UNIVERSITÉ DU LUXEMBOURG

PhD-FHSE-2021-041

The Faculty of Humanities, Education and Social Sciences

DISSERTATION

Defence held on 18/11/2021 in Esch-sur-Alzette

to obtain the degree of

DOCTEUR DE L'UNIVERSITÉ DU LUXEMBOURG

EN *Sciences Sociales*

by

Maximilian SCHIELE
Born on 25 October 1990 in Nördlingen, (Germany)

UNEQUAL MIGRANTS: SYSTEMATIC SELECTION AND ITS CONSEQUENCES IN THE CONTEXT OF INEQUALITY

Dissertation defence committee

Dr Louis Chauvel, dissertation supervisor
Professor, Université du Luxembourg

Dr Michel Beine, Chairman
Professor, Université du Luxembourg

Dr Marie Valentova
Researcher, Luxembourg Institute of Socio-Economic Research (LISER)

Dr Martin Schröder
Professor, Philipps-Universität Marburg

Dr Mirna Safi, Vice Chairman
Professor, Sciences Po

ACKNOWLEDGMENTS

I would like to thank the Luxembourg National Research Fund, short FNR (grant number: 10949242), for financing my research. Further, I want to express my gratitude to all of the individuals who have helped and supported my research. This PhD dissertation was done under the supervision of Prof. Dr. Louis Chauvel. I thank him for his constant guidance and advice. I also express my gratitude to the supervisory board of this dissertation that consists besides Prof. Dr. Cauvel of Prof. Dr. Beine and Dr. Valentova. Further, I want to thank Dr. Bar Haim, Dr. Hartung, Prof. Dr. Hadjar, Prof. Dr. Powell, Prof. Dr. Leist, Prof. Dr. Van Kerm and Dr. Murphy for their helpful comments. My gratitude also extends to my fellow doctoral student colleagues at the University of Luxembourg for the countless discussions that helped to develop this work. A special thank you goes to my wife Julia Martin as well as Ms. Trierweiler and Editage (www.editage.com) for English language editing.

Maximilian SCHIELE
+49 152 97360854
schiele.maximilian@gmail.com
ORCID ID: 0000-0003-0650-6195

Faculté des Lettres, des Sciences Humaines, des Arts et des Sciences de l'Education
UNIVERSITÉ DU LUXEMBOURG
Campus Belval
11, Porte des Sciences
L-4366 Esch/Alzette (Belval)

Supported by the Luxembourg National Research Fund (FNR) 10949242

Abstract

This thesis investigates the intersection between international migration and socio-economic inequality. Social inequality may influence who migrates, which may consequently determine patterns of socio-economic inequality in the host society. This connection among the origin country's inequality, selection, and the host country's inequality is investigated in three chapters. Each chapter addresses one aspect of the process.

The first chapter provides an overview of existing theories on inequality and selection during international migratory flows. Most existing studies investigate selection in outmigration from the skill-selection perspective given the context of the returns to skill between labor markets in different countries. Other studies investigate selection through such productivity-relevant traits as health or personal attitudes. After the literature review, a new study is presented regarding gender inequality's impact on gender selection during asylum migration.

The second chapter summarizes the discussion on whether return migration occurs due to failure or success, as well as its implications for selections occurring during the return migration process. Subsequently, the second study in this thesis presents an analysis with a novel approach to addressing this question.

The final and third chapter analyzes the consequences of selection for the dynamics of socio-economic inequality within the host country's society. First, a summary is given of literature on how inequality of outcomes may transform into an inequality of opportunity for immigrants. This is followed by the presentation of a new study that investigates the connection of immigrant minorities' socio-economic composition and its effect on children's school outcomes.

The three chapters' strengths, weaknesses, and implications are then discussed.

Table of Contents

Introduction: Inequality and International Migration

The 21st century has been dubbed the "age of migration" (Chiswick and Miller 2009). During the last few decades, the number of international migrants has increased globally, in terms of both absolute and relative numbers (United Nations--UN 2019). The UN estimates that in 1970, approximately 84 million individuals—or 2.3% of the world's population—were international migrants. In 2019, this number rose in absolute terms by a factor of 3.2 to 272 million, or 3.5% of the global population. Many experts anticipate that this number will continue to rise in the future (International Organization for Migration--IOM 2020a). Rather than merely continuing this trend, some fear that climate change may trigger an extraordinary increase in international migration in the future (IOM 2008).

This dissertation investigates the role of social inequality for the selection of migrants during international migration. How does social inequality influence who can and wants to migrate and what are the consequences of this selection for the integration into a stratified host society? The following section will set the stage for this analysis by briefly discussing global social inequality and its potential implications on the flow of international migration. This is followed by an overview of the perspectives on social inequality that inform all three studies of this dissertation. After setting the context, the role of social inequality for the selection during international migration is briefly discussed, and the first two chapters investigating this connection are introduced. This is followed by a discussion of the consequences of this selection for the integration of immigrants, which will be investigated in more detail in chapter three. Finally, the results of the three studies are briefly summarized.

Inequality, International Migration and their Connection

Currently, this "age of migration" involves an increasing income inequality in many countries worldwide. Atkinson (2018) observed a changing pattern of inequality over time, which he called the "inequality turn." After years of declining income inequality in many countries—or specifically, during the time after World War II until the 1970s—this trend began to reverse in the 1980s (Atkinson 2018, p.17). For many developed countries, income inequality has increased in the last few decades (Organization for Economic Co-operation and Development--OECD 2011, 2015, 2019). This increase in income inequality in the developed world is driven by stagnant or decreasing wages for the middle and lower classes and large increases for the elite. Such an increase has been accompanied by large gains in income for the lower- and middle-class in Asia (Milanovic 2016). This has led to a decline in global income inequality[1] in recent decades. However, the Gini coefficient for global wages, an indicator of global inequality, has remained high at around 70 (Milanovic 2016, p.132). In fact, Milanovic (2016) estimates that two-thirds of the variance in global wages can be explained by the place of birth alone.

While global inequality has decreased slightly, the number of migrants has continued to gradually increase. However, this should not lead to the supposition that global wage inequality does not significantly shape migratory flows. First, the decrease in global inequality has been fueled by the rise of two large countries: China and India. These countries have traditionally low

[1] Milanovic (2016, p. 3): "Global inequality, that is, income inequality among the citizens of the world, can be formally considered as the sum of all national inequalities plus the sum of all gaps in the mean incomes among countries."

emigration rates.[2] Furthermore, while global income inequality has decreased, the unweighted cross-country inequality in real gross domestic product (GDP) per capita, or the inequality in countries' economic development, has remained relatively and constantly high, with a Gini coefficient of 55 (Milanovic 2016, p.166).

When discussing global inequality's impact on migratory flows, we must first consider the broader manifestations of global inequality. The differences in economic development among countries and wage differences both tend to occur with differences in countries' security (Nafziger and Auvinen 2002; Fearon 2008). In addition, the health of a country's citizens strongly correlates with economic development. According to the World Bank (2017), the group of high-income countries have a child mortality rate of 0.54%; alternatively, low-income countries exhibit a much higher average child mortality rate of 6.91%, which is more than 12.5 times the mortality rate of high-income countries. Other manifestations of cross-country inequality in economic development can also be considered. For example, the sum of effects associated with economic development can statistically explain approximately 70% of the cross-country variance in populations' self-rated well-being between 1989 and 2004 (Stevenson and Wolfers 2008). These cross-country differences in development and their various manifestations, such as wages, security, health, and well-being, have an empirically measurable effect on global migration flows. According to the United Nations (2020), around two-thirds of the global migrant population comes from developing countries.

[2] According to an OECD (2000) estimation, the emigration rates for China and India in 2000 were 0.5% and 0.4%, respectively.

While cross-country inequalities may shape the direction of international migratory flows, intra-country inequalities affect the selection process. This dissertation focusses on how within country inequality may shape the selection process of migrants from one country to another and how this selection, in turn, may shape migrants' social position within their new host society. This relationship between social inequality and international migration is analyzed from a perspective of class and social stratification.

Perspectives on Social Inequality in the Context of International Migration

The study follows a Eurocentric perspective, that is, most host countries in this study tend to be European. The Eurocentric perspective is partly the result of data availability. Developed host countries such as members of the European Union tend to be better covered with high quality micro data surveys. However, the special interest is caused by its geographic location, which makes Europe a prime destination for migration movements from relatively poorer regions of the world. In this sense, the external limits of the European Union represent a boarder, which restricts movements between relatively rich and poor countries. This issue is especially relevant in the light of climate change and projections of large-scale movement of climate refugees from the global south. The large and increasing monetary effort placed by the European Union on securing its external limits from irregular migration highlights the level of tension arising from restricting the movement of people in an unequal world.

The study's theoretical perspective combines the economic and sociological view on social inequality. From a sociological perspective, social inequality tends to be viewed as a social hierarchy of power. While Goldthorpe (2007) describes this hierarchy with the help of

occupational classes, Bourdieu does not view social hierarchy as a summation of clear-cut occupational classes but rather as a social ranking based on continuous forms of capital. In addition to economic capital, other forms of capital according to Bourdieu (1984) include cultural, social and symbolic capital. Another sociological perspective on inequality is presented by Luhmann (1975). Following Luhmann, social inequality structures the inclusion or exclusion from social systems. The social role in various social systems defines the individual's power within society. All three prominent sociological schools view social inequality by its hierarchical nature, as defined over a hierarchy of power, which finds expression in differences in resources available, rights granted, and privileges enjoyed.

From an economic perspective social inequality is the result of market processes and the institutions governing the market. Different economic fields of research focus on diverse aspects of this market process. Common fields of research include a focus on the role of human capital (Becker 1964), labor market institutions, the role of pre-existing inequalities in the reproduction of inequality and the resulting inequality of opportunity (Andrews and Leigh 2009) or the welfare state (Sinn 1994; Barr 2020). In all microeconomic fields of research, the effects of social inequality are analyzed in its appearance as the unequal distribution of resources as well as differences in the market position and the microeconomic rational choices resulting from this market dynamic.

Both views on social inequality—sociological and economic—are helpful for the empirical analysis of migration movements. On the one hand, social stratification of power means that some individuals enjoy a larger ability to change locations. They may derive this increased power due to the residential rights granted to them, the ability to absorb potential costs of migration or social connections, and access to migration networks. On the other hand, the

rational choice perspective within a market context provides the logic for using their ability assigned to them by their social position within a stratified society. When analyzing the selective effect of social inequality on the possible migrants, we need to consider social inequality with both its facets: the hierarchy in power and ability as well as the difference in market position and resulting rational behavior.

The Selective Effect of Social Inequality in International Migration

Following the sociological and economic perspective, social inequality influences both requirements for the act of migrating: the wish and the ability to migrate. Different forms of social stratification may influence the ability to migrate in several ways. Health inequalities, typically a result of structural inequalities within a society (Marmot 2005; Chauvel and Leist 2015), may determine who is able to migrate (Wu and Schimmele 2005; Fennelly 2007; Rubalcava et al. 2008; Norredam et al. 2014). Educational inequality may shape who qualifies for immigration under a given host country's migration regime (Shachar and Hirschl 2013; Beine et al. 2016). Furthermore, gender inequality and assigned gender roles, such as the male breadwinner versus female caretaker, may determine who considers migration a viable option (Belloni et al. 2018).

However social inequality may not only determine who is able to migrate but also who wants to. Borjas' (1987) economic theory of negative self-selection predicts that increased income inequality and decreased medium wages within a sending country decreases migrants' average skill level. Following the same logic, wage considerations of high skilled migrants are expected to lead them to choose countries with high median wage and high-income inequality as their

destination (Grogger and Hanson 2011). The existence of this economic incentive motivating high skilled individuals to migrate to high-income labor markets has some economists worried about a so called "brain drain" in the developing world (Docquier, Lohest, and Marfouk 2007). They fear that developing countries might lose their high-skilled workers to developed countries with higher wages. This, in turn, may hinder economic growth in the developing world. However, the prospect of migration may also influence individuals to invest in education which may offset the outflow of high skilled labor (Beine, Docquier, and Rapoport 2008).

In summary, this study's perspective assigns social inequality with a dual role for an individual's choice to migrate: the role of power and ability to migrate and the role of shaping the rational choice to migrate. This perspective also presents the theoretical framework. Generally, the cost of migration is high. This cost may include loss of social contacts, psychosocial stress, or monetary cost. Thus, the wish to migrate is low. Only approximately 15% of the global population would prefer to migrate if they could freely choose their destination country (Gallup 2018). However, given the restrictiveness of the global migration system, only approximately 3.4% percent of the global population end up migrating. In the laid-out perspective of this study, migration flows are shaped by the prevalence of the wish to migrate as well as the general ability to migrate. Different wish-ability profiles of different migration flows are expected to create distinct patterns of selection. Therefore, we analyze two opposite cases, in terms of their wish-ability profile.

In the first chapter, the selection pattern among the asylum seeker to Europe is analyzed. We would expect a situation in which the wish to migrate is relatively high in the origin country, along with the cost and restrictive measures. In such a situation, wherein many people would like to migrate but only some are able to, migration becomes a privilege. Social stratification and

one's social position within it become major forces in determining one's ability to migrate. This pattern of selection is demonstrated in the first study, which analyzes asylum seeking in Europe and the gendered ability to migrate. Here, a social hierarchy between the genders creates an imbalance of power and the ability to migrate. It is hypothesized that the gender difference in the power to migrate might be derived from gender roles (Belloni, Pastore, and Timmerman 2018) and the level of mobility associated with these social roles, as well as resource inequality.

The second chapter analyzes the return intentions of immigrants in Germany. In this situation, migration decisions are defined over a low level of restrictiveness. Most migrants retain the residential rights of their origin country. Further knowledge of the local language and culture as well as social contacts and reliable information lower the cost of return migration to a known origin relative to out-migration to an unknown destination. When restrictions and costs are low and most people can migrate, the selective channel becomes the prevalence of the wish to migrate. Social stratification is less deterministic in shaping selection; instead, complex utility considerations, of what migrant's regard as their best choice option, take over.

Two opposing economic schools of thought attempt to estimate migrant's utility consideration in the context of return migration: the neoclassic theory (see Sjaastad 1962) and the new economics of labor migration (see Stark 1996; Dustmann 2003). Both capture utility over income, while deriving different conclusions regarding the effect of income on return migration decisions (Constant and Massey 2002; Bijwaard and Wahba 2014; Haas et al. 2015). However, the subjective utility of migrants may be shaped by factors other than income. Health, social relationships, or general attitude towards ones' circumstances are some of the factors discussed in the literature (see Dolan, Peasgood, and White (2008) for an overview). Factors that influence the well-being of immigrants have been documented to be subjectively felt discrimination (Safi

2010) or factors of the host country such as the quality of public goods, income inequality, and the general climate towards immigrants (Kogan, Shen, and Siegert 2018). To reflect the complexity of utility estimation, some have called for the use of more holistic utility measures, such as subjective well-being (Wright 2011; Hendriks and Bartram 2019). The study in chapter two follows this call and aims to estimate the utility considerations of return migrants using life satisfaction surveys.

Both chapters investigate the role of social inequality in determining who ends up migrating. While the first chapter investigates how social inequality influences the ability to migrate, the second chapter analyzes the role of social inequality for the wish to migrate.

Consequences of Selection for the Social Stratification in the Host Country

The third chapter analyzes the effects of the resulting selection, occurring during the process of international migration, on immigrants' social position in their new, socially stratified host country. Depending on the circumstances of a migration flow, social stratification may influence the selection of migrants more through the ability to overcome cost and restrictiveness or by influencing individual's utility functions. Either way, a highly selected sub-sample of the origin country population will migrate to a new host country where they will share a given social reality. These selected subsamples of migrants may be socially stratified. Despite potential social inequality within the immigrant minorities, and the fact that most migrants did not know their fellow migrants prior to their migration, they will be associated to each other in their new host country.

The study presented in chapter three focuses on immigrant students' learning outcomes associated with their respective immigrant minority. More specifically, the effects of immigrants' individual socio-economic status (SES) and their minorities' average SES on the students score in the Programme for International Student Assessment (PISA) are analyzed.

The socio-economic status (SES) of a student's peer group (van Ewijk and Sleegers 2010), neighborhood (Wodtke, Harding, and Elwert 2011), school or class (Hoover-Dempsey, Bassler, and Brissie 1987; Caldas and Bankston 1997; Bankston and Caldas 1998; Perry and Mconney 2010) has been shown to influence the student's learning outcomes. Students with a shared migration background may also experience a similar exposure to stereotypes (Steele 1997; Maass and Cadinu 2003) and teacher expectations (Weinstein, Gregory, and Strambler 2004; Rubie-Davies, Hattie, and Hamilton 2006), which have also been shown to influence their learning outcomes. Not surprisingly, subjectively felt discrimination of immigrant students has been shown to correlate strongly with their objective school performance (Stone and Han 2005). Consequently, migrant students may get linked by their shared migration history, irrespective of the social stratification and heterogeneity within the group. School success and an individual's education, in turn, are major drivers for an individual's social position in an unequal society.

In this way, the selection of people from an origin country may determine these migrants' social position within their new host country across generations. The social position of immigrants in a host society may be the result of various endowments, such as education, wealth, and health of selected migrants, but this position will be felt as unjust when differences in endowments between immigrant minorities and locals translate into lasting and stable inequalities of opportunity. Specifically, the children of low SES migrants may feel immobilized at the bottom and at an unfair disadvantage relative to their local peers. This may lead to different forms of

tension between the various subgroups within a host country's society. In this context, tension is understood as conflict potential. This tension may manifest as discrimination, the formation of negative stereotypes, or migrants' general disregard for the host society's institutions. All forms of tension between immigrants and locals can make integration more difficult.

The integration process within the host society and its social hierarchy occurs within the context of a shrinking middle class, an astronomically increasing income at the apex, and a generally increasing income inequality (Milanovic 2016). Moreover, a successful integration involves the equalization of life opportunities between immigrants and locals. This aspect of the integration process may be hindered by the fact that low-skilled immigrants tend to migrate into a lower class within the host country that falls beyond the rest of society (OECD 2014). The increasing wage polarization in these host countries may also spur populist political sentiment (Pastor and Veronesi 2018; Guriev 2018). In this context, the influx of immigrants may trigger an anti-immigration backlash which, in turn, makes redistribution less politically feasible as a primary solution to address the social inequality (Alesina and Tabellini 2021).

Consequently, the selection during emigration, which is shaped by the social stratification within the origin country, can create lasting and stable social hierarchies between different immigrant minorities and locals. This thesis investigates the interplay between social stratification, selection, and the production of new social hierarchies within host societies using three concrete case studies. Each study is presented within its chapter.

Overview of the Results

The results of the three studies highlight how social inequality shapes the selection process during international migration and how this selection, in turn, shapes immigrants' position in the host society.

The first study shows that social inequality may shape the ability to migrate. More specifically, the study finds a significant correlation between the variables aiming to capture differences in the gender roles and gender inequality (i.e., adolescent birthrate and national religion) and the number of male and female asylum applications in Europe. This indicates that gender roles and gender inequality may create gender differences in the ability to seek asylum in Europe. However, gender inequality in the origin country also correlates with gender differences in the asylum decisions. The higher the gender inequality in the origin country, the higher the female asylum acceptance rate relative to men.

The second study shows that utility considerations may shape migration decisions. More specifically, return migration intentions of immigrants in Germany are shown to correlate with differences in life satisfaction between the immigrants and their demographic peers in the origin country. This correlation, however, is somewhat dependent on the nature of social ties held by immigrants in Germany to their origin country.

The third study shows that the composition of an immigrant minority, which is a consequence of selection occurring during international migration, may influence the long-term social position of immigrants within the host country's society. Specifically, the composition of an immigrant minority influences immigrant students' scores in the Programme for International Student Assessment (PISA) beyond their individually held SES.

Chapter I: Inequality and Systematic Selection in International Migration

Gender and Asylum in Europe: A Quantitative Assessment of Gendered Self-Selection and its Consequences for Asylum Acceptance Rates

This dissertation is divided into two parts. The first part contains the first two chapters and concerns inequalities' effects on migration patterns. Specifically, these two chapters concern selection during outmigration and return migration, respectively. All chapters, including the first chapter, will consist of an introduction to the literature followed by my own empirical study.

The Role of Inequality in Selection during Migration

It is a well-established finding in migration research that migrants are not randomly selected from an origin country. Instead, the selection is a function of who wants and is able to migrate. According to Gallup Surveys between 2015 and 2017, approximately 15% of the global population would prefer to migrate if they could freely choose their destination country (Gallup 2018). This population is sometimes noted as the "migration potential" (Docquier et al. 2014). However, only 3.4% of the global population were actual international migrants in 2015 (IOM 2020b). As only one in nearly nine people worldwide would want to migrate, and only one in five of those who want to migrate proceed with migrating, this indicates the steep selection process that occurs during emigration.

Many researchers argue that on average, migrants are favorably selected, in that they are more "able, ambitious, aggressive, entrepreneurial, or otherwise more favorably selected than similar individuals who choose to remain in their place of origin" (Chiswick 1999 p.181). The assumed

positive selection is also mirrored in the healthy migrant hypothesis, according to which individuals need certain levels of mental and physical health to attempt a successful migration project. Thus, migrants are self-selected as healthier than average non-migrants. Many empirical studies, much of it on Latin American migrants to the United States support this hypothesis (Wu and Schimmele 2005; Fennelly 2007; Rubalcava et al. 2008; Norredam et al. 2014). In addition to the healthy migrant hypothesis, the "salmon bias" theory posits that migrants are more likely to return to their country of origin if they become ill, and thus, the healthy migrant effect may be biased; empirical evidence largely supports this theory (Abraído-Lanza et al. 1999; Turra and Elo 2008; Lu and Qin 2014). Regardless of the degree to which the healthier migrant phenomenon occurs due to health selection during the emigration or return migration, together the salmon bias and healthy migrant theories predict a positive selection of migrants in terms of health.

Borjas' (1987) economic theory of negative self-selection is based on Roy's (1951) model, and predicts that increased income inequality and decreased medium wages within a sending country decreases migrants' average skill level. Liebig and Sousa-Poza (2004) suggest that this negative selection mechanism alters the naturally positive selection tendencies of migration. Other research highlights the importance of including the costs and constraints of international migration in the Roy model (Belot and Hatton 2012). On the one hand, the Roy model predicts that low-skilled migrants from poorer, more unequal countries have the most to gain from international migration. On the other hand, low-skilled migrants from poor countries are also most constrained by the substantial costs of international migration. Wage maximization's impact on migration decisions is further muddled by restrictive migration regimes, which tend to restrict low-skilled rather than high-skilled migration. However, the latter tends to be less politically restricted (Shachar and Hirschl 2013) and less constrained by the costs of international

migration. Thus, wage maximization's effect on migration decisions can be more easily observed. Following the Roy model's logic, high-skilled migrants benefit from large skill-related wage differences in the host country. Therefore, rational high-skilled migrants prefer an unequal host country with steep returns to education over a more egalitarian society; empirical evidence exists to support the wage maximization hypothesis for high-skilled migrants (Grogger and Hanson 2011).

While skill selection from the labor migration and wage maximization perspectives has been studied using the Roy model since the 1950s, researchers have only recently begun to examine the patterns of selection for refugees and asylum-seekers. Several studies suggest that refugees in Europe are positively selected in terms of education (Buber-Ennser et al. 2016; Lange and Pfeiffer 2019; Kolb et al. 2019) and labor-market outcomes (Kondylis 2010). Further, Blum and Rei's (2018) study of Holocaust refugees demonstrates the same pattern of positive selection. However, Guichard's (2020) findings suggest that this pattern may only be true for some countries of origin and not for others. While a pattern of positive selection in terms of education can be found for refugees from Syria and Iraq, a negative selection is found for refugees from Albania and Serbia. The finding of positive selection in terms of income and education has generally been explained by the high costs of irregular migration.

A selection channel that functions over costs and the ability to absorb or overcome them is expected to reproduce existing inequalities within the origin country's society. Namely, the greater an individual's endowments—such as education, income, or wealth—the less constraining the effects of migration costs. The first studies that emerged in this relatively recent topic of research tend to confirm this pattern by indicating a generally positive selection. In the following study, I will showcase how existing inequalities within a society and the costs

associated with irregular migration shape the selection of asylum-seekers in a complex process. Specifically, the study analyzes gender inequality within an origin country's society and the selection of asylum-seekers it produces.

Overview Study I: Gender and Asylum in Europe

While 50% of forcefully displaced individuals worldwide are female, only 30% of the people seeking asylum in Europe are female. This discrepancy is due to the gendered self-selection of those who migrate to Europe. This study utilizes administrative data from Eurostat on 4.9 million asylum-seekers between 2008 and 2018 to identify the country-level factors that drive this gendered self-selection as well as its consequences on the asylum acceptance rate. The results suggest that gendered self-selection may occur due to gender inequality in the countries of origin. Additionally, men had lower asylum acceptance rates. This disadvantage in terms of male asylum acceptance rates increases with the share of male asylum-seekers. The effects of the gender distribution on male asylum acceptance rates remain even after including several control variables.

Introduction: Gender and the Rise of Asylum-Seekers to Europe around 2015

A tragic milestone was reached in 2015, as the number of forcefully displaced people surpassed 65 million (United Nations High Commissioner for Refugees--UNHCR 2015b), a new all-time high. This increase in displaced people also led to an increase in international asylum-seekers, reaching an estimated 25 million refugees and asylum-seekers worldwide (UNHCR 2015b). Most of these displaced people (40.8 million) remained in their own country, and most of those internationally displaced found refuge in a neighboring country, with 85% of refugees

hosted in developing regions (UNHCR 2015b). However, the increasing number of displaced people also translated to an increasing number of asylum-seekers in Europe; this peaked in 2015, with 1.2 million first-time asylum applications (Eurostat 2020b).

When observing the 65 million individuals forcefully displaced and the 1.2 million asylum applications in Europe in 2015, it becomes clear that a steep self-selection process has occurred regarding exactly who seeks asylum in Europe. One primary dimension by which this self-selection occurs is gender. While 50% of worldwide asylum-seekers are female (UNHCR 2015b), the current work considered Eurostat (2020b) data to note that only 31% of the individuals seeking asylum in Europe are female. This gender imbalance among asylum-seekers sparked public debates in Europe and the United States, as evidenced by the numerous articles appearing in popular news outlets (*Der Spiegel* 2015; *Politico* 2016; *Washington Post* 2016). The sociological research community has also produced multiple articles on male asylum-seekers' experiences and their framing in public discourse (Griffiths 2015; Allsopp 2017; de Hart 2017). In contrast, economists tend to focus on self-selection in many extant analyses of migration; however, economists have produced only one text on the self-selection of asylum-seekers in the 2015 migration crisis (Aksoy and Poutvaara 2019), and this article focused on migrants' skills and returns for labor rather than gender. Hence, this study aims to quantitatively analyze the drivers of the gender imbalance among European asylum-seekers. Additionally, the methodology tests the potential effects of gender imbalances in asylum-seeker flows on asylum acceptance rates.

The results indicate that gender inequality is a major force in shaping self-selection among asylum-seekers. Furthermore, a large surplus of young male asylum-seekers decreases the chance that they will gain residential rights.

Gender Inequality and the Gendered Self-Selection of Asylum-Seekers to Europe

Why are there so many more male than female asylum-seekers in Europe? I respond to this question by formulating several theoretically informed hypotheses for quantitative testing.

Our **first hypothesis** posits that the surplus of male asylum-seekers in Europe is the product of social structures in their countries of origin. Specifically, gender inequality in the origin country might generate gendered self-selection for asylum migration to Europe in two ways: resource inequality and gender roles. Migrating to Europe as an asylum-seeker is both risky and expensive; a study among asylum-seekers in Germany suggests that the average travel cost to reach Germany between 2013 and 2016 was approximately EUR 7,100 (Brücker et al. 2016). The same study also suggests that approximately 30% of asylum-seekers use money lent to them by friends and family. It has been argued that families may be more willing to invest in a migration project for a man than a woman (Belloni et al. 2018). Given scarce resources, women located at the bottom of the social hierarchy lack access to the resources to facilitate their migration to Europe. Women have fewer personal resources to attempt migration, and with increasingly patriarchal social structures, women may also struggle to borrow money. Another factor through which gender beliefs could directly create gendered self-selection could involve societal beliefs in gender roles. Women tend to perform more care-based work, such as taking care of children or the elderly, and thus, are less mobile (Belloni et al. 2018). This is reflected in data from the Netherlands, where 34% of men but 66% of asylum-seeking women traveled with their spouses (Mascini and Bochove 2009). If this formulated mechanism of gender self-selection is true, we could expect less women from countries with substantial gender inequality and influential gender roles.

Another possible explanation involves the gender roles assigned to men. The **second hypothesis** postulates that men might hold the gendered role of breadwinner, and thus, migrate to Europe for economic reasons. In this case, one could predict that an economic downturn would push a higher proportion of men to migrate rather than women.

The third potential explanation as noted in **hypothesis three** is that the gender imbalance is shaped by insecurity and violence in the country of origin. Different forms of conflict and violence may affect men and women differently. On the one hand, large-scale sexual violence, which tends to target women, is a part of many armed conflicts (Wood 2006). On the other hand, men are more often forced to serve in the military, which places them at the center of the battlefield (Davis 2016). It has also been argued that gender roles lead men to become more active in the public sphere, such as in politics, while women's sphere tends to be limited to the family (Freedman 2015). This situates men at the center of most political struggles. If an excessive proportion of men are affected by political persecution, then large-scale political violence could drive up the number of men in the asylum-seeker population.

Finally, **hypothesis four** refers to the insecurity and danger that asylum-seekers experience during their migration to Europe. Undocumented migrations between the country of origin and Europe are dangerous, and undocumented migrants are frequently subjected to violence (Infante et al. 2012; Keygnaert et al. 2012; Freedman 2016). Such violent experiences can be a result of interactions with state officials that aim to prevent undocumented border crossings, criminal enterprises that profit from extortions and human trafficking, or the general insecurity in refugee camps. Women might be disproportionately targeted, which would make migrating disproportionately more dangerous for women than men (Freedman 2016). Additionally, many asylum-seekers attempt to enter Europe through the Mediterranean Sea. This water crossing is a

dangerous obstacle in the migration route to Europe, with an estimated 4,000 asylum-seekers drowned in 2015 (UNHCR 2015a). Literature also indicates that women tend to be more risk-averse than men (Borghans et al. 2009; Bertrand 2011; Booth et al. 2014). If the increased risk of violence for women—and given the female tendency toward risk aversion—is indeed behind the observed gendered self-selection, we could anticipate the number of women migrants to decrease not only as the distance they must travel increases (and increasing distance increases the number of borders they must cross), but also if entering Europe by sea.

In summary, four potential mechanisms might create a gendered self-selection among asylum-seekers in Europe. First, gender inequality's direct economic effects restrict females' access to resources and decrease the opportunity to migrate to Europe. Further, the gender roles connected to gender inequality assign women the role of caretakers, which limits women's mobility. Second, the gender role of "breadwinner" as assigned to men could push an excessive proportion of men rather than women to seek refuge in Europe for economic reasons. Third, violence and insecurity could affect men and women differently and could create imbalances of either men or women refugees depending on the context. Finally, the gender imbalance could be driven by gender differences in risk as well as risk aversion in the context of undocumented migration.

Gender's Effect on the Asylum Acceptance Rate

Gendered self-selection may shape not only the gender distribution among asylum-seekers, but also asylum acceptance rates (**hypothesis five**). First, researchers have found lower acceptance rates for men in several European countries (Spijkerboer 2015; Wetten et al. 2001; Mascini and Bochove 2009). Thus, if these previous findings can be replicated for Europe as a

whole, the male-skewed asylum-seeker population produces a lower average asylum acceptance rate than a more gender-equal distribution. This disadvantage may be further increased through the gender distribution itself; the indirect effect may influence the male asylum acceptance rate, whether through family composition and/or the various stereotypes and perceptions related to the gender imbalance in the asylum-seeker population.

The share of men is connected to family migration patterns. Typical gender roles create a situation in which men travel more often alone (as "breadwinners") and women travel within their family (as caretakers). This gendered difference in migration patterns has been shown to exist in the asylum-seeker population in the Netherlands (Mascini and Bochove 2009), as 34% of men and 66% of asylum-seeking women travel with their spouses. Men traveling alone are found to have lower asylum acceptance rates compared to men traveling with their families (Boyd 1999; Mascini and Bochove 2009). Consequently, large proportions of single male asylum-seekers and small proportions of women could result in lower asylum acceptance rates for men.

This "single man" effect might be strengthened by various common European perceptions and stereotypes regarding young male asylum-seekers. Griffiths (2015) describes these through two archetypes: "genuine" and "bogus" refugees. The former are presumed as vulnerable, passive, and female, while the latter are stereotyped as active, criminal, and male (Griffiths 2015). A skewed gender distribution could increase the likelihood of men being categorized as the latter archetype.

In summary, we theorize that the gendered self-selection of asylum-seekers in Europe is largely a result of excluding women from the process. This exclusion may transpire as a result of economic resources, gender roles, or gendered threats during migration. The resulting gender

distribution may influence male asylum acceptance rates over family composition or common perceptions on the European side.

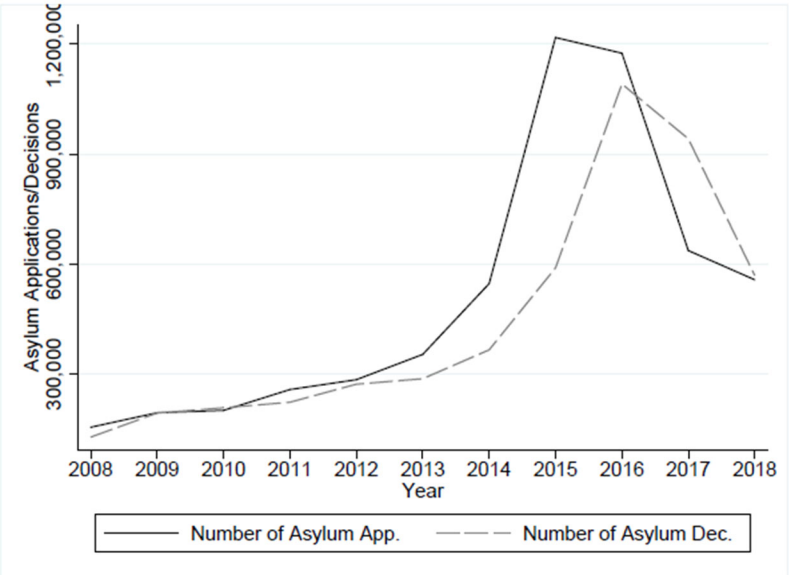
Data: Eurostat Asylum Statistics and Origin Country Characteristics

All calculations in this study are performed based on Eurostat data on asylum applications and decisions by age, sex, origin, and host country (Eurostat 2020a; 2020b). The Eurostat data lists the number of asylum applications and decisions by origin country, host country, age, gender, and decision outcome. Age is grouped into five categories: younger than 14, 14 to 17, 18 to 34, 35 to 64, and 65 and older. The reported number of asylum decisions and asylum applications is rounded to the nearest five; for example, three decisions are rounded to five, and two decisions are rounded to zero. However, as rounding errors were random, no systematic bias was anticipated. The dataset is a full representation of all officially documented asylum applications and decisions within the European Union (EU) between 2008 and 2018. Overall, the dataset consists of 5,039,230 first-instance asylum decisions and 5,931,365 asylum applications. The chosen subsample from this data included only observations from countries that were never a part of the European Union, with no missing values, and that have asylum applications and asylum decisions for a given year and country of origin, with a minimum of 50 asylum applications for a given country of origin and year. Only non-EU countries are considered in the present analyses because this study investigates the self-selection that occurs during migrations to the European Union. Further, only cases from countries with asylum applications and decisions for a given year were selected to ensure a consistent dataset for all calculations.

The data was restricted to a minimum of 50 asylum applications for a given year and country to ensure the significance of the gender distribution calculated based on asylum applications. This subsample consists of 4,943,175 asylum decisions and 5,288,878 asylum applications. Observations from North Korea, Palestine, and the western Sahara region were omitted because valid country-level information was scarcely available for nearly all the variables used, resulting in 4,920,560 asylum decisions and 5,185,895 asylum applications. Finally, all observations from origin countries were omitted in which the combination of origin/host country, age, and gender perfectly explain all outcomes of asylum decisions. This omission is critical because this study includes an analysis of gender differences in asylum acceptance rates that cannot be drawn from such cases. Based on these considerations, the final dataset consists of 4,875,650 asylum decisions (96.8% of all decisions) and 5,154,775 asylum applications (86.9% of all asylum applications) from 98 origin countries and 32 European host countries. The observations were distributed over time from 2008 to 2018. However, it is not a balanced panel, and not all countries appear in the data for every year. This resulted in 813 country-year observations.

We then introduce the data by first quantitatively describing the flow of asylum-seekers, then illustrating the country-level variables used to analyze this flow. Figure 1 presents the number of asylum applications and decisions over time. The growth in the number of asylum claims accelerated from 2008 to 2014 and increased sharply in 2015. Subsequently, the number of asylum applications decreased. One can also observe a time lag between asylum applications and asylum decisions, as the asylum decisions peaked in 2016, while applications peaked in 2015.

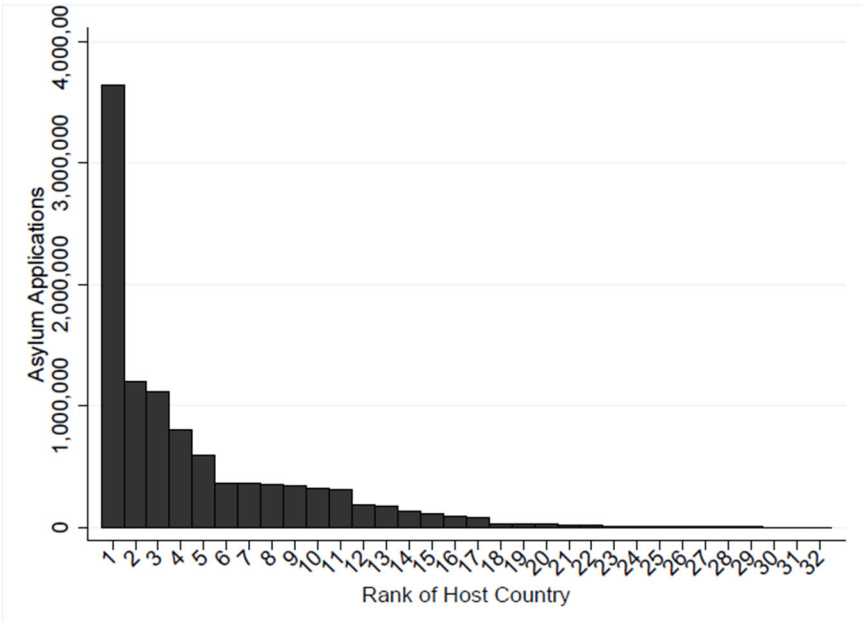
Figure 1: Asylum Applications and Decisions over Time (2010–2018)



Note: Data from Eurostat 2008–2018; pooled by year.

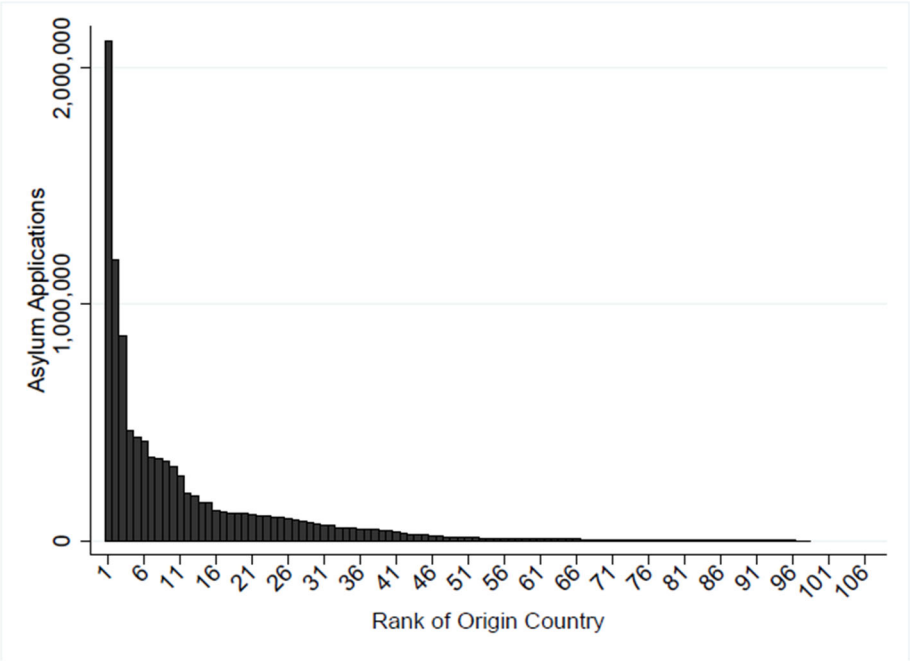
Figures 2 and 3 display the distribution of asylum applications in the host and origin countries. The countries in both figures are sorted on the x-axis by the number of asylum applications (Tables A and B in the Appendix provide the distribution tables). The figures depict two distributions that follow an exponential function: a large share of asylum-seekers originate from a few origin countries (i.e., the top ten countries of origin covering 66% of asylum-seekers from the sample are Syria, Afghanistan, Iraq, Eritrea, Pakistan, Nigeria, Russia, Somalia, Iran, and Albania), most of which are handled by five host countries (Germany, France, Italy, Sweden, and the UK receive 71% of asylum applications).

Figure 2: Asylum Applications by Host Country



Note: Data from Eurostat 2008–2018; pooled by country of origin.

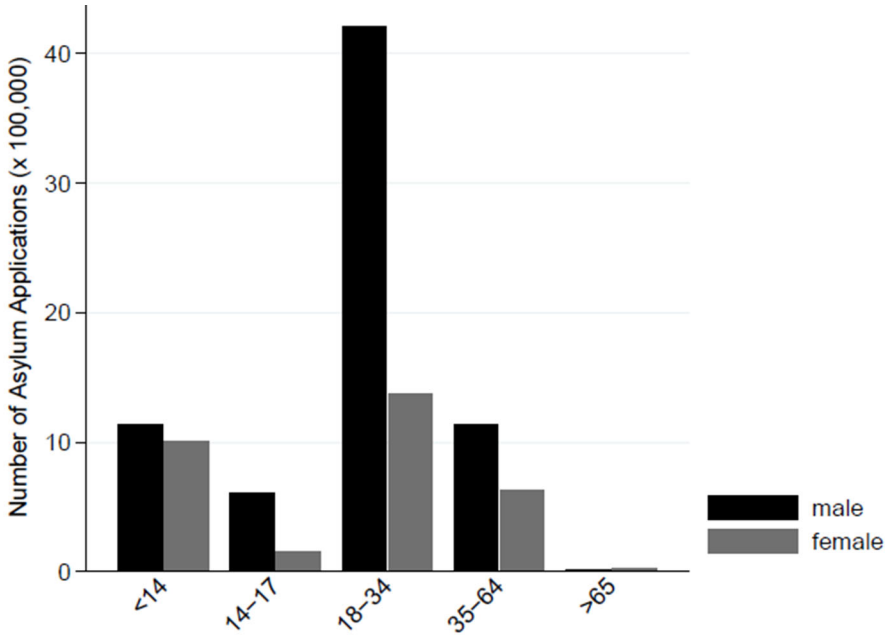
Figure 3: Asylum Applications by Country of Origin



Note: Data from Eurostat 2008–2018; pooled by host country.

However, asylum-seekers are not only unevenly distributed over time (Figure 1), host (Figure 2), and origin country (Figure 3), but also according to gender and age. Figure 4 illustrates the age distribution for both men and women in all asylum applications made between 2008 and 2018 in the European Union. When the gender distribution is divided according to age, it becomes apparent that the gender imbalance is largest in the 18 to 34 age group. The gender distribution is most equal for those asylum-seekers younger than 14 and older than 65.

Figure 4: Asylum Applications by Age and Gender



Note: Data from Eurostat 2008–2018; pooled by age and gender.

The variable ***number of asylum applications*** represents the number of asylum applications made while the variable ***number of asylum decisions*** represents the number of decisions made. The number of asylum applications is split into male and female applications: ***number of female applications*** and ***number of male applications*** from a given country and year. All variables corresponding either to the number of decisions or applications where log-transformed before

they were introduced into statistical models. The variable ***asylum acceptance rate*** is the calculated probability of gaining any residential rights in the first-instance decision. The grounds on which these residential rights are granted are not considered, such as refugee status, subsidiary protections, and humanitarian reasons. The rationale underlying the calculation of the variable ***asylum acceptance rate*** is explained in the Methods section and calculated in Equation (4).

The external independent variables examined here can be categorized into four blocks: cultural, economic, security, and migration routes.

The first block of cultural variables aims to capture the role of gender in a given culture. This block consists of a proxy for female emancipation and religion. This study uses data on the adolescent birth rate (ages 15 to 19) of women in the given country of origin as a proxy for female independence (UNDP 2020). The United Nations' (2012) sustainability goals describe the association between the adolescent birth rate and gender equality as follows:

> "Women who become mothers very early frequently miss out on education and socio-economic opportunities. Thus, high adolescent birth rates may contribute to a large gender gap in education. High adolescent birth rates also indicate a prevalence of early marriage among women, and are often a sign of a social structure in which women are expected to affirm their adulthood by assuming their social role as mothers as early as possible. As such, declining adolescent birth rates can indicate increasing gender equality and women's empowerment."

The United Nations provides yearly data on adolescent birth rates for 2005 to 2018. From 1990 to 2005, the birth rate was shown only every five years, or for 1990, 1995, 2000, and 2005. The

missing gaps between the years were simulated by imputing the given time trend in the data. The overall adolescent birth rate matches the asylum data with a nine-year delay, or specifically, asylum-seekers in 2009 were matched with the birth rate in the origin country in the year 2000. This is calculated so that the adolescent birth rate matches to when the members of the 18 to 34 age group, with a median of 26, were on average 17, as this is the center of the age bracket for the adolescent birth rate 15 to 19 group in the country of origin. We focus on the 18 to 34 age group because the differences in the gender distribution are the most persistent for this age group (Figure 4).

The second variable employed to capture gender relations in the country of origin is religion. It has been argued that gender inequalities partially occur due to religious norms (Inglehart et al. 2003). Within this context, it has been demonstrated that the predominant religion is connected to a given place's gender inequality (Seguino 2011; Klingorová and Havlíček 2015). This paper defines the main religion as the denomination with the largest fellowship in the country. Data on the religious demographics within countries are taken from the World Religion dataset (Maoz and Henderson 2013).

Variables concerning the economic situation in the country of origin are taken from the World Bank, such as the GDP per capita; and the International Labour Organization, such as unemployment (World Bank 2020a, 2020b). The logarithm of GDP per capita in US dollars as of 2020 was used to determine economic performance. If GDP data for a specific year were not available, the previous year's GDP was imputed. If the previous year was not available, the following year was imputed, for example, if 2015 data was missing but available for 2016. However, the GDP was estimated for some special cases; for example, the GDP for Syria is based on estimations by the International Monetary Fund (IMF; Gobat and Kostial 2016). This

expert appraisal of the Syrian War's economic consequences revealed an economic downturn of 57% between 2010 and 2015. Further, the study estimates that this economic downturn stalled for a few years after 2015, until recovery began. This study calculates the estimated GDP for Syria between 2008 and 2010 as the last available GDP from 2007, while the GDP between 2010 and 2015 is estimated to decline linearly, with an overall downturn of 57% in 2015 (see Figure I in the Appendix). Following Gobat and Kostial's (2016) prediction, GDP is thought to stall between 2015 and 2018. Similarly, estimations from the IMF's economic outlook were used in data for Venezuela (IMF 2020). The GDP for Taiwan was obtained from the National Statistics Republic of China (Taiwan). Unemployment is measured as the share of unemployed individuals as estimated by the International Labour Organization.

Five variables capture the different possible dimensions of violence and the security situation in the country of origin: political terror (Political Terror Scale 2019), genocide, state failure, international war, and civil war (Marshall 2019; Marshall et al. 2019). The Political Terror Scale combines information on human rights violations taken from reports from Amnesty International, Human Rights Watch, and the US Department of State. Further, the Political Terror Scale's scoring is based on remaining sources if any one or two sources are missing. The variable measuring genocide ranges from zero to five, with increments of 0.5, and represents the number of deaths caused by genocide within a year. The scale for state failure represents the state's inability to exercise its authority, manifesting through the shutdown of government services; security forces' failure to follow through on government directives; and various levels of anarchic conditions, with rival forces trying to establish autonomous zones of government. The scale ranges from one, or "an adverse regime change with no significant weakening of state institutions or persistent collapse of public order," to four, or "complete collapse or near-total

failure of state authority." The variables for international and civil war are categorized on a scale from 1, or "sporadic or expressive political violence," to 10, or "extermination and annihilation." While international war occurs between two nations, civil war occurs between two parties within the same nation-state.

Two variables capture the difficulty in the migration route from the origin to host country. The first is the distance between the two countries. This study uses the log-transformed distance between the most populated cities of origin and the host country. The second variable is the share of asylum-seekers from a given country who crossed a European border by sea, according to Frontex (2020). Countries for which Frontex observed no undocumented border crossings were classified as zero. Table 1 provides summary statistics for the previously discussed variables.

Table 1: Descriptive Statistics

	mean	sd	min	max
Share of Men (Decisions)	0.67	0.15	0.14	0.98
Share of Men (Applications)	0.67	0.16	0.18	0.99
Number of Male Applications	8,745	30,405	20	505,460
Number of Female Applications	3,936	14,153	10	253,115
Number of Asylum Decisions	5,997	20,098	25	415,625
Adolescent Birth Rate	80.50	51.04	6.1	219.6
Buddhist	0.05		0.00	1.00
Christian	0.42		0.00	1.00
Hindu	0.02		0.00	1.00
Muslim	0.48		0.00	1.00
Other	0.02		0.00	1.00
Distance (km)	5,088	2,272	1,125	10,660
Sea	0.53		0.00	1.00
Unemployment	8.06	6.09	0.32	33.76
GDP	3,690	5,473	234	62,997
Political Terror	3.16	0.95	1.00	5.00
State Failure	0.16	0.72	0.00	4.00
Genocide	0.03	0.22	0.00	3.50
War	0.02	0.37	0.00	6.00
Civil War	0.92	1.79	0.00	7.00

Note: Data from Eurostat 2008-2018, UNHCR (2018), Maoz and Henderson (2013), Frontex (2020), World Bank (2020a, 2020b), Marshall et al. (2019), and Marshall (2019); supporting data from IMF (2020).

Methodology: Estimating Effects on the Gender Distribution and Asylum Acceptance Rates

To uncover the drivers of gendered self-selection and gender distributions' impacts on asylum acceptance rates, this study uses multiple variations of fixed- and random-effect models.

The first model analyzes the connection between the gender distribution and various country-level variables using a multilevel random-intercept linear regression model. Equations (1) models the number of female asylum applications (i.e., Nf_{ot}) after controlling for the number of male applications (i.e., Nm_{ot}) from a given origin country with a mixed-effects model. The number of female asylum-seekers Nf_{ot} within an asylum-seeker population from country *o* at time point *t* is estimated by *n* covariates *x* and a residual term ε_{ot}. Further, the intercept term β_{0o} is split into a term that is fixed within countries of origin π_{00} and a term that captures the variation from this fixed part of the intercept r_{0o}:

$$\boldsymbol{Nf_{ot} = \beta_{0o} + \beta_1 Nm_{ot} + \beta_2 x_{1ot} + \cdots + \beta_n x_{not} + \varepsilon_{ot}} \quad \textbf{(1)}$$

$$\boldsymbol{\beta_{0o} = \pi_{00} + r_{0o}}$$

The gender composition of asylum seeker flows is also analyzed using a fixed-effect panel model that controls for the origin country and thus, only observes the changes over time (Equation 2). Here, O_o represents the origin country fixed effects.

$$\boldsymbol{Nf_{ot} = \beta_0 + \beta_1 Nm_{ot} + \beta_2 x_{1ot} + \cdots + \beta_n x_{not} + O_o + \varepsilon_{ot}} \quad \textbf{(2)}$$

The role of gender in the context of asylum acceptance rates was then examined. Model 3 investigates the individual-level direct effects of gender and age on the chance of asylum, and Models 4, 5, 6, 7, and 8 analyze gender distributions' country-level effects on asylum acceptance rates. Model 3 calculates the logarithm of the odds ratio from the binary outcome (i.e., allowed to stay in host country yes or no) of individual *i* from origin country *o*, currently residing in

destination country *d* at time *t*. The model also includes the individual's age and gender as well as the interaction between the two. The origin country *o*, destination country *d*, and year *t* are controlled with fixed effects to extract the average effects of gender and age. The fixed effects are represented as a vector for destination country *D* and the corresponding coefficients δ. Similarly, $O_i\vartheta$ denotes the set of origin countries and their coefficients. Finally, Model 3 includes the time effects ω_t and error term ε_{iodt}

$$\ln\left(\frac{P(Y_{iodt})}{1-P(Y_{iodt})}\right) = \boldsymbol{\beta_0} + \boldsymbol{\beta_1 Gender_i} + \boldsymbol{\beta_2 Age_i} + \boldsymbol{\beta_3 Gender_i Age_i} + \boldsymbol{D_i\delta} + \boldsymbol{O_i\vartheta} + \boldsymbol{\omega_t} + \boldsymbol{\varepsilon_{iotd}} \quad \textbf{(3)}$$

The drivers behind the asylum acceptance rates and subsequent gender differences are estimated in two steps: first, the asylum acceptance rates and their gender differences are calculated for each country-year separately. Second, the estimated coefficients for the origin country at a given year and the interaction between origin country and gender become the dependent variables, and are estimated within a country-level mixed effect (years in country) or fixed-effects (panel) model. Model 4 illustrates the equation that estimates the origin country effect on asylum acceptance rates with its gender variation. The sample was thereby restricted to the 18 to 34 age group because this is the largest group with the greatest gender differences, and limiting the sample by age increases the model's parsimony. Note the interaction between origin country and gender—or specifically, $(O_i Gender_i)\vartheta_{2t}$—acts as an estimator of gender differences across the origin countries.

$$\ln\left(\frac{P(Y_{it})}{1-P(Y_{it})}\right) = \boldsymbol{\beta_{0t}} + \boldsymbol{\beta_{1t} Gender} + \boldsymbol{O_i\vartheta_{1t}} + \boldsymbol{(O_i Gender_i)\vartheta_{2t}} + \boldsymbol{D_i\delta_t} + \boldsymbol{\varepsilon_{ot}} \quad \textbf{(4)}$$

In the second step, the estimated coefficients for the country of origin-specific asylum acceptance rates and their gender variation, as estimated with ϑ_{1t} and ϑ_{2t} in Model 4, are now used as dependent variables in a mixed- and fixed-effects model. Models 5 and 6 illustrate the fixed-effect models, in which ϑ_{jt} indicates row j of the vector of coefficients ϑ_t.

$$\widehat{\boldsymbol{\vartheta_{j1t}}} = \boldsymbol{\gamma_0} + \boldsymbol{\gamma_1 x_{1jt}} + \cdots + \boldsymbol{\gamma_n x_{njt}} + \boldsymbol{O_o} + \boldsymbol{\varepsilon_{jt}} \quad \textbf{(5)}$$

$$\widehat{\boldsymbol{\vartheta_{j2t}}} = \boldsymbol{\gamma_0} + \boldsymbol{\gamma_1 x_{1jt}} + \cdots + \boldsymbol{\gamma_n x_{njt}} + \boldsymbol{O_o} + \boldsymbol{\varepsilon_{jt}} \quad \textbf{(6)}$$

Models 7 and 8 estimate the same two dependent variables within a mixed-effects framework.

$$\boldsymbol{\vartheta_{j1t}} = \boldsymbol{\gamma_{0j}} + \boldsymbol{\gamma_1 x_{1jt}} + \cdots + \boldsymbol{\gamma_n x_{njt}} + \boldsymbol{\varepsilon_{jt}} \quad \textbf{(7)}$$

$$\boldsymbol{\gamma_{0j}} = \boldsymbol{\tau_{00}} + \boldsymbol{\mu_{j0}}$$

$$\boldsymbol{\vartheta_{j2t}} = \boldsymbol{\gamma_{0j}} + \boldsymbol{\gamma_1 x_{1jt}} + \cdots + \boldsymbol{\gamma_n x_{njt}} + \boldsymbol{\varepsilon_{jt}} \quad \textbf{(8)}$$

$$\boldsymbol{\gamma_{0j}} = \boldsymbol{\tau_{00}} + \boldsymbol{\mu_{j0}}$$

The results of the previously explained models will be shown now in the order they were introduced. All the models' non-binary independent variables were standardized for comparably sized effects.

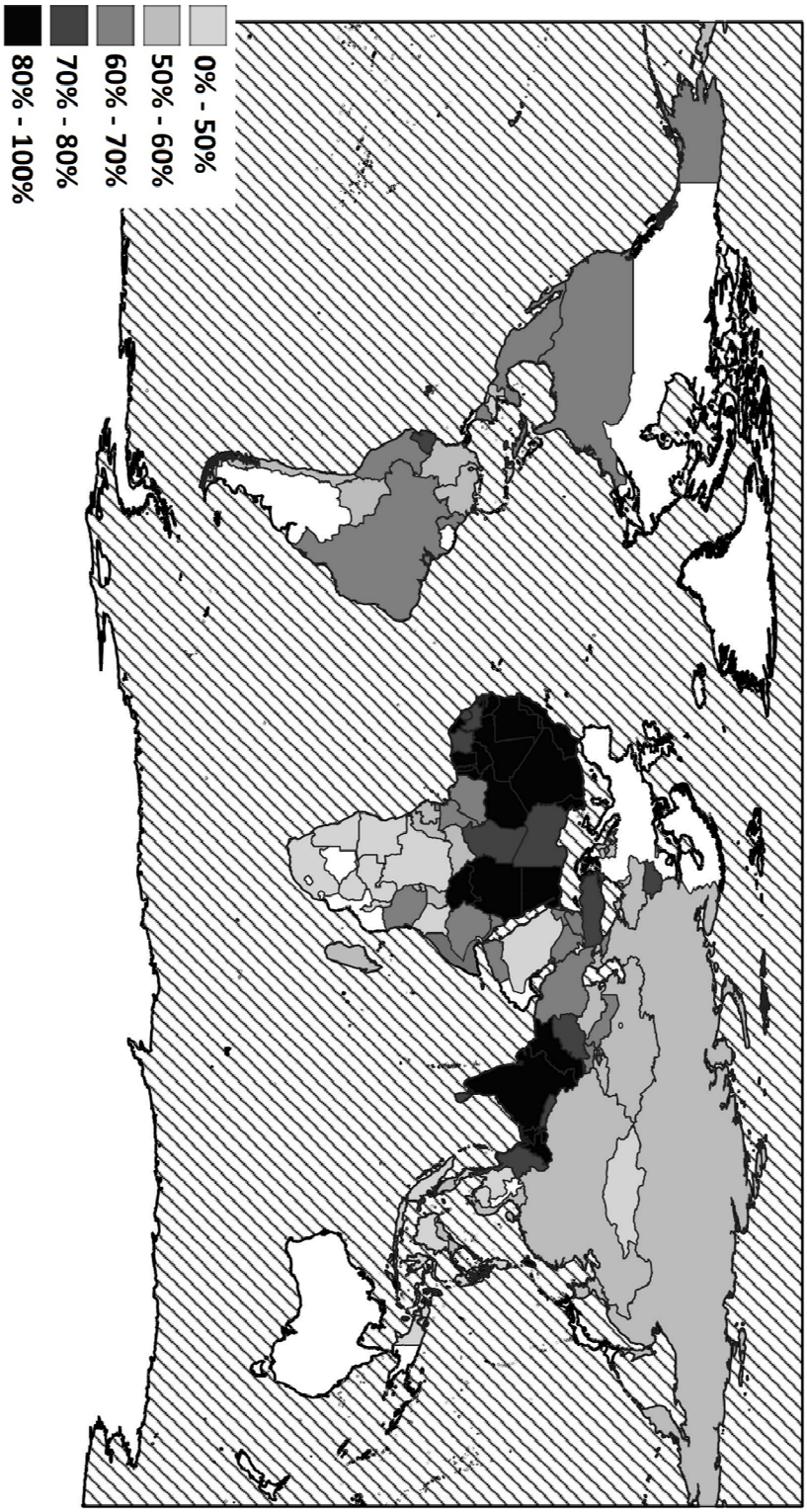
Results: Gendered Self-Selection and its Effect on Asylum Acceptance Rates

The results section consists of two parts. First, this section explores the drivers behind gendered self-selection, and second, calculates gender distribution's effects on asylum acceptance rates.

What Drives Gendered Self-Selection?

Why does the gender distribution in asylum-seeker populations vary between countries of origin? This study responds by mapping the asylum-seeker populations according to the share of men and their country of origin. Figure 5 illustrates a heat map of the proportion of males within asylum streams from various countries of origin. Note that the unshaded (white) countries had insufficient numbers of asylum-seekers.

Figure 5: Gender Distribution Across Source Countries



Note: Data from Eurostat 2008–2018; this figure notes the share of men among asylum applications made in the European Union, with a minimum number of 50 applications per country; this map was produced with QGIS 3.4 Madeira software.

The map in Figure 5 reveals some noteworthy patterns. First, a stark division exists between north African and Sub-Saharan African countries. While the northern areas have a large overpopulation of young men, the southern region depicts a greater gender balance. Another cluster of countries with a high proportion of young men was found in southern Asia. This cluster consists of India, Pakistan, Afghanistan, Nepal, Burma, Bangladesh, and Myanmar. Moderately high levels of young men within the asylum stream are found in Middle Eastern countries, such as Syria, Iraq, and Iran, among others.

The clustering apparent on the map might suggest cultural reasons behind the gender distribution, as neighboring countries with similar cultures exhibit similar gender distribution patterns, such as those in northern versus Sub-Saharan Africa. Economic differences seem to play no major role, as poorer Sub-Saharan Africa appears more gender-equal than richer northern Africa. Further, the security situation does not seem to manifest as a driver of gender distributions, given that low-safety countries share the same gender distribution as neighboring countries with a significantly better situation; for example, Afghanistan is similar to Pakistan, and Syria is similar to Iran.

Table 2: Gendered Self-Selection

Dep. Var.: Nr. of Female Applications (log)	Mixed Effect Model		Fixed Effect Model	
Nr. of Male Applications (log)	0.90***	(46.63)	0.89***	(39.28)
Culture				
Adolescent Birth Rate	-0.27***	(-3.36)	-0.35*	(-2.15)
Religion: Christian (ref.)				
Buddhist	-0.89**	(-2.61)		
Hindu	-0.88	(-1.76)		
Muslim	-0.63***	(-4.07)		
Other	-0.89	(-1.81)		
Migration Route				
log(Distance in km)	0.17*	(2.06)		
Sea	-0.20**	(-2.72)		
Economic Situation				
Unemployment	0.08	(1.37)	0.06	(0.71)
log(GDP)	-0.09	(-1.77)	-0.29**	(-2.69)
Security Situation				
Political Terror	0.02	(0.51)	-0.00	(-0.04)
State Failure	0.02	(1.10)	0.03	(1.18)
Genocide	-0.00	(-0.12)	0.00	(0.02)
War	-0.01	(-0.50)	-0.02	(-0.94)
Civil War	0.06	(1.40)	0.04	(0.89)
Constant	0.29	(1.64)	-0.05	(-0.29)
Observations	813		813	

t statistics in parentheses

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

Table 2 presents the results of the fixed-effects panel and mixed-effects models. Both models test for effects from the four variable blocks—culture, migration route, economic situation, and security situation—on the log-transformed number of female asylum-seekers while controlling for the number of male asylum-seekers. This study analytically focuses on determining which factors lead to a divergence in the number of female versus male asylum-seekers. Before analyzing the three blocks of explanatory variables' effects, note that the number of male asylum-seekers as the control variable strongly correlates to the number of female asylum-seekers, as anticipated.

As Table 2 illustrates, the statistical models' results largely confirm the insights gained from the heat map in Figure 5. The security situation seems insignificant in the variance of gendered self-selection (hypothesis three). Further, we find no proof that danger in the migration route shapes

gender distributions (hypothesis four). While fewer women cross the ocean, the relative number of women asylum-seekers tends to increase with distance. Thus, the danger of undocumented migration has no clear observable effect on gendered self-selection, and hypothesis four cannot be confirmed.

While unemployment has no significant effect, low levels of economic development as measured by GDP compel more women than men to migrate to Europe. Thus, hypothesis two cannot be confirmed. One possible explanation could be that women might face more struggles to live independently in countries with low economic development. The largest and most consistent effects can be found in the first hypothesis, in that gender relations in the country of origin drive the number of women migrants. Moreover, Buddhism and Islam seem to result in similarly low numbers of female asylum-seekers relative to those from Christian countries. Further, the adolescent birth rate has substantial, significant effects in the mixed- and fixed-effects models.

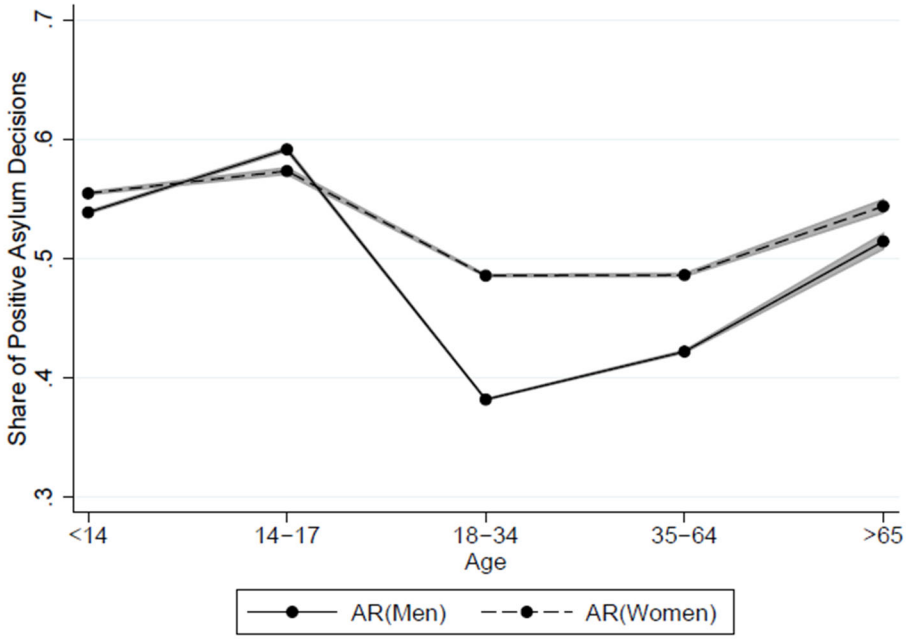
Overall, the main driver of cross-country variance in the gender distribution among asylum-seekers seems to be the differences in cultural notions of gender. Thus, gender inequalities in the country of origin lie at the heart of gender imbalances within the European asylum-seeking population. This finding is reasonable if one considers that other factors—such as gendered threats or the migration route—can only be reflected in the gender distribution if women have the opportunity and resources to migrate to Europe in the first place. The extent to which women have access to resources and the freedom to use them to seek asylum in Europe is reflected in the gender inequality and roles assumed by women within the country of origin.

Gender Distribution and the Probability of Gaining Asylum

After analyzing the country-level drivers of gender distributions in asylum-seeker flows, this section investigates gender distributions' role in the gender effects on asylum acceptance rates. First, this study explores the differences in asylum acceptance rates between men and women, then estimates the effect of the gender distribution on asylum acceptance rates.

We start by examining the differences in asylum acceptance rates between men and women. Figure 6 illustrates the interaction between age and gender after controlling for the origin and host country with fixed effects; a large, significant disadvantage can be observed for men. While this paper does not claim any discrimination exists in the asylum system against men, discrimination offers one possible explanation for the finding. The data at hand are limited and do not allow for a control of the asylum decision contexts. However, it can be observed that men, regardless of reason, are less likely to be granted asylum. Hence, the gender gap is the largest for the 18 to 34 age group, and lowest for young and old asylum-seekers, or those younger than age 14 and older than 65, respectively.

Figure 6: Age, Gender, and Asylum Acceptance Rates



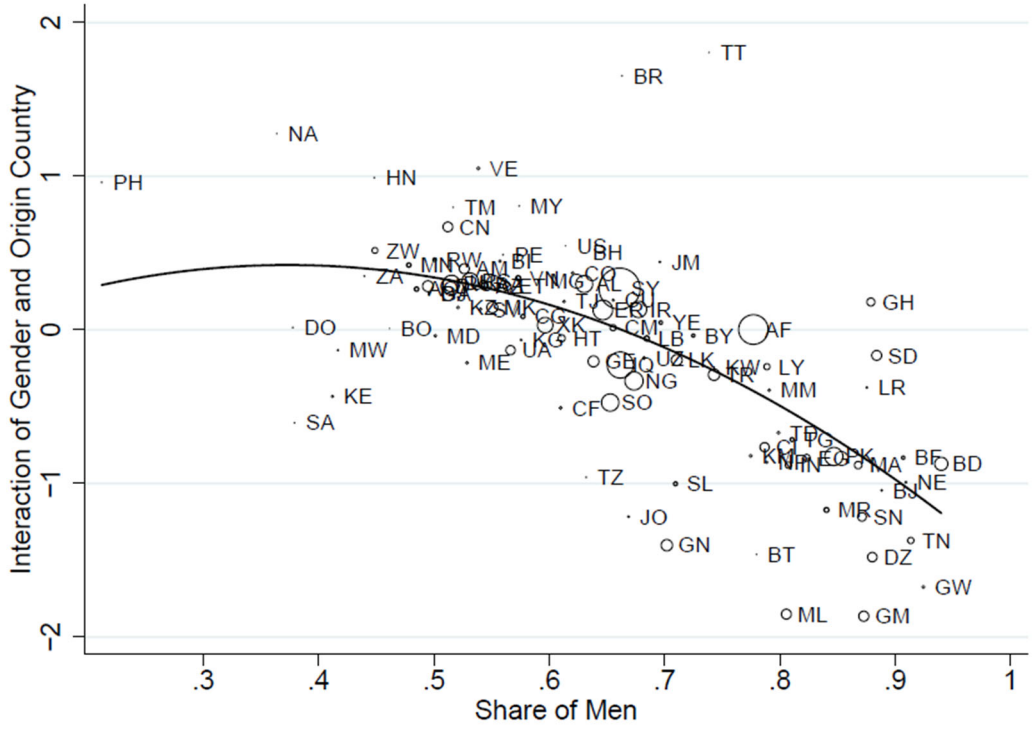
Note: Data from Eurostat 2008–2018; fixed-effects model according to Model 3

Next, the gender distribution's effect on the asylum acceptance rate was analyzed. Does the gender distribution change gender's effect on the likelihood of gaining asylum? To test for this, the origin country fixed effect and its interaction with gender were estimated. Figure 7 plots the average differences in the effects of gender across various countries of origin against the share of men (i.e., share of men amongst asylum decisions) originating from these countries. Note that the random effect of gender across origin countries was calculated for asylum-seekers in the 18 to 34 age bracket whilst controlling for the host country over fixed effects.

Figure 7 reveals two compelling observations: First, if more men exist than women (x-axis > 0.5), the gender effect becomes more negative. In other words, the greater the gender imbalance toward men, the greater the disadvantage for men. Second, a gender imbalance with more women than men (x-axis < 0.5) does not continue this trend in a linear fashion. In fact, once the

gender distribution is balanced, no sizeable effect can be observed from increasing the share of women. However, the second observation is based only on a few observations, as most countries of origin exhibit a larger proportion of men.

Figure 7: Gender Distribution and the Effect of Gender by Origin Country



Note: Data from Eurostat 2008–2018; this is calculated for the entire sample (2008 to 2018) without controlling for time; regarding weights, the size of the circle corresponds to the number of asylum-seekers from a given country of origin.

Figure 7 reveals that male asylum acceptance rates negatively correlate with the share of men in a given asylum flow; however, this correlation does not prove causation. As described in the theory section, several factors could influence the share of males and acceptance rates. The previous section indicates that gender inequality influences the share of men in a given asylum-seeker flow. Further, gender inequality in the country of origin may influence the differences in

asylum acceptance rates between men and women. In this case, gender inequality drives both asylum acceptance rates and gender distribution, rather than gender distribution driving asylum acceptance rates. Thus, many control variables are introduced to gain insights into whether the gender distribution itself may influence gender's effect on asylum acceptance rates. The connection between the gender distribution and gender's effect on asylum rates was then tested within a mixed- and fixed-effect model.

In the following, the results of the models used to check for the gender distribution's effect on male acceptance rates are described. Aside from the share of young men and other demographic variables, the other three blocks of previously used variables were included as control variables: economic, security, and cultural variables. The share of young men as the variable of interest is always included. Tests were performed first using a univariate model, then with the added control variables. The models were run with two different dependent variables: the pure origin country effect ϑ_t, and the interaction term between gender and the origin country ϑ_{2t}. Each time, fixed- and mixed-effect models were used. The models with the pure country of origin effects on asylum acceptance rates as the outcome variable estimate the factors that influence the likelihood of gaining asylum for women (1.1, 1.2, 2.1, and 2.2). The models with the interaction term of gender and the origin country as outcomes explain the difference in male asylum rates from the female baseline (3.1, 3.2, 4.1, and 4.2). Each outcome variable is estimated within a mixed- and fixed-effect framework, as well as with and without control variables. Table 3 lists the eight resulting models.

Table 3: Determinants of Asylum Acceptance Rates and Gender Differences

	$Y_1 = \beta(Country\ of\ Origin)$				$Y_2 = \beta(Country\ of\ Origin)$ x $(Gender)$			
	1.1) FE: Y_1	1.2) FE: Y_1	2.1) ME: Y_1	2.2) ME: Y_1	3.1) FE: Y_2	3.2) FE: Y_2	4.1) ME: Y_2	4.2) ME: Y_2
Share of Men (Dec.)	-0.24**	-0.22**	-0.11	-0.17**	-0.13*	-0.11*	-0.32***	-0.22***
	(-3.12)	(-3.08)	(-1.62)	(-2.69)	(-2.29)	(-1.96)	(-7.95)	(-5.28)
Nr. of Asylum Decisions(log)		-0.03		-0.10		0.12*		0.13***
		(-0.41)		(-1.82)		(2.21)		(3.55)
Economic Situation								
Unemp.		0.01		-0.14		-0.21*		-0.13**
		(0.10)		(-1.65)		(-2.00)		(-2.66)
log(GDP)		-0.29		0.10		0.05		0.07
		(-1.59)		(1.30)		(0.35)		(1.64)
Security Situation								
Political Terror		0.14*		0.20***		0.01		0.03
		(2.29)		(3.43)		(0.21)		(0.75)
State Failure		0.16***		0.16***		-0.02		-0.01
		(4.30)		(4.45)		(-0.88)		(-0.46)
Genocide		-0.01		-0.00		0.02		0.02
		(-0.22)		(-0.06)		(1.06)		(0.84)
War		0.08*		0.07*		-0.03		-0.02
		(2.30)		(2.29)		(-1.15)		(-0.88)
Civil War		0.32***		0.28***		0.01		0.03
		(3.78)		(3.84)		(0.23)		(0.69)
Culture								
Adolescent Birth Rate		0.95***		0.46***		-1.49***		-0.31***
		(3.51)		(4.03)		(-7.14)		(-5.40)
Religion: Christian (ref.)								
Budist				1.12*				-0.64**
				(2.19)				(-2.68)
Hindu				-0.97				-0.90**
				(-1.29)				(-2.60)
Moslem				1.06***				-0.58***
				(4.60)				(-5.22)
Other				1.08				-0.73*
				(1.46)				(-2.19)
Constant	-1.57***	-1.57***	-1.65***	-2.18***	-0.23***	-0.23***	-0.21***	0.14
	(-59.73)	(-62.87)	(-12.26)	(-13.46)	(-11.49)	(-12.18)	(-3.92)	(1.79)
Observations	813	813	813	813	813	813	813	813
BIC	1747.628	1714.267	2172.144	2138	1330.352	1285.197	1635.191	1644.454

t statistics in parentheses
* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

First, several variables from the security block significantly affect the general probability of asylum granted, and these effects can be detected in mixed- and fixed-effects Models 2.2 and 1.2, respectively. This finding indicates that the acceptance rates do in fact respond to security

threats in countries of origin. Further, the security situation equally affects the chance of asylum for both men and women, as no significant effect on gender differences can be detected (Models 3.2 and 4.2). The higher the security threat in the country of origin, the higher the acceptance rates for both men and women. Regarding the economic variables, unemployment in the origin country seems to decrease the asylum acceptance rate for men relative to women (Models 3.2 and 4.2), with no discernable effect on women's acceptance rate. No effect of GDP was found.

The block of cultural variables exhibited strong, significant effects on asylum acceptance rates and gender differences. While women from non-Christian countries tended to have higher acceptance rates, men tended to have lower acceptance rates relative to women. The adolescent birth rates demonstrate a similar pattern. This finding of increased acceptance rates for women from gender-unequal countries might be due to the perceptions that these women have a greater need for protection.

The number of asylum claims is the only variable that exhibits a decrease in male disadvantage relative to women; with an increase in this variable, male acceptance rates increase relative to the rates found for female applicants. This might be due to the large numbers of asylum-seekers around 2015, which lead to a need for faster processing of asylum applications. This level of urgency could compel authorities to make less differentiated decisions which consequently may minimize the negative effects of gender. For example, nearly all asylum-seekers from Syria, male or female, were granted protections in Germany in 2015.

Finally, the results reveal that the gender distribution as an explanatory variable has a negative effect on the asylum acceptance rate of women and an additional negative effect for men. The negative effect on the acceptance rate of women might stem from single women having a higher

likelihood of being granted asylum than women migrating with their partner (Models 1.1, 1.2, 2.1, and 2.2). The additional negative effect for men (Models 3.1, 3.2, 4.1, and 4.2) is in accordance with hypothesis five, which claims that family composition and the negative perceptions of male asylum-seekers may lead to additional penalties for men in the asylum process. Note that we cannot disentangle the two mechanisms, and either or both could be at work here. While the control variables can explain some of the gender distributions' effects on asylum acceptance rates, most of the effects remain. This suggests that gender distributions within asylum-seeker flows may influence men's and women's asylum acceptance rates, and are not a pure function of the third variables discussed in this paper.

In summary, the analysis reveals a strong correlation between the share of men within a given asylum-seeker flow and asylum acceptance rates. The results suggest that this correlation may be partially due to the fact that gender inequality in the origin country influences gendered self-selection and gender differences in asylum acceptance rates. However, the models also indicate that the gender distribution has a robust remaining effect on asylum acceptance rates after third variables were controlled for. This suggests that the gender distribution itself may influence asylum acceptance rates in the European context.

Discussion: The Multifaceted Role of Gender when Seeking Asylum in Europe

This paper demonstrates gender's importance in shaping asylum-seeking in Europe. Gender inequality in the respective countries of origin appears to result in larger shares of male asylum-seekers in the asylum-seeker flows. Both the adolescent birth rate (ages 15 to 19) and religion in the country of origin are significant predictors of female access to the European asylum system. However, the analysis was performed at the country level, a strategy that has

some disadvantages. First, this study could not analyze the detailed micro-process of how exactly women tend to be excluded from migrating to Europe. Is it the influence of gender roles or lack of access to resources that drive the female disadvantage? Therefore, we encourage further research into the detailed process that connects gender inequality with gender distribution within asylum-seeker flows. Further, the danger exists of wrongfully assigning country-level property to individuals. For example, primarily Muslim individuals may flee from Buddhist countries (countries are categorized as Buddhist if the largest religious community is Buddhist). In such a case, the country-level variable is incorrectly assigned to individuals. In considering these issues, the results indicate that women's social position in the country of origin is the main driver behind the gender imbalance in the population seeking asylum in Europe.

An argument could be made that the gender imbalance among asylum-seekers is not necessarily a sign of women exclusion, as families tend to send their males first; after acceptance, they will subsequently aim to bring the rest of their families as well. Therefore, the high proportion of men among asylum applications is due to internal familial migratory strategies rather than the exclusion of women. While there may be some truth to this, family reunification can only slightly offset the gender imbalance in the asylum-seeker population. For the 10-year period between 2008 and 2018, only 447,362 permits for family reunification were granted to the top five countries of origin among asylum-seekers: Syria, Afghanistan, Iraq, Eritrea, and Pakistan. During the same period 2,527,730 asylum-seekers from these five countries were granted residence permits. Thus, only about 1 in 5 accepted asylum-seekers ultimately reunite with his or her family in Europe. Further, only 57% of these family-related residence permits were granted to women, which cannot eliminate the male-skewed gender distribution among asylum-seekers, in that 71% of asylum applications of these five countries were made by men. Overall, patterns

of family reunification might reduce the exclusion of women to a small extent; however, it cannot compensate for women's reduced access to the asylum system.

The resulting share of men within asylum-seeker flows correlates strongly with the relative disadvantage for men in terms of asylum acceptance rates. While some of this correlation can be explained with third variables, specifically gender inequality in the origin country, most of the effect remains. This suggests that gender distribution itself may shape gender's effect on asylum acceptance rates. Collectively, these results highlight the importance of gender inequality in the country of origin in shaping gender's role in asylum-based migrations to Europe. The greater the gender inequality in the origin country, the greater the effect of gender on the self-selection process, and with this, the gender imbalance within a given asylum-seeker flow. Gender inequality also appears to influence gender differences in asylum acceptance rates, both directly and indirectly. On the one hand, such factors associated with gender inequality as the adolescent birth rate or religion correlate with male disadvantages; on the other hand, they seem to influence gender distribution, which consequently may impact the differences in asylum acceptance rates.

Chapter II: Inequality and Selection in Return Migration

Life Satisfaction and Return Migration: Analyzing the Role of Life Satisfaction in Migrants' Return Intentions in Germany

The first chapter investigated the role of inequality in the selection process during international migration. However, selection not only occurs during the initial outmigration, but may also affect migrants' decision to stay in their current host country or continue to migrate, whether to another host country or their country of origin. Chapter II will first provide an overview of existing literature on selections during return migration. This will be followed by the presentation of my own study regarding the logic of selection in the return migration process.

Return Migration: Selection by Success or Failure?

As demonstrated by the Salomon bias (Abraído-Lanza et al. 1999; Turra and Elo 2008; Lu and Qin 2014), the selection of individuals that return to their country of origin or move on to a new host country can potentially alter the composition of migrants that remain in the host country. Most studies that investigate the drivers of return migration tend to focus on income inequality (Bijwaard and Wahba, 2014; Haas et al., 2015; Wahba, 2015). However, different economic migration theories suggest income has opposing effects on the propensity of return migration (Constant and Massey, 2002; Haas et al., 2015).

The neoclassical perspective on international migration states that rational migrants will attempt to increase their utility by migrating to a place where they can increase their wages and utility for a given skill (Sjaastad 1962; Todaro 1969; Borjas 1987; Bauer and Zimmermann 1997). From

this perspective, no rationale exists for migrants who successfully increase their wages through international migration to return to their country of origin. This implies that return migrants must have failed to increase their wages to the extent they expected, and thus, return migration could be considered a consequence of a failed migration project. Consequently, one would expect return migrants to be relatively lower-income earners, as they are more likely to have failed their income expectations. However, this view of return migration is challenged by research from the "new economics of labor migration" school of thought (Stark 1991; Dustmann 2003). It argues that migrants tend to have a natural preference for their country of origin, which leads them to save their earnings until they reach an amount with which they can comfortably live in their preferred country of origin. From this perspective, return migration marks the successful end of a migration project.

Empirical evidence suggests that income has a U-shaped effect on return migration, with both high and low incomes predictive of intentions to return (Bijwaard and Wahba 2014; Bijwaard 2015). Researchers' general consensus is that the two schools of thought—the neoclassical migration theory and the new economics of labor migration—are complementary. Some return decisions are driven by failure, such as unmet expectations; while others are driven by success, or an expected end to the migration project.

The discussion regarding income's effect on migrants' decision to return to their country of origin is noteworthy because it helps our understanding of not only how wage inequalities shape self-selection during return migration, but also how to analyze return migrations. Do these occur due to failure or success? We could anticipate that failure-driven return migration is also much more negatively selective than return migrations driven by success in terms of traits other than

income. While current research suggests that some migrants return due to failure while others return due to success, the extent to which one is more common than the other remains unclear.

Over the last decades, a new class of utility measures has emerged: measures of subjective well-being (Veenhoven 1988; Diener et al. 1999). These measures try to measure the extent to which an individual subjectively feels good or bad about different aspects of his or her life, or life in general. These subjective utility measures may be useful to investigate whether return migration is truly a failure or success given migrants' subjective opinions. The second study will employ this new subjective class of utility measures to analyze the extent to which return migrants tend to be selected by failure or success.

Overview Study II: Life Satisfaction and Return Migration

This study analyzes the role of life satisfaction in migrants' intention to return to their country of origin. It is argued that the utility function of return migration is a function of the life satisfaction gains and losses that occur due to migration. The German Socio-Economic Panel and the World Value Survey were used to study first-generation migrants from 26 countries at the country level and within a random-intercept logistic regression framework. The results suggest that cross-country differences in the intended return rate can be explained by the expected cross-country differences in the returning migrants' life satisfaction gains or losses. However, this effect might be quadratic rather than linear. At a micro-level, the data indicates that migrants tend to settle or return depending on life satisfaction in Germany and their country of origin. This effect seems to be driven by relatively recent arrivals and migrants with transnational social ties. The study concludes that migration decisions are to some degree determined by the maximization of life

satisfaction, and such behavior can be best observed when migrants know what to expect from their move.

Introduction: The Utility of Return Migration

What determines whether an immigrant settles in a host country? From an economic perspective, individuals are rational and aim to maximize their utility (Becker 1978). Therefore, individuals migrate to increase their welfare (Borjas 1989). For most migrants, the primary alternative to stay in the host country is to return to their country of origin (CO; Nekby 2006). Thus, migrants return if their utility in their country of origin exceeds their present utility in the host country (HO).

Two main economic theories are used to explain utility-maximizing migrants' return migration decisions: the neoclassic economic (NE) theory of return migration, and the new economics of labor migration (NELM) theory. Both capture utility over income, but come to opposite conclusions (Constant and Massey 2002; Bijwaard and Wahba 2014; Haas et al. 2015). In the NE theory, no locational consumption preference exists, and migrants consume their income in the host country (Sjaastad 1962; Todaro 1969). Migrants return if the utility gained through consumption in the host country does not outweigh the social-psychological costs of moving to the host country (Cassarino 2004). From the NELM perspective, migrants prefer consumption in their country of origin, and only move to the host country for a limited time. From this perspective, migrants save money and send remittances home to prepare their returns (Stark 1991). On the one hand, a high income increases the probability that a migrant's utility gained through consumption outweighs the social-psychological costs of moving, thus decreasing the

probability of return migration (the NE theory). On the other hand, a high income increases the likelihood that migrants reach their target for a successful return (the NELM theory; Dustmann, 2003).

Several economists have noted income's ambiguous effect on migrants' return propensity, suggesting that both theories are simultaneously true (Constant and Massey 2002; Bijwaard and Wahba 2014; Haas et al. 2015); for some migrants, income increases the likelihood of return, while the opposite is true for others. Thus, income appears to be a somewhat insufficient measure of utility when predicting return migration decisions.

Alternatively, there have been calls to more holistically study migrant behavior using subjective well-being (SWB) rather than such discipline-specific, one-dimensional indicators as income (Wright 2011; Hendriks and Bartram 2019). This study uses life satisfaction as a conscious component of SWB (Veenhoven 2012) to measure the effect of utility maximization on immigrants' decision-making.

Therefore, the paper is structured roughly into two parts: first, it theoretically explores the properties of subjective utility measures in migration and, more specifically, return migration. The second part quantitatively analyzes the effects of maximizing life satisfaction on the return intentions of first-generation migrants in Germany; this section primarily incorporates data from the German Socio-Economic Panel (GSOEP) and World Value Survey (WVS).

The study indicates that migrants try to maximize their life satisfaction by strategically choosing whether to return to their country of origin. The effect of projected life satisfaction in the country of origin is largely driven by migrants with relatively short stays in Germany—or specifically, less than 17 years—and transnational ties to their source country. This finding suggests that

maximizing well-being in the return migration process might depend on reliable information about the origin country. Overall, the patterns of maximizing life satisfaction explain a substantial amount of the cross-country variation in the rate of intended return. However, the effects of average life satisfaction gains versus losses may be exponential rather than linear.

The Reason for Subjective Utility Measures in Return Migration

The literature connecting SWB to utility is well-established (Dolan et al. 2008 provide an overview). However, although SWB proves to be a reliable measure of utility within a given society, it is a subjective measure; thus, it has some possible issues, such as the effect of cultural backgrounds on self-evaluation. The causes of SWB vary across cultural contexts (Tam et al. 2012), but this cross-cultural variation can be explained by cultural variations in values (Diener et al. 1999) and cultural variations in self-perceptions (Suh et al. 2008; Cheng et al. 2016). Additionally, income's effect on SWB depends on an individual's optimism (Diener et al. 2013), and this level of optimism is influenced by the individual's cultural context (Heine and Lehman 1995; Chang 1996). However, this does not mean that SWB is not a reliable measure of utility. As in the last instance, utility is a subjective measure and a subjective evaluation of the welfare gained from objective circumstances. Considering this fundamentally subjective nature of utility, personal traits—which are influenced by culture—clearly impact the evaluation of utility. Only if a significant bias exists between how individuals rate their SWB and how they actually feel, and if this bias systematically differs across countries, does SWB become unreliable. However, many studies have used SWB across cultures (Easterlin 1974; Helliwell 2007; Stevenson and Wolfers 2008; Hadjar and Backes 2013; Samuel and Hadjar 2016), and SWB appears to be a rather robust measure of utility that can be used in this context.

Another appealing property of SWB, specifically when analyzing return migration decisions, is the level of SWB, which is thought to be driven by the level of fulfillment of one's own goals and expectations (Diener and Fujita 1995; Diener et al. 1999). An individual who achieves his or her expectations will experience an increase in SWB, and vice versa. Similarly, individuals emigrate with specific expectations, which can then be met in the host country. This will translate into the SWB of immigrants in the host country, and thus, SWB is a suitable measure of achieved expectations.

This allows us to answer an old question in economic migration research: "Is return migration due to failure or success?" Past research has attempted to answer this question using income and other objective measures of utility (Constant and Massey 2002; Bijwaard and Wahba 2014; Haas et al. 2015). However, this approach has several limitations. First, income might not be the immigrant's own ruler by which to judge the migration's success. An individual who migrated to unify the family could judge such success based on re-establishing a good relationship with his or her family. Many other expectations can be considered that are either met or unfulfilled. In this regard, income fails to capture the entirety of factors that make migration a success or failure. Second, and in contrast to life satisfaction, income can be stored and spent later at a different location. This property of income gives rise to the NELM perspective (Stark 1991; Dustmann 2003). Individuals who migrate with the plan to work and save money in the host country and return to their origin will regard the return as a success. Economists seem to settle their argument by concluding that return migrations can occur due to both failures and successes (Constant and Massey 2002; Bijwaard and Wahba 2014; Haas et al. 2015). However, they cannot judge the extent to which each of the two mechanisms—a return due to failure versus success—

is at work. Given its unique measurement of achieved expectations, SWB is a perfect candidate to answer this question.

Subjective Well-Being and Migration

Even when used cross-culturally, SWB appears to be a reliable measurement of utility. As a measurement of met expectations, it is an even more relevant measure of return migration. Substantial research has analyzed the association between SWB and migration; in fact, a special edition of the United Nations' World Happiness Report (2018) investigates the relationship between SWB and migration. However, all studies have only examined the association between currently held SWB and migration.

In a cross-country study, Polgreen and Simpson (2011) discovered a U-shaped relationship exists between the out-migration rate and average happiness within the countries they studied. In other words, emigration rates decline with an increase in country-level happiness for low-happiness countries, but surge with increasing country-level happiness for high-happiness countries. Graham and Markowitz's (2011) study of Latin American immigrants found that individuals with the intent to emigrate had a lower SWB. Cai et al. (2014) used a vast dataset from the World Gallup Poll that includes several countries to note that individuals with a lower SWB exhibit a higher propensity to emigrate; this holds true at the individual and country levels. Alternatively, Bartram (2013) found an opposite pattern among potential Eastern European migrants. Mara and Landesmann (2013) demonstrated an increased propensity for return migration among low-SWB Romanian migrants to Austria, in accordance with the theory of this paper. Similarly, Shamsuddin and Katsaiti (2019) noted that migrants content with their lives tend to stay

permanently in Germany.

Despite SWB's desirable properties as a measurement of the utility in migration, empirical results on out-migration are somewhat inconclusive. Thus, one might wrongfully doubt whether migrants are rational or that SWB is an appropriate measure. However, migration decisions in the utility maximization perspective are driven not by the singular, absolute value of utility in one country, but rather the expected differentials between the two countries in question. Individuals might have biased expectations during out-migration regarding their future SWB abroad. Moreover, high-SWB individuals might expect even higher SWB abroad, while low-SWB individuals express more pessimistic expectations (Polgreen and Simpson 2011). This bias is expected to be much smaller for return migration decisions, as has been demonstrated by literature indicating that migrants are well-aware of the situation in their country of origin (Akay et al. 2017). This reflects studies indicating that well-being in fact can predict return migrations, although no study to date has included the anticipated well-being in the country of origin. If little or no bias is assumed in return migrants' utility expectations, the expected utility can be modeled on the realities in the country of origin, as precisely indicated in this study.

Subjective Utility, Return Migrations, and Transnationalism

Literature regards subjective well-being and its conscious component of life satisfaction as a suitable utility measure, even when used across cultures. Additionally, subjective utility as a measurement of met expectations makes it especially useful for studying return migration. The following section will combine the measurement of life satisfaction, the economic rational choice-based theory on return migration, and a transnational perspective. Based on this

framework, several hypotheses are deduced.

As subjective life satisfaction in contrast to income cannot be stored and consumed later, we can simply adapt the traditional neoclassic economic (NE) model for the use of life satisfaction rather than income. This allows us to create a straightforward rational choice model that posits migrants will return if the utility gain from return migration outweighs the utility cost.

Hypothesis I:

An immigrant in Germany will return to the country of origin if:

$$\boldsymbol{U_{io} - U_{ih} > C_i}, \text{ where}$$

U_{io}: the utility of individual *i* in origin country *o*;

U_{ih}: the utility of individual *i* in host country *h*; and

C_i: the utility cost for individual *i*'s return migration.

Hypothesis I is supported by the finding that return migration depends on the host country's well-being (Mara and Landesmann 2013; Shamsuddin and Katsaiti 2019). From this perspective, however, the level of information a migrant holds is crucial to explaining his or her decisions. We can only model expectations after reality if the migrant is aware of the potential utility gained if he or she were to return to the origin country. When it comes to understanding the level of information a migrant in Germany might hold about the country of origin, a transnational perspective on migration can be helpful.

Essentially, transnationalism focuses on the fact that many migrants have a strong connection to both their source and host countries (Schiller et al. 1992). These links allow the diaspora and source country to exchange information. The transnational connection of individuals in the diaspora with their source community can consequently influence their return decisions regarding not only the social connection itself, but also the information shared. If the shared

information is largely correct, the diaspora will become better informed, and hence, more efficient in maximizing their life satisfaction.

Hypothesis II:

Individuals with transnational ties are better at maximizing their life satisfaction due to their lower cost to return and their better levels of information. Therefore, the effects of differences in life satisfaction on the intention to return will be larger for individuals with transnational ties.

As time progresses, immigrants will integrate into the host society, and transnational ties will decline; this will increase the logistical costs of returning as the level of information decreases. Thus, the effect from maximizing life satisfaction decreases over time.

Hypothesis III:

The effects from maximizing life satisfaction will decline with the erosion of transnational ties over time.

In conclusion, using subjective life satisfaction as a measurement of utility offers an opportunity to estimate return migrations due to failure. In contrast to the existing literature on SWB and the decision to migrate, a proxy for the expected utility in the origin country must be employed to exploit this opportunity. We chose to model the expectations after the realities in the country of origin while considering the level of information, and therefore, the expectations that immigrants in Germany might hold regarding their origin countries.

Data: The Migrant Sample and their Life Satisfaction in the German Socio-Economic Panel

This study analyzes the rates of intended return migration among immigrants in Germany. This is because Germany contains the largest immigrant community in Europe—and the second-largest in the world, surpassed only by the United States—in absolute numbers according to the OECD (2017). The primary data source for this research is the German Socio-Economic Panel (GSOEP), with a specific focus on the 2014 migrant sample. The SOEP is a highly regarded dataset provided by the German Institute for Economic Research (DIW). It is known for its high quality and low dropout rate (Goebel et al. 2019; Kühne and Kroh 2017). This dataset is particularly useful for testing life satisfaction's effects relative to the country of origin, as the data is comprised of many countries of origin.

Regarding the production of migrants' counterfactual life satisfaction if they had remained in their country of origin, data from the 2005 to 2013 World Value Survey were used (Inglehart et al. 2019). Each round of surveys for a given year and country consisted of approximately 1,000 individuals. However, the year in which a given country was surveyed, as well as how often a country was surveyed—and thus, the overall sample size—varies between countries (see the Appendix, Table C). All observations within a country were pooled for all years. Observations with missing values in the WVS sample were dropped, resulting in an omission of 3.8% of the WVS sample.

Along with the individual-level data from the SOEP, country-level data were merged from various sources. All country-level data refer to the year 2014 in the SOEP survey, as follows: GDP from the World Bank (2017), the geographic distance between Germany and the country of origin from the Center d'Etudes Prospectives et d'Informations Internationales (CEPII 2017; Mayer and Zignago 2011), religious and linguistic distance from Devleeschauwer et al. (2003),

and information about the number of migrants from a specific country of origin in Germany from the statistical office of Germany (GENESIS-Online Datenbank, 2017).

Following Hippel (2007), all missing values of individual-level variables were imputed simultaneously. The imputation was performed using the averaged value of 10 imputations drawn from a multivariate normal distribution and rounded to the next feasible value. As a robustness check, all models were also run on a sample in which all observations with missing values were simply dropped. The results remain robust.

If information was missing regarding the GDP for a particular year and country, the last available year from the World Bank's data with information on GDP for the same country was imputed. Finally, information on the religious and linguistic distance to Serbia was missing, which was solved by imputing values from Croatia.[3] Only cases involving those over age 18, from countries covered in the WVS, and those surveyed in 2014 were considered.

Further, observations were omitted of migrants from countries with fewer than 20 migrants in the sample. This ensures a minimum group size for the country-level analysis. However, multilevel models were also run without a minimum group size; the results remained robust (Table F in the Appendix). The final sample size included 3,696 migrants from 26 countries. As Thailand proves to be a drastic outlier—which will be discussed later—it is excluded from the country-level calculations, and thus, 25 countries remain. However, as a robustness check, country-level calculations were also performed including Thailand, and the results remain robust. Table 4

[3] Croatia is observed as a suitable proxy for the Serbian linguistic and religious culture because both countries' primary language is derived from a family of South Slavic languages; further, the population of both countries is overwhelmingly Christian.

reports the countries of origin in the sample and the distribution of migrants among them. Migrants were detected by a survey question asking for the country in which they were born.

Table 4: Number of Migrants across Country of Origin and their Share of Citizenship

Country of Origin	N	Citizen(%)
Russia	695	79
Kazakhstan	555	90
Poland	543	61
Turkey	494	30
Romania	311	51
Italy	229	10
Ukraine	171	41
Serbia	87	10
Spain	73	10
Kyrgyzstan	67	87
Netherlands	46	17
France	39	26
Marocco	37	51
Iran	36	81
USA	35	26
UK	33	21
Lebanon	32	41
Bulgeria	29	33
Iraq	29	66
Belarus	27	33
Azerbaijan	25	4
Hungary	22	18
Thailand	21	10
Philippines	20	80
Pakistan	20	35
Uzbekistan	20	75
Total	3,696	55

The ***citizenship*** variable measures whether a migrant is a naturalized German citizen; the "citizen" column displays the percentage of naturalized migrants.

The dependent variable was constructed by combining two survey questions: First, migrants were asked: "Did you recently seriously consider moving abroad for longer or forever?" If migrants answered "yes," they were asked which country they would prefer. Migrants who said they wanted to move to the same country in which they were born were coded as having an intention to complete a return migration journey.

Table 5 displays the summary statistics for all variables used in the models. The explanatory variables are the life satisfaction variables; life satisfaction is regarded as a conscious component of the subjective well-being construct (Veenhoven 2012). Other variables were used as controls, and all variables were standardized except any dichotomous variables. The dependent variable is denoted as "***Return***." The ***LS-Difference*** explanatory variable presents the difference between life satisfaction in Germany, or LS (HO); and life satisfaction in the country of origin, or LS (CO). The ***years in Germany*** variable measures the elapsed time in years since the migrant's arrival in Germany. This does not account for eventual breaks in the time spent in Germany, such as a temporal stay in the country of origin. The ***age at arrival*** is calculated by subtracting the years since arrival from the current age. The ***Aussiedler*** variable captures whether a migrant belongs to this specific group of ethnic German migrants from the ex-UDSSR countries who are known in Germany as "(*Spät*) *Aussiedler*." The ***asylum*** variable documents whether the migrant was considered an asylum-seeker at arrival.

Table 5: Descriptive Statistics

	mean	sd	min	max
Return	0.08		0.00	1.00
LS(Germany)	7.46	1.71	0.00	10.00
LS(CO)	6.32	0.75	3.71	9.03
LS Difference	1.14	1.85	-6.83	6.00
Citizenship	0.55		0.00	1.00
Years in Germany	18.76	10.54	0.00	64.00
Age at immigration	24.60	13.35	0.00	91.00
Aussiedler	0.35		0.00	1.00
Asylum	0.06		0.00	1.00
Child	0.65		0.00	1.00
Male	0.45		0.00	1.00
Married	0.74		0.00	1.00
Basic education	0.06		0.00	1.00
Lower sec. education	0.21		0.00	1.00
Upper sec. education	0.36		0.00	1.00
Post sec. education	0.14		0.00	1.00
Tertiary education	0.23		0.00	1.00
Full emp.	0.39		0.00	1.00
Part emp.	0.15		0.00	1.00
Training	0.02		0.00	1.00
Marginal emp.	0.09		0.00	1.00
Unemployed	0.35		0.00	1.00
Self-employment	0.05		0.00	1.00
Income(std. adult)	18,443	11,028	0	166,882
Remittance	272	1,144.05	0	20,000
Social ties (CO) GDP	0.76		0.00	1.00
Mig. Population	23,970	820	335	54,599
Geographic distance	441,657	476,923	8,437	1,527,118
Linguistic distance	2,010	1,462	516	9,872
Religious distance	0.97	0.01	0.90	1.00
EU	0.83	0.10	0.66	1.00
	0.43		0.00	1.00

The ***income of migrants*** is the household income scaled for a standard adult by dividing household income by the square root of household members. The ***remittance*** migrants sent to their origin countries is measured as the amount sent over the last year in euros. Further, a binary variable captures whether the migrant currently has regular contact (transnational ties) with either friends or family living in the origin country.

The ***child*** and ***married*** variables capture whether the migrant is married and if a child younger than age 16 lives in the household. ***Education*** was measured as a categorical variable indicating the highest educational degree according to the 2011 International Standard Classification of Education (ISCED). However, larger group sizes were formed by collapsing some ISCED groups: all higher educational degrees (bachelor's, master's, and PhD) were aggregated into one new variable for higher education; post-secondary education, but not tertiary, was combined with short-cycle tertiary education into a new "post-secondary" group. ***Employment status*** has five categories: full employment, part-time employment, training, marginal employment, and unemployed. Additionally, a binary control variable for self-employment was added. Migrants are coded as self-employed if they earned money through self-employment within the last year. The ***GDP*** is calculated as the GDP per capita of the country of origin, measured in international dollars. The size of the ***migrant population*** is calculated by the absolute number of first- and second-generation migrants—or specifically, those who are migrants themselves or their parents were born outside of Germany—who are living in Germany according to the German statistical office. Further, the model uses three different measures of ***distance***: the geographic distance between Berlin and the capital of the country of origin, linguistic distance, and religious distance. Linguistic and religious distances aim to quantify the degree of relatedness of the predominant religions and languages spoken between countries (Devleeschauwer et al. 2003). The ***EU*** variable indicates whether the migrant's country of origin is a member of the European Union. The income, migrant population, and geographic/linguistic/religious distance variables were log-transformed before their application in the models.

Methodology: How the Effect of Life Satisfaction on Return Intensions is Estimated

Life satisfaction's effects on the intended return rate are tested in a three-step process: First, the life satisfaction in the country of origin is estimated by calculating the counterfactual life satisfaction in the country of origin for the migrants residing in Germany. Next, the impacts of the simulated life satisfaction and the difference to the measured life satisfaction in Germany on the intended return rate are tested at the country level. In the third step, the life satisfaction variable's effect on the intention to return is analyzed at the individual level.

How beneficial the environmental context in the country of origin is to the migrants, were they to return, is modelled by calculating the average life satisfaction of inhabitants from the country of origin with the same demographics as the migrants in Germany. This is done in two steps: first, the coefficients β for the demographic variables x (age, age squared, gender, education, and religion)[4] and the dependent variable Y (life satisfaction—LS) is calculated using data about individuals k residing within the country of origin j (Equation 1). A counterfactual LS score is then predicted for migrant i residing in Germany. Therefore, the previous estimated coefficients from the country of origin are combined with the demographic variables X for migrants in Germany (Equation 2).

$$\boldsymbol{Y_{kj} = \beta_{0j} + \beta_{1j} x_{1kj} + \beta_{2j} x_{2kj} + \cdots + \beta_{nj} x_{nkj} + e_{kj}}$$

Equation 1: Estimation of the parameters to predict the counterfactual LS score

$$\boldsymbol{\widehat{Y_{jk}} = \beta_{0j} + \beta_{1j} x_{1kj} + \beta_{2j} x_{2kj} + \cdots + \beta_{nj} x_{nkj}}$$

Equation 2: Estimation of the counterfactual LS for the country of origin

[4] To do so, the education and religion variables in the two datasets (SOEP and WVS) had to be harmonized, as illustrated in the Appendix, Tables D and E.

The country-level analysis averages both the actual measure of life satisfaction in Germany and the predicted life satisfaction in the country of origin *j*. After simulating the country of origin's life satisfaction, the effect from maximizing life satisfaction on the propensity for an intended return migration is analyzed by comparing the life satisfaction in both Germany and the country of origin. To do so, the life satisfaction measures for Germany and the estimated life satisfaction for the country of origin are subtracted, as *LS(Diff)*. This difference *LS(Diff)* is then used as an independent variable to estimate the share of migrants from the country of origin intending to return (see Equation 3).

$$\frac{\boldsymbol{N\ with\ intend\ to\ return}}{\boldsymbol{N_{total}}} = \boldsymbol{\beta_{0j}} + \boldsymbol{\beta_{1j}} \boldsymbol{LS(Diff)_j} + \boldsymbol{e_j}$$

Equation 3: Regression of intendent return rate and the *LS(Diff)* at the country level

After the country-level analysis, a random-intercept logistic regression model was used to test life satisfaction's individual-level effects while controlling for a substantial array of individual- and country-level variables. The model is structured with two levels (a person in the country of origin).

$$\boldsymbol{lvl\ 1}\text{:}\ \ \boldsymbol{Ln}\left(\frac{\mathbf{P(Y_{ij})}}{\mathbf{1 - P(Y_{ij})}}\right) = \boldsymbol{\beta_{0j}} + \boldsymbol{\beta_{1j}}\boldsymbol{x_{1ij}} + \boldsymbol{\beta_{2j}}\boldsymbol{x_{2ij}} + \cdots + \boldsymbol{\beta_{nj}}\boldsymbol{x_{nij}} + \boldsymbol{\varepsilon_{ij}}$$

$$\boldsymbol{lvl\ 2}\text{:}\ \ \boldsymbol{\beta_{0j}} = \boldsymbol{\pi_{00}} + \boldsymbol{\pi_{01}}\boldsymbol{\alpha_{1j}} + \boldsymbol{\pi_{02}}\boldsymbol{\alpha_{2j}} + \cdots \boldsymbol{\pi_{0n}}\boldsymbol{\alpha_{nj}} + \boldsymbol{r_{0jk}}$$

Equation 4: Two-level random intercept logistic regression

The logit function of the outcome variable *Y* (the intent to return) for individual *i* from country *j* is estimated with assistance from the individual-level independent variable *x* and country-level (country of origin) independent variable α. The coefficients are denoted as β for the individual

level and π for the country level. This model's residuals are ε at the individual level and r at the country level. The models estimated in this manner will implement the previously calculated counterfactual life satisfaction in the country of origin, as well as the life satisfaction difference drawn from this score. The model's standard errors are clustered around the grouping variable (country of origin).

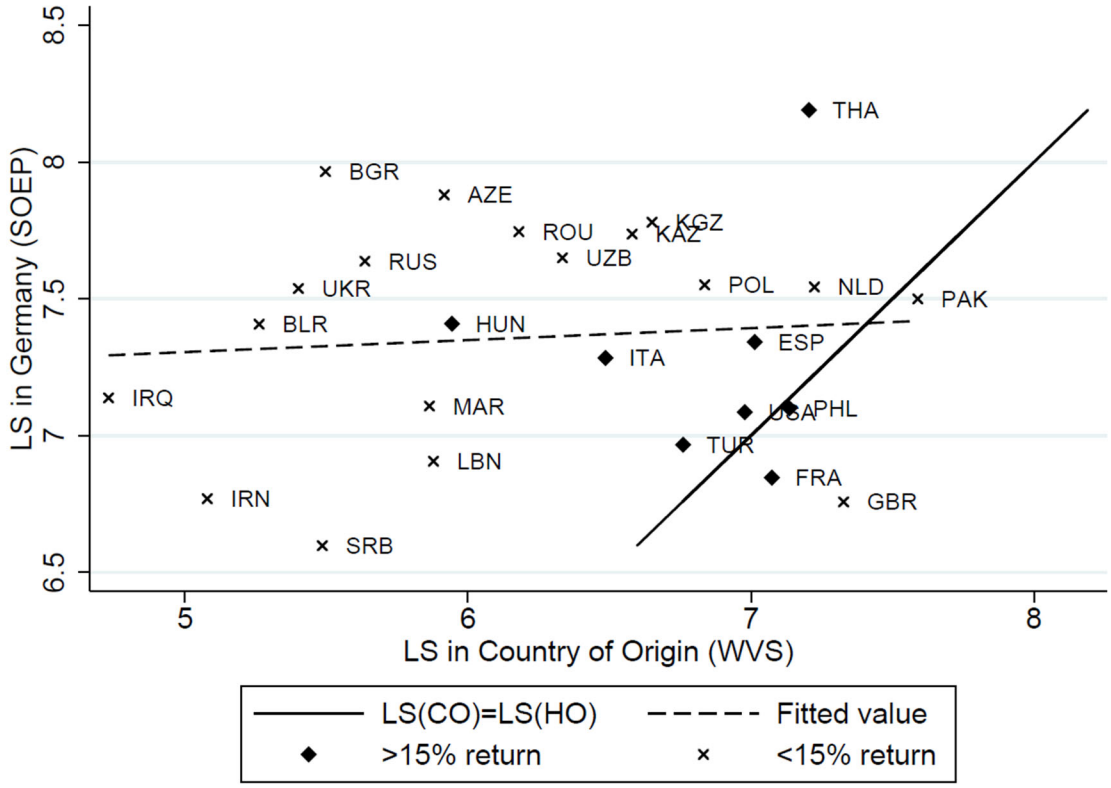
Results: Differences in Life Satisfaction and Return Intentions

This section's findings are twofold: first, it reports the calculated differences in life satisfaction, and second, it presents the statistical association between life satisfaction differences and intended return to the origin country.

Figure 8 plots the mean predicted life satisfaction in the country of origin and the mean life satisfaction of the migrants in Germany. The diagonal line indicates the point at which the life satisfaction in Germany equals the predicted life satisfaction in the country of origin. Every dot above the line expresses an average life satisfaction higher than that in the country of origin, and vice versa. The dashed line in Figure 8 indicates the best fit; if this line were the same as the diagonal line, migration on average would not change migrants' life satisfaction at all. The fit line indicates no significant correlation between life satisfaction in the country of origin and the life satisfaction in Germany.[5]

[5] A possible effect of LS(CO) on the LS(HO) was also tested at the country level as well as within a multilevel setup, with no effects discovered.

Figure 8: Comparison of LS in Germany and the Predicted LS in the Country of Origin



Note: The country abbreviations follow ISO3c country codes: Turkey (TUR), Italy (ITA), Spain (ESP), France (FRA), United Kingdom (GBR), United States (USA), Romania (ROU), Poland (POL), Iran (IRN), Iraq (IRQ), Pakistan (PAK), Hungary (HUN), Bulgaria (BGR), Russia (RUS), Philippines (PHL), Thailand (THA), Morocco (MAR), Kazakhstan (KAZ), Lebanon (LBN), Kyrgyzstan (KGZ), Ukraine (UKR), Uzbekistan (USB), Netherlands (NLD), Azerbaijan (AZE), Belarus (BLR), and Serbia (SRB).

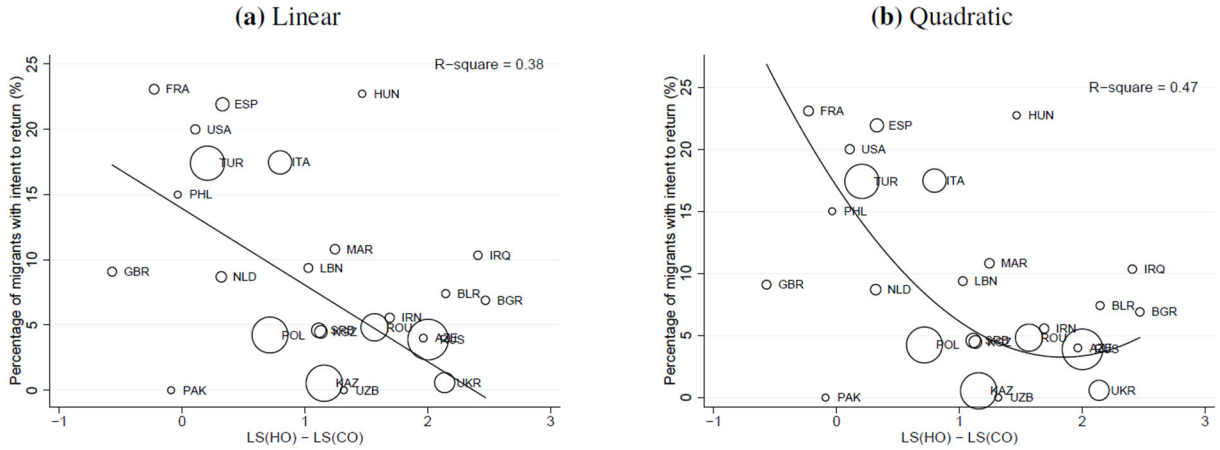
The results that emerge demonstrate the same pattern as previous findings for Germany, the United Kingdom, and Canada (Brockmann 2017; Helliwell et al. 2018). Namely, different immigrant groups with different life satisfaction scores in their country of origin converge around the national average (Helliwell et al. 2018). For Germany, the national average in 2014 according to the SOEP data is 7.4 (DIW 2015). Further, the life satisfaction of migrant groups as sorted by their origin country seems to vary around this value; on average, these are slightly below the German average with a mean of 7.3, which is not significant. This finding parallels previous findings (Brockmann 2017; Helliwell et al. 2018). However, one should be cautious

when comparing life satisfaction in the origin country with that in the host country, as life satisfaction is measured with two different surveys (SOEP and WVS) with different scales that were distributed in different years and subsequently harmonized. Moreover, the migrant population is likely to systematically differ from the local population due to the self-selection of unobserved variables. However, potential biases from using two surveys and this self-selection should affect all countries similarly, and thus, should not create a significant bias in the life satisfaction gains or losses of countries *relative to each other*, which is what is significant for the regression models.

It is important to point out that this paper does not participate in the empirical debate on whether international migration increases or decreases migrants' SWB; Hendriks (2015) provides an overview of studies engaging in this debate.

Figure 9 plots the percentage of migrants who intend to return to their country of origin against the country-level difference in life satisfaction. The graph illustrates a linear and quadratic fit line. Thailand was omitted from the sample as it was considered an outlier. Figure II in the Appendix plots the graph including Thailand; if the country is considered, the R-squared and coefficient both decrease ($R^2 = 0.31$; coefficient = -6.0). Figure III in the Appendix presents the squared residuals and leverage of each country from the plot in Figure II, and reveals that Thailand substantially surpasses the model's average in terms of squared residuals. Thailand appears as a unique case, as all 21 migrants are women; these female migrants often enter Germany through relationships with male German nationals (Sunanta 2014). It appears that these women hold a large desire to return to their country of origin. However, in further analyses, Thailand is included in the multilevel models to ensure that our results are not due to the sample selection.

Figure 9: LS and Cross-Country Differences in Intended Return Migration: (a) Linear and (b) Quadratic



Note: The minimum group size is 20 migrants per country of origin (25 countries); Thailand has been omitted.

The size of the circle in Figure 9 represents the migrant group size from each respective country of origin. It can be observed that the aggregated country-level life satisfaction difference functions as a strong predictor of the share of the population that intends to return to their origin country. The linear model's R-squared value is 0.38, with a coefficient of -5.9 between the life satisfaction difference and the percentage points with the intent to return to the country of origin. Thus, the model indicates that for every unit in which the average life satisfaction in Germany exceeds the average predicted life satisfaction in the country of origin, 5.9% less of the immigrant population from that country of origin intend to return. In the model and sample at hand, the aggregated LS difference explains 38% of the variance in the rate of intended permanent stay between countries.[6] The model's fit increases to an R-squared value of 0.47 when applying a quadratic fit rather than linear. When the square of the life satisfaction difference is added as an additional variable to the linear regression between life satisfaction and the share of

[6] If the pure average LS in the country of origin is taken instead of the average of the counterfactual, the R-squared value decreases to 0.27. The root mean square error increases to 5.97, compared to 5.5.

return intentions, this is found to be significant, with a *p*-value of 0.071. This suggests that the average difference in life satisfaction between the host and origin countries may influence the return propensity in a quadratic manner, rather than linear. This quadratic fit could be explained by the normal distribution of life satisfaction differences within the country groups. Under this assumption, the share of migrants that profit from return migration increases exponentially as the mean life satisfaction difference of the groups increases. However, this non-linear effect was not picked up in the multi-level models. Due to the small sample of 25 countries and the *p*-value of 0.071, the results are uncertain, and should be tested again in different contexts and with larger samples. The model was run after transforming the dependent variable with a logit function (see Figure IV in the Appendix). Subsequently, the R-squared value in this model decreased to 0.19. While the model's fit is smaller in the logit model, the overall effect of life satisfaction differences remains significant.

Table 6 presents the results from the four multilevel models that test life satisfaction differentials as predictors of intended return. Models 2 and 4 tested the effect against a range of covariates. Models 1 and 2 aim to illustrate the effects from the single components that comprise the life satisfaction difference used in Model 4. Models 1 and 3 observe the life satisfaction variables' pure effects without any control variables.

Table 6: Average Marginal Effect (t-value) of Random Intercept Logistic Models on the Likelihood of Intended Return

	Model 1		Model 2		Model 3		Model 4	
LS(Germany)	-0.022***	(-3.71)	-0.018***	(-3.70)				
LS(CO)	0.023*	(2.48)	0.018*	(2.00)				
LS Difference					-0.025***	(-3.92)	-0.020***	(-3.92)
Demographic & Migration								
Citizenship			-0.012	(-0.99)			-0.014	(-1.15)
Years in Germany			0.004	(0.66)			0.003	(0.44)
Age at immigration			-0.011	(-1.61)			-0.013*	(-2.05)
Aussiedler			-0.054**	(-2.88)			-0.054**	(-2.87)
Asylum			-0.026	(-1.15)			-0.026	(-1.16)
Child			-0.051***	(-4.11)			-0.050***	(-4.13)
Male			-0.000	(-0.04)			-0.001	(-0.05)
Married			0.013	(1.12)			0.013	(1.12)
Education & Labor Market								
Basic education			0.034	(1.55)			0.035	(1.62)
Ref.: Lower secondary edu.								
Upper sec. edu.			-0.003	(-0.19)			-0.001	(-0.05)
Post sec. edu.			-0.004	(-0.22)			-0.003	(-0.15)
Tertiary edu.			-0.018	(-1.15)			-0.013	(-0.91)
Ref.: Full emp.								
Part emp.			-0.004	(-0.26)			-0.004	(-0.25)
Training			0.017	(0.43)			0.020	(0.49)
Marginal emp			-0.000	(-0.02)			0.000	(0.00)
Unemployed			0.007	(0.58)			0.008	(0.65)
Self-employment			-0.001	(-0.04)			-0.001	(-0.06)
Income(log std. adult)			-0.007^{+}	(-1.85)			-0.007^{+}	(-1.84)
Remittance(log)			0.002^{+}	(1.68)			0.002^{+}	(1.70)
Social ties (CO)			0.108***	(4.66)			0.107***	(4.69)
Country-Level Variables								
GDP(log)			0.040*	(2.33)			0.039*	(2.31)
Mig. Population (log)			-0.009	(-0.54)			-0.008	(-0.49)
Geographic distance (log)			0.022	(1.43)			0.027^{+}	(1.87)
Linguistic distance (log)			0.125**	(2.58)			0.116*	(2.49)
Religious distance (log) EU			-0.004	(-0.35)			-0.007	(-0.58)
			0.028	(0.93)			0.037	(1.27)
Observations	3696		3696		3696		3696	
BIC	1786.168		1890.99		1780.165		1884.055	

t statistics in parentheses

$^{+}$ $p < 0.1$, * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

The life satisfaction difference is a highly significant predictor of intended return migration.[7] For each unit difference in life satisfaction between Germany and the country of origin, the model predicts an average marginal increase of 2.5% in the likelihood of holding return intentions. When the life satisfaction of migrants in Germany and their counterfactual in the country of origin are placed in the model separately, their effects exhibit opposing directions, as the theory predicts. With each unit increase in the life satisfaction in Germany, the return propensity decreases by 2.3% on average, while the propensity increases by an average of 2.2% for each unit of increase in predicted life satisfaction for the country of origin. These results support Hypothesis I. The explanatory variables' effects are robust to changes in the covariates used or restrictions on the countries' group sizes (see Table F in the Appendix). Further, Table G in the Appendix presents the results of Model 2 with and without the life satisfaction variables included; overall, no significant change was observed. Thus, the life satisfaction and control variables appear to be mostly independent.

The GDP has significant and stable effects, with migrants from high-GDP countries intending to return more frequently than migrants from low-GDP countries. Migrants could be more willing to return to more developed countries for several reasons, such as labor market conditions and issues related to infrastructure in schools or hospitals, among others. The geographic distance between country of origin and Germany is not robust, but changes substantially with the inclusion or exclusion of different variables due to other mediating variables, such as *EU*, *GDP*, *LS (CO)*, and the religious and linguistic distance. If solely including geographic distance, no effect can be observed. Similarly, linguistics demonstrates a positive but not robust effect (to the

[7] The LS variable's polynomials had no discernible effects.

variables included) on return intentions.

Migrants that have entered Germany as *Aussiedlers* or have children exhibit a robust, negative effect on the likelihood of return intentions. The low-intentions to return among *Aussiedlers* might be explained by the discrimination experienced by many of those considered ethnic Germans—and especially the older generations—in the UDSSR after World War II. The reduction in return intentions among migrants with children can be explained by the reduced mobility of parents considering their children's well-being. Specifically, it has been suggested that under certain circumstances, a return migration may negatively impact the well-being of children (Cena et al. 2018).

While migrants with children are less mobile—and therefore, more likely to stay—labor market attachments have no significant observable effects. This might seem surprising, in that labor market attachments also limit migrants' mobility. However, such effects may be ambivalent. On the one hand, migrants with a job in Germany might be less willing to leave that job and return to an uncertain career in the country of origin, while migrants without a job might have too few resources for a successful return or are bound to Germany as they rely on the German welfare system.

The last significant and robust effect from a control variable involves the social ties to the country of origin, as migrants with such social ties are more likely to intend to return. This finding mirrors the transnational perspective, which argues that such ties directly facilitate return intentions. The existence of remittances also increases return intentions, but is strongly mediated by social ties. However, remittances seem to have an additional effect on return intentions within a 90% confidence interval. This observation is in line with the NELM theory, which hypothesizes that migrants send remittances to prepare for their return (Dustmann 2003). The

German migrant population's size or whether the origin country is a part of the European Union had no effect.

In the next step, the effects of *LS(CO)* and *LS(HO)* on return intentions are tested on different subsamples: 1) migrants that send remittances to their country of origin; 2) migrants that do not send remittances to their country of origin; 3) migrants with social ties to the country of origin; 4) migrants without social ties to the country of origin; 5) migrants who have lived in Germany for less than 17 years; and 6) migrants who have lived in Germany for more than 17 years (as this period is the median time the migrants in the sample had been in Germany). The first four subsamples reflect the existence of different measures of social connection to the country of origin (hypothesis two). Therefore, the split sample in terms of the time spent in Germany reflects the assumption that migrants grow more distant from their origin country over time (hypothesis three). The effect of *LS(CO)* on these samples was calculated to test hypotheses two and three relative to the transnational perspective. Samples 1, 3, and 5 reflect a high transnational connection, while Samples 2, 4, and 6 reflect a lower transnational connection.

Table 7: Model 1 Excluding Selected Subgroups

	Remittance	No Remittance	Social Ties (CO)	No Social Ties (CO)	Under 17 yr. (HC)	Over 17 yr. (HC)
LS(Germany)	-0.555***	-0.206**	-0.291***	-0.425	-0.148	-0.366***
	(-3.75)	(-3.07)	(-4.52)	(-1.93)	(-1.53)	(-4.74)
LS(CO)	0.469*	0.293**	0.279*	0.105	0.354**	0.190
	(1.99)	(2.59)	(2.53)	(0.32)	(2.75)	(1.25)
Observations	610	3086	2824	872	1933	1935

t statistics in parentheses

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

The results in Table 7 demonstrate that the effect of life satisfaction in the origin country can only be observed for migrants with social ties to their origin country, or who are among the bottom half in terms of their years spent in Germany (less than 17 years). The effect of *LS(CO)* is

also significantly larger for migrants who send remittances relative to those who do not. We interpret this as proof supporting the transnational hypotheses two and three, in that individuals with transnational ties better maximize their life satisfaction because of their lower cost to return and better level of information (hypothesis two). Further, transnational ties seem to erode over time (H3). In terms of the effect of *LS(Germany)* on return intentions, the results are less clear. While the effect is significantly larger for migrants who send remittances and have social ties, the opposite is true for migrants with relatively short stays in Germany.

This study accounts for heterogeneity in the migrant sample by excluding various groups in testing their robustness. Table H in the Appendix illustrates the results for Model 4 as the main model of interest after omitting EU migrants, asylum-seekers, and settlers (*Aussiedlers*); migrants from Turkey; low- and high-income, low- and high-education, and neighboring countries. We also excluded five countries with the greatest differences in life satisfaction as measured from the World Value Survey and the Gallup Poll: Pakistan, Uzbekistan, the Philippines, Kyrgyzstan, and Turkey (Figure V in the Appendix compares the LS in the Gallup Poll and WVS; Figure VI displays the sample's fit when the five countries are excluded). The results remain robust, and thus, the results are not driven by measurement errors in the country of origin.

Discussion: Return Migration as Strategy to Maximize Life Satisfaction

We analyzed the relationship between migrants' life satisfaction and their intent to return to their country of origin. In this regard, we tested the predictive capabilities of the average difference in life satisfaction between Germany and the country of origin. The results indicate

that the differences in life satisfaction explain 38% of the cross-country variation in the rate of intended return when applying a linear fit, and 47% when applying a quadratic fit. For each unit in which life satisfaction in Germany exceeded life satisfaction in the country of origin, approximately 6% fewer migrants intended to return to their country of origin, according to the linear model. This is a rather substantial effect when considering that the sample's migrants intended to return in only 8% of the cases on average. The country-level model's fit is also remarkable ($R^2 = 0.38$ for the linear model; $R^2 = 0.47$ for the quadratic fit) when considering the small size of some country groups (20) and the prediction's imperfections.[8] These results are especially compelling given the debate on whether return migrations occur due to failure or success. As previously noted, subjective utility measures are driven by the extent to which individuals' subjective expectations are either met or unfulfilled. The degree to which a loss in life satisfaction can explain cross-country return intentions can be interpreted as the degree to which unmet expectations drive return intentions. According to our estimations, approximately 38% to 47% (depending on the assumed fit) of cross-country return intentions can be explained by unmet expectations.

A further micro-level analysis was performed by employing a multilevel random-intercept logit model. In these multilevel models, life satisfaction is a strong predictor of return intentions—whether in Germany or the country of origin—and this remained significant even after more traditional independent migration variables were included. However, the effect of life satisfaction in the country of origin seems to be driven by migrants with strong transnational ties.

[8] The counterfactual life satisfaction in the country of origin is the best estimation of the data available. Life satisfaction was predicted solely based on demographics (age, age squared, gender, education, and religion), which allows for significantly varying predictions.

Overall, the micro- and macro-level results suggest that return migration is a strategy of utility/well-being maximization. This finding can only be indirectly observed by demonstrating that the return propensity correlates with certain factors that determine an individual's utility, such as social connections (Constant and Zimmermann 2012) or socio-economic and working conditions (Paparusso and Ambrosetti 2017). Moreover, the average life satisfaction of those remaining in the country of origin with the same demographics as the migrant sample is a robust predictor of return intentions; this suggests that migrants are well-aware of the living situation waiting for them in their country of origin.

This study's results provide implications for policymakers and researchers. Policymakers should be aware that while high economic development may attract migrants (Docquier et al., 2014), the quality of life in the host country compels them to stay. Therefore, combining a high-income economy with low life satisfaction could lead to a high turnover among migrants. Conversely, host countries whose migrants have high life satisfaction could benefit from higher levels of intended permanent stay, which could expedite the integration process. Furthermore, the process of life satisfaction maximization will lead to a self-selection process due to which migrants in the host country will increase their average life satisfaction over time. Life satisfaction affects various forms of social participation and productivity (Thoits and Hewitt 2001; Oswald et al. 2015). Therefore, life satisfaction-driven self-selection could function as a supportive force in the integration process. Source countries, on the other hand, can attract back members of their diaspora by investing in their quality of life. This is especially important, as most typical emigration countries tend to be much poorer than typical host countries. Thus, source countries that find it difficult to compete economically with the host countries of their diaspora could instead invest directly in the life satisfaction of the demographic group it aims to entice.

The implications for further research are also noteworthy for multiple reasons. While the results of the effect of life satisfaction on out-migration have been inconclusive, evidence for return migration can be found. This suggests that incorrect expectations lead to inconclusive results for life satisfaction and out-migration. Given the assumption that migrants are aware of what awaits them in their country of origin, these expectations can more easily be included in the case of return migrants, as the expectations can be modeled after the realities in the country of origin. The results demonstrate that life satisfaction is a useful measure for analyzing return migration behavior. Finally, the study indicates that the large cross-country differences in return migration rates can be explained by significant differences in life satisfaction within the various countries of origin.

Chapter III: The Consequences of Systematic Selection

Comparing the Effect of Socio-Economic Status on PISA Scores across Different Immigrant Minorities: Is the Effect of SES on Learning Outcomes due to the Home Environment or Home External Factors?

The previous Chapters I and II reveal that migration patterns create unique and unequal selections of migrants. Thus, we anticipate that migrant groups with different migration backgrounds would be unequal in terms of their resources. In a next step, we address the long-term consequences of migrant minorities that differ systematically from each other and the host country population in terms of their socio-economic status. We respond to this issue in Chapter III, which investigates the effects of socio-economic differences between immigrants with different migrant backgrounds on the observed social mobility.

From Social Inequality to the Inequality of Opportunity

Migrant populations can vary in their levels of productivity and economic resources due to different patterns of selection. On the one hand, the unequal distribution of economic resources among individuals is known as the inequality of outcomes. On the other hand, the inequality of opportunity refers to the extent to which children with unequal parental backgrounds have unequal chances to succeed in life (Roemer,1998). The connection between the two concepts is known as the Great Gatsby Curve, and has been extensively discussed in the literature (Durlauf and Seshadri 2015; Jerrim and Macmillan 2015). The Great Gatsby Curve generally indicates that the more unequal resources are distributed among the parental

generation, the more important these parental resources become for the life opportunities of the next generation of children. An array of studies highlight the important role of education in this intergenerational process of transmitting inequality (Boudon 1974; Blanden et al. 2005; Jerrim and Macmillan 2015). This research suggests that the system of tracking apparent in many Western educational institutions is critical in magnifying socio-economic differences' effects on educational outcomes (Van de Werfhorst and Mijs 2010).

When different migrant minorities systematically differ from each other and the local population in terms of socio-economic status, they are also expected to systematically differ in terms of the next generation's level of opportunity. This could easily be a problem for cohesion within a society if members of certain low socio-economic-status (SES) migrant minorities are systematically disadvantaged not only given their material possessions, but also in their opportunities to advance in life. This parallels research suggesting that low-SES migrant minorities report experiencing high subjective levels of discrimination (Silberman et al., 2007).

These migrants' subjective impressions of discrimination are supported by evidence that negative stereotypes tend to target low-status minorities (Maass and Cadinu 2003), as well as evidence of discrimination in the marketplace, such as the labor, housing, and credit markets (Riach and Rich 2002; Pager and Shepherds 2008; Auspurg et al. 2019). Several studies have also observed the effects of perceived discrimination on migrants' mental health and overall subjective well-being (Safi 2010; Schmitt et al. 2014). Further, low-SES minorities' discrimination experiences may deter them from identifying with the host country (de Vroome et al. 2014). These dividing social forces may be further aided by the significant segregation of low-SES migrant minorities in many host countries. Consequently, the socio-economic inequality of outcomes between locals and immigrants hinders the latter's successful integration

over time and generations, and may transform the parental generation's inequality of outcomes into an inequality of opportunity for their children.

Hence, Study III aims to estimate the connection between the social inequality among migrant minorities and their academic achievements. This study analyzes the extent to which social inequality drives various migrant minorities' unequal educational outcomes.

Overview Study III: Socio-Economic Status and the PISA score of Immigrants

A substantial body of literature demonstrates the effect of socio-economic status (SES) on students' learning outcomes. The pathways of this effect as mentioned in literature can be split into factors involving the home environment and home external factors. We anticipate the home environment factors will produce similar effects across different immigrant minorities. Alternatively, home external factors are expected to be reflected in the broader contextual effects of socio-economic status and large variations in individual-level SES effects across different minorities. This study uses data from the Programme for International Student Assessment (PISA 2018) to compare the differences in SES effects across various immigrant minorities in the sample. The analysis was conducted within a multilevel framework; the results reveal not only a significant variation in SES' individual-level effects across different immigrant minorities, but also that SES has significant contextual effects at the minority group level. Thus, a minority's average socio-economic position can statistically explain 50% of the variance in the individual-level SES effect. These results highlight the importance of home external factors in transmitting SES to students' learning outcomes for immigrants.

Introduction: Home Internal and External Factors in the Effect of SES on Learning Outcomes

The effect of parental socio-economic status (SES) on children's learning outcomes has been well-established (see Sirin 2005). Specifically, current literature reveals that parental SES has robust effects on children's learning outcomes. Further, research also indicates that SES can explain a large share—although not all—of the differences in learning outcomes between different immigrant minorities (Kao and Thompson 2003; Levels et al. 2008).

The literature has proposed several mechanisms by which parental SES may influence children's learning outcomes. A common argument states that a family's SES influences the student's home environment, which consequently influences students' academic achievements (Thomson 2018). Other home external factors have been proposed that translate parental SES into students' academic achievements, such as the school environment (Perry and Mconney 2010), the student's peers (van Ewijk and Sleegers 2010), stereotypes (Maass and Cadinu 2003), teachers' preconceptions (Rubie-Davies et al. 2006), and subjectively experienced discrimination (Stone and Han 2005). These home external factors that may drive the SES' effect on learning outcomes may be especially strong for immigrants. Hence, this paper aims to analyze the extent to which translating SES into learning outcomes is driven by either the home environment or home external factors.

In examining the extent to which immigrant students' school outcomes are driven by either their home environment or factors external to their home, it can be helpful to analyze the different patterns of parental SES transmission into students' school outcomes across different immigrant minorities. Immigrants with similar SES are expected to provide similar home environments to their children, regardless of their immigrant minority group. That is, a high-SES student with Turkish roots living in Germany is expected to enjoy a similarly beneficial home environment as

a high-SES student with a Vietnamese migratory background. However, home external factors—such as the school, peers, neighborhood, or stereotypes—may substantially vary between different minority groups independent of the individual student's SES. Therefore, analyzing the extent to which parental SES effects vary among different immigrant minorities can provide the extent to which parental SES translates into children's school outcomes through either the home environment or home external factors.

This paper analyzes the extent to which the SES effects vary between different immigrant minorities worldwide using data from the Programme for International Student Assessment (PISA 2018). We investigate the extent to which the SES effect observed within an immigrant minority group corresponds to the socio-economic standing of immigrant minorities in society. We find significant differences in the SES effect on PISA outcomes across immigrant minority groups. While parental SES becomes barely significant for low-SES immigrant minorities, some high-SES immigrant minorities exhibit SES effects larger than those of locals. Approximately 50% of these cross-minority differences in the SES effect on learning outcomes can be explained by the immigrant minorities' overall socio-economic position in society. These findings underline the importance of home external factors in how SES effects immigrant students' learning outcomes.

The Role of SES in Learning Outcomes among Immigrants

In the following section, we discuss the factors that may establish a pathway between parental SES and students' learning outcomes. This is specifically applied to the unique

circumstances faced by immigrants; the literature review is divided into two parts: factors within the home environment and home external factors.

A common argument as to why parental SES influences children's learning outcomes states that a family's SES influences the student's academic home environment (Thomson 2018). High-SES parents can provide their children with more and better resources to learn and develop. In this regard, a well-established finding involves the number of books in a student's home as a proxy for the academic home environment, which is one of the most predictive variables for a child's academic success (Thomson et al. 2017). Additionally, several studies demonstrate that a family's SES appears to influence a child's development in terms of overall health and IQ (Bradley and Corwyn 2002). Further, studies support the notion that students' benefit from a higher propensity of private tutoring (Dang and Rogers 2008).

Overall, the SES factors in the home environment influence students' learning outcomes over the level of resources available within the student's home. As parents with a similar SES enjoy similar levels of resources, they should be able to provide their children with a similar home environment regardless of their immigrant minority group. Therefore, we anticipate these home internal factors to have a similar effect on learning outcomes across immigrant minorities. In the case of large cultural effects that shape the transmission of SES within the home environment, differences are expected to be random rather than correspond to the minority socio-economic position.

A highly examined home external factor relative to parental SES translating into children's school outcomes is the socio-economic composition of a student's school (Hoover-Dempsey et al. 1987; Caldas and Bankston 1997; Perry and Mconney 2010). In this instance, the literature argues that students commonly share a school or classroom with students of similar SES.

Further, students benefit from their fellow students' SES. Additional home external factors mentioned in literature that affect students' educational outcomes include the neighborhood (Wodtke et al. 2011) and peers (van Ewijk and Sleegers 2010). All these effects are thought to function over the influence a student's social circle might have on the student's attitude in regard to school.

Another train of thought argues that teacher expectations might create a self-fulfilling prophecy for learning outcomes (Weinstein et al. 2004; Rubie-Davies et al. 2006) that may be especially harmful to low-SES minorities. Similarly, negative stereotypes that tend to target low-SES minorities have been shown to influence students' test performance (Steele 1997; Maass and Cadinu 2003; Aronson and Inzlicht 2004). Research also observes that perceptions of discrimination correlate with lower academic achievement (Stone and Han 2005).

In summary, parental SES might affect a student through direct parental influence, or the general home environment created by the student's parents and their resources, or by social factors that operate outside of the student's home. If the SES effect on learning outcomes operates largely due to the home environment, one would expect SES would have similar effects on students' performance across different immigrant minorities. However, if the SES effect is largely a function of home external factors, one would expect a large cross-minority variation in the SES effect; subsequently, this should correspond to the minority's overall socio-structural position in society.

This study first tests the extent to which parental SES affects students' learning outcomes through the home environment or external factors by examining the extent to which the SES effect varies between different immigrant minorities. We also test the extent to which these differences correspond with the minority's socio-structural position in society. After presenting

the theoretical background in the current section, the next section presents the data, followed by the method used to analyze the differences in SES effects across migrant minorities.

Data: Immigrant Students and their Socio-Economic Status in the PISA Survey

The PISA (2018) survey was used as the primary data source to analyze the variation in the SES effect on students' learning outcomes. We selected only those country samples that surveyed the countries of birth of students and their parents. Further, countries were only considered with PISA samples representative of their entire population. We included only observations with a PISA score that also participated in the questionnaire. All observations with unknown countries of birth for children and parents were excluded. We also omitted all cases in which both parents were born in the host country, but their child was born in a country different from the host country. Finally, we considered only immigrant minority groups with at least 50 members to make the group averages more meaningful and improve the quality of cross-minority comparisons.

Migration status was assigned to the country of birth. A student born in a country other than the host country is defined as a first-generation migrant. Students who were born in the host country but whose parents were born abroad were defined as second-generation migrants. In cases in which parents were born in different countries, we defined the migration status of the parent with the better occupation, or with a higher international socio-economic index (ISEI). Approximately 60% of the observations in the migrant sample involve second-generation migrants, while 40% are first-generation migrants.

If only one of the two parents' country of birth is known, the one parent's known birth country is imputed for the other. If the country of birth is unknown for either parent, but the student's

country of birth is known, we impute the student's country of birth for both parents. Finally, if the student's country of birth is unknown, the country of birth of the student's parents is used. If the student's country of birth is unknown and the student's parents were born in two different countries, we assigned the student to the mother's country of birth.

All other missing values for independent variables within the sample were imputed using a multiple-imputation method (i.e., 10) then averaged. Table 8 displays the number of observations for each immigrant minority with the share of first- and second-generation migrants.

Table 8: Migrant Sample across Different Minority Groups

Origin-Host Country	2nd Generation	N	Origin-Host Country	2nd Generation	N	Origin-Host Country	2nd Generation	N	Origin-Host Country	2nd Generation	N
prt/lux	0.58	1196	ussr/deu	0.80	274	irq/jor	0.30	149	fra/isr	0.61	95
syr/jor	0.12	1002	ssh.afk/bel	0.63	272	fji/nzl	0.62	143	idn/brn	0.69	93
nic/cri	0.78	865	ind/aus	0.28	270	usa/isr	0.57	143	afg/dnk	0.88	91
mys/brn	0.65	834	eeu/bel	0.45	255	eth/isr	0.61	142	ven/pan	0.05	88
phl/can	0.33	833	tur/deu	0.94	255	zaf/nzl	0.28	140	arg/ury	0.66	86
gbr/aus	0.59	822	rus/ukr	0.83	251	ita/lux	0.62	137	ukr/lva	0.85	86
ussr/isr	0.87	579	vnm/aus	0.77	251	phl/nzl	0.18	132	swe/fin	0.84	81
gbr/irl	0.66	571	pry/arg	0.59	224	col/pan	0.47	131	bra/ury	0.72	79
chn/can	0.44	538	pak/can	0.48	221	hti/dom	0.64	130	swe/nor	0.75	79
nzl/aus	0.51	523	tur/dnk	0.91	218	lbn/dnk	0.97	129	syr/can	0.29	79
alb/grc	0.77	495	chn/nzl	0.51	209	deu/bel	0.43	127	rus/fin	0.55	75
ind/can	0.58	491	svk/cze	0.82	209	rus/geo	0.58	126	ukr/cze	0.44	75
fra/lux	0.52	461	deu/aut	0.54	208	fra/che	0.63	121	est/fin	0.32	74
usa/can	0.39	430	bel/lux	0.71	196	cze/svk	0.80	120	ita/aus	0.84	68
n.afk/bel	0.79	409	ussr/grc	0.83	191	ukr/mda	0.78	120	esp/che	0.60	67
gbr/nzl	0.47	407	deu/che	0.42	187	kor/can	0.33	118	kaz/blr	0.78	65
ita/che	0.64	363	irq/dnk	0.93	185	irn/can	0.45	113	vnm/cze	0.72	61
rus/blr	0.85	355	deu/lux	0.50	184	rus/mda	0.69	113	chn/pan	0.78	60
tur/aut	0.94	315	nld/bel	0.34	183	tur/che	0.85	110	chl/arg	0.81	59
rus/lva	0.87	313	wsm/nzl	0.63	176	pol/deu	0.67	107	jor/sau	0.49	59
irl/gbr	0.45	310	fra/bel	0.56	172	cpv/lux	0.74	106	ury/arg	0.83	59
chn/aus	0.46	309	fra/can	0.46	168	pak/dnk	0.91	105	are/can	0.26	57
prt/che	0.53	301	tur/bel	0.90	157	bra/prt	0.35	103	syr/dnk	0.41	56
phl/aus	0.39	292	som/dnk	0.93	154	phl/brn	0.56	99	col/cri	0.60	53
bol/arg	0.61	277	ukr/blr	0.81	154	egy/jor	0.61	98			
gbr/can	0.54	274	aus/nzl	0.50	151	blr/lva	0.95	96			
									Total	**0.60**	**23,843**

Note: Countries are abbreviated according to their ISO3c codes: (afg) Afghanistan; (alb) Albania; (are) United Arab Emirates; (arg) Argentina;(aut) Austria; (aus) Australia; (bel) Belgium; (blr) Belarus; (bol) Bolivia; (bra) Brazil; (brn) Burnei Darussalam; (can) Canada; (che) Switzerland; (chl) Chile; (chn) China; (col) Columbia; (cpv) Cape Verde;(cri) Costa Rica; (cze) Czechia;(dnk) Denmark; (deu) Germany; (dom) Dominican Republic; (eeu) East European; (egy) Egypt; (esp) Spain; (est) Estonia; (eth) Ethopia;(fin) Finland; (fji) Fiji; (fra) France; (gbr) United Kingdom;(geo) Georgia; (grc)Greece; (hti) Haiti; (idn) Indonesia; (ind) India; (irl) Ireland; (irn) Iran; (irq) Iraq; (isr) Isreael; (ita) Italy; (jor) Jordan; (kaz) Kazakhstan; (kor) South Korea; (lbn) Lebanon; (lux) Luxembourg; (lva) Latvia;(mda) Moldova; (mys) Malaysia; (n.afk) North Africa; (nic) Nicaragua; (nld) Netherlands; (nor) Norway; (nzl) New Zealand; (pak) Pakistan; (pan) Panama; (phl) Philippines; (pol) Poland; (prt) Portugal; (pry) Paraguay; (rus) Russia; (sau) Saudi Arabia, (som) Somalia; (ssh. afk) Sub-Saharan Africa; (svk) Slovakia; (swe) Sweden; (syr) Syria; (tur) Turkey; (ukr) Ukraine; (ury) Uruguay; (usa) United States; (ussr) USSR; (ven) Venezuela; (vnm) Vietnam; (wsm) Samoa; and (zaf) South Africa.

In addition to the main data source (PISA 2018), an additional dataset was used. The average harmonized learning outcome was taken from Altinok et al. (2018). Table 9 notes the summary statistics for the migrant and local samples.

Table 9: Summary Statistics

Migrant Sample	mean	sd	min	max
Parent Variables				
Occ. Status(ISEI)	49.32	22.83	11.00	89.00
Years of Schooling (int.)	13.51	3.21	3.00	17.00
AHLO	455.57	70.42	252.82	588.30
Student Variables				
Pisa Score (Math & Science)	469.64	95.46	132.72	787.65
Mig. 2nd Generation	0.60		0.00	1.00
Language	0.62		0.00	1.00
Male	0.51		0.00	1.00
				N = 23,843

Local Sample	mean	sd	min	max
Parent Variables				
Occ. Status(ISEI)	52.14	22.21	11.00	89.00
Years of Schooling (int.)	13.78	2.77	3.00	18.00
AHLO	474.29	51.81	337.68	550.08
Student Variables				
Pisa Score (Math & Science)	465.85	95.07	116.94	800.96
Language	0.90		0.00	1.00
Male	0.50		0.00	1.00
				N = 187,929

Note: Data from PISA (2018); the average harmonized learning outcome (AHLO) variable is derived from Altinok et al. (2018).

The first two variables concern the parental generation's labor market situation. The quality of the parent's occupation is measured using the International Socio-Economic Index (ISEI; Ganzeboom 2010). Parents' education is measured in international years of schooling, or specifically, as an internationally harmonized variable to indicate the parent's years of education. The variable average harmonized learning outcome (AHLO) is the result of harmonizing different national, regional, and international learning assessments to create comparable results (Altinok et al., 2018). The resulting AHLO variable measures the average quality of education that the parental generation received in their country of birth.

The outcome variable of interest in this study is the students' PISA scores in science and math. We chose to restrict the score to science and math to minimize potential language effects. Further, this study considers students' gender and the language commonly spoken at home. The sample consisted of roughly the same number of male and female students. Further, the binary language variable measures whether the language of the student's PISA test is also the language most commonly spoken at home. Note that some students attend international schools and the school language may not be the local language, such as English schools in Central or South America. This explains why only 90% of local students speak their schooling language at home. After introducing the data used for this paper in the current section, the next section will map the method used to analyze the data.

Methodology: How the Variance in the SES Effect is Estimated

This study aims to analyze the extent to which the effect of SES on students' PISA outcomes varies across different immigrant minorities; in doing so, a multilevel model with a random intercept and random coefficient is applied. Note that the independent variables were group mean-centered, and their group average was introduced as level two variables. The group mean centering method (or "centering with context") allows us to separate the individual-level effect from the contextual effect (Feaster et al. 2011).

$$Y_{ij} = \pi_{0j} + \pi_{1j}\left(X1_{ij} - \overline{X1_j}\right) + \cdots + \pi_{nj}\left(Xn_{ij} - \overline{Xn_j}\right) + e_{ij} \qquad \text{(Level 1)}$$

$$\pi_{0j} = \beta_{00} + \beta_{01}\overline{X}_j + r_{0j} \qquad \text{(Level 2)}$$

$$\pi_{nj} = v_{00} + v_{01}\overline{X}_j + z_{0j} \qquad \text{(Level 2)}$$

In this multilevel model, the dependent variable $\boldsymbol{Y}$ of individual $\boldsymbol{i}$ from the minority group $\boldsymbol{j}$ is explained using the intercept $\boldsymbol{\pi_{0j}}$, the independent variables $\boldsymbol{X1\text{-}Xn}$, and their coefficients $\boldsymbol{\pi_{nj}}$-$\boldsymbol{\pi_{1j}}$. The intercept $\boldsymbol{\pi_{0j}}$ is further split into two parts: the fixed and random intercepts, or $\boldsymbol{\beta_{00}, \beta_{01}}$. This allows the intercept to vary between the different groups. The same principles apply to the coefficient $\boldsymbol{\pi_{nj}}$ in the model. The coefficients are also split into fixed and random components ($\boldsymbol{v_{00}, v_{01}}$), or the purported "fixed" and "random" coefficients. This allows the model's coefficients to vary between the predefined minority groups.

The resulting random intercept random coefficient model allows different minority groups to have different intercepts and coefficients. The group-mean centering method within this multilevel framework further allows us to separate the effect into its individual level and its contextual level effect. In summary, the random coefficient multilevel model allows coefficients to vary between predefined groups. The random coefficient part of this multilevel model allows us to efficiently estimate differences in the SES effect on learning outcomes across various immigrant minorities, as these differences are captured in the random coefficient part of the equation. After introducing the PISA data as well as the method used to analyze the data, the next section presents the results of our calculations.

Measuring the Socio-Economic Status (SES)

According to Sirin (2005, p.418), SES is commonly defined as "an individual's or a family's ranking on a hierarchy according to access to or control over some combination of valued commodities such as wealth, power, and social status (Mueller and Parcel 1981)". While variations in the exact practical application of this SES concept are widespread, Sirin (2005)

concludes that SES involves a combination of parents' income, education, and occupation. This study combines these three factors; specifically, we used the ISEI of parental occupations (Ganzeboom 2010) and the education (international years of education) of the parent with a higher occupation in terms of ISEI. The ISEI score can be interpreted as occupational status, as this score is derived from the earner's ability to turn an education into wages (Ganzeboom 2010). Therefore, the ISEI score is a combination of parental occupation and wages. To account for its hierarchical nature, both variables were ranked within the entire host country population. The two variables—ISEI for occupation and wages, and the international years of schooling for education—were then combined using a principal component analysis (Abdi and Williams 2010) to obtain the SES variable used in this study.

The following Table 10 lists all immigrant minorities with their average SES, the standard deviation of SES, as well as the number of immigrants in the sample. The list is sorted from highest to lowest average SES. We can observe a substantially large distance in the average SES of 1.64 standard deviations between the highest (Emirati migrants in Canada) and lowest SES (Portuguese migrants in Luxembourg) immigrant minorities.

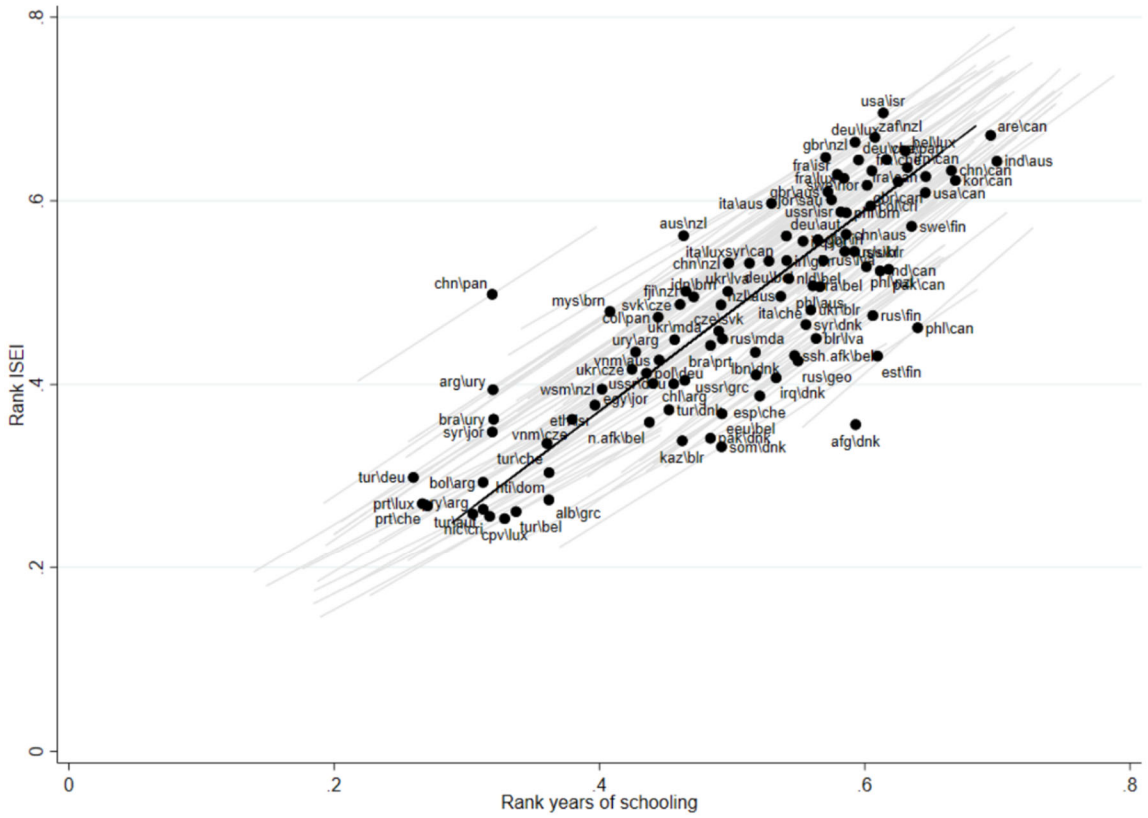
Table 10: SES among Immigrant Minorities

Origin-Host Country	mean(SES)	sd(SES)	N	Origin-Host Country	mean(SES)	sd(SES)	N
are/can	0.90	0.78	57	ukr/lva	0.00	1.07	86
ind/aus	0.84	0.89	270	ssh.afk/bel	-0.05	1.14	272
usa/isr	0.76	0.99	143	nzl/aus	-0.05	1.18	523
chn/can	0.73	1.00	538	rus/geo	-0.06	1.12	126
kor/can	0.71	0.87	118	idn/brn	-0.08	1.12	93
bel/lux	0.70	0.96	196	fji/nzl	-0.08	1.22	143
zaf/nzl	0.68	0.94	140	lbn/dnk	-0.12	1.30	129
fra/can	0.67	0.94	168	afg/dnk	-0.12	1.26	91
irn/can	0.66	0.99	113	cze/svk	-0.13	1.11	120
ven/pan	0.64	1.09	88	svk/cze	-0.13	1.20	209
deu/lux	0.63	1.09	184	rus/mda	-0.14	1.08	113
usa/can	0.62	1.02	430	irq/dnk	-0.15	1.24	185
gbr/can	0.60	0.94	274	ussr/grc	-0.18	1.09	191
deu/che	0.59	1.06	187	bra/prt	-0.18	1.27	103
fra/che	0.58	1.08	121	col/pan	-0.20	1.32	131
swe/nor	0.54	1.03	79	esp/che	-0.22	1.19	67
gbr/nzl	0.53	1.06	407	ukr/mda	-0.23	1.10	120
fra/lux	0.51	1.14	461	mys/brn	-0.28	1.08	834
fra/isr	0.51	1.15	95	vnm/aus	-0.31	1.25	251
swe/fin	0.51	1.04	81	chl/arg	-0.32	1.23	59
col/cri	0.49	1.05	53	ury/arg	-0.34	1.24	59
gbr/aus	0.45	1.05	822	eeu/bel	-0.34	1.08	255
jor/sau	0.43	1.38	59	ussr/deu	-0.35	1.14	274
phl/brn	0.42	1.03	99	pol/deu	-0.37	1.13	107
ussr/isr	0.42	1.10	579	egy/jor	-0.39	1.23	98
chn/aus	0.37	1.13	309	ukr/cze	-0.39	1.06	75
pak/can	0.35	1.07	221	pak/dnk	-0.43	1.27	105
rus/blr	0.34	1.04	355	tur/dnk	-0.43	1.28	218
ind/can	0.33	1.05	491	som/dnk	-0.43	1.14	154
rus/ukr	0.32	1.06	251	chn/pan	-0.45	0.97	60
phl/nzl	0.32	1.13	132	kaz/blr	-0.49	0.94	65
ita/aus	0.31	1.07	68	wsm/nzl	-0.50	1.09	176
gbr/irl	0.30	1.11	571	n.afk/bel	-0.50	1.21	409
irq/jor	0.27	1.26	149	eth/isr	-0.55	1.35	142
rus/lva	0.25	1.06	313	vnm/cze	-0.63	0.89	61
deu/aut	0.25	1.11	208	arg/ury	-0.70	1.26	86
phl/can	0.25	0.97	833	tur/che	-0.74	1.19	110
rus/fin	0.20	1.08	75	bra/ury	-0.78	1.16	79
irl/gbr	0.19	1.11	310	syr/jor	-0.81	1.22	1002
phl/aus	0.18	1.12	292	hti/dom	-0.82	1.06	130
fra/bel	0.17	1.14	172	alb/grc	-0.89	0.88	495
deu/bel	0.15	1.23	127	bol/arg	-0.97	1.15	277
nld/bel	0.14	1.19	183	tur/bel	-0.98	1.00	157
syr/can	0.11	1.10	79	cpv/lux	-1.02	1.23	106
est/fin	0.10	1.06	74	tur/aut	-1.04	0.92	315
ukr/blr	0.10	1.09	154	nic/cri	-1.04	1.13	865
ita/che	0.08	1.14	363	pry/arg	-1.07	1.02	224
ita/lux	0.07	1.22	137	tur/deu	-1.08	1.11	255
chn/nzl	0.07	1.20	209	prt/che	-1.13	0.82	301
aus/nzl	0.06	1.23	151	prt/lux	-1.13	1.02	1196
syr/dnk	0.05	1.33	56				
blr/lva	0.03	1.04	96				
				Total	**-0.10**	**1.24**	**23,843**

The following Figure 10 illustrates the different immigrant minorities within two dimensions—the ranked years of schooling on the x-axis, and the rank of occupations in ISEI on the y-axis—that collectively form the SES. The black dots depict the average value for the minority group, while the line in gray indicates the position of the orthogonal factor between the variables for the rank of education and rank of quality of occupation within the host country. The orthogonal factors between the rank of parental years of schooling and parental ISEI corresponds to the calculated SES. Therefore, the gray lines depict the internal gradient of parental SES across the years of education among the immigrant minorities. The line's length denotes the interval within one standard deviation around the average SES (the black dots). The thick black diagonal line indicates the entire sample's orthogonal factor. Regarding all minority groups and the sample as a whole, a consistent pattern can be observed of improving rank in terms of occupation, with increasing rank in terms of education, and vice versa.

We further note that a substantial share of the variance in occupational rank among migrant minorities can be explained by their differences in average education. The graph depicts these differences in terms of the socio-economic standing of immigrants versus locals among the different minority groups. For example, Indians in Australia (ind/aus) possess a higher education than 70% of locals. Their occupations as well is higher than those of 64% of locals. On the other end of the spectrum, the education of Portuguese migrants in Luxembourg (prt/lux) falls at the bottom 27% of society, and occupations are positioned at the bottom of society as well (27%).

Figure 10: Education, Occupation and SES across Different Immigrant Minorities

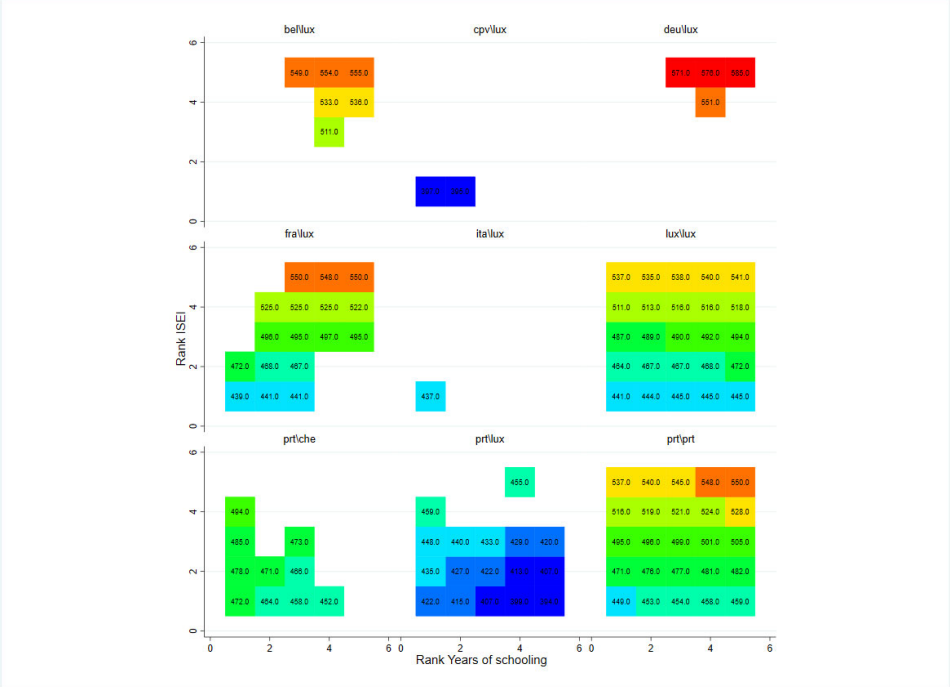


Results: Analyzing the Variance in the SES Effect across Immigrant Minority Groups

This results section is structured as follows: First, it explores the individual factors that comprise the SES score and their combined effect on students' PISA outcomes. This is followed by the results of multiple random-intercept models aiming to explain the cross-minority differences in PISA outcomes over SES at the individual and contextual levels. The final and most central part of these analyses investigates the variation in the SES effect on PISA outcomes using several random intercept, random coefficient models.

We first examine the PISA scores of different student groups as defined by their parental educational and occupational ranks as well as their migration background. To do so, we perform a quintile regression using the parental years of education and ISEI as predictors within each group of locals and immigrant minorities. The predicted PISA scores from this regression are then averaged for each quintile group, with a minimum of 10 observations; each quintile group is defined by the parental quintile of education, occupation, and minority group. Figure 11 presents the resulting heat map with Luxembourg and its immigrant minorities as an example (Appendices VII and VIII provide heat maps of all minority and local groups in the sample). High and low PISA scores are noted in red and blue, respectively. The intermediate steps ranging from high to low are red, orange, yellow, green, teal, and light blue, dark blue.

Figure 11: Heat Maps of PISA Scores for Parental Background



Note: Heat map based on average predicted PISA outcomes; prediction separately performed for each Origin-Host group.

First, we can observe different PISA scores for members of different groups with the same parental background in terms of education and occupation. For example, the children of Belgian, German, or French migrants in Luxembourg (bel/lux, deu/lux, and fra/lux, respectively) have PISA scores that are higher than those of local children (lux/lux) whose parents share the same quintile in terms of education and occupation. Additionally, we noted that the gradient between ranked education and ranked occupations varied between the different groups. For locals and immigrant minorities with a higher than average socio-economic background, the parental education and quality of occupation collectively increase the students' PISA scores. However, the PISA scores increase with parental occupation (ISEI) but decrease with parental education for members of such low-ranking migrant minorities as the Portuguese in Switzerland (prt/che) and Luxembourg (prt/lux), and Cape Verdeans in Luxembourg (cpv/lux). This suggests that the previously calculated SES factor varies in its effect on children's PISA scores across different immigrant minority groups.

Next, we test whether the pattern observed in the heat maps is statistically significant across all migrant minorities in the sample. The following Table 11 tests the SES' effect while including several control variables. Hence, the SES effect is split into individual-level and contextual effects by including both the group mean-centered SES and the group mean itself as variables. The variables are introduced stepwise to determine how the variables interact with each other, and whether the model improves in terms of their Bayesian Information Criterion (BIC).

Table 11: Results of Multi-Level Models Testing for the Effect of SES on PISA Scores

Dependent Var.: Pisa Score (Science, Math)	Model 1		Model 2		Model 3	
LVL1: SES	0.18***	(37.83)	0.18***	(37.83)	0.18***	(36.62)
Mig. 2nd Generation	0.18***	(15.30)	0.18***	(15.39)	0.15***	(12.42)
ave. Local Pisa Score	0.68***	(7.76)	0.55***	(8.94)	0.54***	(8.84)
Male	0.02	(1.95)	0.02*	(1.97)	0.02*	(2.14)
LVL2 (OC-HC): SES			0.59***	(10.79)	0.51***	(9.35)
AHLO					0.63***	(3.65)
Language					0.22***	(15.76)
Constant	-0.23***	(-5.15)	-0.19***	(-6.01)	-4.12***	(-3.94)
Observations	23,843		23,843		23,843	
BIC	58,922.13		58,854.98		58,615.31	

t statistics in parentheses
$^{*}\ p < 0.05,\ ^{**}\ p < 0.01,\ ^{***}\ p < 0.001$

Model 1 includes only the group-centered, individual-level SES, as well as such basic background variables as the student's migrant generation, the average PISA score of local students in the host country, and the student's gender. As anticipated, the individual-level SES had a strong effect on the students' PISA score. Further, second-generation migrants performed better than first-generation migrants, and male students outperformed female students by a small margin, although it should be noted that the PISA score is based only on science and math. The average PISA score of local students in the host country is included to control for the quality of the host country's education system; migrant students improved their PISA scores as the quality of the host country's school system improved. When we include the contextual effect of SES (Model 2), a strong significant contextual effect can be observed. This is also reflected in the improved BIC of Model 2 relative to Model 1 (58,855 < 58,922). This suggests that SES has a significant effect at both the individual and contextual levels. In the next step (Model 3), we include control variables for the contextual effect of SES. We posit that the lower quality of education received by some immigrant minorities from less-developed countries might explain the parents' SES as well as low student performance. A potential language barrier could also

explain both parental SES and students' PISA scores. We observe that these two control variables do improve the model in terms of BIC (58,615 < 58,854); however, only a relatively small portion of the contextual effect of SES can be explained by these two control variables. The three models were also calculated for local students. The individual level SES of locals showed a robust effect, while the contextual group level effect was not picked up. This indicates that the group level effect of SES on learning outcomes is only a phenomenon for immigrants rather than natives.

Figure 12 illustrates the differences in minority groups' PISA scores after controlling for parental SES with a single fixed coefficient. The graph can be interpreted as a visualization of the contextual effect of SES after controlling for the individual-level SES effect. The top quintiles of minorities in terms of average SES are shown in red, the bottom quintile in blue, and the middle three quintiles (20^{th} to 80^{th} quintiles) in gray (Table I in the Appendix presents a color-coded tabulation).

Figure 12: Unexplained Differences in PISA Scores and Minority Groups' Social Position

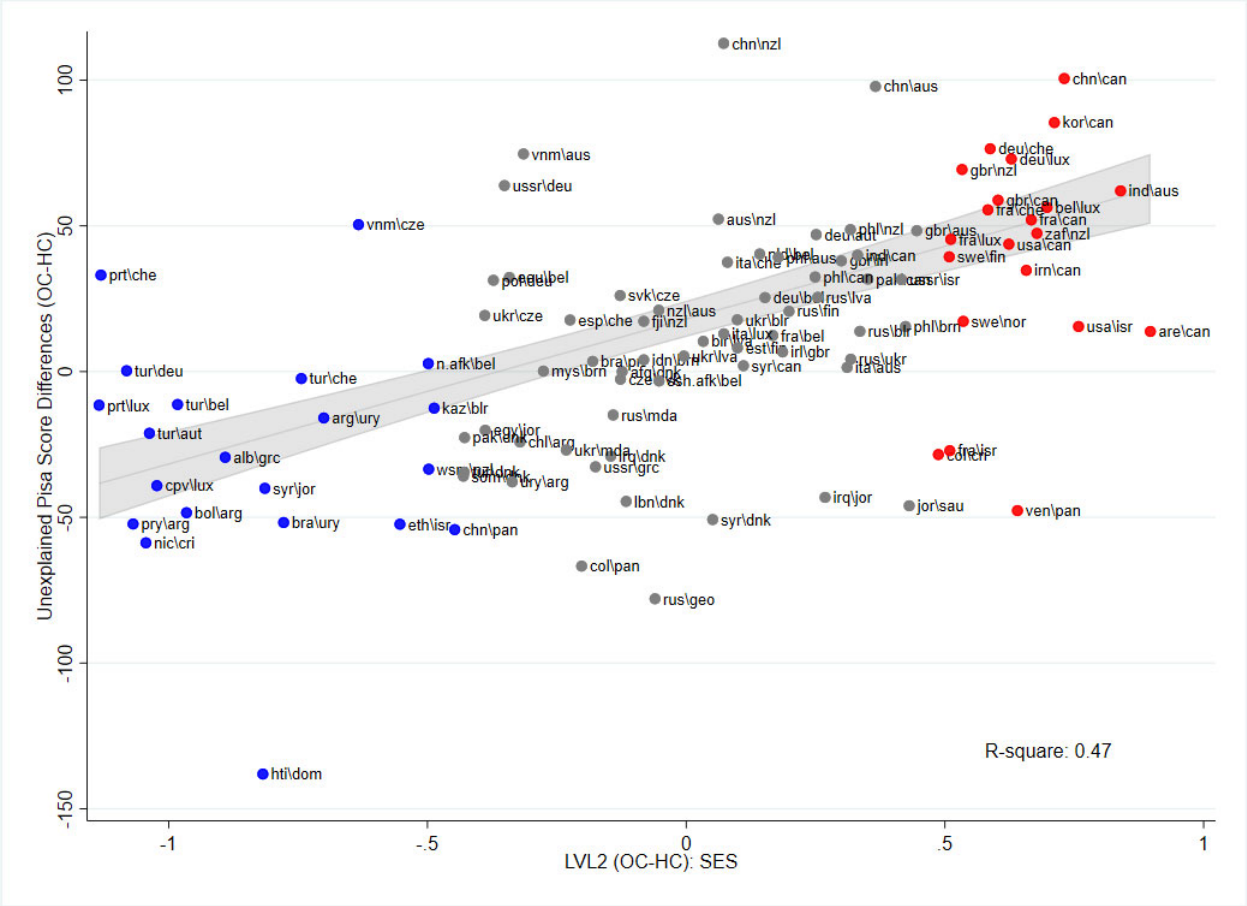


Figure 12 also indicates that an immigrant minority group's average social position (average SES) can explain 47% of the cross-minority differences in the PISA score unexplained by the individual's parental SES. The large, significant contextual effect of SES suggests that SES may influence immigrant students' learning outcomes due to home external factors.

We have established that the cross-minority differences in PISA scores that are unexplained by individual-level SES can be meaningfully explained by the SES' contextual effect. As a second step, we aim to test for the cross-level interaction between individual- and contextual-level SES. Table 12 presents Model 3 from Table 12, but the model in this instance allows for a cross-level

interaction between the minority group's mean-centered, individual-level SES and the group-level average SES.

Table 12: Cross-Level Interaction of SES

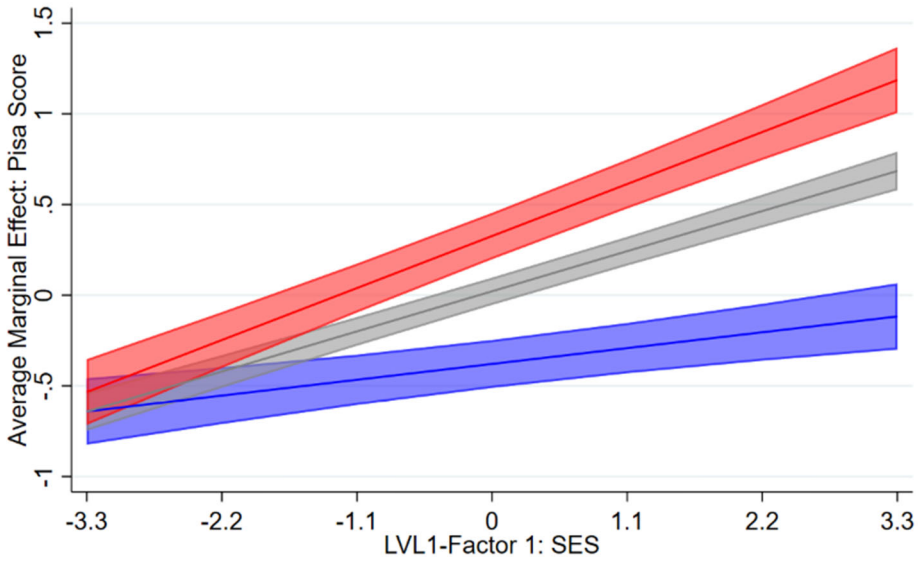
	Model 3 with Interaction	
LVL1 SES	0.19***	(21.85)
LVL2 (OC-HC): SES	0.51***	(9.37)
LVL1: SES × LVL2 (OC-HC): SES	0.13***	(8.15)
Mig. 2nd Generation	0.16***	(12.91)
ave. Local Pisa Score	0.54***	(8.83)
Male	0.03**	(2.67)
AHLO	0.62***	(3.64)
Language	0.21***	(15.50)
Constant	-4.11***	(-3.94)
Observations	23,843	
BIC	58,335.26	

t statistics in parentheses
* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

Table 12 reveals a strong and significant cross-level interaction between the individual- and group-level average SES. The lower BIC from Model 3 with the interaction—versus Model 3 without the interaction—indicates that including the interaction meaningfully improves the model.

Figure 13 presents the cross-level interactions discussed in Table 12, with the average marginal effect of the group mean-centered individual-level SES for three groups: 1) the bottom quintile of migrant minorities (in blue); 2) the middle 60% of migrant minorities (in gray); and 3) the top quintile of migrant minorities (in red). Table I in the Appendix presents a color-coded tabulation of the three groups.

Figure 13: Cross-Level Interaction (Average Marginal Effect)

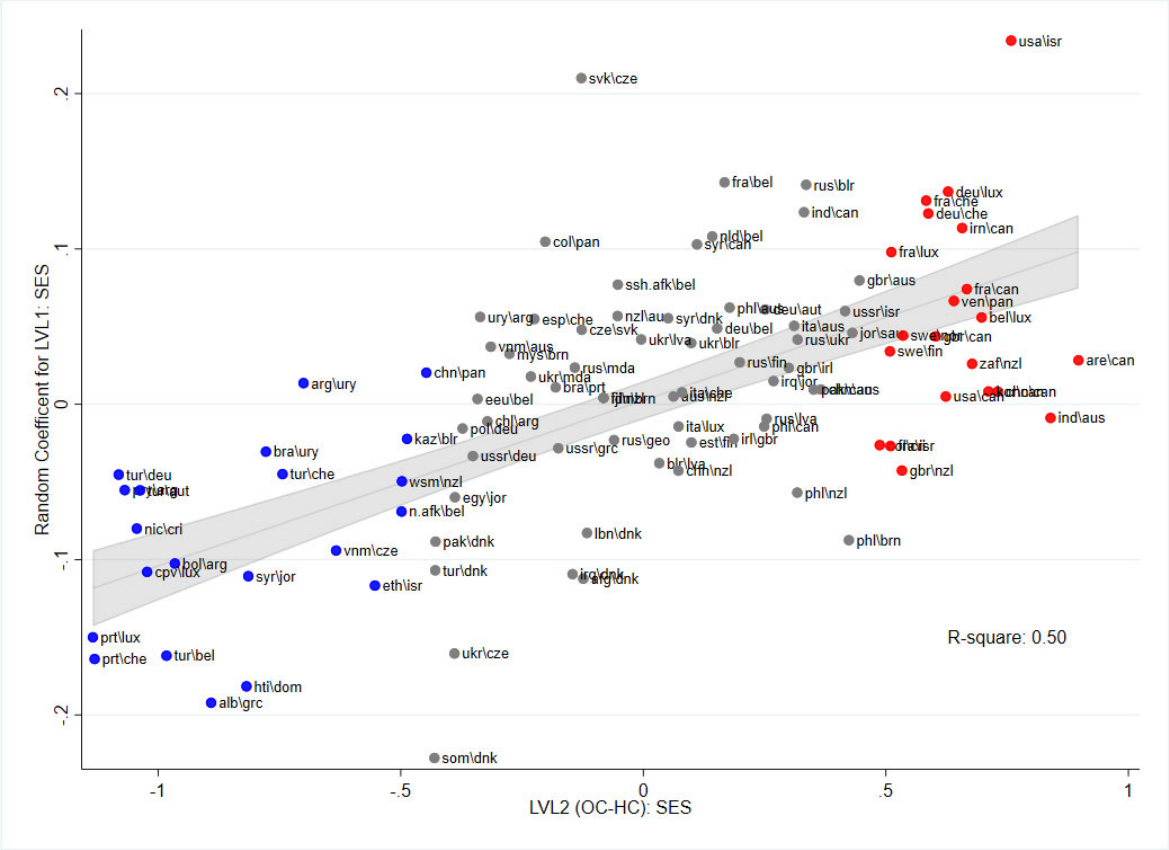


Note: Quintile groups are based on Table I in the Appendix; depicted margins are based on the results from Table 12.

Figure 13 reveals that SES has an incredibly small and barely significant individual-level effect among minorities with a low average SES. Further, the difference between the top and middle three quintiles (20^{th} to 80^{th} percentiles) is much smaller than the difference between the middle three and the bottom quintiles. This suggests that immigrant minorities that well surpass the average SES have an advantage, but this advantage is smaller than the disadvantage faced by low-SES immigrant minorities.

Figure 13 also presents the average marginal effect for the three quintile groups; however, we can note the exact differences in individual-level SES effects on students' PISA scores across different immigrant minorities. The differences in the coefficient of parental SES were captured in the random coefficient part of the random-intercept, random-coefficient model. Figure 14 plots the average SES of immigrant minorities against the group's random coefficient of the individual-level group mean-centered SES. The top and bottom quintiles of minorities in terms of average SES are noted in red and blue, respectively.

Figure 14: Random Coefficient of SES



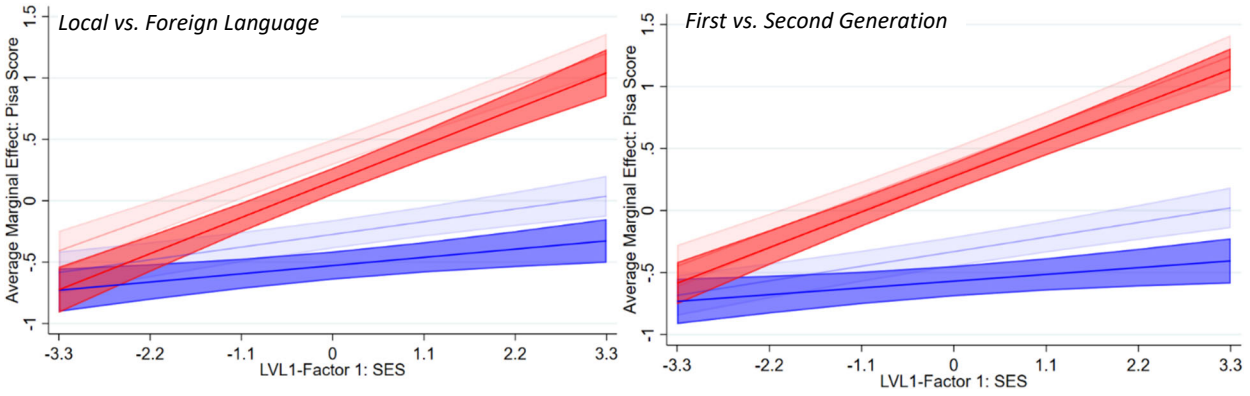
Note: Random coefficient calculated with a univariate (SES) random-intercept, random-coefficient multilevel model; for color coding, see Table I in the Appendix.

Figure 14 indicates a strong linear relationship between the random coefficient of parental SES and the migrant minorities' average SES. While such high-SES minorities as Iranians in Canada, Germans in Luxembourg, or the French in Switzerland exhibit largely stratified PISA scores that parallel their parental SES, such low-SES minorities as Haitians in the Dominican Republic, Cape Verdeans in Luxembourg, and the Turkish in Belgium reveal parental SES has small or negative effects on their PISA scores. A minority group's average SES can explain 50% of the variance in the parental SES' effect on students' PISA scores.

These results reveal a substantial variation in SES effect across the immigrant minority groups in the sample. Approximately half of the variance in the SES' effect can be explained by the minority group's average SES. This highlights the importance of home external factors in the transmission of SES as connected to the overall socio-economic position of immigrant minorities in their host society. Subsequently, we analyze to what extent this pattern varies for first- and second-generation immigrants, as well as for immigrants who primarily speak the test language at home versus those who do not.

The graph on the left splits the top and bottom quintiles by whether the immigrant students speak the PISA test language at home a majority of the time. We note that language has no significant effect on PISA scores for high-SES minorities, although language has a small but significant effect on low-SES minorities. The graph on the right splits the two quintiles by first (dark red/blue) and second generations (light red/blue). We can observe the same pattern, in that no significant effect occurs for high-SES minority members, while a small but significant effect occurs for low-SES minority members.

Figure 15: Effect of Integration



Note: Quintile groups are based on Table I in the Appendix.

The results presented in Figure 15 demonstrate that the cross-level interaction between immigrant minorities' overall SES and an immigrant's individual SES remains largely the same for first- and second-generation immigrants, as well as for immigrants that primarily speak the local language at home and those that do not. Further, these results also suggest that low-SES immigrant minorities can reduce the hampering effect of external factors to a small extent over time (second- versus first-generation) or by speaking the local language at home. High-SES immigrant minorities are not subject to the same hampering contextual effects, and no difference was observed regarding the language spoken at home or their immigrant generation. Given the presentation of these results, the next section discusses their implications and the potential for future research.

Discussion: The Important Role of Home External Factors for Immigrant Students

This paper argues that the pathways that translate parental SES into school outcomes can be split into factors involving the home environment and home external factors. While the former should be reflected in similar individual-level SES effects across immigrant minorities, the latter factors should be reflected in the contextual effects from a minority's social position as well as the substantial variance in the individual-level SES effect.

The first step in this study calculated the SES of immigrants and the average socio-economic standing of immigrant minorities. We observed significant differences between immigrant minorities in terms of SES. These differences seem to be largely driven by the average education of the immigrants in the given minority. In exploring the PISA outcomes of different immigrant minorities split by parental background, we observe systematic differences in the patterns of

transmission by which the parental background impacts students' PISA outcomes. These differences can be explained by the contextual effects of the immigrant minorities' average SES. After controlling for individual-level SES with a fixed coefficient, 47% of the cross-minority variance can be explained by the contextual effect of SES on the minority group's level. These findings underline the importance of socio-structural explanations for the systematic differences in learning outcomes across minority groups after controlling for individual-level variables (Kao and Thompson 2003). Furthermore, the SES' strong contextual effect suggests that home external factors are important in transmitting SES among immigrant minorities.

In the next step, a random coefficient model was applied to analyze the variance in the SES effect. We find a significant and strong cross-level interaction between individual-level SES and the average SES of an immigrant minority. While a significant stratification exists in terms of PISA outcomes for immigrants from high-SES minority groups, the opposite is true for low-SES minorities. Overall, 50% of the variance in the SES effect among immigrant minorities can be explained by the minority group's average SES. The large differences in the individual-level SES between different minorities—as well as the fact that these differences correlate with the minorities' average SES—-suggest that home external factors are an important driver of the intergenerational transmission of SES among immigrants. The language spoken at home or the migrant generation have no significant effects on high-SES minorities, but has a small effect on low-SES minorities; this suggests that low- and high-SES minority students may face different obstacles and advantages regarding their home external factors.

By analyzing the differences in the SES' effect on students' learning outcomes across different immigrant minorities, this study uses an indirect strategy to identify the roles of home internal versus home external factors. This augments current literature by providing evidence for the

general strength of these two sets of factors in the intergenerational reproduction of inequality among immigrants. However, this study did not discern the exact mechanism at work during transmission, and thus, future researchers may consider incorporating advanced mediation techniques to identify the home external factors that can statistically explain these cross-minority differences beyond SES, such as subjective discrimination, peer groups' composition, and teachers' expectations, among others.

To summarize, this study demonstrates that parental SES' effect on learning outcomes among immigrants depends on the minority group's overall social status. This finding suggests that home external factors unique to the immigrant minority group and driven by its average socio-economic standing are key in parental SES translating into students' learning outcomes.

Discussion of the Results: Findings, Uncertainties, Implications, and Conclusion

The final part of this dissertation will reflect on the entire thesis and illuminate its strengths, weaknesses, and implications for researchers and policymakers. This dissertation aims to combine the migration and social inequality fields of research. While social inequality is theorized to influence international migration patterns over the selection of who is able and motivated to migrate, the selection may shape new social hierarchies within host country societies.

The conclusion of this dissertation begins by presenting the results regarding the relationship between social inequality and selection occurring during international migration. This is followed by a review of the results regarding the consequences of this selection for the social mobility of immigrants. These results are then discussed in terms of potential caveats and uncertainties with the data and methods used. Drawing on the results of all three studies together, the multifaceted role of social inequality in international migration is reflected. Finally, implications of these findings for researchers and policy makers are outlined and promising future research prospects sketched.

Reviewing the Results on Social Inequality and Selection

The first two chapters investigate the selection that occurs during international migration movements, while the last chapter analyzes potential consequences of this selection. The effects of social inequality on selection are demonstrated using two concrete examples. The first

example presents the effect of gender and gender inequality on differences in the gender distribution among the asylum seeker population. The second example analyzes return migration intensions of immigrants in Germany using life satisfaction surveys. The first example on asylum seeker is defined by a high prevalence of the wish to live in a European host country, along with equally high costs and obstacles. Here, social inequality is shown to be a driving force of selection due to the differences in the ability to migrate. Return migration from Germany is defined by a low prevalence of return intentions (i.e., 8% according to the SOEP data) in addition to equally low costs and obstacles. The analysis, in this instance, suggests that location choices may be better understood as a function of personal preferences and utility maximization. Depending on the context, and with varying degrees of pressure to migrate and hurdles to contain such pressures, selections within migratory flows may be similar to the first example involving selection based on endowments, or the second presenting selection over utility maximization.

The first chapter lays out several dimensions of social inequality that may shape one's ability to migrate. In this respect, gender inequalities' role in asylum migrations flows has been identified as an understudied area. This gap is addressed by the study in chapter one. The study theorizes several ways in which gender inequality may lead to gender differences in the ability to migrate to Europe.

Research indicates the importance of gender roles, such as female caretaker versus male breadwinner, and the mobility associated with these roles for gendered migration patterns (Belloni, Pastore, and Timmerman 2018). While men are expected to sell their labor to support their family, women tend to be tasked with the family's internal care work, such as raising the children or caring for the old. The role of the breadwinner may lead to the decision to migrate, since changing labor markets may lead to a better price for one's labor. Women's role as

caretaker is intrinsically connected with a lower level of mobility, which, in turn, may discourage female migration. Furthermore, gender inequality appears as a difference in the access to resources, which creates differences in the ability to overcome the steep costs of seeking asylum in Europe. This gendered effect of migration costs may be exuberated by gender differences to loan money (Belloni, Pastore, and Timmerman 2018).

The study presented in chapter one investigates whether this theorized effect of social gender inequality on the ability to migrate is reflected in the reported asylum seeker statistics of the European Union. This is achieved by comparing differences in the gender distributions of asylum seekers from various origin countries. Comparable data on the gender inequality and gender roles within the asylum seeker's sending countries is very limited. However, study two argues that adolescent (aged 15–19 years old) birth rate and the origin countries' major religion can sufficiently capture women's social role and position in developing societies: a high prevalence of young mothers highlights the importance of motherhood for women's role in society. Furthermore, young mothers in developing countries tend to exit the educational system and the labor market more often, which increases their dependence on their spouse (UN 2012). A country's religion has been argued to shape women's role and the country's gender inequality, in general (Inglehart et al. 2003; Seguino 2011; Klingorová and Havlíček 2015).

The results reveal an effect of adolescent birthrate on gender distribution. This effect is picked up in a longitudinal fixed effect model, as well as a cross-country comparison with the help of mixed effects. An effect of religion is also picked up with a mixed effect model. The robust and significant results indicate that the theorized gendered ability to seek asylum in Europe is reflected in the number of men and women among asylum seekers to Europe.

However, the gender hierarchy within origin countries, reflected in the increased mobility of men seeking asylum in Europe, does not seem to translate to advantages in the asylum grating process of European host countries. In fact, it appears that men are granted residential rights less often than women. Interestingly this difference in asylum acceptance rates between men and women increases with the increase in the share of men within a given asylum seeker population. Furthermore, the variables used to approximate gender inequality—that is, adolescent birthrate and religion—can explain some of the gender differences in asylum acceptance rates. In other words, the steeper the gender hierarchy within the origin country, the greater the chances of women to gain residential rights within Europe. Thus, gender inequality may influence the mobility of choosing the location of residence for an asylum seeker in a dual way: the ability to travel to the host country and the residential rights granted by the host country.

While the social inequality among men and women within the origin country may translate into differences in the ability to migrate, this social hierarchy is not replicated in the ability to gain residential rights within European countries. This case shows that the formation of unequal global mobility between male and female asylum seekers is no pure reflection of traditional dimensions of gender inequality, such as resource inequality or gender roles, but depends also on the context these inequalities operate in. Overall, gendered mobility appears as an additional dimension of gender inequality within an asylum seeker's origin country. However, social inequalities may not only determine the ability to migrate but also the intention to do so.

The second chapter investigates return migration intentions of immigrants. Here, the relative cost and general obstacles to migration are significantly smaller than in the case of seeking asylum in Europe. Simultaneously, the urge to migrate is expected to be equally smaller. In such a situation, selection is mostly a form of self-selection and whether one wishes to migrate.

Study two aims to capture this self-selection by estimating the return migration intention using the subjective variable life satisfaction. Earlier economic studies attempted to estimate a return migrant's utility function using the migrant's income in the host country. The neoclassic theory of migration assumed that migrants move to change the labor market and increase their wage. Under this assumption, there is no need for return migration, except if migrants failed to realize their initial wage expectation. The new school of labor migration argues that migrants may prefer to spend their money in their home country but migrate to take advantage of the higher wage in a different national labor market. In this view, migrants move to another country for a period necessary for them to save enough money and achieve a higher living standard in their country of origin. While it is generally considered that both forms of return migration exist—that is, some return because of unmet expectations while others due to a successful end to their plan—the extent to which return migration decisions reflect rational utility considerations remains somewhat unclear.

The second study argues that life satisfaction is a usefully item for the measurement of migrant's subjectively felt utility. To analyze the extent to which return migration intentions follow rational utility considerations, the life satisfaction of immigrants in Germany is compared to the life satisfaction of their demographic peers in their origin country. The study then analyzes the extent to which return intentions follow differences in the life satisfaction between immigrants in Germany and individuals who chose to stay in their respective origin country. The study further investigates the role of migrant's transnational ties to their respective origin countries for their utility considerations. It is theorized, that migrants with transnational ties are better aware of the situation in their origin country which improves the accuracy of their utility expectations. Additionally, social ties may lower the material and psychological cost of return migration. The

study, therefore, tests if this difference in the ability to increase one's utility through return migration is also reflected in the data on return intentions. The analysis is performed with data from the German Socio-Economic Panel (SOEP) and the World Value Survey (WVS). While the SOEP measures the life satisfaction and other variables of interest of immigrants living in Germany, the WVS is used to estimate the life satisfaction of their demographic peers in their respective origin countries. The results reveal that return intentions corelate with differences in the life satisfaction between Germany and the origin country. Furthermore, differences in life satisfaction appear to be more predictive of the return intention among immigrants with transnational ties to their origin country. These results demonstrate that utility considerations as well as the ability of migrants to act on their utility expectations shape selection during migration.

Thus, taken together, chapter one and chapter two showcase two different forms of migration. Each form of migration is defined over its combination of utility considerations and the level of obstacles to overcome. While selection in asylum flows may be better understood by a migrant's ability to overcome these obstacles, return migration from Germany may be best understood through the utility considerations of migrants. Both utility considerations of migration and the ability to migrate are shaped by social inequality. The selection of migrants, in turn, may shape migrants' social position in the host country.

Reviewing the Results on the Consequences of Selection

The third chapter explores the long-term consequences of selection for migrants' social position within a stratified host society. The selection process influences the level of resources

and endowments brought by migrants to the host country. The level of endowments and resources shape migrants' social position in a stratified host society. Large differences in the level of endowments might create significant differences in the social position of unequal migrants. Large social inequality may create stark differences in the social mobility of different migrants. Study three investigates the role of education in this process of intergenerational status transmission. This is done by comparing the differences in the way in which parental socio-economic status is translated into children's learning outcomes. This allows us to detect differences in the patterns of social mobility across highly unequal immigrant minorities.

More specifically, study three uses data from the Programme of International Student Assessment (PISA 2018) to model the effect of parental SES on students' PISA scores in science and math within a multilevel random coefficient model. The model is structured into the individual and immigrant minority group levels. This allows us to detect variations in the effect of the socio-economic status on PISA scores across different immigrant groups. Differences in the SES effect are then compared with the immigrant minorities' overall socio-economic position. The results reveal a striking correlation between the size of the effect of parental SES on immigrant students' learning outcomes and the average social status of the immigrant minority. The learning outcomes of immigrant students and their potential future socio-economic position apparently depend not only on their parental socio-economic positions but also on the socio-economic status they are associated to over their migration background. This demonstrates how the selection during international migration may influence migrants' social position in their host society.

Discussion of the Results

While innovative approaches in these studies allowed us to gain more insights into the relationship between selection and social inequality within host and origin country, lack of cross-national data also creates some uncertainties regarding the findings. The first study on asylum-seekers overcame the lack of cross-national, individual-level data by creating a novel dataset that combines individual-level European asylum decisions with several origin country-level variables. The second study approached the lack of cross-national data by simulating counterfactuals for the origin country based on demographics taken in the host country and separate surveys in the countries of origin. Finally, the last study used a multilevel model allowing for cross-level interactions to estimate the effect an immigrant's associated minority has on the immigrant's learning outcome.

While these approaches help us illuminate a research subject that is plagued by a lack of cross-national data, they also possess certain weaknesses. First, there was a lack of cross-national, individual-level data from asylum-seekers' home countries. While this was overcome by utilizing country-level indicators and exploiting country-level differences, using country-level data to investigate selection patterns leads to incorrect conclusions, if the migrant population differs from the ascribed country-level variable. For example, larger shares of male asylum-seekers may come from countries with a Buddhist majority. However, the asylum-seeking population from these Buddhist countries could be mostly Muslims escaping discrimination in Buddhist societies, such as Muslim Rohingya minority members fleeing Buddhist Myanmar. In this case, the model would wrongfully assign an effect of gendered selection to the Buddhist religion rather than the Muslim religion.

The second study aimed to overcome the lack of cross-national data by simulating potential life satisfaction in the country of origin. This approach also includes some uncertainty. Specifically, the model assumes that individuals with similar demographics in both the host and origin countries can be used as counterfactuals for each other. However, a selection of unobserved variables may be relevant to the difference in life satisfaction across countries. Finally, the third paper may suffer from some bias due to problems in the comparability of variables across countries; for example, education is expected to vary in quality across countries. The third study attempts to account for this bias by controlling for the average school outcome in the country of origin within a multilevel framework. However, we have no micro-level data from the origin country, and the selection may create a bias if migrants differ from the average, in terms of the quality of education they receive. For example, Indian migrants in Australia are highly educated; hence, they are selected from the top of the Indian socio-economic distribution. We can anticipate large differences in the quality of education received by the upper class of Indian society compared to the average Indian.

Understanding inequality issues within migration also involves understanding the selection mechanisms and consequences of the resulting composition within the immigrant minority. Each study finds innovative ways to analyze their selection and its consequences, despite a relative lack of global cross-national datasets. However, the uncertainties surrounding the selection that occurs during migration will remain until researchers can access more high-quality global datasets that follow individuals across borders.

The Role of Social Inequality in International Migration

Despite these uncertainties, all three chapters improve our understanding of the relationship between social inequality and international migration. Social inequality thereby appears in different contexts. The first study investigates the role of inequality in seeking asylum in Europe. These irregular migrant flows to Europe are mostly from much poorer developing countries. Irregular migrants are excluded from international transportation (e.g., airplanes, ferries, bus) due to their lack of residential rights in the host country. While nearly all Syrian asylum seekers of 2015 in Germany could stay, at least, for a limited amount of time, most Syrians were unable to simply fly to Germany. Instead, they were forced to rely on a much costlier and more dangerous route to Europe. Here, purposefully high costs of entering Europe due to the exclusion from major systems of international transportation are used to enforce the European vision of a global hierarchy of mobility. Global mobility granted to individuals by their resources, education, or origin country appears as another dimension of global social inequality. While rich, educated individuals from developed countries enjoy the lowest level of restrictions to their mobility, poor, uneducated individuals from developing countries face the highest level of restrictions. This hierarchy of restrictions is enforced and governed by nation states and their migration policies. While nation states or international alliances like the European Union try to increase the cost of irregular migration to enforce their borders, irregular migrants aim to overcome these costs. The ability to overcome these costs is shaped by the social stratification within the origin society. This inequality in the ability to migrate to Europe is reflected in the disproportionately low number of female asylum seekers. In this case study, the social position of an individual in an unequal world shaped the individual's ability to seek asylum at multiple stages. Here, global mobility presents itself as an additional dimension of global social inequality.

However, not all migration situations are defined by such high costs of migration and an equally high incentive to overcome these costs and obstacles. The second study was on return migration intentions of migrants in Germany. While dimensions of social inequality such as income, education, or origin country seem to have a limited effect on the intention to return to the origin country, utility considerations measured over life satisfaction, may shape a migrant's intention to return. Mobility patterns appear not as a reflection of a vertical social hierarchy but that of diverse utility considerations. Social inequality, in this case study, influences mobility patterns by shaping the utility consideration rather than driving the ability to overcome costs and restrictions. The role of social inequality in shaping utility considerations is not straight forward. This is reflected in the ongoing debate on the effect of income on return migration decisions.

Social inequality shapes the selection occurring during international migration over the ability and the utility of international migration. When social inequality influences the ability to migrate, mobility appears as an additional dimension of global social inequality. In contrast to the social hierarchy in the ability to migrate, utility considerations shaped by inequality have no hierarchy. They are better understood as horizontally diverse clusters of different motivations defined by their unique circumstances, which includes their social position.

The diverse utility prospects of migrants from different backgrounds are reflected in the high level of inequality within and between migrant minorities and the endowments with which they arrive in the host country. Linked by their shared migration background, the association to the selection may influence differences in social mobility between unequal selections of migrants. This may cause immigrant minorities with low socio-economic status to be stuck at the bottom of the host country's society. In the long term, the selection occurring during international migration may lead to the association of a given migration background and class.

Research and Policy Implications

Future researchers can build upon all three of these studies. The first study notes gender inequality's importance in the gendered selection of asylum-seeker flows to Europe. Future research may want to deepen our understanding of the social mechanisms that translate gender inequality into gendered selection. Does this occur due to gender roles, or material inequality? The second study highlights the promising nature of variables related to the subjective well-being in examining return migration and the general assessment of whether a migrant perceives the migration project as successful. Studies are limited on this topic, and future research may want to exploit the promising properties of this class of variables. Finally, the third study shows that a minority groups' composition influences the intergenerational transmission of social status. While many studies could provide explanations for this finding, no studies addressed the different explanations' relative importance. Future research may want to use advanced mediation methods to test the different established factors that influence immigrants' intergenerational transmission of social status on their relative importance.

Regarding migration policy, both the costs and benefits of immigration must be considered. On the one hand, substantial economic benefits exist for the migrants (World Bank 2006) and global GDP (IMF 2020), with limited effects on the origin and host countries' economies (Milanovic 2016, p. 153) and labor market outcomes such as income and unemployment (Longhi et al. 2008). Thus, migration likely leads to an overall increase in economic welfare for humanity; one could subsequently argue that a migration regime should allow for maximum migration without destabilizing the overall system. The political tension arising from large-scale migration could be considered as an example of such a potentially destabilizing factor. Moreover, the cost of this instability partially depends on the socio-economic differences between locals and immigrants. A

migration regime that considers the welfare of both migrants and locals in the origin and host countries should therefore allow for as much migration as possible while minimizing the potential socio-economic differences between the immigrant minority groups and local populations.

References

Alesina, Alberto, and Marco Tabellini. 2021. “The Political Effects of Immigration: Culture or Economics?”, Working Paper 21-069.

Andrews, Dan, and Andrew Leigh. 2009. “More Inequality, Less Social Mobility.” Applied Economics Letters 16 (15): 1489–92. https://doi.org/10.1080/13504850701720197.

Abdi, Hervé, and Lynne J. Williams. 2010. “Principal Component Analysis.” WIREs Computational Statistics 2 (4): 433–59. https://doi.org/10.1002/wics.101.

Abraído-Lanza, A. F., B. P. Dohrenwend, D. S. Ng-Mak, and J. B. Turner. 1999. “The Latino Mortality Paradox: A Test of the ‘Salmon Bias’ and Healthy Migrant Hypotheses.” American Journal of Public Health 89 (10): 1543–48. https://doi.org/10.2105/AJPH.89.10.1543.

Akay, Alpaslan, Olivier Bargain, and Klaus F. Zimmermann. 2017. “Home Sweet Home?: Macroeconomic Conditions in Home Countries and the Well-Being of Migrants.” Journal of Human Resources 52 (2): 351–73. https://doi.org/10.3368/jhr.52.2.0115-6900R1.

Aksoy, Cevat Giray, and Panu Poutvaara. 2019. “Refugees’ and Irregular Migrants’ Self-Selection into Europe: Who Migrates Where?” SSRN Scholarly Paper ID 3434837. Rochester, NY: Social Science Research Network. https://papers.ssrn.com/abstract=3434837.

Allsopp, Jennifer. 2017. “Agent, Victim, Soldier, Son: Intersecting Masculinities in the European ‘Refugee Crisis.’” In A Gendered Approach to the Syrian Refugee Crisis, 1st ed., 155–75. Abingdon, NY: Routledge.

Altinok, Nadir, Noam Angrist, and Harry Anthony Patrinos. 2018. “Global Data Set on Education Quality (1965-2015).” World Bank Policy Research Working Paper (8314).

Aronson, Joshua, and Michael Inzlicht. 2004. “The Ups and Downs of Attributional Ambiguity: Stereotype Vulnerability and the Academic Self-Knowledge of African American College Students.” Psychological Science 15 (12): 829–36. https://doi.org/10.1111/j.0956-7976.2004.00763.x.

Atkinson, Anthony B. 2018. Inequality: What Can Be Done? Cambridge, MA: Harvard University Press.

Auspurg, Katrin, Andreas Schneck, and Thomas Hinz. 2019. “Closed Doors Everywhere? A Meta-Analysis of Field Experiments on Ethnic Discrimination in Rental Housing Markets.” Journal of Ethnic and Migration Studies 45 (1): 95–114. https://doi.org/10.1080/1369183X.2018.1489223.

Bankston, Carl L., and Stephen J. Caldas. 1998. “Family Structure, Schoolmates, and Racial Inequalities in School Achievement.” Journal of Marriage and Family 60 (3): 715–23. https://doi.org/10.2307/353540.

Barr, Nicholas. 2020. Economics of the Welfare State. Oxford University Press.

Bartram, David. 2013. “Happiness and ‘Economic Migration’: A Comparison of Eastern European Migrants and Stayers.” Migration Studies 1 (2): 156–75.

Bauer, Thomas, and Klaus F. Zimmermann. 1997. “Network Migration of Ethnic Germans.” International Migration Review 31 (1): 143–49. https://doi.org/10.1177/019791839703100108.

Becker, Gary S. 1964. Human Capital; a Theoretical and Empirical Analysis, With Special Reference to Education. New York: Columbia University Press.

———. 1978. The Economic Approach to Human Behavior. Chicago: The University of Chicago Press.

Beine, Michel, Anna Boucher, Brian Burgoon, Mary Crock, Justin Gest, Michael Hiscox, Patrick McGovern, Hillel Rapoport, Joep Schaper, and Eiko Thielemann. 2016. “Comparing Immigration Policies: An Overview from the IMPALA Database.” International Migration Review 50 (4): 827–63. https://doi.org/10.1111/imre.12169.

Beine, Michel, Fréderic Docquier, and Hillel Rapoport. 2008. “Brain Drain and Human Capital Formation in Developing Countries: Winners and Losers*.” The Economic Journal 118 (528): 631–52. https://doi.org/10.1111/j.1468-0297.2008.02135.x.

Belloni, Milena, Ferruccio Pastore, and Christiane Timmerman. 2018. “Women in Mediterranean Asylum Flows: Current Scenario and Ways Forward.” In Gender and Migration: A Gender-Sensitive Approach to Migration Dynamics, 217–41. Leuven, Belgium: Leuven University Press.

Belot, Michèle V. K., and Timothy J. Hatton. 2012. “Immigrant Selection in the OECD.” The Scandinavian Journal of Economics 114 (4): 1105–28. https://doi.org/10.1111/j.1467-9442.2012.01721.x.

Bertrand, Marianne. 2011. “New Perspectives on Gender.” In Handbook of Labor Economics. Amsterdam: Elsevier.

Bijwaard, Govert E. 2015. “Income of Immigrants and Their Return.” IZA World of Labor, April. https://doi.org/10.15185/izawol.141.

Bijwaard, Govert E., and Jackline Wahba. 2014. “Do High-Income or Low-Income Immigrants Leave Faster?” Journal of Development Economics 108 (May): 54–68. https://doi.org/10.1016/j.jdeveco.2014.01.006.
Blanden, Jo, Paul Gregg, and Stephen Machin. 2005. “Intergenerational Mobility in Europe and North America.” Centre for Economic Performance: A Report Supported by the Sutton Trust.
Blum, Matthias, and Claudia Rei. 2018. “Escaping Europe: Health and Human Capital of Holocaust Refugees.” European Review of Economic History 22 (1): 1–27. https://doi.org/10.1093/ereh/hex014.
Booth, Alison, Lina Cardona-Sosa, and Patrick Nolen. 2014. “Gender Differences in Risk Aversion: Do Single-Sex Environments Affect Their Development?” Journal of Economic Behavior & Organization 99 (C): 126–54.
Borghans, Lex, James J. Heckman, Bart H. H. Golsteyn, and Huub Meijers. 2009. “Gender Differences in Risk Aversion and Ambiguity Aversion.” Journal of the European Economic Association 7 (2–3): 649–58. https://doi.org/10.1162/JEEA.2009.7.2-3.649.
Borjas, George J. 1987. “Self-Selection and the Earnings of Immigrants.” The American Economic Review 77 (4): 531–53.
———. 1989. “Economic Theory and International Migration.” The International Migration Review 23 (3): 457–85. https://doi.org/10.2307/2546424.
Bourdieu, Pierre. 1984. Distinction: A Social Critique of the Judgement of Taste. London: Routledge.
Boudon, Raymond. 1974. Education, Opportunity and Social Inequality: Changing Prospects in Western Society. New York: John Wiley & Sons Inc.
Boyd, Monica. 1999. “Gender, Refugee Status and Permanent Settlement.” Gender Issues 17 (1): 5–25. https://doi.org/10.1007/s12147-999-0008-6.
Bradley, Robert H., and Robert F. Corwyn. 2002. “Socioeconomic Status and Child Development.” Annual Review of Psychology 53 (1): 371. https://doi.org/10.1146/annurev.psych.53.100901.135233.
Brockmann, Hilke. 2017. “Happy Newcomers? Subjective Well-Being of First-Generation Immigrants in Germany.” Robert Schuman Centre for Advanced Studies 63.
Brücker, Herbert, Nina Rother, Jürgen Schupp, Christian Babka von Gostomski, Axel Böhm, Herbert Brücker, Tanja Fendel, Martin Friedrich, Marco Giesselmann, Elke Holst, Yuliya Kosyakova, Martin Kroh, Elisabeth Liebau, David Richter, Agnese Romiti, Nina Rother, Diana Schacht, Jana A. Scheible, Paul Schmelzer, Jürgen Schupp, Manuel Siegert, Steffen Sirries, Parvati Trübswetter, and Ehsan Vallizadeh. 2016. “IAB-BAMF-SOEP-Befragung von Geflüchteten: Überblick Und Erste Ergebnisse.” IAB—Forschungsbericht 201614. Nuremberg, Germany: Institut für Arbeitsmarkt- und Berufsforschung.
Buber-Ennser, Isabella, Judith Kohlenberger, Bernhard Rengs, Zakarya Al Zalak, Anne Goujon, Erich Striessnig, Michaela Potančoková, Richard Gisser, Maria Rita Testa, and Wolfgang Lutz. 2016. “Human Capital, Values, and Attitudes of Persons Seeking Refuge in Austria in 2015.” PLOS ONE 11 (9): e0163481. https://doi.org/10.1371/journal.pone.0163481.
Cai, Ruohong, Neli Esipova, Michael Oppenheimer, and Shuaizhang Feng. 2014. “International Migration Desires Related to Subjective Well-Being.” IZA Journal of Migration 3 (1): 8. https://doi.org/10.1186/2193-9039-3-8.
Caldas, Stephen J., and Carl Bankston. 1997. “Effect of School Population Socioeconomic Status on Individual Academic Achievement.” The Journal of Educational Research 90 (5): 269–77. https://doi.org/10.1080/00220671.1997.10544583.
Cassarino, Jean-Pierre. 2004. “Theorising Return Migration: The Conceptual Approach to Return Migrants Revisited.” International Journal on Multicultural Societies 6 (2): 253–79.
Cena, Elida, Derek Heim, and Ruxandra Trandafoiu. 2018. “Changing Places: Children of Return Migrants in Albania and Their Quest to Belong.” Journal of Ethnic and Migration Studies 44 (7): 1156–76. https://doi.org/10.1080/1369183X.2017.1351336.
Centre d’Etudes Prospectives et d’Informations Internationales—CEPII. 2017. “GeoDist Database : Geographic Distance between Capitals.” Retrieved from http://www.cepii.fr/CEPII/en/bdd_modele/presentation.asp?id=6.
Chang, Edward C. 1996. “Cultural Differences in Optimism, Pessimism, and Coping: Predictors of Subsequent Adjustment in Asian American and Caucasian American College Students.” Journal of Counseling Psychology 43 (1): 113–23.

Chauvel, Louis, and Anja K. Leist. 2015. “Socioeconomic Hierarchy and Health Gradient in Europe: The Role of Income Inequality and of Social Origins.” International Journal for Equity in Health 14 (1): 132. https://doi.org/10.1186/s12939-015-0263-y.

Cheng, Cecilia, Mike W. L. Cheung, Alex Montasem, and the International Network of Well-Being Studies. 2016. “Explaining Differences in Subjective Well-Being Across 33 Nations Using Multilevel Models: Universal Personality, Cultural Relativity, and National Income.” Journal of Personality 84 (1): 46–58. https://doi.org/10.1111/jopy.12136.

Chiswick, Barry R. 1999. “Are Immigrants Favorably Self-Selected?” The American Economic Review 89 (2): 181–85.

Chiswick, Barry R., and Paul W. Miller. 2009. “The International Transferability of Immigrants’ Human Capital.” Economics of Education Review 28 (2): 162–69. https://doi.org/10.1016/j.econedurev.2008.07.002.

Constant, Amelie, and Douglas S. Massey. 2002. “Return Migration by German Guestworkers: Neoclassical versus New Economic Theories.” International Migration 40 (4): 5–38.

Constant, Amelie F., and Klaus F. Zimmermann. 2012. “The Dynamics of Repeat Migration: A Markov Chain Analysis.” International Migration Review 46 (2): 362–88. https://doi.org/10.1111/j.1747-7379.2012.00890.x.

Dang, Hai-Anh, and F. Halsey Rogers. 2008. “The Growing Phenomenon of Private Tutoring: Does It Deepen Human Capital, Widen Inequalities, or Waste Resources?” The World Bank Research Observer 23 (2): 161–200. https://doi.org/10.1093/wbro/lkn004.

Davis, Rochelle. 2016. “Gendered Vulnerability and Forced Conscription in the War in Syria.” Retrieved from: https://blogs.lse.ac.uk/mec/2016/09/27/gendered-vulnerability-and-forced-conscription-in-the-war-in-syria/.

De Hart, Betty. 2017. “Sexuality, Race and Masculinity in Europe’s Refugee Crisis.” Migration on the Move, 27–53. https://doi.org/10.1163/9789004330467_004.

Der Spiegel. 2015. “Flüchtlinge: Warum Vor Allem Männer Nach Deutschland Kommen.” Retrieved from: https://www.spiegel.de/kultur/gesellschaft/fluechtlinge-warum-vor-allem-maenner-nach-deutschland-kommen-a-1051755.html.

Deutsches Institut für Wirtschaft—DIW. 2015. “Mittlere Lebenszufriedenheit in Deutschland.” Retrieved from: https://www.diw.de/documents/dokumentenarchiv/17/diw_01.c.554629.de/20170317_pm_glueck_abb1.pdf.

Devleeschauwer, Arnaud, Romain Wacziarg, Sergio Kurlat, William Easterly, and Alberto Alesina. 2003. “Fractionalization.” Retrieved from: https://dash.harvard.edu/handle/1/4553003.

de Vroome, Thomas, Maykel Verkuyten, and Borja Martinovic. 2014. “Host National Identification of Immigrants in the Netherlands.” International Migration Review 48 (1): 1–27. https://doi.org/10.1111/imre.12063.

Diener, Ed, and Frank Fujita. 1995. “Resources, Personal Strivings, and Subjective Well-Being: A Nomothetic and Idiographic Approach.” Journal of Personality 68 (5): 926–35. https://doi.org/10.1037/0022-3514.68.5.926.

Diener, Ed, Eunkook M. Suh, Richard E. Lucas, and Heidi L. Smith. 1999. “Subjective Well-Being: Three Decades of Progress.” Psychological Bulletin 125 (2): 276–302.

Diener, Ed, Louis Tay, and Shigehiro Oishi. 2013. “Rising Income and the Subjective Well-Being of Nations.” Journal of Personality and Social Psychology 104 (2): 267–76. https://doi.org/10.1037/a0030487.

Docquier, Frédéric, Olivier Lohest, and Abdeslam Marfouk. 2007. “Brain Drain in Developing Countries.” The World Bank Economic Review 21 (2): 193–218. https://doi.org/10.1093/wber/lhm008.

Docquier, Frédéric, Giovanni Peri, and Ilse Ruyssen. 2014. “The Cross-Country Determinants of Potential and Actual Migration.” International Migration Review 48 (s1): S37–99. https://doi.org/10.1111/imre.12137.

Dolan, Paul, Tessa Peasgood, and Mathew White. 2008. “Do We Really Know What Makes Us Happy? A Review of the Economic Literature on the Factors Associated with Subjective Well-Being.” Journal of Economic Psychology 29 (1): 94–122. https://doi.org/10.1016/j.joep.2007.09.001.

Durlauf, Steven N., and Ananth Seshadri. 2018. “Understanding the Great Gatsby Curve.” NBER Macroeconomics Annual 32 (April): 333–93. https://doi.org/10.1086/696058.

Dustmann, Christian. 2003. “Return Migration, Wage Differentials, and the Optimal Migration Duration.” European Economic Review 47 (2): 353–69. https://doi.org/10.1016/S0014-2921(01)00184-2.

Easterlin, Richard A. 1974. “Does Economic Growth Improve the Human Lot? Some Empirical Evidence.” In Nations and Households in Economic Growth, Paul A. David and Melvin W. Reder (Eds.), 89–125. Cambridge, MA: Academic Press. https://doi.org/10.1016/B978-0-12-205050-3.50008-7.

Eurostat. 2020a. “Data Explorer: First Instance Decisions on Applications by Citizenship, Age and Sex—Annual Aggregated Data (Rounded) (Migr_asydcfsta).” Retrieved from: https://appsso.eurostat.ec.europa.eu/nui/show.do?dataset=migr_asydcfsta&lang=en.

———. 2020b. “Data Explorer: Asylum and First Time Asylum Applicants by Citizenship, Age and Sex—Annual Aggregated Data (Rounded) (Migr_asyappctza).” Retrieved from: https://appsso.eurostat.ec.europa.eu/nui/show.do?dataset=migr_asyappctza&lang=en.

Ewijk, Reyn van, and Peter Sleegers. 2010. “The Effect of Peer Socioeconomic Status on Student Achievement: A Meta-Analysis.” Educational Research Review 5 (2): 134–50. https://doi.org/10.1016/j.edurev.2010.02.001.

Fearon, James D. 2008. “Economic Development, Insurgency, and Civil War.” In Institutions and Economic Performance, Elhanan Helpman. Cambridge, MA: Harvard University Press.

Feaster, Daniel, Ahnalee Brincks, Michael Robbins, and Jose Szapocznik. 2011. “Multilevel Models to Identify Contextual Effects on Individual Group Member Outcomes: A Family Example.” Family Process 50 (2): 167–83. https://doi.org/10.1111/j.1545-5300.2011.01353.x.

Fennelly, K. 2007. “The ‘Healthy Migrant’ Effect.” Minnesota Medicine 90 (3): 51–53.

Freedman, Jane. 2015. “Gender and Asylum in International Law—The Geneva Convention Revisited.” In Gendering the International Asylum and Refugee Debate, Jane Freedman (Ed.), 69–107. London: Palgrave Macmillan UK. https://doi.org/10.1057/9781137456236_4.

———. 2016. “Sexual and Gender-Based Violence against Refugee Women: A Hidden Aspect of the Refugee ‘Crisis.’” Reproductive Health Matters 24 (47): 18–26. https://doi.org/10.1016/j.rhm.2016.05.003.

Frontex. 2020. “Migratory Map.” Retrieved from: https://frontex.europa.eu/along-eu-borders/migratory-map/.

Gallup. 2018. “More than 750 Million Worldwide Would Migrate if They Could.” Retrieved from: https://news.gallup.com/poll/245255/750-million-worldwide-migrate.aspx.

Ganzeboom, Harry B. G. 2010. “A New International Socio-Economic Index [ISEI] of Occupational Status for the International Standard Classification of Occupation 2008 [ISCO-08] Constructed with Data from the ISSP 2002–2007; With an Analysis of Quality of Occupational Measurement in ISSP.” Lisbon: Annual Conference of International Social Survey Programme.

GENESIS-Online Datenbank. 2017. “Ausländer in Deutschland, Stichtag, Geschlecht, Altersjahre, Migrantengeneration, Ländergruppierungen/ Staatsangehörigkeit.” Wiesbaden: Statistisches Bundesamt.

Gobat, Jeanne, and Kristina Kostial. 2016. “Syria’s Conflict Economy.” IMF Working Papers 16 (123): 1. https://doi.org/10.5089/9781498336826.001.

Goebel, Jan, Markus M. Grabka, Stefan Liebig, Martin Kroh, David Richter, Carsten Schröder, and Jürgen Schupp. 2019. “The German Socio-Economic Panel Study (SOEP).” Jahrbücher Für Nationalökonomie Und Statistik [Journal of Economics and Statistics] 239 (2): 345–60.

Goldthorpe, John H. 2007. On Sociology. Stanford University Press.

Graham, Carol, and Julie Markowitz. 2011. “Aspirations and Happiness of Potential Latin American Immigrants.” Journal of Social Research and Policy 2 (2): 9–25.

Griffiths, Melanie. 2015. “‘Here, Man Is Nothing!’: Gender and Policy in an Asylum Context.” Men and Masculinities 18 (4): 468–88. https://doi.org/10.1177/1097184X15575111.

Grogger, Jeffrey, and Gordon H. Hanson. 2011. “Income Maximization and the Selection and Sorting of International Migrants.” Journal of Development Economics 95 (1): 42–57. https://doi.org/10.1016/j.jdeveco.2010.06.003.

Guichard, Lucas. 2020. “Self-Selection of Asylum Seekers: Evidence From Germany.” Demography 57 (3): 1089–1116. https://doi.org/10.1007/s13524-020-00873-9.

Guriev, Sergei. 2018. “Economic Drivers of Populism.” AEA Papers and Proceedings 108 (May): 200–3. https://doi.org/10.1257/pandp.20181123.

Haas, Hein de, Tineke Fokkema, and Mohamed Fassi Fihri. 2015. “Return Migration as Failure or Success?” Journal of International Migration and Integration 16 (2): 415–29. https://doi.org/10.1007/s12134-014-0344-6.

Hadjar, Andreas, and Susanne Backes. 2013. “Migration Background and Subjective Well-Being A Multilevel Analysis Based on the European Social Survey.” Comparative Sociology 12 (5): 645–76. https://doi.org/10.1163/15691330-12341279.

Heine, Steven J., and Darrin R. Lehman. 1995. “Cultural Variation in Unrealistic Optimism: Does the West Feel More Invulnerable Than the East?” Journal of Personality 68 (4): 595–607. https://doi.org/10.1037/0022-3514.68.4.595.

Helliwell, John F. 2007. “Well-Being and Social Capital: Does Suicide Pose a Puzzle?” Social Indicators Research 81 (3): 455. https://doi.org/10.1007/s11205-006-0022-y.

Helliwell, John F., Haifang Huang, Shun Wang, and Hugh Shiplett. 2018. “International Migration and World Happiness.” Retrieved from: https://s3.amazonaws.com/happiness-report/2018/CH2-WHR-lr.pdf.

Hendriks, Martijn. 2015. “The Happiness of International Migrants: A Review of Research Findings.” Migration Studies 3 (3): 343–69. https://doi.org/10.1093/migration/mnu053.

Hendriks, Martijn, and David Bartram. 2019. “Bringing Happiness Into the Study of Migration and Its Consequences: What, Why, and How?” Journal of Immigrant & Refugee Studies 17 (3): 279–98. https://doi.org/10.1080/15562948.2018.1458169.

Hippel, Paul T. V. 2007. “Regression with Missing Ys: An Improved Strategy for Analyzing Multiply Imputed Data.” Sociological Methodology 37 (1): 83–117. https://doi.org/10.1111/j.1467-9531.2007.00180.x.

Hoover-Dempsey, Kathleen V., Otto C. Bassler, and Jane S. Brissie. 1987. “Parent Involvement: Contributions of Teacher Efficacy, School Socioeconomic Status, and Other School Characteristics.” American Educational Research Journal 24 (3): 417–35. https://doi.org/10.3102/00028312024003417.

Infante, César, Alvaro J. Idrovo, Mario S. Sánchez-Domínguez, Stéphane Vinhas, and Tonatiuh González-Vázquez. 2012. “Violence Committed Against Migrants in Transit: Experiences on the Northern Mexican Border.” Journal of Immigrant and Minority Health 14 (3): 449–59. https://doi.org/10.1007/s10903-011-9489-y.

Inglehart, R., C. Haerpfer, A. Moreno, C. Welzel, K. Kizilova, J. Diez-Medrona, M. Lagos, P. Norris, E. Ponarin, and B. Puranen et al. (Eds.). 2019. “World Values Survey.” Madrid: JD Systems Institute.

Inglehart, Ronald, Pippa Norris, and Inglehart Ronald. 2003. Rising Tide: Gender Equality and Cultural Change Around the World. Cambridge, MA: Cambridge University Press.

International Monetary Fund—IMF. 2020. “World Economic Outlook—Real GDP Growth.” Retrieved from: https://www.imf.org/external/datamapper/NGDP_RPCH@WEO.

International Organization for Migration—IOM. 2008. “Migration and Climate Change.” Geneva: IOM Migration Research Series.

———. 2020a. “Future Migration Trends: Migration Data Portal.” Retrieved from: http://migrationdataportal.org/themes/future-migration-trends.

———. 2020b. World Migration Report 2020. Geneva: IOM.

Jerrim, John, and Lindsey Macmillan. 2015. “Income Inequality, Intergenerational Mobility, and the Great Gatsby Curve: Is Education the Key?” Social Forces 94 (2): 505–33. https://doi.org/10.1093/sf/sov075.

Kao, Grace, and Jennifer S. Thompson. 2003. “Racial and Ethnic Stratification in Educational Achievement and Attainment.” Annual Review of Sociology 29 (1): 417–42. https://doi.org/10.1146/annurev.soc.29.010202.100019.

Keygnaert, Ines, Nicole Vettenburg, and Marleen Temmerman. 2012. “Hidden Violence is Silent Rape: Sexual and Gender-Based Violence in Refugees, Asylum Seekers and Undocumented Migrants in Belgium and the Netherlands.” Culture, Health & Sexuality 14 (5): 505–20. https://doi.org/10.1080/13691058.2012.671961.

Klingorová, Kamila, and Tomáš Havlíček. 2015. “Religion and Gender Inequality: The Status of Women in the Societies of World Religions.” Moravian Geographical Reports 23 (2): 2–11. https://doi.org/10.1515/mgr-2015-0006.

Kogan, Irena, Jing Shen, and Manuel Siegert. 2018. “What Makes a Satisfied Immigrant? Host-Country Characteristics and Immigrants’ Life Satisfaction in Eighteen European Countries.” Journal of Happiness Studies 19 (6): 1783–1809.

Kolb, Michael, Guido Neidhöfer, and Friedhelm Pfeiffer. 2019. “Intergenerational Mobility and Self-Selection of Asylum Seekers in Germany.” SSRN Scholarly Paper ID 3428238. Rochester, NY: Social Science Research Network. https://doi.org/10.2139/ssrn.3428238.

Kondylis, Florence. 2010. “Conflict Displacement and Labor Market Outcomes in Post-War Bosnia and Herzegovina.” Journal of Development Economics 93 (2): 235–48.
Kühne, Simon, and Martin Kroh. 2017. “The 2015 IAB-SOEP Migration Study M2: Sampling Design, Nonresponse, and Weighting Adjustment.” SOEP Survey Papers (473).
Lange, Martin, and Friedhelm Pfeiffer. 2019. “The Human Capital Selection of Young Males Seeking Asylum in Germany.” Journal for Labour Market Research 53 (1): 8. https://doi.org/10.1186/s12651-019-0259-y.
Levels, Mark, Jaap Dronkers, and Gerbert Kraaykamp. 2008. “Immigrant Children’s Educational Achievement in Western Countries: Origin, Destination, and Community Effects on Mathematical Performance.” American Sociological Review 73 (5): 835–53. https://doi.org/10.1177/000312240807300507.
Liebig, Thomas, and Alfonso Sousa-Poza. 2004. “Migration, Self-Selection and Income Inequality: An International Analysis.” Kyklos 57 (1): 125–46. https://doi.org/10.1111/j.0023-5962.2004.00246.x.
Longhi, Simonetta, Peter Nijkamp, and Jacques Poot. 2008. “Meta-Analysis of Empirical Evidence on the Labour Market Impacts of Immigration.” IZA Working Paper (3418). https://doi.org/10.1111/j.0042-7092.2007.00700.x.
Lu, Yao, and Lijian Qin. 2014. “Healthy Migrant and Salmon Bias Hypotheses: A Study of Health and Internal Migration in China.” Social Science & Medicine 102 (February): 41–48. https://doi.org/10.1016/j.socscimed.2013.11.040.
Luhmann, Niklas. 1975. Soziologische Aufklärung 2: Aufsätze zur Theorie der Gesellschaft. 7th ed. VS Verlag für Sozialwissenschaften. https://www.springer.com/de/book/9783658196875.
Maass, Anne, and Mara Cadinu. 2003. “Stereotype Threat: When Minority Members Underperform.” European Review of Social Psychology 14 (1): 243–75. https://doi.org/10.1080/10463280340000072.
Maoz, Zeev, and Errol A. Henderson. 2013. “The World Religion Dataset, 1945–2010: Logic, Estimates, and Trends.” International Interactions 39 (3): 265–91. https://doi.org/10.1080/03050629.2013.782306.
Mara, Isilda, and Michael Landesmann. 2013. “Do I Stay because I am Happy or am I Happy because I Stay? Life Satisfaction in Migration, and the Decision to Stay Permanently, Return and Out-Migrate.” Working Paper 103. Vienna: Wiener Institut für Internationale Wirschaftsvergleiche.
Marmot, Michael. 2005. “Social Determinants of Health Inequalities.” The Lancet 365 (9464): 1099–1104. https://doi.org/10.1016/S0140-6736(05)71146-6.
Marshall, Monty G. 2019. “Center for Systemic Peace, Major Episodes of Political Violence, 1946-2018 (War List).” Retrieved from: https://www.systemicpeace.org/inscrdata.html.
Marshall, Monty G., Ted R. Gurr, and Barbara Harff. 2019. “Center for Systemic Peace: PITF State Failure Problem Set.” Retrieved from: https://www.systemicpeace.org/inscrdata.html.
Mascini, Peter, and Marjolein Bochove. 2009. “Gender Stereotyping in the Dutch Asylum Procedure: ‘Independent’ Men versus ‘Dependent’ Women.” SSRN Scholarly Paper ID 2558512. Rochester, NY: Social Science Research Network.
Mayer, Thierry, and Soledad Zignago. 2011. “Notes on CEPII’s Distances Measures: The GeoDist Database.” SSRN Electronic Journal. https://doi.org/10.2139/ssrn.1994531.
Milanovic, Branko. 2016. Global Inequality: A New Approach for the Age of Globalization. Cambridge, MA: Belknap Press.
Mueller, C., and T. L. Parcel. 1981. “Measures of Socioeconomic Status: Alternatives and Recommendations.” Child Development (Mar 1): 13 – 30.
Nafziger, Wayne E., and Juha Auvinen. 2002. “Economic Development, Inequality, War, and State Violence.” World Development 30 (2): 153–63. https://doi.org/10.1016/S0305-750X(01)00108-5.
Nekby, Lena. 2006. “The Emigration of Immigrants, Return vs Onward Migration: Evidence from Sweden.” Journal of Population Economics 19 (2): 197–226. https://doi.org/10.1007/s00148-006-0080-0.
Norredam, Marie, Charles Agyemang, Oluf K. Hoejbjerg Hansen, Jørgen H. Petersen, Stine Byberg, Allan Krasnik, and Anton E. Kunst. 2014. “Duration of Residence and Disease Occurrence among Refugees and Family Reunited Immigrants: Test of the ‘Healthy Migrant Effect’ Hypothesis.” Tropical Medicine & International Health 19 (8): 958–67. https://doi.org/10.1111/tmi.12340.
Organization for Economic Co-operation and Development—OECD. 2000. “Emigration Rates by Country of Origin, Sex and Educational Attainment Levels.” Retrieved from: https://www.oecd.org/migration/46561284.pdf.

———. 2011. “Divided We Stand: Why Inequality Keeps Rising.” Retrieved from: https://www.oecd.org/els/soc/49170768.pdf.
———. 2014. “Rising Inequality: Youth and Poor Fall Further Behind.” Retrieved from: https://www.oecd.org/social/OECD2014-Income-Inequality-Update.pdf.
———. 2015. “In It Together: Why Less Inequality Benefits All.” Retrieved from: https://read.oecd-ilibrary.org/employment/in-it-together-why-less-inequality-benefits-all_9789264235120-en.
———. 2017. International Migration Outlook 2017. Paris: OECD Publishing.
———. 2019. “Under Pressure: The Squeezed Middle Class.” Retrieved from: https://www.oecd-ilibrary.org/social-issues-migration-health/under-pressure-the-squeezed-middle-class_689afed1-en.
Oswald, Andrew J., Eugenio Proto, and Daniel Sgroi. 2015. “Happiness and Productivity.” Journal of Labor Economics 33 (4): 789–822. https://doi.org/10.1086/681096.
Pager, Devah, and Hana Shepherd. 2008. “The Sociology of Discrimination: Racial Discrimination in Employment, Housing, Credit, and Consumer Markets.” Annual Review of Sociology 34 (1): 181–209. https://doi.org/10.1146/annurev.soc.33.040406.131740.
Paparusso, Angela, and Elena Ambrosetti. 2017. “To Stay or to Return? Return Migration Intentions of Moroccans in Italy.” International Migration 55 (6): 137–55. https://doi.org/10.1111/imig.12375.
Pastor, Lubos, and Pietro Veronesi. 2018. “Inequality Aversion, Populism, and the Backlash Against Globalization.” National Bureau of Economic Research: Working Paper 24900 (August). https://doi.org/10.3386/w24900.
Perry, Laura, and Andrew Mconney. 2010. “Does the SES of the School Matter? An Examination of Socioeconomic Status and Student Achievement Using PISA 2003.” Teachers College Record 112 (4), 1137–62.
Polgreen, Linnea A., and Nicole B. Simpson. 2011. “Happiness and International Migration.” Journal of Happiness Studies 12 (5): 819–40. https://doi.org/10.1007/s10902-010-9229-3.
Politico. 2016. “Europe’s Man Problem.” Retrieved from: https://www.politico.com/magazine/story/2016/01/europe-refugees-migrant-crisis-men-213500.
Political Terror Scale. 2019. “PTS Data Table.” Retrieved from: http://www.politicalterrorscale.org/Data/Datatable.html.
Riach, P. A., and J. Rich. 2002. “Field Experiments of Discrimination in the Market Place.” The Economic Journal 112 (483): F480–518. https://doi.org/10.1111/1468-0297.00080.
Roemer, John E. 1998. Equality of Opportunity. Cambridge, MA: Harvard University Press.
Roy, A. D. 1951. “Some Thoughts on the Distribution of Earnings.” Oxford Economic Papers, New Series 3 (2): 135–46.
Rubalcava, Luis N., Graciela M. Teruel, Duncan Thomas, and Noreen Goldman. 2008. “The Healthy Migrant Effect: New Findings From the Mexican Family Life Survey.” American Journal of Public Health 98 (1): 78–84. https://doi.org/10.2105/AJPH.2006.098418.
Rubie-Davies, Christine, John Hattie, and Richard Hamilton. 2006. “Expecting the Best for Students: Teacher Expectations and Academic Outcomes.” British Journal of Educational Psychology 76 (3): 429–44. https://doi.org/10.1348/000709905X53589.
Safi, Mirna. 2010. “Immigrants’ Life Satisfaction in Europe: Between Assimilation and Discrimination.” European Sociological Review 26 (2): 159–76. https://doi.org/10.1093/esr/jcp013.
Samuel, Robin, and Andreas Hadjar. 2016. “How Welfare-State Regimes Shape Subjective Well-Being Across Europe.” Social Indicators Research 129 (2): 565–87. https://doi.org/10.1007/s11205-015-1125-0.
Schiller, Nina Glick, Linda Basch, and Cristina Blanc-Szanton. 1992. “Transnationalism: A New Analytic Framework for Understanding Migration: A New Analytic Framework.” Annals of the New York Academy of Sciences 645 (1): 1–24. https://doi.org/10.1111/j.1749-6632.1992.tb33484.x.
Schmitt, Michael T., Nyla R. Branscombe, Tom Postmes, and Amber Garcia. 2014. “The Consequences of Perceived Discrimination for Psychological Well-Being: A Meta-Analytic Review.” Psychological Bulletin 140 (4): 921–48. https://doi.org/10.1037/a0035754.
Seguino, Stephanie. 2011. “Help or Hindrance? Religion’s Impact on Gender Inequality in Attitudes and Outcomes.” World Development 39 (8): 1308–21.
Shachar, Ayelet, and Ran Hirschl. 2013. “Recruiting ‘Super Talent’: The New World of Selective Migration Regimes.” Indiana Journal of Global Legal Studies 20 (1): 71–107. https://doi.org/10.2979/indjglolegstu.20.1.71.
Shamsuddin, Mrittika, and Marina-Selini Katsaiti. 2019. “Migration and Happiness: Evidence from Germany.” Journal of Happiness Studies, December. https://doi.org/10.1007/s10902-019-00207-6.

Silberman, Roxane, Richard Alba, and Irène Fournier. 2007. “Segmented Assimilation in France? Discrimination in the Labour Market against the Second Generation.” Ethnic and Racial Studies 30 (1): 1–27. https://doi.org/10.1080/01419870601006488.
Sinn, Hans-Werner. 1994. “A Theory of the Welfare State.” Working Paper 4856. Working Paper Series. National Bureau of Economic Research. https://doi.org/10.3386/w4856.
Sirin, Selcuk R. 2005. “Socioeconomic Status and Academic Achievement: A Meta-Analytic Review of Research.” Review of Educational Research 75 (3): 417–53. https://doi.org/10.3102/00346543075003417.
Sjaastad, Larry A. 1962. “The Costs and Returns of Human Migration.” Journal of Political Economy 70 (5): 80–93.
Spijkerboer, Thomas. 2015. “European Sexual Nationalism: Refugee Law after the Gender & Sexuality Critiques.” Retrieved from: https://papers.ssrn.com/abstract=2607476.
Stark, Oded. 1991. The Migration of Labor. Hoboken, NJ: Blackwell Publishers.
Steele, C. M. 1997. “A Threat in the Air. How Stereotypes Shape Intellectual Identity and Performance.” The American Psychologist 52 (6): 613–29. https://doi.org/10.1037//0003-066x.52.6.613.
Stevenson, Betsey, and Justin Wolfers. 2008. “Economic Growth and Subjective Well-Being: Reassessing the Easterlin Paradox.” NBER Working Paper Series (14282). https://doi.org/10.3386/w14282.
Stone, Susan, and Meekyung Han. 2005. “Perceived School Environments, Perceived Discrimination, and School Performance among Children of Mexican Immigrants.” Children and Youth Services Review 27 (1): 51–66. https://doi.org/10.1016/j.childyouth.2004.08.011.
Suh, Eunkook M., E. D. Diener, and John A. Updegraff. 2008. “From Culture To Priming Conditions: Self-Construal Influences on Life Satisfaction Judgments.” Journal of Cross-Cultural Psychology 39 (1): 3–15. https://doi.org/10.1177/0022022107311769.
Sunanta, Sirijit. 2014. “Thailand and the Global Intimate: Transnational Marriages, Health Tourism and Retirement Migration.” Retrieved from: http://www.mmg.mpg.de/publications/working-papers/2014/wp-14-02/.
Tam, Kim-Pong, Hi Po Bobo Lau, and Da Jiang. 2012. “Culture and Subjective Well-Being: A Dynamic Constructivist View.” Journal of Cross-Cultural Psychology 43 (1): 23–31. https://doi.org/10.1177/0022022110388568.
Thoits, Peggy A., and Lyndi N. Hewitt. 2001. “Volunteer Work and Well-Being.” Journal of Health and Social Behavior 42 (2): 115–31. https://doi.org/10.2307/3090173.
Thomson, Sue. 2018. “Achievement at School and Socioeconomic Background—An Educational Perspective.” NPJ Science of Learning 3 (1): 1–2. https://doi.org/10.1038/s41539-018-0022-0.
Thomson, Sue, Lisa De Bortoli, and Catherine Underwood. 2017. “PISA 2015: Reporting Australia’s Results.” Retrieved from: https://research.acer.edu.au/ozpisa/22.
Todaro, Michael P. 1969. “A Model of Labor Migration and Urban Unemployment in Less Developed Countries.” The American Economic Review 59 (1): 138–48.
Turra, Cassio M., and Irma T. Elo. 2008. “The Impact of Salmon Bias on the Hispanic Mortality Advantage.” Population Research and Policy Review 27 (5): 515–30. https://doi.org/10.1007/s11113-008-9087-4.
United Nations—UN. 2012. “Indicators for Monitoring the Millennium Development Goals: Definitions, Rationale, Concepts and Sources.” Retrieved from: http://mdgs.un.org/unsd/mi/wiki/5-4-Adolescent-birth-rate.ashx.
———. 2020. World Social Report 2020: Inequality in a Rapidly Changing World. New York: United Nations Department of Economic and Social Affairs. https://doi.org/10.18356/7f5d0efc-en.
United Nations Development Programme—UNDP. 2020. “Human Development Data (1990–2018): Adolescent Birth Rate (Births per 1,000 Women Ages 15-19).” Retrieved from: http://hdr.undp.org/en/data.
United Nations High Commissioner for Refugees—UNHCR. 2015a. “Over One Million Sea Arrivals Reach Europe in 2015.” Retrieved from: https://www.unhcr.org/news/latest/2015/12/5683d0b56/million-sea-arrivals-reach-europe-2015.html.
———. 2015b. “UNHCR Global Trends 2015.” Retrieved from: https://www.unhcr.org/576408cd7.pdf.
Van de Werfhorst, Herman G., and Jonathan J.B. Mijs. 2010. “Achievement Inequality and the Institutional Structure of Educational Systems: A Comparative Perspective.” Annual Review of Sociology 36 (1): 407–28. https://doi.org/10.1146/annurev.soc.012809.102538.
Van Ewijk, Reyn, and Peter Sleegers. 2010. “The Effect of Peer Socioeconomic Status on Student Achievement: A Meta-Analysis.” Educational Research Review 5 (2): 134–50. https://doi.org/10.1016/j.edurev.2010.02.001.

Van Wetten, Jos W., Catrien C. J. H. Bijleveld, F. Heide, and N. Dijkhoff. 2001. “Female Asylum-Seekers in the Netherlands: An Empirical Study.” International Migration 39 (3): 86–98. https://doi.org/10.1111/1468-2435.00157.
Veenhoven, Ruut. 1988. “The Utility of Happiness.” Social Indicators Research 20 (4): 333–54. https://doi.org/10.1007/BF00302332.
———. 2012. “Happiness: Also Known as ‘Life Satisfaction’ and ‘Subjective Well-Being.’” In Handbook of Social Indicators and Quality of Life Research, Kenneth C. Land, Alex C. Michalos, and M. Joseph Sirgy (Eds.), 63–77. Dordrecht: Springer Netherlands. https://doi.org/10.1007/978-94-007-2421-1_3.
Wahba, Jackline. 2015. “Selection, Selection, Selection: The Impact of Return Migration.” Journal of Population Economics 28 (3): 535–63. https://doi.org/10.1007/s00148-015-0541-4.
Washington Post. 2016. “Trump’s Claim That ‘Young, Strong Men’ Dominate the European Migrant Crisis.” Retrieved from: https://www.washingtonpost.com/news/fact-checker/wp/2016/05/16/trumps-claim-that-young-strong-men-dominate-the-european-migrant-crisis/.
Wayne Nafziger, E, and Juha Auvinen. 2002. “Economic Development, Inequality, War, and State Violence.” World Development 30 (2): 153–63. https://doi.org/10.1016/S0305-750X(01)00108-5.
Weinstein, Rhona S., Anne Gregory, and Michael J. Strambler. 2004. “Intractable Self-Fulfilling Prophecies Fifty Years after Brown v. Board of Education.” American Psychologist 59 (6): 511–20. https://doi.org/10.1037/0003-066X.59.6.511.
Wodtke, Geoffrey T., David J. Harding, and Felix Elwert. 2011. “Neighborhood Effects in Temporal Perspective: The Impact of Long-Term Exposure to Concentrated Disadvantage on High School Graduation.” American Sociological Review 76 (5): 713–36. https://doi.org/10.1177/0003122411420816.
Wood, Elisabeth Jean. 2006. “Variation in Sexual Violence during War.” Politics & Society 34 (3): 307–42. https://doi.org/10.1177/0032329206290426.
World Bank. 2006. “Global Economic Prospects: Economic Implications of Migration and Remittances.” Retrieved from: https://elibrary.worldbank.org/doi/pdf/10.1596/978-0-8213-6344-7.
———. 2017. “World Development Indicators (2017). GDP per Capita PPP (Current International $).” Retrieved from: http://data.worldbank.org/indicator/NY.GDP.PCAP.PP.CD.
———. 2020a. “GDP per Capita (Constant 2010 US$) | Data.” Retrieved from: https://data.worldbank.org/indicator/NY.GDP.PCAP.KD.
———. 2020b. “Unemployment, Total (% of Total Labor Force) (Modeled ILO Estimate).” Retrieved from: https://data.worldbank.org/indicator/SL.UEM.TOTL.ZS.
Wright, Katie. 2011. “Constructing Migrant Wellbeing: An Exploration of Life Satisfaction Amongst Peruvian Migrants in London.” Journal of Ethnic and Migration Studies 37 (9): 1459–75. https://doi.org/10.1080/1369183X.2011.623621.
Wu, Zheng, and Christoph M. Schimmele. 2005. “The Healthy Migrant Effect on Depression: Variation over Time?” Canadian Studies in Population, December, 271–95. https://doi.org/10.25336/P6DW3T.

Appendix

Study I: Gender and Asylum in Europe: A Quantitative Assessment on Gendered Self-Selection and its Consequences for Asylum Acceptance Rates

Table A: Distribution of Asylum Decisions over Host Countries

Country	Nr. Asylum Decisions	Col %	Cum %
(1)DE	1,671,730	37.2	37.2
(2)FR	593,815	13.2	50.4
(3)IT	389,560	8.7	59.1
(4)SE	372,305	8.3	67.3
(5)UK	244,000	5.4	72.8
(6)AT	190,095	4.2	77.0
(7)BE	186,520	4.1	81.2
(8)NL	153,870	3.4	84.6
(9)CH	153,570	3.4	88.0
(10)EL	131,490	2.9	90.9
(11)NO	104,215	2.3	93.2
(12)DK	51,455	1.1	94.4
(13)ES	44,935	1.0	95.4
(14)FI	44,545	1.0	96.4
(15)PL	33,170	0.7	97.1
(16)BG	25,135	0.6	97.7
(17)HU	25,025	0.6	98.2
(18)CY	15,875	0.4	98.6
(19)MT	15,510	0.3	98.9
(20)IE	12,995	0.3	99.2
(21)RO	10,375	0.2	99.4
(22)LU	8,125	0.2	99.6
(23)CZ	6,820	0.2	99.8

(24)PT	2,210	0.0	99.8
(25)LT	1,775	0.0	99.9
(26)SK	1,230	0.0	99.9
(27)SI	1,200	0.0	99.9
(28)HR	1,140	0.0	99.9
(29)IS	985	0.0	100.0
(30)LV	935	0.0	100.0
(31)EE	455	0.0	100.0
(32)LI	205	0.0	100.0
Total	4,495,270	100.0	

Table B: Distribution of Asylum Decisions among Source Countries

Country	Nr. Asylum Decisions	Col %	Cum %
(1)SY	884,900	19.7	19.7
(2)AF	454,650	10.1	29.8
(3)IQ	355,830	7.9	37.7
(4)ER	200,200	4.5	42.2
(5)PK	181,285	4.0	46.2
(6)RU	166,000	3.7	49.9
(7)SO	161,160	3.6	53.5
(8)NG	160,540	3.6	57.1
(9)RS	152,755	3.4	60.4
(10)AL	145,700	3.2	63.7
(11)XK	136,135	3.0	66.7
(12)IR	135,195	3.0	69.7
(13)BD	87,380	1.9	71.7
(14)LK	65,640	1.5	73.1
(15)TR	63,045	1.4	74.5
(16)GE	62,085	1.4	75.9
(17)CD	61,230	1.4	77.3
(18)GN	60,380	1.3	78.6

(19)AM	54,160	1.2	79.8
(20)CN	51,275	1.1	81.0
(21)ML	49,165	1.1	82.1
(22)MK	48,720	1.1	83.1
(23)SD	48,155	1.1	84.2
(24)DZ	47,615	1.1	85.3
(25)GM	47,035	1.0	86.3
(26)BA	40,290	0.9	87.2
(27)UA	39,565	0.9	88.1
(28)CI	37,520	0.8	88.9
(29)SN	34,545	0.8	89.7
(30)GH	31,690	0.7	90.4
(31)ET	31,445	0.7	91.1
(32)MA	28,925	0.6	91.7
(33)HT	25,260	0.6	92.3
(34)AZ	24,010	0.5	92.8
(35)EG	23,445	0.5	93.4
(36)IN	20,475	0.5	93.8
(37)TN	19,410	0.4	94.3
(38)ZW	18,660	0.4	94.7
(39)CM	17,435	0.4	95.1
(40)LY	16,900	0.4	95.4
(41)MR	14,775	0.3	95.8
(42)LB	14,635	0.3	96.1
(43)CG	10,350	0.2	96.3
(44)VN	10,100	0.2	96.5
(45)PS	9,915	0.2	96.8
(46)AO	9,870	0.2	97.0
(47)TG	8,215	0.2	97.2
(48)SL	8,165	0.2	97.3
(49)RW	6,685	0.1	97.5
(50)BY	6,570	0.1	97.6

(51)KM	6,170	0.1	97.8
(52)MN	6,105	0.1	97.9
(53)CO	5,745	0.1	98.0
(54)BF	5,645	0.1	98.2
(55)YE	5,620	0.1	98.3
(56)UG	5,170	0.1	98.4
(57)UZ	5,085	0.1	98.5
(58)TD	4,985	0.1	98.6
(59)MM	4,320	0.1	98.7
(60)KZ	4,205	0.1	98.8
(61)CF	4,155	0.1	98.9
(62)BI	3,760	0.1	99.0
(63)MD	3,665	0.1	99.1
(64)GW	3,445	0.1	99.2
(65)NE	3,360	0.1	99.2
(66)KE	3,315	0.1	99.3
(67)NP	3,230	0.1	99.4
(68)EH	3,090	0.1	99.4
(69)CU	2,960	0.1	99.5
(70)VE	2,870	0.1	99.6
(71)TJ	2,740	0.1	99.6
(72)LR	2,270	0.1	99.7
(73)BJ	2,260	0.1	99.7
(74)KG	2,120	0.0	99.8
(75)SV	1,735	0.0	99.8
(76)DJ	1,380	0.0	99.8
(77)JM	1,345	0.0	99.9
(78)JO	1,015	0.0	99.9
(79)KP	800	0.0	99.9
(80)KW	615	0.0	99.9
(81)TZ	565	0.0	99.9
(82)DO	495	0.0	100.0

(83)MW	400	0.0	100.0
(84)GA	380	0.0	100.0
(85)BT	370	0.0	100.0
(86)ME	260	0.0	100.0
(87)PH	185	0.0	100.0
(88)BR	135	0.0	100.0
(89)BH	130	0.0	100.0
(90)SA	80	0.0	100.0
Total	4,495,270	100.0	

Figure I: GDP Estimation of Syria

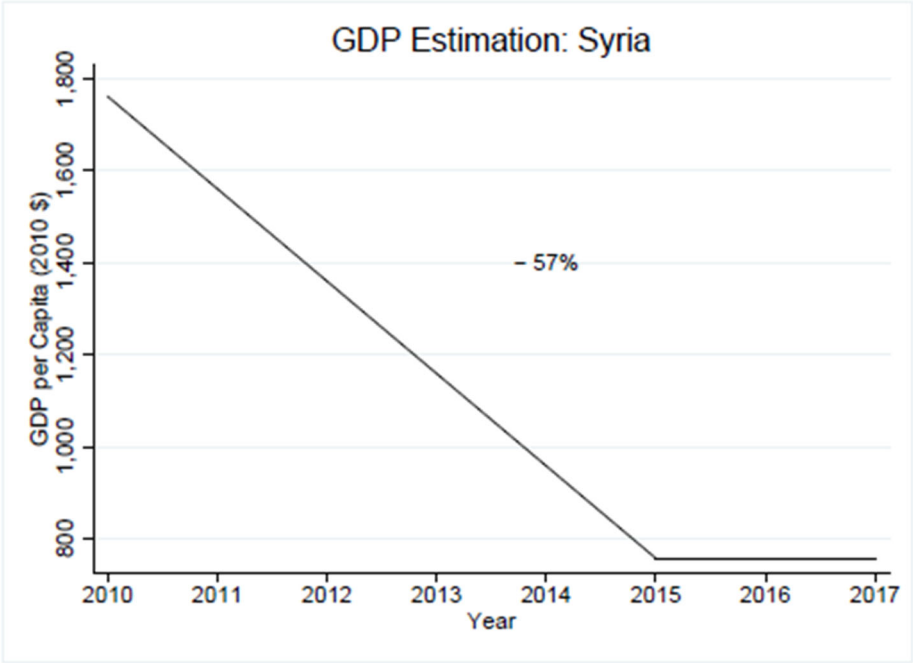


Table C: WVS Sample over Country and Year

Country	2005	2006	2007	2009	2011	2012	2013	Total
Turkey	0	0	1,318	0	1,565	0	0	2,883
Italy	661	0	0	0	0	0	0	661
Spain	0	0	1,079	0	1,027	0	0	2,106
France	0	874	0	0	0	0	0	874
UK	782	0	0	0	0	0	0	782
USA	0	1,141	0	0	2,138	0	0	3,279
Romania	1,460	0	0	0	0	1,450	0	2,910
Poland	921	0	0	0	0	911	0	1,832
Iran	0	0	2,581	0	0	0	0	2,581
Hungary	0	0	0	960	0	0	0	960
Bulgaria	878	0	0	0	0	0	0	878
Russia	0	1,580	0	0	2,322	0	0	3,902
Philippines	0	0	0	0	0	1,198	0	1,198
Thailand	0	0	1,477	0	0	0	1,138	2,615
Morocco	0	0	1,189	0	1,048	0	0	2,237
Kazakhstan	0	0	0	0	1,500	0	0	1,500
Lebanon	0	0	0	0	0	0	1,101	1,101
Kyrgyzstan	0	0	0	0	1,459	0	0	1,459
Ukraine	0	920	0	0	1,500	0	0	2,420
Uzbekistan	0	0	0	0	1,454	0	0	1,454
Netherlands	0	687	0	0	0	1,592	0	2,279
Azerbaijan	0	0	0	0	1,002	0	0	1,002
Belarus	0	0	0	0	1,507	0	0	1,507
Serbia	1,127	0	0	0	0	0	0	1,127
Total	5,829	5,202	7,644	960	16,522	5,151	2,239	43,547

Table D: Harmonization of Education

Harmonized	SOEP	WVS
Basic Education	In school Primary education	No formal education
Lower secondary	Lower secondary education	Incomplete secondary school Incomplete secondary: university-prep.
Upper secondary/ Lower Tertiary	Upper secondary education Post-secondary non-tertiary Short-cycle tertiary education	Complete secondary school: technical/vocational Complete secondary: university prep. Some university-level education, without degree
Tertiary	Bachelors or equivalent Masters or equivalent Doctoral or equivalent	University-level education, with degree

Table E: Harmonization of Religion

Harmonized	SOEP	WVS
No Religion	No Confession	No Religion
Christian Religion	Catholic Protestant Christian Other Christian Religion	Anglican Armenian Apostolic Church Assembly of God Christian Christian Reform Church of Christ Evangelical Free Church Greek Catholic Gregorian Iglesia ni Cristo (INC) Independent African Church Israelita Nuevo Pacto Universal Jehovah Witnesses Lutheran Methodist Mormon Orthodox Other: Christian Pentecostal Presbyterian Protestant Roman Catholic Salvation Army Seven Day Adventist The Church of Sweden Unitarian Ratana New Apostolic Church DZ: Christian (Quakers, Jehovah's Witness) AU: Uniting Church Dutch Reformed (Nederlands Hervormd) Reformed Churches in the Netherlands ZA: Evangelical/Apostolic Faith Mission
Islam	Islam Religion	Muslim Shia Sunni Druse
Other	Other Religion	Ancestral worshipping / tradition Bahai Baptist Buddhist Cao Dai Confucianism Hindu Hoa Hao Jain Judaism Native, folk religion Other Paganism Sikh Spiritista Spiritualists Taoist Unitarian Zionist Zoroastrian Yiguan Dao Daoism ZA: African Traditional Religion

Table F: Average Marginal Effect (t-value) of Random Intercept Logistic Models on the Likelihood of Intended Return (No Group Size Restriction)

	Model 1		Model 2		Model 3		Model 4	
LS(Germany)	-0.020***	(-3.91)	-0.017***	(-3.61)				
LS(CO)	0.027***	(3.46)	0.019*	(2.36)				
LS Difference					-0.025***	(-4.40)	-0.019***	(-3.91)
Demographic & Migration								
Citizenship			-0.018	(-1.51)			-0.020^{+}	(-1.70)
Years in Germany			0.003	(0.59)			0.002	(0.32)
Age at immigration			-0.010	(-1.54)			-0.013*	(-2.02)
Aussiedler			-0.048*	(-2.57)			-0.048**	(-2.58)
Asylum			-0.021	(-0.94)			-0.021	(-0.96)
Child			-0.043***	(-3.69)			-0.043***	(-3.71)
Male			0.002	(0.18)			0.002	(0.15)
Married			0.014	(1.17)			0.014	(1.20)
Education & Labor								
Market Basic education			0.035	(1.57)			0.036	(1.64)
Ref.: Lower secondary edu.								
Upper sec. edu.			-0.003	(-0.20)			-0.000	(-0.01)
Post sec. edu.			-0.008	(-0.44)			-0.006	(-0.35)
Tertiary edu.			-0.019	(-1.25)			-0.014	(-0.94)
Ref.: Full emp.								
Part emp.			-0.004	(-0.24)			-0.003	(-0.20)
Training			0.009	(0.24)			0.013	(0.33)
Marginal emp			0.011	(0.59)			0.012	(0.63)
Unemployed			0.008	(0.69)			0.009	(0.77)
Self-employment			0.003	(0.16)			0.003	(0.15)
Income(log std. adult)			-0.007^{+}	(-1.68)			-0.006	(-1.63)
Remittance(log)			0.002^{+}	(1.68)			0.002^{+}	(1.69)
Social ties (CO)			0.109***	(4.67)			0.109***	(4.71)
Country-Level Variables								
GDP(log)			0.024*	(2.04)			0.025*	(2.14)
Mig. Population (log)			-0.006	(-0.49)			-0.006	(-0.59)
Geographic distance (log)			0.003	(0.21)			0.008	(0.72)
Linguistic distance (log)			0.022	(1.18)			0.017	(0.98)
Religious distance (log) EU			-0.002	(-0.15)			-0.005	(-0.45)
			-0.003	(-0.10)			0.009	(0.30)
Observations	3,957		3,957		3,957		3,957	
BIC	1,960.598		2,074.364		1,957.622		2,068.371	

t statistics in parentheses

$^{+}$ $p < 0.1$, * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

Table G: Comparison of the Average Marginal Effects of Random Intercept Logistic Model with and Without SWB

	Model 2		Model w/o LS	
LS Difference				
LS(Germany)	-0.018***	(-3.72)		
LS(CO)	0.017+	(1.92)		
Demographic & Migration				
Citizenship	-0.011	(-0.89)	-0.014	(-1.14)
Standardized values of (inG)	0.001	(0.18)	0.001	(0.23)
Age at immigration	-0.012+	(-1.72)	-0.014*	(-2.03)
Aussiedler	-0.054**	(-2.84)	-0.056**	(-2.94)
Asylum	-0.026	(-1.13)	-0.026	(-1.13)
Child	-0.052***	(-4.06)	-0.050***	(-3.95)
Male	-0.000	(-0.02)	0.002	(0.22)
Married	0.015	(1.20)	0.012	(0.96)
Education & Labor Market				
Basic education	0.035	(1.57)	0.038+	(1.75)
Ref.: Lower secondary edu.				
Upper sec. edu.	-0.002	(-0.19)	-0.001	(-0.12)
Post sec. edu.	-0.004	(-0.23)	-0.005	(-0.26)
Tertiary edu.	-0.018	(-1.17)	-0.013	(-0.85)
Ref.: Full emp.				
Part emp.	-0.004	(-0.24)	-0.001	(-0.08)
Training	0.017	(0.41)	0.025	(0.61)
Marginal emp	-0.000	(-0.01)	0.003	(0.19)
Unemployed	0.008	(0.61)	0.015	(1.22)
Self-employment	-0.000	(-0.01)	0.000	(0.01)
Income(log std. adult)	-0.007+	(-1.85)	-0.008*	(-2.10)
Remittance(log)	0.002+	(1.69)	0.002+	(1.75)
Social ties (CO)	0.107***	(4.63)	0.104***	(4.53)
Country-Level Variables				
GDP(log)	0.040*	(2.33)	0.039*	(2.29)
Mig. Population (log)	-0.009	(-0.52)	-0.007	(-0.41)
Geographic distance (log)	0.022	(1.47)	0.031*	(2.14)
Linguistic distance (log)	0.123*	(2.54)	0.109*	(2.32)
Religious distance (log)	-0.005	(-0.40)	-0.010	(-0.85)
EU	0.029	(0.95)	0.043	(1.48)
Observations	3,696		3,696	
BIC	1,891.395		1,895.237	

t statistics in parentheses

$^{+}\ p < 0.1,\ ^{*}\ p < 0.05,\ ^{**}\ p < 0.01,\ ^{***}\ p < 0.001$

Table H: Model 4 with Different Migrant Sub-Groups Excluded

Model Model 4 after excluding the following migrant groups	LS(Diff)
Origin	
Aussiedler	-0.293*** (-4.23)
EU-Migrants	-0.250* (-3.40)
Asylum Seeker	-0.311*** (-4.53)
Migrants from Turkey	-0.204* (-2.42)
Income	
Low Income	-0.282*** (-4.22)
High Income	-0.93*** (-4.41)
Education	
Low Education (primary & lower secondary)	-0.366*** (-4.06)
High Education (tertiary)	-0.294*** (-4.04)
Geographic distance (country of origin)	
Neighboring Countries (Poland, France, Netherlands)	-0.296*** (-4.16)
Countries diff. from Gallup (country of origin)	
Countries diff. from Gallup (UZB, PHL, PAK, TUR, KGZ)	-0.218* (-2.55)

Figure II: Indented Return Rate and LS Difference between the Host and Source Countries (Including Thailand)

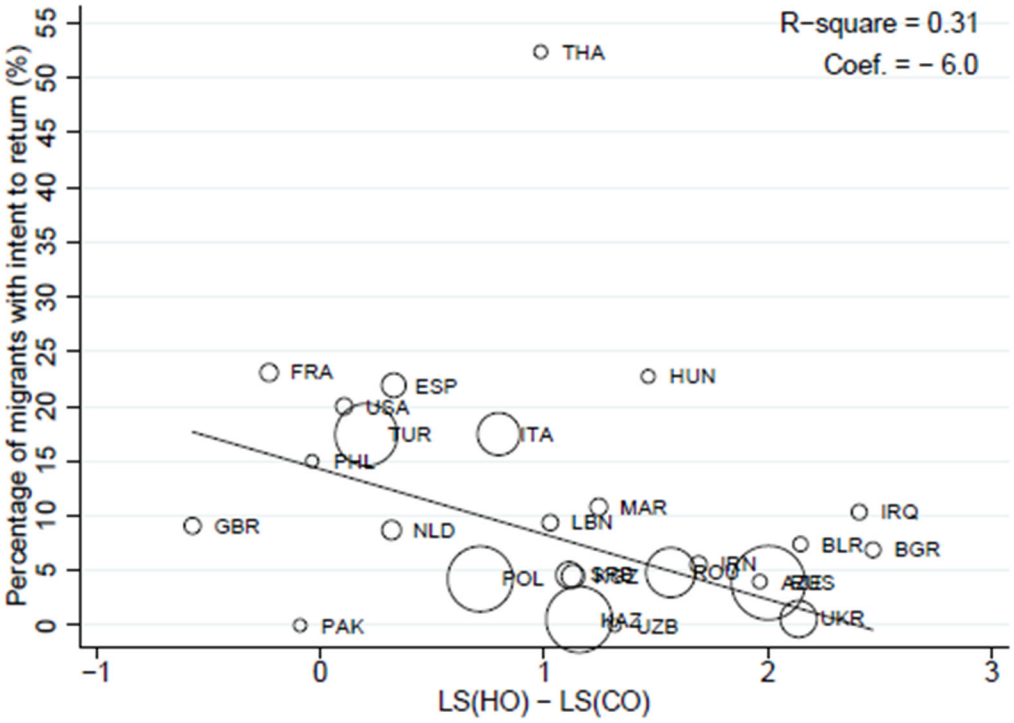


Figure III: Average Leverage and Average Normalized Squared Residual

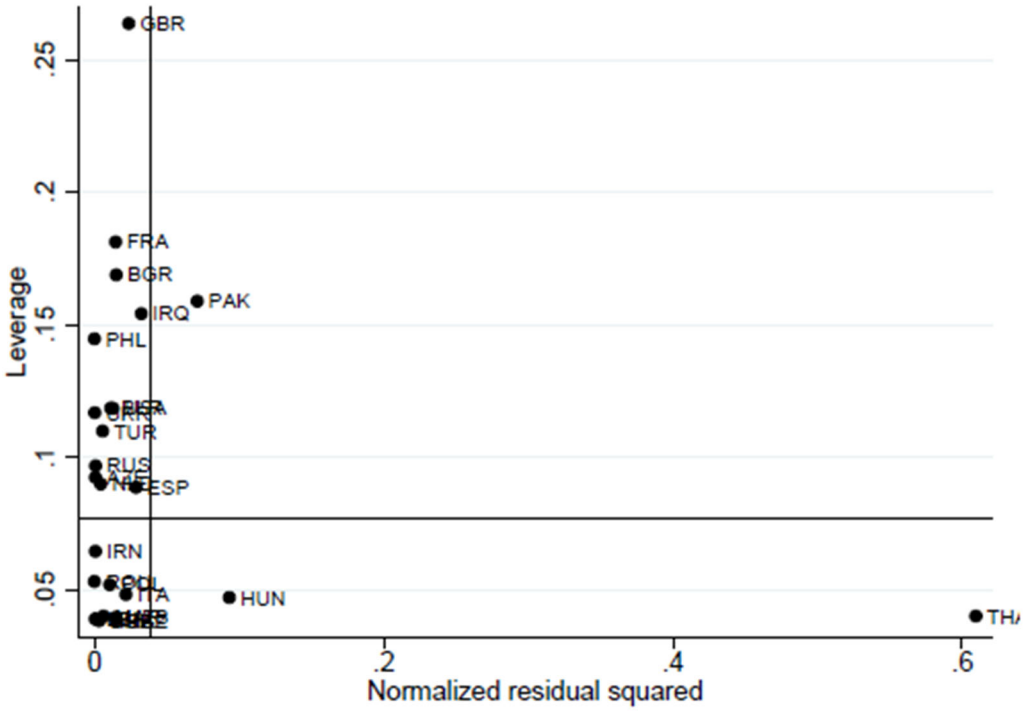


Figure IV: Logit of Settle Propensity across Different Levels of Life Satisfaction

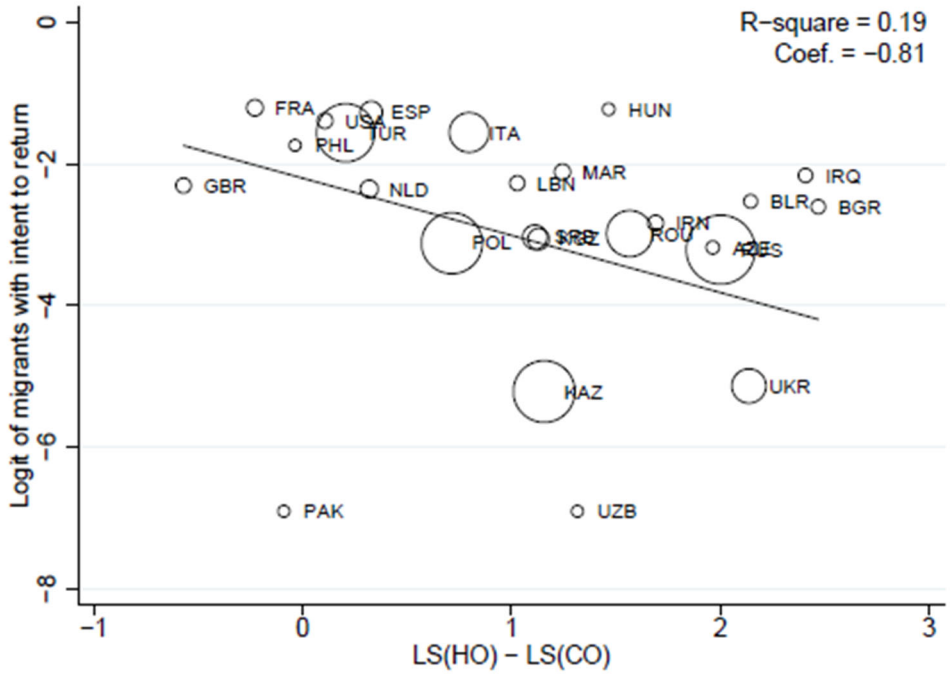
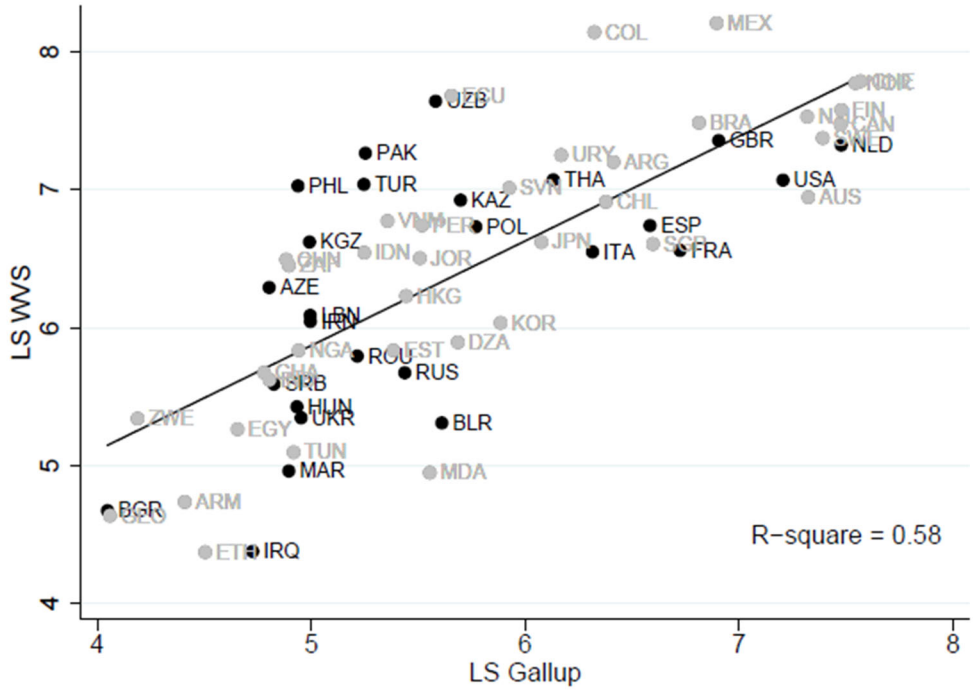
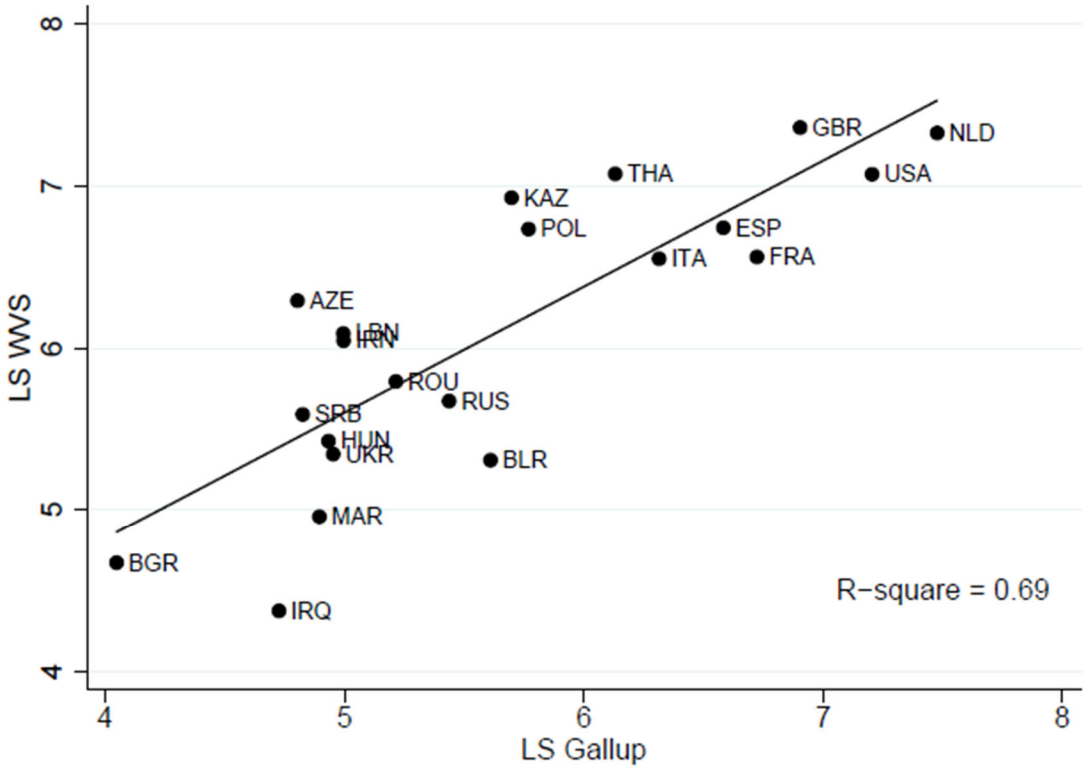


Figure V: Life Satisfaction in the Gallup World Poll and World Value Survey



Note: Countries denoted in gray are not included in the SOEP sample, and thus, the analysis. Countries denoted in black were included in the SOEP sample.

Figure VI: Life Satisfaction in the Gallup World Poll and World Value Survey without Pakistan, Uzbekistan, the Philippines, Kyrgyzstan, and Turkey

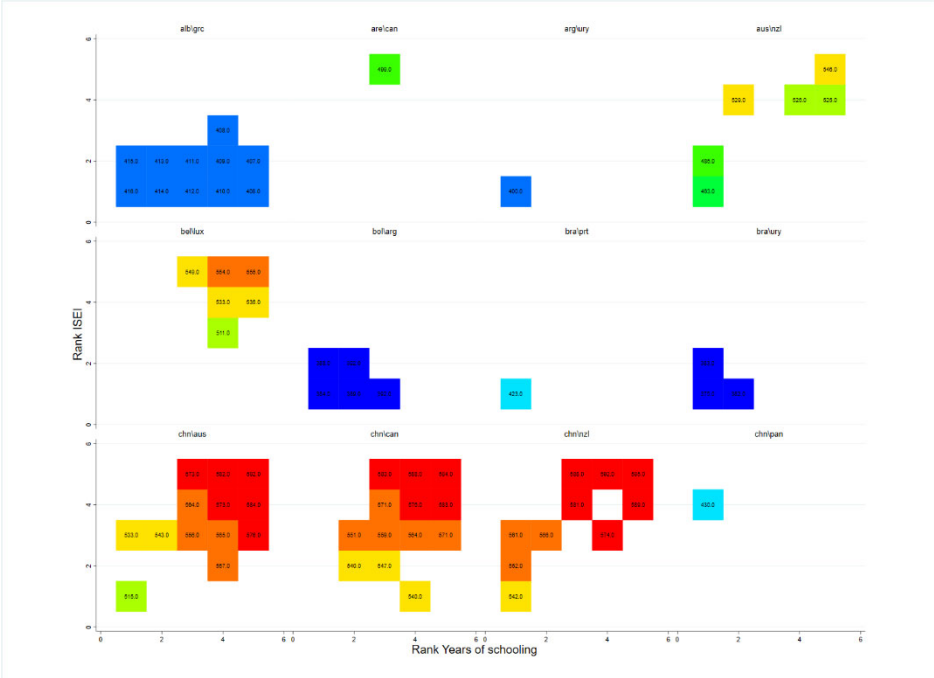


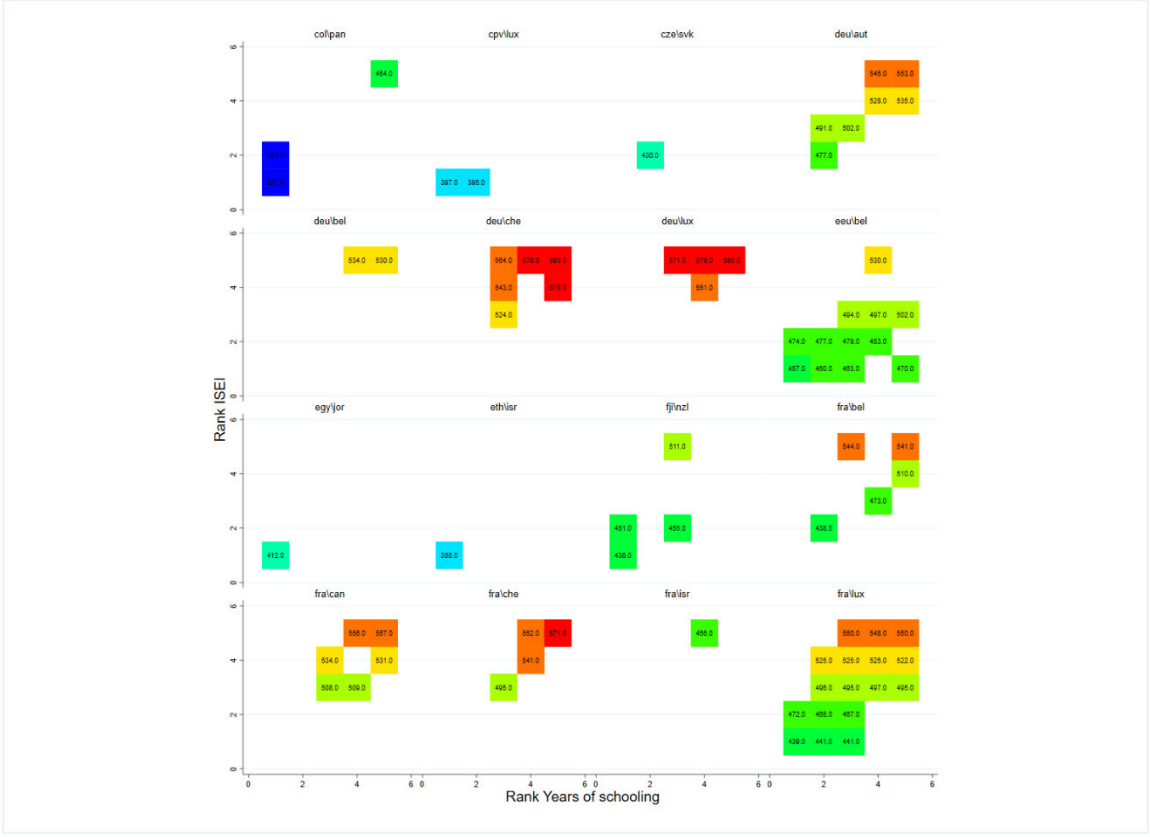
Study C: Analyzing the Reproduction of Inequality in PISA Outcomes among Migrants from Different Minority Groups

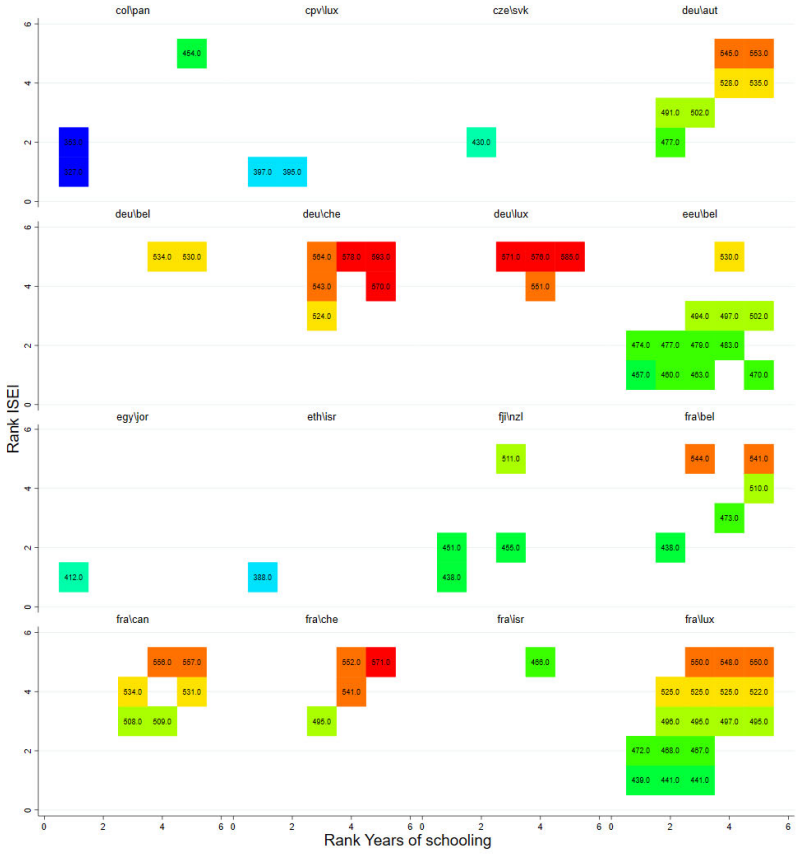
Table I: Top and Bottom Quintile of Minorities in Terms of Factor 1: SES

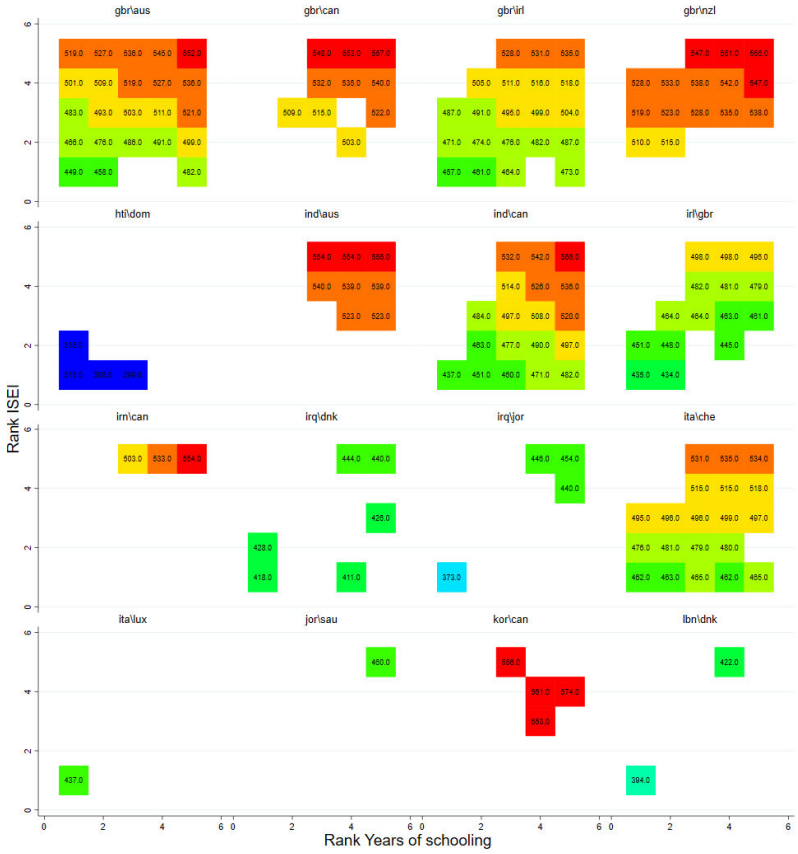
Origin-Host Country	Mean Factor 1: SES	Origin-Host Country	Mean Factor 1: SES	Origin-Host Country	Mean Factor 1: SES	Origin-Host Country	Mean Factor 1: SES
are/can	0.90	pak/can	0.35	ukr/lva	0.00	pak/dnk	-0.43
ind/aus	0.84	rus/blr	0.34	ssh.afk/bel	-0.05	tur/dnk	-0.43
usa/isr	0.76	ind/can	0.33	nzl/aus	-0.05	som/dnk	-0.43
chn/can	0.73	rus/ukr	0.32	rus/geo	-0.06	chn/pan	-0.45
kor/can	0.71	phl/nzl	0.32	idn/brn	-0.08	kaz/blr	-0.49
bel/lux	0.70	ita/aus	0.31	fji/nzl	-0.08	wsm/nzl	-0.50
zaf/nzl	0.68	gbr/irl	0.30	lbn/dnk	-0.12	n.afk/bel	-0.50
fra/can	0.67	irq/jor	0.27	afg/dnk	-0.12	eth/isr	-0.55
irn/can	0.66	rus/lva	0.25	cze/svk	-0.13	vnm/cze	-0.63
ven/pan	0.64	deu/aut	0.25	svk/cze	-0.13	arg/ury	-0.70
deu/lux	0.63	phl/can	0.25	rus/mda	-0.14	tur/che	-0.74
usa/can	0.62	rus/fin	0.20	irq/dnk	-0.15	bra/ury	-0.78
gbr/can	0.60	irl/gbr	0.19	ussr/grc	-0.18	syr/jor	-0.81
deu/che	0.59	phl/aus	0.18	bra/prt	-0.18	hti/dom	-0.82
fra/che	0.58	fra/bel	0.17	col/pan	-0.20	alb/grc	-0.89
swe/nor	0.54	deu/bel	0.15	esp/che	-0.22	bol/arg	-0.97
gbr/nzl	0.53	nld/bel	0.14	ukr/mda	-0.23	tur/bel	-0.98
fra/lux	0.51	syr/can	0.11	mys/brn	-0.28	cpv/lux	-1.02
fra/isr	0.51	est/fin	0.10	vnm/aus	-0.31	tur/aut	-1.04
swe/fin	0.51	ukr/blr	0.10	chl/arg	-0.32	nic/cri	-1.04
col/cri	0.49	ita/che	0.08	ury/arg	-0.34	pry/arg	-1.07
gbr/aus	0.45	ita/lux	0.07	eeu/bel	-0.34	tur/deu	-1.08
jor/sau	0.43	chn/nzl	0.07	ussr/deu	-0.35	prt/che	-1.13
phl/brn	0.42	aus/nzl	0.06	pol/deu	-0.37	prt/lux	-1.13
ussr/isr	0.42	syr/dnk	0.05	egy/jor	-0.39		
chn/aus	0.37	blr/lva	0.03	ukr/cze	-0.39		

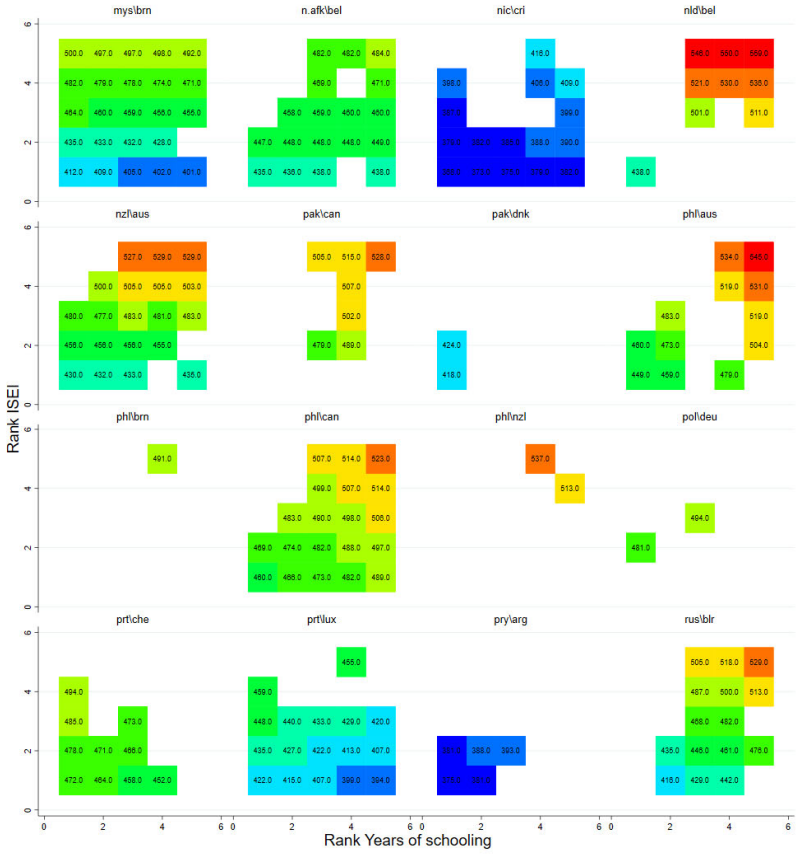
Figure VII: Heat Maps—Minority Populations

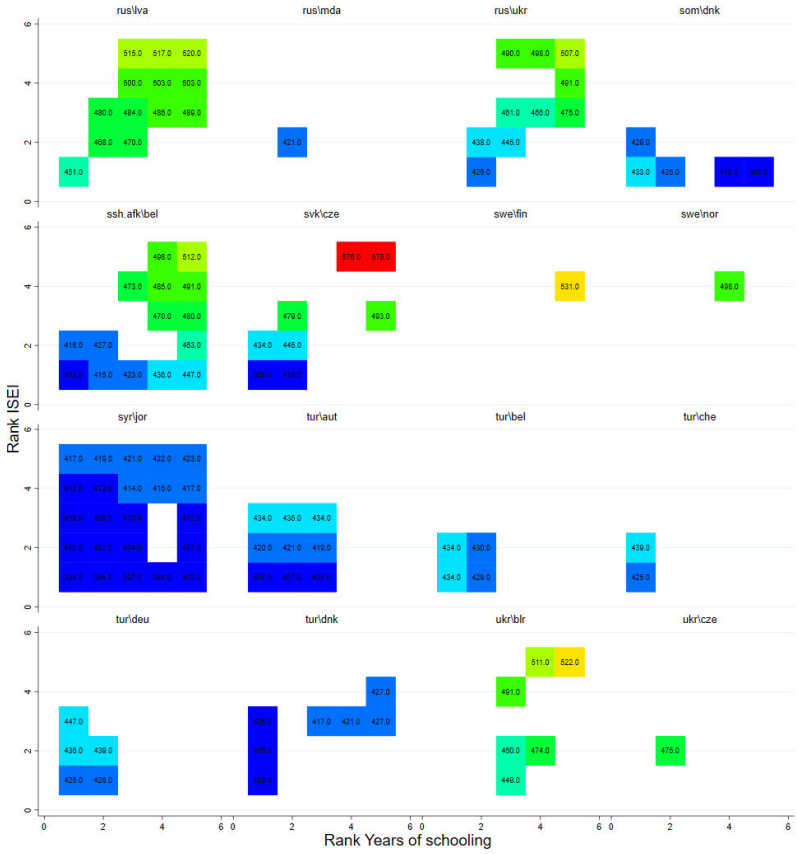



col\pan
cpv\lux
cze\svk
deu\aut
deu\bel
deu\che
deu\lux
eeu\bel
egy\jor
eth\isr
fji\nzl
fra\bel
fra\can
fra\che
fra\isr
fra\lux
Rank ISEI
Rank Years of schooling


col\pan
cpv\lux
cze\svk
deu\aut
deu\bel
deu\che
deu\lux
eeu\bel
egy\jor
eth\isr
fji\nzl
fra\bel
fra\can
fra\che
fra\isr
fra\lux
Rank ISEI
Rank Years of schooling


gbr\aus
gbr\can
gbr\irl
gbr\nzl
hti\dom
ind\aus
ind\can
irl\gbr
irn\can
irq\dnk
irq\jor
ita\che
ita\lux
jor\sau
kor\can
lbn\dnk
Rank ISEI
Rank Years of schooling


mys\brn
n.afk\bel
nic\cri
nld\bel
nzl\aus
pak\can
pak\dnk
phl\aus
phl\brn
phl\can
phl\nzl
pol\deu
prt\che
prt\lux
pry\arg
rus\blr
Rank ISEI
Rank Years of schooling


rus\lva
rus\mda
rus\ukr
som\dnk
ssh.afk\bel
svk\cze
swe\fin
swe\nor
syr\jor
tur\aut
tur\bel
tur\che
tur\deu
tur\dnk
ukr\blr
ukr\cze
Rank ISEI
Rank Years of schooling

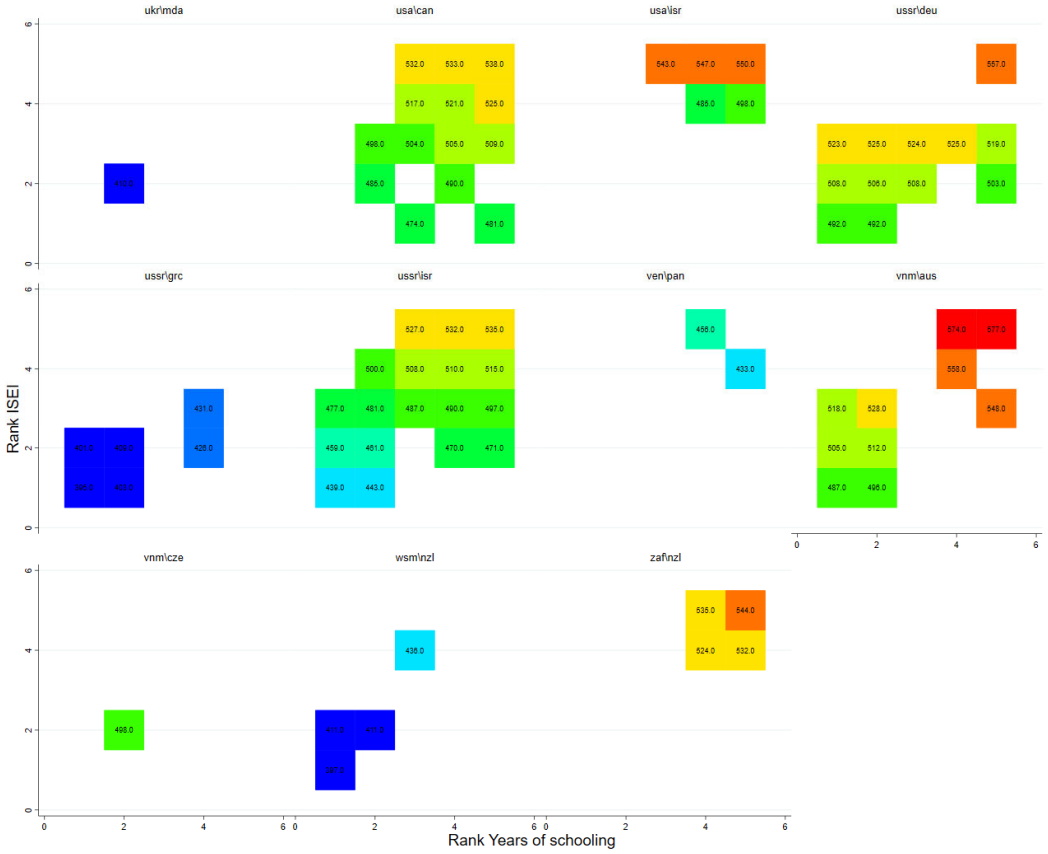
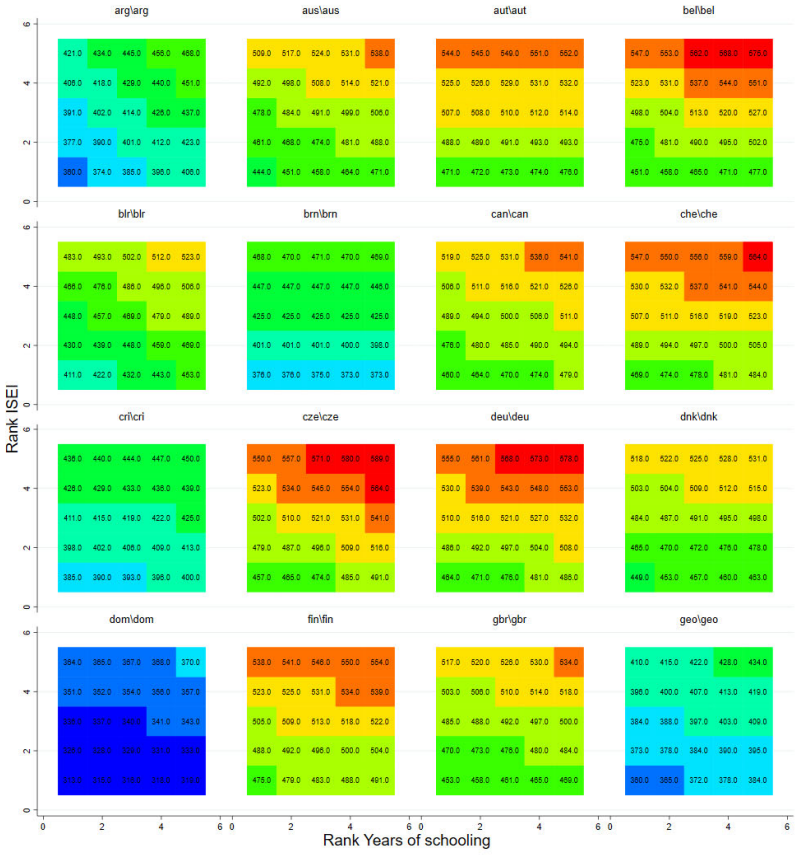
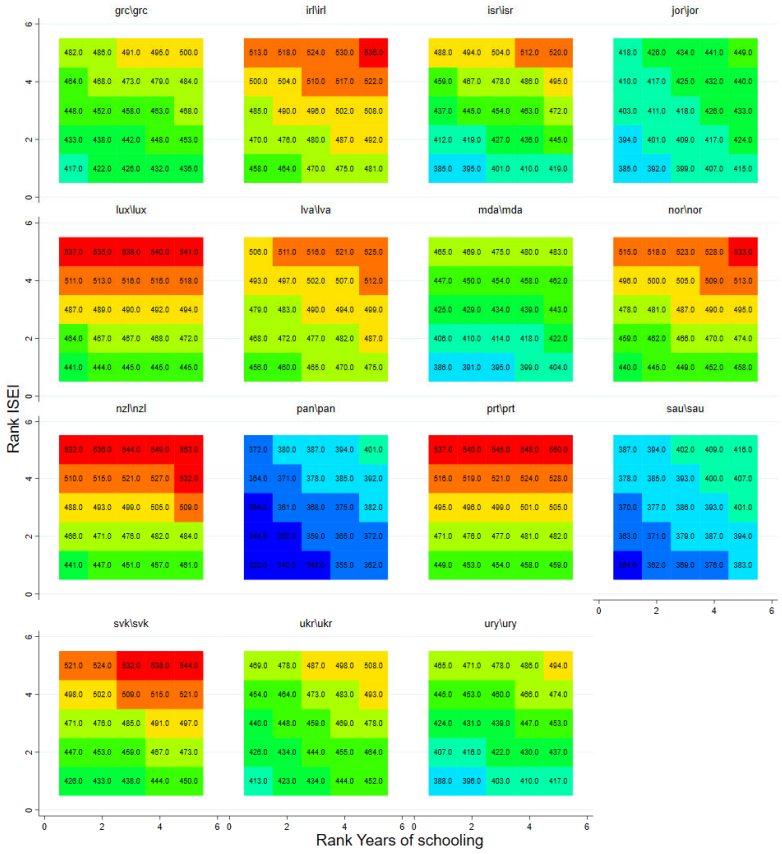

ukr\mda
usa\can
usa\isr
ussr\deu
ussr\grc
ussr\isr
ven\pan
vnm\aus
vnm\cze
wsm\nzl
zaf\nzl
Rank ISEI
Rank Years of schooling

Figure VIII: Heat Map—Local Population




grc\grc
irl\irl
isr\isr
jor\jor
lux\lux
lva\lva
mda\mda
nor\nor
nzl\nzl
pan\pan
prt\prt
sau\sau
svk\svk
ukr\ukr
ury\ury
Rank ISEI
Rank Years of schooling