

Magnus Fossumstuen Svendsen

Does Immigration Hurt Social Capital?

A quantitative study on the effects of Immigration on Social Capital in Europe

Master's thesis in Political Science

Supervisor: Anders Todal Jensen

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Norwegian University of Science and Technology
Faculty of Social and Educational Sciences
Department of Sociology and Political Science

Abstract

The results of studies based on the effects of immigration on social capital are inconsistent. Immigration has also been shown to have different effects on different aspects of social capital. To study the effects of immigration on social capital on a country-level basis in Europe, I chose three variables to represent social capital and conducted a multi-level logistical regression with data from the European Values Study - using the 4th and 5th waves. By interpreting the effects of immigration on interpersonal trust, organizational membership, and trustworthiness we could not conclude either a positive or negative effect. In comparing the two waves we also could not determine whether the effects of immigration had been positively or negatively strengthened over time. An attempt was also made to isolate the effects of relative deprivation as an omitted variable in the relationship between immigration and social capital, without significant results.

Sammendrag

Resultatene fra tidligere studier basert på effekten av immigrasjon på sosial kapital er inkonsistente. Immigrasjon har også vist seg å ha ulik effekt på forskjellige aspekter ved sosial kapital. For å studere effekten av immigrasjon på land-nivå i Europa valgte jeg tre avhengige variabler som en representasjon av sosial kapital og gjennomførte en logistisk flernivåanalyse med data fra European Values Surveys fjerde og femte bølge. Ved å tolke effektene av immigrasjon på mellommenneskelig tillit, organisasjonsmedlemskap og troverdighet kunne jeg verken konkludere en positiv eller negativ effekt. Ved å sammenligne de to bølgene kunne jeg heller ikke fastslå om effektene av immigrasjon hadde blitt positivt eller negativt forsterket over tid. Det ble også forsøkt å isolere effekten av relativ deprivasjon som en utelatt variabel i forholdet mellom immigrasjon og sosial kapital, uten signifikante resultater.

Preface

Etter to år i Trondheim står jeg igjen med flere positive minner enn én kan få plass til i en masteroppgave. NTNUs rolle i denne opplevelsen stiller overaskende sterkt, da også tatt i betraktning skrivingen av denne oppgaven. Jeg har lyst til å takke min veileder Anders Todal Jenssen som har fulgt meg igjennom denne prosessen, og for å ha tatt seg tid til å svare på hva enn jeg har lurt på de siste fem månedene. Jeg vil også takke Arild Blekesaune for litt praktisk hjelp i Stata. Takk – også til alle som har utfyllt hverdagen min her i Trondheim, da spesielt Ingvild og hennes uendelige tålmodighet. Tusen takk.

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1. Introduction

The perpetual discussion of the impact immigration can have on a country's social and economic well-being has only intensified in recent years and is unlikely to experience a marked decline in the foreseeable future. The complexity of evaluating these consequences is in large part a result of these changes growing in scale very recently. The surge of migrants seeking refuge and protection in Europe in the period between 2011 and 2015 has been described as the second-largest movement of people since the end of World War II (Minteh, 2016). Most prominent among these migrants are displaced citizens from the various conflicts in Syria, Libya, and Iraq. This has caused a majority of European countries to consist of a more heterogeneous population with the social consequences of this thereafter. This phenomenon has had both positive and negative consequences, many of which we still do not have a clear consensus on how to measure today. Some of these consequences affect aspects of what we want to capture as "social capital", which should include a composition of several variables constituting the term. The term generally wants to encapsulate the advantages of social networks combined with different aspects of the term functioning as an overall value. Most famous for research on social capital is Robert Putnam, who defines the term as "a composition of the general trust in others within a society, the amount of participation potential and civic orientation (Putnam, 2000). This is not the only definition of social capital, but the one we'll prioritize in this thesis, a discussion where another layer of complexity adds to this field of research. Different studies attempting to measure the effects of immigration on social capital have inconsistent results and often use different variables to measure social capital. Therefore, using the concept as a measurement of the consequences of immigration is prone to controversy, something we'll cover in more detail in our theory chapter, discussing the critiques of Putnam and the reasoning behind the methodology for this thesis.

These problems dilute the field of research with conflicting results and make room for speculation based on a range of theoretical explanations. This is especially exemplified in Dinesen, Sønderskov & Schaeffer's metanalysis from 2020, giving an overview of how conflicting the results of these studies have been, particularly surrounding the effects on general trust. Simultaneously as the effects of immigration have been a major discussion topic in national elections for the majority of European countries for the last 15 years. Institutional policies, social and cultural differences, the socio-economic composition of the population, and a large range of in-country variables all play a part in the effects of immigration. The list of possible omitted variables to the relationship between social capital and immigration is long. However, for this thesis, we want to explore the effects of one of these possible omitted variables, relative deprivation. Relative deprivation is a state of mind where individuals, preferably experiencing economic hardship or belonging to a lower social class, compare themselves to other individuals or groups in a better socioeconomic state. Economic hardship can feed into a population's view on immigration where they "lash out" at minorities, in particular, those minorities the group feels are competing for the same resources or are perceived to be the very cause of their relative deprivation (Dollard, 1938; Riek, Mania, & Gaertner 2006; Walker & Smith, 2002). In short, we believe this phenomenon can negatively influence the effects immigration has on social capital. We also want to test whether this effect is present in Eastern Europe, as we know there exists a higher level of income inequality in this region. This is interesting to explore as we know Eastern Europe has a distinctly different approach to immigration compared to Western European countries.

The thesis improves the understanding of the effects of immigration on social capital by answering this research question:

"Does immigration hurt social capital on a country-level basis in Europe?"

By comparing the 2008 and 2017 waves of the European Values Study (EVS) we want to explore the (1) effects of immigration on social capital, (2) to which extent this effect has changed in this period of time, and (3) whether we can isolate the effects of relative deprivation as the difference in effect immigration has on social capital in Europe, causing a more negative correlation in Eastern Europe. We'll perform a multi-level logistical analysis using our data from the EVS, and while the primary focus of this thesis is macro-comparative, we still want to include a series of individual-level control variables that we know can have an impact on our dependent variables constituting social capital.

The findings of our analysis indicate that there is a correlation between a greater composition of immigrants and social capital. Whether the effect is positive or negative varies among the different aspects of social capital, however, we see three main tendencies in this relationship. Firstly, the effects of immigration are almost exclusively positive in the cases where significance was found. The only case where a significant negative effect was traced was in our trustworthiness variable, but we hypothesize that this is a result of the variables included in this model and not a trustworthy independent result to interpret. Secondly, in all our dependent variables the effects of immigration were diminished by the presence of a control variable for GDP per capita. This means that a large portion of the effect claimed by immigration can be better explained by GDP per capita, something that might have contributed to the large variety of results in similar studies. We also hypothesize that GDP per capita works as an intermediate variable between immigration and social capital, where the effect of immigration works both directly and indirectly through GDP per capita – causing even more difficulty in isolating the effects of immigration independently with the inclusion of a GDP variable. Finally, the effects in all significant cases were stronger in our 2017 wave. Despite this, testing done to evaluate the significance of these changes in effect showed that the effects had not been positively *strengthened* over time. These results indicate that whereas there are problems tracing the effects higher levels of immigration have on social capital, there is a positive correlation in most aspects, but we could not trace a significant change in effect over time in all aspects. Lastly, we could not find sufficient evidence that relative deprivation explains the difference in effect immigration has on social capital in Eastern Europe, compared to Western Europe.

The thesis will begin with a review of the relevant theory. Where we define social capital and go into detail on its methodological discussions. We also lay the foundation for our choice of this thesis' method by assessing the critique of Putnam's work and other studies in this field. We also discuss the relevance of contact- and conflict theory and relative deprivation to the relationship between immigration and social capital. We then review earlier research on this relationship and emphasize Dinesen, Sønderskov & Schaeffer's metanalysis from 2020. We also present the thesis' hypotheses based on the theoretical and empirical foundation. In Chapter 3 we review our choice of method and multilevel logistical regression. This chapter also elaborates on the data and operationalizations that form the basis for our analysis. In Chapter 4 we analyze our regression models and the associated results which are discussed further in Chapter 5. Lastly, a conclusion is included in the last chapter of the thesis.

2. Theory

In this part of the thesis, I will account for the relevant literature, definition, and theories. Below I will define social capital starting with Robert Putnam's *Bowling Alone: The Collapse and Revival of American Community* from 2000, ensued by a broader outlook on the concept's development, academic discussion, and appliances in quantitative research. Then I will look at the relationship between social capital and immigration, both from a theoretical and methodological standpoint. Furthermore, I will explore conflict theory as a theoretical alternative to social capital and how it impacts the relationship between social capital and immigration. Finally, the same process will be done with relative deprivation theory and how it can help explain the difference in effect immigration has on social capital in Western and Eastern Europe.

2.1 Social capital

In the last decades, the concept of social capital has undergone a long development process and even though we today have a generalized idea of what the term entails. Different schools of thought like to emphasize different aspects of the term and their definition of it. Generally, we define social capital as the advantages of social networks combined with different aspects of the term functioning as an overall value. These aspects have their origins in different sectors of the state, the state itself, the state's redistribution of resources, like health, economic productivity, crime, and the level of education amongst young people (Knack & Keefer, 1997; Castiglione, 2008; Putnam, 2000). The term's popularity can in its modern sense and discussion be attributed to Robert Putnam and the release of his book *Bowling Alone: The Collapse and Revival of American Community* in 2000. He describes in the book the downfall of social capital in the US from the 1950s and how this negative trend is a product of us, the people, no longer striving for groups and institutions that promotes trust and cooperation in our communities. Putnam, in this context, defines social trust as a public good, the amount of participation potential in the population, civic orientation, and the general level of trust in others inside a community (Putnam, 2000). In his previous research, as in his book *The Prosperous Community*, he describes in more detail social capital as "traits in social organizations, like networks, norms, and trust that pave the way for action and cooperation for mutual gain (Putnam, 1993, p. 35). Putnam attributes social capital in its essence as the amount of trust available in a community and that the value of this characterizes the strength of the political culture in modern society. With this, a set function and value could be established that could be regarded as an overall property that could thus be compared across cities, regions, and countries.

Putnam also describes the different dimensions social capital has and how they can be used differently, with the most important distinction being between bridging and bonding social capital (Putnam, 1993, p. 23). Social capital in its bridging dimension, its inclusive form, is outward-looking and aims to bring people together from different social classes, cultures, and ethnicities. The civil rights movement in the US is a good example of this, as well as other social movements in various fields like environment, economy, and politics, and social schemes for young people like both political groups and leisure activities. As for the binding dimension we have more exclusive networks that preserve the homogenous identity and groups. These can be organizations that identify with an ethnic fraternity or clubs that in practice only are available to certain social classes, like country clubs in the US. Putnam argues that inclusive networks are mostly of use when you aim to mobilize solidarity in times of emergency as in a pressing period like a war or a pandemic, while the

exclusive networks are more useful for information spreading when you want to get ahead of the status quo (Putnam, 1993, p. 23). It is also worth noting that this distinction between an inclusive and exclusive network can be diminished and, in many cases, the categories coincide. A network can thus both be inclusive and exclusive at the same time, for example, a mainly black church can seem exclusive in the context of race and the religious aspect, while it can also be bridge-building between people from different economic or social classes from within that community. In his research, Putnam starts gathering large amounts of data in a meta-analysis from different sources to encapsulate how the value of social capital has changed over time in the US. This brings him to the dominant theme in his book about how in the first two-thirds of the twentieth century there was a powerful wave of broader public engagement for the community before it slowed down a couple of decades ago before the tidal wave turned and the American public was caught by a reverse effect (Putnam, 1993, p. 27). The period in question showed a great growth for social capital in the US until the 1970s before it suddenly fell. He measured this through seven different indicators for social capital: political engagement, civic engagement, religious engagement, casual networks, workplace networks, mutual trust between people, and altruism. These findings seemed unsettling to Putnam who argued that a society cannot be without a high value of social capital because it has many functions that help people translate ambitions into reality (Putnam, 1993, p. 288). It's also worth noting that Putnam himself did find exceptions to this rule. In the book *Making a Democracy* from 1993, he pointed to Southern Italy as an example of a society that could hold a stable political culture despite low levels of social capital.

He places a particular emphasis on five of these functions. Firstly, social capital makes collective problems easier to solve as there is often less resistance between the political parties and institutions. This leads to improved social environments, such as safer and more productive neighborhoods. Secondly, it facilitates business transactions since there is less of a need to cancel contracts and connections when there is a higher value of general trust in the community. As a result of this Putnam argues that less time and money is spent on restructuring and that this thereby increases economic prosperity in the community on a large scale (Putnam, 1993, p. 289). Thirdly, social capital increases society's awareness of our mutual commonalities, across cultural, ethnic, or economic divides. This can improve the quality of social and democratic institutions. Fourthly, a higher value of social capital helps to increase and accelerate the flow of information, leading to a higher quality of education and economic production. Lastly, Putnam argues that higher social capital also improves human happiness and health through both psychological and biological processes based on human contact (Putnam, 1993, p. 289). Although Putnam admits to having a nostalgic view of the American period between 1870-1915, he acknowledges that the politics and reforms of the past are not appropriate for our age, but that the pragmatic and enthusiastic idealism from this period should inspire us (Putnam, 1993, p. 401). Therefore, he puts forward several points for how we can improve social capital in the modern era. He places particular emphasis on educational reforms and leisure activities, more family-oriented workplaces, that technology should improve and not replace human contact, and, finally, the strong need for reforms in political campaigns and decentralization of power in society (Putnam, 1993, p. 405).

Social capital as a concept has from Putnam's earlier works been redefined and pulled in different directions over the last 20 years, and there's still no clear consensus on a single combination of variables and how these should be emphasized in the overall value of what the concept should embrace. Dario Castiglione describes it in *The Handbook of Social Capital* (2008, p. 558) as that on one end most emphasis is placed on "thin" structural

data focused on networks (see Lin, 2001 and Bourdieu, 1986) while it's on the other end dominated by "thicker" moral notions of social trust and cohesion (see Uslander, 2002). Therefore, there is a discussion about how central the concept of trust is to social capital and empirical studies are unclear as to whether there is a relationship between trust and involvement in society or whether the two might even be independent of each other. Here Putnam would agree with there being a relationship between them (Putnam, 2000), while for example, Uslander would argue for independence between the two phenomena (Uslander, 2008). We can also differentiate between the *benefits* and *those who receive benefits* by living in a community with a high level of social capital. Efficient trading across all sectors or contacts and suppliers for personal benefit can be emphasized differently with the benefits. At the same time, the recipients of the benefits can be defined as society itself and us as individuals. By this logic, you could make a distinction between different schools of thought where, among others, Derik Gelderblom refers to the cooperation school and the competition school within the doctrine of social capital (Gelderblom, 2018). These overarching discussions about social capital and its origins will, however interesting, not be assessed further in this thesis and we'll now look at the relationship between social capital and immigration.

2.2 Immigration and social capital

Continuing on our base following social capital development as a concept, we will again look to Robert Putnam and how he linked social capital to the consequences of immigration. In 2007 he released *E Pluribus Unum: Diversity and Community in the Twenty-first Century*, a paper both addressing the criticisms he had gotten for his previous work with social capital and developing a theory surrounding the concept's relationship with immigration. He argued that immigration challenges social solidarity and hampers social capital at least in the short and medium run. He conducted a study using a large, nationally representative sample of nearly 30,000 Americans which showed that people who lived in neighborhoods with higher diversity reported lower levels of trust in their neighborhoods (Putnam, 2007, p. 137). Putnam also referred to his previous research on the inclusive and exclusive dimensions of social capital and argued that diversity in society puts a damper on social capital in both categories. There were reports of less interest in voting, volunteering, and giving to charity. It was also shown that in neighborhoods with higher diversity there was a tendency to "hunker down", that trust (also between people with the same ethnicity) was lower, there was less community cooperation, and circles of friends were narrower (Putnam, 2007). He argued that people become more socially introverted due to ethnic diversity. These finds were alarming to both the mass public and the scientific community, and it didn't help that similar results were also found in Europe (Dinesen & Sønderskov, 2012; Laurence and Bentley, 2015). Thus, a base of research pointed to a relationship between greater diversity and negative behavior in neighborhoods, which thus threatened the positive development of multicultural societies around the world. This seemed disturbing to many as racial diversity in the United States only continues to grow with each passing year. Positivity and hopefulness around the growing diversity worldwide have been a matter of struggle for the majority of the world's political actors in recent decades. Thus, the fact that the reluctance to continue this development now could be rooted in political science research could have serious consequences. Putnam, on the other hand, also argues that the findings of the research point to the urge to form new "shared identities" that respect ethnic and cultural differences, but many have also cited his research in an attempt to justify stricter immigration policies (Jonas, 2007 - an example of this usage). It should be noted, however, that Putnam added immigration as an explanatory variable to why the value of social capital can be inhibited, and that

immigration, according to Putnam himself, is not the main reason for this decline in the United States and the rest of the world. Putnam should neither be held responsible for others misrepresenting his data, creating an argument supporting their narrative. The critique of Putnam's *E Pluribus Unum* and the methodological disagreement in the area in which stems from his research is integral to how we look at the relationship between social capital and immigration today which is why it is thoroughly explained in this thesis.

Putnam received criticism for his methodological approach, both with the release of *Bowling Alone* and *E Pluribus Unum*. The main problem with the former can be credited to the composition of factors that represent social capital and the subjective perception of what social capital as a concept is meant to encapsulate in the first place. An American social scientist, Steven Durlauf argues that Putnam carried out a drastic simplification of complex and interdependent processes transformed into either a simple factor or a small set of factors (Durlauf, 2001, p. 235). He particularly singles out the individual variables such as *trust*, which Putnam identified as one of the most crucial elements of social capital. The very design and composition of the various factors that should be able to represent social capital as a dependent variable is, therefore, something we have to consider in this thesis. Fortunately, several multilevel analyzes have been done to do just that, which to a large extent will also inspire my application of the term in this thesis. However, social capital is not the only concept we need to define, we must also explore the implications of immigration and the relationship between these two concepts. There are several methodological and ethical prerequisites for being able to work with these variables together, and the debate in the wake of Putnam's *E Pluribus Unum* is a prime example of that. The publication received some notoriety it rapidly became apparent that Mr. Durlauf wasn't the only one having an issue with his methodological approach.

Casey Dawkins argues that a recurrence of Putnam's misinterpretations is his inability to distinguish between the effects of ethnic diversity at the societal level and the segregation of neighborhood-level residents in the United States. Ethnic diversity is usually defined in the scientific literature as a simple unit of analysis, as a metropolitan area or at a national level. Neighborhood segregation, on the other hand, is most often used in connection with the relationship between the composition of ethnic diversity divided into smaller analysis units, such as neighborhoods or census tracts, about the level of ethnic diversity observed on a larger scale (Dawkins, 2008, p. 211). Dawkins uses Atlanta as an example where there are often many different ethnic groups in the larger urban area, while neighborhoods mostly consist of residents from a single ethnic group. He argues that although the inhabitants have the opportunity to get in touch with a diverse population at the metropolitan level, each person's everyday life is largely shaped by contact with members of a single group. There is therefore reason to believe that the diversity observed in the metropolitan area versus the neighborhood can affect social trust in different ways (Dawkins, 2008, p. 211). If social interactions are limited to the limits of each individual's neighborhood, the larger surrounding metropolitan area may provide a poor measure of the level of diversity relevant to social interactions. This may at least show that Putnam's measures of ethnic homogeneity have significant measurement errors.

In 2015, sociologists Maria Abascal and Delia Baldassari presented a paper to refute Putnam's findings, claiming that he had made several mistakes in his approach. They argued that in terms of mistrust and diversity, Putnam had overlooked that the predominance of mistrust found in the study had roots in the white population who felt uncomfortable living in neighborhoods with higher racial diversity. They claimed that there was a case of an omitted variable that affected mistrust, namely prejudice (Abascal &

Baldassari, 2015). Thus, they had a solid argument that could refute Putnam's conclusion that racial diversity automatically led to less altruism and cooperation between neighbors. Namely, if there was an automatic disadvantage with diversity then it had less to do with the behavior of ethnic minorities and rather the feelings of the white population who lived in the neighborhoods with them. Abascal & Baldassari's conclusion that prejudice exists as an omitted variable in the context of the relationship between social capital and immigration is key here. We will dig deeper into this angle as we'll later look at the effects of relative deprivation, where we'll be comparing Western and Eastern Europe as a case for our quantitative research.

These criticisms on both method and choice of data are aspects we have to consider in this thesis. There is also a large list of other problems when you're working with social capital and immigration that we can't cover in this paper. One of the biggest one's being that trust, independent of the level of immigrants in a country, is more prevalent amongst people who are similar to each other physically and is, therefore, more prevalent in homogenous societies (Cook, 2005). There is also no doubt that neighborhoods tend to segregate race, both due to economic availability and self-motivation. The relationship between these two is of great consequence for researching social capital. There are, both from an economic and methodological point of view, not enough datasets at the neighborhood level that are based on ethnic differences designed for this type of research (Kesler & Bloemraad, 2010). There are also datasets like this available in Europe, but not of a nature that can be used in research with social capital both methodologically and ethically in larger research projects without risking major measurement errors. This is somewhat due to greater information sensitivity in Europe, where we see a rising number of countries being more cautious about posting data based on ethnicities. Therefore, we'll rather be using a dataset at the national level, the European Values Study, an approach most of the current research in the field also utilizes.

2.3 Conflict theory vs. Contact theory

There is plenty of scientific research, also other than Putnam, that suggests that social capital and trust tend to decline as ethnic diversity increases (see Alesina & La Ferrara, 2000; Costa & Kahn, 2003). As Putnam himself put it: "the more ethnically diverse the people we live around are, the less we trust" (Putnam, 2007). People are also less inclined to join civic groups or volunteer, reducing their chances of actually interacting with their increasingly diverse neighbors (Stolle, Soroka, & Johnston, 2008). They "hunker down—that is, to pull in like a turtle" (Putnam, 2007, p. 149). These symptoms echo the claims of conflict theory, where it is predicted that, due to several possible factors, such as conflict over limited resources, members of the majority group feel threatened by the "outsiders", which leads to mistrust and intolerance towards these outsiders and solidarity with one's group (Sumner, 1906). The coexistence with the outsiders causes cooperation in the communities to wane, being replaced by the perceived threat, and interactions between the ethnic groups become fewer (Oliver & Wong, 2003; Ports, 1998). This can cause a mobilization for group conflict, whereas the difference between the ethnic groups escalates and there is a development of hostile attitudes and stereotypes. On the other side, we have contact theory, which contradicts conflict theory claiming that an increasing amount of individual contact between members from the different groups diminishes these symptoms. Stereotypes are dispelled, prejudices reduced, and the possibility of group conflict more unlikely (Allport, 1954). This theory, although it gained some traction in the early 2000s, was outnumbered by empirical studies tending to rather support conflict theory (Putnam, 2007, p. 142). The theory is still relevant today, but more recent studies

have also shown that there are still several challenges and implications for contact theory that contemporary researchers have yet to contend with. Some argue that as a prerequisite for contact theory to work, there must be a certain level of social capital already in place, resulting in contact between individuals with the same status, equal placement in hierarchies, and collaboration on common tasks (Zuma, 2014). Conflict theory, however, seems to tap into more of an instinctive response within us, making it harder to refute. It asserts that interactions in neighborhoods with a growing ethnical diversity can cause feelings of threat, provoking "increased negative orientations towards those who are different" (Oliver & Wong, 2003; Stolle & Harell, 2013, p. 43). This "threat dynamic" is what undermines the average person's ability to trust (Alesina & La Ferrara, 2000). Looking back to the bridging element of social capital, one would think that increasing diversity at the community level would have great potential for producing a bridging effect on social capital, but it has in the empirical studies been negatively associated with generalized trust time and time again (Costa & Kahn, 2003; Stolle et al., 2008; Alesina & La Ferrara, 2000).

There is, however, a key component missing from this discussion. The time perspective. With a new flow of immigrants or a stream of immigration caused by a conflict or event, there will always be uncertainty at first, hurting the indicators by which social capital is measured. Social capital is a measurement of a population's social potential, productivity, and wellbeing, big changes in one's social environment are a given impediment to this, but mainly in the short run. As Putnam stated himself, this effect is mainly measured in a short and medium time frame (Putnam, 2007, p. 137). The question of whether immigration hurts social capital is more interesting using different phrasing, such as: What can we learn from the developing effects immigration has on social capital over time? This is exactly what we'll be exploring in this thesis, using the European Values Study waves of 2008 and 2017 in Europe to conduct a multi-level analysis. Another component of this puzzle is the cultural differences that are being found in empirical studies showing to have a big impact on whether there are still grounds for conflict theory to prevail in the long run. In Canada for instance, Brandon Bouchillon argues that contact theory describes the relationship between diversity and trust for young people perfectly, while in the United States, conflict theory is still the dominant tendency. Bouchillon argues that this indicates that the melting pot has soured in the United States, which is fair to say is likely a result of the political and racial issues still prevailing in the country (Bouchillon, 2013). The overall assessment of the situation in the United States is that immigration has a more negative effect on social capital in this region, something we'll touch upon more later (Dinesen, Sønderskov & Schaeffer, 2020). These divides in whether conflict or contact theory is the predominant theme is something we'll also like to explore in Europe, which we'll now be taking a closer look at by delving into the theory of relative deprivation.

2.4 Relative deprivation theory: Western and Eastern Europe

The concept of relative deprivation (RD) "postulates a subjective state that shapes emotions, cognitions, and behavior, which links the individual with the interpersonal and intergroup levels of analysis" (Pettigrew, et al., 2008). This describes a state where individuals, who are experiencing economic hardship or belonging to a lower social class, compare themselves to other individuals or groups in a better socioeconomic state. The lower group has a perception that it is deprived in comparison to the standard of their community or compared to a relevant outgroup (Guimond & Dambrun, 2002). This state of relative deprivation is also relevant to a population's attitudes towards immigration. Economic hardship feeding into a population's view on immigration is well-founded in the

academic literature¹. We see a tendency where a group confronted with economic hardship “lash out” at minorities, in particular, those minorities the group feels are competing for the same resources or are perceived to be the very cause of the relative deprivation (Dollard, 1938; Riek, Mania, & Gaertner 2006; Walker & Smith, 2002). Some of these mechanisms should be reminiscent of conflict theory, relative deprivation theory being considered an enlargement of the already established workings of conflict theory. The case of relative deprivation is well documented both in Europe (McLaren, 2003) and North America (Esses et.al. 2001). Economic downturns have also long been associated with an increased level of voting for anti-immigration parties and a rise in negative attitudes towards immigrants in general (Kitschelt, 1995). This points to a worldwide trend where an ingroup, under the distress of economic hardship, is prone to develop (or exercise underlying values) more negative attitudes towards immigrants. In the context of our thesis, we’re interested in how relative deprivation could influence the relationship between immigration and social capital in Europe. The effect of relative deprivation has also been isolated from other social factors and has shown a negative impact on social capital (Sakketa, 2018). Additionally, we want to explore the suspected different levels of relative deprivation in Western and Eastern Europe that impact this relationship.

There is without a doubt a distinction to be made between Western and Eastern European countries in the case of most political, cultural, and social aspects. Most relevant to our case the Eastern Europeans have shown a tendency to have less accepting attitudes toward minorities and social issues in addition to a stronger attraction to anti-immigrant parties (Menchini & Redmond, 2009). Looking at it historically and geopolitically the region has been a battlefield between greater powers for large periods of the modern era, missing out on the stable economic and cultural growth we have seen in Western European countries. Therefore, the consequences of colonialism may help explain their extreme concerns about protecting themselves from immigration. Following the occupation by the Soviet Union in the 1900s several other factors could also be aiding the production of relative deprivation. Until the fall of the Berlin Wall and the end of the Soviet Union, most of the Eastern European countries were sealed off from immigration. As the countries were liberated from the Soviet Union in the 1990s there was an influx of problems relating to nation-building, like distribution of power, sharp jumps in wealth, and the extreme poverty seen in the rural areas (Menchini & Redmond, 2009). This caused large differences in the population, creating distinctive social and economic classes.

There is a lot to be said surrounding how the negative attitudes towards immigrants and support for anti-immigrant parties flourish in this region, where this thesis only will be covering some of them. Taking Poland, Hungary, and the Czech Republic as examples, countries where foreigners respectively made up 5, 1.6, and 5.5 percent of the population in 2018, still seem extraordinarily motivated on keeping a strict policy on immigration (EACEA (a)-(c), 2018). This was especially exemplified during the 2015 European refugee crisis, where all three countries later were accused of breaking EU laws by refusing to host migrants (Reuters, 2019). Breaking this trend, however, was the Eastern European countries’ reaction to the refugees from the Russian invasion of Ukraine in early 2022. Poland, Hungary, and the Czech Republic took in over 4 million refugees in total during the crisis (as of 20/05/2022) (UN, 2022). However, one could argue that this sudden change of course for the right-leaning government’s immigration policies is more of a temporary

¹ There is some discussion about the impacts of symbolic racism in the context of this relationship, where individuals also can symbolically oppose immigration despite not suffering from any economic hardship (McConahay & Hough Jr., 1976).

relief rather than an onward trend. These actions are polar opposite to earlier stances on immigration, where a difference in cultural and social affinity with the Muslim countries of the 2015 European migrant crisis most certainly plays a part. These differences in political stances on immigration between Western and Eastern Europe showcase values that could be influenced by the existence of relative deprivation in Eastern Europe. The various factors impacting the difference in effect immigration has on social capital in Western contra Eastern Europe are several, and to carve out the effect of relative deprivation from the interconnected factors at work in Eastern Europe is therefore clearly not an easy task. Therefore, the choice of variables used to calculate this effect is paramount, something we will take a closer look at in the next chapter covering methods.

2.5 Previous research and hypotheses

Thus, we have tried to gather the most relevant literature belonging to the chosen theoretical perspectives and it is now time to account for the similar research that has already been done in this field. So far, this thesis has defined social capital, what the concept entails and how it can be assembled and applied. We have also explored the relationship between social capital and immigration, the various methodological mistakes that already have been done in previous research, and how we can avoid them. Furthermore, we have looked into conflict theory and contact theory to assess how these concepts work on their own and about social capital. In addition, we have accounted for relative deprivation and explored how it can have a powerful impact on the relationship between social capital and immigration in the context of our thesis. There has been a long string of studies done on immigration's effects on social capital (Kesler & Bloemraad, 2010; Dinesen et. al. 2020; Fieldhouse & Cutts, 2010; Vermeulen & Berger, 2008). While many of these assess the effects of immigration on social capital in a year-specific manner, Kesler & Bloemraad (2010) is the study that most resembles mine with more of a focus on the time perspective and will also be further assessed in the method chapter of this thesis.

Much of the previous research on the relationship between social capital and diversity came from the United States. Putnam, along with other researchers in this field, received much criticism for the universality of the research and the claimed obviousness of the existence of these mechanisms in other continents. There are several obvious reasons why one for example couldn't translate the effects of immigration on social capital in the United States to Europe. Some are the United States' rather unique history of immigration and diversity and compared to the United Kingdom, or most countries in Europe, the sheer differences in both the size of different ethnic minorities and the different levels of inequality (Fieldhouse & Cutts, 2010, p 4). Most Western European countries tend to have more comprehensive welfare states, while in the United States there is a greater emphasis on civil protection and liberties (Fieldhouse & Cutts, 2010). One can also differentiate between the American assimilation model for integration and the European evolving model for multiculturalism (especially in rhetoric). Therefore, one could argue that the negative effects of immigration on social capital in the United States may just reflect American policy and thus cannot be generalized to countries in Europe. However, fully justifying this line of argument using empirical data is more difficult.

There are differences in the recent research on social capital and diversity in Europe contra the United States, but there are also many contradictions. In 2010, Hooghe & Stolle found no significant correlation between immigration at the country level, diversity, and general trust in fellow countrymen in Europe. Kesler and Bloemraad (2010) also couldn't find a correlation between ethnic diversity and general trust. Only when using data at the country

level, where the connection depends on different countries' institutional arrangements. In the same period, however, it was reported by the British Home Office that general trust was lower in neighborhoods and cities in England with greater ethnic diversity (Pennant, 2005). Dinesen and Sønderskov (2015) also found similar findings in neighborhoods with higher ethnic diversity where it also turned out to hurt trust, a study that also used survey data in a country focused on the neighborhood level. On this note, Natalia Letki argues that the reason you can find a negative correlation between immigration and social capital, or generalized trust, in Europe has a background in socio-economic differences being of greater importance for a democratic community and interpersonal trust, than race-based heterogeneity (2008). She concluded in her research that "when the connection between ethnic diversity and economic deprivation is explained, there is no evidence of the erosive effect of ethnic diversity on interactions in local communities and trust" (2008, p. 120). In 2020 Dinesen, Schaeffer & Sønderskov released a paper gathering literature on the relationship between ethnic diversity and social trust through a narrative review and a meta-analysis of 1,001 estimates from 87 studies. They found that as a baseline result, across all studies, there is "observed a statistically significant negative relationship between ethnic diversity and social trust of moderate size" (Dinesen, Schaeffer & Sønderskov, 2020, p. 457). However, they assess that the effect, on average across the meta-analysis, is modest at best and that the claims of diversity being a severe threat are exaggerated in contemporary societies. Despite this effect is modest, they also add that this effect remains negative and significant, even when controlling for potential confounders or mediators, like interethnic contact, individual minority background, contextual crime, or socioeconomic deprivation, the latter of which we also want to explore in this thesis (Dinesen, Schaeffer & Sønderskov, 2020, p. 461). Both non-income and social relative deprivation has been well documented to hurt social capital (Sakketa, 2018).

The key to solving these contradictions and mapping the difference in impact immigration can have on social capital, however, probably lies in exploring the time perspective. Kesler & Bloemraad conducted a multilevel analysis amongst 19 countries in 2010 to analyze whether immigration erodes social capital. They defined social capital with three indicators that were meant to include the different perspectives on social capital while the main emphasis still being relative to Putnam's core definition. The three indicators of social capital thus became: generalized trust, community involvement, and political participation outside constituencies. It is also based on this study we would like to do a similar analysis, using the newer waves of the European Values Study. Kesler & Bloemraad argued in 2010 that as multiculturalism is institutionalized in society, stability grows in ethnically segregated local communities and society adapts, the negative correlation between diversity and trust will become weaker. They add that a large root of confusion and difficulty with this type of research is that the concept of social capital is made up of aspects from different sectors of society and that the variables thus often have to be divided into several dependent variables in the research (2010, p 319). There are also studies pointing out that multiculturalism promotes collective mindedness amongst the immigrants themselves by providing them the instrumental support and symbolic legitimacy, which again would increase the overall "stocks" of social capital as immigrant populations grow (Vermeulen & Berger, 2008; Bloemraad, 2006). If these assumptions are right, we should, after expanding on Kesler & Bloemraad method in 2010, be able to see a more positive correlation between social capital and immigration using newer waves of data.

It would appear that immigration, in a still picture perspective, still could hurt social capital in Europe. Conflict theory supports this argument which claims that the majority of a host country would feel threatened by the immigrants, leading to mistrust and a drop in

cooperation and interactions in a community. Considering the time perspective, however, previous research has shown that the relationship between social capital and immigration has a more positive correlation over time, which would support the theory that Europe is still in an adjustment period where the levels of social capital eventually will rise after an influx of immigration. We also have reason to believe that the more pronounced existence of relative deprivation in Eastern Europe has an impact on the relationship between social capital and immigration, causing a more negative correlation compared to Western Europe. Based on the theory we have assessed, and the previous research in this field the thesis will therefore explore the following hypotheses:

1. There is a negative correlation between immigration and social capital in Europe, exemplifying that we still are experiencing the short-term negative effects of immigration
2. There is a progressively more positive correlation between social capital and immigration over time in Europe, showcasing a shift in effect to more positive long-term effects of immigration
3. Relative deprivation explains the difference in effect immigration has on social capital in Europe, causing a more negative correlation in Eastern Europe

3. Data and Method

Whereas the previous chapter focused on the theoretical background for the hypotheses that we have established, this chapter will focus on the methodological approach and data that is going to be used to test these hypotheses. In this analysis, a multi-level analysis with the 4th and 5th wave of EVS (European Values Study) will be used, conducting several logistic regression models with a sample of 39,419 individuals from 31 countries (EVS, 2017).

3.1 Multi-level logistical regression

To be able to analyze this connection between the level of immigration and social capital in Europe, regression analysis with both level 1 and level 2 variables will be conducted in STATA. The multilevel analysis differs in particular from an ordinary OLS regression where it is structured hierarchical and on two levels (Ringdal, 2013, p. 492). Level 1 represents the individual level which will be the typical data gathered by answers given by the participants in the surveys that EVS consists of. Here we have the values and attitudes of the different individuals and can apply these to find different mechanisms and correlations in the statistics. Level 2 consists of the data collected at the country level. These are variables with data collected from countries, forming variables that can represent a country's value of a specific number. These are variables like the ones used in this thesis: immigrant stock of each European country, the Gini index, the Democratic Index, and GDP. A typical problem for a multi-level analysis is where a problem or a theory deals with a relationship between different variables that are measured at different hierarchical levels. The multi-level analysis makes it possible to analyze the variance of a dependent variable using information from all levels in an analysis (Mehmetoglu & Jakobsen, 2017, p. 198). The inclusion of all other relevant variables on both levels also makes sure that the estimated effects of the level of immigration are correct. We can take the (1) hypothesis as an example, where we want to evaluate to which extent the stock level of immigrants at level 2 has an effect on social capital at level 1. We also get the most out of a multilevel analysis when we have a theoretical starting point for both levels to provide insight into the phenomenon (Ringdal, 2013, p. 174). We believe this may apply in our thesis, where social capital is influenced by conditions at both the individual- and country-level. The data from our independent variables like religiousness, voting, employment, and education, can thus be collected from the individual level, at the same time as we look at the effect of immigrant stock at the country level. These attributes at the individual level most definitely impact the level of social capital, but they also co-exist with the effects of immigration stock, socio-economic differences, and quality of governance.

We'll be conducting multi-level logistic regression models to investigate the effect of both individual- and macro-level factors on our dependent variables. In analyzes where the dependent variable is at the ordinal or nominal level and does not satisfy the assumption of a continuous dependent variable for linear regression, logistic regression is the most widely used alternative. In situations where the dependent variable only has two categories, preferably coded 0 and 1, the model is most commonly a binary logit model (Ringdal and Wiborg, 2017, p. 193). In logistical regression, the results we can interpret are different from the conventional OLS estimates. There are produced regression coefficients in an OLS regression, while we in a logistical regression are given both regression coefficients and log odds. To be more technical logistic regression estimates models use Maximum Likelihood Estimation (MLE), while linear regression usually uses Ordinary Least Squares (OLS) (Mehmetoglu and Jakobsen, 2017, p. 162). The log odds

value in these regression models suggests the chance that respondents with certain characteristics end up in category 1 or 0. We can transform these log odds into more interpretable odds ratios, which in turn gives us the probability of the outcome happening divided by the probability of the outcome not happening. We interpret the results as if the value is lower than 1, the variable has a reducing effect on the dependent variable. In return, if the value is higher than 1, it has a strengthening effect on the dependent variable. In the case of our variables, like interpersonal trust, if an independent variable has an odds ratio of 1.10, it indicates a 10% higher chance of causing a positive shift in interpersonal trust.

3.2 Data

The data sets and data used in this thesis are taken from the European Values Study (EVS), the World Bank, the United Nations (UN), the Luxembourg Income Study (LIS), and the Economist Intelligence Unit (EIU). EVS is an academically conducted multi-country survey that has been carried out since 1981 with an interval of approximately nine years. The data collected comes from Europe and aims to map values, behavior, preferences, opinions, and attitudes in the various countries in this region (EVS, 2022). Through EVS we have access to variables at the individual level that can be used to examine socio-economic characteristics and different mechanisms between the different groups of respondents. In our thesis, we'll be using the 4th and the 5th wave which through interviews from all 31 European countries has generated these datasets representative for the years 2008 and 2017. Also included in our analysis are measurements of the Gini Index from the Luxembourg Income Study from 2007 and 2015, data from the World Bank covering GDP per capita from 2007 and 2016, data from the UN covering immigrant stock from 2007 and 2016, and data from EIU covering countries democratic index from 2007 and 2016. Another advantage of a multi-level analysis is that we do not have to worry about having the same number of observations from the different countries in the analysis if we control for countries' different numbers of observations. By doing this it is not statistically necessary to weigh the models at the individual level (Mehmetoglu & Jakobsen, 2017, p. 203), so a population weight or weighting of the data at the individual level from EVS will not be included in our models. However, we use a design weight for the GDP, Gini Index, Democratic Index, and immigration stock variable at the country level to adjust the individual's probability of being included in the sample. This considers the variation in individual selection probabilities in sample designs with multiple stages (EVS, 2022), thus giving us a representative sample from all countries, so every Russian, Norwegian and Hungarian counts equally in our model. Considering the available data from our independent variables on both the macro and individual level the countries included in this analysis is thus the following: Albania, Austria, Bosnia & Herzegovina, Bulgaria, Belarus, Croatia, Czechia, Denmark, Estonia, Finland, France, Germany, Hungary, Iceland, Italia, Lithuania, Montenegro, Netherlands, Norway, Poland, Portugal, Romania, Russian Federation, Serbia, Slovakia, Slovenia, Spain, Sweden, Switzerland, North Macedonia, Great Britain. The analysis focuses on the 2008 and 2017 waves of EVS, capturing more recent European immigration policy changes, cultural shifts, and changes in values than previous research on the relationship between social capital and immigration.

3.2.1 Dependent variables

Capturing the essence of social capital and the overall value the term is meant to entail is an essential part of this thesis. In EVS we have several variables that individually cover different aspects of the term at our disposal. In short, we have chosen three dependent

variables that individually cover: interpersonal trust, participation in civil society, and trustworthiness. In general, we look at the definition of social capital as the qualities of social relationships, like trust, norms of reciprocity, and involvement in social networks (Putnam, 1997). We, therefore, include interpersonal trust as it is commonly agreed upon to be a basic component of social capital. We also include organizational membership as it is the closest to what we can measure in data for involvement in social networks. The third dimension chosen in this thesis, trustworthiness, is more difficult to measure with EVS data. We decided to follow the suggestion of Knack and Keefer (1997), who defined the norms of reciprocity as “the attitudes toward cooperating with anonymous others in prisoner’s dilemma settings”. The measurements of the civic cooperation reflect respondents’ own stated willingness to cooperate when faced with a collective action problem and can thus be thought of as “trustworthiness” (Knack & Keefer, 1997, p. 1258). Civic cooperation reveals itself by the willingness to put groups or someone else’s interest ahead of pure individual interest. As Stolle and Rochon (1999, p. 197) put it: “civic cooperation means that people do their share in collective endeavors”. The “trustworthiness” variable is therefore a collection of different actions that the respondents have deemed either justifiable or not, much like Knack & Keefer’s study from 1997, with some adjustments based on available data from EVS. Further reasoning behind the selection of these dependent variables is included in chapter 5.4 “Strengths and weaknesses” of this thesis.

Firstly, we have interpersonal trust. We capture this aspect of social capital with the opinions of the participants of EVS by using the variable coded “v31”. This variable covers whether the participant feels that you can trust random people and is formulated as such: “*Generally speaking, would you say that most people can be trusted or can’t be too careful in dealing with people?*”. The options for the questions are “Most people are trustworthy” as 1 and “You can not be careful enough” as 2. We also remove the missing and “don’t know” answers from the variable in both waves of EVS, where the number of observations goes from 50,997 to 49,911 in 2017. The mean level of trust across both waves of EVS is .422, ranging from .0723 in Portugal and .688 in Norway. Secondly, we have the measure of participation in civil society. This variable covers what social organizations the participants belong to. We take six of these organizations and create a dichotomous variable consisting of whether the participant belongs to *any* of the following organizations: religious or church organizations; Third World development or human rights organizations; sports or recreational organizations; social welfare service organizations for the elderly, handicapped, or deprived people; conservation, environment, or animal rights organizations; and education, arts, music, or cultural organizations. The mean membership level from the 2008 and 2017 waves of EVS is .221, ranging from 0.52 in Portugal to .692 in Denmark. Lastly, we have trustworthiness. This variable covers a series of moral questions that the participants of the study think can be justified. We take four of these questions and create a dichotomous variable consisting of whether the participant thinks that *any* of the following can be justified: claiming state benefits to which you are not entitled, cheating on tax if you have the chance, someone accepting a bribe in the course of their duties, avoiding a fare on public transport, and the death penalty. The mean justification level from the 2008 and 2017 waves of EVS is .409, ranging from 0.335 in Serbia to .612 in Norway. *Table 1* on the next page shows the mean value of each of our dependent variables sorted by country.

Table 1: Mean levels of Interpersonal Trust, Organizational Membership, and Trustworthiness across both the 2008 and 2017 waves of EVS, by country. Source: European Values Survey, averages across multiple waves

Country	Interpersonal Trust	Org. Membership	Trustworthiness
Albania	0.212	0.201	0.408
Austria	0.459	0.464	0.597
Bosnia & Herzegovina	0.070	0.227	0.505
Bulgaria	0.155	0.083	0.403
Belarus	0.399	0.063	0.475
Croatia	0.150	0.371	0.425
Czech Republic	0.203	0.383	0.517
Denmark	0.703	0.692	0.508
Estonia	0.313	0.086	0.411
Finland	0.697	0.534	0.504
France	0.255	0.268	0.479
Germany	0.422	0.583	0.510
Hungary	0.259	0.223	0.360
Iceland	0.632	0.672	0.574
Italy	0.259	0.130	0.577
Lithuania	0.302	0.144	0.389
Montenegro	0.195	0.149	0.503
Netherlands	0.596	0.640	0.484
Norway	0.723	0.550	0.612
Poland	0.222	0.092	0.470
Portugal	0.072	0.052	0.598
Romania	0.107	0.206	0.451
Russian Federation	0.209	0.090	0.466
Serbia	0.155	0.265	0.335
Slovakia	0.185	0.084	0.406
Slovenia	0.246	0.567	0.470
Spain	0.385	0.161	0.479
Sweden	0.648	0.631	0.576
Switzerland	0.582	0.663	0.575
North Macedonia	0.125	0.345	0.367
Great Britain	0.388	0.382	0.457

3.2.2 Independent variables: Level 1

Along with our dependent variables, we have several independent variables we think can have a significant effect on our dependent ones. First, we will look at our individual-level variables at level 1, followed by our macro-level variables at level 2 in the next chapter. While the primary focus of this thesis is macro-comparative, we still want to include a series of individual-level control variables for education, gender, age, marital status, income, religious affiliation, employment status, and voting. The education variable measures what level of education the participant has, ranging from "less than primary" to "doctoral or equivalent". We create the continuous variable and remove missing observations ("no answer", "don't know" and "other") reducing observations from 49,911 to 49,494. Marital status and gender as simple dichotomous variables indicating being male and married. In the married variable, we removed the missing reducing observations from 49,494 to 49,179. Age is a simple continuous variable. In our income variable, a measurement of households' total net income is also a continuous variable ranging from the 1st to the 10th decile ranging from lower to higher-income families. We also remove missing reducing observations from 49,179 to 41,664, decreasing our total observation count a bit because of some respondents not being willing to answer which decile they belong to. Furthermore, we include a variable asking the participant whether they belong to a religious denomination. We create a dichotomous variable indicating being religious and remove missing. Observations are reduced from 41,664 to 41,439. We also include a voting variable where we look at whether the participants vote in the national elections. We create a dichotomous variable on whether the participant usually or always voted contra never votes, where voting is the indicator, and remove missing answers and observations from those not allowed to vote. This reduced observations from 41,439 to 39,820, where some respondents again didn't want to include their voting habits and we also had to remove the observations counting people under the voting age. We also include a variable covering whether the participant is currently employed or not. We create a categorical variable consisting of either "employed", "unemployed" or "out of the labor force", where being unemployed is the reference. We also remove missing, which reduces the observations from 39,820 to 39,419. Finally, to account for whether the respondent is from a rural or urban area, we include the variable "rural" to see the effects of people living in an area with under 5000 inhabitants. We remove missing which reduces our observations from 39,419 to 34,556. The same procedure is done in the 2008 wave of EVS, coding the variables the same way and removing missing observations.

3.2.3 Independent variables: Level 2

At the macro-level, we have a total of four variables that we will use in different combinations in our analysis. Firstly, we have the immigrant stock data collected from the UN, which captures the percentage of the country's population that is foreign-born. We use this measurement because it's a commonly used measure of immigration, allowing for straightforwardness when interpreting the results and more comparability. The data collected by the UN is available for each country every five years, so we have to use measurements from 2005 and 2015 in our analysis. The values are measured in percentages, so we'll simply divide by 100 to get a range between 0 and 1 in Stata. Secondly, we have GDP with data collected from the World Bank. GDP is a simple calculation measuring different countries' added value created through the production of goods and services in a country during a certain period. The unit of measurement of the variables here is 1000 \$ (US dollars) per inhabitant and we adjust for this. Therefore, we divide this data by 1000 to make it easier to read the results, here to avoid a minimum

coefficient that would have approached 0.000, without having to experience any noticeable changes in our results. We'll be using data for our European countries from the years 2007 and 2016, the years before our waves in EVS. This helps with causality as we get to see the effects of these measurements in play with the data collected from 2008 and 2017 in EVS.

Thirdly, we have the Gini Index with data collected from The Luxembourg Income Study. The Gini Index measures inequality in income distribution, where the values go from 0 to 1 where "0" represents high levels of equality and "1" lower levels of equality. We again use the available data from 2007 and 2016, to see the measurement's effect on our survey data from 2008 and 2017. The mean Gini Index in 2008 and 2017 ranged from .272 (Denmark) and .368 (Portugal). Fourthly, we have the Democratic Index with data collected by the Economist Intelligence Unit. The index is based on over 60 indicators covering political culture, electoral process and pluralism, political participation, and civil liberties. The index gives different countries a score from 1 to 10 on how democratic their institutions and policies are. We use the measurements from 2006 and 2016 in our analysis. Lastly, we have our Eastern Europe variable at level 2. This variable simply separates the Eastern European² countries from our selection, where the following countries are included: Albania, Austria, Bosnia & Herzegovina, Bulgaria, Belarus, Croatia, Czech Republic, Estonia, Hungary, Lithuania, Montenegro, Poland, Romania, Russian Federation, Serbia, Slovakia, Slovenia, and North Macedonia. We want to create this division because of the impact the totalitarian civil society under the Soviet Union had on most of our Eastern European countries, and to which extent it still impacts social capital today.

3.3 Statistical Assumptions

While dealing with quantitative data all methods require some assumptions about the data to be made. In multilevel analysis, however, we are exempt from some of these, like the independence of observations and the possibility of heteroscedasticity. In logistic regression, the value of the dependent variable ranges only from 0 to 1, so one cannot risk the spread of data being heteroscedastic. There is some debate about how many units are appropriate to be able to perform a multi-level analysis. In our analysis, we have 31 countries, which should be more than good enough whereas Snijders and Bosker (1999, p. 44) argue that between 10-100 units are suitable for this type of analysis. On the second level, Hox (2010, p. 233) has found that analyses with around 30 countries at level 2 are appropriate, whereas an analysis with less than 15-20 countries could be problematic. Dealing with 31 countries we should be in the clear, avoiding issues like the possibility of conceiving confidence intervals. Something we can test in our regression models is the Intra-Class Correlation Coefficient (ICC). In an ordinary OLS regression, we would look to the value of R^2 as an indicator of our independent variables' ability to explain our dependent one, given to us as a percentage that would represent the dependent variables' variance explained by our independent ones (Mehmetoglu & Jakobsen, 2017, p. 71). However, this method for linear mixed- and logistic models remains challenging, where we thus have to use other methods, like the ICC. The ICC reveals to us to what extent there are correlations between observations between clusters of different groups of data, like our countries. The ICC, therefore, serves as an estimate of this aspect of reliability, which represents the share of the total variance in the outcome that can be calculated for the variables at level 2. An ICC-test, in the logit format of multi-level analysis, can only be calculated in a model

² A more accurate term for this region is "Central- and Eastern Europe Countries", or CEEC.

in which level 2 variables are present, as there are no random effects at the individual level alone, something we'll discuss further later on. Below we have our variables in a descriptive table with the number of observations. Observations vary between the dependent variables with individual-level observations correlating with their respective dependent variables' N.

Table 2: Descriptive statistics

Dependent Variables	N	Average	Std. Error	Min	Max
Interpersonal Trust	34,556	0.381	0.485	0	1
Org. Membership	34,572	0.565	0.495	0	1
Trustworthiness	33,480	0.625	0.484	0	1
Independent - Level 2					
Immigrant stock	50,997	10.203	6.650	1.1	29.1
Gini coefficient	50,997	31.833	4.128	24.8	40.6
GDP per capita	50,997	0.306	0.232	0.04	0.855
Democratic Index	50,997	7.595	1.594	3.31	9.93
Eastern European	50,997	0.517	0.499	0	1
Independent - Level 1					
Male	50,971	0.044	0.497	0	1
Voted	48,739	0.904	0.294	0	1
Rural	45,040	1.734	0.441	1	2
Age	50,672	50,076	17.726	18	82
Employment	50,286				
<i>Unemployed</i>	5,904		0.101	0	1
<i>Out of Labor Force</i>	17,338		0.329	0	1
<i>Employed</i>	27,044		0.691	0	1
Married	50,603	0.515	.0499	0	1
Education decile	50,547	4.837	1.890	1	9
Income decile	42,901	5.213	2.724	1	10
Religious	50,604	0.680	0.466	0	1

Averages for dummy variables have been removed.

4. Analysis and Results

In this part of the thesis, I will present the result of our multilevel analyses and models. The set research question for this thesis is: "Does immigration hurt social capital on a country-level basis in Europe?". Our research question is studied by looking at the statistical connection between social capital and immigrant stock, GDP per capita, the Gini coefficient, and the value of the democratic index in our set countries. All models include respondents from 31 European countries over two rounds of EVS, where we have a total of 39, 415 observations (N) in the analysis. I will look more closely at the significant results in the models, and further develop the models with different combinations of our level 2 variables, interactions, and a division based on Western and Eastern European countries.

4.1 Strategy for modelling and comparability

We use multi-level logistic regression models to analyze our data. The model takes the general form of

$$L_{ij} = \beta_0 + \beta_1 X_{1ij} + \beta_2 X_{2ij} + \beta_3 X_{3ij} + \beta_4 X_{4ij} + \beta_5 X_{5ij} + \beta_6 X_{6ij} + \beta_7 X_{7ij} + \beta_8 X_{8ij} + \beta_9 X_{9ij} + \beta_{10} X_{10j} + \mu_{0j} + e_{ij}$$

in both the 2008 and 2017 waves of EVS. We can see that our X variables have the suffix "i", which represents that they indicate the value of X for individuals in countries "j". We can also see that "X10", which represents immigrant stock, is marked with only a "j" instead of "ij", this tells us that this is a level 2 variable that only varies between countries. Lastly, we have the suffixes μ and e which are the individual- and macro-level error terms, respectively.

We also want to compare the two waves and see to what extent the effects of immigration have been strengthened or weakened between 2008 and 2017. To accurately be able to do this we cannot compare the coefficients by themselves. We first have to find the t-value of the two effects by also considering the standard errors. The different effects found are not considered a significant change in effect if this number can be calculated to be between -1,96 and 1,96, and we would in that case confirm the null hypothesis of there being a similar effect. This is considered a two-tailed test where we are interested in seeing both if the effects have changed positively or negatively in this period. The calculation is shown in the formula below (Ringdal, 2014).

$$D = b_2 - b_1 \quad S_d = \sqrt{S_1^2 + S_2^2} \quad t = \frac{D}{S_d}$$

4.2 Results

We begin with a baseline model that is shown in *Table 3*. This model only includes the individual-level variables. We include these variables as an attempt to capture to which extent our macro-comparative variables influence social capital compared to the respondents' individual-specific characteristics, something we'll address later in our discussion chapter. The variables included are based on previous empirical studies' baseline model and the generally agreed upon individual-specific characteristics that impact social capital (Kesler & Bloemraad, 2010; Dinesen, Schaeffer & Sønderskov, 2020). The results mostly agree with the previous analyzes in this area, although some variation is expected given our individually constructed dependent variables and data. In terms of levels of interpersonal trust, organizational membership, and trustworthiness women and men are indistinguishable. We can see tendencies where women have a higher chance of being in

an organization, but with an observation count as high as we have in our analysis, we have to be strict with our interpretation of our p-values. Being an active voter in the national elections also gives a significantly higher chance of having more interpersonal trust, being a part of organizations, and having a higher score of trustworthiness. The respondent being from a rural area does not show a significant effect on interpersonal trust or trustworthiness, while it gives a lower chance of being part of an organization. An increase in age in our participants doesn't yield a significant effect on interpersonal trust or organizational membership but does have an impact on what the respondents deem justifiable where we see a positive effect of age on our trustworthiness variable. Whether the respondent is employed, out of the workforce or unemployed doesn't yield any statistically significant result on interpersonal trust or trustworthiness, but respondents out of the workforce and employed have a significantly higher chance of being a member of an organization compared to an unemployed respondent. Being married shows a higher chance of being part of an organization. Having a higher level of education gives a significantly higher chance of both having higher levels of interpersonal trust and organizational membership, while it does not have an impact on our trustworthiness variable. A higher income level in our respondents has a positive significant effect on all our dependent variables. Finally, being religious does not give a higher chance of higher interpersonal trust, but a higher chance of being in an organization and on our trustworthiness variable.

Table 3: B and odds ratios of individual controls of Interpersonal Trust, Organizational Membership, and Trustworthiness, mean across both waves of EVS (Baseline model). Observations are "34,556", "34,572" and "33,480" for Interpersonal Trust, Org. Membership, and Trustworthiness, respectively.

	Interpersonal Trust		Org. Membership		Trustworthiness				
	b	se	b	se	b	se			
Individual controls									
Male	-0.018	0.047	0.988	-0.008	0.022	1.046	0.047	0.034	0.937
Female (reference)									
Voted	0.330***	0.097	1.432***	0.021***	0.058	1.459***	0.334***	0.090	1.398***
Rural Area	0.112	0.110	1.118	-0.123***	0.027	0.883***	0.001	0.047	1.001
Didn't vote (reference)									
Age	-0.002	0.002	0.999	-0.007***	0.007	1.000***	0.0141***	0.001	1.013***
Out of Labor Force	0.079	0.100	1.101	0.250***	0.070	1.715***	0.003	0.066	0.981
Employed	-0.046	0.079	0.978	0.042	0.057	1.514	0.030	0.578	0.925
Unemployed (reference)									
Married	0.044	0.039	1.017	0.108***	0.017	0.771***	0.096	0.043	1.080
Not married (reference)									
Education	0.162***	0.049	1.176***	0.157***	0.007	1.152***	0.009	0.010	1.014
Income	0.070***	0.009	1.072***	0.060***	0.005	1.119***	0.041***	0.008	1.042***
Religious	0.150	0.068	1.145	0.929***	0.043	1.854***	0.443***	0.058	1.531***
Not religious (reference)									
Constant	-2.401	0.036	0.104	1.827	0.004	0.077	1.279	0.029	0.281

*** p<0.0001, ** p<0.005, *p<0.01. Standard errors are signed as "se".

The models in Tables 4, 5, and 6 bring us closer to the research question at hand: whether the percentage of immigrants in a country's population affects the levels of interpersonal trust, organizational membership, and trustworthiness, respectively. These tables consist of 5 different models, each with a variety of variables at level 2, but always included the immigrant stock variable. Model 2.1 is identical to the baseline model but has added the immigrant stock and the Gini-coefficient variable. In Model 2.2 the Gini coefficient variable has replaced the control for GDP. In Model 2.3 we include both GDP per capita and the Gini coefficient and an interaction between immigrant stock and the Gini coefficient. We include this interaction because we have strong reasons to believe that higher income inequality can negatively impact the effect immigration has on social capital. Greater income inequality can cause higher levels of relative deprivation that we know can hurt social capital (Sakketa, 2018). In Model 2.4 we include GDP per capita and the democratic index and create an interaction between the democracy index and immigration stock. We include this interaction because we hypothesize that countries with a stronger democracy tend to benefit more from higher levels of immigration. Countries with stronger democracies usually have institutions more fit for immigration and are regulated in a manner that more easily allows for integration and economic growth (Breunig, Cao & Luedtke, 2012). Finally, in Model 2.5 we include GDP per capita, the Gini Coefficient, and our Eastern Europe variable, adding an interaction between both immigrant stock and Eastern Europe, and the Gini coefficient and Eastern Europe. Firstly, regarding the interaction between Eastern Europe and immigrant stock, it is included as we suspect that a higher level of relative deprivation is an omitted variable in the relationship between immigration and social capital and that the levels of relative deprivation are higher in Eastern Europe. Secondly, regarding the interaction between Eastern Europe and the Gini coefficient, we include this as a development of the previous interaction. We know that higher levels of relative deprivation have a negative influence on the effects of immigration on social capital (Sakketa, 2018), and we also are curious to see how this effect works and the role this influence plays in Eastern contra Western countries. Note that all models in Tables 4, 5, and 6 also include individual controls not shown here, the omitted categories are male, voted, age, employment, married, education, income, and religious affiliation. By doing this we isolate the odds ratios at the macro-level in our tables for easier interpretation while the individual-level variables are still included in the analysis. The tables are representative of each of our dependent variables forming social capital, where we'll first have a look at interpersonal trust in Table 4.

In Model 2.1 we can see that our immigration stock variable has a significant positive effect in our 2017 wave, while GDP per capita has a strong positive significant effect on the $p < 0.001$ level. This is the case in both the 2008 and 2017 waves of EVS, where we also can see that the positive effect of GDP per capita and immigrant stock on interpersonal trust has been strengthened from 2008 to 2017 in our analysis. However, we can also trace a high standard error on our GDP variable which could indicate that the effect is volatile. In Model 2.2 we can trace a significant negative effect of the Gini coefficient on interpersonal trust in both waves. Furthermore, without the inclusion of a variable covering GDP per capita, we can see a stronger positive significant effect of immigration stock in 2017, and a significant effect in the 2008 wave as well as we did not earlier. In Model 2.3 we again see a significant effect of GDP per capita and an insignificant effect of both immigrant stock and the Gini coefficient on interpersonal trust in both waves. We also included our Immigrant Stock * Gini interaction without any significant results on the $p < 0.05$ level. The interaction stands at a p-value of 0.088, so while it is not significant at the 0.05 level, it still holds the 10% significant level (0.1), meaning that it can still give

some relevant insight into our discussion for later (Mehmetoglu & Jakobsen, 2017, p 106). We can interpret the interaction as countries with a higher level of immigration having a more negative effect of a rise in the Gini coefficient in the context of immigration's effect on interpersonal trust, something we'll go into more detail on later in our discussion chapter. We include the effects in *Figure 1* using margins in Stata, found in the appendix.

In Model 2.4 we can see a significant positive effect of GDP per capita and a significant positive effect of immigrant stock in both waves. We also include our democracy index variable which shows an insignificant effect in 2008, but a positive significant effect in 2017. This could point to that the importance of a proper democracy has, with time, had a more significant effect on interpersonal trust than in 2008. We also include an interaction between immigration stock and democracy index which shows a significant negative effect in both waves. This shows another interesting aspect of the relationship between immigrant stock and interpersonal trust where countries with a stronger democracy react differently to higher levels of immigrant stock than countries with a weaker democracy. In our analysis of the 2017 wave of EVS, where our democracy index variable independently has a significant p-value, countries with a stronger democracy have a more negative reaction to higher levels of immigrants than countries with a weaker democracy. At 9% immigration stock the effect of immigration stock on interpersonal trust shifts between the countries of higher and lower values of democracy. The effects are shown in *Figure 2* using margins in Stata, found in the appendix.

Finally, in Model 2.5, we still see a significant positive effect of GDP per capita and an insignificant effect of the Gini coefficient on interpersonal trust. In this model, our immigrant stock variable shows no significant results. In this model, we also include our Eastern Europe variable which here shows a significant effect in our 2017 wave. We see an odds ratio of 0.285, which indicates that there is a 71.5% higher chance of a respondent from an Eastern European country in our analysis to have lower interpersonal trust, compared to respondents from Western European countries. In this model, we also include an interaction between our Eastern Europe and immigrant stock variable. We hypothesized that the Gini coefficient could have an impact on the relationship between immigration and interpersonal trust, as to why we include our Eastern * Immigrant Stock interaction. This is closely tied to our hypothesis about relative deprivation and gives us great insight into this phenomenon. Here we can see a significant positive effect in our 2017 wave, where Western European countries have a more positive reaction to a higher level of immigrants compared to Eastern European countries. The effect and interaction are significant in our 2017 waves of EVS, with an odds ratio of 1.106***. Unfortunately, our independent immigration stock variable is not significant, so as this effect may have roots in practice, it cannot be deemed significant in our analysis. The effects are shown in *Figure 3* using margins in Stata, found in the appendix. We also wanted to include our Gini coefficient variable to map out the effects of relative deprivation and see the role of influence the effect has in Western contra Eastern countries. It shows a reclining reaction between the Eastern European countries to a positive change in the Gini coefficient. The Western European countries, however, the effect of having a higher income inequality appears to have a more negative effect on the level of interpersonal trust, compared to Eastern European countries. The effect and interaction are significant in both the 2008 and 2017 waves of EVS, with an odds ratio of 1.184*** and 1.100*, respectively. Unfortunately, our independent immigration stock variable is not significant, so as this effect may have roots in practice, it cannot be deemed significant in our analysis. The effects are shown in *Figure 4* using margins in Stata, found in the appendix.

Table 4: B and odds ratios of Interpersonal Trust in EVS 2008 and 2017. Observations are "29,672" and "30,856" for the 2008 and 2017 waves, respectively.

Interpersonal Trust

Model	2008			2017		
	B	se	odds ratio	B	se	odds ratio
Model 2.1						
GDP per capita	4.045**	33.806	47.171***	3.893***	399.924	485.205***
Immigrant Stock	0.036	0.024	1.035	0.062*	0.032	1.064*
Constant	-2.404	0.022	0.098	-3.906	0.007	0.020
Level 2 variance (ICC)	0.067	0.013	0.067	0.050	0.014	0.050
Model 2.2						
Gini Coefficient	-0.057*	0.020	0.948*	-0.078**	0.028	0.924**
Immigrant Stock	0.043*	0.021	1.042*	0.095***	0.023	1.100***
Constant	0.039	0.718	0.952	-0.674	0.557	0.509
Level 2 variance (ICC)	0.103	0.022	0.103	0.136	0.034	0.136
Model 2.3						
GDP per capita	2.398***	5.066	9.451***	3.553***	25.101	34.933***
Immigrant Stock	-0.002	0.019	0.998	0.004	0.028	1.004
Gini Coefficient	-0.012	0.019	0.988	-0.037	0.022	0.962
IS * Gini	-0.005	0.004	0.999	-0.003	0.003	0.993
Constant	-1.620	0.142	0.201	-2.060	0.109	0.127
Level 2 variance (ICC)	0.065	0.015	0.065	0.082	0.020	0.082
Model 2.4						
GDP per capita	3.454***	19.654	27.853***	4.954***	119.253	141.80***
Immigrant Stock	0.230**	0.127	1.241*	0.399***	0.161	1.490***
Democracy Index	0.154	0.166	1.138	0.447***	0.171	1.565***
IS * DI	-0.031*	0.012	0.970*	-0.052***	0.013	0.948***
Constant	-3.374	0.047	0.043	-6.766	0.001	0.001
Level 2 variance (ICC)	0.051	0.012	0.051	0.045	0.010	0.045
Model 2.5						
GDP per capita	2.502**	9.053	10.471**	3.607***	37.936	36.888***
Immigrant Stock	-0.043	0.031	0.960	-0.030	0.025	0.970
Gini Coefficient	-0.006	0.020	0.994	-0.024	0.023	0.975
Eastern Europe	-0.601	0.220	0.572	-1.253***	0.098	0.285***
Eastern * IS	0.061	0.038	1.059	0.100***	0.030	1.106***
Eastern * Gini	0.184***	0.0522	1.184***	0.095**	0.039	1.100**
Constant	-1.423	0.198	0.241	-1.555	0.205	0.210
Level 2 variance (ICC)	0.037	0.009	0.037	0.043	0.015	0.043

*** p<0.001, ** p<0.01, *p<0.05. Standard errors are signed as "se".

We'll now cover organizational membership, as seen in Table 5. Again, the variables included are the same, as they also will be for Trustworthiness. In Model 2.1 we can see that our immigration stock variable has an insignificant effect on organizational membership (OM), while GDP per capita stands as a significant effect on the $p < 0.0001$ level. In this Model, we cannot trace an effect by immigration stock, while it seems that a higher level of GDP leads to a higher chance of OM in a country which is the case in both the 2008 and 2017 wave of EVS. In Model 2.2 we introduce our Gini coefficient variable which shows that higher income inequality leads to less OM. This effect, however, is stronger in the 2008 wave of EVS, which could mean that the effect has lost some explanatory ability over time. In this model, we can trace a significant positive effect of immigration stock to OM, both in 2008 and 2017, an effect we can also see has been strengthened in this time period. In Model 2.3 we include GDP per capita, immigration stock, and the Gini coefficient, where only GDP per capita stands as a significant effect. We also included an interaction between immigration stock and the Gini coefficient without any significant results. In Model 2.4 we include our democracy index variable, unfortunately without significant results. The inclusion of this variable also made our GDP per capita variable insignificant in both waves. We also included an interaction between immigrant stock and our democracy index variable, without significant results.

In Model 2.5 we introduce our Eastern Europe variable, which here shows a significant negative effect on OM in both waves of EVS. This indicates that respondents from Eastern European countries have a lower chance of being part of organizations. With the combination of GDP per capita, immigration stock, Eastern Europe, and the Gini coefficient, we now see a significant negative effect of the Gini coefficient in the 2017 wave. We include an interaction between both Eastern Europe and immigrant stock which does not yield any significant results. We also include our interaction between Eastern Europe and the Gini coefficient which shows a significant positive effect in both waves. It shows a reclining reaction in the Eastern European countries to a positive change in the Gini coefficient. The Western European countries, however, the effect of having a higher income inequality appears to have a stronger negative effect on the level of OM in these countries. The interactions stand significant with a coefficient of 1.207 and 1.162 in the 2008 and 2017 waves of EVS, respectively. The effects are shown in *Figure 5* using margins in Stata, found in the appendix.

Table 5: B and odds ratios of Organizational Membership in EVS 2008 and 2017. Observations are "27,485" and "34,572" for the 2008 and 2017 waves, respectively.

Organizational Membership						
Model	2008			2017		
	B	se	odds ratio	B	se	odds ratio
Model 2.1						
GDP per capita	4.385***	50.006	50.536***	4.208***	495.722	339.638***
Immigrant Stock	0.023	0.035	1.051	-0.003	0.035	1.039
Constant	-2.176	0.018	0.059	-3.237	0.026	0.058
Level 2 variance (ICC)	0.133	0.024	0.133	0.134	0.026	0.134
Model 2.2						
Gini Coefficient	-0.092**	0.023	0.919**	-0.098*	0.038	0.906*
Immigrant Stock	0.053*	0.025	1.072*	0.095***	0.018	1.099***
Constant	1.404	1.354	1.522	0.462	2.521	1.588
Level 2 variance (ICC)	0.125	0.029	0.125	0.183	0.055	0.183
Model 2.3						
GDP per capita	2.708***	6.448	9.249**	3.695**	47.102	40.252**
Immigrant Stock	0.001	0.025	1.027	0.004	0.031	1.004
Gini Coefficient	-0.044	0.024	0.956	-0.053	0.034	0.948
IS * Gini	-0.005	0.006	0.994	-0.004	0.006	0.995
Constant	-0.385	0.316	0.354	-1.088	0.459	0.336
Level 2 variance (ICC)	0.121	0.023	0.121	0.122	0.024	0.122
Model 2.4						
GDP per capita	1.668	4.137	4.235	2.598	20.961	13.446
Immigrant Stock	0.069	0.159	1.124	0.091	0.161	1.095
Democracy Index	0.348	0.284	1.398	0.341	0.278	1.407
IS * DI	-0.007	0.017	0.989	-0.010	0.019	0.989
Constant	-4.286	0.092	0.338	-5.067	0.010	0.006
Level 2 variance (ICC)	0.093	0.022	0.093	0.115	0.025	0.115
Model 2.5						
GDP per capita	0.905	2.183	1.766	2.445	19.940	11.540
Immigrant Stock	0.036	0.048	1.061	0.020	0.046	1.020
Gini Coefficient	-0.006	0.067	0.845	-0.186**	0.057	0.829**
Eastern Europe	-5.331*	0.026	0.012*	-5.228*	0.013	0.005*
Eastern * IS	-0.009	0.049	0.990	0.017	0.033	0.014
Eastern * Gini	0.188**	0.087	1.207**	0.150*	0.082	1.162*
Constant	4.726	265.705	112.889	3.485	79.120	32.626
Level 2 variance (ICC)	0.091	0.022	0.091	0.111	0.021	0.111

*** p<0.001, ** p<0.01, *p<0.05. Standard errors are signed as "se".

Finally, we'll cover trustworthiness as seen in Table 6. In Model 2.1 we can see that our immigration stock variable shows no signs of a significant effect on trustworthiness, while GDP per capita has a significant negative effect in 2008, and a significant positive effect in 2017. We'll address this shift in effect in the next chapter. In Model 2.2 we can trace a significant positive effect of the Gini coefficient in our 2008 wave. Immigration stock here shows a significant positive effect in our 2017 wave. In Model 2.3 we see a significant positive in our GDP per capita variable. Our immigration stock variable shows no significant results, while our Gini coefficient variable shows a significant positive effect in our 2008 wave. We also include an interaction between our immigrant stock- and the Gini coefficient variable, without significant results.

In Model 2.4 we see no significant effects of GDP per capita in either wave, while our immigration stock variable shows a significant negative effect in both waves. In this model, similar to the GDP per capita variable previous, our immigrant stock has shifted in effect, now showing a significant negative output. We'll discuss both these variables' behaviors in more detail in the next chapter. We also introduce our democracy index variable in this model which shows a significant positive effect in our 2008 wave. Also included is an interaction between immigration stock and democracy index which shows a positive significant effect in both waves. It shows a negative reaction amongst countries with lower values in our democracy index variable, while the opposite is true for the countries with a higher value to a higher percentage of immigration. Thus, it seems that countries with weaker democracies react more negatively to higher values of immigration, with a turning point for the effect being at 11% immigration stock. Countries with stronger democracies, however, seem to benefit from higher levels of immigration, in the context of our trustworthiness variable. The interaction stands with an odds ratio of 1.033 in our 2008 wave of EVS, and while the interaction is also significant in our 2017 wave, the democracy index independently stands insignificant. The interaction from the 2008 wave is shown in the appendix in *Figure 6*, using margins in Stata. In Model 2.5 we now see only a significant positive effect of GDP per capita on trustworthiness in our 2017 wave, while our immigrant stock variable still shows a significant negative result in 2008. Our Gini coefficient variable shows a significant positive effect in 2008, and an insignificant effect in 2017. We also introduce our Eastern European variable in this model which does not yield any significant results. We also introduce both an interaction between Eastern Europe and immigration stock, and Eastern Europe and the Gini coefficient, with both interactions showing an insignificant result.

Table 6: B and odds ratios of Trustworthiness in EVS 2008 and 2017. Observations are "28,440" and "33,480" for the 2008 and 2017 waves, respectively.

Trustworthiness						
	2008			2017		
Model	B	se	odds ratio	B	se	odds ratio
Model 2.1						
GDP per capita	-2.705***	0.038	0.049***	2.020**	4.954	7.540**
Immigrant Stock	-0.045	0.025	0.955	-0.024	0.020	0.976
Constant	0.722	0.491	2.040	-0.662	0.148	0.515
Level 2 variance (ICC)	0.068	0.016	0.068	0.050	0.011	0.050
Model 2.2						
Gini Coefficient	0.059***	0.018	1.068***	-0.019	0.924	0.980
Immigrant Stock	-0.030	0.016	0.969	0.025**	0.010	1.027**
Constant	-1.562	0.100	0.163	0.013	0.924	1.014
Level 2 variance (ICC)	0.064	0.016	0.064	0.073	0.016	0.073
Model 2.3						
GDP per capita	-0.622	0.243	0.448	2.066***	3.794	7.901***
Immigrant Stock	-0.181	0.018	0.984	0.055	0.121	0.105
Gini Coefficient	0.048*	0.020	1.053*	0.021	0.025	1.021
IS * Gini	0.003	0.004	1.003	-0.002	0.003	0.997
Constant	-1.157	0.190	0.274	-1.362	0.218	0.256
Level 2 variance (ICC)	0.052	0.015	0.052	0.049	0.012	0.049
Model 2.4						
GDP per capita	-1.119	0.222	0.284	0.506	1.089	1.659
Immigrant Stock	-0.256**	0.086	0.765**	-0.168*	0.054	0.845*
Democracy Index	0.334*	0.112	1.695*	0.022	0.104	1.978
IS * DI	0.031*	0.014	1.033*	0.020*	0.008	1.020*
Constant	3.004	28.665	24.026	-0.267	0.563	0.765
Level 2 variance (ICC)	0.062	0.015	0.062	0.040	0.009	0.040
Model 2.5						
GDP per capita	1.162	2.542	3.149	2.246**	7.939	9.453**
Immigrant Stock	-0.037*	0.017	0.963*	-0.023	0.018	0.977
Gini Coefficient	0.119*	0.051	1.148*	-0.008	0.048	0.991
Eastern Europe	2.768	44.473	29.220	-0.375	1.101	0.686
Eastern * IS	0.013	0.034	1.013	0.027	0.024	1.027
Eastern * Gini	-0.049	0.044	0.952	-0.001	0.056	0.998
Constant	-2.122	0.012	0.008	-0.537	0.938	0.584
Level 2 variance (ICC)	0.042	0.011	0.042	0.048	0.012	0.048

*** p<0.001, ** p<0.01, *p<0.05. Standard errors are signed as "se".

To be able to accurately compare our two waves we also wanted to find the t-value of the effects in our two waves. We only do this with our “Immigrant Stock” variable as it is closely tied with our H2, which covers whether the effect of immigration on social capital has been strengthened or weakened between 2008 and 2017. For our interpersonal trust variable, we tested the effects in both waves for both Model 2.2 and 2.4 where neither of the t-values exceeded the frame of -1.96 to 1.96. Therefore, we confirm the null hypothesis of the effects being similar and interpret this as the effect of immigration not having a significant change of effect in this period. We also have to note that in Model 2.4, where both effects from the two waves had a significance level lower than 0.01, the frame in which the null hypothesis would be rejected is extended to being between -2.58 and 2.58 (Ringdal, 2014). We do the test in Model 2.2 for organizational membership, with the same result indicating a similar effect. For trustworthiness, we do the same in Model 2.4 where we get a t-value of 4.175. This indicates a significant positive change of effect, and we reject the null hypothesis of a similar effect. We interpret this as immigration having a more positive effect in 2017 on trustworthiness, compared to our 2008 wave.

To sum up our ICC calculations we can see that the value of the ICC diminishes, across all models, as we add more variables at the country level. Taking our analysis of interpersonal trust in the 2017 wave as an example models 2.1, 2.2, 2.3, 2.4, and 2.5 had an ICC of 0.050, 0.136, 0.082, 0.045, and 0.043, respectively. The models are not in perfect order of complexity, as to why model 1 has a higher value. As the models become more complex the ICC declines. This, in practice, means that the explanatory ability of our independent variables, like immigration stock, is diminished by the inclusion of variables like GDP per capita, as the effects are better explained by real-world aspects like that of GDP per capita. The value of the ICC, as previously mentioned, represents the share of the total variance in the outcome that can be calculated for the variables at level 2. The ICC of model 2.2 in Table 4, covering interpersonal trust, is calculated to be 0.136. This means that 13.6% of the variance in interpersonal trust can be explained at the country level, while 86.4% can be explained at the individual level. As we include more country-level variables this value decreases, like in 2.5 in Table 4, where only 0.043 (4.3%) is now explained at the country level, while 95.7% are explained at the individual level. One should also note that this calculation determines the explained variance in our models, it does not consider the variation omitted variables could have on the ICC and therefore the ratio of what can be explained on the individual- and country-level. These values will be further assessed in the next chapter. One should also note that our models only show the average effect across all countries selected in our analysis in Europe and that the question of whether immigration stock has a negative impact on different *societies* within countries could vary in results. A relevant aspect of this in the context of our analysis is how different subsets of countries can show different effects of immigration stock on interpersonal trust, which is exemplified in our analysis with the Eastern Europe variable.

5. Discussion

The findings of our analysis indicate that there is a correlation between immigrant stock and social capital. Whether the effect is positive or negative varies between the different aspects of social capital and what variables you include in your regressions. We also could not find sufficient evidence for the positive effects of immigration being strengthened over time. Finally, we have also found traces of the negative effects of relative deprivation on the relationship between immigration and social capital in our interpersonal trust variable. In this part of the thesis, I will discuss our different models' results in the context of the expectations of our hypotheses: (H1) There is a negative correlation between immigration and social capital in Europe, exemplifying that we still are experiencing the short-term negative effects of immigration, (H2) There is a progressively more positive correlation between social capital and immigration over time in Europe, showcasing a shift in effect to more positive long-term effects of immigration, and (H3) Relative deprivation explains the difference in effect immigration has on social capital in Europe, causing a more negative correlation in Eastern Europe.

5.1. The effects of immigration on social capital

The controversial question surrounding a higher level of immigration having either a positive or negative effect on social capital has shown its complexity in our analysis (H1). The effect has a large variation in strength and direction of effect and relies heavily on which variables you combine it with. We see a clear trend throughout models 2.1 – 2.5 in all our dependent variables that the effects of immigration are generally diminished by the inclusion of a variable for GDP per capita. This means that a substantial portion of immigration's explanatory ability on interpersonal trust, organizational membership, and trustworthiness is better explained by GDP per capita. We can also interpret our GDP variable as an intermediate variable between immigration and social capital, where the effect of immigration works both directly and indirectly through GDP per capita. The only case where immigration has a significant effect with the inclusion of GDP is on our interpersonal trust variable. As seen in Table 4: Model 2.4, a larger percentage of immigrants grants a significant positive effect on interpersonal trust in both 2008 and 2017. One should remember, however, that this is only a generalized effect across all European countries in the 2008 and 2017 waves of EVS. Contradicting evidence on immigration's effect on interpersonal trust is more prevalent where the effect is measured locally, as showcased in Dinesen, Sønderskov, and Schaeffer's meta-analysis (2020), also in European countries.

In the terms of organizational membership, we see some of the same tendencies with immigration stock as we saw in our interpersonal trust analysis. Immigration stock, when paired with GDP per capita, has an insignificant effect. Without a control for GDP, however, immigration stock shows a significant positive effect in model 2.2. This is also exemplified by earlier theoretical and empirical studies which show that immigration, under the right circumstances, can have a positive effect on organizational membership (Kesler & Bloemraad, 2012). By excluding a control for GDP, one could very well conclude that a larger percentage of immigrants leads to higher levels of organizational membership, rendering oneself oblivious to the explanatory ability "borrowed" from GDP. We would, however, conclude that effects are inconclusive, at the same time as we recognize the traces of the positive effects that immigration *can have* on organizational membership. We also see a higher explained variance at the country-level in this dependent variable, reaching up to 13%, which would indicate that our models surrounding organizational

membership better can be explained by our country-level variables compared to interpersonal trust and trustworthiness. One should also note, however, that it is not very likely that members of the original population would suddenly go out and join an organization as soon as the proportion of immigrants increases if they had not previously. At the same time, a surge in immigration could also create a natural portion of the population that never has been a member of any organization in the country, which could boost organizational membership as a result of the immigrants themselves.

In the case of trustworthiness, we see a more interesting spread of effects by our immigrant stock variable. In models 2.1 and 2.2 we see the same tendencies as before, the inclusion of a control variable covering GDP diminishes the significance of a higher level of immigration. In model 2.2, we again see that immigration stock has a significant positive effect on trustworthiness. In model 2.4, with the inclusion of our democracy index variable, we now see a significant negative effect of immigration in both waves. We'll cover why this might be at the end of this paragraph. Our interaction between "Democracy Index" and "Immigrant Stock" in model 2.4 showcases an interesting aspect of the relationship between immigration and trustworthiness. We saw that countries with a lower value of the democracy index variable had a negative reaction to higher levels of immigration, while the opposite was true for countries with a higher democracy index. Thus, it seems that countries with weaker democracies react more negatively to higher levels of immigration, while stronger democracies seem to benefit from it. This is also supported by empirical evidence done in previous studies where one can see a tendency for more developed countries to have a more positive (or less negative) effect of immigration on general trust (Dinesen, Schaeffer & Sønderskov, 2020, s. 452). Going back to the fact that immigrant stock shows a significant negative result in Model 2.4. We hypothesize that the reason behind this is our larger ratio of Eastern European countries in our analysis (18/31). We saw in our interaction between the Immigrant Stock and Democracy Index that countries with a lower democracy index had a more negative reaction to a higher level of immigration. The countries with a generally lower democracy index hold the majority of data in our analysis, and therefore, our immigrant stock variable indicates a negative result independently. We also have conflicting effects between the two waves on the Gini coefficient, our Eastern Europe variable, and immigration stock. We hypothesize that one of the reasons behind these conflicting results is the difficulties of tracing values on a country-level basis. The trustworthiness variable in essence focuses more on individual values and beliefs, which relies more heavily on culture than economics or policies.

As we have seen, a higher level of immigration seems to have some conflicting effects on the different aspects of social capital. The overall tendencies, however, are mostly alike. The effects are (1) almost exclusively positive in the cases where significance was found, (2) in most cases diminished by the presence of a control variable for GDP, and (3) stronger in our 2017 wave compared to the 2008 wave. Firstly, some context for our first tendency. These results can only be interpreted in a "broad strokes" generalization of all European countries in the European Values Survey in our chosen waves. The relationship between immigration and social capital is heavily influenced by institutions, policies, culture, and other in-country effects. One aspect of this is also seen in our second tendency. We hypothesize that the reason GDP per capita takes away a portion of immigration stock significance is that countries with a higher GDP per capita and more democratic institutions already have a high level of social capital in place, and therefore, take in more immigrants. The inclusion of a variable for GDP per capita reflects this relationship whereas we've seen that GDP has a positive effect on all aspects of social capital.

There is much to be said about our third tendency, the role of the time perspective. This is closely tied to our H2 which covers immigration having a progressively more positive effect over time. For one we can draw parallels to our earlier discussion surrounding conflict- and contact theory. Where conflict theory would have it that the majority group would feel threatened by the “outsiders”, which can lead to mistrust and intolerance towards these outsiders and solidarity with one’s group (Sumner, 1906). Whereas contact theory claims that an increasing amount of individual contact between members from the different groups diminishes these symptoms (Allport, 1954). The results of our analysis, however, do not give any clear indicator as to proving either of these theories “right”. We could not find evidence of the effects of immigration having been positively strengthened between 2008 and 2017 on social capital as a whole. Despite the effects of immigration being overall stronger in our 2017 wave, this could be the result of several things tied to the other variables and the composition of our models and, therefore, not something to take at face value. We saw, however, immigration having a significant positive change of effect on our trustworthiness variable. One could also argue that our Eastern European variable independently showcases the effect of the time perspective. Eastern European countries have, in modern terms, less experience with multicultural societies, which in turn should represent countries where immigration has a more negative effect, compared to our Western European countries. This is also exemplified in our interaction between Eastern European and Immigrant Stock where we saw that Eastern European countries have a negative reaction to a higher level of immigration in the context of our interpersonal trust variable. However, this does not outweigh the findings of our t-value testing between the two waves.

5.2. Relative deprivation as an omitted variable

Based on previous theoretical arguments and empirical data, greater income inequality should have a negative effect on social capital. This is exemplified in our interpersonal trust and organizational membership, where a rise in the Gini coefficient results in lower values in both aspects. In our trustworthiness aspect, however, we saw that a rise in the Gini coefficient gave grounds for a higher level of trustworthiness, but only in our 2008 wave. Overall, in countries where there is greater economic insecurity, there should be produced higher levels of relative deprivation, which again should lead to residents being more threatened by immigration, and therefore withdrawing more from collective life (Dinesen & Sønderskov, 2012; Putnam, 1997). To test this effect, we included an interaction between immigrant stock and the Gini coefficient. We also purposely included the interaction in Model 2.3 with the GDP per capita variable as we know the difference in output one can get by omitting a control for GDP in this context. We did, however, not gain any significant insight into this effect in our analysis. The most prevalent effect of greater income inequality in the context of social capital, based on previous empirical data (Dinesen, Schaeffer & Sønderskov, 2020), is the effect on generalized trust. Our interpersonal trust variable, covering generalized trust, is also where we saw the closest to a significant effect. Our interaction held the 10% significance level at a p-value of 0.088 at an odds ratio of 0.993 in our 2017 wave, showing a negative effect of a rise in the Gini coefficient, which agrees with previous empirical evidence. The interaction shows that the effect of immigration on interpersonal trust is more negative (or less positive) in contexts of greater income inequality, but given the p-value, we cannot deem it significant in our analysis. The effect of this variable is also very weak, but we include it to showcase that we could at least trace what previous studies have found. One should also have reasons to believe that this effect would show itself in our organizational membership and trustworthiness variables, which it did not.

We hypothesized in H3 that relative deprivation was an omitted variable in the relationship between interpersonal trust and immigrant stock, having a more negative reaction in Eastern European countries. We attempted to measure this effect by comparing Eastern and Western European countries in an interaction with immigrant stock. Regarding our interpersonal trust variable, the interaction indicated that the Western countries have a more positive reaction to a higher level of immigrants, while Eastern European countries had a negative reaction in the context of interpersonal trust. Going back to Dinesen, Schaeffer & Sønderskov's metanalysis from 2020, this coincides with their evidence, which shows that more developed countries have a more positive (or less negative) reaction to higher levels of immigration on generalized trust. In model 2.5, however, in which we conducted this interaction, our immigrant stock variable was not significant independently. The previous theoretical and empirical data on this field points to the interaction having roots in practice, but our immigrant stock showing insignificant results forces us to not deem the effect of the interaction significant in our analysis. The lack of significance in our previous interaction between immigrant stock and the Gini coefficient also makes a discussion isolating the effects of relative deprivation in this context highly speculative. We also wanted to map out the effects of relative deprivation in the different regions where we saw that both Eastern and Western Europe has a negative reaction to a rise in the Gini coefficient. Where effect was stronger in Western Europe, showing that higher levels of income inequality are more detrimental to interpersonal trust in this region.

In the case of organizational membership, we could not trace a significant result from our Eastern and Immigrant Stock interaction, while we saw the same tendency in our Eastern and Gini interaction where higher levels of income inequality are more detrimental to organizational membership in Western European countries. Finally, regarding our trustworthiness variable, we could not trace any significant results that could point to that higher income inequality has a negative effect on the relationship between immigration stock and social capital. Neither could we trace any influence a rise in the Gini coefficient could have regarding the comparison between Western and Eastern Europe. As an overall assessment of our testing regarding both our Immigrant Stock and Gini and our Eastern and Immigrant Stock interaction, we would have to conclude that we could not find support for our claim that relative deprivation is causing a more negative effect of higher immigrant stock in Eastern European countries, compared to Western European countries, on social capital.

Lastly, we also want to touch upon the actual scale of effect the variables included in our models have. Looking at our dependent variables and our Model 2.1 – 2.5 we can look to the ICC calculations for more answers to this question. For our interpersonal trust variable, we see a range from 0.136 to 0.037, 0.134 to 0.091 for organizational membership, and 0.073 to 0.40 in our trustworthiness variable. As touched upon earlier, in the case of interpersonal trust this means that 3.7% to 13.6% of the variation can be explained at the country level, varying on the variables included in the models. As previously mentioned, the ICC does not consider omitted variables in the correlations but calculates the ratio of the country- and individual-level variance explained by our models and only the variables included here. Most of our models keep an ICC over 0.5 (5%), a limit where if the number were to be below this, the results of the model could be ignored (Ringdal & Wiborg, 2017, p. 228). Model 2.5 in both our interpersonal trust and trustworthiness variable has an ICC under the 5% level something that we have to consider when interpreting the results. Having a low ICC in this field of research is, however, not surprising. It is common in the social sciences that the explained variance of the individual level is between 80 and 95% (Eikemo & Clausen, 2018, p. 213).

5.3. Strengths and weaknesses

The core complexity of measuring social capital and the effects thereafter using a given set of variables gives room for speculation, as it has since research on this field began. Exemplified by the metanalysis by Dinesen, Schaeffer, and Sønderskov in 2020 the effects of a rise in immigration, especially on trust, vary greatly between different studies with independent definitions and methodology. This points in the direction of the choice of variables representing social capital being detrimental to what result you are going to get. As a result of researching a large number of studies we eventually chose interpersonal trust, organizational membership, and trustworthiness as three dependent variables covering three different aspects of this social capital. This selection was heavily influenced by the data availability and comparability between different variables in the 2008 and 2017 waves of EVS. We wanted to choose the best variables in the context of the concept it was meant to represent, at the same time as the variables' question structure was similar enough to be comparable between the two waves. We also wanted to keep the dependent variables separated, as we know from the earlier theoretical and empirical data that a rise in the level of immigration can have different effects on different aspects of social capital.

Additional interesting layers to this field of research, that we could not cover in this thesis, are the variation in results based on regions and the interconnectedness between the macro and micro levels of research. We know that immigration's negative effect on social capital is more prevalent in studies done in the US, most famously Putnam's, compared to studies done in Europe (Kesler & Bloemraad, 2012; Dinesen, Sønderskov & Schaeffer, 2020). While countries in Europe seem to be experiencing more positive outcomes, there is a high level of complexity to this relationship and creating a sufficient outline of the interconnected variables is not easy. Taking the most recognized case in Europe as an example, Denmark, where they saw a dramatic increase in generalized trust – from 47% in 1979 to 79% in 2009 (Dinesen, 2011). This, while being a country that has diversified at a rapid pace since the 1980s. Further, a rise in ethnic diversity in workplaces and neighborhoods was also found to *negatively* impact generalized social trust in Denmark during this period (Dinesen & Sønderskov, 2012), highlighting the sometimes-dramatic relationship between the micro-level and over-time macro-level aspect of the effect of immigration on social capital.

6. Conclusion

Previous research has been inconsistent on whether immigration has a negative or positive effect on social capital, even on the presence of its correlation (Dinesen, Sønderskov & Schaeffer, 2020). While the effects of immigration in a year-specific study are hard to trace, however, both the theoretical and empirical evidence points to the correlation being more positive over time (Putnam, 2007; Kesler & Bloemraad, 2012). There have also been empirical data showing that the effects of relative deprivation, or greater income inequality, should have a negative impact on the effects of immigration on social capital (Sakketa, 2018). Through this thesis, I have aimed to create a better understanding of how immigration affects social capital on a country-level basis in Europe using newer data, while also attempting to capture the effects over time. I have also attempted to isolate the effects of relative deprivation as a cause of why immigration has a more negative correlation with social capital in Eastern Europe, compared to Western Europe. The findings in this thesis do not render any concrete answer to whether immigration has a negative or positive effect on social capital in Europe. Isolating the effects on interpersonal trust, however, we have sufficient evidence to believe that immigration positively correlates on a country-level basis in Europe. We have not found sufficient evidence that immigration correlates with either organizational membership or trustworthiness. Therefore, we reject our (H1) as we have not been able to provide evidence of this correlation, positive or negative.

Considering the time perspective, where we should see a more positive correlation over time, we have more interesting findings. Well-founded in the theoretical arguments and empirical data is that we should, over time, see the beginning of a "mending" period where the initial negative socio-economic consequences of immigration are diminished (Putnam, 2007; Kesler & Bloemraad, 2012). This means that we should see a more positive correlation between immigration and social capital between our 2008 and 2017 waves, where the effects themselves don't necessarily have to be positive. However, after conducting the appropriate testing of these effects we found that the change of effect between the waves was not significant in the case of interpersonal trust and organizational membership. As a result of these findings, we conclude that immigration does not have a more positive correlation with social capital over time, and that (H2) is rejected as there was not a significant positive change of effect in all aspects.

We also wanted to expand our thesis to test whether the higher levels of relative deprivation in Eastern Europe are the cause of a more negative correlation between immigration and social capital in this region compared to Western Europe. We tested this with two interactions on all our dependent variables, both between Eastern Europe and the Gini coefficient, and Eastern Europe and Immigrant Stock. Before this, however, we wanted to establish the basic negative correlation between greater income inequality (the Gini coefficient) and a higher level of immigration (Immigrant Stock), which we for all three aspects of social capital - could not. We tested our interactions involving Eastern Europe and gained some insight into the difference in effect immigration has in this region. We established that Eastern Europe has a more negative reaction to a higher level of immigration compared to Western Europe on social capital but could not isolate relative deprivation as the cause of this relationship. Based on our findings, we conclude that relative deprivation does not explain the difference in effect immigration has on social capital in Europe, causing a more negative effect in Eastern Europe, and (H3) is, therefore, rejected.

Our thesis is mostly in line with the overall tendencies of previous research (Putnam, 2007; Dinesen, Sønderskov & Schaeffer, 2020; Keasler & Bloemraad, 2012). Establishing the correlation between immigration and social capital is difficult, especially in a way that considers both individual and country-level effects. By doing a generalized study of the effects on a country-level basis in Europe we saw many of the same tendencies in Dinesen, Sønderskov, and Schaeffer's meta-analysis, where the results are inconsistent both between different studies and amongst the different aspects of social capital. Even though we could not find sufficient evidence surrounding relative deprivation, we also made an interesting case out of our Eastern Europe variable where it can be viewed as a collection of countries in an earlier state of the relationship between immigration and social capital compared to Western Europe. Drawing parallels to Putnam's (2007) prediction of the initial negative consequences of immigration. Relevant further research in this field will surround using even newer waves of data, like a possible 6th wave of the European Values Study. This could showcase a positive correlation between immigration and social capital over a larger period of time. Newer waves of data would also help in the case of connecting the micro and macro-level effects between immigration and social capital, where new dynamics could be discovered and a more sufficient assessment of the relationship as a whole established.

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Attachments

Attachment 1: Figure 1: Interaction between Immigrant Stock and the Gini Coefficient in Model 2.3 (Interpersonal Trust).

Attachment 2: Figure 2: Interaction between Immigrant Stock and Democracy Index in Model 2.4 (Interpersonal Trust).

Attachment 3: Figure 3: Interaction between Immigrant Stock and Eastern Europe in Model 2.5 (Interpersonal Trust).

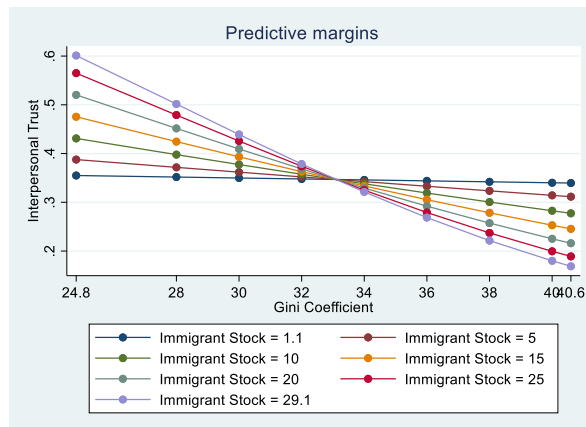
Attachment 4: Figure 4: Interaction between the Gini Coefficient and Eastern Europe in Model 2.5 (Interpersonal Trust).

Attachment 5: Figure 5: Interaction between the Gini Coefficient and Eastern Europe in Model 2.5 (Organizational Membership).

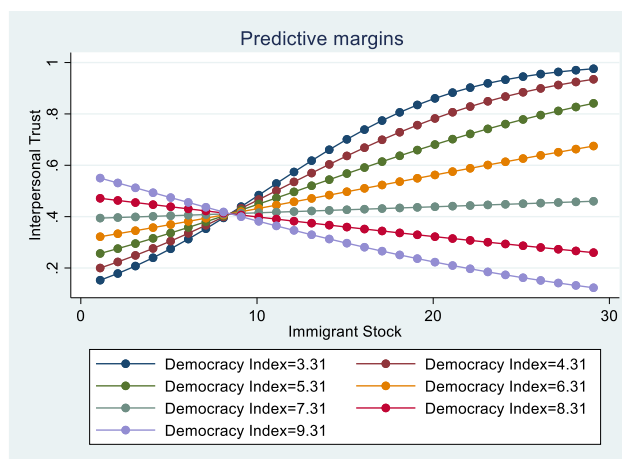
Attachment 6: Figure 6: Interaction between Immigrant Stock and Democracy Index in Model 2.4 (Trustworthiness).

Attachment 7: Immigration Stock by country in percentages (UN, 2019).

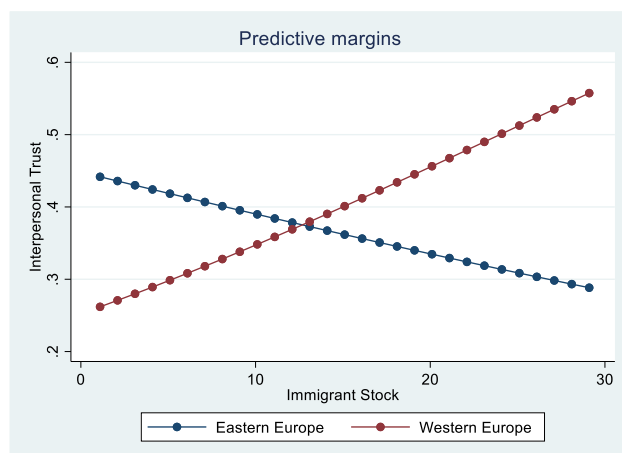
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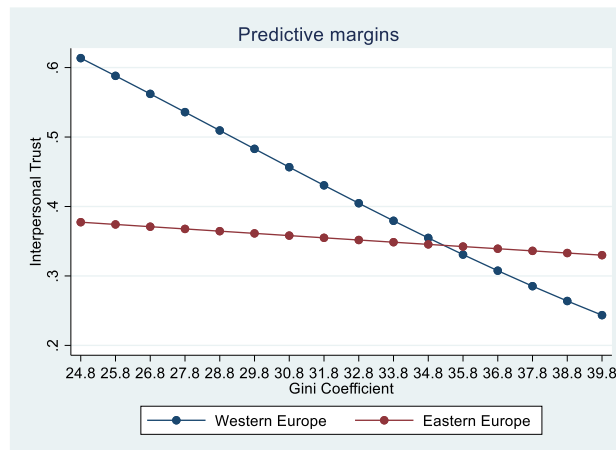
Attachment 2: Figure 2: Interaction between Immigrant Stock and Democracy Index in Model 2.4 (Interpersonal Trust).



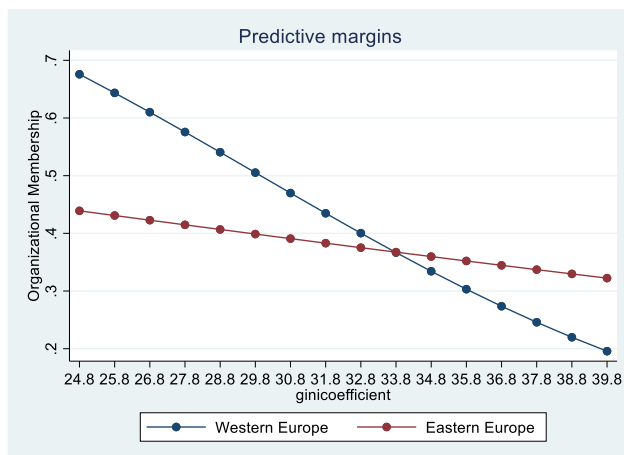
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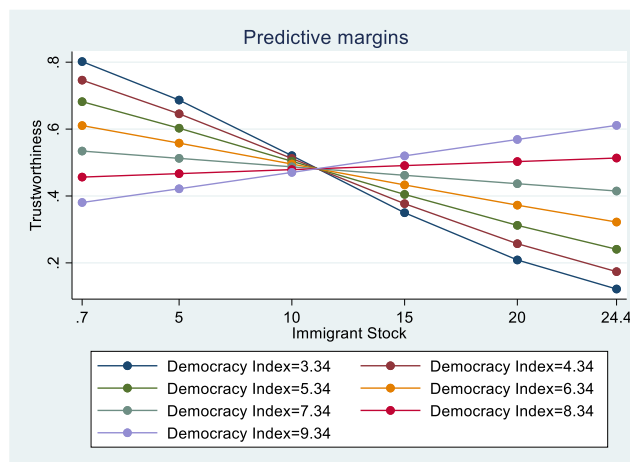
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Attachment 6: Figure 5: Interaction between Immigrant Stock and Democracy Index in Model 2.4 (Trustworthiness).



Attachment 7: Immigration Stock by country in percentages (UN, 2019).

Country	2005	2017	Change
Albania	2.1	1.8	-0.2
Austria	13.8	17.2	+3.4
Bosnia & Herzegovina	1.3	1.1	-0.2
Bulgaria	0.8	1.7	+0.9
Belarus	11.6	11.5	-0.1
Croatia	13.2	13.3	+0.1
Czech Republic	3.1	3.9	+0.8
Denmark	8.1	10.5	+2.4
Estonia	17.2	14.8	-2.4
Finland	3.7	5.7	+2
France	11	12.2	+1.2
Germany	11.5	12.5	+1
Hungary	3.6	4.9	+1.3
Iceland	8.6	11.8	+3.2
Italy	6.8	9.6	+2.8
Lithuania	6	4.6	-1.4
Montenegro	13	11.4	-1.6
Netherlands	10.6	11.8	+1.2
Norway	7.8	14.4	+6.6
Poland	1.9	1.6	-0.3
Portugal	7.3	8.3	+1
Romania	0.7	1.4	+0.7
Russian Federation	8.1	8.0	-0.1
Serbia	8.7	9.1	+0.4
Slovakia	2.4	3.3	+0.9
Slovenia	10.9	11.5	+0.6
Spain	9.3	12.6	+3.3
Sweden	12.5	17.2	+4.7
Switzerland	24.4	29.1	+4.6
North Macedonia	6.2	6.3	+0.1
United Kingdom	9.8	12.8	+4

