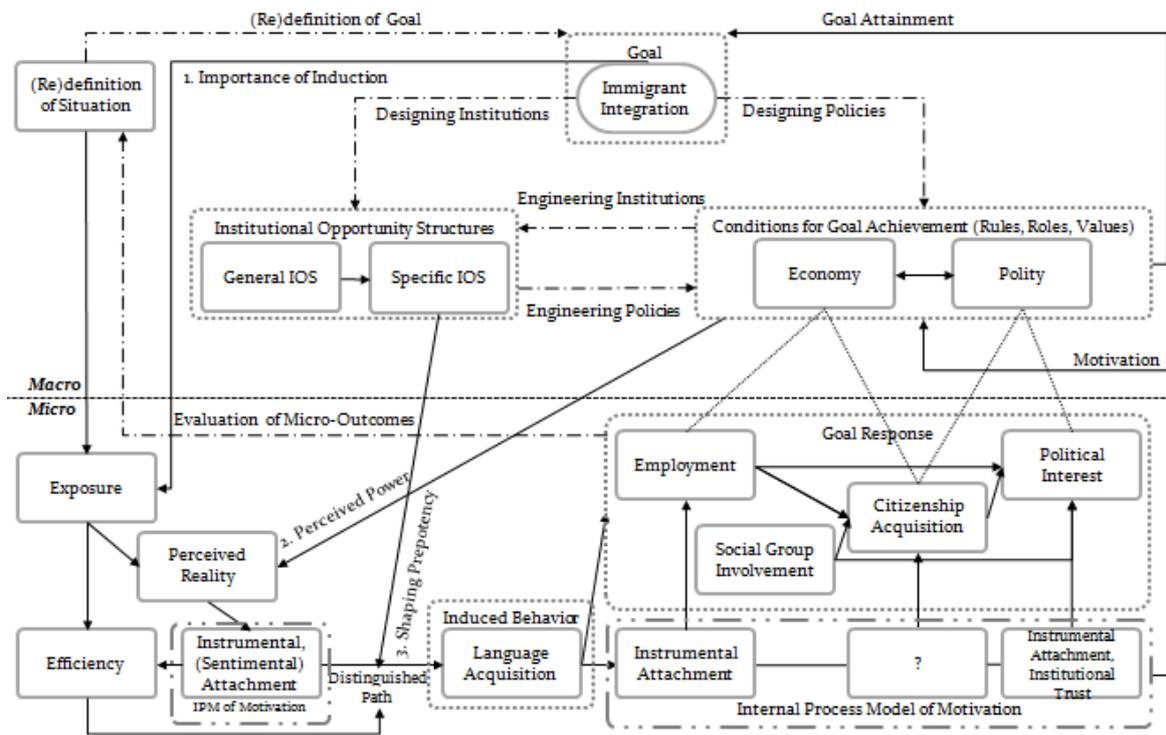


Figure 8-16: An Initial Model of Capital Generation

I also introduce new dashed boxes named the 'internal process model of motivation'²⁵³ and an arrow from the dashed box to the 'conditions for goal achievement.' I view the conditions for goal achievement as "all elements of society to participate in the running of the system and in its benefits" (Kelman, 1971, p.38). Thus, 'motivation' means motivation "to participate in the running of the system and in its benefits," as the direction of the arrow indicates. Provided that the sources of motivation (attachment) were the sources of capital generation that affect not only the individual but also the system, then such internal generation mechanisms would naturally become the most important dimension to be analyzed. This is because if the proposition is accepted, it can be logically claimed that the internal processes determine the quantity and quality of all subsequent outcomes (e.g., motivation, motivated behavior, and micro- macro-outcomes in a system). And, if so, then the

²⁵² The concept of "willingness to trust" is described in Chapter 8: 3.3.3. Operationalizing the Internal Process Model of Motivation.

²⁵³ More detailed information on the "internal process model of motivation" is available in Chapter 8: 3.2.3. Creating an Internal Process Model of Motivation.

types of orientation or human images heed special attention for designing and engineering social systems. For example, if policies and institutions are designed solely on the assumption of rule orientation or homogeneous individuals, the individuals are expected to follow the system's rules in exchange of the provision of security and order, thus, their participation in the system would be passive and minimal. In the case of role orientation or homogeneous collectives, the individuals are expected to obey and support the system for maintaining the status of the system and the individual within, thus, their participation in the system would be active in implementing the collective goals. As for value orientation or heterogeneous individuals, the individuals are expected to take part in formulating and evaluating the system and the system is expected to pursue the goals reflecting its principles, thus their participation in the system would be firm but conditional. While a number of uncertainties and complexities are inevitable, considering multiple (un)intended consequences that could arise in the interactive process between the individual and the system may lead us to unexpected opportunities for social innovation.

The empirical analysis results hint a general tendency to move from more universally applicable rule orientation (compliance pathway) to group-oriented role orientation (identification pathway) and (then to) highly personalized value orientation (internalization pathway) in accordance with the presumed temporal order in the immigrant integration process. This temporally evolving nature of psychological processes was found through the combined analysis of the internal process model of motivation²⁵⁴ and the psychologically-oriented reinterpretation of the motivational pathways hypothesized in the immigrant integration modeling framework²⁵⁵. Firstly, based on the analysis of the internal process model of motivation, while no concrete statement can be made for the other two pathways, internalization pathway ('institutional trust') emerges as a significant system participation route for the final stage of political integration but not for the other prior stages of integration. Secondly, the psychologically-oriented reinterpretation of the hypothesized mediation effects of acquired capital on immigrant political integration outcome ('political interest') informs that those who are more inclined to take an identification pathway ('social group involvement') and/or an internalization pathway ('language' and 'citizenship') are more likely to actively participate in the system than those with preference for compliance pathway ('employment'). As conceptualized in the research design, if prosocial behavior ('political interest') is a contributing factor to capital generation, identification and internalization pathways as well as the role of language in the integration process may deserve a good deal of attention. Therefore, future research is recommended to further explore the psychological/behavioral processes of immigrant integration with a temporal perspective and a process-oriented methodological approach using more appropriate data (e.g., longitudinal and/or panel data) for designing and engineering effective immigrant integration policies and institutions.

²⁵⁴ More detailed information on the analysis is available in *Chapter 8: 3.3.4. Analysis & Interpretation*. Refer to *Figure 8-14: Schematic Summary of the Operationalized Internal Process Model of Motivation*.

²⁵⁵ For the reinterpretation of the analysis, refer to *Chapter 8: 3.1.5. Reinterpreting Empirical Results*.

Relating specifically to the role of language, it is probably strongly correlated with immigrants' participation in multiple dimensions of society as the current empirical investigation has shown—*'language proficiency' is found to be one of the most consistent predictors in estimating all of the immigrant integration outcomes.* Moreover, the multivariate regression analysis results suggest educational attainment is the most critical factor in predicting linguistic attainment as well as economic and political integration outcomes; and the mediation effect of education on integration outcomes through language proficiency is consistently observed. The evidence seems to imply that the immigrant language acquisition issue may be better handled if it is considered in the context of governance, particularly in coordination with educational planning as well as economic, political, and cultural development. In order to realize such coordinated governance, however, it would require not only a systematic and strategic long-term planning and solid institutional commitment, but also 'good citizens' who are concerned with the welfare of others and actively engaged in its betterment or individuals with what Dalton (2008) calls "engaged citizenship."

I think the psychological processes that operate in a system need to be included in the micro-outcome evaluation for realizing not only 'efficiency' but also 'effectiveness' in "all elements of society." Development of such an evaluation and measurement presumably requires moving beyond the conventional ways of thinking and adopting an innovative design perspective. This is because the crucial task is not only about categorizing and developing valid and reliable measurements for the self-determinant qualitative as well as quantifiable quantitative aspects of the internal motivational processes but also understanding and seriously accounting for the dynamic interplay between the why, what, and how of human behavior and the multiple constituents of the system that facilitate or hamper the internal processes. The task is elongated to the mission to enhance the quality and quantity of capital generation by awakening and arousing desires, dreams, and visions of every one of us. The following quote illustrates well the significance of carrying out such a mission:

Throughout history of mankind, humans are driven by their imagination and their ability to see images of the desired future. Leaders, poets, writers, composers, artists, dreamers, athletes have been able to be inspired, stay inspired and inspire others through such images. These images, once shared, have the power to become a force, and in that sense an inspiration for social development and growth, for intentional change at many levels of social organization, not just for the individual (Boyatzis & Akrivou, 2006, p.633).

The projected beauty materializing from the collective art is my vision for creating our reality.

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Appendix I: Measures

1. Dependent Variables

1) A Model of Immigrant Language Acquisition: Language Proficiency (q53m1_RC²⁵⁶)

The dependent variable is destination language proficiency, that is, the extent to which respondents are able to speak the destination language. In *Barcelona, Budapest, Geneva, Lyon, Madrid, Milan, and Zurich (q53m1 RC)*, it is measured by a question “How well do you speak [host country language]?” on a six-point scale (1=“I do not speak (HCL),” 2=“I speak a little (HCL),” 3=“I speak reasonably well (HCL),” 4=“I speak fluently (HCL),” 5=“I speak (HCL) like my native language,” 6=“(HCL) is my first language”). The response value, 6=“(HCL) is my first language,” is excluded because language proficiency is conceptualized as an acquisition outcome in the model of immigrant language acquisition. The original variable is normalized to the unit interval 0-1.

London, Oslo, and Stockholm use their own country-specific variable to measure language skills of immigrants. In *London (q53en RC)*, language proficiency is measured by a question “How well do you speak English?” on a four-point scale (1=“I don’t speak English,” 2=“I speak English a little,” 3=“I speak English reasonably,” and 4=“I speak English fluently”). In *Oslo (q53nor RC)*, it is measured by a question, “How do you rate your ability to speak Norwegian?” on a four-point scale (1=“Very good,” 2=“Pretty good,” 3=“Pretty bad,” and 4=“Very bad”). Similarly, in *Stockholm (q53sw RC)*, it is measured by a question, “How well do you speak Swedish?” on a four-point scale (1=“Very well,” 2=“Fairly well,” 3=“Poor,” and 4=“Very poor or do not speak Swedish at all”). I reverse coded the responses for Oslo and Stockholm to make the responses coherent across cities: the lower the number, the lower the proficiency and the higher the number, the higher the proficiency. Since the three cities do not include the response that denotes that the host country language is the first or native language, the same country-specific variable for destination language proficiency (q53en for London, q53nor for Oslo, and q53sw for Stockholm) is used throughout the statistical analyses of testing all of the empirical models.

2) A Model of Immigrant Economic Integration: Employment (q55_RC, q55nor_RC)

The measure of employment comes from the response to the question: “Which of these descriptions best describes your situation in the last seven days?” Employment (q55_RC) is transformed from a categorical variable with nine categories (1=“in paid work,” 2=“in education,” 3=“unemployed and actively looking for a job,” 4=“unemployed, wanting a job but not actively looking for a job,” 5=“permanently sick or disabled,” 6=“retired,” 7=“in community or military service,” 8=“doing housework, looking after children or other persons,” 9=“other”) into a dichotomous variable; the composite value of the measure ranges from 0 to 1, where 0 represents “not in paid work” and 1 denotes “in paid work.” The old values 2=“in education,” 3=“unemployed and actively looking for a job,” 4=“unemployed, wanting a job but not actively looking for a job,” 5=“permanently sick or disabled,” 6=“retired,” 7=“in community or military service,” 8=“doing housework, looking after children or other persons,” and 9=“other” are pooled into a single category, “not in paid work,” whereas the old value 1=“in paid work” is retained as it is.

Oslo (q55nor RC) uses a country-specific variable to measure employment status. The measure of employment comes from the response to the question: “Which of these descriptions best describes your situation in the last seven days?” The difference with the common variable is that this country-specific variable uses a 7-categories value set, instead of a 9-categories value set. Employment (q55nor_RC) is transformed from a categorical variable with seven categories (1=“in paid work,” 2=“student,” 3=“unemployed and seeking job,” 4=“on welfare,” 5=“housewife/houseman,” 6=“retired pensioner,” and 7=“not gainfully employed for other reasons”) into a dichotomous variable; the composite value of the measure ranges from 0 to 1, where 0 represents “not in paid work” and 1 denotes “in paid work.” The old values 2=“student,” 3=“unemployed and seeking job,” 4=“on welfare,” 5=“housewife/houseman,” 6=“retired pensioner,” and 7=“not gainfully employed for other reasons” are pooled into a single category, “not in paid work,” whereas the old value 1=“in paid work” is retained as it is.

²⁵⁶ ‘_RC’ denotes the variable is recoded. Apart from dummy variables (which have values 0 or 1), ‘_RC’ indicates the original variable is normalized to the unit interval 0-1. The general formula for normalization is given as: $X' = \frac{X - X_{MIN}}{X_{MAX} - X_{MIN}}$ where X' is the normalized value and X is an original value. All variable used for OLS regression analyses are normalized to make the estimates comparable within and across samples.

3) A Model of Immigrant Citizenship Acquisition: Citizenship of the Host Country (citiz)

In the questionnaire (q7), respondents are asked to provide information on their current citizenship. Respondents are asked their first, second, and third citizenship. Since they are coded with alphabetical country codes, I have transformed the responses to create a numeric binary variable (citiz) using the country of immigration (cntry). The new variable, citizenship of the host country (citiz), is recoded as 1 if the current citizenship matches with the country of immigration and 0 if the current citizenship does not match with the country of immigration. Thus, the variable ranges from 0 to 1, 0 denoting having citizenship other than the host country and 1 denoting having citizenship of the host country.

4) A Model of Immigrant Political Integration: Political Interest (PolInt)

Political interest (PolInt) is an index created from two political interest variables: 'interest in city politics' (q1901) and 'interest in host country politics' (q1902). The items are measured on a four-point Likert scale with values 1="very interested," 2="fairly interested," 3="not very interested," and 4="not at all interested." The reliability test result has found a Cronbach's alpha of 0.861; hence, the two indicators related to political interest (interest in country politics and interest in city politics) are reliable with a high level of internal consistency. The answers are first reverse coded to match the positive valence of the other questions. Each measure is first normalized to the unit interval 0-1, and are added and divided by two: $PolInt = (q1901_RC + q1902_RC)/2$.

2. Independent Variables

1) Educational Attainment (q54_RC)

The measure of educational attainment comes from the response to the question: "What is the highest level of education you have achieved?" The value of the measure ranges from 0 to 5, where 0 represents "not completed primary education," 1="primary education or first stage of basic education," 2="lower level secondary education or second stage of basic education," 3="upper secondary education," 4="post secondary, non-tertiary education," and 5="first- and second-stage tertiary education." The original variable is normalized to the unit interval 0-1.

2) Age at Migration (age_mig_RC)

The direct measure is not included in the survey. I originally used two items included in the questionnaire (respondents' year of birth and the year of survey) to compute the respondents' age at migration: $Age\ at\ migration\ (age_mig) = year\ of\ arrival\ (q4) - year\ of\ birth\ (q2)$.

Notes on Data Transformation & Normalization: However, later analysis showed that there was a high number of missing values in the 'year of arrival (q4)' variable in several cities (e.g., London: 507, Lyon: 446, Stockholm: 109). It seemed highly probable that the missing value was assigned to those who were born in the country. Thus, before creating 'age at migration' variable, I first replaced year of arrival (q4) values with year of birth (q2) for those who were born in the host country: $Year\ of\ arrival\ (q4) = year\ of\ birth\ (q2)$ if $birth_inHC=1$. After the data manipulation, I used the new year of arrival (q4) variable to formulate age at migration: $age\ at\ migration\ (age_mig) = year\ of\ arrival\ (q4) - year\ of\ birth\ (q2)$. The value was normalized by first identifying the minimum and maximum age at migration (age_mig). After excluding the negative values (by assigning missing values), the minimum value was zero and the maximum value was 76. Therefore, the equation for the normalization is: $age_mig_RC = (X[age_mig] - 0)/(76 - 0) = X[age_mig]/76$. Accordingly, the constructed variable was normalized to the unit interval 0-1.

3) Length of Stay in the Host Country (yr_inHC_RC)

The direct measure is not included in the survey. Two items included in the questionnaire—(1) respondents' year of arrival in the host country; and (2) the year of survey—are used to compute the respondents' length of stay in the host country. The equation used for constructing the variable is: $Length\ of\ stay\ in\ the\ host\ country\ (yr_inHC) = year\ of\ survey\ (control3c) - year\ of\ arrival\ (q4)$.

Notes on Data Transformation & Normalization: The cross-tabulation analysis result (Stata command used: "bysort city: tab control3c, m") showed that there were no observations for year of survey (control3c) in Geneva, Oslo, Stockholm, and Zurich because the item was not asked in the cities. Therefore, I replaced the missing values with the year of survey conducted in the cities. The surveys were conducted: from February 2006 to March 2007 in Geneva; from November 2006 to January 2007 in Zurich; from February to October 2004 in Stockholm; from 2003 to 2004 in Oslo. I assigned 2007 for the missing values of the Geneva and Zurich data

and 2004 for the missing values of the Stockholm and Oslo data. The value was normalized by first identifying the minimum and maximum values of length of stay in the host country (*yr_inHC*). The minimum value was zero and the maximum value was 99. Therefore, the equation for the normalization is: $yr_inHC_RC = (X[yr_inHC] - 0) / (99 - 0) = X[yr_inHC] / 99$. Accordingly, the constructed variable was normalized to the unit interval 0-1.

4) Permit Category (migration motives)

The questionnaire does not include a question asking the respondents to indicate the reasons for migration. Therefore, I used a proxy as an empirical measure of the construct. Migration motives are typically assessed by immigrants' visa categories or permit status in previous studies (see Chiswick, Lee, & Miller, 2002). In the LOCALMULTIDEM questionnaire, respondents were asked to respond to the question on their permit status²⁵⁷. It was answered by choosing one of the following categories: 1="An EEA national (or relative of EEA national) residence/work permit," 2="for work," 3="for study only," 4="for family reunification/marriage," 5="for tourism," 6="as a refugee/asylum-seeker," 7="for residence only (not linked to family reunification/marriage)," and 8="other." For regression analysis, I transformed the answers into five dummy variables: (1) An EEA²⁵⁸ national (or relative of EEA national) residence/work permit (*q10_EEA*); (2) for work (*q10_work*); (3) for study only (*q10_study*); (4) for family reunification/marriage (*q10_family*); and (5) for other purposes (*q10_other*). The last category, for other purposes, includes permit type as a refugee/asylum-seeker, for tourism, for residence only (not linked to family reunification/marriage), and other purposes. For work (*q10_work*) is used as the reference category throughout the analysis.

Notes on Data Transformation: The decision to transform the variable into five categories is made following the advice for conducting the mainstream statistical analysis. For most of the traditional statistical techniques assume the scale of measurement for variables are interval or ratio (continuous). One of the rare exceptions to the assumption is if we have one dichotomous (dummy) independent variable and one continuous dependent variable. In this case, however, the data need to contain roughly the same number of observations or cases in each category of the dichotomous variable (Pallant, 2010, p.125). The cross-tabulation analysis result of permit status (*q10*) of migrant groups (*qtype=1*; removing autochthonous groups from the data analysis) suggest that there are 4,012 observations in total, and each of the eight categories contain: (1) EEA national: 422 cases; (2) for work: 2035 cases; (3) for study: 354 cases; (4) for family reunification: 485 cases; (5) for tourism: 15 cases; (6) as a refugee/asylum seeker: 81 cases; (7) for residence only: 262 cases; and (8) other: 358 cases. It may be advisable to create a separate category for the refugee/asylum-seeker, but the number of observations contained in the LOCALMULTIDEM data is too small.

5) Birth in the Host Country (birth_inHC)

The direct measure is not included in the survey. I used two items included in the questionnaire—(1) respondents' country of immigration and (2) their country of birth—to create a new dummy variable, where 1 indicates "birth in the host country" and 0 "otherwise." I identified those who were born in the host country if respondents' birth of country (*q3*) was the same as their country of immigration (*cntry*): Birth in the host country (*birth_inHC*) = 1, if country of immigration (*cntry*) = country of birth (*q3*).

6) Attachment to Host Country People (q1302_RC)

The measure of attachment to host country people comes from the response to the question: "I would like to ask you how attached you feel to different places and groups of people." The answer list includes, for instance, Europe, people with the same religion, host country people, neighborhood, people of your same age, and city. Attachment to host country people is chosen from the answer list for the data analysis. The value of the measure ranges from 0 to 10, where 0 represents "no attachment at all" and 10 represents "very strong attachment." The original variable is normalized to the unit interval 0-1.

²⁵⁷ Permit status was not asked in the older surveys conducted in Stockholm and Oslo and no indicator that measures the concept of migration motive was available in the questionnaires of the two cities. Therefore, permit status was removed from the models for Stockholm and Oslo.

²⁵⁸ EEA stands for the European Economic Area. The Agreement on the European Economic Area brings together the EU Member States and the three EEA EFTA States — Iceland, Liechtenstein and Norway — in a single market. "The EEA Agreement provides for the inclusion of EU legislation covering the four freedoms — the free movement of goods, services, persons and capital — throughout the 31 EEA States" (EFTA, 2016). In the LOCALMULTIDEM data, a comparatively large number of EEA permit holders are found in Geneva (*n*=146) and Zurich (*n*=222) but only a small number (or none) of EEA permit holders are found in other cities.

Oslo (q1302nor RC): The measure of attachment to host country people comes from the response to the question: “I would like to ask you how attached you feel to Norwegian people.” The value of the measure ranges from 1 to 4, where 1 means “very strongly attached,” 2 means “pretty strongly attached,” 3 means “weakly attached,” and 4 means “not attached at all.” The answers were first reverse coded to maintain the directionality of the scale and be consistent with the items used for other cities. The original variable is normalized to the unit interval 0-1.

Stockholm (q1302sw RC): The measure of attachment to host country people comes from the response to the question: “I would like to ask you how attached you feel to Swedish people.” The value of the measure ranges from 1 to 4, where 1 means “very weak attachment,” 2 means “weak attachment,” 3 means “strong attachment,” and 4 means “very strong attachment.” The original variable is normalized to the unit interval 0-1.

7) Social Trust (q34_RC)

The measure of social trust comes from the response to the question: “Generally speaking, would you say that most people can be trusted or that you can’t be too careful in dealing with people?” The value of the measure ranges from 0 to 10, where 0 means “you can’t be too careful” and 10 means “most people can be trusted.” The original variable is normalized to the unit interval 0-1.

Oslo (q34nor RC): The measure of social trust comes from the response to the question: “Generally speaking, would you say that most people can be trusted or that you can’t be too careful in dealing with people?” The response is binary, where 1 means “most people can be trusted” and 2 means “you cannot be too careful.” The answers were first reverse coded to maintain the directionality of the scale and be consistent with the items used for other cities. The original variable is normalized to the unit interval 0-1.

8) Institutional trust (q36InTr_RC)

In Barcelona, Budapest, Geneva, London, Lyon, Madrid, Milan, and Zurich, the measure of institutional trust comes from the response to the question: “In the following, we name some public institutions in [CITY], [COUNTRY] and Europe. Specify, to what extent you do, or do not, trust them.” The value of the measure ranges from 0 to 10, where 0 means “I do not trust at all” and 10 means “I totally trust.” The answer list includes: (q3601) civil servants and employees in the [CITY] civil service; (q3601) [CITY] government; (q3603) schools and teachers in [CITY]; (q3604) the [CITY] assembly; (q3605) [where relevant] regional parliament; (q3606) the police; (q3607) [where relevant] regional government; (q3608) main denomination church of host society; (q3609) [COUNTRY] government; (q3610) the legal system; (q3611) [COUNTRY] national parliament; (q3612) the institutions of the European Union. I selected five indicators, namely, trust in city government, city assembly, country government, the legal system, and national parliament.

After conducting the reliability test (see below: *Reliability Statistics Results*), the answers are first added and then the total sum is divided by five to create a single institutional trust variable. The new variable indicates the means of the levels of trust in the five public institutions of the destination. The original variable is normalized to the unit interval 0-1. In Oslo and Stockholm, ‘institutional trust’ is measured by country-specific variables.

Oslo (q36InTrnor RC): The measure of institutional trust comes from the response to the question: “In the following, we name some public institutions in [CITY], [COUNTRY] and Europe. Specify, to what extent you do, or do not, trust them.” The value of the measure ranges from 1 to 4, where 1 means “very strongly,” 2 means “pretty strongly,” 3 means “weakly,” and 4 means “not at all.” Only three out of the five measures (used for constructing the index of the other eight cities) are available in Oslo. They are: trust city government, trust legal system, and trust national parliament. The answers are first reverse coded to maintain the directionality of the scale and be consistent with the items used for other eight cities. Each of the recoded values are added and then the total sum is divided by three to create a single institutional trust variable for Oslo. The original variable is normalized to the unit interval 0-1.

Stockholm (q36InTrsw RC): The measure of institutional trust comes from the response to the question: “In the following, we name some public institutions in [CITY], [COUNTRY] and Europe. Specify, to what extent you do, or do not, trust them.” The value of the measure ranges from 1 to 4, where 1 means “very large trust,” 2 means “large trust,” 3 means “small trust,” and 4 means “very small trust.” Only two out of the five measures (used for constructing the index of the other eight cities) are available in Stockholm. They are: trust city government and trust national parliament. The answers are first reverse coded to maintain the directionality of the scale and be consistent with the items used for other eight cities. Each of the recoded values are added and

then the total sum is divided by two to create a single institutional trust variable for Stockholm. The original variable is normalized to the unit interval 0-1.

Reliability Statistics Results: The reliability statistics of Cronbach's alpha ranges from 0.616 to 0.928, which is reliable and acceptable since they exceed the minimum recommended level of 0.6 (Sekaran, 2003). Cronbach's alpha of all five items which are measured on a 11-point scale are: Barcelona: 0.836, Budapest 0.903, Geneva: 0.893, London: 0.928, Lyon: 0.835, Madrid: 0.832, Milan: 0.904, Zurich: 0.869. Cronbach's alpha of the two Scandinavian cities that used country-specific variables for measuring institutional trust are: Oslo: 0.753 (3 items) and Stockholm: 0.616 (2 items).

9) Language Proficiency (q53m3_RC, q53en_RC, q53nor_RC, q53sw_RC)

In Barcelona, Budapest, Geneva, Lyon, Madrid, Milan, and Zurich, language proficiency is measured by a question "How well do you speak [host country language]?" on a six-point scale (1="I do not speak (HCL)," 2="I speak a little (HCL)," 3="I speak reasonably (HCL)," 4="I speak fluently (HCL)," 5="I speak (HCL) like my native language," 6="(HCL) is my first language"). All of the response values are kept (including the response value 6=HCL is my first language) because language proficiency is conceptualized as a resource or capital in the model of immigrant integration. The original variable is normalized to the unit interval 0-1. The newly constructed variable is used as an intervening variable for all three sub-models of immigrant integration. For London, Oslo, and Stockholm, the same country-specific variable for destination language proficiency (q53en for London, q53nor for Oslo, and q53sw for Stockholm) is used throughout the statistical analyses since the three cities do not include the response that denotes that the host country language is the first or native language.

Notes on Data Transformation: There were many missing values for the original self-assessed language proficiency variable. A careful examination of the variable revealed that the response values "not applicable" or "item not asked" were assigned for those who are native-speakers of the destination language. Therefore, I recoded the missing values and merged them into the response category 6="(HCL) is my first language."

10) Social Group Involvement (AI_RC)

The variable is relevant only for Barcelona, Budapest, Geneva, Madrid, Stockholm, and Zurich. In other four cities (London, Lyon, Milan, and Oslo), country-specific variables are used, thus, different variables for each of the four cities are constructed.

The measure of social group involvement (non-political associational involvement) comes from the response to the question: "Have you participated in any activity arranged by any such organisation during the last 12 months?" (q17b in the LOCALMULTIDEM survey questionnaire/data) (1) sports club or club for outdoor activities; (2) organisation for cultural activities, tradition preserving or any hobby activities; (3) political party; (4) trade union; (5) business, employers, professional or farmers' organisation; (6) organisation for humanitarian aid, charity or social welfare; (7) organisation for environmental protection or animal rights; (8) human rights or peace organisation; (9) religious or church organisation; (10) immigrants' organisation; (11) ethnic group organisation; (12) anti-racism organisation; (13) educational organisation, teachers', parents' etc.; (14) youth organisation; (15) organisation for the retired/elderly; (16) women's organisation; (17) residents, housing or neighborhood organisation; (18) other organisation. The answers are given as "yes" or "no."

Ten out of the eighteen 1="yes" or 0="no" answers are added to create a single social group involvement variable. The items included in the variable are: (1) sports club or club for outdoor activities; (2) organisation for cultural activities, tradition preserving or any hobby activities; (6) organisation for humanitarian aid, charity or social welfare; (9) religious or church organisation; (10) immigrants' organisation; (11) ethnic group organisation; (13) educational organisation, teachers', parents' etc.; (14) youth organisation; (15) organisation for the retired/elderly; and (17) residents, housing or neighborhood organisation.

The new variable indicates the number of non-political associational activities that each respondent has participated during the last 12 months. The equation for the construction is given as: $AI (n=10) = q17b01 + q17b02 + q17b06 + q17b09 + q17b10 + q17b11 + q17b13 + q17b14 + q17b15 + q17b17$. The value is normalized by dividing it by 10: $AI_RC = (AI)/10$.

London (AIen_RC): Nine of the ten items are used to generate the country-specific variable for London: $AIen = q17b01en + q17b02en + q17b06en + q17b09en + q17b10en + q17b13en + q17b14en + q17b15en + q17b17en$.

q17b11en (ethnic group organisation) is dropped due to no observation. The value is normalized by dividing it by nine: $AIen_RC = (AIen)/9$.

Notes on Data Transformation (specific to the London dataset): There was no observation when the items were initially combined ("Alen") because the variables had no categorized "no" or response value 0. The missing value, "not applicable (routing)," was replaced to value "0."

Lyon (Aifr_RC): The same ten items are used for creating the country-specific variable for Lyon: $Aifr = q17b01fr + q17b02fr + q17b06fr + q17b09fr + q17b10fr + q17b11fr + q17b13fr + q17b14fr + q17b15fr + q17b17fr$. The value is normalized: $Aifr_RC = (Aifr)/10$

Milan (Alit_RC): The same ten items are used for creating the country-specific variable for Milan: $Alit = q17b01it + q17b02it + q17b06it + q17b09it + q17b10it + q17b11it + q17b13it + q17b14it + q17b15it + q17b17it$. The value is normalized: $Alit_RC = (Alit)/10$.

Oslo (AInor_RC): Nine of the ten items are used to generate the country-specific variable for Oslo: $AInor = q17b01 + q17b02 + q17b09 + q17b10 + q17b11 + q17b13 + q17b14 + q17b15 + q17b17$. q17b06nor (organisation for humanitarian aid, charity or social welfare) is dropped due to its high missing rate. (The inclusion of a variable with a high percentage of missing values removes the valid observations of other variables included in generating an index.) The value is normalized: $AInor_RC = (AInor)/9$.

3. Control Variables

1) Gender (q1_RC)

Gender (q1) is originally coded as: 1="male" and 2="female". It is recoded into new values, where 0 represents male and 1 indicates female.

2) Marital status (q46_RC)

Marital status (q46) is transformed from a categorical variable with five categories (1="married," 2="cohabiting/living with partner," 3="never married," 4="divorced," 5="widowed") into a dichotomous variable; the composite value of the measure ranges from 0 to 1, where 0 represents "not in a relationship" and 1 denotes "in a relationship." The old values 3="never married," 4="divorced," and 5="widowed" are pooled into a single category, 0="not in a relationship" while the old values 1="married" and 2="cohabiting/living with partner" are combined into a category, 1="in a relationship."

3) Ethnic group (gr#_[name of ethnic group])

Dummy variables (1="ethnic group," 0="else") are created for each ethnic group from the original survey question that asks the respondents' ethnic origin. Each city sample includes 2 or 3 ethnic groups. One of the groups (group of recent arrival) is used as the reference category to compare ethnic group differences in predicting outcome.

Appendix II: Descriptive Statistics of All Variables²⁵⁹

City	Barcelona			Budapest			Geneva			London			Lyon		
Variable	Obs.	Mean (SD)	Min-Max	Obs.	Mean (SD)	Min-Max	Obs.	Mean (SD)	Min-Max	Obs.	Mean (SD)	Min-Max	Obs.	Mean (SD)	Min-Max
Language proficiency	224	3.70 (0.95)	2--6	523	2.82 (1.10)	1--5	487	3.78 (1.04)	1--6	874	3.66 (0.62)	1--4	189	4.16 (0.93)	2--5
Language proficiency (Nor1)	217	0.66 (0.22)	0.25--1	523	0.46 (0.27)	0--1	468	0.67 (0.24)	0--1	874	0.88 (0.21)	0--1	189	0.79 (0.23)	0.25--1
Language proficiency (Nor2)	737	0.86 (0.24)	0.2--1	808	0.59 (0.35)	0--1	487	0.56 (0.21)	0--1	874	0.88 (0.21)	0--1	702	0.90 (0.19)	0.2--1
Social group involvement	729	0.04 (0.08)	0--0.5	822	0.004 (0.02)	0--0.2	590	0.04 (0.07)	0--0.5	885	0.03 (0.05)	0--0.44	641	0.20 (0.19)	0--0.8
Political interest	733	0.48 (0.30)	0--1	812	0.54 (0.29)	0--1	630	0.47 (0.30)	0--1	873	0.40 (0.29)	0--1	702	0.55 (0.31)	0--1
Educational attainment	738	2.83 (1.57)	0--5	804	3.74 (1.19)	0--5	641	2.86 (1.53)	0--5	831	3.61 (1.52)	0--5	702	2.96 (1.62)	0--5
Educational attainment (Nor)	738	0.57 (0.31)	0--1	804	0.75 (0.24)	0--1	641	0.57 (0.31)	0--1	831	0.72 (0.30)	0--1	702	0.59 (0.32)	0--1
Age at migration	736	29.78 (10.88)	0--76	810	24.12 (10.76)	0--70	642	17.31 (11.42)	0--61	714	8.15 (11.81)	0--66	645	5.00 (9.29)	0--53
Age at migration (Nor)	736	0.39 (0.14)	0--1	810	0.32 (0.14)	0--1	642	0.23 (0.15)	0--0.80	714	0.11 (0.16)	0--0.87	645	0.07 (0.12)	0--0.70
Length of stay in HC	736	9.14 (8.24)	0--69	815	9.71 (8.32)	0--67	643	26.76 (16.83)	1--94	795	23.43 (14.21)	0--64	645	29.60 (12.56)	1--77
Length of stay in HC (Nor)	736	0.09 (0.08)	0--0.68	815	0.10 (0.08)	0--0.66	643	0.26 (0.17)	0.01--0.93	795	0.23 (0.14)	0--0.63	645	0.29 (0.12)	0.01--0.76
Attachment to HCP	737	6.83 (2.38)	0--10	778	5.60 (2.47)	0--10	640	7.86 (2.16)	0--10	875	5.37 (2.31)	0--10	700	7.69 (2.23)	0--10
Attachment to HCP (Nor)	737	0.68 (0.24)	0--1	778	0.56 (0.25)	0--1	640	0.79 (0.22)	0--1	875	0.54 (0.23)	0--1	700	0.77 (0.22)	0--1
Social trust	736	4.84 (2.57)	0--10	750	6.10 (2.00)	0--10	598	5.09 (2.67)	0--10	871	4.92 (2.19)	0--10	702	3.37 (2.86)	0--10
Social trust (Nor)	736	0.48 (0.26)	0--1	750	0.61 (0.20)	0--1	598	0.51 (0.27)	0--1	871	0.49 (0.22)	0--1	702	0.34 (0.29)	0--1
Institutional trust	457	5.81 (1.91)	0--10	487	4.51 (2.21)	0--10	442	6.66 (2.22)	0--10	733	5.15 (1.92)	0--10	660	5.20 (2.12)	0--10
Institutional trust (Nor)	457	0.58 (0.19)	0--1	487	0.45 (0.22)	0--1	442	0.67 (0.22)	0--1	733	0.52 (0.19)	0--1	660	0.52 (0.21)	0--1
Dummy Variable	Freq. (%)	Mean (SD)	Min-Max / Value	Freq. (%)	Mean (SD)	Min-Max / Value	Freq. (%)	Mean (SD)	Min-Max / Value	Freq. (%)	Mean (SD)	Min-Max / Value	Freq. (%)	Mean (SD)	Min-Max / Value
Employment	740 (21.08%)	0.79 (0.41)	0--1	786 (41.22%)	0.59 (0.49)	0--1	646 (46.28%)	0.54 (0.50)	0--1	864 (38.54%)	0.61 (0.49)	0--1	704 (46.45%)	0.54 (0.50)	0--1
Not in paid work	156 (21.08%)	---	0	324 (41.22%)	---	0	299 (46.28%)	---	0	333 (38.54%)	---	0	327 (46.45%)	---	0
In paid work	584 (78.92%)	---	1	462 (58.78%)	---	1	347 (53.72%)	---	1	531 (61.46%)	---	1	377 (53.55%)	---	1
Citizenship	740 (79.86%)	0.20 (0.40)	0--1	823 (82.75%)	0.17 (0.38)	0--1	649 (84.44%)	0.16 (0.36)	0--1	886 (23.70%)	0.76 (0.43)	0--1	705 (20.14%)	0.80 (0.40)	0--1
Not acquired citizenship	591 (79.86%)	---	0	681 (82.75%)	---	0	548 (84.44%)	---	0	210 (23.70%)	---	0	142 (20.14%)	---	0
Acquired citizenship	149 (20.14%)	---	1	142 (17.25%)	---	1	101 (15.56%)	---	1	676 (76.30%)	---	1	563 (79.86%)	---	1
Country of birth	740 (99.19%)	0.01 (0.09)	0--1	823 (97.57%)	0.24 (0.15)	0--1	649 (84.90%)	0.15 (0.36)	0--1	886 (44.36%)	0.57 (0.50)	0--1	705 (39.57%)	0.60 (0.49)	0--1
Birth in foreign country	734 (99.19%)	---	0	803 (97.57%)	---	0	551 (84.90%)	---	0	393 (44.36%)	---	0	279 (39.57%)	---	0
Birth in the host country	6 (0.81%)	---	1	20 (2.43%)	---	1	98 (15.10%)	---	1	493 (55.46%)	---	1	426 (60.43%)	---	1
Permit category	740 (55.95%)	---	0--1	823 (25.03%)	---	0--1	649 (10.02%)	---	0--1	886 (8.47%)	---	0--1	705 (4.96%)	---	0--1
EEA	25 (3.38%)	0.03 (0.18)	1	5 (0.61%)	0.01 (0.08)	1	146 (22.50%)	0.22 (0.42)	1	X	X	X	X	X	X
Work	414 (55.95%)	0.56 (0.50)	1	206 (25.03%)	0.25 (0.43)	1	65 (10.02%)	0.10 (0.30)	1	75 (8.47%)	0.08 (0.28)	1	35 (4.96%)	0.05 (0.22)	1
Study	16 (2.16%)	0.02 (0.15)	1	220 (26.73%)	0.27 (0.44)	1	6 (0.92%)	0.01 (0.01)	1	64 (7.22%)	0.07 (0.26)	1	5 (0.71%)	0.01 (0.08)	1
Family reunification	15 (2.03%)	0.02 (0.14)	1	119 (14.46%)	0.14 (0.35)	1	67 (10.32%)	0.10 (0.30)	1	15 (1.69%)	0.02 (0.13)	1	23 (3.26%)	0.03 (0.18)	1
Other purposes	21 (2.84%)	0.03 (0.17)	1	69 (8.38%)	0.08 (0.28)	1	243 (37.44%)	0.37 (0.48)	1	178 (20.09%)	0.20 (0.40)	1	31 (4.40%)	0.04 (0.21)	1
Gender	740 (55.68%)	0.44 (0.50)	0--1	823 (61.12%)	0.39 (0.49)	0--1	649 (53.93%)	0.46 (0.50)	0--1	886 (52.26%)	0.48 (0.50)	0--1	705 (44.40%)	0.56 (0.50)	0--1
Male	412 (55.68%)	---	0	503 (61.12%)	---	0	350 (53.93%)	---	0	463 (52.26%)	---	0	313 (44.40%)	---	0
Female	328 (44.32%)	---	1	320 (38.88%)	---	1	299 (46.07%)	---	1	423 (47.74%)	---	1	392 (55.60%)	---	1
Marital status	738 (38.75%)	0.61 (0.49)	0--1	788 (46.70%)	0.53 (0.50)	0--1	645 (29.46%)	0.71 (0.46)	0--1	883 (50.41%)	0.50 (0.50)	0--1	704 (46.45%)	0.54 (0.50)	0--1
Not in a relationship	286 (38.75%)	---	0	368 (46.70%)	---	0	190 (29.46%)	---	0	435 (50.41%)	---	0	327 (46.45%)	---	0
In a relationship	452 (61.25%)	---	1	420 (53.30%)	---	1	455 (70.54%)	---	1	428 (49.59%)	---	1	377 (53.55%)	---	1
Ethnic group	740 (30.27%)	---	0--1	823 (35.24%)	---	0--1	649 (52.23%)	---	0--1	886 (33.41%)	---	0--1	705 (16.17%)	---	0--1
G1	224 (30.27%)	0.30 (0.46)	1	290 (35.24%)	0.35 (0.48)	1	339 (52.23%)	0.52 (0.50)	1	296 (33.41%)	0.33 (0.47)	1	114 (16.17%)	0.16 (0.37)	1
G2	257 (34.73%)	0.35 (0.48)	1	284 (34.51%)	0.35 (0.48)	1	X	X	X	290 (32.73%)	0.33 (0.47)	1	461 (65.39%)	0.65 (0.48)	1
G3	259 (35.00%)	0.35 (0.48)	1	249 (30.26%)	0.30 (0.46)	1	310 (47.77%)	0.48 (0.50)	1	300 (33.86%)	0.34 (0.47)	1	130 (18.44%)	0.18 (0.39)	1
	G1: Moroccan			G1: Ethnic Hungarian			G1: Italian			G1: Indian			G1: Moroccan		
	G2: Andean mixed group			G2: Mixed Muslim			G2: n/a			G2: Afro-Caribbean			G2: Algerian		
	G3: Ecuadorian			G3: Chinese			G3: Kosovar			G3: Bangladeshi			G3: Tunisian		

²⁵⁹ NOTES: The table provides the information on each variable after data cleaning. Therefore, cases with missing values are excluded. "Nor" denotes the variable is normalized; "Nor1" in the language proficiency indicates the normalized variable for language as acquisition (q53m1_RC). "Nor2" in the language proficiency indicates the normalized variable for language as capital (q53m3_RC).

Appendix II: Descriptive Statistics of All Variables (continued)

City	Madrid			Milan			Oslo			Stockholm			Zurich		
Variable	Obs.	Mean (SD)	Min-Max	Obs.	Mean (SD)	Min-Max	Obs.	Mean (SD)	Min-Max	Obs.	Mean (SD)	Min-Max	Obs.	Mean (SD)	Min-Max
Language proficiency	291	2.95 (1.02)	1-6	899	2.89 (0.93)	1-6	897	3.07 (0.76)	1-4	508	3.29 (0.72)	1-4	761	2.84 (1.32)	1-6
Language proficiency (Nor1)	289	0.48 (0.25)	0-1	874	0.45 (0.19)	0-1	897	0.69 (0.25)	0-1	508	0.76 (0.24)	0-1	740	0.44 (0.31)	0-1
Language proficiency (Nor2)	860	0.79 (0.31)	0-1	899	0.38 (0.19)	0-1	897	0.69 (0.25)	0-1	508	0.76 (0.24)	0-1	761	0.37 (0.26)	0-1
Social group involvement	862	0.03 (0.06)	0-0.4	899	0.02 (0.06)	0-0.5	900	0.02 (0.05)	0-0.56	511	0.07 (0.11)	0-0.7	898	0.03 (0.08)	0-0.6
Political interest	853	0.42 (0.28)	0-1	868	0.38 (0.26)	0-1	878	0.36 (0.28)	0-1	508	0.48 (0.28)	0-1	891	0.48 (0.33)	0-1
Educational attainment	862	2.43 (1.39)	0-5	891	3.18 (1.07)	0-5	895	2.51 (1.74)	0-5	510	3.15 (1.58)	0-5	888	2.48 (1.51)	0-5
Educational attainment (Nor)	862	0.49 (0.28)	0-1	891	0.64 (0.21)	0-1	895	0.50 (0.35)	0-1	510	0.63 (0.32)	0-1	888	0.50 (0.30)	0-1
Age at migration	859	27.95 (10.02)	0-68	890	25.87 (9.83)	0-66	890	21.83 (13.95)	0-71	495	16.25 (12.98)	0-55	895	19.58 (11.01)	0-60
Age at migration (Nor)	859	0.37 (0.13)	0-0.98	890	0.34 (0.13)	0-0.87	890	0.29 (0.18)	0-0.93	495	0.21 (0.17)	0-0.72	895	0.26 (0.14)	0-0.79
Length of stay in HC	862	6.98 (5.35)	0-43	900	9.55 (6.79)	1-34	900	15.20 (9.67)	0-99	495	21.74 (6.60)	4-52	896	25.09 (14.05)	1-82
Length of stay in HC (Nor)	862	0.07 (0.05)	0-0.43	900	0.09 (0.07)	0.01-0.34	900	0.15 (0.10)	0-0.98	495	0.22 (0.07)	0.04-0.51	896	0.25 (0.14)	0.01-0.81
Attachment to HCP	837	6.75 (2.28)	0-10	889	5.72 (2.55)	0-10	886	2.73 (0.69)	1-4	490	2.92 (0.72)	1-4	896	7.21 (2.55)	0-10
Attachment to HCP (Nor)	837	0.68 (0.23)	0-1	889	0.57 (0.25)	0-1	886	0.58 (0.23)	0-1	490	0.64 (0.24)	0-1	896	0.72 (0.25)	0-1
Social trust	841	5.23 (2.56)	0-10	868	4.71 (2.43)	0-10	785	0.58 (0.49)	0-1	503	2.86 (2.86)	0-10	757	4.93 (2.81)	0-10
Social trust (Nor)	841	0.52 (0.26)	0-1	868	0.47 (0.24)	0-1	785	0.58 (0.49)	0-1	503	0.45 (0.29)	0-1	757	0.49 (0.28)	0-1
Institutional trust	568	5.95 (1.96)	0-10	510	5.21 (1.94)	0-10	634	2.63 (0.69)	1-4	425	2.50 (0.67)	1-4	713	6.67 (2.17)	0-10
Institutional trust (Nor)	568	0.60 (0.20)	0-1	510	0.52 (0.19)	0-1	634	0.54 (0.23)	0-1	425	0.50 (0.22)	0-1	713	0.67 (0.22)	0-1
Dummy Variable	Freq. (%)	Mean (SD)	Min-Max / Value	Freq. (%)	Mean (SD)	Min-Max / Value	Freq. (%)	Mean (SD)	Min-Max / Value	Freq. (%)	Mean (SD)	Min-Max / Value	Freq. (%)	Mean (SD)	Min-Max / Value
Employment	864	0.78 (0.42)	0-1	888	0.74 (0.44)	0-1	900	0.62 (0.49)	0-1	509	0.70 (0.47)	0-1	805	0.63 (0.48)	0-1
Not in paid work	192 (22.22%)	---	0	232 (26.13%)	---	0	344 (38.22%)	---	0	168 (33.01%)	---	0	301 (37.39%)	---	0
In paid work	672 (77.78%)	---	1	656 (73.87%)	---	1	556 (61.78%)	---	1	341 (66.99%)	---	1	504 (61.61%)	---	1
Citizenship	866	0.16 (0.37)	0-1	900	0.06 (0.23)	0-1	900	0.65 (0.48)	0-1	513	0.80 (0.40)	0-1	902	0.12 (0.32)	0-1
Not acquired citizenship	727 (83.95%)	---	0	849 (94.33%)	---	0	315 (35.00%)	---	0	105 (20.47%)	---	0	796 (88.25%)	---	0
Acquired citizenship	139 (16.05%)	---	1	51 (5.67%)	---	1	585 (65.00%)	---	1	408 (79.53%)	---	1	106 (11.75%)	---	1
Country of birth	866	0.005 (0.07)	0-1	900	0.03 (0.18)	0-1	900	0.09 (0.29)	0-1	513	0.21 (0.17)	0-1	902	0.12 (0.32)	0-1
Birth in foreign country	862 (99.54%)	---	0	870 (96.67%)	---	0	818 (90.89%)	---	0	403 (78.56%)	---	0	798 (88.47%)	---	0
Birth in the host country	4 (0.46%)	---	1	30 (3.33%)	---	1	82 (9.11%)	---	1	110 (21.44%)	---	1	104 (11.53%)	---	1
Permit category	866	---	0-1	900	---	0-1	X	X	X	X	X	X	902	---	0-1
EEA	19 (2.19%)	0.02 (0.15)	1	5 (0.56%)	0.01 (0.07)	1	X	X	X	X	X	X	222 (24.61%)	0.25 (0.43)	1
Work	500 (57.74%)	0.58 (0.49)	1	505 (56.11%)	0.56 (0.50)	1	X	X	X	X	X	X	235 (26.05%)	0.26 (0.44)	1
Study	15 (1.73%)	0.02 (0.15)	1	24 (2.67%)	0.03 (0.16)	1	X	X	X	X	X	X	4 (0.44%)	0.004 (0.07)	1
Family reunification	28 (3.23%)	0.03 (0.18)	1	125 (13.89%)	0.14 (0.35)	1	X	X	X	X	X	X	93 (10.31%)	0.10 (0.30)	1
Other purposes	31 (3.58%)	0.04 (0.19)	1	31 (3.44%)	0.03 (0.18)	1	X	X	X	X	X	X	108 (11.97%)	0.12 (0.32)	1
Gender	866	0.51 (0.50)	0-1	900	0.48 (0.50)	0-1	900	0.48 (0.50)	0-1	513	0.51 (0.50)	0-1	902	0.33 (0.47)	0-1
Male	427 (49.31%)	---	0	472 (52.44%)	---	0	471 (52.33%)	---	0	251 (48.93%)	---	0	600 (66.52%)	---	0
Female	439 (50.69%)	---	1	428 (47.56%)	---	1	429 (47.67%)	---	1	262 (51.07%)	---	1	302 (33.48%)	---	1
Marital status	860	0.55 (0.50)	0-1	888	0.48 (0.50)	0-1	900	0.76 (0.43)	0-1	512	0.60 (0.49)	0-1	889	0.78 (0.41)	0-1
Not in a relationship	390 (45.35%)	---	0	323 (36.37%)	---	0	218 (24.22%)	---	0	205 (40.04%)	---	0	192 (21.60%)	---	0
In a relationship	470 (54.65%)	---	1	565 (63.63%)	---	1	682 (75.78%)	---	1	307 (59.94%)	---	1	697 (78.40%)	---	1
Ethnic group	866	---	0-1	900	---	0-1	900	---	0-1	508	---	0-1	902	---	0-1
G1	298 (34.41%)	0.34 (0.48)	1	300 (33.33%)	0.33 (0.47)	1	300 (33.33%)	0.33 (0.47)	1	235 (46.26%)	0.46 (0.50)	1	299 (33.15%)	0.33 (0.47)	1
G2	277 (31.99%)	0.32 (0.47)	1	300 (33.33%)	0.33 (0.47)	1	300 (33.33%)	0.33 (0.47)	1	X	X	X	297 (32.93%)	0.33 (0.47)	1
G3	291 (33.60%)	0.34 (0.47)	1	300 (33.33%)	0.33 (0.47)	1	300 (33.33%)	0.33 (0.47)	1	273 (53.74%)	0.53 (0.50)	1	306 (33.92%)	0.34 (0.47)	1
	G1: Moroccan			G1: Egyptian			G1: Turkish			G1: Turkish			G1: Italian		
	G2: Andean mixed group			G2: Filipino			G2: Pakistani			G2: n/a			G2: Turkish		
	G3: Ecuadorian			G3: Ecuadorian			G3: Bosnian			G3: Chilean			G3: Kosovar		

Appendix III: Determinants of Immigrant Language Acquisition
(DV: Language Proficiency; OLS Regression, LOCALMULTIDEM: 10 cities)

Barcelona²⁶⁰

	(1) Controls		(2) +Personals		(3) +Attitudes		(4) +Personals +Attitudes	
Female	0.111*	(0.0463)	0.0839*	(0.0415)	0.122**	(0.0465)	0.0916*	(0.0430)
Marital status	-0.0471	(0.0405)	-0.0367	(0.0394)	-0.0317	(0.0410)	-0.0289	(0.0411)
Education			0.127*	(0.0559)			0.116	(0.0607)
Age at migration			-0.693***	(0.201)			-0.709**	(0.213)
Length of stay in HC			0.676*	(0.269)			0.639*	(0.277)
Permit category (Ref.: For Work)								
EEA			0.136	(0.103)			0.127	(0.106)
Study			0.325	(0.173)			0.303	(0.178)
Family reunification			-0.269*	(0.124)			-0.271*	(0.127)
Other purposes			-0.0613	(0.0819)			-0.0408	(0.0865)
Attachment to HCP					0.0723	(0.0844)	-0.00459	(0.0768)
Social trust					0.0390	(0.0817)	0.0558	(0.0749)
Institutional trust					-0.260*	(0.120)	-0.0711	(0.114)
Constant	0.730***	(0.0323)	0.781***	(0.0881)	0.802***	(0.0866)	0.805***	(0.119)
Observations	102		102		102		102	
R ²	0.069		0.400		0.114		0.405	

Standard errors in parentheses

* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

Budapest²⁶¹

	(1) Controls		(2) +Personals		(3) +Attitudes		(4) +Personals +Attitudes	
Female	0.0188	(0.0381)	-0.0274	(0.0330)	0.0158	(0.0374)	-0.0321	(0.0319)
Marital status	-0.0176	(0.0339)	0.0158	(0.0336)	-0.0119	(0.0334)	0.0220	(0.0324)
Ethnic group (Ref.: Chinese)								
Ethnic Hungarian	0.348***	(0.0736)	0.355***	(0.0655)	0.346***	(0.0734)	0.347***	(0.0640)
Mixed Muslim	0.175***	(0.0375)	0.125***	(0.0335)	0.152***	(0.0374)	0.0941**	(0.0331)
Education			0.230***	(0.0629)			0.245***	(0.0619)
Age at migration			-0.680***	(0.116)			-0.590***	(0.114)
Length of stay in HC			0.812***	(0.197)			0.923***	(0.190)
Permit category (Ref.: For Work)								
EEA			0	(.)			0	(.)
Study			-0.00282	(0.0487)			0.0159	(0.0469)
Family reunification			-0.00273	(0.0379)			-0.0192	(0.0365)
Other purposes			-0.0914*	(0.0455)			-0.0694	(0.0440)
Attachment to HCP					0.260***	(0.0722)	0.267***	(0.0619)
Social trust					-0.0102	(0.103)	-0.0429	(0.0875)
Institutional trust					-0.174*	(0.0860)	-0.184*	(0.0764)
Constant	0.419***	(0.0406)	0.398***	(0.0698)	0.375***	(0.0686)	0.323***	(0.0775)
Observations	233		233		233		233	
R ²	0.131		0.385		0.191		0.444	

Standard errors in parentheses

* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

²⁶⁰ Barcelona: Ethnic groups (Moroccan, Ecuadorian, and Andean Latin American) are excluded from the model because observations are available only for Moroccans.

²⁶¹ Budapest: EEA (a permit category) omitted because of collinearity.

Geneva

	(1) Controls		(2) +Personals		(3) +Attitudes		(4) +Personals +Attitudes	
Female	-0.00406	(0.0279)	-0.0171	(0.0245)	-0.00502	(0.0278)	-0.0147	(0.0246)
Marital status	-0.137***	(0.0302)	-0.0394	(0.0285)	-0.119***	(0.0308)	-0.0353	(0.0288)
Ethnic group (Ref.: Kosovar)								
Italian	-0.0129	(0.0267)	-0.0354	(0.0325)	-0.0363	(0.0280)	-0.0418	(0.0342)
Education			0.164***	(0.0400)			0.174***	(0.0407)
Age at migration			-0.804***	(0.0928)			-0.787***	(0.0951)
Length of stay in HC			-0.0317	(0.112)			-0.0307	(0.114)
Permit category (Ref.: For Work)								
EEA			-0.0624	(0.0342)			-0.0617	(0.0343)
Study			-0.129	(0.112)			-0.130	(0.113)
Family reunification			-0.0814	(0.0418)			-0.0834*	(0.0422)
Other purposes			-0.0460	(0.0292)			-0.0479	(0.0295)
Attachment to HCP					-0.0308	(0.0656)	0.0577	(0.0584)
Social trust					-0.0484	(0.0510)	0.00765	(0.0444)
Institutional trust					-0.126	(0.0714)	-0.0938	(0.0617)
Constant	0.825***	(0.0323)	0.926***	(0.0525)	0.960***	(0.0674)	0.933***	(0.0710)
Observations	277		277		277		277	
R ²	0.071		0.351		0.095		0.357	

Standard errors in parentheses

* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

London²⁶²

	(1) Controls		(2) +Personals		(3) +Attitudes		(4) +Personals +Attitudes	
Female	0.0435**	(0.0163)	0.00212	(0.0139)	0.0413**	(0.0158)	0.00292	(0.0137)
Marital status	-0.0458**	(0.0160)	0.0137	(0.0158)	-0.0428**	(0.0155)	0.0133	(0.0156)
Ethnic group (Ref.: Bangladeshi)								
Indian	0.0167	(0.0200)	0.0525**	(0.0185)	0.0136	(0.0197)	0.0426*	(0.0186)
Caribbean	0.120***	(0.0192)	0.108***	(0.0166)	0.0822***	(0.0199)	0.0893***	(0.0173)
Education			0.168***	(0.0243)			0.170***	(0.0239)
Age at migration			-0.628***	(0.0698)			-0.591***	(0.0701)
Length of stay in HC			-0.0971	(0.0734)			-0.118	(0.0741)
Permit category (Ref.: For Work)								
Study			-0.0898*	(0.0364)			-0.0817*	(0.0358)
Family reunification			0.0448	(0.0639)			0.0441	(0.0628)
Other purposes			-0.00291	(0.0205)			0.00117	(0.0202)
Attachment to HCP					0.149***	(0.0364)	0.110***	(0.0312)
Social trust					0.121**	(0.0376)	0.0602	(0.0322)
Institutional trust					-0.187***	(0.0463)	-0.0929*	(0.0403)
Constant	0.859***	(0.0177)	0.818***	(0.0312)	0.828***	(0.0319)	0.785***	(0.0359)
Observations	526		526		526		526	
R ²	0.125		0.405		0.192		0.429	

Standard errors in parentheses

* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

²⁶² London: The dependent variable (language proficiency) is measured by a country-specific variable on a four-point scale. EEA omitted because of no observation. Mixed race British (gr25_mixedracebritish; n=14) is excluded from the dataset because the variable is repeatedly omitted in the regression analyses due to collinearity.

Lyon²⁶³

	(1) Controls		(2) +Personals		(3) +Attitudes		(4) +Personals +Attitudes	
Female	0.0204	(0.0360)	0.00151	(0.0330)	0.0133	(0.0371)	-0.00340	(0.0343)
Marital status	-0.0909*	(0.0368)	0.00430	(0.0369)	-0.0783*	(0.0378)	0.00249	(0.0376)
Ethnic group (Ref.: Tunisian)								
Moroccan	0.0966	(0.0510)	0.0921	(0.0478)	0.108*	(0.0514)	0.0955	(0.0486)
Algerian	0.0356	(0.0423)	0.0293	(0.0386)	0.0426	(0.0425)	0.0313	(0.0391)
Education			0.144**	(0.0488)			0.144**	(0.0494)
Age at migration			-0.594***	(0.133)			-0.588***	(0.142)
Length of stay in HC			-0.0287	(0.155)			-0.0220	(0.159)
Permit category (Ref.: For Work)								
Study			-0.0307	(0.147)			-0.0365	(0.149)
Family reunification			-0.0306	(0.0632)			-0.0299	(0.0642)
Other purposes			-0.00141	(0.0674)			-0.000510	(0.0696)
Attachment to HCP					-0.0688	(0.0803)	-0.00697	(0.0763)
Social trust					-0.0444	(0.0658)	-0.0380	(0.0601)
Institutional trust					-0.110	(0.1000)	0.0152	(0.0961)
Constant	0.805***	(0.0502)	0.773***	(0.0723)	0.919***	(0.0847)	0.783***	(0.0949)
Observations	165		165		165		165	
R ²	0.062		0.268		0.082		0.270	

Standard errors in parentheses

* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

Madrid²⁶⁴

	(1) Controls		(2) +Personals		(3) +Attitudes		(4) +Personals +Attitudes	
Female	-0.0198	(0.0412)	-0.0127	(0.0334)	0.00175	(0.0412)	0.00333	(0.0331)
Marital status	0.0802*	(0.0397)	0.0226	(0.0363)	0.0855*	(0.0389)	0.0192	(0.0354)
Education			0.276***	(0.0589)			0.247***	(0.0589)
Age at migration			-0.523**	(0.169)			-0.469**	(0.165)
Length of stay in HC			2.181***	(0.290)			2.242***	(0.285)
Permit category (Ref.: For Work)								
EEA			-0.113	(0.192)			-0.0114	(0.193)
Study			-0.0492	(0.139)			-0.00164	(0.137)
Family reunification			-0.0891	(0.0895)			-0.0686	(0.0875)
Other purposes			0.0403	(0.0816)			0.00937	(0.0800)
Attachment to HCP					0.109	(0.0849)	0.0582	(0.0676)
Social trust					-0.124	(0.0970)	-0.000396	(0.0790)
Institutional trust					-0.209	(0.115)	-0.255**	(0.0936)
Constant	0.509***	(0.0293)	0.399***	(0.0708)	0.616***	(0.0869)	0.496***	(0.0922)
Observations	150		150		150		150	
R ²	0.027		0.429		0.092		0.471	

Standard errors in parentheses

* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

²⁶³ Lyon: EEA omitted because of no observation

²⁶⁴ Madrid: Ethnic groups (Moroccan, Ecuadorian, and Andean Latin American) are excluded from the model because observations are available only for Moroccans.

Milan

	(1) Controls		(2) +Personals		(3) +Attitudes		(4) +Personals +Attitudes	
Female	0.0331	(0.0179)	0.00133	(0.0153)	0.0178	(0.0171)	-0.00496	(0.0152)
Marital status	-0.0506**	(0.0185)	-0.0558***	(0.0160)	-0.0511**	(0.0176)	-0.0538***	(0.0159)
Ethnic group (Ref.: Ecuadorian)								
Egyptian	0.0819***	(0.0234)	-0.0593**	(0.0221)	0.0400	(0.0239)	-0.0637**	(0.0225)
Filipino	0.0165	(0.0195)	-0.0695***	(0.0174)	0.00568	(0.0219)	-0.0607**	(0.0198)
Education			0.168***	(0.0331)			0.154***	(0.0333)
Age at migration			-0.512***	(0.0634)			-0.463***	(0.0637)
Length of stay in HC			1.042***	(0.119)			0.933***	(0.121)
Permit category (Ref.: For Work)								
EEA			0.222**	(0.0768)			0.220**	(0.0761)
Study			-0.0777	(0.0533)			-0.0417	(0.0533)
Family reunification			0.0236	(0.0229)			0.0240	(0.0227)
Other purposes			0.0309	(0.0431)			0.0451	(0.0428)
Attachment to HCP					0.284***	(0.0379)	0.142***	(0.0352)
Social trust					-0.0901*	(0.0390)	-0.0674*	(0.0342)
Institutional trust					-0.0232	(0.0500)	-0.0183	(0.0439)
Constant	0.487***	(0.0205)	0.529***	(0.0358)	0.393***	(0.0310)	0.486***	(0.0398)
Observations	465		465		465		465	
R ²	0.045		0.354		0.151		0.378	

Standard errors in parentheses

* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

Oslo²⁶⁵

	(1) Controls		(2) +Personals		(3) +Attitudes		(4) +Personals +Attitudes	
Female	-0.0281	(0.0196)	-0.0290	(0.0173)	-0.0247	(0.0196)	-0.0268	(0.0173)
Marital status	-0.0810***	(0.0227)	-0.00452	(0.0216)	-0.0798***	(0.0227)	-0.00303	(0.0217)
Ethnic group (Ref.: Bosnian)								
Turk	-0.123***	(0.0260)	-0.139***	(0.0262)	-0.121***	(0.0263)	-0.141***	(0.0263)
Pakistani	-0.131***	(0.0245)	-0.180***	(0.0256)	-0.122***	(0.0257)	-0.173***	(0.0261)
Education			0.180***	(0.0271)			0.168***	(0.0277)
Age at migration			-0.581***	(0.0658)			-0.594***	(0.0661)
Length of stay in HC			0.287*	(0.119)			0.255*	(0.120)
Attachment to HCP (NOR)					0.0931*	(0.0449)	0.0546	(0.0399)
Social trust (NOR)					0.0165	(0.0207)	0.00693	(0.0185)
Institutional trust (NOR)					0.0488	(0.0462)	0.0515	(0.0409)
Constant	0.888***	(0.0255)	0.868***	(0.0403)	0.789***	(0.0442)	0.814***	(0.0479)
Observations	565		565		565		565	
R ²	0.088		0.304		0.102		0.309	

Standard errors in parentheses

* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

²⁶⁵ Oslo: The dependent variable (language proficiency) is measured by a country-specific variable on a four-point scale. Attachment to host country people, social trust, and institutional trust are measured by country-specific variables. Permit category omitted because of no available indicator.

Stockholm²⁶⁶

	(1) Controls		(2) +Personals		(3) +Attitudes		(4) +Personals +Attitudes	
Female	-0.00148	(0.0220)	0.00892	(0.0178)	0.00554	(0.0217)	0.0122	(0.0179)
Marital status	-0.0868***	(0.0226)	-0.0164	(0.0192)	-0.0936***	(0.0222)	-0.0220	(0.0192)
Ethnic group (Ref.: Chilean)								
Turk	0.0208	(0.0222)	-0.0227	(0.0204)	0.0293	(0.0219)	-0.0155	(0.0206)
Education			0.145***	(0.0317)			0.147***	(0.0319)
Age at migration			-0.733***	(0.0601)			-0.704***	(0.0610)
Length of stay in HC			0.244	(0.151)			0.211	(0.153)
Attachment to HCP (SW)					0.195***	(0.0472)	0.107**	(0.0395)
Social trust					0.0562	(0.0402)	0.0134	(0.0339)
Institutional trust (SW)					-0.0773	(0.0495)	-0.0273	(0.0408)
Constant	0.826***	(0.0227)	0.807***	(0.0472)	0.708***	(0.0452)	0.742***	(0.0554)
Observations	396		396		396		396	
R ²	0.037		0.379		0.085		0.391	

Standard errors in parentheses

* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$ **Zurich**

	(1) Controls		(2) +Personals		(3) +Attitudes		(4) +Personals +Attitudes	
Female	-0.0247	(0.0310)	-0.00969	(0.0270)	-0.0229	(0.0307)	-0.00769	(0.0269)
Marital status	-0.120**	(0.0363)	-0.0478	(0.0311)	-0.124***	(0.0358)	-0.0494	(0.0310)
Ethnic group (Ref.: Kosovar)								
Italian	-0.0785*	(0.0335)	-0.161***	(0.0369)	-0.108**	(0.0338)	-0.178***	(0.0372)
Turk	-0.0811*	(0.0332)	-0.0902**	(0.0276)	-0.0814*	(0.0331)	-0.0889**	(0.0278)
Education			0.330***	(0.0407)			0.310***	(0.0410)
Age at migration			-0.912***	(0.0979)			-0.921***	(0.0974)
Length of stay in HC			0.199	(0.120)			0.195	(0.119)
Permit category (Ref.: For Work)								
EEA			0.110***	(0.0274)			0.100***	(0.0274)
Study			0.308	(0.169)			0.319	(0.168)
Family reunification			0.0571	(0.0370)			0.0389	(0.0373)
Other purposes			0.0498	(0.0392)			0.0399	(0.0392)
Attachment to HCP					0.0941	(0.0592)	0.0557	(0.0498)
Social trust					0.187***	(0.0494)	0.120**	(0.0427)
Institutional trust					-0.0934	(0.0727)	-0.0341	(0.0610)
Constant	0.681***	(0.0428)	0.626***	(0.0608)	0.597***	(0.0697)	0.576***	(0.0754)
Observations	454		454		454		454	
R ²	0.034		0.347		0.068		0.360	

Standard errors in parentheses

* $p < 0.05$, ** $p < 0.01$, *** $p < 0$

²⁶⁶ Stockholm: The dependent variable (language proficiency) is measured by a country-specific variable on a four-point scale. Attachment to host country people, and institutional trust are measured by country-specific variables. Permit category omitted because of no available indicator.

Appendix IV: Determinants of Immigrant Integration

1. Determinants of Immigrant Economic Integration

(DV: Employment Status; LPM with Robust Standard Errors & Logistic Regression, LOCALMULTIDEM: 10 cities)

Barcelona (LPM)

	(1) Controls		(2) +Personals		(3) +Attitudes		(4) +Capital		(5) +Personals +Attitudes		(6) +Personals +Capital		(7) +Personals +Attitudes +Capital	
Female	-0.0599	(0.0390)	-0.0382	(0.0382)	-0.0572	(0.0396)	-0.0622	(0.0390)	-0.0362	(0.0388)	-0.0423	(0.0382)	-0.0402	(0.0387)
Marital status	0.0304	(0.0400)	0.0281	(0.0399)	0.0317	(0.0406)	0.0313	(0.0400)	0.0292	(0.0404)	0.0285	(0.0399)	0.0298	(0.0404)
Ethnic group (Ref.: Ecuadorian)														
Moroccan	-0.120 [*]	(0.0526)	-0.114 [*]	(0.0554)	-0.127 [*]	(0.0524)	-0.0714	(0.116)	-0.119 [*]	(0.0554)	0.000333	(0.124)	-0.00200	(0.125)
Andean	0.0418	(0.0378)	0.0267	(0.0397)	0.0345	(0.0380)	0.0420	(0.0379)	0.0235	(0.0396)	0.0294	(0.0398)	0.0262	(0.0398)
Latin American														
Education			0.0922	(0.0579)					0.0840	(0.0577)	0.0886	(0.0584)	0.0802	(0.0584)
Age at migration			-0.133	(0.179)					-0.145	(0.183)	-0.120	(0.181)	-0.134	(0.184)
Length of stay in HC			-0.104	(0.301)					-0.174	(0.306)	-0.159	(0.300)	-0.230	(0.303)
Birth in HC			-0.525 [*]	(0.223)					-0.512 [*]	(0.224)	-0.597 ^{**}	(0.222)	-0.584 ^{**}	(0.222)
Permit category (Ref.: For Work)														
EEA			-0.0709	(0.0968)					-0.0795	(0.0965)	-0.0763	(0.0967)	-0.0853	(0.0964)
Study			-0.329 [*]	(0.165)					-0.322	(0.170)	-0.336 [*]	(0.168)	-0.330	(0.172)
Family			-0.385	(0.209)					-0.365	(0.207)	-0.363	(0.204)	-0.343	(0.202)
Other			-0.0896	(0.0943)					-0.0866	(0.0931)	-0.0889	(0.0937)	-0.0854	(0.0924)
purposes														
Attachment to HCP					0.0541	(0.0838)			0.0459	(0.0819)			0.0440	(0.0825)
Social trust					0.0949	(0.0779)			0.0723	(0.0768)			0.0747	(0.0764)
Institutional trust					0.00994	(0.0970)			-0.00876	(0.0988)			-0.00581	(0.0982)
Language proficiency							0.122	(0.261)			0.272	(0.274)	0.278	(0.279)
Constant	0.845 ^{***}	(0.0452)	0.869 ^{***}	(0.105)	0.759 ^{***}	(0.0833)	0.724 ^{**}	(0.265)	0.824 ^{***}	(0.120)	0.599 [*]	(0.295)	0.548	(0.303)
Observations	447		447		447		447		447		447		447	
R ²	0.033		0.080		0.039		0.033		0.084		0.084		0.087	

Robust standard errors in parentheses
* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

Barcelona (Logistic Regression)

	(1) Controls		(2) +Personals		(3) +Attitudes		(4) +Capital		(5) +Personals +Attitudes		(6) +Personals +Capital		(7) +Personals +Attitudes +Capital	
Employment														
Female	-0.437	(0.266)	-0.299	(0.280)	-0.420	(0.268)	-0.460	(0.269)	-0.287	(0.281)	-0.336	(0.283)	-0.323	(0.284)
Marital status	0.217	(0.263)	0.213	(0.278)	0.238	(0.265)	0.225	(0.263)	0.234	(0.279)	0.222	(0.278)	0.241	(0.279)
Ethnic group (Ref.: Ecuadorian)														
Moroccan	-0.739 [*]	(0.312)	-0.772 [*]	(0.354)	-0.802 [*]	(0.316)	-0.446	(0.579)	-0.822 [*]	(0.358)	-0.0860	(0.715)	-0.124	(0.719)
Andean	0.342	(0.316)	0.245	(0.333)	0.295	(0.319)	0.344	(0.316)	0.223	(0.335)	0.270	(0.334)	0.247	(0.335)
Latin American														
Education			0.680	(0.454)					0.639	(0.464)	0.648	(0.456)	0.604	(0.466)
Age at migration			-0.973	(1.089)					-1.099	(1.112)	-0.883	(1.098)	-1.019	(1.120)
Length of stay in HC			-0.594	(1.790)					-1.125	(1.840)	-1.069	(1.809)	-1.610	(1.861)
Birth in HC			-2.422 [*]	(1.229)					-2.313	(1.236)	-2.833 [*]	(1.293)	-2.732 [*]	(1.302)
Permit category (Ref.: For Work)														
EEA			-0.473	(0.611)					-0.531	(0.621)	-0.521	(0.611)	-0.581	(0.621)
Study			-1.824 [*]	(0.729)					-1.772 [*]	(0.738)	-1.872 [*]	(0.729)	-1.822 [*]	(0.739)
Family reunification			-1.730	(0.951)					-1.570	(0.967)	-1.618	(0.962)	-1.451	(0.978)
Other			-0.576	(0.558)					-0.561	(0.568)	-0.580	(0.558)	-0.563	(0.567)
purposes														
Attachment to HCP					0.389	(0.541)			0.375	(0.577)			0.362	(0.578)
Social trust					0.696	(0.531)			0.558	(0.566)			0.568	(0.566)
Institutional trust					0.0961	(0.719)			0.0128	(0.764)			0.0349	(0.761)
Language proficiency							0.744	(1.221)			1.571	(1.401)	1.606	(1.413)
Constant	1.725 ^{***}	(0.314)	1.899 ^{**}	(0.664)	1.091	(0.559)	0.988	(1.252)	1.499	(0.789)	0.355	(1.536)	-0.0817	(1.605)
Observations	447		447		447		447		447		447		447	
Pseudo R ²	0.034		0.074		0.042		0.035		0.078		0.077		0.082	

Standard errors in parentheses
* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

Budapest (LPM)

	(1) Controls	(2) +Personals	(3) +Attitudes	(4) +Capital	(5) +Personals +Attitudes	(6) +Personals +Capital	(7) +Personals +Attitudes +Capital
Female	-0.199*** (0.0478)	-0.202*** (0.0444)	-0.203*** (0.0475)	-0.200*** (0.0472)	-0.205*** (0.0444)	-0.201*** (0.0443)	-0.204*** (0.0444)
Marital status	0.415*** (0.0436)	0.279*** (0.0485)	0.416*** (0.0439)	0.424*** (0.0426)	0.279*** (0.0491)	0.284*** (0.0480)	0.283*** (0.0486)
Ethnic group (Ref.: Chinese)							
Ethnic	-0.181*** (0.0533)	-0.0958 (0.0521)	-0.198*** (0.0583)	-0.392*** (0.109)	-0.107 (0.0581)	-0.209 (0.110)	-0.202 (0.111)
Hungarian							
Mixed	-0.320*** (0.0527)	0.273*** (0.0516)	-0.345*** (0.0538)	-0.370*** (0.0596)	-0.293*** (0.0533)	-0.297*** (0.0583)	-0.312*** (0.0587)
Muslim							
Education		-0.0137 (0.0827)			-0.0245 (0.0851)	-0.0348 (0.0838)	-0.0444 (0.0863)
Age at migration		-0.420* (0.198)			-0.404* (0.198)	-0.377 (0.195)	-0.374 (0.198)
Length of stay in HC		0.176 (0.315)			0.185 (0.318)	0.108 (0.318)	0.118 (0.322)
Birth in HC		-0.215 (0.198)			-0.208 (0.194)	-0.213 (0.195)	-0.208 (0.192)
Permit category (Ref.: For Work)							
EEA		-0.283 (0.328)			-0.289 (0.320)	-0.286 (0.328)	-0.289 (0.320)
Study		0.496*** (0.0640)			-0.490*** (0.0651)	-0.491*** (0.0643)	-0.487*** (0.0654)
Family		-0.138* (0.0595)			-0.142* (0.0600)	-0.132* (0.0602)	-0.135* (0.0605)
Other		-0.120 (0.0694)			-0.110 (0.0700)	-0.103 (0.0674)	-0.0976 (0.0686)
purposes							
Attachment to HCP			0.206* (0.0985)		0.143 (0.0894)		0.127 (0.0907)
Social trust			-0.0802 (0.135)		0.0188 (0.122)		0.00872 (0.123)
Institutional trust			-0.0151 (0.119)		-0.0273 (0.108)		0.000847 (0.109)
Language proficiency				0.337* (0.133)		0.184 (0.135)	0.162 (0.134)
Constant	0.663*** (0.0570)	0.972*** (0.111)	0.616*** (0.101)	0.543*** (0.0685)	0.903*** (0.127)	0.911*** (0.111)	0.854*** (0.126)
Observations	420	420	420	420	420	420	420
R ²	0.237	0.389	0.246	0.251	0.393	0.392	0.396

Robust standard errors in parentheses

* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

Budapest (Logistic Regression)

	(1) Controls	(2) +Personals	(3) +Attitudes	(4) +Capital	(5) +Personals +Attitudes	(6) +Personals +Capital	(7) +Personals +Attitudes +Capital
Employment							
Female	-1.115*** (0.259)	-1.326*** (0.290)	-1.138*** (0.262)	-1.124*** (0.260)	-1.359*** (0.294)	-1.320*** (0.291)	-1.363*** (0.295)
Marital status	2.078*** (0.251)	1.768*** (0.299)	2.089*** (0.252)	2.157*** (0.257)	1.797*** (0.302)	1.806*** (0.302)	1.833*** (0.306)
Ethnic group (Ref.: Chinese)							
Ethnic	-1.241** (0.399)	-0.883 (0.462)	-1.320** (0.418)	-2.318*** (0.591)	-0.943 (0.486)	-1.453* (0.640)	-1.439* (0.644)
Hungarian							
Mixed	-2.028*** (0.430)	-2.108*** (0.486)	-2.169*** (0.444)	-2.266*** (0.444)	-2.298*** (0.506)	-2.212*** (0.492)	-2.389*** (0.511)
Muslim		-0.148 (0.618)			-0.262 (0.634)	-0.240 (0.622)	-0.352 (0.638)
Education		-2.625* (1.104)			-2.647* (1.130)	-2.373* (1.129)	-2.462* (1.148)
Age at migration		1.688 (1.954)			1.604 (1.963)	1.268 (1.974)	1.181 (1.989)
Length of stay in HC		-1.201 (0.939)			-1.149 (0.932)	-1.196 (0.924)	-1.154 (0.920)
Birth in HC							
Permit category (Ref.: For Work)							
EEA		-1.279 (1.350)			-1.303 (1.344)	-1.298 (1.348)	-1.301 (1.339)
Study		-2.645*** (0.368)			-2.658*** (0.373)	-2.631*** (0.368)	-2.651*** (0.373)
Family		-0.994* (0.418)			-1.018* (0.421)	-0.932* (0.421)	-0.962* (0.423)
reunification							
Other		-0.620 (0.466)			-0.550 (0.481)	-0.523 (0.479)	-0.467 (0.494)
purposes							
Attachment to HCP			1.109* (0.539)		1.035 (0.606)		0.959 (0.610)
Social trust			-0.398 (0.663)		0.0781 (0.758)		0.0359 (0.756)
Institutional trust			0.00746 (0.684)		0.0577 (0.771)		0.240 (0.785)
Language proficiency				1.765* (0.692)		0.995 (0.772)	0.926 (0.787)
Constant	1.226** (0.392)	3.077*** (0.764)	0.907 (0.576)	0.562 (0.463)	2.606** (0.832)	2.684*** (0.814)	2.239* (0.881)
Observations	420	420	420	420	420	420	420
Pseudo R ²	0.198	0.336	0.206	0.210	0.342	0.339	0.345

Standard errors in parentheses

* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

Geneva (LPM)

	(1) Controls		(2) +Personals		(3) +Attitudes		(4) +Capital		(5) +Personals +Attitudes		(6) +Personals +Capital		(7) +Personals +Attitudes +Capital	
Female	-0.109	(0.0606)	-0.0682	(0.0586)	-0.114	(0.0608)	-0.109	(0.0582)	-0.0693	(0.0589)	-0.0633	(0.0577)	-0.0659	(0.0580)
Marital status	0.172 ^{**}	(0.0641)	0.328 ^{***}	(0.0692)	0.185 ^{**}	(0.0663)	0.270 ^{**}	(0.0676)	0.328 ^{***}	(0.0689)	0.359 ^{***}	(0.0697)	0.356 ^{***}	(0.0692)
Ethnic group (Ref.: Kosovar)														
Italian	-0.103	(0.0572)	0.0926	(0.0793)	-0.120 [*]	(0.0594)	-0.0867	(0.0564)	0.0995	(0.0824)	0.116	(0.0793)	0.126	(0.0821)
Education			0.304 ^{**}	(0.101)					0.333 ^{**}	(0.102)	0.241 [*]	(0.107)	0.268 [*]	(0.109)
Age at migration			-0.625 [*]	(0.270)					-0.555 [*]	(0.270)	-0.340	(0.301)	-0.293	(0.301)
Length of stay in HC			-1.212 ^{***}	(0.263)					-1.254 ^{***}	(0.268)	-1.214 ^{***}	(0.265)	-1.258 ^{***}	(0.270)
Birth in HC			0.0736	(0.131)					0.116	(0.135)	0.0604	(0.131)	0.0956	(0.134)
Permit category (Ref.: For Work)														
EEA			0.0672	(0.0832)					0.0591	(0.0841)	0.0948	(0.0824)	0.0845	(0.0833)
Study			0.0886	(0.248)					0.0566	(0.256)	0.149	(0.240)	0.114	(0.249)
Family			-0.0570	(0.0980)					-0.0643	(0.0961)	-0.0411	(0.0956)	-0.0470	(0.0949)
Other purposes			0.0350	(0.0704)					0.0267	(0.0714)	0.0537	(0.0714)	0.0454	(0.0724)
Attachment to HCP					0.0191	(0.145)			0.251	(0.135)			0.223	(0.137)
Social trust					-0.114	(0.111)			-0.0700	(0.102)			-0.0848	(0.102)
Institutional trust					-0.0534	(0.154)			-0.0826	(0.145)			-0.0290	(0.148)
Language proficiency							0.612 ^{***}	(0.148)			0.457 [*]	(0.183)	0.442 [*]	(0.187)
Constant	0.529 ^{***}	(0.0673)	0.535 ^{***}	(0.134)	0.612 ^{***}	(0.142)	0.0882	(0.131)	0.409 [*]	(0.168)	0.182	(0.199)	0.0666	(0.215)
Observations	291		291		291		291		291		291		291	
R ²	0.055		0.190		0.060		0.107		0.202		0.210		0.220	

Robust standard errors in parentheses
^{*} $p < 0.05$, ^{**} $p < 0.01$, ^{***} $p < 0.001$

Geneva (Logistic Regression)

	(1) Controls		(2) +Personals		(3) +Attitudes		(4) +Capital		(5) +Personals +Attitudes		(6) +Personals +Capital		(7) +Personals +Attitudes +Capital	
Employment														
Female	-0.459	(0.252)	-0.368	(0.285)	-0.483	(0.253)	-0.487	(0.259)	-0.362	(0.288)	-0.346	(0.290)	-0.348	(0.292)
Marital status	0.713 ^{**}	(0.263)	1.719 ^{***}	(0.365)	0.771 ^{**}	(0.274)	1.202 ^{***}	(0.303)	1.739 ^{***}	(0.373)	1.955 ^{***}	(0.384)	1.930 ^{***}	(0.387)
Ethnic group (Ref.: Kosovar)														
Italian	-0.438	(0.243)	0.525	(0.404)	-0.512 [*]	(0.257)	-0.398	(0.250)	0.520	(0.420)	0.674	(0.418)	0.683	(0.433)
Education			1.523 ^{**}	(0.479)					1.689 ^{***}	(0.493)	1.221 [*]	(0.494)	1.370 ^{**}	(0.510)
Age at migration			-3.324 ^{**}	(1.269)					-2.952 [*]	(1.298)	-1.878	(1.386)	-1.583	(1.418)
Length of stay in HC			-6.365 ^{***}	(1.468)					-6.502 ^{***}	(1.477)	-6.656 ^{***}	(1.508)	-6.768 ^{***}	(1.511)
Birth in HC			0.342	(0.555)					0.554	(0.575)	0.303	(0.561)	0.468	(0.580)
Permit category (Ref.: For Work)														
EEA			0.279	(0.401)					0.269	(0.407)	0.412	(0.411)	0.387	(0.416)
Study			0.355	(1.286)					0.225	(1.294)	0.681	(1.310)	0.529	(1.317)
Family reunification			-0.306	(0.464)					-0.358	(0.471)	-0.245	(0.468)	-0.276	(0.477)
Other purposes			0.127	(0.338)					0.102	(0.343)	0.204	(0.344)	0.174	(0.349)
Attachment to HCP					0.0838	(0.599)			1.170	(0.702)			0.996	(0.703)
Social trust					-0.500	(0.479)			-0.331	(0.549)			-0.403	(0.553)
Institutional trust					-0.223	(0.660)			-0.482	(0.744)			-0.225	(0.759)
Language proficiency							2.746 ^{***}	(0.699)			2.394 ^{**}	(0.877)	2.298 ^{**}	(0.890)
Constant	0.132	(0.277)	0.202	(0.598)	0.488	(0.608)	-1.847 ^{**}	(0.579)	-0.363	(0.849)	-1.642	(0.905)	-2.097	(1.086)
Observations	291		291		291		291		291		291		291	
Pseudo R ²	0.040		0.155		0.045		0.082		0.164		0.174		0.181	

Standard errors in parentheses
^{*} $p < 0.05$, ^{**} $p < 0.01$, ^{***} $p < 0.001$

London²⁶⁷ (LPM)

	(1) Controls	(2) +Personals	(3) +Attitudes	(4) +Capital	(5) +Personals +Attitudes	(6) +Personals +Capital	(7) +Personals +Attitudes +Capital
Female	-0.190*** (0.0417)	-0.193*** (0.0415)	-0.196*** (0.0418)	-0.194*** (0.0418)	-0.198*** (0.0417)	-0.193*** (0.0416)	-0.198*** (0.0418)
Marital status	0.243*** (0.0397)	0.268*** (0.0450)	0.241*** (0.0397)	0.248*** (0.0397)	0.273*** (0.0455)	0.270*** (0.0453)	0.274*** (0.0458)
Ethnic group (Ref.: Bangladeshi)							
Indian	0.179*** (0.0470)	0.121* (0.0555)	0.165*** (0.0486)	0.177*** (0.0470)	0.105 (0.0575)	0.124* (0.0562)	0.109 (0.0579)
Caribbean	0.167*** (0.0500)	0.159** (0.0507)	0.172** (0.0528)	0.154** (0.0512)	0.168** (0.0536)	0.166** (0.0520)	0.175** (0.0543)
Education		0.237** (0.0734)			0.234** (0.0738)	0.249** (0.0767)	0.249** (0.0777)
Age at migration		-0.0307 (0.287)			-0.0928 (0.286)	-0.0630 (0.294)	-0.133 (0.291)
Length of stay in HC		0.250 (0.227)			0.176 (0.235)	0.240 (0.230)	0.163 (0.237)
Birth in HC		-0.0554 (0.104)			-0.0688 (0.106)	-0.0492 (0.104)	-0.0624 (0.106)
Permit category (Ref.: For Work)							
Study		0.162 (0.0850)			0.162 (0.0871)	0.157 (0.0847)	0.157 (0.0867)
Family		-0.177 (0.171)			-0.184 (0.180)	-0.172 (0.173)	-0.178 (0.183)
Other purposes		-0.151* (0.0769)			-0.154* (0.0781)	-0.148 (0.0770)	-0.151 (0.0780)
Attachment to HCP			0.0857 (0.0924)		0.0917 (0.0921)		0.101 (0.0936)
Social trust			0.0230 (0.0955)		0.00461 (0.0959)		0.00890 (0.0962)
Institutional trust			0.102 (0.123)		0.113 (0.121)		0.105 (0.122)
Language proficiency (EN)				0.108 (0.0966)		-0.0675 (0.122)	-0.0857 (0.127)
Constant	0.502*** (0.0451)	0.338** (0.128)	0.396*** (0.0823)	0.409*** (0.0933)	0.264* (0.132)	0.388* (0.157)	0.327* (0.161)
Observations	519	519	519	519	519	519	519
R ²	0.122	0.167	0.126	0.124	0.172	0.168	0.172

Robust standard errors in parentheses
* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

London (Logistic Regression)

	(1) Controls	(2) +Personals	(3) +Attitudes	(4) +Capital	(5) +Personals +Attitudes	(6) +Personals +Capital	(7) +Personals +Attitudes +Capital
Employment							
Female	-0.914*** (0.203)	-0.952*** (0.214)	-0.954*** (0.205)	-0.942*** (0.205)	-0.996*** (0.217)	-0.953*** (0.213)	-0.996*** (0.217)
Marital status	1.183*** (0.205)	1.378*** (0.255)	1.177*** (0.206)	1.216*** (0.208)	1.411*** (0.258)	1.386*** (0.256)	1.419*** (0.259)
Ethnic group (Ref.: Bangladeshi)							
Indian	0.882*** (0.253)	0.590* (0.283)	0.817** (0.257)	0.875*** (0.253)	0.516 (0.288)	0.607* (0.285)	0.534 (0.290)
Caribbean	0.811*** (0.239)	0.803** (0.257)	0.847*** (0.257)	0.742** (0.247)	0.868** (0.275)	0.840** (0.268)	0.906** (0.283)
Education		1.238*** (0.373)			1.231*** (0.373)	1.292*** (0.390)	1.300*** (0.392)
Age at migration		0.144 (1.426)			-0.247 (1.436)	-0.0557 (1.476)	-0.484 (1.480)
Length of stay in HC		1.192 (1.188)			0.782 (1.218)	1.154 (1.189)	0.734 (1.218)
Birth in HC		-0.214 (0.506)			-0.298 (0.512)	-0.187 (0.509)	-0.269 (0.514)
Permit category (Ref.: For Work)							
Study		0.885 (0.706)			0.857 (0.706)	0.869 (0.706)	0.837 (0.706)
Family		-0.878 (0.943)			-0.919 (0.939)	-0.852 (0.945)	-0.885 (0.942)
Other purposes		-0.788* (0.399)			-0.809* (0.402)	-0.771 (0.400)	-0.790* (0.403)
Attachment to HCP			0.422 (0.459)		0.482 (0.485)		0.524 (0.491)
Social trust			0.115 (0.484)		-0.00476 (0.504)		0.0139 (0.506)
Institutional trust			0.544 (0.591)		0.673 (0.636)		0.635 (0.640)
Language proficiency(EN)				0.598 (0.549)		-0.344 (0.709)	-0.424 (0.719)
Constant	-0.0198 (0.211)	-0.921 (0.630)	-0.561 (0.402)	-0.535 (0.518)	-1.316 (0.676)	-0.659 (0.830)	-1.001 (0.860)
Observations	519	519	519	519	519	519	519
Pseudo R ²	0.099	0.139	0.103	0.100	0.143	0.139	0.143

Standard errors in parentheses
* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

²⁶⁷ London: Language proficiency is measured by a country-specific variable on a four-point scale. EEA omitted because of no observation. Mixed race British (gr25_mixedracebritish; n=14) is excluded from the dataset because the variable is repeatedly omitted in the regression analyses due to collinearity.

Lyon²⁶⁸ (LPM)

	(1) Controls	(2) +Personals	(3) +Attitudes	(4) +Capital	(5) +Personals +Attitudes	(6) +Personals +Capital	(7) +Personals +Attitudes +Capital
Female	-0.206*** (0.0404)	-0.210*** (0.0397)	-0.206*** (0.0406)	-0.200*** (0.0402)	-0.212*** (0.0398)	-0.204*** (0.0398)	-0.206*** (0.0399)
Marital status	0.0925* (0.0404)	0.0867* (0.0425)	0.105* (0.0412)	0.117** (0.0407)	0.0954* (0.0427)	0.0929* (0.0425)	0.103* (0.0428)
Ethnic group (Ref.: Tunisian)							
Moroccan	-0.0614 (0.0666)	-0.0923 (0.0656)	-0.0556 (0.0666)	-0.0675 (0.0663)	-0.0845 (0.0655)	-0.0977 (0.0658)	-0.0895 (0.0656)
Algerian	0.0202 (0.0524)	0.00306 (0.0505)	0.0268 (0.0524)	0.00159 (0.0518)	0.0127 (0.0503)	-0.00293 (0.0506)	0.00718 (0.0503)
Education		0.288*** (0.0628)			0.294*** (0.0638)	0.268*** (0.0637)	0.273*** (0.0648)
Age at migration		0.133 (0.263)			0.189 (0.271)	0.255 (0.279)	0.326 (0.290)
Length of stay in HC		0.603** (0.203)			0.637** (0.206)	0.552** (0.204)	0.587** (0.207)
Birth in HC		-0.0416 (0.0626)			-0.0538 (0.0638)	-0.0538 (0.0629)	-0.0682 (0.0642)
Permit category (Ref.: For Work)							
Study		-0.581*** (0.107)			-0.583*** (0.104)	-0.605*** (0.110)	-0.609*** (0.107)
Family		-0.261* (0.107)			-0.268* (0.109)	-0.254* (0.111)	-0.260* (0.113)
Other purposes		-0.238* (0.106)			-0.251* (0.107)	-0.238* (0.103)	-0.253* (0.104)
Attachment to HCP			-0.0360 (0.0931)		-0.0607 (0.0901)		-0.0751 (0.0902)
Social trust			0.0481 (0.0747)		-0.0123 (0.0712)		-0.0149 (0.0709)
Institutional trust			-0.149 (0.0971)		-0.150 (0.0966)		-0.158 (0.0968)
Language proficiency				0.372*** (0.104)		0.241* (0.121)	0.261* (0.122)
Constant	0.619*** (0.0565)	0.330** (0.108)	0.696*** (0.0942)	0.281* (0.111)	0.439*** (0.132)	0.138 (0.147)	0.246 (0.159)
Observations	598	598	598	598	598	598	598
R ²	0.059	0.133	0.063	0.078	0.138	0.139	0.145

Robust standard errors in parentheses
* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

Lyon²⁶⁹ (Logistic Regression)

	(1) Controls	(2) +Personals	(3) +Attitudes	(4) +Capital	(5) +Personals +Attitudes	(6) +Personals +Capital	(7) +Personals +Attitudes +Capital
Employment							
Female	0.895*** (0.176)	0.964*** (0.186)	0.896*** (0.177)	-0.887*** (0.178)	-0.983*** (0.189)	-0.943*** (0.187)	-0.962*** (0.190)
Marital status	0.391* (0.171)	0.401* (0.191)	0.441* (0.176)	0.507** (0.177)	0.443* (0.193)	0.431* (0.192)	0.478* (0.194)
Ethnic group (Ref.: Tunisian)							
Moroccan	-0.251 (0.287)	-0.445 (0.301)	-0.229 (0.289)	-0.294 (0.290)	-0.409 (0.302)	-0.477 (0.304)	-0.439 (0.305)
Algerian	0.0832 (0.223)	0.0231 (0.232)	0.112 (0.224)	-0.000137 (0.227)	0.0719 (0.234)	-0.00740 (0.235)	0.0430 (0.237)
Education		1.335*** (0.302)			1.376*** (0.308)	1.246*** (0.306)	1.283*** (0.311)
Age at migration		0.750 (1.303)			1.047 (1.308)	1.351 (1.359)	1.722 (1.367)
Length of stay in HC		2.866** (0.883)			3.037*** (0.896)	2.643** (0.892)	2.831** (0.905)
Birth in HC		-0.184 (0.299)			-0.236 (0.300)	-0.250 (0.302)	-0.312 (0.303)
Permit category (Ref.: For Work)							
Study		0 (.)			0 (.)	0 (.)	0 (.)
Family reunification		-1.237* (0.574)			-1.270* (0.577)	-1.227* (0.580)	-1.256* (0.583)
Other purposes		-1.149* (0.511)			-1.206* (0.511)	-1.157* (0.513)	-1.223* (0.512)
Attachment to HCP			-0.176 (0.410)		-0.304 (0.436)		-0.363 (0.438)
Social trust			0.220 (0.317)		-0.0717 (0.334)		-0.0928 (0.336)
Institutional trust			-0.595 (0.437)		-0.688 (0.465)		-0.727 (0.468)
Language proficiency				1.600*** (0.478)		1.141* (0.576)	1.241* (0.581)
Constant	0.543* (0.238)	-0.833 (0.511)	0.865* (0.408)	-0.901 (0.492)	-0.321 (0.605)	-1.733* (0.687)	-1.241 (0.745)
Observations	593	593	593	593	593	593	593
Pseudo R ²	0.045	0.097	0.048	0.059	0.101	0.102	0.107

Standard errors in parentheses
* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

²⁶⁸ Lyon: EEA (permit category) omitted because of no observation

²⁶⁹ Lyon (logistic regression): Study (permit category) was dropped from the logistic regression analysis and 5 observations were not used.

Madrid (LPM)

	(1) Controls		(2) +Personals		(3) +Attitudes		(4) +Capital		(5) +Personals +Attitudes		(6) +Personals +Capital		(7) +Personals +Attitudes +Capital	
Female	-0.0155	(0.0353)	-0.0127	(0.0339)	-0.0150	(0.0354)	-0.0160	(0.0353)	-0.0115	(0.0340)	-0.0150	(0.0338)	-0.0138	(0.0339)
Marital status	0.0805*	(0.0363)	0.0348	(0.0347)	0.0854*	(0.0363)	0.0827*	(0.0365)	0.0375	(0.0348)	0.0367	(0.0347)	0.0399	(0.0349)
Ethnic group (Ref.: Ecuadorian)														
Moroccan	-	(0.0453)	0.00825	(0.0417)	-0.0174	(0.0451)	-0.110	(0.113)	-0.00262	(0.0418)	-0.0958	(0.109)	-0.115	(0.111)
Andean	0.00815	(0.0406)	-0.0394	(0.0399)	-0.0181	(0.0407)	-0.0115	(0.0407)	-0.0427	(0.0400)	-0.0394	(0.0399)	-0.0429	(0.0400)
Latin American														
Education			0.189**	(0.0579)					0.173**	(0.0583)	0.196***	(0.0583)	0.180**	(0.0586)
Age at migration			0.101	(0.175)					0.102	(0.176)	0.0841	(0.176)	0.0850	(0.177)
Length of stay in HC			-0.718	(0.388)					-0.779*	(0.392)	-0.618	(0.392)	-0.672	(0.394)
Birth in HC			0.106	(0.230)					0.0880	(0.227)	0.102	(0.235)	0.0830	(0.233)
Permit category (Ref.: For Work)														
EEA			-0.108	(0.138)					-0.116	(0.140)	-0.110	(0.137)	-0.118	(0.139)
Study			-0.710***	(0.136)					-0.697***	(0.140)	-0.711***	(0.136)	-0.695***	(0.140)
Family			-0.597***	(0.116)					-0.602***	(0.115)	-0.601***	(0.120)	-0.607***	(0.119)
Other			-0.167	(0.0992)					-0.185	(0.0990)	-0.168	(0.1000)	-0.186	(0.0997)
purposes														
Attachment to HCP					0.133	(0.0810)			0.132	(0.0782)			0.135	(0.0781)
Social trust					0.0109	(0.0712)			0.0353	(0.0693)			0.0313	(0.0691)
Institutional trust					-0.120	(0.0920)			-0.0811	(0.0946)			-0.0901	(0.0948)
Language proficiency							-0.183	(0.184)			-0.184	(0.168)	-0.199	(0.170)
Constant	0.769***	(0.0423)	0.748***	(0.0886)	0.746***	(0.0824)	0.951***	(0.184)	0.705***	(0.116)	0.927***	(0.185)	0.904***	(0.204)
Observations	531		531		531		531		531		531		531	
R ²	0.011		0.140		0.018		0.013		0.146		0.142		0.149	

Robust standard errors in parentheses
* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

Madrid (Logistic Regression)

	(1) Controls		(2) +Personals		(3) +Attitudes		(4) +Capital		(5) +Personals +Attitudes		(6) +Personals +Capital		(7) +Personals +Attitudes +Capital	
Employment														
Female	-0.0967	(0.221)	-0.0925	(0.242)	-0.0991	(0.222)	-0.0965	(0.221)	-0.0888	(0.244)	-0.111	(0.243)	-0.108	(0.244)
Marital status	0.500*	(0.220)	0.246	(0.249)	0.536*	(0.222)	0.512*	(0.220)	0.272	(0.251)	0.254	(0.249)	0.284	(0.251)
Ethnic group (Ref.: Ecuadorian)														
Moroccan	-0.0523	(0.275)	0.0762	(0.299)	-0.103	(0.281)	-0.633	(0.572)	0.0152	(0.306)	-0.613	(0.638)	-0.745	(0.653)
Andean	-0.0717	(0.260)	-0.278	(0.292)	-0.112	(0.263)	-0.0715	(0.260)	-0.309	(0.296)	-0.282	(0.292)	-0.317	(0.296)
Latin American														
Education			1.403**	(0.479)					1.294**	(0.485)	1.466**	(0.484)	1.352**	(0.490)
Age at migration			0.736	(0.942)					0.730	(0.954)	0.599	(0.945)	0.600	(0.956)
Length of stay in HC			-4.359*	(1.964)					-4.711*	(1.988)	-3.757	(2.044)	-4.061*	(2.065)
Birth in HC			0.676	(1.251)					0.518	(1.250)	0.633	(1.245)	0.488	(1.249)
Permit category (Ref.: For Work)														
EEA			-0.616	(0.728)					-0.679	(0.729)	-0.624	(0.730)	-0.688	(0.731)
Study			-3.742***	(1.124)					-3.681**	(1.130)	-3.781***	(1.133)	-3.715**	(1.140)
Family reunification			-2.823***	(0.689)					-2.903***	(0.697)	-2.882***	(0.695)	-2.971***	(0.706)
Other			-0.905	(0.473)					-1.028*	(0.484)	-0.917	(0.474)	-1.046*	(0.485)
purposes														
Attachment to HCP					0.828	(0.465)			0.925	(0.510)			0.942	(0.510)
Social trust					0.0698	(0.447)			0.234	(0.482)			0.233	(0.481)
Institutional trust					-0.779	(0.610)			-0.560	(0.650)			-0.637	(0.654)
Language proficiency							-1.061	(0.938)			-1.247	(1.038)	-1.365	(1.054)
Constant	1.213***	(0.242)	0.972	(0.501)	1.104*	(0.486)	2.267*	(0.962)	0.679	(0.645)	2.202	(1.140)	2.060	(1.245)
Observations	531		531		531		531		531		531		531	
Pseudo R ²	0.010		0.116		0.018		0.013		0.123		0.119		0.126	

Standard errors in parentheses
* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

Milan (LPM)

	(1) Controls	(2) +Personals	(3) +Attitudes	(4) +Capital	(5) +Personals +Attitudes	(6) +Personals +Capital	(7) +Personals +Attitudes +Capital
Female	-0.0741 (0.0399)	-0.0303 (0.0366)	-0.0711 (0.0398)	-0.0687 (0.0396)	-0.0279 (0.0369)	-0.0301 (0.0366)	-0.0275 (0.0369)
Marital status	0.208*** (0.0444)	0.108** (0.0410)	0.209*** (0.0449)	0.185*** (0.0441)	0.103* (0.0413)	0.110** (0.0411)	0.106* (0.0415)
Ethnic group (Ref.: Ecuadorian)							
Egyptian	-0.0864 (0.0552)	-0.0201 (0.0593)	-0.106 (0.0584)	-0.0614 (0.0559)	-0.0431 (0.0622)	-0.0177 (0.0600)	-0.0405 (0.0626)
Filipino	0.0670 (0.0426)	0.0701 (0.0391)	0.0369 (0.0506)	0.0760 (0.0421)	0.0327 (0.0470)	0.0733 (0.0409)	0.0355 (0.0481)
Education		0.0447 (0.0719)			0.0263 (0.0761)	0.0378 (0.0742)	0.0195 (0.0777)
Age at migration		-0.207 (0.170)			-0.223 (0.177)	-0.186 (0.179)	-0.203 (0.184)
Length of stay in HC		0.490 (0.292)			0.457 (0.307)	0.446 (0.321)	0.415 (0.330)
Birth in HC		-0.534*** (0.105)			-0.545*** (0.107)	-0.547*** (0.107)	-0.559*** (0.109)
Permit category (Ref.: For Work)							
EEA		-0.0559 (0.214)			-0.0731 (0.222)	-0.0645 (0.216)	-0.0822 (0.224)
Study		-0.265 (0.149)			-0.270 (0.155)	-0.259 (0.153)	-0.264 (0.157)
Family		-0.435*** (0.0688)			-0.439*** (0.0697)	-0.435*** (0.0690)	-0.439*** (0.0699)
Other		-0.195 (0.110)			-0.206 (0.107)	-0.198 (0.111)	-0.210 (0.108)
purposes							
Attachment to HCP			0.0362 (0.102)		0.0182 (0.102)		0.0120 (0.103)
Social trust			0.0854 (0.0879)		0.0255 (0.0825)		0.0284 (0.0831)
Institutional trust			0.0378 (0.124)		0.148 (0.120)		0.150 (0.120)
Language proficiency				-0.214 (0.122)		0.0513 (0.138)	0.0541 (0.138)
Constant	0.678*** (0.0500)	0.789*** (0.0855)	0.610*** (0.0855)	0.771*** (0.0738)	0.734*** (0.1000)	0.767*** (0.104)	0.712*** (0.115)
Observations	479	479	479	479	479	479	479
R ²	0.087	0.288	0.090	0.095	0.293	0.288	0.293

Robust standard errors in parentheses
* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

Milan (Logistic Regression)

	(1) Controls	(2) +Personals	(3) +Attitudes	(4) +Capital	(5) +Personals +Attitudes	(6) +Personals +Capital	(7) +Personals +Attitudes +Capital
Employment							
Female	-0.491 (0.251)	-0.232 (0.287)	-0.477 (0.254)	-0.455 (0.253)	-0.215 (0.289)	-0.226 (0.287)	-0.207 (0.290)
Marital status	1.195*** (0.235)	0.837** (0.291)	1.205*** (0.239)	1.073*** (0.245)	0.803** (0.296)	0.861** (0.299)	0.826** (0.303)
Ethnic group (Ref.: Ecuadorian)							
Egyptian	-0.507 (0.299)	-0.140 (0.380)	-0.626 (0.329)	-0.346 (0.312)	-0.317 (0.398)	-0.120 (0.385)	-0.295 (0.404)
Filipino	0.466 (0.282)	0.748* (0.350)	0.273 (0.333)	0.538 (0.285)	0.450 (0.405)	0.774* (0.357)	0.475 (0.411)
Education		0.383 (0.630)			0.215 (0.645)	0.331 (0.647)	0.166 (0.661)
Age at migration		-1.532 (1.215)			-1.701 (1.237)	-1.357 (1.315)	-1.539 (1.323)
Length of stay in HC		6.002* (2.791)			5.679* (2.857)	5.602 (3.002)	5.322 (3.021)
Birth in HC		-3.562*** (0.737)			-3.669*** (0.742)	-3.648*** (0.777)	-3.760*** (0.789)
Permit category (Ref.: For Work)							
EEA		-0.383 (1.200)			-0.532 (1.231)	-0.438 (1.213)	-0.589 (1.247)
Study		-1.264 (0.777)			-1.346 (0.798)	-1.232 (0.786)	-1.324 (0.805)
Family		-2.482*** (0.362)			-2.540*** (0.365)	-2.488*** (0.362)	-2.547*** (0.366)
reunification							
Other		-1.457* (0.681)			-1.560* (0.699)	-1.480* (0.683)	-1.586* (0.703)
purposes							
Attachment to HCP			0.221 (0.535)		0.0584 (0.642)		0.00855 (0.659)
Social trust			0.531 (0.561)		0.180 (0.667)		0.186 (0.667)
Institutional trust			0.234 (0.718)		1.223 (0.858)		1.240 (0.859)
Language proficiency				-1.145 (0.609)		0.377 (1.072)	0.386 (1.101)
Constant	0.825** (0.264)	1.182 (0.660)	0.412 (0.433)	1.309*** (0.374)	0.836 (0.735)	1.014 (0.814)	0.682 (0.856)
Observations	479	479	479	479	479	479	479
Pseudo R ²	0.082	0.264	0.086	0.089	0.270	0.264	0.270

Standard errors in parentheses
* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

*Oslo*²⁷⁰ (LPM)

	(1) Controls	(2) +Personals	(3) +Attitudes	(4) +Capital	(5) +Personals +Attitudes	(6) +Personals +Capital	(7) +Personals +Attitudes +Capital
Female	-0.251*** (0.0396)	-0.253*** (0.0388)	-0.250*** (0.0396)	-0.241*** (0.0390)	-0.254*** (0.0388)	-0.248*** (0.0387)	-0.250*** (0.0387)
Marital status	0.00290 (0.0457)	0.0640 (0.0483)	0.0103 (0.0460)	0.0300 (0.0463)	0.0717 (0.0483)	0.0642 (0.0480)	0.0716 (0.0480)
Ethnic group (Ref.: Bosnian)							
Turk	-0.140** (0.0508)	-0.111 (0.0592)	-0.145** (0.0507)	-0.0993 (0.0517)	-0.117* (0.0594)	-0.0873 (0.0609)	-0.0932 (0.0611)
Pakistani	-0.235*** (0.0485)	-0.228*** (0.0575)	-0.246*** (0.0499)	-0.191*** (0.0503)	-0.239*** (0.0581)	-0.196** (0.0607)	-0.209*** (0.0611)
Education		0.229*** (0.0609)			0.226*** (0.0626)	0.198** (0.0630)	0.197** (0.0644)
Age at migration		-0.488** (0.162)			-0.488** (0.161)	-0.391* (0.172)	-0.392* (0.174)
Length of stay in HC		0.0572 (0.265)			0.00319 (0.271)	0.0114 (0.264)	-0.0357 (0.271)
Birth in HC		-0.0218 (0.0787)			-0.0187 (0.0783)	-0.0277 (0.0793)	-0.0250 (0.0788)
Attachment to HCP(NOR)			0.160 (0.0911)		0.130 (0.0913)		0.120 (0.0906)
Social trust(NOR)			0.0127 (0.0413)		-0.00127 (0.0413)		-0.00244 (0.0413)
Institutional trust(NOR)			-0.0620 (0.0907)		-0.0766 (0.0879)		-0.0856 (0.0881)
Language proficiency(NOR)				0.334*** (0.0847)		0.174 (0.0968)	0.171 (0.0981)
Constant	0.876*** (0.0531)	0.821*** (0.0968)	0.808*** (0.0863)	0.579*** (0.0936)	0.798*** (0.107)	0.671*** (0.131)	0.661*** (0.135)
Observations	565	565	565	565	565	565	565
R ²	0.104	0.146	0.110	0.129	0.150	0.152	0.155

Robust standard errors in parentheses
* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

Oslo (Logistic Regression)

	(1) Controls	(2) +Personals	(3) +Attitudes	(4) +Capital	(5) +Personals +Attitudes	(6) +Personals +Capital	(7) +Personals +Attitudes +Capital
Employment(NOR)							
Female	-1.128*** (0.185)	-1.184*** (0.193)	-1.136*** (0.187)	-1.113*** (0.188)	-1.206*** (0.195)	-1.167*** (0.193)	-1.191*** (0.195)
Marital status	0.0177 (0.217)	0.321 (0.245)	0.0524 (0.219)	0.164 (0.223)	0.365 (0.247)	0.337 (0.246)	0.381 (0.247)
Ethnic group (Ref.: Bosnian)							
Turk	-0.717** (0.262)	-0.565 (0.304)	-0.741** (0.268)	-0.525 (0.269)	-0.601 (0.307)	-0.456 (0.311)	-0.493 (0.314)
Pakistani	1.133*** (0.246)	-1.113*** (0.290)	-1.192*** (0.260)	-0.947*** (0.251)	-1.189*** (0.299)	-0.972** (0.301)	-1.056*** (0.309)
Education		1.103*** (0.303)			1.109*** (0.312)	0.953** (0.315)	0.971** (0.322)
Age at migration		-2.369** (0.799)			-2.397** (0.804)	-1.921* (0.836)	-1.945* (0.844)
Length of stay in HC		0.160 (1.311)			-0.0855 (1.328)	-0.0628 (1.322)	-0.268 (1.337)
Birth in HC		-0.0944 (0.377)			-0.0875 (0.379)	-0.124 (0.377)	-0.121 (0.379)
Attachment to HCP(NOR)			0.770 (0.431)		0.671 (0.446)		0.625 (0.450)
Social trust(NOR)			0.0491 (0.198)		-0.0260 (0.206)		-0.0334 (0.207)
Institutional trust(NOR)			-0.309 (0.444)		-0.457 (0.463)		-0.501 (0.466)
Language proficiency(NOR)				1.562*** (0.408)		0.830 (0.465)	0.817 (0.468)
Constant	1.757*** (0.267)	1.550** (0.473)	1.457*** (0.438)	0.385 (0.438)	1.488** (0.561)	0.839 (0.615)	0.834 (0.673)
Observations	565	565	565	565	565	565	565
Pseudo R ²	0.081	0.116	0.087	0.102	0.120	0.121	0.124

Standard errors in parentheses
* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

²⁷⁰ Oslo: The dependent variable, employment, is measured by a country-specific variable. Language proficiency is measured by a country-specific variable on a four-point scale. Attachment to host country people, social trust, and institutional trust are measured by country-specific variables. Permit category omitted because of no available indicator.

Stockholm²⁷¹ (LPM)

	(1) Controls		(2) +Personals		(3) +Attitudes		(4) +Capital		(5) +Personals +Attitudes		(6) +Personals +Capital		(7) +Personals +Attitudes +Capital	
Female	-0.0596	(0.0472)	-0.0424	(0.0463)	-0.0489	(0.0470)	-0.0593	(0.0471)	-0.0394	(0.0465)	-0.0442	(0.0463)	-0.0418	(0.0465)
Marital status	0.123*	(0.0499)	0.0714	(0.0509)	0.115*	(0.0495)	0.142**	(0.0503)	0.0637	(0.0509)	0.0761	(0.0506)	0.0690	(0.0507)
Ethnic group (Ref.: Chilean)														
Turk	-0.0382	(0.0471)	0.0513	(0.0541)	-0.0158	(0.0470)	-0.0427	(0.0471)	0.0715	(0.0532)	0.0552	(0.0538)	0.0739	(0.0529)
Education			0.293***	(0.0819)					0.271**	(0.0824)	0.261**	(0.0843)	0.241**	(0.0849)
Age at migration			-0.00627	(0.190)					0.00674	(0.190)	0.165	(0.205)	0.159	(0.205)
Length of stay in HC			1.166**	(0.386)					1.011*	(0.392)	1.110**	(0.390)	0.967*	(0.397)
Birth in HC			-0.195*	(0.0788)					-0.200*	(0.0777)	-0.187*	(0.0784)	-0.194*	(0.0775)
Attachment to HCP(SW)					0.0372	(0.0991)			0.0380	(0.0991)			0.0170	(0.0994)
Social trust					0.285**	(0.0887)			0.209*	(0.0903)			0.206*	(0.0898)
Institutional trust(SW)					-0.177*	(0.107)			-0.206*	(0.103)			-0.200	(0.103)
Language proficiency(SW)							0.216*	(0.108)			0.219	(0.128)	0.204	(0.126)
Constant	0.655***	(0.0516)	0.233	(0.123)	0.578***	(0.0976)	0.477***	(0.102)	0.254	(0.143)	0.0526	(0.161)	0.0998	(0.170)
Observations	396		396		396		396		396		396		396	
R ²	0.023		0.090		0.054		0.033		0.110		0.097		0.116	

Robust standard errors in parentheses
* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

Stockholm (Logistic Regression)

	(1) Controls		(2) +Personals		(3) +Attitudes		(4) +Capital		(5) +Personals +Attitudes		(6) +Personals +Capital		(7) +Personals +Attitudes +Capital	
Employment														
Female	-0.281	(0.220)	-0.235	(0.228)	-0.243	(0.225)	-0.281	(0.221)	-0.216	(0.233)	-0.246	(0.229)	-0.225	(0.233)
Marital status	0.564*	(0.222)	0.343	(0.248)	0.537*	(0.227)	0.659**	(0.229)	0.308	(0.254)	0.371	(0.250)	0.339	(0.256)
Ethnic group (Ref.: Chilean)														
Turk	-0.181	(0.221)	0.276	(0.267)	-0.0793	(0.227)	-0.205*	(0.223)	0.363	(0.273)	0.302	(0.269)	0.380	(0.275)
Education			1.462***	(0.410)					1.395***	(0.419)	1.314**	(0.422)	1.258**	(0.431)
Age at migration			0.0668	(0.942)					0.120	(0.972)	0.939	(1.089)	0.876	(1.104)
Length of stay in HC			5.974**	(1.989)					5.231*	(2.038)	5.669**	(2.001)	4.954*	(2.050)
Birth in HC			-0.912*	(0.378)					-0.943*	(0.383)	-0.868*	(0.379)	-0.913*	(0.384)
Attachment to HCP(SW)					0.164	(0.487)			0.185	(0.509)			0.0875	(0.517)
Social trust					1.368**	(0.422)			1.029*	(0.439)			1.023*	(0.441)
Institutional trust(SW)					-0.846	(0.516)			-1.029	(0.537)			-0.983	(0.538)
Language proficiency(SW)							1.011*	(0.502)			1.076	(0.657)	0.993	(0.668)
Constant	0.666**	(0.223)	-1.454*	(0.638)	0.329	(0.462)	-0.164	(0.467)	-1.348	(0.750)	-2.346**	(0.847)	-2.118*	(0.920)
Observations	396		396		396		396		396		396		396	
Pseudo R ²	0.018		0.074		0.044		0.026		0.091		0.080		0.096	

Standard errors in parentheses
* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

²⁷¹ Stockholm: Language proficiency is measured by a country-specific variable on a four-point scale. Attachment to host country people, and institutional trust are measured by country-specific variables. Permit category omitted because of no available indicator.

Zurich (LPM)

	(1) Controls	(2) +Personals	(3) +Attitudes	(4) +Capital	(5) +Personals +Attitudes	(6) +Personals +Capital	(7) +Personals +Attitudes +Capital
Female	-0.136** (0.0511)	-0.138** (0.0510)	-0.136** (0.0503)	-0.126* (0.0493)	-0.142** (0.0501)	-0.135** (0.0499)	-0.140* (0.0492)
Marital status	0.207*** (0.0610)	0.235*** (0.0567)	0.218*** (0.0606)	0.268*** (0.0600)	0.242*** (0.0564)	0.248*** (0.0569)	0.253*** (0.0568)
Ethnic group (Ref.: Kosovar)							
Italian	-0.201*** (0.0514)	0.0301 (0.0613)	-0.192*** (0.0519)	-0.149** (0.0509)	0.0537 (0.0603)	0.0735 (0.0615)	0.0908 (0.0605)
Turk	-0.0851 (0.0490)	-0.0694 (0.0468)	-0.0813 (0.0489)	-0.0682 (0.0484)	-0.0621 (0.0463)	-0.0568 (0.0466)	-0.0517 (0.0461)
Education		0.333*** (0.0764)			0.344*** (0.0749)	0.282*** (0.0821)	0.300*** (0.0808)
Age at migration		-1.048*** (0.180)			-1.014*** (0.181)	-0.831*** (0.203)	-0.827*** (0.202)
Length of stay in HC		-1.309*** (0.213)			-1.333*** (0.208)	-1.330*** (0.210)	-1.350*** (0.206)
Birth in HC		-0.200* (0.0972)			-0.189* (0.0950)	-0.220* (0.0960)	-0.206* (0.0943)
Permit category (Ref.: For Work)							
EEA		0.0589 (0.0439)			0.0547 (0.0438)	0.0441 (0.0437)	0.0427 (0.0438)
Study		-0.139 (0.248)			-0.198 (0.278)	-0.202 (0.247)	-0.250 (0.277)
Family		-0.0566 (0.0668)			-0.0442 (0.0666)	-0.0502 (0.0659)	-0.0385 (0.0660)
Other		0.0182 (0.0685)			0.0334 (0.0679)	0.0102 (0.0685)	0.0255 (0.0681)
purposes							
Attachment to HCP			0.196* (0.0910)		0.166* (0.0829)		0.145 (0.0829)
Social trust			-0.146 (0.0841)		-0.197** (0.0730)		-0.190** (0.0731)
Institutional trust			-0.0724 (0.120)		-0.00423 (0.100)		0.00365 (0.101)
Language proficiency				0.449*** (0.0866)		0.253* (0.109)	0.219* (0.108)
Constant	0.665*** (0.0688)	0.973*** (0.115)	0.637*** (0.115)	0.382*** (0.0861)	0.934*** (0.135)	0.809*** (0.131)	0.798*** (0.150)
Observations	446	446	446	446	446	446	446
R ²	0.111	0.285	0.127	0.159	0.303	0.295	0.310

Robust standard errors in parentheses
 $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

Zurich (Logistic Regression)

	(1) Controls	(2) +Personals	(3) +Attitudes	(4) +Capital	(5) +Personals +Attitudes	(6) +Personals +Capital	(7) +Personals +Attitudes +Capital
Employment							
Female	-0.660** (0.239)	-0.871** (0.284)	-0.683** (0.241)	-0.630* (0.248)	-0.949** (0.290)	-0.870** (0.288)	-0.948** (0.293)
Marital status	0.909*** (0.263)	1.344*** (0.336)	0.989*** (0.267)	1.301*** (0.294)	1.439*** (0.344)	1.457*** (0.347)	1.526*** (0.353)
Ethnic group (Ref.: Kosovar)							
Italian	-1.053*** (0.279)	0.109 (0.419)	-1.038*** (0.287)	-0.788** (0.291)	0.239 (0.436)	0.389 (0.438)	0.485 (0.454)
Turk	-0.508 (0.286)	-0.426 (0.317)	-0.514 (0.293)	-0.396 (0.293)	-0.463 (0.327)	-0.312 (0.324)	-0.362 (0.333)
Education		1.996*** (0.462)			2.157*** (0.487)	1.688*** (0.480)	1.891*** (0.503)
Age at migration		-6.625*** (1.386)			-6.865*** (1.444)	-5.319*** (1.519)	-5.739*** (1.570)
Length of stay in HC		-7.792*** (1.385)			-8.122*** (1.418)	-7.979*** (1.394)	-8.273*** (1.425)
Birth in HC		-1.439* (0.568)			-1.500* (0.587)	-1.598** (0.582)	-1.637** (0.599)
Permit category (Ref.: For Work)							
EEA		0.357 (0.310)			0.276 (0.320)	0.277 (0.314)	0.213 (0.323)
Study		-0.919 (1.339)			-1.360 (1.429)	-1.246 (1.370)	-1.615 (1.450)
Family		-0.494 (0.403)			-0.503 (0.413)	-0.449 (0.408)	-0.450 (0.417)
reunification							
Other		0.0937 (0.422)			0.169 (0.430)	0.0948 (0.428)	0.170 (0.435)
purposes							
Attachment to HCP			1.084* (0.496)		1.168* (0.576)		1.025 (0.589)
Social trust			-0.846 (0.449)		-1.487** (0.535)		-1.454** (0.536)
Institutional trust			-0.392 (0.631)		-0.0148 (0.715)		0.00928 (0.724)
Language proficiency				2.379*** (0.520)		1.646* (0.729)	1.418 (0.741)
Constant	0.895** (0.335)	2.954*** (0.731)	0.794 (0.590)	-0.618 (0.482)	2.955** (0.908)	1.879* (0.873)	2.096* (1.015)
Observations	446	446	446	446	446	446	446
Pseudo R ²	0.089	0.253	0.105	0.131	0.275	0.262	0.282

Standard errors in parentheses
 $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

Comparison of LPM and Logistic Regression Output
Model 2: A Model of Immigrant Economic Integration (Overall Summary)

According to the analysis summary tables, the results from of LPM (above) and logistic regression (below) show nearly identical results in terms of statistical significance, levels of significance, and direction of associations. In short, they do not demonstrate contradictory results. For more detailed information (e.g., sizes of regression coefficients), refer to the raw regression analysis output.

Model 2: A Model of Immigrant Economic Integration (LPM)										
City ^a	BAR	BUD	GEN	LON	LYO	MAD	MIL	OSL	STO	ZUR
Controls										
Gender (Female)		—***		—***	—***			—***		—**
Marital status		+***	+***	+***	+*		+			+***
Ethnic group ^b	Reference category: G3 (group of recent arrival)									
G1										
G2		—***	X	+**				—***	X	
Personal characteristics										
Educational attainment			+*	+**	+***	+**		+**	+**	+***
Age at migration								—*		—***
Length of stay in HC			—***		+**				+	—***
Birth in HC	—**						—***		—*	—*
Permit category	Reference category: Work									
EEA				X	X			X	X	
Study		—***			—***	—***		X	X	
Family reunification		—*			—*	—***	—***	X	X	
Other purposes					—*			X	X	
Attitudes										
Attachment to HCP										
Social trust									+	—**
Institutional trust										
Capital										
Language proficiency			+*		+*					+
Observations	447	420	291	519	598	531	479	565	396	446
R²	0.087	0.396	0.220	0.172	0.145	0.149	0.293	0.155	0.116	0.310

Model 2: A Model of Immigrant Economic Integration (Logistic Regression)										
City	BAR	BUD	GEN	LON	LYO	MAD	MIL	OSL	STO	ZUR
Controls										
Gender (Female)		—***		—***	—***			—***		—**
Marital status		+***	+***	+***	+*		+			+***
Ethnic group	Reference category: G3 (group of recent arrival)									
G1		—*								
G2		—***	X	+**				—***	X	
Personal characteristics										
Educational attainment			+**	+***	+***	+**		+**	+**	+***
Age at migration		—*						—*		—***
Length of stay in HC			—***		+**	—*			+	—***
Birth in HC	—*						—***		—*	—**
Permit category	Reference category: Work									
EEA				X	X			X	X	
Study	—*	—***				—**		X	X	
Family reunification		—*			—*	—***	—***	X	X	
Other purposes				—*	—*	—*	—*	X	X	
Attitudes										
Attachment to HCP										
Social trust									+	—**
Institutional trust										
Capital										
Language proficiency			+**		+*					
Observations	447	420	291	519	593	531	479	565	396	446
Pseudo R²	0.082	0.345	0.181	0.143	0.107	0.126	0.270	0.124	0.096	0.282

* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

^a BAR: Barcelona, BUD: Budapest, GEN: Geneva, LON: London, LYO: Lyon, MAD: Madrid, MIL: Milan, OSL: Oslo, STO: Stockholm, ZUR: Zurich

^bEthnic groups: Barcelona (G1: Moroccan, G2: Andean mixed group, G3: Ecuadorian), Budapest (G1: Ethnic Hungarian, G2: Mixed Muslim, G3: Chinese),

Geneva (G1: Italian, G2: N/A, G3: Kosovar), London (G1: Indian, G2: Afro-Caribbean, G3: Bangladeshi), Lyon (G1: Moroccan, G2: Algerian, G3: Tunisian),

Madrid (G1: Moroccan, G2: Andean mixed group, G3: Ecuadorian), Milan (G1: Egyptian, G2: Filipino, G3: Ecuadorian), Oslo (G1: Turkish, G2: Pakistani, G3:

Bosnian), Stockholm (G1: Turkish, G2: N/A, G3: Chilean), Zurich (G1: Italian, G2: Turkish, G3: Kosovar)

2. Determinants of Immigrant Citizenship Acquisition
(DV: Citizenship of the Host Country;
LPM with Robust Standard Errors & Logistic Regression, LOCALMULTIDEM: 10 cities)

Barcelona (LPM)

	(1) Controls		(2) +Personals		(3) +Attitudes		(4) +Capital		(5) +Personals +Attitudes		(6) +Personals +Capital		(7) +Personals +Attitudes +Capital	
Female	0.0116	(0.0444)	-0.0446	(0.0359)	0.00698	(0.0442)	-0.00357	(0.0433)	-0.0414	(0.0363)	-0.0440	(0.0358)	-0.0410	(0.0360)
Marital status	0.0109	(0.0449)	0.0161	(0.0371)	0.00476	(0.0447)	0.0223	(0.0441)	0.0160	(0.0372)	0.0178	(0.0373)	0.0181	(0.0373)
Ethnic group (Ref.: Ecuadorian)														
Moroccan	0.0482	(0.0536)	-0.124**	(0.0461)	0.0362	(0.0543)	0.386***	(0.111)	-0.127**	(0.0469)	-0.0760	(0.115)	-0.0768	(0.117)
Andean	0.167***	(0.0477)	0.0998*	(0.0420)	0.156**	(0.0477)	0.159***	(0.0479)	0.102*	(0.0422)	0.0967*	(0.0421)	0.0991*	(0.0423)
Latin American														
Education			0.149**	(0.0566)					0.161**	(0.0579)	0.136*	(0.0571)	0.150*	(0.0581)
Age at migration			-0.0749	(0.142)					-0.130	(0.141)	-0.0633	(0.144)	-0.119	(0.142)
Length of stay in HC			2.963***	(0.234)					2.933***	(0.241)	2.928***	(0.231)	2.904***	(0.238)
Birth in HC			0.400***	(0.118)					0.402***	(0.111)	0.363*	(0.147)	0.360*	(0.142)
Attachment to HCP					0.237**	(0.0808)			0.0332	(0.0683)			0.0262	(0.0683)
Social trust					0.0931	(0.0886)			-0.0402	(0.0729)			-0.0470	(0.0729)
Institutional trust					-0.0205	(0.111)			0.161	(0.0918)			0.168	(0.0923)
Language proficiency							0.861***	(0.208)			0.111	(0.214)	0.117	(0.217)
Employment							0.0189	(0.0520)			0.0318	(0.0442)	0.0290	(0.0448)
Social group involvement							0.507	(0.262)			0.264	(0.220)	0.277	(0.221)
Constant	0.166**	(0.0519)	-0.0930	(0.0853)	-0.0170	(0.0883)	-0.734***	(0.214)	-0.175	(0.0994)	-0.239	(0.244)	-0.322	(0.254)
Observations	439		439		439		439		439		439		439	
R ²	0.030		0.342		0.051		0.070		0.347		0.346		0.351	

Robust standard errors in parentheses

* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

Barcelona²⁷² (Logistic Regression)

	(1) Controls		(2) +Personals		(3) +Attitudes		(4) +Capital		(5) +Personals +Attitudes		(6) +Personals +Capital		(7) +Personals +Attitudes +Capital	
Citizenship														
Female	0.0152	(0.237)	-0.460	(0.312)	-0.0131	(0.242)	-0.0492	(0.241)	-0.436	(0.316)	-0.487	(0.314)	-0.467	(0.319)
Marital status	0.0792	(0.240)	-0.0145	(0.315)	0.0476	(0.245)	0.115	(0.246)	-0.00890	(0.319)	0.00459	(0.317)	0.0133	(0.322)
Ethnic group (Ref.: Ecuadorian)														
Moroccan	0.153	(0.326)	-1.642**	(0.502)	0.0844	(0.331)	2.191**	(0.703)	-1.701***	(0.511)	-1.174	(1.037)	-1.164	(1.054)
Andean	0.891***	(0.260)	0.505	(0.314)	0.847**	(0.264)	0.857**	(0.262)	0.528	(0.316)	0.488	(0.315)	0.515	(0.317)
Latin American														
Education			1.355**	(0.506)					1.471**	(0.519)	1.268*	(0.511)	1.390**	(0.524)
Age at migration			-0.295	(1.241)					-0.901	(1.319)	-0.334	(1.253)	-0.949	(1.332)
Length of stay in HC			26.49***	(3.524)					26.41***	(3.580)	26.26***	(3.588)	26.23***	(3.642)
Birth in HC			0	(.)					0	(.)	0	(.)	0	(.)
Attachment to HCP					1.360*	(0.554)			0.381	(0.686)			0.321	(0.691)
Social trust					0.598	(0.484)			-0.319	(0.603)			-0.401	(0.611)
Institutional trust					0.0303	(0.655)			1.321	(0.869)			1.418	(0.879)
Language proficiency							5.617**	(1.871)			1.264	(2.311)	1.428	(2.344)
Employment							0.259	(0.335)			0.0889	(0.435)	0.0793	(0.438)
Social group involvement							2.226	(1.272)			2.160	(1.643)	2.250	(1.650)
Constant	-1.588***	(0.292)	-4.097***	(0.793)	-2.800***	(0.567)	-7.527***	(1.909)	-4.829***	(0.936)	-5.452*	(2.436)	-6.329*	(2.528)
Observations	436		436		436		436		436		436		436	
Pseudo R ²	0.029		0.323		0.050		0.060		0.330		0.327		0.334	

Standard errors in parentheses

* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

²⁷² Barcelona (logistic regression): Birth in the host country was dropped from the logistic regression analysis and 3 observations were not used.

Budapest (LPM)

	(1) Controls		(2) +Personals		(3) +Attitudes		(4) +Capital		(5) +Personals +Attitudes		(6) +Personals +Capital		(7) +Personals +Attitudes +Capital	
Female	0.0387	(0.0453)	0.000690	(0.0389)	0.0279	(0.0454)	0.0638	(0.0443)	-0.00274	(0.0389)	0.00972	(0.0392)	0.00473	(0.0392)
Marital status	0.0932 [*]	(0.0420)	-	(0.0408)	0.0843 [*]	(0.0417)	0.0482	(0.0494)	-0.00117	(0.0409)	-0.0213	(0.0444)	-0.0204	(0.0447)
Ethnic group (Ref.: Chinese)			0.000324											
Ethnic Hungarian	0.291 ^{***}	(0.0373)	0.331 ^{***}	(0.0379)	0.326 ^{***}	(0.0409)	0.00297	(0.0739)	0.331 ^{***}	(0.0385)	0.213 ^{**}	(0.0726)	0.217 ^{**}	(0.0724)
Mixed Muslim	0.246 ^{***}	(0.0417)	0.126 ^{***}	(0.0374)	0.224 ^{***}	(0.0418)	0.215 ^{***}	(0.0431)	0.113 ^{**}	(0.0369)	0.118 ^{**}	(0.0395)	0.107 ^{**}	(0.0405)
Education			0.152 [*]	(0.0765)					0.146	(0.0789)	0.136	(0.0776)	0.125	(0.0807)
Age at migration			0.269	(0.183)					0.268	(0.190)	0.312	(0.186)	0.297	(0.190)
Length of stay in HC			2.656 ^{***}	(0.316)					2.648 ^{***}	(0.318)	2.505 ^{***}	(0.330)	2.488 ^{***}	(0.332)
Birth in HC			0.0313	(0.219)					0.0329	(0.220)	0.0317	(0.212)	0.0295	(0.213)
Attachment to HCP					0.0826	(0.0824)			0.0931	(0.0683)			0.0571	(0.0668)
Social trust					0.0234	(0.117)			-0.0475	(0.0965)			-0.0553	(0.0941)
Institutional trust					0.212 [*]	(0.103)			0.0417	(0.0902)			0.0923	(0.0914)
Language proficiency							0.503 ^{***}	(0.0995)			0.213 [*]	(0.0992)	0.222 [*]	(0.102)
Employment							0.143 ^{**}	(0.0491)			0.0689	(0.0439)	0.0654	(0.0445)
Social group involvement							-0.306	(0.897)			-0.925	(0.699)	-0.963	(0.707)
Constant	-0.0597	(0.0349)	-0.458 ^{***}	(0.0803)	-0.217 ^{**}	(0.0822)	-0.331 ^{***}	(0.0572)	-0.491 ^{***}	(0.0936)	-0.561 ^{***}	(0.0905)	-0.588 ^{***}	(0.101)
Observations	419		419		419		419		419		419		419	
R ²	0.065		0.334		0.079		0.136		0.337		0.350		0.352	

Robust standard errors in parentheses
^{*} $p < 0.05$, ^{**} $p < 0.01$, ^{***} $p < 0.001$

Budapest (Logistic Regression)

	(1) Controls		(2) +Personals		(3) +Attitudes		(4) +Capital		(5) +Personals +Attitudes		(6) +Personals +Capital		(7) +Personals +Attitudes +Capital	
Citizenship														
Female	0.224	(0.259)	-0.0558	(0.310)	0.143	(0.262)	0.380	(0.283)	-0.118	(0.316)	0.0432	(0.329)	-0.0150	(0.335)
Marital status	0.556 [*]	(0.250)	-0.0241	(0.327)	0.526 [*]	(0.252)	0.390	(0.287)	-0.00988	(0.328)	-0.120	(0.355)	-0.116	(0.357)
Ethnic group (Ref.: Chinese)														
Ethnic Hungarian	3.397 ^{***}	(1.022)	4.526 ^{***}	(1.116)	3.719 ^{***}	(1.040)	0.858	(1.155)	4.561 ^{***}	(1.146)	1.937	(1.275)	2.093	(1.304)
Mixed Muslim	3.160 ^{**}	(1.028)	2.321 [*]	(1.100)	3.080 ^{**}	(1.031)	2.801 ^{**}	(1.048)	2.234 [*]	(1.107)	1.639	(1.112)	1.608	(1.118)
Education			1.347	(0.716)					1.243	(0.739)	1.079	(0.741)	1.015	(0.761)
Age at migration			2.771 [*]	(1.142)					2.771 [*]	(1.154)	3.780 ^{**}	(1.196)	3.694 ^{**}	(1.214)
Length of stay in HC			21.33 ^{***}	(2.709)					21.27 ^{***}	(2.729)	21.78 ^{***}	(2.910)	21.53 ^{***}	(2.925)
Birth in HC			1.196	(1.240)					1.249	(1.280)	0.899	(1.211)	0.952	(1.248)
Attachment to HCP					0.477	(0.584)			0.801	(0.708)			0.413	(0.739)
Social trust					0.272	(0.708)			0.210	(0.837)			-0.0656	(0.869)
Institutional trust					1.458 [*]	(0.741)			0.277	(0.935)			0.723	(0.993)
Language proficiency							4.795 ^{***}	(1.119)			4.407 ^{**}	(1.352)	4.346 ^{**}	(1.377)
Employment							0.821 ^{**}	(0.300)			0.357	(0.359)	0.352	(0.363)
Social group involvement							-1.721	(5.360)			-3.841	(5.504)	-4.251	(5.494)
Constant	-4.658 ^{***}	(1.031)	-9.227 ^{***}	(1.393)	-5.872 ^{***}	(1.168)	-7.331 ^{***}	(1.217)	-9.843 ^{***}	(1.509)	-11.30 ^{***}	(1.588)	-11.72 ^{***}	(1.674)
Observations	419		419		419		419		419		419		419	
Pseudo R ²	0.081		0.364		0.097		0.163		0.369		0.399		0.402	

Standard errors in parentheses
^{*} $p < 0.05$, ^{**} $p < 0.01$, ^{***} $p < 0.001$

Geneva (LPM)

	(1) Controls	(2) +Personals	(3) +Attitudes	(4) +Capital	(5) +Personals +Attitudes	(6) +Personals +Capital	(7) +Personals +Attitudes +Capital
Female	-0.00618 (0.0353)	-0.00853 (0.0355)	-0.00888 (0.0356)	-0.00967 (0.0360)	-0.0108 (0.0359)	-0.0114 (0.0360)	-0.0141 (0.0362)
Marital status	-0.0488 (0.0394)	-0.0131 (0.0400)	-0.0502 (0.0422)	-0.00584 (0.0352)	-0.0177 (0.0417)	0.00799 (0.0365)	0.00407 (0.0378)
Ethnic group (Ref.: Kosovar)	-0.107** (0.0332)	-0.135** (0.0420)	-0.108** (0.0369)	-0.0911** (0.0327)	-0.128** (0.0461)	-0.112** (0.0393)	-0.100* (0.0446)
Education		0.0497 (0.0602)			0.0479 (0.0637)	0.0484 (0.0628)	0.0436 (0.0672)
Age at migration		-0.212 (0.176)			-0.218 (0.178)	-0.146 (0.180)	-0.147 (0.182)
Length of stay in HC		0.0887 (0.105)			0.0716 (0.112)	0.0619 (0.117)	0.0363 (0.125)
Birth in HC		0.0410 (0.0893)			0.0326 (0.0959)	0.0266 (0.0897)	0.0159 (0.0963)
Attachment to HCP			-0.0194 (0.0943)		-0.00295 (0.113)		-0.00226 (0.111)
Social trust			-0.0833 (0.0760)		-0.0615 (0.0811)		-0.0668 (0.0810)
Institutional trust			0.0752 (0.0978)		0.0789 (0.0964)		0.0991 (0.0986)
Language proficiency				0.236* (0.0990)		0.162 (0.0941)	0.181 (0.0990)
Employment				-0.0218 (0.0355)		-0.0258 (0.0411)	-0.0285 (0.0406)
Social group involvement				-0.325** (0.114)		-0.348** (0.129)	-0.343** (0.132)
Constant	0.178*** (0.0449)	0.168* (0.0747)	0.187* (0.0887)	0.0297 (0.0667)	0.155 (0.127)	0.0697 (0.0970)	0.0354 (0.144)
Observations	278	278	278	278	278	278	278
R ²	0.039	0.057	0.045	0.068	0.061	0.074	0.080

Robust standard errors in parentheses
* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

Geneva (Logistic Regression)

	(1) Controls	(2) +Personals	(3) +Attitudes	(4) +Capital	(5) +Personals +Attitudes	(6) +Personals +Capital	(7) +Personals +Attitudes +Capital
Citizenship							
Female	-0.0776 (0.451)	-0.115 (0.467)	-0.0832 (0.457)	-0.155 (0.470)	-0.122 (0.472)	-0.145 (0.488)	-0.148 (0.493)
Marital status	-0.592 (0.447)	-0.0217 (0.588)	-0.671 (0.476)	-0.0923 (0.571)	-0.151 (0.597)	0.146 (0.677)	-0.00418 (0.685)
Ethnic group (Ref.: Kosovar)	-1.507** (0.519)	-2.512* (1.003)	-1.536** (0.534)	-1.263* (0.532)	-2.469* (1.014)	-2.213* (1.033)	-2.116* (1.057)
Education		0.617 (0.792)			0.625 (0.800)	0.532 (0.874)	0.525 (0.900)
Age at migration		-3.104 (2.312)			-3.461 (2.409)	-2.180 (2.512)	-2.612 (2.601)
Length of stay in HC		1.658 (3.060)			1.651 (3.041)	1.508 (3.139)	1.480 (3.149)
Birth in HC		1.269 (1.050)			1.110 (1.064)	1.163 (1.082)	0.949 (1.106)
Attachment to HCP			-0.247 (1.009)		-0.0156 (1.064)		0.0936 (1.076)
Social trust			-1.020 (0.786)		-0.821 (0.824)		-0.921 (0.828)
Institutional trust			1.050 (1.132)		1.266 (1.202)		1.577 (1.258)
Language proficiency				2.821* (1.297)		1.579 (1.525)	1.847 (1.562)
Employment				-0.127 (0.487)		-0.176 (0.507)	-0.152 (0.519)
Social group involvement				-6.599 (4.542)		-6.630 (4.559)	-7.170 (4.669)
Constant	-1.377** (0.424)	-1.587 (0.905)	-1.351 (1.020)	-3.289** (1.130)	-1.900 (1.339)	-2.609 (1.519)	-3.322 (1.836)
Observations	278	278	278	278	278	278	278
Pseudo R ²	0.069	0.112	0.080	0.119	0.122	0.140	0.155

Standard errors in parentheses
* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

London²⁷³ (LPM)

	(1) Controls		(2) +Personals		(3) +Attitudes		(4) +Capital		(5) +Personals +Attitudes		(6) +Personals +Capital		(7) +Personals +Attitudes +Capital	
Female	0.143***	(0.0293)	0.0584	(0.0229)	0.134***	(0.0293)	0.0983***	(0.0271)	0.0557	(0.0230)	0.0416	(0.0219)	0.0380	(0.0220)
Marital status	0.00429	(0.0306)	0.0195	(0.0239)	0.00277	(0.0301)	0.0571	(0.0295)	0.0216	(0.0244)	0.0342	(0.0254)	0.0381	(0.0258)
Ethnic group (Ref.: Bangladeshi)														
Indian	0.271***	(0.0468)	-0.0426	(0.0351)	-0.292***	(0.0466)	-0.264***	(0.0419)	-0.0513	(0.0356)	-0.0424	(0.0339)	-0.0493	(0.0343)
Caribbean	0.0840**	(0.0278)	-0.0383	(0.0258)	0.0516	(0.0290)	0.0205	(0.0268)	-0.0381	(0.0276)	-0.0502*	(0.0247)	-0.0435	(0.0270)
Education			-0.153***	(0.0439)					-0.154***	(0.0440)	-0.174***	(0.0441)	-0.174***	(0.0440)
Age at migration			-0.847***	(0.210)					-0.884***	(0.209)	-0.657**	(0.219)	-0.703**	(0.218)
Length of stay in HC			1.115***	(0.137)					1.073***	(0.143)	1.147***	(0.127)	1.103***	(0.133)
Birth in HC			0.0671	(0.0648)					0.0571	(0.0654)	0.0674	(0.0640)	0.0613	(0.0648)
Attachment to HCP					0.233***	(0.0660)			0.0750	(0.0495)			0.0516	(0.0488)
Social trust					0.166*	(0.0698)			0.00606	(0.0542)			-0.00709	(0.0543)
Institutional trust					-0.0700	(0.0814)			0.0365	(0.0633)			0.0660	(0.0633)
Language proficiency(EN)							0.656***	(0.102)			0.262**	(0.0856)	0.254**	(0.0870)
Employment							-0.0977***	(0.0278)			-0.0894***	(0.0234)	-	(0.0235)
Social group involvement (EN)							0.0505	(0.302)			0.207	(0.195)	0.0918***	(0.197)
Constant	0.803***	(0.0374)	0.683***	(0.0772)	0.651***	(0.0632)	0.287**	(0.101)	0.644***	(0.0829)	0.488***	(0.107)	0.458***	(0.111)
Observations	518		518		518		518		518		518		518	
R ²	0.209		0.580		0.242		0.316		0.583		0.603		0.605	

Robust standard errors in parentheses
* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

London (Logistic Regression)

	(1) Controls		(2) +Personals		(3) +Attitudes		(4) +Capital		(5) +Personals +Attitudes		(6) +Personals +Capital		(7) +Personals +Attitudes +Capital	
Citizenship														
Female	1.345***	(0.305)	0.831	(0.466)	1.350***	(0.316)	1.028**	(0.341)	0.922	(0.476)	0.568	(0.510)	0.666	(0.521)
Marital status	-0.0235	(0.263)	0.735	(0.531)	-0.0377	(0.272)	0.406	(0.306)	0.831	(0.546)	1.007	(0.571)	1.062	(0.588)
Ethnic group (Ref.: Bangladeshi)														
Indian	-1.525***	(0.283)	0.0321	(0.527)	-1.824***	(0.311)	-1.768***	(0.333)	0.000663	(0.547)	0.0577	(0.572)	0.0524	(0.591)
Caribbean	1.546**	(0.510)	1.247	(0.711)	1.244*	(0.538)	0.942	(0.551)	1.603*	(0.777)	0.708	(0.798)	1.073	(0.863)
Education			-0.589	(0.712)					-0.551	(0.722)	-1.315	(0.851)	-1.308	(0.882)
Age at migration			-2.390	(2.377)					-2.492	(2.460)	-1.456	(2.400)	-1.713	(2.550)
Length of stay in HC			13.76***	(2.649)					13.93***	(2.793)	13.64***	(2.742)	13.75***	(2.899)
Birth in HC									3.774**	(1.232)	3.352**	(1.211)	3.575**	(1.257)
Attachment to HCP			3.506**	(1.192)	2.071**	(0.669)			1.571	(1.111)			0.863	(1.199)
Social trust					1.338	(0.706)			-2.169	(1.219)			-1.992	(1.230)
Institutional trust					-0.613	(0.917)			1.462	(1.534)			1.896	(1.607)
Language proficiency(EN)							4.329***	(0.690)			2.491*	(1.204)	2.474	(1.316)
Employment							-0.927*	(0.367)			-0.910	(0.582)	-0.821	(0.588)
Social group involvement (EN)							0.166	(2.672)			1.027	(3.270)	1.159	(3.244)
Constant	1.464***	(0.278)	-1.722	(1.160)	0.304	(0.538)	-1.465*	(0.611)	-2.495	(1.315)	-2.824*	(1.416)	-3.534*	(1.572)
Observations	518		518		518		518		518		518		518	
Pseudo R ²	0.235		0.686		0.279		0.339		0.695		0.701		0.708	

Standard errors in parentheses
* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

²⁷³ London: Language proficiency is measured by a country-specific variable on a four-point scale. Non-political associational involvement is measured by country-specific variables. EEA omitted because of no observation. Mixed race British (gr25_mixedracebritish; n=14) is excluded from the dataset because the variable is repeatedly omitted in the regression analyses due to collinearity.

Lyon²⁷⁴ (LPM)

	(1) Controls		(2) +Personals		(3) +Attitudes		(4) +Capital		(5) +Personals +Attitudes		(6) +Personals +Capital		(7) +Personals +Attitudes +Capital	
Female	0.0490	(0.0339)	0.0369	(0.0306)	0.0450	(0.0336)	0.0803 [*]	(0.0333)	0.0358	(0.0307)	0.0572	(0.0306)	0.0562	(0.0306)
Marital status	-0.0747 [*]	(0.0331)	0.0135	(0.0307)	-0.0567	(0.0334)	-0.0483	(0.0323)	0.0150	(0.0310)	0.0111	(0.0306)	0.0121	(0.0309)
Ethnic group (Ref.: Tunisian)														
Moroccan	-0.0262	(0.0548)	-0.000843	(0.0483)	-0.0153	(0.0548)	-0.0324	(0.0540)	-0.00177	(0.0490)	0.00486	(0.0485)	0.00362	(0.0492)
Algerian	-0.0144	(0.0408)	-0.0421	(0.0372)	-0.00482	(0.0408)	-0.0380	(0.0396)	-0.0417	(0.0377)	-0.0446	(0.0375)	-0.0447	(0.0380)
Education			0.192 ^{***}	(0.0539)					0.193 ^{***}	(0.0548)	0.154 ^{**}	(0.0578)	0.155 ^{**}	(0.0586)
Age at migration			-0.443	(0.278)					-0.441	(0.277)	-0.403	(0.276)	-0.405	(0.275)
Length of stay in HC			-0.0735	(0.170)					-0.0889	(0.173)	-0.148	(0.179)	-0.165	(0.181)
Birth in HC			0.274 ^{***}	(0.0616)					0.273 ^{***}	(0.0621)	0.276 ^{***}	(0.0621)	0.276 ^{***}	(0.0627)
Attachment to HCP					-0.00142	(0.0751)			0.0700	(0.0638)			0.0738	(0.0646)
Social trust					0.0401	(0.0599)			0.0132	(0.0555)			0.0118	(0.0554)
Institutional trust					-0.236 ^{**}	(0.0809)			-0.0586	(0.0731)			-0.0509	(0.0733)
Language proficiency							0.431 ^{***}	(0.111)			0.0336	(0.119)	0.0302	(0.120)
Employment							0.0973 ^{**}	(0.0348)			0.0832 [*]	(0.0324)	0.0832 [*]	(0.0327)
Social group involvement (FR)							0.170 [*]	(0.0828)			0.0643	(0.0843)	0.0664	(0.0854)
Constant	0.841 ^{***}	(0.0443)	0.561 ^{***}	(0.0991)	0.934 ^{***}	(0.0728)	0.346 ^{**}	(0.109)	0.537 ^{***}	(0.109)	0.503 ^{***}	(0.129)	0.476 ^{***}	(0.135)
Observations	539		539		539		539		539		539		539	
R ²	0.015		0.230		0.030		0.086		0.232		0.241		0.243	

Robust standard errors in parentheses
^{*} $p < 0.05$, ^{**} $p < 0.01$, ^{***} $p < 0.001$

Lyon (Logistic Regression)

	(1) Controls		(2) +Personals		(3) +Attitudes		(4) +Capital		(5) +Personals +Attitudes		(6) +Personals +Capital		(7) +Personals +Attitudes +Capital	
Citizenship														
Female	0.325	(0.226)	0.395	(0.273)	0.288	(0.230)	0.600 [*]	(0.246)	0.391	(0.274)	0.598 [*]	(0.287)	0.588 [*]	(0.289)
Marital status	-0.512 [*]	(0.232)	0.125	(0.283)	-0.388	(0.238)	-0.353	(0.246)	0.147	(0.289)	0.111	(0.290)	0.133	(0.298)
Ethnic group (Ref.: Tunisian)														
Moroccan	-0.172	(0.368)	-0.187	(0.430)	-0.115	(0.374)	-0.289	(0.385)	-0.223	(0.432)	-0.228	(0.433)	-0.258	(0.436)
Algerian	-0.0984	(0.292)	-0.577	(0.350)	-0.0378	(0.297)	-0.306	(0.310)	-0.601	(0.355)	-0.616	(0.356)	-0.631	(0.360)
Education			1.593 ^{***}	(0.416)					1.611 ^{***}	(0.420)	1.304 ^{**}	(0.453)	1.332 ^{**}	(0.457)
Age at migration			-2.040	(1.420)					-2.172	(1.471)	-1.665	(1.461)	-1.807	(1.522)
Length of stay in HC			-0.586	(1.120)					-0.768	(1.138)	-0.987	(1.157)	-1.161	(1.170)
Birth in HC			2.091 ^{***}	(0.360)					2.108 ^{***}	(0.364)	2.171 ^{***}	(0.369)	2.193 ^{***}	(0.374)
Attachment to HCP					-0.0106	(0.549)			0.829	(0.648)			0.855	(0.659)
Social trust					0.259	(0.413)			0.199	(0.475)			0.212	(0.484)
Institutional trust					-1.569 ^{**}	(0.574)			-0.441	(0.667)			-0.501	(0.679)
Language proficiency							2.314 ^{***}	(0.562)			0.0476	(0.698)	-0.00963	(0.705)
Employment							0.728 ^{**}	(0.247)			0.716 ^{**}	(0.276)	0.725 ^{**}	(0.276)
Social group involvement (FR)							1.413 [*]	(0.695)			0.779	(0.793)	0.771	(0.794)
Constant	1.699 ^{***}	(0.313)	0.0239	(0.653)	2.361 ^{***}	(0.546)	-1.060	(0.604)	-0.389	(0.804)	-0.395	(0.856)	-0.766	(0.958)
Observations	539		539		539		539		539		539		539	
Pseudo R ²	0.016		0.238		0.031		0.085		0.241		0.252		0.256	

Standard errors in parentheses
^{*} $p < 0.05$, ^{**} $p < 0.01$, ^{***} $p < 0.001$

²⁷⁴ Lyon: Non-political associational involvement is measured by country-specific variables. EEA omitted because of no observation.

Madrid (LPM)

	(1) Controls	(2) +Personals	(3) +Attitudes	(4) +Capital	(5) +Personals +Attitudes	(6) +Personals +Capital	(7) +Personals +Attitudes +Capital
Female	0.131*** (0.0349)	0.0627* (0.0291)	0.131*** (0.0350)	0.131*** (0.0337)	0.0637* (0.0293)	0.0671* (0.0291)	0.0679* (0.0292)
Marital status	0.0296 (0.0346)	-0.0243 (0.0300)	0.0345 (0.0348)	0.0239 (0.0339)	-0.0219 (0.0299)	-0.0247 (0.0304)	-0.0226 (0.0304)
Ethnic group (Ref.: Ecuadorian)							
Moroccan	-0.0434 (0.0414)	-0.0959** (0.0358)	-0.0599 (0.0421)	0.441*** (0.102)	-0.106** (0.0361)	0.117 (0.102)	0.109 (0.103)
Andean	0.00382 (0.0419)	-0.0100 (0.0369)	-0.00493 (0.0417)	-0.00160 (0.0422)	-0.0160 (0.0370)	-0.0127 (0.0371)	-0.0186 (0.0373)
Latin American							
Education		0.0954 (0.0582)			0.0904 (0.0586)	0.0890 (0.0604)	0.0858 (0.0606)
Age at migration		0.221 (0.129)			0.234 (0.132)	0.268* (0.130)	0.280* (0.132)
Length of stay in HC		3.675*** (0.379)			3.672*** (0.368)	3.441*** (0.378)	3.436*** (0.366)
Birth in HC		0.0524 (0.233)			0.0485 (0.243)	0.0714 (0.219)	0.0681 (0.229)
Attachment to HCP			0.131* (0.0648)		0.0118 (0.0548)		0.0115 (0.0548)
Social trust			0.0846 (0.0663)		0.0828 (0.0628)		0.0908 (0.0623)
Institutional trust			-0.109 (0.0846)		-0.0746 (0.0781)		-0.0631 (0.0788)
Language proficiency				0.851*** (0.144)		0.372** (0.143)	0.376** (0.145)
Employment				-0.0566 (0.0439)		-0.0524 (0.0370)	-0.0540 (0.0372)
Social group involvement				0.385 (0.315)		0.0675 (0.255)	0.0555 (0.255)
Constant	0.127*** (0.0358)	-0.196*** (0.0577)	0.0656 (0.0700)	-0.689*** (0.152)	-0.200** (0.0759)	-0.527*** (0.153)	-0.544** (0.167)
Observations	528	528	528	528	528	528	528
R ²	0.035	0.301	0.044	0.102	0.304	0.314	0.318

Robust standard errors in parentheses
* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

Madrid (Logistic Regression)

	(1) Controls	(2) +Personals	(3) +Attitudes	(4) +Capital	(5) +Personals +Attitudes	(6) +Personals +Capital	(7) +Personals +Attitudes +Capital
Citizenship							
Female	0.859*** (0.231)	0.509 (0.283)	0.876*** (0.233)	0.864*** (0.242)	0.515 (0.283)	0.509 (0.290)	0.513 (0.290)
Marital status	0.204 (0.228)	-0.214 (0.291)	0.249 (0.232)	0.256 (0.242)	-0.206 (0.296)	-0.105 (0.297)	-0.107 (0.302)
Ethnic group (Ref.: Ecuadorian)							
Moroccan	-0.319 (0.298)	-1.509*** (0.426)	-0.445 (0.306)	3.308*** (0.699)	-1.525*** (0.424)	1.130 (0.875)	1.095 (0.872)
Andean	0.0287 (0.256)	-0.271 (0.319)	-0.0272 (0.260)	-0.0105 (0.259)	-0.311 (0.325)	-0.257 (0.317)	-0.290 (0.322)
Latin American							
Education		0.748 (0.508)			0.760 (0.515)	0.675 (0.535)	0.708 (0.542)
Age at migration		1.747 (1.072)			1.799 (1.085)	2.230 (1.067)	2.272 (1.083)
Length of stay in HC		34.80*** (4.098)			34.56*** (4.130)	32.76*** (4.251)	32.55*** (4.294)
Birth in HC		-1.629 (1.385)			-1.579 (1.390)	-1.423 (1.430)	-1.374 (1.431)
Attachment to HCP			0.973 (0.519)		0.0692 (0.625)		0.0615 (0.640)
Social trust			0.606 (0.462)		0.479 (0.562)		0.449 (0.566)
Institutional trust			-0.750 (0.618)		-0.111 (0.772)		0.0568 (0.792)
Language proficiency				7.895*** (1.594)		6.326** (2.002)	6.289** (1.996)
Employment				-0.398 (0.279)		-0.433 (0.350)	-0.439 (0.353)
Social group involvement				2.191 (1.660)		0.308 (2.232)	0.203 (2.247)
Constant	-1.934*** (0.272)	-5.111*** (0.665)	-2.455*** (0.552)	-9.623*** (1.637)	-5.334*** (0.868)	-11.15*** (2.156)	-11.42*** (2.241)
Observations	528	528	528	528	528	528	528
Pseudo R ²	0.036	0.322	0.047	0.119	0.323	0.350	0.352

Standard errors in parentheses
* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

*Milan*²⁷⁵ (LPM)

	(1) Controls		(2) +Personals		(3) +Attitudes		(4) +Capital		(5) +Personals +Attitudes		(6) +Personals +Capital		(7) +Personals +Attitudes +Capital	
Female	0.0263	(0.0257)	-0.00440	(0.0226)	0.00607	(0.0255)	-	(0.0219)	-0.0134	(0.0229)	-0.0109	(0.0215)	-0.0180	(0.0221)
Marital status	-0.0375	(0.0284)	0.0184	(0.0190)	-0.0327	(0.0273)	0.000667	(0.0236)	0.0183	(0.0190)	0.0412	(0.0202)	0.0387	(0.0200)
Ethnic group (Ref.: Ecuadorian)														
Egyptian	0.227***	(0.0436)	0.0713*	(0.0344)	0.188***	(0.0446)	0.143***	(0.0383)	0.0751*	(0.0361)	0.0827*	(0.0339)	0.0844*	(0.0360)
Filipino	0.0152	(0.0221)	-0.0804***	(0.0230)	0.0206	(0.0302)	-0.00623	(0.0197)	-0.0531	(0.0293)	-0.0552*	(0.0231)	-0.0342	(0.0302)
Education			-0.0288	(0.0460)					-0.0322	(0.0476)	-0.0769	(0.0508)	-0.0695	(0.0511)
Age at migration			-0.102	(0.0804)					-0.0468	(0.0833)	0.0146	(0.0836)	0.0414	(0.0871)
Length of stay in HC			1.339***	(0.251)					1.229***	(0.246)	1.121***	(0.269)	1.079***	(0.268)
Birth in HC			0.405***	(0.0999)					0.409***	(0.0974)	0.283**	(0.106)	0.300**	(0.104)
Attachment to HCP					0.329***	(0.0673)			0.154**	(0.0577)			0.118*	(0.0542)
Social trust					-0.180**	(0.0686)			-0.133*	(0.0559)			-0.111*	(0.0525)
Institutional trust					-0.0584	(0.0739)			-0.0559	(0.0637)			-0.0496	(0.0632)
Language proficiency_m3							0.670***	(0.0892)			0.297**	(0.105)	0.255*	(0.101)
Employment							-0.0932**	(0.0338)			-0.0677*	(0.0327)	-0.0665*	(0.0333)
Social group involvement (IT)							0.260	(0.213)			0.238	(0.209)	0.193	(0.204)
Constant	0.0404	(0.0236)	-0.0241	(0.0487)	-0.0300	(0.0438)	-0.193***	(0.0411)	-0.0376	(0.0553)	-0.104	(0.0603)	-0.0924	(0.0620)
Observations	479		479		479		479		479		479		479	
R ²	0.108		0.389		0.175		0.324		0.406		0.417		0.428	

Robust standard errors in parentheses
* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

Milan (Logistic Regression)

	(1) Controls		(2) +Personals		(3) +Attitudes		(4) +Capital		(5) +Personals +Attitudes		(6) +Personals +Capital		(7) +Personals +Attitudes +Capital	
Citizenship														
Female	0.427	(0.379)	0.327	(0.486)	0.246	(0.412)	-0.292	(0.498)	0.153	(0.539)	0.0570	(0.577)	0.0209	(0.622)
Marital status	-0.499	(0.347)	1.062	(0.625)	-0.463	(0.380)	2.330***	(0.698)	1.290	(0.732)	2.336**	(0.849)	2.298*	(0.937)
Ethnic group (Ref.: Ecuadorian)														
Egyptian	2.508***	(0.522)	-0.0601	(0.746)	2.185***	(0.569)	1.904**	(0.617)	-0.124	(0.784)	0.193	(0.834)	0.141	(0.875)
Filipino	0.426	(0.572)	-2.461**	(0.843)	0.493	(0.631)	-0.227	(0.704)	-2.042*	(0.874)	-2.243*	(0.944)	-1.988*	(0.982)
Education			-2.369	(1.277)					-2.529	(1.340)	-4.665**	(1.580)	-4.196**	(1.611)
Age at migration			-4.420	(2.838)					-4.146	(3.024)	0.0769	(3.119)	-0.536	(3.302)
Length of stay in HC			22.12***	(4.307)					22.55***	(4.856)	23.74***	(5.076)	23.31***	(5.380)
Birth in HC			2.043	(1.063)					2.161	(1.159)	-0.0618	(1.250)	0.348	(1.361)
Attachment to HCP					5.802***	(1.112)			5.624***	(1.505)			3.639*	(1.603)
Social trust					-1.984**	(0.751)			-3.280**	(1.142)			-2.270	(1.227)
Institutional trust					-0.750	(1.010)			-1.770	(1.447)			-1.542	(1.577)
Language proficiency							9.517***	(1.447)			8.445***	(2.158)	6.973**	(2.266)
Employment							-1.290*	(0.509)			-1.695**	(0.629)	-1.468*	(0.649)
Social group involvement (IT)							2.205	(2.527)			2.958	(3.195)	1.707	(3.219)
Constant	-3.433***	(0.538)	-3.491**	(1.296)	-6.103***	(1.030)	-8.902***	(1.369)	-5.517***	(1.632)	-7.844***	(2.083)	-8.164***	(2.372)
Observations	479		479		479		479		479		479		479	
Pseudo R ²	0.155		0.501		0.288		0.475		0.578		0.607		0.636	

Standard errors in parentheses
* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

²⁷⁵ Milan: Non-political associational involvement is measured by country-specific variables.

*Oslo*²⁷⁶ (LPM)

	(1) Controls	(2) +Personals	(3) +Attitudes	(4) +Capital	(5) +Personals +Attitudes	(6) +Personals +Capital	(7) +Personals +Attitudes +Capital
Female	0.0149 (0.0391)	0.0384 (0.0355)	0.0164 (0.0389)	0.0431 (0.0391)	0.0403 (0.0354)	0.0510 (0.0368)	0.0527 (0.0367)
Marital status	-0.0993* (0.0431)	-0.0651 (0.0443)	-0.0907* (0.0430)	-0.0655 (0.0433)	-0.0645 (0.0442)	-0.0670 (0.0443)	-0.0670 (0.0442)
Ethnic group (Ref.: Bosnian)							
Turk	0.0723 (0.0528)	-0.0670 (0.0540)	0.0500 (0.0534)	0.144*** (0.0507)	-0.0785 (0.0541)	-0.0359 (0.0561)	-0.0456 (0.0565)
Pakistani	0.0487 (0.0497)	-0.172** (0.0568)	0.0363 (0.0521)	0.128* (0.0511)	-0.173** (0.0571)	-0.129* (0.0610)	-0.130* (0.0616)
Education		0.0720 (0.0519)			0.0944 (0.0537)	0.0310 (0.0545)	0.0545 (0.0564)
Age at migration		-0.494** (0.154)			-0.465** (0.153)	-0.373* (0.163)	-0.338* (0.163)
Length of stay in HC		2.333*** (0.282)			2.373*** (0.289)	2.276*** (0.286)	2.321*** (0.292)
Birth in HC		-0.146* (0.0617)			-0.145* (0.0619)	-0.150* (0.0615)	-0.149* (0.0619)
Attachment to HCP(NOR)			0.186* (0.0903)		0.0619 (0.0792)		0.0483 (0.0793)
Social trust(NOR)			-0.0791 (0.0412)		- (0.0374)		-0.102** (0.0374)
Institutional trust(NOR)			-0.0344 (0.0986)		0.0999** -0.00554 (0.0890)		-0.0130 (0.0884)
Language proficiency(NOR)				0.442*** (0.0815)		0.189* (0.0936)	0.195* (0.0924)
Employment(NOR)				0.0429 (0.0426)		0.0247 (0.0388)	0.0233 (0.0388)
Social group involvement (NOR)				0.457 (0.275)		0.0997 (0.270)	0.120 (0.266)
Constant	0.714*** (0.0523)	0.554*** (0.0902)	0.676*** (0.0909)	0.267** (0.0918)	0.557*** (0.107)	0.368** (0.119)	0.377** (0.133)
Observations	565	565	565	565	565	565	565
R ²	0.011	0.218	0.022	0.068	0.228	0.226	0.237

Robust standard errors in parentheses
* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

Oslo (Logistic Regression)

	(1) Controls	(2) +Personals	(3) +Attitudes	(4) +Capital	(5) +Personals +Attitudes	(6) +Personals +Capital	(7) +Personals +Attitudes +Capital
Citizenship							
Female	0.0697 (0.185)	0.262 (0.214)	0.0785 (0.187)	0.241 (0.201)	0.286 (0.218)	0.334 (0.224)	0.360 (0.228)
Marital status	-0.488* (0.226)	-0.380 (0.271)	-0.453* (0.228)	-0.358 (0.234)	-0.402 (0.277)	-0.397 (0.273)	-0.431 (0.280)
Ethnic group (Ref.: Bosnian)							
Turk	0.339 (0.244)	-0.159 (0.316)	0.233 (0.250)	0.738** (0.264)	-0.254 (0.322)	0.0257 (0.333)	-0.0625 (0.337)
Pakistani	0.226 (0.228)	-0.803** (0.297)	0.167 (0.243)	0.660** (0.252)	-0.820** (0.310)	-0.573 (0.319)	-0.580 (0.330)
Education		0.626 (0.358)			0.730* (0.365)	0.399 (0.376)	0.494 (0.382)
Age at migration		-2.355** (0.879)			-2.157* (0.895)	-1.744 (0.929)	-1.456 (0.950)
Length of stay in HC		15.88*** (1.947)			16.39*** (1.995)	15.55*** (1.955)	16.19*** (2.011)
Birth in HC		-0.770 (0.526)			-0.746 (0.529)	-0.815 (0.530)	-0.811 (0.534)
Attachment to HCP(NOR)			0.884* (0.428)		0.288 (0.490)		0.190 (0.498)
Social trust(NOR)			-0.382 (0.201)		-0.640** (0.236)		-0.680** (0.240)
Institutional trust(NOR)			-0.164 (0.441)		0.0638 (0.513)		0.00153 (0.514)
Language proficiency(NOR)				2.156*** (0.428)		1.077* (0.528)	1.232* (0.544)
Employment(NOR)				0.212 (0.208)		0.115 (0.236)	0.109 (0.238)
Social group involvement (NOR)				2.580 (1.949)		0.580 (2.243)	0.497 (2.216)
Constant	0.942*** (0.247)	-0.485 (0.533)	0.776 (0.422)	-1.220** (0.463)	-0.441 (0.630)	-1.498* (0.715)	-1.474 (0.776)
Observations	565	565	565	565	565	565	565
Pseudo R ²	0.009	0.209	0.018	0.057	0.220	0.216	0.228

Standard errors in parentheses
* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

²⁷⁶ Oslo: Language proficiency is measured by a country-specific variable on a four-point scale. Attachment to host country people, social trust, and institutional trust, employment, non-political associational involvement are measured by country-specific variables. Permit category omitted because of no available indicator.

Stockholm²⁷⁷ (LPM)

	(1) Controls		(2) +Personals		(3) +Attitudes		(4) +Capital		(5) +Personals +Attitudes		(6) +Personals +Capital		(7) +Personals +Attitudes +Capital	
Female	0.00370	(0.0394)	0.0157	(0.0389)	0.0106	(0.0407)	0.00476	(0.0396)	0.0197	(0.0400)	0.0113	(0.0388)	0.0139	(0.0399)
Marital status	-0.0560	(0.0405)	-0.0433	(0.0446)	-0.0615	(0.0402)	-0.0293	(0.0415)	-0.0495	(0.0443)	-0.0330	(0.0438)	-0.0380	(0.0434)
Ethnic group (Ref.: Chilean)														
Turk	0.136***	(0.0392)	0.120**	(0.0410)	0.142***	(0.0386)	0.129***	(0.0388)	0.128**	(0.0412)	0.128**	(0.0415)	0.135**	(0.0415)
Education			0.0854	(0.0650)					0.0904	(0.0670)	0.0404	(0.0658)	0.0483	(0.0676)
Age at migration			0.323*	(0.158)					0.376*	(0.160)	0.613***	(0.172)	0.639***	(0.173)
Length of stay in HC			0.913*	(0.362)					0.879*	(0.360)	0.858*	(0.363)	0.839*	(0.363)
Birth in HC			0.182**	(0.0583)					0.192**	(0.0584)	0.189**	(0.0590)	0.195**	(0.0593)
Attachment to HCP(SW)					0.131	(0.0914)			0.149	(0.0891)			0.114	(0.0873)
Social trust					0.0639	(0.0781)			0.00202	(0.0778)			0.00487	(0.0777)
Institutional trust(SW)					-0.0357	(0.0970)			-0.0360	(0.0936)			-0.0332	(0.0923)
Language proficiency(SW)							0.290**	(0.0987)			0.371**	(0.114)	0.352**	(0.113)
Employment							-0.0208	(0.0423)			-0.0344	(0.0433)	-0.0362	(0.0435)
Social group involvement							0.0496	(0.197)			0.00596	(0.203)	-0.00631	(0.205)
Constant	0.776***	(0.0412)	0.409***	(0.115)	0.676***	(0.0955)	0.547***	(0.0965)	0.317*	(0.138)	0.112	(0.152)	0.0597	(0.163)
Observations	396		396		396		396		396		396		396	
R ²	0.031		0.076		0.039		0.057		0.083		0.103		0.108	

Robust standard errors in parentheses
* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

Stockholm (Logistic Regression)

	(1) Controls		(2) +Personals		(3) +Attitudes		(4) +Capital		(5) +Personals +Attitudes		(6) +Personals +Capital		(7) +Personals +Attitudes +Capital	
Citizenship														
Female	0.0217	(0.259)	0.114	(0.267)	0.0729	(0.264)	0.0352	(0.267)	0.151	(0.272)	0.0829	(0.276)	0.106	(0.279)
Marital status	-0.371	(0.272)	-0.276	(0.298)	-0.403	(0.274)	-0.207	(0.284)	-0.338	(0.303)	-0.228	(0.303)	-0.282	(0.309)
Ethnic group (Ref.: Chilean)														
Turk	0.920***	(0.279)	0.895**	(0.328)	0.963***	(0.283)	0.899**	(0.283)	0.950**	(0.334)	0.998**	(0.340)	1.039**	(0.346)
Education			0.642	(0.474)					0.669	(0.485)	0.311	(0.515)	0.349	(0.520)
Age at migration			2.056*	(1.024)					2.396*	(1.054)	4.267***	(1.276)	4.462***	(1.298)
Length of stay in HC			6.408**	(2.306)					6.203**	(2.361)	5.980*	(2.358)	5.848*	(2.401)
Birth in HC			1.757**	(0.598)					1.812**	(0.600)	1.875**	(0.610)	1.913**	(0.613)
Attachment to HCP(SW)					0.836	(0.563)			0.955	(0.584)			0.752	(0.609)
Social trust					0.413	(0.487)			0.00808	(0.519)			0.0196	(0.532)
Institutional trust(SW)					-0.247	(0.609)			-0.297	(0.633)			-0.228	(0.649)
Language proficiency(SW)							1.809**	(0.586)			2.538**	(0.785)	2.437**	(0.792)
Employment							-0.136	(0.291)			-0.175	(0.305)	-0.162	(0.309)
Social group involvement							0.381	(1.250)			0.0254	(1.296)	-0.0720	(1.330)
Constant	1.287***	(0.266)	-1.251	(0.723)	0.661	(0.541)	-0.114	(0.551)	-1.784*	(0.849)	-3.308***	(1.000)	-3.657***	(1.105)
Observations	396		396		396		396		396		396		396	
Pseudo R ²	0.032		0.090		0.041		0.058		0.097		0.118		0.122	

Standard errors in parentheses
* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

²⁷⁷ Stockholm: Language proficiency is measured by a country-specific variable on a four-point scale. Attachment to host country people, and institutional trust are measured by country-specific variables. Permit category omitted because of no available indicator.

Zurich (LPM)

	(1) Controls	(2) +Personals	(3) +Attitudes	(4) +Capital	(5) +Personals +Attitudes	(6) +Personals +Capital	(7) +Personals +Attitudes +Capital
Female	0.0328 (0.0368)	0.0383 (0.0364)	0.0334 (0.0369)	0.0404 (0.0365)	0.0386 (0.0364)	0.0432 (0.0372)	0.0427 (0.0375)
Marital status	-0.0166 (0.0406)	0.0183 (0.0395)	-0.0139 (0.0410)	0.0117 (0.0439)	0.0205 (0.0396)	0.0205 (0.0425)	0.0225 (0.0425)
Ethnic group (Ref.: Kosovar)							
Italian	-0.0952*** (0.0274)	-0.138*** (0.0363)	-0.0977*** (0.0277)	-0.0705* (0.0286)	-0.138*** (0.0361)	-0.127*** (0.0382)	- (0.0389)
Turk	0.103** (0.0419)	0.0934* (0.0405)	0.102* (0.0415)	0.110** (0.0417)	0.0931* (0.0402)	0.0984* (0.0408)	0.0972* (0.0406)
Education		0.116* (0.0563)			0.114* (0.0573)	0.0902 (0.0619)	0.0919 (0.0628)
Age at migration		-0.228 (0.166)			-0.221 (0.167)	-0.136 (0.180)	-0.141 (0.179)
Length of stay in HC		0.185 (0.135)			0.183 (0.134)	0.200 (0.147)	0.195 (0.146)
Birth in HC		0.113 (0.0875)			0.115 (0.0869)	0.110 (0.0867)	0.112 (0.0863)
Attachment to HCP			0.0788 (0.0649)		0.0626 (0.0624)		0.0508 (0.0637)
Social trust			-0.00563 (0.0563)		-0.0169 (0.0548)		- (0.0539)
Institutional trust			-0.0575 (0.0738)		-0.0488 (0.0728)		0.0121 (0.0732)
Language proficiency				0.218** (0.0715)		0.0860 (0.0781)	0.0777 (0.0809)
Employment				0.0129 (0.0319)		0.0180 (0.0358)	0.0146 (0.0354)
Social group involvement				0.117 (0.147)		0.0523 (0.149)	0.0434 (0.147)
Constant	0.111* (0.0466)	0.0433 (0.0827)	0.0953 (0.0776)	-0.0390 (0.0659)	0.0384 (0.108)	-0.0331 (0.106)	- (0.123)
Observations	445	445	445	445	445	445	445
R ²	0.072	0.118	0.075	0.099	0.120	0.121	0.123

Robust standard errors in parentheses

* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

Zurich (Logistic Regression)

	(1) Controls	(2) +Personals	(3) +Attitudes	(4) +Capital	(5) +Personals +Attitudes	(6) +Personals +Capital	(7) +Personals +Attitudes +Capital
Citizenship							
Female	0.340 (0.342)	0.305 (0.363)	0.361 (0.345)	0.361 (0.354)	0.322 (0.366)	0.343 (0.369)	0.346 (0.371)
Marital status	-0.195 (0.397)	0.551 (0.483)	-0.132 (0.403)	0.185 (0.441)	0.614 (0.492)	0.542 (0.502)	0.608 (0.514)
Ethnic group (Ref.: Kosovar)							
Italian	-2.212** (0.767)	-3.071*** (0.929)	-2.224** (0.770)	-2.041** (0.777)	-3.071** (0.942)	-3.044** (0.953)	-3.044** (0.962)
Turk	0.781* (0.343)	0.698 (0.360)	0.798* (0.350)	0.827* (0.351)	0.711 (0.370)	0.726* (0.365)	0.733 (0.375)
Education		1.499* (0.657)			1.486* (0.658)	1.209 (0.703)	1.238 (0.704)
Age at migration		-2.731 (1.652)			-2.736 (1.665)	-1.797 (1.855)	-1.888 (1.862)
Length of stay in HC		1.466 (1.926)			1.360 (1.970)	1.544 (2.008)	1.439 (2.044)
Birth in HC		1.376 (0.713)			1.424 (0.734)	1.469* (0.749)	1.478 (0.765)
Attachment to HCP			0.825 (0.702)		0.615 (0.756)		0.533 (0.770)
Social trust			-0.0728 (0.626)		-0.316 (0.662)		-0.233 (0.684)
Institutional trust			-0.537 (0.841)		-0.399 (0.922)		-0.352 (0.924)
Language proficiency				2.121** (0.722)		0.737 (0.886)	0.708 (0.892)
Employment				0.215 (0.409)		0.299 (0.458)	0.229 (0.466)
Social group involvement				2.133 (2.163)		0.936 (2.399)	0.895 (2.444)
Constant	-2.076*** (0.477)	-3.183*** (0.879)	-2.330** (0.843)	-3.769*** (0.724)	-3.232** (1.149)	-3.930*** (1.096)	-3.921** (1.351)
Observations	445	445	445	445	445	445	445
Pseudo R ²	0.119	0.192	0.124	0.156	0.195	0.197	0.199

Standard errors in parentheses

* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

Comparison of LPM and Logistic Regression Output
Model 3: A Model of Immigrant Citizenship Acquisition (Overall Summary)

According to the analysis summary tables, the results from of LPM (above) and logistic regression (below) do not show contradictory results. For more detailed information (e.g., sizes of regression coefficients), refer to the raw regression analysis output.

Model 3: A Model of Immigrant Citizenship Acquisition (LPM)											
City ^a	BAR	BUD	GEN	LON	LYO	MAD	MIL	OSL	STO	ZUR	
Controls											
Gender (Female)						+	*				
Marital status											
Ethnic group ^b	Reference category: G3 (group of recent arrival)										
G1		+	**	-	*			+	*	-	**
G2	+	*	+	**	X			-	*	X	+
Personal characteristics											
Educational attainment	+	*			-	**	+	**			
Age at migration					-	**	+	*		+	**
Length of stay in HC	+	**	+	**	+	**	+	**	+	**	
Birth in HC	+	*				+	**	+	**	+	
Attitudes											
Attachment to HCP							+	*			
Social trust							-	*	-	**	
Institutional trust											
Capital											
Language proficiency		+	*		+	**	+	**	+	*	
Employment					-	**	+	*			
Social group involvement				-	**						
Observations	439	419	278	518	539	528	479	565	396	445	
R²	0.351	0.352	0.080	0.605	0.243	0.318	0.428	0.237	0.108	0.123	

Model 3: A Model of Immigrant Citizenship Acquisition (Logistic Regression)										
City ^a	BAR	BUD	GEN	LON	LYO	MAD	MIL	OSL	STO	ZUR
Controls										
Gender (Female)					+	*				
Marital status							+	*		
Ethnic group ^b	Reference category: G3 (group of recent arrival)									
G1			-	*					+	**
G2			X				-	*	X	
Personal characteristics										
Educational attainment	+	**				+	**	-	**	
Age at migration		+	**			+	*		+	**
Length of stay in HC	+	**	+	**	+	**	+	**	+	**
Birth in HC					+	**	+	**	+	**
Attitudes										
Attachment to HCP							+	*		
Social trust								-	**	
Institutional trust										
Capital										
Language proficiency		+	**			+	**	+	**	+
Employment					+	**		-	*	
Social group involvement										
Observations	436	419	278	518	539	528	479	565	396	445
Pseudo R²	0.334	0.402	0.155	0.708	0.256	0.352	0.636	0.228	0.122	0.199

* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

^a BAR: Barcelona, BUD: Budapest, GEN: Geneva, LON: London, LYO: Lyon, MAD: Madrid, MIL: Milan, OSL: Oslo, STO: Stockholm, ZUR: Zurich

^bEthnic groups: Barcelona (G1: Moroccan, G2: Andean mixed group, G3: Ecuatorian), Budapest (G1: Ethnic Hungarian, G2: Mixed Muslim, G3: Chinese), Geneva (G1: Italian, G2: N/A, G3: Kosovar), London (G1: Indian, G2: Afro-Caribbean, G3: Bangladeshi), Lyon (G1: Moroccan, G2: Algerian, G3: Tunisian), Madrid (G1: Moroccan, G2: Andean mixed group, G3: Ecuatorian), Milan (G1: Egyptian, G2: Filipino, G3: Ecuatorian), Oslo (G1: Turkish, G2: Pakistani, G3: Bosnian), Stockholm (G1: Turkish, G2: N/A, G3: Chilean), Zurich (G1: Italian, G2: Turkish, G3: Kosovar)

3. Determinants of Immigrant Political Integration
(DV: Political Interest; OLS Regression, LOCALMULTIDEM: 10 cities)

Barcelona

	(1) Controls		(2) +Personals		(3) +Attitudes		(4) +Capital		(5) +Personals +Attitudes		(6) +Personals +Capital		(7) +Personals +Attitudes +Capital	
Female	-0.0704 [*]	(0.0309)	-0.0628 [*]	(0.0303)	-0.0617 [*]	(0.0306)	-0.0773 [*]	(0.0304)	-0.0564	(0.0300)	-0.0635 [*]	(0.0298)	-0.0575	(0.0296)
Marital status	0.00547	(0.0312)	0.0172	(0.0305)	0.00749	(0.0308)	0.0104	(0.0305)	0.0215	(0.0302)	0.0207	(0.0300)	0.0259	(0.0297)
Ethnic group (Ref.: Ecuadorian)														
Moroccan	0.100 [*]	(0.0391)	0.0983 [*]	(0.0403)	0.0890 [*]	(0.0386)	0.206 ^{**}	(0.0783)	0.0847 [*]	(0.0400)	0.269 ^{**}	(0.0832)	0.260 ^{**}	(0.0821)
Andean Latin American	0.0656	(0.0337)	0.0155	(0.0332)	0.0599	(0.0334)	0.0381	(0.0334)	0.0156	(0.0328)	0.00322	(0.0329)	0.00462	(0.0325)
Education			0.297 ^{***}	(0.0488)					0.300 ^{***}	(0.0488)	0.266 ^{***}	(0.0485)	0.269 ^{***}	(0.0485)
Age at migration			0.209	(0.121)					0.108	(0.122)	0.238 [*]	(0.119)	0.137	(0.120)
Length of stay in HC			0.406 [*]	(0.198)					0.312	(0.201)	-0.0449	(0.229)	-0.112	(0.230)
Birth in HC			-0.0443	(0.176)					-0.00854	(0.174)	-0.240	(0.182)	-0.209	(0.180)
Permit category (Ref.: For Work)														
EEA			0.00327	(0.0755)					0.0110	(0.0750)	0.0155	(0.0745)	0.0202	(0.0740)
Study			-0.106	(0.101)					-0.0650	(0.101)	-0.0923	(0.101)	-0.0577	(0.100)
Family reunification			-0.119	(0.133)					-0.0672	(0.133)	-0.0628	(0.133)	-0.0148	(0.132)
Other purposes			-0.113	(0.0697)					-0.107	(0.0692)	-0.0858	(0.0691)	-0.0812	(0.0686)
Attachment to HCP					0.0453	(0.0640)			0.0437	(0.0634)			0.0317	(0.0623)
Social trust					0.146 [*]	(0.0604)			0.0565	(0.0603)			0.0585	(0.0593)
Institutional trust					0.191 [*]	(0.0815)			0.239 ^{**}	(0.0814)			0.240 ^{**}	(0.0801)
Language proficiency							0.297	(0.170)			0.380 [*]	(0.173)	0.397 [*]	(0.170)
Citizenship							0.121 ^{***}	(0.0342)			0.118 ^{**}	(0.0398)	0.109 ^{**}	(0.0394)
Employment							0.0114	(0.0390)			-0.0162	(0.0387)	-0.0221	(0.0383)
Social group involvement							0.461 ^{**}	(0.171)			0.396 [*]	(0.167)	0.407 [*]	(0.165)
Constant	0.486 ^{***}	(0.0361)	0.201 ^{**}	(0.0718)	0.273 ^{***}	(0.0648)	0.138	(0.175)	0.0458	(0.0836)	-0.169	(0.188)	-0.330	(0.191)
Observations	436		436		436		436		436		436		436	
R ²	0.032		0.133		0.074		0.093		0.163		0.174		0.203	

Standard errors in parentheses
* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

Budapest

	(1) Controls		(2) +Personals		(3) +Attitudes		(4) +Capital		(5) +Personals +Attitudes		(6) +Personals +Capital		(7) +Personals +Attitudes +Capital	
Female	0.00886	(0.0266)	0.000969	(0.0259)	0.00126	(0.0265)	0.00913	(0.0271)	-0.00364	(0.0259)	0.00753	(0.0271)	0.00174	(0.0271)
Marital status	0.0334	(0.0252)	0.00808	(0.0275)	0.0277	(0.0250)	0.0180	(0.0278)	0.00599	(0.0275)	0.00368	(0.0290)	0.00260	(0.0290)
Ethnic group (Ref.: Chinese)														
Ethnic Hungarian	0.0469	(0.0359)	0.0538	(0.0364)	0.0633	(0.0375)	-0.0596	(0.0575)	0.0660	(0.0385)	-0.00727	(0.0599)	0.00783	(0.0602)
Mixed Muslim	-0.0854 [*]	(0.0372)	-0.109 ^{**}	(0.0371)	-0.108 ^{**}	(0.0376)	-0.121 ^{**}	(0.0401)	-0.124 ^{**}	(0.0377)	-0.121 ^{**}	(0.0400)	-0.135 ^{***}	(0.0404)
Education			0.154 ^{**}	(0.0559)					0.128 [*]	(0.0571)	0.134 [*]	(0.0570)	0.111	(0.0582)
Age at migration			0.0580	(0.107)					0.0365	(0.109)	0.0940	(0.109)	0.0678	(0.110)
Length of stay in HC			0.598 ^{**}	(0.185)					0.579 ^{**}	(0.186)	0.448 [*]	(0.200)	0.442 [*]	(0.201)
Birth in HC			-0.174	(0.1000)					-0.177	(0.0996)	-0.158	(0.100)	-0.164	(0.1000)
Permit category (Ref.: For Work)														
EEA			0.126	(0.143)					0.123	(0.143)	0.166	(0.144)	0.163	(0.145)
Study			-0.00354	(0.0348)					-0.00346	(0.0351)	0.0436	(0.0416)	0.0382	(0.0419)
Family reunification			0.0311	(0.0391)					0.0320	(0.0390)	0.0602	(0.0413)	0.0585	(0.0413)
Other purposes			-0.120 ^{**}	(0.0436)					-0.120 ^{**}	(0.0438)	-0.0824	(0.0468)	-0.0865	(0.0469)
Attachment to HCP					0.109 [*]	(0.0548)			0.0927	(0.0539)			0.0799	(0.0546)
Social trust					0.0599	(0.0705)			0.0271	(0.0701)			0.0184	(0.0702)
Institutional trust					0.104	(0.0690)			0.0840	(0.0694)			0.0925	(0.0708)
Language proficiency							0.129	(0.0723)			0.0688	(0.0746)	0.0702	(0.0762)
Citizenship							0.101 ^{**}	(0.0307)			0.0679	(0.0392)	0.0602	(0.0392)
Employment							0.0227	(0.0293)			0.0372	(0.0319)	0.0327	(0.0318)
Social group involvement							0.0311	(0.472)			-0.0304	(0.473)	-0.0854	(0.471)
Constant	0.551 ^{***}	(0.0361)	0.380 ^{***}	(0.0654)	0.410 ^{***}	(0.0576)	0.496 ^{***}	(0.0473)	0.303 ^{***}	(0.0727)	0.328 ^{***}	(0.0756)	0.261 ^{**}	(0.0810)
Observations	414		414		414		414		414		414		414	
R ²	0.057		0.139		0.083		0.101		0.154		0.151		0.164	

Standard errors in parentheses
* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

Geneva

	(1) Controls		(2) +Personals		(3) +Attitudes		(4) +Capital		(5) +Personals +Attitudes		(6) +Personals +Capital		(7) +Personals +Attitudes +Capital	
Female	-0.0647	(0.0375)	-0.0553	(0.0382)	-0.0641	(0.0368)	-0.0529	(0.0370)	-0.0532	(0.0372)	-0.0497	(0.0380)	-0.0480	(0.0371)
Marital status	0.0574	(0.0390)	0.0950 [*]	(0.0444)	0.0205	(0.0396)	0.0680	(0.0426)	0.0743	(0.0437)	0.0878	(0.0475)	0.0693	(0.0466)
Ethnic group (Ref.: Kosovar)														
Italian	-0.0371	(0.0357)	-0.00362	(0.0521)	0.00229	(0.0366)	-0.0444	(0.0364)	0.0521	(0.0526)	-0.00651	(0.0534)	0.0483	(0.0539)
Education			0.210 ^{***}	(0.0624)					0.223 ^{***}	(0.0615)	0.160 [*]	(0.0657)	0.170 ^{**}	(0.0652)
Age at migration			-0.262	(0.164)					-0.393 [*]	(0.164)	-0.133	(0.179)	-0.263	(0.178)
Length of stay in HC			-0.0283	(0.178)					-0.102	(0.174)	-0.00855	(0.186)	-0.0868	(0.183)
Birth in HC			-0.122	(0.0792)					-0.123	(0.0786)	-0.120	(0.0794)	-0.124	(0.0790)
Permit category (Ref.: For Work)														
EEA			0.0852	(0.0533)					0.0756	(0.0522)	0.103	(0.0604)	0.0846	(0.0594)
Study			0.344 [*]	(0.172)					0.295	(0.168)	0.367 [*]	(0.174)	0.312	(0.170)
Family reunification			0.0675	(0.0628)					0.0363	(0.0616)	0.0947	(0.0700)	0.0544	(0.0690)
Other purposes			0.0290	(0.0459)					0.00932	(0.0449)	0.0506	(0.0533)	0.0229	(0.0525)
Attachment to HCP					0.132	(0.0856)			0.169	(0.0870)			0.154	(0.0873)
Social trust					0.0974	(0.0677)			0.123	(0.0674)			0.112	(0.0674)
Institutional trust					0.181	(0.0923)			0.181 [*]	(0.0918)			0.195 [*]	(0.0925)
Language proficiency							0.119	(0.0992)			0.102	(0.114)	0.122	(0.112)
Citizenship							0.0133	(0.0630)			0.0744	(0.0749)	0.0451	(0.0735)
Employment							0.0487	(0.0372)			0.0308	(0.0397)	0.0256	(0.0389)
Social group involvement							0.627 ^{**}	(0.211)			0.486 [*]	(0.213)	0.462 [*]	(0.207)
Constant	0.489 ^{***}	(0.0413)	0.361 ^{***}	(0.0817)	0.217 [*]	(0.0862)	0.354 ^{***}	(0.0801)	0.0841	(0.107)	0.235	(0.124)	-0.0314	(0.139)
Observations	275		275		275		275		275		275		275	
R ²	0.026		0.098		0.075		0.074		0.158		0.125		0.181	

Standard errors in parentheses
^{*} $p < 0.05$, ^{**} $p < 0.01$, ^{***} $p < 0.001$

*London*²⁷⁸

	(1) Controls		(2) +Personals		(3) +Attitudes		(4) +Capital		(5) +Personals +Attitudes		(6) +Personals +Capital		(7) +Personals +Attitudes +Capital	
Female	0.0207	(0.0243)	-0.00315	(0.0236)	0.0182	(0.0245)	0.00302	(0.0244)	-0.00449	(0.0238)	-0.00565	(0.0238)	-0.00702	(0.0240)
Marital status	0.111 ^{***}	(0.0239)	0.0850 ^{**}	(0.0269)	0.109 ^{**}	(0.0240)	0.122 ^{**}	(0.0242)	0.0863 ^{**}	(0.0271)	0.0848 ^{**}	(0.0274)	0.0859 ^{**}	(0.0276)
Ethnic group (Ref.: Bangladeshi)														
Indian	-0.0160	(0.0297)	-0.0265	(0.0317)	-0.0235	(0.0304)	-	(0.0307)	-0.0251	(0.0324)	-0.0287	(0.0318)	-0.0268	(0.0323)
Caribbean	-0.0298	(0.0287)	-0.0200	(0.0283)	-0.0179	(0.0309)	0.0000984	(0.0290)	-0.00758	(0.0302)	-0.0438	(0.0293)	-0.0303	(0.0308)
Education			0.272 ^{***}	(0.0413)			-0.0723 [*]		0.270 ^{***}	(0.0414)	0.222 ^{***}	(0.0438)	0.216 ^{***}	(0.0439)
Age at migration			0.272	(0.162)					0.259	(0.165)	0.438 ^{**}	(0.168)	0.442 ^{**}	(0.171)
Length of stay in HC			0.324 [*]	(0.129)					0.313 [*]	(0.132)	0.341 [*]	(0.133)	0.339 [*]	(0.136)
Birth in HC			0.103	(0.0569)					0.110	(0.0577)	0.0881	(0.0588)	0.0968	(0.0592)
Permit category (Ref.: For Work)														
Study			-0.113	(0.0627)					-0.115	(0.0628)	-0.112	(0.0630)	-0.112	(0.0630)
Family reunification			-0.0849	(0.109)					-0.0829	(0.109)	-0.126	(0.109)	-0.124	(0.109)
Other purposes			0.0807	(0.0434)					0.0827	(0.0435)	0.0601	(0.0465)	0.0616	(0.0465)
Attachment to HCP					-0.0168	(0.0565)			-0.0550	(0.0543)			-0.0814	(0.0542)
Social trust					0.0257	(0.0578)			-0.0109	(0.0556)			-0.0222	(0.0548)
Institutional trust					0.0845	(0.0720)			0.0686	(0.0704)			0.0839	(0.0699)
Language proficiency(EN)							0.285 ^{***}	(0.0669)			0.228 ^{**}	(0.0746)	0.256 ^{***}	(0.0762)
Citizenship							0.0475	(0.0358)			0.0104	(0.0505)	0.0111	(0.0506)
Employment							-0.00983	(0.0259)			-0.0299	(0.0256)	-0.0300	(0.0257)
Social group involvement (EN)							0.632 ^{**}	(0.191)			0.529 ^{**}	(0.190)	0.506 ^{**}	(0.190)
Constant	0.379 ^{***}	(0.0263)	0.0228	(0.0705)	0.332 ^{***}	(0.0488)	0.0827	(0.0609)	0.0187	(0.0753)	-0.150	(0.0921)	-0.171	(0.0954)
Observations	512		512		512		512		512		512		512	
R ²	0.047		0.160		0.051		0.122		0.163		0.193		0.198	

Standard errors in parentheses
^{*} $p < 0.05$, ^{**} $p < 0.01$, ^{***} $p < 0.001$

²⁷⁸ London: Language proficiency is measured by a country-specific variable on a four-point scale. Non-political associational involvement is measured by country-specific variables. EEA omitted because of no observation. Mixed race British (gr25_mixedracebritish; n=14) is excluded from the dataset because the variable is repeatedly omitted in the regression analyses due to collinearity.

Lyon²⁷⁹

	(1) Controls		(2) +Personals		(3) +Attitudes		(4) +Capital		(5) +Personals +Attitudes		(6) +Personals +Capital		(7) +Personals +Attitudes +Capital	
Female	0.00810	(0.0267)	0.000196	(0.0262)	0.0145	(0.0266)	0.0233	(0.0260)	0.00279	(0.0261)	0.0120	(0.0261)	0.0145	(0.0260)
Marital status	0.00549	(0.0264)	0.000572	(0.0271)	-0.0127	(0.0267)	0.0351	(0.0256)	-0.00928	(0.0271)	0.0161	(0.0264)	0.00525	(0.0265)
Ethnic group (Ref.: Tunisian)														
Moroccan	0.0515	(0.0432)	0.0239	(0.0420)	0.0330	(0.0431)	0.0397	(0.0410)	0.0120	(0.0419)	0.0148	(0.0406)	0.00548	(0.0405)
Algerian	-0.0225	(0.0336)	-0.0193	(0.0327)	-0.0337	(0.0335)	-0.0393	(0.0320)	-0.0317	(0.0327)	-0.0280	(0.0316)	-0.0395	(0.0316)
Education			0.275***	(0.0418)					0.267***	(0.0420)	0.184***	(0.0434)	0.177***	(0.0434)
Age at migration			-0.0769	(0.184)					-0.158	(0.184)	0.0762	(0.180)	-0.00871	(0.181)
Length of stay in HC			0.265*	(0.123)					0.214	(0.123)	0.170	(0.122)	0.127	(0.122)
Birth in HC			-0.0535	(0.0418)					-0.0403	(0.0417)	-0.0754	(0.0416)	-0.0616	(0.0415)
Permit category (Ref.: For Work)														
Study			-0.0942	(0.151)					-0.0921	(0.150)	-0.0855	(0.148)	-0.0720	(0.147)
Family reunification			0.0517	(0.0781)					0.0572	(0.0778)	0.117	(0.0805)	0.128	(0.0805)
Other purposes			-0.0512	(0.0665)					-0.0349	(0.0662)	-	(0.0699)	0.0195	(0.0697)
Attachment to HCP					0.110	(0.0619)			0.106	(0.0606)	0.000574		0.0989	(0.0586)
Social trust					0.0573	(0.0481)			0.0150	(0.0470)			-0.00178	(0.0453)
Institutional trust					0.139*	(0.0655)			0.153*	(0.0650)			0.156*	(0.0631)
Language proficiency							0.184*	(0.0720)			0.216**	(0.0792)	0.193*	(0.0789)
Citizenship							0.0462	(0.0334)			0.0766	(0.0409)	0.0819*	(0.0408)
Employment							0.0120	(0.0261)			-0.00937	(0.0264)	-0.00331	(0.0262)
Social group involvement (FR)							0.466***	(0.0670)			0.394***	(0.0686)	0.395***	(0.0682)
Constant	0.566***	(0.0356)	0.371***	(0.0713)	0.407***	(0.0601)	0.247***	(0.0742)	0.235**	(0.0834)	0.115	(0.0960)	-0.00308	(0.103)
Observations	537		537		537		537		537		537		537	
R ²	0.008		0.092		0.032		0.119		0.111		0.163		0.181	

Standard errors in parentheses
* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

Madrid

	(1) Controls		(2) +Personals		(3) +Attitudes		(4) +Capital		(5) +Personals +Attitudes		(6) +Personals +Capital		(7) +Personals +Attitudes +Capital	
Female	-0.0428	(0.0255)	-0.0555	(0.0255)	-0.0460	(0.0253)	-0.0473	(0.0258)	-0.0585	(0.0253)	-0.0527	(0.0257)	-0.0550	(0.0255)
Marital status	-0.0140	(0.0254)	-0.0265	(0.0265)	-0.0184	(0.0254)	-0.0194	(0.0256)	-0.0321	(0.0264)	-0.0282	(0.0266)	-0.0344	(0.0265)
Ethnic group (Ref.: Ecuadorian)														
Moroccan	-0.0117	(0.0318)	-0.0175	(0.0318)	-0.0228	(0.0322)	0.0304	(0.0721)	-0.0277	(0.0321)	-0.0458	(0.0746)	-0.0356	(0.0744)
Andean Latin American	0.0258	(0.0299)	0.00811	(0.0304)	0.0271	(0.0299)	0.0222	(0.0299)	0.0110	(0.0304)	0.00757	(0.0305)	0.0103	(0.0304)
Education			0.149**	(0.0481)					0.160***	(0.0482)	0.140**	(0.0493)	0.152**	(0.0492)
Age at migration			0.0681	(0.105)					0.0365	(0.105)	0.0636	(0.106)	0.0371	(0.106)
Length of stay in HC			0.720**	(0.243)					0.679**	(0.242)	0.928**	(0.293)	0.885**	(0.291)
Birth in HC			0.111	(0.152)					0.111	(0.151)	0.108	(0.153)	0.110	(0.151)
Permit category (Ref.: For Work)														
EEA			-0.100	(0.0913)					-0.114	(0.0905)	-0.110	(0.0921)	-0.125	(0.0914)
Study			0.0274	(0.103)					0.00220	(0.103)	0.0514	(0.106)	0.0240	(0.106)
Family reunification			0.0231	(0.0791)					0.0152	(0.0785)	0.0379	(0.0819)	0.0294	(0.0813)
Other purposes			-0.0774	(0.0628)					-0.0949	(0.0628)	-0.0769	(0.0634)	-0.0948	(0.0635)
Attachment to HCP					0.0722	(0.0545)			0.0409	(0.0544)			0.0365	(0.0547)
Social trust					0.0804	(0.0510)			0.0849	(0.0505)			0.0856	(0.0507)
Institutional trust					0.116	(0.0685)			0.153*	(0.0685)			0.153*	(0.0687)
Language proficiency							0.0551	(0.117)			-0.0502	(0.119)	-0.0133	(0.118)
Citizenship							0.0328	(0.0334)			-0.0445	(0.0388)	-0.0490	(0.0385)
Employment							0.0465	(0.0316)			0.0359	(0.0335)	0.0337	(0.0334)
Social group involvement							0.336	(0.206)			0.201	(0.206)	0.195	(0.204)
Constant	0.475***	(0.0287)	0.341***	(0.0551)	0.323***	(0.0565)	0.369**	(0.122)	0.196**	(0.0700)	0.356**	(0.132)	0.177	(0.141)
Observations	522		522		522		522		522		522		522	
R ²	0.008		0.055		0.028		0.020		0.078		0.063		0.085	

Standard errors in parentheses
* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

²⁷⁹ Lyon: EEA omitted because of no observation.

Milan²⁸⁰

	(1) Controls		(2) +Personals		(3) +Attitudes		(4) +Capital		(5) +Personals +Attitudes		(6) +Personals +Capital		(7) +Personals +Attitudes +Capital	
Female	0.00359	(0.0251)	-0.0118	(0.0248)	-0.0101	(0.0243)	-0.00802	(0.0236)	-0.0173	(0.0243)	-0.0127	(0.0241)	-0.0150	(0.0238)
Marital status	-	(0.0253)	0.0141	(0.0265)	-0.00631	(0.0245)	0.00500	(0.0253)	0.00326	(0.0260)	0.00551	(0.0264)	-0.00462	(0.0260)
Ethnic group (Ref.: Ecuadorian)														
Egyptian	0.0480	(0.0328)	-0.0443	(0.0365)	-0.0320	(0.0337)	-0.00257	(0.0322)	-0.0848 [*]	(0.0365)	-0.0351	(0.0358)	-0.0752 [*]	(0.0362)
Filipino	0.0386	(0.0275)	-0.0186	(0.0287)	-0.0314	(0.0315)	0.0213	(0.0259)	-0.0647 [*]	(0.0323)	0.000878	(0.0285)	-0.0481	(0.0319)
Education			0.217 ^{***}	(0.0538)					0.181 ^{***}	(0.0531)	0.169 ^{**}	(0.0542)	0.149 ^{**}	(0.0536)
Age at migration			-0.152	(0.108)					-0.124	(0.107)	-0.0793	(0.111)	-0.0816	(0.110)
Length of stay in HC			0.522 ^{**}	(0.198)					0.378	(0.198)	0.104	(0.214)	0.0493	(0.212)
Birth in HC			0.105	(0.0635)					0.0827	(0.0619)	0.0344	(0.0699)	0.0195	(0.0693)
Permit category (Ref.: For Work)														
EEA			0.113	(0.125)					0.0603	(0.122)	0.0770	(0.123)	0.0380	(0.121)
Study			0.0374	(0.0908)					0.0672	(0.0887)	0.0959	(0.0896)	0.108	(0.0881)
Family reunification			-0.0500	(0.0365)					-0.0603	(0.0355)	-0.0157	(0.0381)	-0.0310	(0.0375)
Other purposes			-0.137 [*]	(0.0680)					-0.139 [*]	(0.0664)	-0.102	(0.0666)	-0.112	(0.0657)
Attachment to HCP					0.264 ^{***}	(0.0542)			0.178 ^{**}	(0.0569)			0.118 [*]	(0.0573)
Social trust					-0.130 [*]	(0.0554)			-0.131 [*]	(0.0548)			-0.0962	(0.0542)
Institutional trust					0.275 ^{***}	(0.0727)			0.279 ^{***}	(0.0721)			0.268 ^{***}	(0.0708)
Language proficiency							0.199 ^{**}	(0.0718)			0.117	(0.0925)	0.0916	(0.0918)
Citizenship							0.172 ^{***}	(0.0484)			0.172 ^{**}	(0.0524)	0.165 ^{**}	(0.0517)
Employment							0.108 ^{***}	(0.0290)			0.0996 ^{**}	(0.0325)	0.0865 ^{**}	(0.0319)
Social group involvement (IT)							0.654 ^{***}	(0.170)			0.543 ^{**}	(0.173)	0.439 [*]	(0.171)
Constant	0.415 ^{***}	(0.0289)	0.312 ^{***}	(0.0600)	0.232 ^{***}	(0.0450)	0.237 ^{***}	(0.0449)	0.192 ^{**}	(0.0658)	0.203 ^{**}	(0.0752)	0.123	(0.0782)
Observations	468		468		468		468		468		468		468	
R ²	0.006		0.100		0.098		0.140		0.159		0.167		0.207	

Standard errors in parentheses
* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

Oslo²⁸¹

	(1) Controls		(2) +Personals		(3) +Attitudes		(4) +Capital		(5) +Personals +Attitudes		(6) +Personals +Capital		(7) +Personals +Attitudes +Capital	
Female	-0.0497 [*]	(0.0233)	-0.0419	(0.0227)	-0.0436	(0.0226)	-0.0297	(0.0232)	-0.0397	(0.0223)	-0.0264	(0.0231)	-0.0258	(0.0228)
Marital status	-0.0423	(0.0270)	-0.0419	(0.0287)	-0.0432	(0.0263)	-0.0248	(0.0262)	-0.0371	(0.0283)	-0.0467	(0.0282)	-0.0414	(0.0278)
Ethnic group (Ref.: Bosnian)														
Turk	-	(0.0308)	-0.0366	(0.0344)	-0.0680 [*]	(0.0303)	-0.0307	(0.0308)	-0.0373	(0.0339)	0.00895	(0.0348)	0.00547	(0.0344)
Pakistani	0.0842 ^{**}	(0.0291)	-0.130 ^{***}	(0.0337)	-0.132 ^{***}	(0.0296)	-0.100 ^{***}	(0.0295)	-0.118 ^{***}	(0.0337)	-0.0754 [*]	(0.0352)	-0.0669	(0.0352)
Education	-0.158 ^{***}		0.196 ^{***}	(0.0356)					0.157 ^{***}	(0.0358)	0.145 ^{***}	(0.0365)	0.113 ^{**}	(0.0366)
Age at migration			-0.112	(0.0944)					-0.152	(0.0929)	0.0349	(0.0983)	-0.0112	(0.0970)
Length of stay in HC			0.452 ^{**}	(0.159)					0.340 [*]	(0.159)	0.394 [*]	(0.168)	0.272	(0.167)
Birth in HC			-0.0785	(0.0449)					-0.0726	(0.0441)	-0.0687	(0.0444)	-0.0610	(0.0436)
Attachment to HCP(NOR)					0.149 ^{**}	(0.0517)			0.117 [*]	(0.0511)			0.111 [*]	(0.0502)
Social trust(NOR)					0.0870 ^{***}	(0.0239)			0.0722 ^{**}	(0.0237)			0.0671 ^{**}	(0.0234)
Institutional trust(NOR)					0.118 [*]	(0.0536)			0.100	(0.0527)			0.0956	(0.0517)
Language proficiency(NOR)							0.254 ^{***}	(0.0500)			0.213 ^{***}	(0.0545)	0.190 ^{***}	(0.0537)
Citizenship							-0.00174	(0.0247)			-0.0209	(0.0266)	-0.0109	(0.0263)
Employment(NOR)							0.0126	(0.0245)			0.00254	(0.0244)	0.000229	(0.0240)
Social group involvement (NOR)							0.884 ^{***}	(0.199)			0.780 ^{***}	(0.198)	0.781 ^{***}	(0.194)
Constant	0.529 ^{***}	(0.0303)	0.365 ^{***}	(0.0540)	0.307 ^{***}	(0.0510)	0.260 ^{***}	(0.0543)	0.236 ^{***}	(0.0627)	0.166 [*]	(0.0731)	0.0590	(0.0775)
Observations	560		560		560		560		560		560		560	
R ²	0.067		0.135		0.128		0.147		0.173		0.180		0.214	

Standard errors in parentheses
* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

²⁸⁰ Milan: Non-political associational involvement is measured by country-specific variables.

²⁸¹ Oslo: Language proficiency is measured by a country-specific variable on a four-point scale. Attachment to host country people, social trust, and institutional trust, employment, non-political associational involvement are measured by country-specific variables. Permit category omitted because of no available indicator.

Stockholm²⁸²

	(1) Controls	(2) +Personals	(3) +Attitudes	(4) +Capital	(5) +Personals +Attitudes	(6) +Personals +Capital	(7) +Personals +Attitudes +Capital
Female	-0.0330 (0.0278)	-0.0201 (0.0270)	-0.00611 (0.0262)	-0.00649 (0.0270)	0.00149 (0.0258)	-0.00321 (0.0266)	0.0107 (0.0256)
Marital status	- (0.0286)	-0.0159 (0.0298)	-0.0101 (0.0268)	-0.00459 (0.0283)	-0.0188 (0.0283)	-0.0188 (0.0292)	-0.0181 (0.0280)
Ethnic group (Ref.: Chilean)	0.0000894						
Turk	-0.0513 (0.0280)	0.0113 (0.0315)	-0.0500 (0.0264)	-0.0574 [*] (0.0272)	0.00234 (0.0302)	- (0.0311)	-0.00739 (0.0301)
Education		0.235 ^{***} (0.0481)			0.200 ^{***} (0.0461)	0.170 ^{***} (0.0495)	0.149 ^{**} (0.0477)
Age at migration		0.0965 (0.110)			0.0602 (0.107)	0.204 (0.124)	0.161 (0.120)
Length of stay in HC		0.454 [*] (0.229)			0.234 (0.220)	0.302 (0.228)	0.137 (0.221)
Birth in HC		-0.0394 (0.0454)			-0.0317 (0.0431)	-0.0211 (0.0452)	-0.0206 (0.0434)
Attachment to HCP(SW)			0.0275 (0.0569)		0.0396 (0.0571)		0.00852 (0.0568)
Social trust			0.223 ^{***} (0.0484)		0.181 ^{***} (0.0489)		0.160 ^{**} (0.0488)
Institutional trust(SW)			0.314 ^{***} (0.0597)		0.302 ^{***} (0.0588)		0.282 ^{***} (0.0585)
Language proficiency(SW)				0.106 (0.0625)		0.138 (0.0764)	0.141 (0.0735)
Citizenship				0.0433 (0.0344)		0.0284 (0.0347)	0.0288 (0.0332)
Employment				0.0153 (0.0290)		-0.0115 (0.0294)	-0.00984 (0.0284)
Social group involvement				0.677 ^{***} (0.123)		0.568 ^{***} (0.125)	0.423 ^{***} (0.121)
Constant	0.544 ^{***} (0.0287)	0.253 ^{***} (0.0741)	0.260 ^{***} (0.0545)	0.357 ^{***} (0.0620)	0.0661 (0.0829)	0.135 (0.0950)	-0.0215 (0.0987)
Observations	396	396	396	396	396	396	396
R ²	0.012	0.083	0.143	0.104	0.186	0.143	0.224

Standard errors in parentheses
^{*} $p < 0.05$, ^{**} $p < 0.01$, ^{***} $p < 0.001$

Zurich

	(1) Controls	(2) +Personals	(3) +Attitudes	(4) +Capital	(5) +Personals +Attitudes	(6) +Personals +Capital	(7) +Personals +Attitudes +Capital
Female	-0.0838 [*] (0.0329)	-0.0419 (0.0334)	-0.0826 [*] (0.0324)	-0.0722 [*] (0.0329)	-0.0395 (0.0329)	-0.0349 (0.0336)	-0.0322 (0.0333)
Marital status	-0.0343 (0.0380)	-0.0162 (0.0383)	-0.0369 (0.0375)	-0.0204 (0.0394)	-0.0186 (0.0378)	-0.0142 (0.0391)	-0.0180 (0.0387)
Ethnic group (Ref.: Kosovar)							
Italian	-0.0657 (0.0354)	-0.145 ^{**} (0.0454)	-0.0823 [*] (0.0355)	-0.0630 (0.0366)	-0.157 ^{***} (0.0454)	-0.151 ^{**} (0.0472)	-0.163 ^{***} (0.0473)
Turk	-0.00585 (0.0353)	-0.0124 (0.0343)	0.0114 (0.0351)	-0.00710 (0.0355)	0.00428 (0.0342)	-0.0182 (0.0347)	- (0.0347)
Education		0.266 ^{***} (0.0527)			0.253 ^{***} (0.0523)	0.220 ^{**} (0.0556)	0.215 ^{***} (0.0554)
Age at migration		0.177 (0.143)			0.141 (0.142)	0.266 (0.159)	0.219 (0.158)
Length of stay in HC		0.399 ^{**} (0.149)			0.387 ^{**} (0.147)	0.417 ^{**} (0.155)	0.411 ^{**} (0.154)
Birth in HC		-0.0140 (0.0673)			-0.0333 (0.0666)	-0.0193 (0.0674)	-0.0352 (0.0667)
Permit category (Ref.: For Work)							
EEA		0.107 ^{**} (0.0338)			0.0885 ^{**} (0.0336)	0.122 ^{***} (0.0362)	0.101 ^{**} (0.0362)
Study		0.184 (0.169)			0.186 (0.167)	0.206 (0.170)	0.203 (0.168)
Family reunification		-0.0150 (0.0458)			-0.0407 (0.0457)	0.00123 (0.0482)	-0.0278 (0.0484)
Other purposes		0.0357 (0.0467)			0.0289 (0.0462)	0.0531 (0.0480)	0.0414 (0.0476)
Attachment to HCP			0.177 ^{**} (0.0622)		0.151 [*] (0.0608)		0.121 [*] (0.0616)
Social trust			0.109 (0.0557)		0.0944 (0.0551)		0.0879 (0.0554)
Institutional trust			0.0993 (0.0787)		0.111 (0.0766)		0.120 (0.0762)
Language proficiency				0.110 (0.0647)		0.0547 (0.0772)	0.0460 (0.0767)
Citizenship				-0.00136 (0.0472)		0.0382 (0.0513)	0.0219 (0.0510)
Employment				0.0335 (0.0333)		0.0329 (0.0352)	0.0329 (0.0351)
Social group involvement				0.569 ^{**} (0.175)		0.559 ^{**} (0.172)	0.498 ^{**} (0.172)
Constant	0.575 ^{***} (0.0453)	0.254 ^{**} (0.0806)	0.331 ^{***} (0.0748)	0.465 ^{***} (0.0609)	0.0554 (0.0955)	0.168 (0.0987)	-0.00391 (0.110)
Observations	444	444	444	444	444	444	444
R ²	0.023	0.106	0.064	0.058	0.138	0.132	0.158

Standard errors in parentheses
^{*} $p < 0.05$, ^{**} $p < 0.01$, ^{***} $p < 0.001$

²⁸² Stockholm: Language proficiency is measured by a country-specific variable on a four-point scale. Attachment to host country people, and institutional trust are measured by country-specific variables. Permit category omitted because of no available indicator.

Appendix V: Summary Scores of Institutional Opportunity Structures

Table 1: Summary Scores of the Specific Institutional Opportunity Structures in the Nine Cities (All indicators)

Indicator City ^a	BAR	BUD	GEN	LON	LYO	MAD	MIL	STO	ZUR
Cultural requirements to access the community									
For short-term permits	1	1	1	1	1	1	1	1	1
For long-term residence permits (duration of validity > 5 years)	1	1	1	-1	1	1	1	1	1
For naturalization (first generation immigrants)	1	-0.3 ^b	0	-1	-1	1	1	1	-1
Overall score	1.0	0.6	0.7	-0.3	0.3	1.0	1.0	1.0	0.3
Host-country language programs									
For immigrant adults	1	-1	0	1	1	1	0	1	1
For immigrant children	1	0	1	1	1	1	0	1	1
Overall score	1.0	-0.5	0.5	1.0	1.0	1.0	0.0	1.0	1.0

^a No information available for Oslo. “The score “-1” refers to the most restrictive situation that can be envisaged, the score “1” corresponds to the most open configuration and the score “0” applies to intermediary potential situations” (Gattinara, Morales, & Morales, 2014, p.6). Source: LOCALMULTIDEM, 2014; with author’s own calculation and modification

^b In Budapest, the cultural requirements for naturalization differ by ethnic groups. While both language and other cultural requirements (“-1”) are set for Chinese and Muslims, there is none (“1”) for Ethnic Hungarian (see Table 7-3: Summary of Cultural Requirements to Access the Community in the Nine Cities). Thus, the average score “for naturalization” is: $(1 + [-1] + [-1])/3 = -0.33$

Table 2: Summary Scores of the Specific Institutional Opportunity Structures & Language Proficiency (Means) by Ethnic Group (for Figure 7-2)

Indicator/LP City: Ethnic Group	Cultural requirements for naturalization	Host-country language programs	Language Proficiency (Means)
BAR: Moroccan	1	1	0.53
BAR: Andean	1	1	1.00
BAR: Ecuadorian	1	1	1.00
BUD: Ethnic Hungarian	1	-0.5	0.97
BUD: Mixed Muslim	-1	-0.5	0.44
BUD: Chinese	-1	-0.5	0.30
GEN: Italian	0	0.5	0.56
GEN: Kosovar	0	0.5	0.55
LON: Indian	-1	1	0.86
LON: Caribbean	-1	1	0.99
LON: Bangladeshi	-1	1	0.82
LYO: Moroccan	-1	1	0.89
LYO: Algerian	-1	1	0.91
LYO: Tunisian	-1	1	0.88
MAD: Moroccan	1	1	0.39
MAD: Andean	1	1	1.00
MAD: Ecuadorian	1	1	1.00
MIL: Egyptian	1	0	0.40
MIL: Filipino	1	0	0.38
MIL: Ecuadorian	1	0	0.36
STO: Turkish	1	1	0.76
STO: Chilean	1	1	0.77
ZUR: Italian	-1	1	0.37
ZUR: Turkish	-1	1	0.36
ZUR: Kosovar	-1	1	0.38

Table 3: Summary Scores of the Specific Institutional Opportunity Structures (for Figure 7-3)

Indicator	City ^a	BAR	BUD Hungarian	BUD Chinese/ Muslim	GEN	LON	LYO	MAD	MIL	STO	ZUR
Cultural requirements for naturalization		1	1	-1	0	-1	-1	1	1	1	-1
Host-country language programs		1	-0.5	-0.5	0.5	1	1	1	0	1	1

^a No information available for Oslo. “The score “-1” refers to the most restrictive situation that can be envisaged, the score “1” corresponds to the most open configuration and the score “0” applies to intermediary potential situations” (Gattinara, Morales, & Morales, 2014, p.6). Source: LOCALMULTIDEM, 2014

Table 4: Summary Scores of the General Institutional Opportunity Structures in the Nine Cities (for Figure 7-4)

Indicator City ^a	BAR	BUD	GEN	LON	LYO	MAD	MIL	STO	ZUR
Individual Rights Dimension	0.1	-0.2	0.0	0.1	0.3	0.1	-0.1	0.7	-0.2
Cultural/Group Rights Dimension	0.5	-0.3	-0.2	0.4	0.1	0.5	-0.3	0.6	-0.1

^a No information available for Oslo. “The score “-1” refers to the most restrictive situation that can be envisaged, the score “1” corresponds to the most open configuration and the score “0” applies to intermediary potential situations” (Gattinara, Morales, & Morales, 2014, p.6). Source: LOCALMULTIDEM, 2014