The Role of Religion in Migrants' Happiness

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Abstract

Migrants experience different levels of happiness depending on the migration stream they follow. This study seeks to understand the role of religion in such differences by focusing on the religious linkages between the host country religious cultures on one hand and home country religious cultures and the migrant's religion on the other hand. The analysis uses a combination of historic and current dominant religions as well as the incidence of those religions in both (home and host) countries to understand how the religious linkages affect immigrants' happiness in Europe. The results suggest that immigrants' happiness is not higher when the immigrants' personal religion matches with the host country's current dominant religion. Nevertheless, immigrants' happiness is slightly higher when there is a strong historic religious linkage between the host and home countries. Finally, when the religious linkages between countries are based on current religions such a relationship is not as significant compared to the historical one.

Keywords: *Religion- culture - migration - happiness - Europe*

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Chapter 1 - Introduction

*"My gold cannot be your gold. But happiness, unlike gold, can be created for all, and can be shared without being scarce for those who give. It even grows as it is shared." (*Helliwell, Layard, & Sachs, 2018, p. 43*).*

According to the United Nations in 2017, 258 million people were living in a country different from the one in which they were born. This represents an increase of 49% compared to the year 2000 and makes up 3.4% of the world's population (UN-DESA, 2017). Migration has improved people's lives as "migrants from the poorest countries, on average, experienced a 15-fold increase in income, a doubling of school enrolment rates, and a 16-fold reduction in child mortality after moving to a developed country" (Ratha, Ozden, & Plaza, 2016).

When migrants decide to move, they are not simply pursuing a higher income or level of safety. They are also leaving their homes in pursuit of greater happiness. Veenhoven (2012) defined happiness as the "subjective enjoyment of life as a whole".[1] The 2018 edition of the World Happiness Report focused its analysis on the subjective well-being of migrants. The authors found that migrants reported an increase of, on average, about 9% in their life's evaluation score after having completed their migration (Helliwell et al., 2018). However, when the authors analysed the happiness outcomes in various migration flows between countries and between and within regions, differences in subjective well-being appeared. In other words, people moving to and from specific countries resulted in different increasing levels of their subjective well-being. For example, the migration streams with the higher positive life evaluation outcomes were those of migrants moving from Sub-Saharan Africa to Western Europe, from the Commonwealth

[1] The term happiness is usually used to describe subjective well-being, but happiness is only a part of subjective well-being as a whole. The term subjective well-being involves a cognitive and an affective component. The cognitive component refers to life satisfaction and the way that people feel content with their life, while the affective component comprises pleasant affects (i.e., happiness) and unpleasant affects (i.e., depression). As these elements are highly correlated (Diener et al. 1999; Lucas et al. 1996), the terms "subjective well-being", "happiness" and "life satisfaction" will be used synonymously within this study.

of Independent States to the Middle East and North Africa and, migrants moving within Southeast Asia. On the other hand, the migration streams who presented non-positive outcomes were migrants moving from Western Europe to Central and Eastern Europe, migrants moving within South Asia, North America and Australia-New Zealand (Helliwell et al., 2018). Other studies have also found similar results, as one such study from the IOM (2013) showed that migrants moving to developed countries presented an increase in their happiness, while those migrants moving to developing countries became less happy.

Various explanations can be found to identify what is behind the differences among the subjective well-being in migration flows between countries. From those, four primary explanations emerge from the reviewed literature: (1) Host country characteristics[2], (2) Home country characteristics ("footprint effects"), (3) Individual characteristics of the migrant, and (4) Linkages between host countries, home countries, and migrants. Concerning these linkages, there is scarce empirical evidence regarding how these influence migrant's happiness. This paper addresses this void by exploring how migrants' happiness is influenced by the link between the host country's religious culture on the one hand and the migrant's religion and the home country's religious culture on the other hand. More specifically, we examine the following three questions:

(1) Are migrants happier when their personal religion matches the dominant religion of the host country?

(2) Are migrants happier when the historic religious culture of their host country is similar to that of their country of origin?

(3) Are migrants happier when the current religious culture of their host country is similar to that of their country of origin?

[2] During this study, the country of residence will be referred to as the host country or destination country while the country of birth will be denoted as the home country or country of origin.

The more general aim of this paper is to provide a framework that identifies the relationship between migration, religion and subjective well-being by offering a better understanding of the impact that religion has on migrant's subjective well-being.

By doing so, this study hopes to provide prospective migrants with relevant information to support them in making better-informed decisions when choosing their country of destination. This support is essential because information constraints about what determines their migration outcome can lead to suboptimal migration decisions. To achieve these objectives, this study employs data of immigrants in 28 European countries from eight waves of the European Social Survey (ESS) and links these data with religion data from external sources. Multilevel modelling is used to test the hypotheses.

The organization of the study is as follows. Chapter 2 will provide the theoretical framework related to the role that religion has played on migration and the hypotheses to test. Chapter 3 will describe the data and methodology used to carry out the analysis that will be presented in Chapter 4. Finally, Chapter 5 will discuss the findings and conclusions.

Chapter 2 - Theoretical Framework

2.1 Relationship between Religion and Happiness

Ellison found that “individuals with strong religious faith report higher levels of life satisfaction, greater personal happiness, and fewer negative psychosocial consequences of traumatic life” (Ellison, 1991, p.80). Ellison was not the only one to find a relationship between happiness and religion as other studies have also shown that religious beliefs have a positive influence on individual well-being (Lim & Putnam, 2010; Smith, McCullough, & Poll, 2004). Additionally, it has been found that religion helps individuals to deal with feelings such as uncertainty and insecurity (Norris & Inglehart, 2004); that religion is as a source of hope and help during difficult times (Newman & Pargament, 1990); it reduces levels of stress (Ellison, 1991) and; it allows individuals to feel accepted and form part of a community (Bauman, 2001).

However, another branch of studies has discovered that the relationship between religion and life satisfaction is lower in countries that are less religious and more pluralistic. In their research, Okulicz-Kozaryn (2010), stated that the relationship between religion and happiness depends on the religious context of the country, as he found that believers of God present lower levels of happiness compared to non-believers in nations with lower levels of religious people. In the author’s words, “Religiosity makes people happier in religious nations” (Okulicz-Kozaryn, 2010, p. 166). The weak relationship between religion and life satisfaction in secular and pluralistic societies might be explained by the fact that these kinds of societies encourage general freedom and therefore, traditional religious beliefs are sharply criticized. It is also possible that because in these societies the system of beliefs is not strong, people might start to have “growing concerns for the meaning and purpose of life’’ (Inglehart, 2000, p. 224) which can produce a feeling of insecurity and uncertainty.

2.2 Relationship between Migration and Religion

Researchers have focused considerable attention on the relationship between migration and religion. Since the role of religion on migrants is a broad topic, Frederiks (2016) separated the theory into three practical categories: (1) Religious beliefs as a source of support while crossing borders; (2) Religious communities allowing new connections in the host country; and (3) Religion facilitating transnational networks. In the first category, faith offers meaning to the migration process and helps migrants to deal with feelings of loss. Religion can also be a source of support in difficult situations when migrants are subject to humiliation or discrimination, while religion itself can be the reason to migrate (Frederiks, 2016). The second category explores the role that religion plays on the well-being of migrants as religion facilitates the creation of a new community through religious practices and activities where people develop new contacts and relations (Levitt, 2003). These religious communities provide spiritual and emotional support as migrants face the struggles that comes along with being in a foreign place (Berger & Redding, 2010). Finally, in the third category, religion serves as the link between migrants' home and host countries as some migrants still maintain a close relationship with the religious organizations that they were part of before migrating. For example, migrants raise funds to support those organizations, host people from their congregation back home or keep communication, and seek guidance from them (Levitt, 2003).

Additionally, numerous studies have shown examples of how churches provide a wide range of services to immigrants upon arrival to the host country. Among them, in his book Guest (2003) depicts how churches in New York City's Chinatown have been helping thousands of Chinese immigrants by not only providing housing, food, and even employment but also by giving meaning to the immigration experience while constructing identities. Additionally, Min (1992) describes the facilities that Korean Christian churches provide to migrants in the USA. He states that these Korean churches have important goals within the migrant's community as they provide social services (e.g., job referrals) and help to maintain traditions (e.g., Korean language school programs).

Despite the seemingly large number of advantages and positive effects, we also find some drawbacks in the relationship between migration and religion. Foner and Alba (2008) discussed that while religion in the USA can help migrants to integrate into society, the opposite can happen in Western Europe (where countries are becoming more secular) as being religious there can be viewed as more of a barrier than a bridge to integrating. The authors mentioned the religious backgrounds of migrants and locals as well as the historic relationship between state and religions as critical aspects to understand this difference. The religious backgrounds of immigrants in the USA and the European Union are different. According to the Pew Research Center (2012), migrants in the USA are mostly Christians (74%) followed by unaffiliated migrants (10%) while in Europe even if Christians (56%) outnumber other immigrants, there are nearly 13 million Muslim immigrants living in Europe (27%). The share of Muslim immigrants in the European Union (39%) becomes closer to that of Christians (42%) when migrants within the European Union are excluded. Muslims migrating to Western Europe experience pressure and conflicts from the way they practice their beliefs, e.g., Europeans tend to criticize the role of Muslim women in their community and the way they are treated.

2.3 Relationship between Religion, Migration, and Happiness

As we have defined the relationship between religion and happiness as well as the relationship between migration and religion, we can now further investigate the relationship at the intersection of religion, migration, and happiness. There are a few reasons to believe that migrants are happier when their religion matches that of the host country. The first reason is based on acculturation which is defined by Berry (2005) as "the dual process of cultural and psychological change that takes place as a result of contact between two or more cultural groups and their individual members". Steffen and Merrill (2011) found that the religion that a person practices influences their level of acculturation, while at the same time this acculturation is vital as researchers have found a strong and positive relationship between cultural assimilation and immigrants' life satisfaction (Angelini, Casi, & Corazzini, 2015). When people are born and raised in a country, they adopt specific traditions, beliefs, and habits that could be difficult to leave

behind when they move to a new country. These ingrained beliefs are often part of religious cultures. Therefore, the possibility of a match between home and host national cultures increases when the host and home countries religions also match, resulting in a smoother acculturation process to the new country.

The second reason is based on a sense of belonging and identification. When people identify with groups, they experience an increase of well-being as groups provide a sense of belonging and act as a support system (Haslam, Jetten, Postmes, & Haslam, 2009). Religious identities promote well-being as a group of people is connected through the same guiding beliefs (Ysseldyk, Matheson, & Anisman, 2010). For example, Yang and Ebaugh (2001) compared two groups of Chinese immigrants residing in the USA. When comparing Chinese Buddhists who are a religious majority in their home country but a religious minority in the USA and Chinese Christians who are a religious minority in China but a religious majority in the USA, the authors found that the majority (or minority) status of belonging to a religion in the home and host country has an impact on the dynamics of adaptation and identification of these migrants in the host country.

The third reason is that religion makes it easier to rebuild a social network as well as to find support and understanding when the host country's dominant religion matches the migrant's religion because of the greater proximity of religious institutions. Religion facilitates the creation of a new community through religious practices and church activities where people have the opportunity to make new contacts and form relationships (Levitt, 2003). Migrants whose personal religion matches with the dominant religion of the host country will increase the probability for them to find a church, mosque, or place of worship within the area where they live. Consequently, they can easily access a place where they find support, hope, and understanding while dealing with the uncertainty that the migration process carries and are therefore more likely to increase their happiness. Sharing the same religion with the host country might also result in finding a community of people with the same beliefs. This community can translate into more social connections and activities that help migrants better integrate if natives are also part of

that community. In consideration of the above-mentioned reasons, the first hypothesis of this thesis states as follows:

H1: The happiness of migrants is positively related to the match between their personal religion and the current dominant religion of the host country.

Until now we have focused attention on the implications of migrants' personal religion, arguing (among other arguments) that churches and religious activities play an essential role while supporting migrants to integrate into the new society. However, some religions have changed substantially in the modern world, and only a small portion of the congregation regularly attends church. Additionally, there has been an increasing number of people who self-identify as non-religious or secular (Inglehart & Baker, 2000). Although such individuals no longer have regular contact with the church or do not identify as religious, their behaviour and national culture are still influenced by the religion that has historically shaped their society (Inglehart & Baker, 2000). From this, it is possible that migrants culture is still influenced by the culture that the dominant religion imprinted in their home countries, regardless of whether their personal religion matches the home country dominant religion. Therefore, it is expected that personal religion is not the only factor that affects migrant's happiness, as the dominant religion from the home country also plays a role.

Inglehart & Baker (2000) also argued that religion is considered an important cultural heritage of society as religion spreads traditional values that have an influence on society's institutions, and such values are difficult to erase over time even after economic development and modernization have occurred. Each religion has its own cultural heritage, and while many religions share similar characteristics, we can find essential differences among them that can be seen in the shaping and development of these different societies. Cohen & Hill (2007) studied the relationship between religion and culture by observing the different facets among Catholics, Jews, and Protestants and found evidence to conclude that differences in religions can also be understood as differences in culture. For example, the authors discussed that the culture of the USA is

highly individualistic compared to other cultures and this focus on individualism might be a result of the Protestant tradition as a cultural heritage within the country. This based on the idea that Protestants endorse the relationship between the individual and God while promoting individual goals. On the other hand, collectivistic religious cultures value social connections as a fundamental part of their religiosity while promoting the welfare of the group as a whole. Cohen & Hill (2007) also proposed that Judaism, Catholicism, Hinduism, Episcopalianism, and Amish are collectivistic religious cultures.

Furthermore, Hofstede defined culture as "the collective programming of the mind that distinguishes the members of one group or category of people from others" (Hofstede, 2011, p. 3). Following Hofstede's definition, we can also assume that people with the same religion will also share the same cultural models, such models then influence how people think and behave. It is possible that the more similar the culture of the host and home country are, the easier the adjustment process to the new country will be. Therefore, people who have both the same dominant religious cultures in the host and home country are likely to be happier. From these arguments, the second and third hypothesis of this thesis states as follows:

H2: The happiness of migrants is positively related to the religion similarity between the historically dominant religion in the home country and the historically dominant religion in the host country.

H3: The happiness of migrants is positively related to the religion similarity between the current dominant religion in the home country and the current dominant religion in the host country.

In order to illustrate the expected outcome of the hypotheses and avoid any confusion, one can use the following examples[3]: (H1) The happiness of a Roman Catholic Mexican migrating to the USA is expected to be lower than a Protestant Mexican

[3] These examples are only for illustration purposes. The outcomes in the examples are not a representation of the analysis outcomes in this study.

migrating to the USA, ceteris paribus, because the current dominant religion in the USA is the Protestantism. (H2) The happiness of a Mexican migrating to the USA is expected to be lower than the happiness of a Mexican migrating to Italy, ceteris paribus. This expectation holds because Mexico's and Italy's historically dominant religion is Roman Catholic, which differs from the traditionally dominant religion in the USA, which is traditionally Protestant. In other words, in H2, the happiness of the Mexican migrants will be independent of their personal religion and dependent on the *historically* dominant religion of both countries. Finally, H3 follows the same principle as H2 but is based on the *current* dominant religion of the host and home country.

Chapter 3 - Data and Methodology

3.1. Data

This study investigates the theoretical expectations before mentioned by using cross-sectional, person-level data from the European Social Survey (ESS) which has been collected in 8 rounds and every two years within Europe since 2001 on subjects aged 15 years and above (ESS, 2018). The ESS data is complemented by two country-level datasets. The first dataset, is an author-created dataset with information from the World Christian Encyclopaedia (Barret, Kurian, & Johnson, 2001), the dataset contains the proportion of the religious adherents by religion in each country in the 1900s and 2000s to account for the dominant home and host country religions (See Appendix B). The second is a dataset from the *French Centre d'Etudes Prospectives et d'Informations Internationales* (CEPII), which includes geographical and bilateral distance variables between home and host country (Mayer & Zignango, 2011).

To avoid ambiguity in immigrants' migration status, the final pooled sample size includes only those first-generation migrants who stated their religion and excludes those respondents who were born in a foreign country but whose parents are host country natives. All rounds from the ESS were used and the sample size resulted in 15,515 individuals nested in the 28 following host countries: Austria, Belgium, Bulgaria, Switzerland, Cyprus, Czechia, Germany, Denmark, Estonia, Spain, Finland, France, United Kingdom, Greece, Croatia, Hungary, Ireland, Iceland, Italy, Lithuania, Netherlands, Norway, Poland, Portugal, Sweden, Slovenia, Slovakia, and Ukraine.[4] The ESS has strengths and limitations as it covers a fair amount of countries and is one of the few social surveys that includes the country of birth, which facilitates the religious comparison between home and host countries. However, the samples are cross-sectional meaning that the surveyed individuals are newly selected in each round.

[4] The analysis excludes respondents who were born in the Soviet Union, Czechoslovakia, Yugoslavia, East Timor, Serbia, Montenegro, Kosovo, and the German Democratic Republic as the selected country-level variables were not available for them. The analysis also excludes host countries who are not part of Europe (i.e., Israel) or that their territories are mostly outside Europe (i.e., Russian Federation and Turkey).

3.2 Variables

3.2.1 Dependent variable:

The dependent variable, happiness, comes from the following ESS question: “Taking all things together, how happy would you say you are?” where respondents were asked to value their happiness on a scale from 0 to 10, zero being extremely unhappy and ten extremely happy.

3.2.2 Explanatory variables:

The first hypothesis in this paper will be tested (H1) using a dummy variable which defines if the personal-level religion matches the current dominant religion in the host country (1= same religion and 0=different religion). The self-reported religion is provided by the ESS which classifies the religions of respondents into eight categories: Roman Catholic, Protestant, Eastern Orthodox, Other Christian denomination, Jewish, Islamic, Eastern religions, and Other non-Christian religions. Additionally to those categories, the Secular category was created from the respondents who answered “No” to the question: “Do you consider yourself as belonging to any particular religion or denomination?” from the ESS. All those categories (including the religions and secular category) will be matched with the current dominant religion in the host country provided by World Christian Encyclopaedia (Barret et al., 2001). The current dominant religion refers to the proportion of adherents of each religion in the mid-2000s. The religions in the World Christian Encyclopaedia were reclassified to match the categories of the ESS (See Appendix A).

In their research, Dow and Karunaratna (2006) make use of international trade flows to test how factors of culture, language, religion, education, and political systems generate cultural distance, or as they call it, the “psychic distance” between countries. The authors propose a set of scales of each factor to calculate the psychic distance. The scales of religion are based on three indicators: “The first indicator (R1) is a five-point scale that focuses on the difference between the dominant religions of any two countries. The second and third indicators (R2 and R3) focus on the reported incidence of the

originating country's dominant religion within the receiving country, and vice versa" (Dow & Karunaratna, 2006, p. 586). Following their insights, I will use a combination of scales to create a Religion Linkage Index that measures the similarity between the dominant religions of the home and host countries, to test the second and third hypotheses (H2 & H3).

The Religion Linkage Index will avoid multicollinearity between the explanatory variables, and it will be composed of three equally weighted standardized variables: (1) A dummy variable which defines if the dominant religion of the home country matches the dominant religion in the host country (1= same religions and 0=different religions), (2) the incidence of the home country religion in the host country and, (3) the incidence of the host country religion in the home country. The incidence of the home country religion is measured as the proportion of the population in the home country who belong to the same dominant religion in the host country. The incidence of the host country religion is measured as the proportion of the population in the host country who belong to the same dominant religion in the home country. Such information is compiled by taking data from the World Christian Encyclopaedia (Barret et al., 2001) using the same categories mentioned in the paragraph above (See Appendix A). Hypothesis 2, will utilize the historically dominant religion, which refers to the proportion of adherents of each religion in 1900, while Hypothesis 3, will use the current dominant religion which refers to the proportion of adherents of each religion in 2000. The country-level variable for those who are Secular includes Atheists and Non-religious adherents in 1900 and 2000.

3.2.3 Control Variables:

Person-level control variables. In addition to the dependent and independent variables, the models include control variables according to the findings from Gerdtham and Johanssed (2001) who studied the influence of different migrants' socio-economic factors on their happiness. The analysis will be divided into three models. The first model (baseline model) includes the person-level and time control variables that are exogenous to the migration episode, and that can affect subjective happiness in order to reduce the omitted variable bias. These type of variables include: gender in the form of a dummy

variable (0 corresponding to “male” and 1 to "female”); age and age squared as a continuous variable for the number of years of the participant[5]; the length of stay in the host country (Within last year; 1-5 years ago; 6-10 years ago; 11-20 years ago; More than 20 years ago), and the year in which the interview was taken, this variable is included as a dummy to control for time-related shocks, such as financial crisis, that occurred in all countries.

The second model includes variables that can be affected by the migration experience but that are not expected to drive causal effects between religion similarity and migrants’ happiness, including years of education (ln); having a partner and children; unemployment status; domicile area; and, perception about household’s income.[6] Religion affiliation is also included as it might have an impact on the level of happiness experienced by migrants. Ngamaba and Soni (2018) investigated whether people with different religious affiliations presented different levels of happiness and found that Protestants, Buddhists, and Catholics were happier compared to people following other religions. While Orthodox people were the least happy. As already discussed in the literature review, the degree of involvement in religion and the participation in religious activities is also of importance on the level of happiness, so I will control for frequency of praying, and the degree of religiousness (From 0: Not at all religious to 10: Very Religious). Even though attendance to religious services has been proven to have a positive effect on happiness (Lim & Putnam, 2010), such variable will not be included in this study as the larger mismatch between religions in home and host countries can affect the availability of a place of worship in the host country.

The last model also includes variables that can both lead to omitted variable bias and that can be mechanisms between the religious linkage (the independent variables) and happiness (the dependent variable): being member of a discriminated group, the

[5] Age squared is included in the analysis, as has been found that the relationship between age and happiness is U-shaped (Gerdtham & Johanssed, 2001).
[6] Due to a change in the measuring method for the variable “Household’s total net income” the ESS was not able to compile all rounds with the same deciles. Therefore, the variable was replaced with “Feeling about household’s income nowadays” in this study.

subjective general health as it has been demonstrated health is one of the socio-economic factors that influences happiness (Gerdtham & Johanssed,2001) and, frequency in which respondent meets with friends (See Appendix D).

Country-level control variables. In the country-level variables, I also included a dummy variable to denote if the home and host countries have a common official primary language being 1 (Yes) and 0 (No)[7] and, a variable to denote contiguity between the countries 1 (countries share a border) and 0 (countries do not share a border), both variables taken from the CEPII (Mayer & Zignango, 2011).

3.3 Estimation strategy

As happiness reports from respondents of the ESS (person-level) are cross-classified in home and host country religions (country-level), the data is presented in a three-level structure through the estimation of a crossed random effects model which is a type of multilevel regression analysis. This model is necessary as it is not possible to claim that the dataset complies with the independence assumption. By ignoring the fact that the error term can be correlated within a country, incorrect standard errors and p-values can be produced (Rabe-Hesketh & Skrondal, 2012).

With 15,515 respondents (person-level) being nested into 28 host countries and 107 home countries (country level), multilevel regressions models are estimated beginning initially only with variables exogenous to migration and progressing with the inclusion of variables not exogenous to migration. The baseline model for H1 shows the relationship between subjective well-being and the personal religion match with host country religion through an ordinary least squares (OLS) model. We assume cardinality in the life satisfaction variable in accordance with the findings of Ferrer-i-Carbonell and Firijters (2014) stating that the assumption of cardinality or ordinality in answers of general satisfaction give similar results. That allows us to conduct an OLS rather than an ordered

[7] In order to avoid collinearity between language and colonial ties, the latter variable was excluded from the analysis.

logit or probit, which are more difficult to interpret. The baseline model is presented as follows:

$$SWB_{ijot} = \beta_1 SCR_{ij} + \theta X_{ijot} + \varepsilon_j + \lambda_o + \delta_{jo} + \tau_t + \mu_{ijot} \quad \text{(Equation 1)}$$

Where SWB_{ijo} refers to happiness of migrant i in host country j from country of origin o during year t, while SCR_{ij} refers to the Same Current Religion, which is a dummy variable stating if the personal-level religion matches the current dominant religion in the host country. The vector X_{ijot} contains all control variables at the personal level. The ε_j and λ_o refer to the host and home country intercepts respectively. The vector δ_{jo} includes the variables related to home-host country linkages. The vector τ_t includes a year dummy. Lastly, μ_{ijot} is the residual error.

On the other hand, the baseline model for H2 and H3 shows the relationship between subjective well-being and the match of host and home country dominant religions through an ordinary least squares (OLS) model as follows:

$$SWB_{ijot} = \beta_1 RLI_{jot} + \theta X_{ijot} + \varepsilon_j + \lambda_o + \delta_{jo} + \tau_t + \mu_{ijot} \quad \text{(Equation 2)}$$

The difference in this model and the previous model are the variables that are included to measure religious distances between countries. The variable RLI_{jot} refers to the Religion Linkage Index (RLI), which is a dummy variable stating if the host country religion matches the home country religion in the year 1900 for H2 and 2000 for H3.

Chapter 4 – Results

4.1 Descriptive statistics

Figure 1 and Figure 2 are Pareto charts that show the composition of the sample by the host and home country. The host country with the most migrants interviewed is Switzerland with 13.99%, followed by Estonia and Germany with 9.54% and 9.53% respectively. The 80% of migrants in the sample are concentrated in 12 host countries out of the 28 countries present in the sample. On the other hand, 11.99% of migrants come from Russia, followed by 6.25% from Germany and 6.03% from Poland. The 80% of the observations come from 32 out of the 107 home countries in the sample. Similarly, Figure 3 provides the sample composition by religion, where we observe that 36.2% of the respondents consider themselves as secular, followed by 24.7% identifying themselves as Roman Catholics and 14.7% as Eastern Orthodox (See Appendix A for religion classifications).

Figure 1. *Sample composition by host country (*N=15,515)

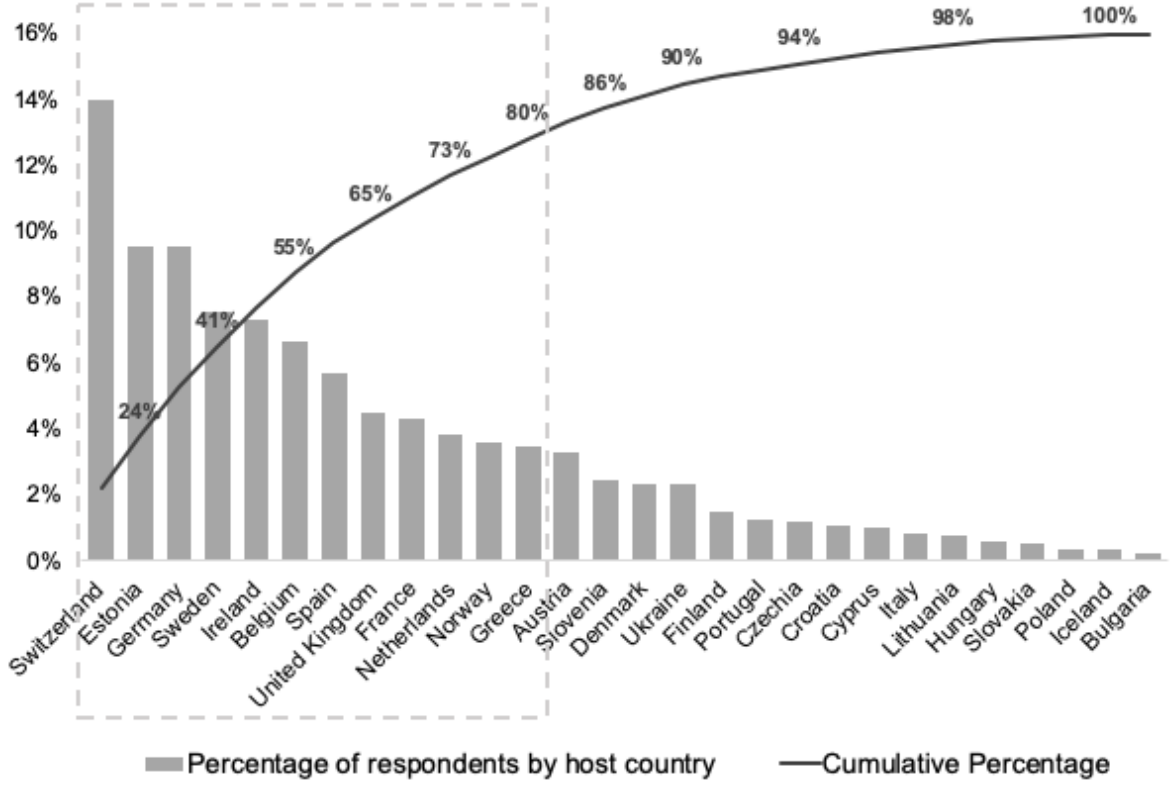


Figure 2. *Sample composition by country of origin (*N=15,515)

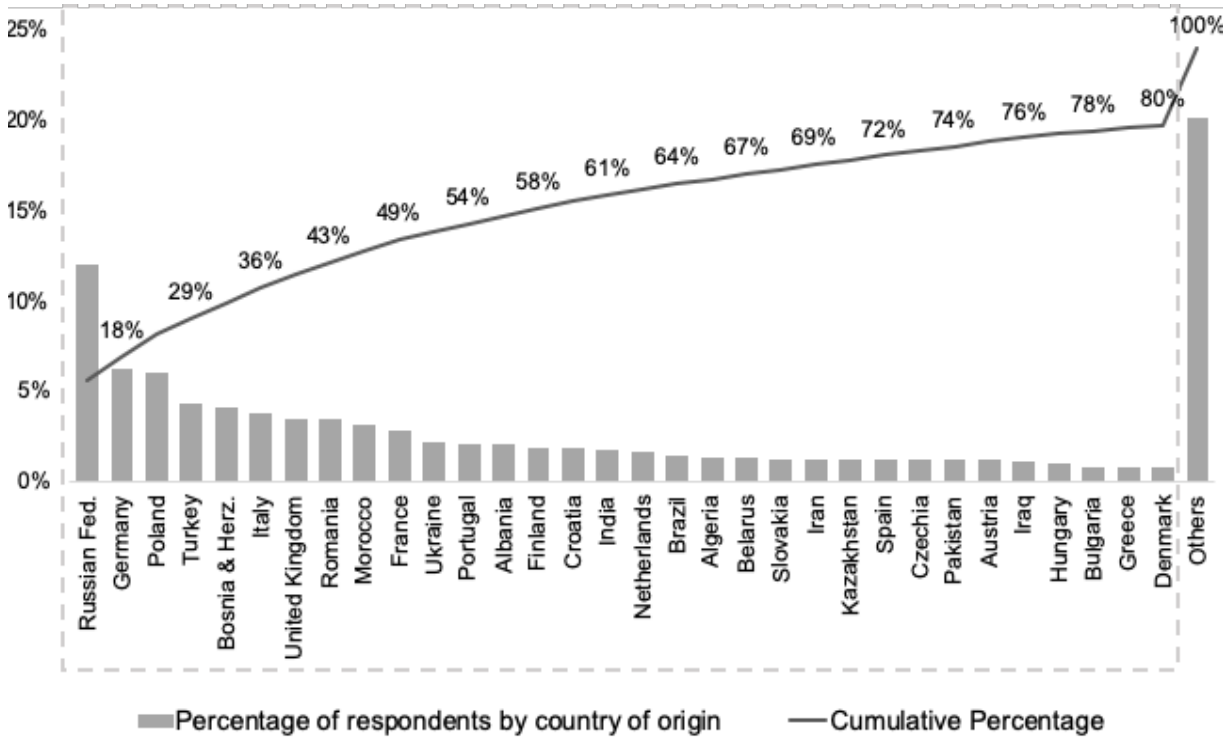


Figure 3. *Sample composition by religion (*N=15,515)

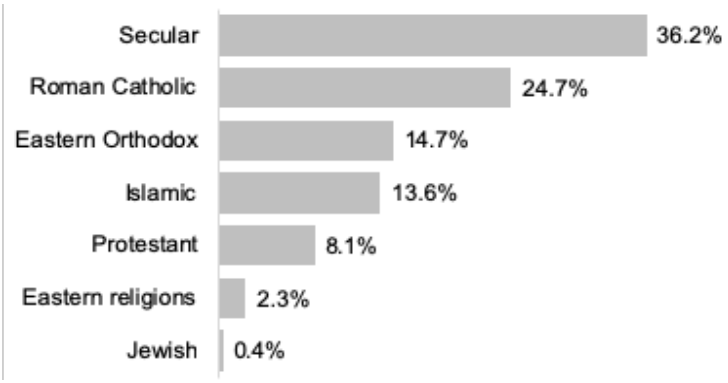


Table 1 provides descriptive statistics for the variables used during the analysis. The migrants interviewed evaluated their happiness with 7.30 points being the average. On average, 31.40% of the respondents have the same personal religion as the current dominant religion of the host country (2000), and this variable will be used to test H1. The average of the Religion Linkage Index that is used to test H2 and H3 is 0 as the variables were standardized. The migrants in the dataset are primarily those that have been living in the host country for more than 20 years (43.87%) and are married (58.68%). The average migrant is 46.85 years old and is not unemployed.

Table 1 *Sample composition and descriptive statistics*

Variables **N = 15,515**	Mean/ Percentage	S.D.	Min	Max
Happiness	7.30	1.986	0	10
H1: Personal religion and host country religion match 2000	31.40	0.464	0	1
H2: Religion Linkage Index 1900	0.00	0.968	-0.78	1.74
H3: Religion Linkage Index 2000	0.00	0.959	-0.86	1.69
Age	46.85	16.87	13	114
Female (%)	54.39	0.498	0	1
Length of stay (%)				
Within last year	7.28			
1-5 years ago	14.12			
6-10 years ago	14.51			
11-20 years ago	20.21			
More than 20 years ago	43.87			
Partner (%)	64.23	0.479	0	1
Children (%)	43.79	0.496	0	1
Years of Education	12.77	4.348	0	40
Feeling about income (%)				
Living Comfortably	27.03			
Coping on income	41.62			
Difficult on income	22.35			
Very difficult on income	9.00			
Unemployment Status(%)	8.22			
Domicile (%)				
Big City	29.16			
Rural Area	24.09			
Suburb, Town, Small City	46.75			
Religiosity	5.29	3.078	0	10
Praying (%)				
At least once a week	43.42			
At least once a month…	11.81			
Less Often	16.08			
Never	26.68			
Perceived health	3.12	1.234	1	5
Member of discriminated group (%)	16.19	0.368	0	1
Frequency of meeting friends (%)				
Every day	13.75			
Several times a week	25.52			
Once a week	19.79			
Several times a month	18.76			
Once a month or less	22.17			
Contiguity (%)	35.67	0.479	0	1
Same language (%)	25.09	0.434	0	1

Note*: Refer to Appendix C, D, and E for a detail explanation for each variable.*

4.2 Main Results

The main results of this study are divided into three sections. Each of the separate sections explores the results of the multilevel analysis conducted for each of the separate Hypothesis 1, 2, and 3. Furthermore, the analysis results from each hypothesis will be further broken down into three different models. As explained in Chapter 3, the first model is a baseline model and the second model will expand on the baseline by including variables that can be affected by the migration process but that are not expected to drive causal effects. The third and final model will replicate the second model with the addition of variables that will look to address Omitted Variable Bias and better explain the relationship between the dependent and explanatory variables.

4.2.1 Personal vs. current host country religion (Hypothesis 1)

In regards to Hypothesis 1 on investigating the relationship between the migrants' happiness and the match of their personal religion and the current dominant religion of their host country, we can take a look at the following results presented in Table 2. The three models exhibited in Table 2 correspond to Equation 1 introduced in Section 3.3. In Column 1, the baseline model is presented, including only exogenous control variables to the migration process. The results show that there is a positive relationship between migrants' happiness and the match of their personal religion with the current dominant religion of the host country. This finding suggests that migrants whose personal religion matches that of the country to where they moved is associated with happiness and the results are significant at the 10% significance level (p-value of 0.097). From the model in Column 1 and based on the Restricted Maximum Likelihood (REML) estimates[8], the estimated within-host country intraclass correlation is 0.11 while the residual cross-sectional intraclass correlation between host-countries and within home-countries is 0.02. In other words, given the covariates, there is a higher correlation over the home countries within the host countries compared to the correlation over host countries within home countries.

[8] REML was used as the Maximum Likelihood estimates (ML) present a downward bias with a small number of clusters. REML is not unbiased for between-cluster variance when data are unbalanced, according to Rabe-Hesketh & Skrondal (2012).

In Columns 2 and 3, the models presented include additional variables that can be affected by the migration experience but that are not expected to drive causal effects as well as variables that can lead to omitted variable bias and that can be mechanisms between the religious linkage and happiness. In both models, we can observe that when those variables are added, the coefficients of the explanatory variable indicate that there is no positive relationship between the migrants' happiness and the match of their personal religion and the current dominant religion of the host country. Among the variables added in models (2) and (3), the variable showing how religious a migrant is has a positive relationship with happiness at the 1% significance level even though the magnitude of the coefficient is small. Migrants who pray "Less often" present lower levels of happiness on average compared to those who pray at least once a week, ceteris paribus. Also, in model (2) migrants who never pray compared to those who pray at least once a week are associated with higher levels of happiness on average, holding other things constant. Moreover, model (2) also shows that the average level of happiness of Eastern Orthodox migrants is lower compared to that of Secular migrants, ceteris paribus.

Table 2. *Multilevel OLS regressions for H1*

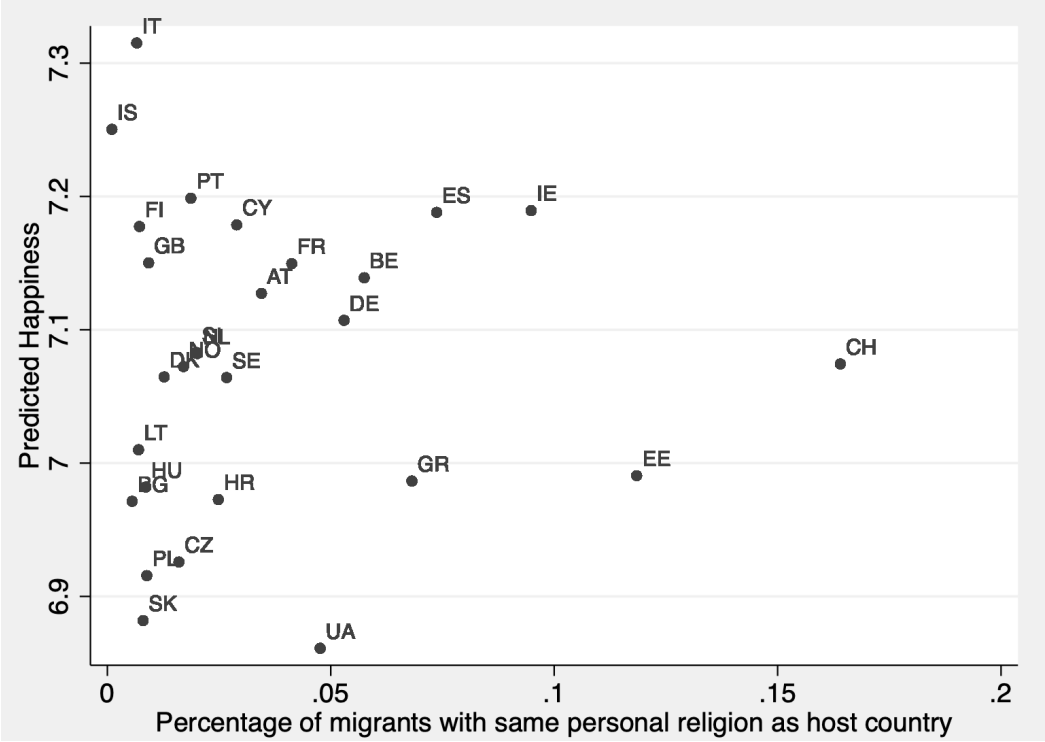
Dependent variable: Happiness	(1) Baseline	(2)	(3)
Personal religion and host country religion match 2000	0.0607* (0.0366)	-0.0558 (0.0450)	-0.0459 (0.0434)
Age	-0.0306*** (0.0051)	-0.0563*** (0.0052)	-0.0372*** (0.0051)
Age^2	0.0002*** (0.0001)	0.0005*** (0.0001)	0.0004*** (0.0001)
Female	0.0440 (0.0307)	0.0620** (0.0298)	0.0873*** (0.0288)
Length of stay (*ref: Within last year)*			
1-5 years ago	-0.106 (0.0711)	-0.112* (0.0672)	-0.0832 (0.0651)
6-10 years ago	-0.0786 (0.0715)	-0.0736 (0.0678)	-0.0404 (0.0656)
11-20 years ago	-0.101 (0.0706)	-0.0940 (0.0668)	-0.0775 (0.0647)
More than 20 years ago	-0.0347 (0.0742)	0.0168 (0.0701)	0.0318 (0.0679)
Religion *(ref: Secular)*			
Eastern Religions		-0.0523 (0.112)	-0.0946 (0.106)
Islamic		-0.0707 (0.0616)	-0.0773 (0.0587)
Jewish		-0.0134 (0.239)	-0.0344 (0.231)
Protestant		0.0685 (0.0641)	0.0342 (0.0620)
Roman Catholic		-0.0333 (0.0564)	-0.0398 (0.0543)
Eastern Orthodox		-0.0976* (0.0580)	-0.0834 (0.0559)
Years of Education (ln)		0.0455 (0.0414)	-0.0180 (0.0401)

Partner		0.527*** (0.0340)	0.575*** (0.0331)
Children		0.0812** (0.0336)	0.0946*** (0.0326)
Unemployment status		-0.235*** (0.0545)	-0.211*** (0.0528)
Feeling about income (*ref: Living comfortably on present income)*			
Coping on present income		-0.445*** (0.0373)	-0.339*** (0.0363)
Difficult on present income		-1.085*** (0.0456)	-0.882*** (0.0447)
Very difficult on present income		-1.862*** (0.0618)	-1.625*** (0.0605)
Domicile (*ref: Big city*)			
Suburb, Town, Small city		0.00266 (0.0352)	-0.00470 (0.0341)
Rural Area		0.101** (0.0422)	0.0852** (0.0409)
Religiosity		0.0687*** (0.00660)	0.0615*** (0.00640)
Praying (*ref: At least once a week*)			
At least once a month or only special occasions		-0.0796 (0.0484)	-0.0611 (0.0469)
Less often		-0.102** (0.0456)	-0.101** (0.0442)
Never		0.103** (0.0485)	0.0684 (0.0470)
Perceived health			0.299*** (0.0129)
Member of discriminated group			-0.329*** (0.0392)
Frequency of meeting friends *(ref: Every day)*			
Several times a week			-0.178*** (0.0470)
Once a week			-0.347*** (0.0497)
Several times a month			-0.460*** (0.0506)
Once a month or less			-0.828*** (0.0502)
Contiguity	-0.111** (0.0534)	-0.108** (0.0485)	-0.0958** (0.0457)
Same Language	0.0574 (0.0577)	0.0346 (0.0522)	0.0618 (0.0492)
Dummy for year	yes	yes	yes
Constant	7.814*** (0.192)	8.232*** (0.201)	7.151*** (0.200)
Observations	15,515	15,438	15,438
Host countries	28	28	28
Home countries	107	107	107

Note: Regressions coefficients are displayed with restricted maximum likelihood standard errors in parentheses. *** p<0.01, ** p<0.05, * p<0.1

Figure 4 illustrates the predicted happiness from model (1), which controls for those variables that are exogenous to migration. As expected from the previous results, there is no evident correlation between happiness and the proportion of migrants whose personal religion matches that of the host country.

Figure 4. *Predicted happiness vs. percentage of migrants with the same personal religion as the host country*



Note: Each observation shown corresponds to the average for each host country, controlling for age, age^2 female, length of stay, and the dummies for year, same language and contiguity.

4.2.2 Host vs. home country historically country religions (Hypothesis 2)

Following Equation 2, we analyze the relationship between happiness and the Religion Linkage Index (RLI) for the year 1900. The three models in Table 3 are all significant at least at the 5% level and display a positive relationship between happiness and the RLI-1900 for the historically dominant religions. Unlike what we have seen in Table 2, here the results suggest that there is a positive association of the match between historically dominant religions of the host and home country and happiness. Considering the size of the effects, the three coefficients are similar in magnitude and direction as all of them have a small influence on happiness. From Model (1) and based on the Restricted Maximum Likelihood (REML) estimates, the estimated within-host country intraclass correlation is 0.12, while the residual cross-sectional intraclass correlation between host-countries and within home-countries is 0.02. Both intraclass correlations are quite similar to those presented in the previous section.

The coefficient of the RLI-1900 in Model (2) increases compared to that of the baseline model as we introduced additional variables that can be affected by the migration experience but that are not expected to drive causal effects. However, the coefficient in Model (3) moves back closer to that of Model (1) as variables that can lead to omitted variable bias, and that can be mechanisms between the religious linkage and happiness were added. Among those variables, we included the perceived health, being a member of a discriminated group and the frequency of meeting with friends, all of which showed results at 1% significance level. In both models (2) and (3), we see that the degree of religiosity is associated with higher happiness at the 1% significance level. Once again, as seen from the previous section, the magnitude of the coefficient for this variable is relatively small.

Table 3. *Multilevel OLS regressions for H2*

Dependent variable: Happiness	(1) Baseline	(2)	(3)
Religion Linkage Index 1900	0.0450** (0.0221)	0.0531*** (0.0202)	0.0414** (0.0191)
Age	-0.0308*** (0.0051)	-0.0563*** (0.0052)	-0.0373*** (0.0051)
Age^2	0.0002*** (0.0001)	0.0005*** (0.0001)	0.0004*** (0.0001)
Female	0.0458 (0.0307)	0.0618** (0.0297)	0.0867*** (0.0288)
Length of stay (*ref: Within last year)*			
1-5 years ago	-0.105 (0.0711)	-0.113* (0.0672)	-0.0840 (0.0651)
6-10 years ago	-0.0745 (0.0716)	-0.0701 (0.0677)	-0.0372 (0.0656)
11-20 years ago	-0.0939 (0.0706)	-0.0865 (0.0668)	-0.0708 (0.0647)
More than 20 years ago	-0.0318 (0.0742)	0.0186 (0.0700)	0.0332 (0.0679)
Religion *(ref: Secular)*			
Eastern Religions		-0.0368 (0.111)	-0.0776 (0.106)
Islamic		-0.0501 (0.0615)	-0.0581 (0.0588)
Jewish		0.0121 (0.238)	-0.0130 (0.231)
Protestant		0.0373 (0.0610)	0.00781 (0.0590)
Roman Catholic		-0.0757 (0.0465)	-0.0751* (0.0448)
Eastern Orthodox		-0.0878 (0.0579)	-0.0746 (0.0558)
Years of Education (ln)		0.0470 (0.0413)	-0.0167 (0.0401)
Partner		0.527*** (0.0340)	0.575*** (0.0331)
Children		0.0811** (0.0336)	0.0947*** (0.0326)
Unemployment status		-0.236*** (0.0545)	-0.212*** (0.0528)
Feeling about income (*ref: Living comfortably on present income*			
Coping on present income		-0.444*** (0.0373)	-0.338*** (0.0362)
Difficult on present income		-1.084*** (0.0456)	-0.881*** (0.0447)
Very difficult on present income		-1.862*** (0.0618)	-1.624*** (0.0605)
Domicile (*ref: Big city*)			

Suburb, Town, Small city		0.00236 (0.0352)	-0.00506 (0.0341)
Rural Area		0.103** (0.0422)	0.0860** (0.0409)
Religiosity		0.0689*** (0.0066)	0.0617*** (0.0064)
Praying (*ref: At least once a week*)			
At least once a month or only special occasions		-0.0787 (0.0484)	-0.0606 (0.0469)
Less often		-0.102** (0.0456)	-0.101** (0.0442)
Never		0.102** (0.0485)	0.0670 (0.0470)
Perceived health			0.299*** (0.0129)
Member of discriminated group			-0.328*** (0.0392)
Frequency of meeting friends *(ref: Every day)*			
Several times a week			-0.180*** (0.0470)
Once a week			-0.349*** (0.0497)
Several times a month			-0.462*** (0.0506)
Once a month or less			-0.830*** (0.0502)
Contiguity	-0.108** (0.0531)	-0.104** (0.0480)	-0.0958** (0.0454)
Same Language	0.0649 (0.0572)	0.0363 (0.0517)	0.0632 (0.0488)
Dummy for year	yes	yes	yes
Constant	7.824*** (0.192)	8.201*** (0.202)	7.130*** (0.200)
Observations	15,515	15,438	15,438
Host countries	28	28	28
Home countries	107	107	107

Note: Regressions coefficients are displayed with restricted maximum likelihood standard errors in parentheses. *** p<0.01, ** p<0.05, * p<0.1

4.2.3 Host vs. home country current country religions (H3)

While in Table 3 from the previous section we utilized the historically dominant religion from the year 1900, Table 4 will use a more current dominant religion from the year 2000 to investigate the relationship between happiness and the RLI. In this case, we see that in the baseline model (1) there is no significant relationship between the RLI and happiness, but this relationship becomes positive and significant at the 5% level once more control variables are added. From the model in Column 1 and based on the Restricted Maximum Likelihood (REML) estimates, the estimated within-host country intraclass correlation is 0.11 while the residual cross-sectional intraclass correlation between host-countries and within home-countries is 0.02.

In model (2) the coefficient for RLI-2000 becomes significant at the 5% level (p-value of 0.028) when we add more control variables. Among those variables added in model (2) we can observe that living with a partner, having children living at home, being

religious and being employed are all positively associated with higher levels of happiness. Finally, when we add all the control variables in the third model we see a decrease in the magnitude and significance level (p-value of 0.077) of the RLI-2000 coefficient compared to model 2. Such a change is the result of healthier, less discriminated, and happier migrants living in countries with more religious similarity.

Table 4. *Multilevel OLS regressions for H3*

Dependent variable: Happiness	(1) Baseline	(2)	(3)
Religion Linkage Index 2000	0.0395 (0.0244)	0.0483** (0.0220)	0.0367* (0.0207)
Age	-0.0307*** (0.0051)	-0.0562*** (0.0052)	-0.0372*** (0.0051)
Age^2	0.0002*** (0.0001)	0.0005*** (0.0001)	0.0004*** (0.0001)
Female	0.0455 (0.0307)	0.0618** (0.0298)	0.0868*** (0.0288)
Length of stay (*ref: Within last year)*			
1-5 years ago	-0.106 (0.0711)	-0.114* (0.0672)	-0.0846 (0.0651)
6-10 years ago	-0.0765 (0.0715)	-0.0723 (0.0677)	-0.0390 (0.0656)
11-20 years ago	-0.0974 (0.0706)	-0.0908 (0.0668)	-0.0744 (0.0647)
More than 20 years ago	-0.0341 (0.0742)	0.0156 (0.0700)	0.0310 (0.0679)
Religion *(ref: Secular)*			
Eastern Religions		-0.0344 (0.112)	-0.0763 (0.107)
Islamic		-0.0495 (0.0618)	-0.0576 (0.0592)
Jewish		0.0115 (0.238)	-0.0140 (0.231)
Protestant		0.0411 (0.0609)	0.0112 (0.0590)
Roman Catholic		-0.0792* (0.0466)	-0.0783* (0.0449)
Eastern Orthodox		-0.0882 (0.0579)	-0.0749 (0.0559)
Years of Education (ln)		0.0484 (0.0414)	-0.0157 (0.0401)
Partner		0.526*** (0.0340)	0.575*** (0.0331)
Children		0.0809** (0.0336)	0.0945*** (0.0326)
Unemployment status		-0.236*** (0.0545)	-0.212*** (0.0528)
Feeling about income (*ref: Living comfortably on present income*			
Coping on present income		-0.446*** (0.0372)	-0.340*** (0.0362)
Difficult on present income		-1.086*** (0.0456)	-0.882*** (0.0447)
Very difficult on present income		-1.863*** (0.0618)	-1.625*** (0.0605)
Domicile (*ref: Big city*)			
Suburb, Town, Small city		0.00197 (0.0352)	-0.00533 (0.0341)
Rural Area		0.101** (0.0422)	0.0846** (0.0409)
Religiosity		0.0688*** (0.0066)	0.0616*** (0.0064)
Praying (*ref: At least once a week*)			
At least once a month or only special occasions		-0.0783 (0.0484)	-0.0603 (0.0469)
Less often		-0.101** (0.0456)	-0.100** (0.0442)
Never		0.103** (0.0485)	0.0675 (0.0470)
Perceived health			0.299*** (0.0129)
Member of discriminated group			-0.328*** (0.0392)
Frequency of meeting friends *(ref: Every day)*			

Several times a week			-0.179*** (0.0470)
Once a week			-0.348*** (0.0497)
Several times a month			-0.460*** (0.0506)
Once a month or less			-0.829*** (0.0502)
Contiguity	-0.110** (0.0532)	-0.105** (0.0482)	-0.0968** (0.0456)
Same Language	0.0562 (0.0574)	0.0270 (0.0518)	0.0566 (0.0490)
Dummy for year	yes	yes	yes
Constant	7.830*** (0.192)	8.206*** (0.201)	7.133*** (0.200)
Observations	15,515	15,438	15,438
Host countries	28	28	28
Home countries	107	107	107

Note: Regressions coefficients are displayed with restricted maximum likelihood standard errors in parentheses. *** p<0.01, ** p<0.05, * p<0.1

Chapter 5 - Discussion and Conclusion

The primary focus of the study was to analyse the relationship between migration, religion, and happiness by understanding how the religious linkages between host countries, home countries, and migrants affect migrants' happiness. The study was addressed exclusively to immigrants within Europe, and it was found that immigrants' happiness is not higher when the immigrants' personal religion is shared with the host country's current dominant religion. However, immigrants' happiness is higher when there is a strong historic religious linkage between the host and home countries. Nevertheless, the size of the effect of the historic religious linkages on happiness is small. The latter relationship is not present when the religious linkages are based on current dominant religions while only including the variables that are exogenous to the migration experience. However, when more control variables are added, the results become significant but with smaller influence compared to the historic religious linkages. The stronger results from historic religious linkages (H2) over the current religious linkages (H1 and H3) can be explained by different reasons. Firstly, the historic religions have had more time (considering the dominant religions from 1900) to shape a nations' culture and leave imprints on their values, ways of thinking, and behaviour. Additionally, the process of changing a national culture will likely occur over a long period of time. The change of the dominant religions in some countries will also slowly change the culture attached to each country. In other words, the current dominant religions haven't had enough time to change the heritage that the historic religious culture has imprinted on its citizens.

Secondly, the difference in the results could also be due to the impact of the larger proportion of Secular population within immigrants and current cultures. During the 1900s none of the countries included in our analysis was predominantly secular, but during the 2000s the Secular population grew significantly among those countries. As Okulicz-Kozaryn (2010) stated, religion makes people happier in countries that are also religious; this was better supported in the years 1900 in our analysis.

The third reason is that currently, the analysed host countries have a greater variety of religions as can be seen by the weaker dominant religions of the 2000s (See appendix B). The current dominant religions no longer have such a large portion of a country's religions as they previously did. Some countries have even experienced changes in their dominant religion from the 1900's to the 2000's, as is the case of Estonia who was formerly dominant Protestant (54.10%) and has moved towards being predominantly Secular (36%), The Netherlands which was once Protestant (60%) and now Roman Catholic (34.5%) is the dominant religion and Switzerland which was previously Protestant (56.20%) but experienced a shift currently towards Roman Catholic (44.10%). The historically dominant religions were stronger (with an average proportion of adherents of 84.13%) and therefore had a larger influence in culture. On the other hand, presently the current dominant religions have less "power" to impact a country's culture (with an average proportion of adherents of 76.11%).

The findings of this study can provide prospective migrants with some support while choosing the country where they want to establish a new home. The findings suggest that migrants who are looking to increase their happiness should move to a country with a strong historic religious linkage with their country of origin given that similar religious cultures allow for a smoother acculturation and adaption process in the destination country. However, as religion is only one of the variables that explains migrants' happiness and as happiness is only one of the reasons for migrants to move, migrants should not solely take the results of this study while choosing their new host country. As exemplified by the control variables of the models previously presented, there are many other aspects of life that have an impact on happiness. Therefore, migrants should consider the benefits (i.e., increase in their income and safety) as well as the costs (i.e., being far away from family and friends as well as language and cultural barriers) of migration before making the decision to move and choosing their new country.

Available literature has investigated the role that religion plays during the migration process, arguing that religion provides support in times of uncertainty and fear as well as helping migrants rebuilt their social connections, among other roles (Frederiks, 2016).

However, to the best of my knowledge, there is an existing void in the available literature regarding the influence of the religious linkages between host countries, home countries, and migrants in migrants' happiness. Therefore, the findings of this research create an added value to the current literature claiming that home and host countries with similar religious cultures have a positive association with happiness. Nevertheless, the small coefficients of those linkages related to migrants' happiness cast doubt on the extent of how deeply religion influences culture, which is not consistent with Cohen & Hill (2007), who stated that differences in religious affiliations equate to differences in culture. All this based on the idea that migrants who move to a similar culture will acculturate and adapt in a smoother way to the new country and therefore present higher levels of happiness.

Limitations of this research include the choice of the personal and country-level variables mentioned in Chapter 3. These variables could have resulted in the exclusion of important aspects of happiness, resulting in an incomplete measurement of happiness. For instance, Lykken and Tellegen (1996) assert that between 44% to 53% of the variability of a person's well-being is related to variation in genetics. Besides genetics, there also exists other unobserved variables that are not controlled for in the available information within the ESS. Some of these variables include migrant's expectations, goals, skills, abilities, and personality. These can also play an important role due to the fact that happiness is taken from a subjective evaluation of the migrant. It is also possible that some control variables could have a reverse causality with the dependent variable. For example, it is not only true that people who are healthier are happier, but it is also true that people who are happier tend to be healthier. Another limitation of the data is that the ESS was not created with a focus on migrants and therefore, there might exist groups of migrants who are not targeted in our sample or are under-represented. For example, in Table 1 we observed that many migrants in the dataset have been living in the host country for more than 20 years (43.87%) while those migrants who have arrived within the last year are at 7.28% of the migrant population. Furthermore, the presented analysis does not make any distinctions among the migrants. Not controlling for refugees, asylum seekers, illegal or legal migrants can have an impact on happiness as each of those

migrant categories holds very different stories and migratory reasons that have an influence on their process of adaptation in the country of destination.

For further and future research, I recommend to extrapolate this study from European immigrants and apply such a study to the whole world through the use of a worldwide survey which would allow for intercontinental comparisons. Additional analytic comparisons could also be conducted by combining personal religion with historical religion in hypothesis 1 in order to fully understand the relationship between religion and happiness. Similarly, the historically dominant religion can be explored using the proportion of religious adherents in the year 1970, which is the next available year of data after the year 1900 in the World Christian Encyclopaedia. The limited availability of data regarding religious cultures in 1900 along with the fact that some countries suffered a transformation of their religious cultures during the first half of the 20th century might have an impact on the results. Among those countries we can identify Angola, Cameroon, Chad, The Democratic Republic of the Congo, and Kenya who were mostly Ethnoreligionists in 1900 but shifted towards Roman Catholic, Protestant or Islamic in 1970 (see Appendix B).

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Annex

Appendix A – Religious denominations and classifications

Families	Religions	Divisions included	Families	Religions	Divisions included
Christian	Roman Catholic	Maronites	Non-Christian	Islamic	Druze
		Roman catholic			Islamic
		Other Catholic, not specified			Muslim
	Protestant	Anglican			Shiah
		Baptists			Sunni
		Anabaptists		Jewish	Jewish
		Evangelical Lutheran			community
		Free evangelical churches			Mosaic
		Methodist		Eastern religions	Buddhist
		Pentecostals Church			Chinese Folk
		Presbyterian			Confucianism
		Protestant			Hindu
		Reformed (Calvinist)			Jainism
		The Seventh-day Adventist			Krishna
		Unitarianism			Shintoisme
		Other Protestants, not specified			Sikhism
	Eastern Orthodox	Greek Orthodox			Taoism
		Middle-Eastern Orthodox			Zen
		Byzantine		Other non-Christian religions	Bahai's
		Eastern Orthodox			Ethnoreligionists
		Orthodox church of the Moscow			New Religionist
		Ukrainian orthodox church			Pagan
		Other Orthodox, not specified			Spiritits
	Other Christian denomination	Adventist			Zoroastrians
		Independents			Other, not specified
		Jehova's Witnesses			
		Marginal Christians			
		Mormon		Secular	Non-religious
		Old Catholic Mariavite Church			Atheist

Note: The divisions included in each religion were based on the classification made by the European Social Survey. The religions in the Christian Encyclopaedia were adapted to those mentioned in the ESS. The final classification is shown in this appendix.

Appendix B – Dominant religion adherents (%) by countries

This is an author-created dataset with information from the World Christian Encyclopaedia (Barret et al., 2001). It contains the proportion of the religious adherents by religion in each country in the 1900s and 2000s. Host countries are highlighted in bold and italic.

Country		Historic: 1900		Current: 2000	
		Dominant religion	Dominant religion adherents %	Dominant religion	Dominant religion adherents %
AE	United Arab Emirates	Islamic	99.90	Islamic	75.60
AF	Afghanistan	Islamic	99.40	Islamic	98.10
AL	Albania	Islamic	68.50	Islamic	38.80
AM	Armenia	Eastern Orthodox	87.80	Eastern Orthodox	78.20
AR	Argentina	Roman Catholic	98.40	Roman Catholic	91.20
AT	***Austria***	***Roman Catholic***	***91.60***	***Roman Catholic***	***75.50***
AU	Australia	Protestant	63.00	Protestant	35.40
AZ	Azerbaijan	Islamic	89.30	Islamic	83.70
BA	Bosnia and Herzegovina	Eastern Orthodox	42.80	Islamic	60.00
BD	Bangladesh	Islamic	65.60	Islamic	85.80
BE	***Belgium***	***Roman Catholic***	***97.40***	***Roman Catholic***	***80.90***
BG	***Bulgaria***	***Eastern Orthodox***	***76.10***	***Eastern Orthodox***	***71.60***
BO	Bolivia	Roman Catholic	93.50	Roman Catholic	88.30
BR	Brazil	Roman Catholic	95.60	Roman Catholic	90.10
BY	Belarus	Eastern Orthodox	60.50	Eastern Orthodox	48.70
CA	Canada	Protestant	50.90	Roman Catholic	41.80
CH	***Switzerland***	***Protestant***	***56.20***	***Roman Catholic***	***44.10***
CL	Chile	Roman Catholic	95.00	Roman Catholic	77.60
CN	China	Eastern religions	92.40	Secular	50.30
CO	Colombia	Roman Catholic	80.00	Roman Catholic	96.10
CR	Costa Rica	Roman Catholic	98.90	Roman Catholic	91.00
CY	***Cyprus***	***Eastern Orthodox***	***98.20***	***Eastern Orthodox***	***87.40***
CZ	***Czechia***	***Roman Catholic***	***86.20***	***Roman Catholic***	***40.40***
DE	***Germany***	***Protestant***	***61.10***	***Protestant***	***37.00***
DK	***Denmark***	***Protestant***	***99.20***	***Protestant***	***87.80***
DO	Dominican Republic	Roman Catholic	92.60	Roman Catholic	88.60
DZ	Algeria	Islamic	86.60	Islamic	96.70
EC	Ecuador	Roman Catholic	87.70	Roman Catholic	94.10
EE	***Estonia***	***Protestant***	***54.10***	***Secular***	***36.00***
EG	Egypt	Islamic	81.10	Islamic	84.40
ES	***Spain***	***Roman Catholic***	***100.00***	***Roman Catholic***	***96.10***
FI	***Finland***	***Protestant***	***97.20***	***Protestant***	***89.60***
FR	***France***	***Roman Catholic***	***98.40***	***Roman Catholic***	***82.30***
GB	***United Kingdom***	***Protestant***	***88.40***	***Protestant***	***53.30***
GE	Georgia	Eastern Orthodox	85.00	Eastern Orthodox	58.10
GN	Guinea	Islamic	58.00	Islamic	67.30
GR	***Greece***	***Eastern Orthodox***	***84.40***	***Eastern Orthodox***	***93.00***

	Country	Historic: 1900		Current: 2000	
		Dominant religion	Dominant religion adherents %	Dominant religion	Dominant religion adherents %
GT	Guatemala	Roman Catholic	91.80	Roman Catholic	84.30
HN	Honduras	Roman Catholic	96.40	Roman Catholic	86.20
HR	Croatia	Roman Catholic	81.70	Roman Catholic	88.50
HT	Haiti	Roman Catholic	84.70	Roman Catholic	79.30
HU	***Hungary***	***Roman Catholic***	***60.60***	***Roman Catholic***	***63.10***
IE	***Ireland***	***Roman Catholic***	***88.70***	***Roman Catholic***	***84.70***
IL	Israel	Islamic	83.30	Jewish	77.10
IN	India	Eastern religions	81.10	Eastern religions	77.40
IQ	Iraq	Islamic	89.50	Islamic	96.00
IR	Iran, Islamic Republic of	Islamic	98.10	Islamic	95.60
IS	***Iceland***	***Protestant***	***99.50***	***Protestant***	***89.10***
IT	***Italy***	***Roman Catholic***	***99.90***	***Roman Catholic***	***97.20***
JO	Jordan	Islamic	94.20	Islamic	93.50
JP	Japan	Eastern religions	79.60	Eastern religions	55.40
KG	Kyrgyzstan	Islamic	96.30	Islamic	60.80
KH	Cambodia	Eastern religions	89.50	Eastern religions	89.70
KW	Kuwait	Islamic	99.70	Islamic	83.00
KZ	Kazakhstan	Islamic	93.90	Islamic	42.70
LA	Lao People's Democratic Republic	Eastern religions	60.50	Eastern religions	50.40
LB	Lebanon	Roman Catholic	73.20	Roman Catholic	42.50
LK	Sri Lanka	Eastern religions	82.50	Eastern religions	80.00
LT	***Lithuania***	***Roman Catholic***	***90.00***	***Roman Catholic***	***84.60***
LV	Latvia	Protestant	45.00	Secular	32.00
LY	Libyan Arab Jamahiriya	Islamic	93.80	Islamic	96.10
MA	Morocco	Islamic	96.40	Islamic	98.30
MD	Moldova, Republic of	Eastern Orthodox	88.90	Eastern Orthodox	44.50
MK	Macedonia	Eastern Orthodox	86.00	Eastern Orthodox	59.30
MR	Mauritania	Islamic	97.70	Islamic	99.10
MT	Malta	Roman Catholic	88.50	Roman Catholic	94.50
MU	Mauritius	Eastern religions	55.60	Eastern religions	45.80
MX	Mexico	Roman Catholic	91.00	Roman Catholic	93.80
MY	Malaysia	Islamic	48.80	Islamic	47.70
NI	Nicaragua	Roman Catholic	94.60	Roman Catholic	85.10
NL	***Netherlands***	***Protestant***	***60.10***	***Roman Catholic***	***34.50***
NO	***Norway***	***Protestant***	***99.40***	***Protestant***	***94.20***
NP	Nepal	Eastern religions	97.00	Eastern religions	85.00
NZ	New Zealand	Protestant	77.10	Protestant	45.50
PA	Panama	Roman Catholic	82.00	Roman Catholic	77.40
PE	Peru	Roman Catholic	94.70	Roman Catholic	95.70
PH	Philippines	Roman Catholic	78.70	Roman Catholic	82.40
PK	Pakistan	Islamic	82.20	Islamic	96.10
PL	***Poland***	***Roman Catholic***	***77.10***	***Roman Catholic***	***92.20***
PS	Palestinian Territory	Islamic	79.50	Islamic	73.50
PT	***Portugal***	***Roman Catholic***	***99.80***	***Roman Catholic***	***90.80***
PY	Paraguay	Roman Catholic	96.70	Roman Catholic	90.10

Country		Historic: 1900		Current: 2000	
		Dominant religion	Dominant religion adherents %	Dominant religion	Dominant religion adherents %
RO	Romania	Eastern Orthodox	88.20	Eastern Orthodox	85.10
RU	Russian Federation	Eastern Orthodox	75.50	Eastern Orthodox	51.70
SA	Saudi Arabia	Islamic	100.00	Islamic	93.70
SD	Sudan	Islamic	62.00	Islamic	70.30
SE	***Sweden***	***Protestant***	***100.00***	***Protestant***	***94.50***
SG	Singapore	Eastern religions	74.00	Eastern religions	62.70
SI	***Slovenia***	***Roman Catholic***	***94.80***	***Roman Catholic***	***83.50***
SK	***Slovakia***	***Roman Catholic***	***84.70***	***Roman Catholic***	***67.90***
SN	Senegal	Islamic	70.00	Islamic	87.60
SO	Somalia	Islamic	99.90	Islamic	98.30
SV	El Salvador	Roman Catholic	95.00	Roman Catholic	91.20
SY	Syrian Arab Republic	Islamic	83.10	Islamic	89.30
TH	Thailand	Eastern religions	95.00	Eastern religions	87.00
TJ	Tajikistan	Islamic	98.30	Islamic	83.60
TM	Turkmenistan	Islamic	98.40	Islamic	87.20
TN	Tunisia	Islamic	87.50	Islamic	98.90
TR	Turkey	Islamic	77.30	Islamic	97.20
TT	Trinidad and Tobago	Protestant	36.70	Roman Catholic	30.70
TW	Taiwan, Province of China	Eastern religions	96.10	Eastern religions	81.80
UA	***Ukraine***	***Eastern Orthodox***	***70.90***	***Eastern Orthodox***	***54.30***
UY	Uruguay	Roman Catholic	69.60	Roman Catholic	78.20
UZ	Uzbekistan	Islamic	98.40	Islamic	76.20
VE	Venezuela	Roman Catholic	91.00	Roman Catholic	94.40
VN	Viet Nam	Eastern religions	71.10	Eastern religions	50.50
YE	Yemen	Islamic	98.40	Islamic	98.90

Note: there are some countries whose adherents present double affiliation to many religions due to that reason some countries can have more than 100% adherents.

Appendix C – Definitions of dependent and explanatory variables

Variable	Definition and source
1. Dependent variable	**European Social Survey - www.europeansocialsurvey.org**
Happiness	Subjective happiness: 0 (Extremely unhappy) to 10 (Extremely happy)
2. Explanatory Variables	**a) European Social Survey - www.europeansocialsurvey.org** **b) Barrett, D., Kurian, G., & Johnson, T. (2001). World Christian encyclopedia : A comparative survey of churches and religions in the modern world (2nd ed.). Oxford: Oxford University Press.**
H1: Personal religion and host country religion match 2000	Same current dominant religion between the individual (respondent) and their host country (year 2000): 1 (Same religion); 0 (Different religion)
H2: Religion Linkage Index 1900	Is the composed of three equally weighted standardized variables for the year 1900: 1. Same historic dominant religion between the respondents home country and their host country: 1 (Same religion); 0 (Different religion) 2. Incidence of the home country religion, which is the proportion of the population in home country which belongs to the same historically dominant religion in the host country. 3. Incidence of the host country religion, which is the proportion of the population in host country which belongs to the same historically dominant religion in the home country
H3: Religion Linkage Index 2000	Is the composed of three equally weighted standardized variables for the year 2000: 1. Same historic dominant religion between the respondents home country and their host country: 1 (Same religion); 0 (Different religion) 2. Incidence of the home country religion, which is the proportion of the population in home country which belongs to the same historically dominant religion in the host country. 3. Incidence of the host country religion, which is the proportion of the population in host country which belongs to the same historically dominant religion in the home country

Appendix D – Definitions of individual-level control variables

Variable	Definition and source
(1) Baseline	**European Social Survey www.europeansocialsurvey.org**
Age & Age^2	Age of respondent in years. The squared age allows modeling the U-shaped relation between life satisfaction and age.
Female	1 (Female); 0 (Male)
Year	Year in which the interview was taken. Dummy variable to control for time-related shocks, such as financial crisis, that occurred in all countries.
Length of stay	Length of stay in country: 1(Within last year); 2 (1-5 years ago); 3(6-10 years ago); 4 (11-20 years ago); 5 (More than 20 years ago); In ESS rounds 1-4, immigrants were given the classification for rounds 4-8 the same classification was created subtracting the interview year from the year the migrant came to the country.
(2)	**European Social Survey www.europeansocialsurvey.org**
Years of Education (ln)	Years of education completed in full-time equivalents. This variable is log-transformed to reduce the influence of outliers.
Partner	Interviewer code for living with a partner: 1 (Lives with husband / wife / partner at household grid); 0 (Does not)
Children	Interviewer code for children living at home: 1(Respondent lives with children at household grid); 0 (Does not)
Unemployment Status	1 (unemployed); 0 (otherwise)
Feeling about income	Feeling about household's income: 1(Living comfortably on present income); 2(Coping on present income); 3(Difficult on present income); 4(Very difficult on present income). The survey question is: Which of the descriptions on this card comes closest to how you feel about your household's income nowadays?
Domicile	Living area: 1 (Big city); 2(Suburb, Town or Small City); 3 (Rural area) The survey question is: Which phrase on this card best describes the area where you live?
Religion	1 (Roman Catholic); 2 (Protestant); 3(Eastern Orthodox); 4 (Jewish); 5 (Islamic); 6(Eastern religions); 7(Secular). The respondents who answer "No" to belonging to any particular religion were classified as "Secular" as well as the Non-Religious and Atheists.
Religiosity	How religious: 0 (Not at all religious) to 10 (Very religious)
Praying	Frequency of praying: 1 (At least once a week); 2(At least once a month or only on special holy days); 3 (Less often); 4(Never).
(3)	**European Social Survey www.europeansocialsurvey.org**
Perceived health	Subjective general health: 1 (very bad) to 5 (very good)
Member of discriminated group	Member of a discriminated group: 1(Yes); 0 (No). The survey question is: Would you describe yourself as being a member of a group that is discriminated against in this country?
Frequency of meeting friends	Frequency meeting with friends: 1 (Everyday); 2 (Several times a week); 3(Once a week); 4(Several times a month); 5 (Once a month or less)

Appendix E – Definitions of country-level control variables

Variable	Definition and source
Links between countries	**Mayer, T. & Zignago, S. (2011) Notes on CEPII's distances measures : the GeoDist Database CEPII Working Paper 2011-25**
Same language	Home and host countries have a common official primary language: 1 (Yes); 0 (No)
Contiguity	Countries share a border: 1 (Contiguity); 0 (No).