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# Immigration, Welfare States & Violent Crime: An Empirical Investigation, 1990-2018

A cross-national study on the immigration and  
crime relationship

Master's thesis in Political Science  
Supervisor: Indra de Soysa  
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Faculty of Social and Educational Sciences  
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## Abstracts

The world is increasingly being more interconnected by globalization and have brought cultures, languages, and people closer together. The International Organization for Migration reported in 2020 that the number of international migrants has increased significantly over the past five decades. Many of them have relocated in the Industrialized West because of humanitarian crises, poverty, job opportunities, and climate change (IOM, 2020, p. 21). But not everyone is equally excited about this development, particularly right-wing populists that claim that immigrants are a major cause of violent crime and terrorism. With the recent surge of support to right-wing political parties controlling the inflow of immigrants has thus become a central and controversial political issue. Many wishes for stricter immigration policies. Looking at the statistical relation between the immigrant stock and homicide rates in a global sample including 147 countries and 23 industrialized countries, the results show no empirical support for a connection between larger stocks of immigrants and homicide rates. Neither is there evidence to suggest that countries that are stronger welfare states and host greater amounts of immigrants suffer higher crime rates, a proposition related to arguments about migrants as “welfare magnets”. In fact, higher migration rates within stronger welfare states among the industrialized countries shows a statistically significant lower homicide rate, suggesting that higher welfare does not attract more problematic immigrants.

Verden blir stadig mer sammenkoblet gjennom globalisering som har brakt kulturer, språk og mennesker nærmere hverandre. The International Organization for Migration rapporterte i 2020 at antallet internasjonale migranter har økt betydelig de siste fem tiårene på grunn av humanitære kriser, fattigdom, jobbmuligheter og klimaendringer (IOM, 2020, s. 21). Mange av dem har flyttet til den industrialiserte Vesten, men ikke alle er like begeistret over denne utviklingen. Blant annet hevder høyrepopulister at innvandrere er en sentral årsak til voldelig kriminalitet og terrorisme. Økt politisk støtte til høyreorienterte politiske partier ført til at innvandring er blitt en sentral og kontroversiell politisk sak hvor mange ønsker en strengere innvandringspolitikk. Ser man på den statistiske sammenhengen mellom innvandrerbestanden og drapsrater i et globalt utvalg som inkluderer 147 land og 23 industriland, viser resultatene ingen empirisk støtte for en sammenheng mellom større bestand av innvandrere og drapsrate. Det er heller ikke bevis som tyder på at land som er sterkere velferdsstater og huser større mengder innvandrere lider av mer kriminalitet, et forslag knyttet til argumenter om migranter som «velferds-magneter». Faktisk viser høyere migrasjonsrater innenfor sterkere velferdsstater blant industrilandene en statistisk signifikant lavere drapsrate, noe som tyder på at høyere velferd ikke tiltrekker seg mer problematiske innvandrere.

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# Introduction

Following major conflicts and economic crisis in developing countries in both North Africa and the Middle East, a mass displacement of migrants in recent decades have made immigration an even bigger subject for policymakers around the world that it previously has been (Pew Research Center, 2016). Because migration still is a pressing issue that is increasingly getting more media attention it is worth asking what kind of effects migration might have on recipient countries. If one is to believe the right-wing media and politicians immigration are going to cause a list of societal issues, and their rhetoric has made immigration something that inspires both fear and confusion among native populations. The political discussions about how to react and deal with the rapid increase in international migration is often heated among politicians and the public, especially within industrialized countries in North America and in Europe. Controlling the inflow of immigrants has thus become a central issue in many of these advanced nations and have turned migration into to a controversial topic in both public and political discourses (Steger, 2017). The International Organization for Migration reported in their 2020 migration report that the number of international migrants has increased significantly in the last five decades (IOM, 2020, p. 21). Consequently, this have led to greater ethnic diversity in the population worldwide. The majority of people that migrate internationally are related to work, family reunions and studies, but a great number of migrants also happens to be refugees (UNODC, 2019). And even though that they comprise a relatively small percentage of all migrants globally, they are often the most in need of assistance and support (ibid.; United Nations, 2020, p. 1).

Yet only 2 per cent of the world's population lives outside of their country of origin, immigration reshapes societies and politics in diverse ways. But the important question is to understand how immigrants either contribute towards or act as a burden on host countries. One of the most common concerns among people critical to immigration is that immigrants will increase unemployment rates among native-born citizens because they are "stealing" jobs by accepting lower wages (Nowrasteh & Powell, 2021, p. 22), another is that immigrants exploit welfare systems by abusing the goodwill of natives. Others are concerned that immigrants bring with them their own "bad" cultures, ideas, or other factors that will undermine and destroy the country's economic and political institutions as well as national identity (Nowrasteh & Powell, 2021; Wright & Esses, 2018). But opinion polls shows that there is also an increasing concern

about immigrants being a major cause of crime, particularly also that Muslim migrants pose a unique risk due to terrorism of groups such as ISIS (Faris, Roberts, Etling, Bourassa, Zuckerman & Benkler, 2017; Gonzalez-Barrera & Connor, 2019). Several nations are therefore split on the opinion on whether immigration is a strength or a burden to their nation as some see them as people abusing on the goodwill of others and causing economic problems and crime, while others do not (Budiman, 2020). Pew Research reports that the majority of the population in 10 of the countries with most immigrants in the world say that immigration strengthen their country, rather than burden it (United States, Germany, the United Kingdom, France, Canada and Australia - each hosting more than 7 million immigrants per 2017). However, in other countries, such as Hungary, Greece, South Africa, Russia, and Israel, majorities see immigrants more as a burden than a strength (each have fewer than 5 million immigrants) (Gonzalez-Barrera & Connor, 2019). But are these concerns based on sound statistical evidence, or are they mostly based on ideology, loose correlations and media driven opinion based on exceptional experiences? This thesis seeks to address this question and answer the question of whether international migration increases violent crime in recipient countries and how host country economic conditions, such as the strength of the welfare state, might explain how crime is either prevented or exacerbated.

Migration flows from poor countries to the rich seem also not to be homogenous nor random (see figure 1). Seemingly, migrants are tending to cluster into states that display higher levels of economic and institutional development, like Scandinavian welfare states, Germany, the US, France, and the UK (Roupakias & Dimou, 2021). Seemingly, questions of *who* and *why* are important question as to *where* most migrants go. In relation to the increase in international migration, there has been growing interest in understanding the consequences of immigration to welfare states. There is a widespread concern among right-wing populists that “bad” immigrants are being “welfare magnets”. This type of migrants is attracted towards the strongest welfare states due to generous welfare and seeks to take advantage of the goodwill of others. This implies that that generous welfare states are attracting the “worst type” of immigrants, i.e., the so called “welfare magnets”. Based on the Welfare State Hypothesis (Borjas, 1999; Milanovic, 2016), these migrants are characterized as young males, low-skilled, and are more likely to stay unemployed. As these are among criminologists’ typical characteristics also among criminals, they may cause homicide rates to increase. If generous welfare states produce a “moral hazard” and “adverse selection” attracting “bad immigrants”



then testing a global sample could reveal some general impacts of welfare strength on the immigration – crime relationship.<sup>1</sup>

## Structure

This thesis addresses the right-wing populist claim that international migration is a major cause of crime. It is structured into eleven main sections (including this one) with subchapters: Introduction, Structure, Research Question, International migration in a globalized world, Theory, Method and Dataset, Variables Description, Results and Analysis, Discussion, and Conclusion. The research question will be addressed in the following section, and in International Migration in a Globalized World a representation of some stylized facts about immigration, a description of what an immigrant is, right-wing populism, people's resilience to immigration, and previous research on the immigration – crime nexus. The Theory section will represent the thesis' theoretical background: social disorganization theory, social support theory, and the welfare magnet hypothesis. The Method and Dataset will represent the method and data packages used, while the Variables Description section will consist of a list of variables used in the models. The following chapter will represent and analyze the models results, before further discussing them more thoroughly in the Discussion section. Lastly in the Conclusion section, some concluding remarks at the end. Tables and figures are also presented in the appendix.

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<sup>1</sup> The terms “Moral hazard” and “adverse selection” are in relation to the problem of private information among migrants wanting to immigrate into another country. Immigrants may lie to authorities when migrating to gain an advantage over others, and thus would “liars” be rewarded compared to “genuine” people. They then become an adverse selection of migrants as they end up gaining over others and the “genuine” people on the list end up elsewhere (Kaasa, et al. 2021). See Ginzburg, T. and Simpser, A. (2017) Circles of Trust: A Proposal for Better Migrant Screening for more information.

# Research Question

Immigration is a complex issue, and there is no indication that the current migration flows will decrease. It is rather estimated to increase as the world continues to be further webbed together through globalization (UNODC, 2019). Therefore, several governments seek to restrict the inflow of poor and uneducated migrants, particularly from poorer continents of the globe, such as Africa and the Middle East. In all this, right-wing politicians are using the immigrants as scapegoats when it comes to societal issues. The Austrian linguist Ruth Wodak writes widely in her book *Politics of Fear* (2015) about how right-wing politicians in today's political atmosphere often associate immigrants with many societal issues, such as unemployment, high state expenditures, Islamization, terrorism, and an increase in crime rates (and more). Interestingly, the immigration – crime relationship has been of great interest to a broad range of social scientists and criminologists, but the growing body of empirical research has given little empirical evidence on the alleged connection between immigrants and crime. Neither in North America nor among other industrialized countries is there much evidence to suggest that immigrants cause crime, especially violent crimes (Ousey and Kubrin, 2009; Leiva et al., 2020; Miles and Cox, 2014; Wortley, 2009). In fact, a few studies suggests that immigration has long-term beneficial effects on the recipient countries, including a reduction in crime (Nowrasteh, 2015; Wortley, 2009; Ousey and Kubrin, 2009).

If we are to believe the scientific research instead of the alleged relationship between immigration and crime taken by media and right-wing politicians, it shows that there is a gap between perceptions and scientific evidence related to the immigration-crime link. One could suspect that right-wing arguments are not more than based on ideology, a few correlational studies, and private experiences rather than careful statistical inference. This is particularly concerning, because misinformation is increasingly spreading, and it begins to serve as a basis for policy making and practice in democratic countries (Iyengar, 2019). When information can be constantly digested through 24/7 news outlets and social media it is no longer a concern that voters today are *ill-informed*, but rather that voters are being *misinformed* (Iyengar, 2019).

Misconceptions about reality are damaging for any society and nation, which means that there is still a desperate need for causal questioning when it comes to immigration. The research question of the thesis is:

**Does international immigration increase homicide rates?**

Homicides is a global phenomenon and is in earlier research on the immigration and crime relationship often used as a proxy for violent crimes in society (Noel & de Soysa, 2020; Neumayer, 2003, p. 623). Although, to date most of the previous research examining the impact of immigration on violent crime (that are in English at least) are mostly only focusing on U.S. metropolitan areas or European states (Bircan & Hooghe, 2011), and evidence available from countries outside of those two continents are seemingly limited. However, these are rich and prosperous countries that are institutionally strong, and cross-national studies on the immigration-crime nexus that includes low- and middle-income countries such as Turkey, Colombia, Thailand, and Ukraine are limited. This is unfortunate because these countries are also hosting large numbers of immigrants (UNODC, 2019). By including these countries in research on whether immigration is a major cause of crime one has a larger source of variance to explore. This study aims to fill some of the gap in cross-national research and therefore examines the issue of international migration and crime in a total 147 countries over a 27-year period.

**Relevant questions that can help answer the research questions in this thesis are:**

- How can immigration lead to more violent crimes?
- How may social support affect crime rates?
- Do welfare states attract “bad” immigrants that cause crime rates to go up?

# International Migration in the Globalized World

## Explaining International Migration

Gunnhild Odden, the author of *International Migrasjon* (2018) writes that it can sometimes be difficult to understand what a migrant is and who should and shouldn't be considered as such. To give a greater clarification and to avoid confusion surrounding the term this section will give a short elaboration of what the thesis considers as an *international migrant*. First of all, the thesis only addresses *international migration*, which excludes internal migration. Gunnhild Odden chooses to define *migration* as «geographical mobility across national borders» (Odden, 2018, p. 22), and further defines an *international migrant* as «an individual who has left their home country for to settle in another country» (Odden, 2018, p. 22). Her definition of an international migrant is similar to the UN's definition from the UN's International Migration Report 2017, in which an international migrant is defined as: “a person living in a country other than his or her country of birth” (UNODC, 2019, p. 46). The distinction between the term's migrant, emigrant and immigrant can also be a bit confusing. For greater clarification, an individual become an *emigrant* when he or she are moving outside their home-country's border to live in another and becomes an *immigrant* when he or she come into another country to live permanently. To *migrate* is simply to be moving, like birds and animals might do in terms of seasonal migration.

But international migration can also be identified differently. United Nations Office on Drugs and Crime divides migrants into four main categories: (1) economic migrants (individuals who migrate to work legally in another country); (2) temporary migrants, such as tourists and students; (3) asylum seekers and refugees; and (4) undocumented migrants who have entered the country illegally/ undocumented, or who arrived with a visa and never left, or who were denied refugee status (UNODC, 2019, p. 46). This thesis' sample of international migrants will not address (2) temporary migrants such as tourists and students, only the other three. There may also be a need for a further elaboration of the distinctions between the immigrants considering generational differences. Normally, we differentiate between first-generation immigrants and second-generation immigrants. First-generation immigrants are immigrants born in a country other than the country to which they immigrated, while second-generation immigrants are immigrants born to two parents who emigrated to the country from

their parents' country of birth. Third-generation immigrants will logically be children of second-generation immigrants but will not be part of this thesis' statistics. This is important to point out because data collected by the WDI on the *total immigrant stock* consists of first- and second-generation immigrants.

## International Migration – The Status Quo

The starting point when discussing migration is usually numbers. This is because it assists in providing a better overview of all information regarding the current situation. This section therefore seeks to contribute to a better understanding of the changes in scale, emerging trends and shifting in migration patterns as well as demographics related to international migration. The chapter draws upon current statistical sources compiled by the International Organization for Migration (IOM), the United Nations High Commissioner for Refugees (UNHCR), The United Nations (UN), and the United Nations Office on Drugs and Crime (UNODC).

As technology moves forward and the world becoming more globalized and interdependent it has become easier than ever to transport people and goods from one side of the world to the other. This has contributed to bring the world closer together by internationalizing economies through trade, tourism, and the import of foreign labor. And as mentioned in the introduction, the number of international migrants is increasing; but why? Some explanations to that are the world has also become more populated, the world climate is changing in a rapid pace and humanitarian crisis' like civil wars are forcing people to move, and the easier access to phones, computers and the internet gives people the knowledge of a better and safer world somewhere else than in their home country. Figures taken from the UN's International Migration Report estimated that there were around 173 million international migrants in 2000 and have increased since then to 281 million in 2020 (United Nations, 2020, p. 1; UNODC, 2019). The high increase in international migrants is thought to be due easier access to transportation and better work- and educational opportunities and living standards in industrial countries in Europe and North America. The majority of people that migrate internationally are related to work, family and study that are not fundamentally challenging the countries they enter (UNODC, 2019), but a great number of migrants also happens to be refugees. And even though that they comprise a relatively small percentage of all migrants globally, they are often the most in need of assistance and support (ibid.; United Nations, 2020, p. 1). This have made refugees a particularly controversial topic as some wants to help and give them that support, while do not.

The impacts of climate change are thought to trigger *climate refugees* (UNCHR, 2021). Changes in climate are expected to worsen living condition in many developing countries, such as in Africa, forcing a great number of refugees to be displaced. Limited natural resources like drinking water and food are becoming scarcer, even in countries that are hosting refugees. Increased frequency of extreme weather such as abnormally heavy rain, prolonged droughts, desertification, and sea-level rise are already causing more than 20 million people to leave their homes and move to other areas each year within their nation (UNCHR, 2021). UN's climate report in 2021 demanded immediate action combating climate change, but only time will tell if we are to make it before entire nations will be unlivable in the near future, forcing a great number of people to migrate further north and most likely trying to end up in the industrialized West. But most notably are refugees wanting to escape from war, human rights violations, and poverty.

For example, the relentless fighting in the Middle East and northern Africa following the Arab Spring in 2011 triggered a huge humanitarian crisis when Syria went into a civil war and forcibly displaced over 6 million of its total population of 23 million people. Most ended up in various camps in neighboring countries surrounding Syria such as Jordan, Lebanon, Iraq, and Turkey. The massive population that was now on the run put great strain on neighboring countries in the form of material resources. This developed a significant cultural tension between natives and refugees because big parts of the domestic population saw them as "outsiders" draining on their country's resources (Steger, 2017, p. 68). Many of them later attempted to get into the European Union by traveling through Turkey and crossing the Mediterranean Sea over to Greece, preferably ending up in one of the more prosperous states within the EU such as the Scandinavian countries and Germany (Steger, 2017, p. 70). But to reach those countries they had to embark on a long journey through not only Turkey and Greece, but further through Macedonia, Serbia, Croatia, Hungary, and Austria, till they eventually arrived in Bavaria in hope of getting a swift approval of their residence applications (Steger, 2017, p. 70). Not all countries were not too excited by the great number of migrants, and countries such as Hungary, Poland, and Belarus tried to stop it by erecting border fences stretching over many miles but proved in the end to be ineffective in stopping such gigantic population movements (Strønen, Carlsen, Bruland, & Jarstad, 2021; Steger, 2017, p. 70).

Most refugees come from developing countries in Africa, Middle East, Asia, and Latin America (See figure 1) that wish to start a new life in Western. Many of them are willing to take great risks by putting both themselves and their loved ones in danger rather than to stay in their homeland (e.g., Afghanistan, Libya, Somalia, and Syria). Many migrants have died trying

to get to safety, either by drowning in the Mediterranean Sea or because of the actions of unscrupulous human traffickers (Anderson, 2016). In the case of Europe, the Schengen Agreement provides 'open border' among the EU core countries, but when faced with such a gigantic population movement (1.3 million) it proved to lack the robustness and comprehensiveness necessary for coping with this crisis (Pew Research Center, 2016; Steger, 2017, p. 70). The Syrian refugee crisis have thus revealed that EU's current institutional immigration arrangements was inadequate to deal with such a movement based on national preferences. Many were not happy about the arrangement and some member countries even chose to withdraw for the agreement and instead reinstated systematic border control in hope of regaining immigration control (ibid.). Others chose to place arbitrary limits on how many refugees they wanted to process and thus refused a more coordinated approach together with other member states. As a result, the huge influx of migrants as of the Syrian Refugee crisis ended up baring deep political divisions over migration policies among EU member states (Steger, 2017, p. 70).

Covid-19 has slowed down much of the ongoing migration, but it is still estimated that the increase from the time before the epidemic went from 271 million in 2019 to 281 million international migrants in 2020 (United Nations 2020, p. 1; IOM, 2020, p. 21). The UN also report that Europe is the most popular region with the largest number of international migrants per 2020, with an estimated number of 87 million in total (United Nations, 2020, p. 9). Northern America hosts the second largest population of international migrants, estimated 59 million, followed by Northern Africa and Western Asia's 50 million in total (See figure 1). Other regions seem to have a much smaller number of migrants.



Figure 1: An overview of global migration patterns. Main routes. (Chwastyk & Williams, 2015)

## The Politics of Fear

As the number of international migrants are increasing, the topic of the effects on immigration has gained much attention in richer advanced nations in both North America and in Europe, and not all are equally excited about the development. Most notably are right-wing populists in both Europe and in the United States that are spreading hard claims about recipient countries will suffer immensely with a great influx of migrants. As mentioned in the introduction, Ruth Wodak (2015) writes widely about how right-wing politicians in today's political atmosphere often associate immigrants with a lot of negative societal issues and how it has led to a surge of support for right-wing political parties. These issues have led to an increase in prejudice, racism, neglect, and violence against foreign-born citizens (Booth, 2019; BBC News, 2019; BBC News; 2018a; Ford, 2021). One of the most known right-wing populist leaders in recent times is the former American President Donald J. Trump.



He has had numerous statements about undocumented Mexican migrants being *illegals* and thus easily being able to frame them as drug lords, criminals, and rapists (Scott, 2019). For example, he once said:

“When Mexico sends its people, they’re not sending their best,” he said. “They’re not sending you. They’re not sending you. They’re sending people that have lots of problems, and they’re bringing those problems with us. They’re bringing drugs. They’re bringing crime. They’re rapists. And some, I assume, are good people.” (Scott, 2019).

Seemingly, there is now a distinction between migrants arriving from “shithole countries” that are labelled “bad” – or “bad hombres” as Trump referred them as (Politico, 2017), while immigrants from for example Norway are labeled as “good” (BBC News, 2018c). He has also on several occasions further claimed that America is a “dumping ground” for Mexico’s criminal element”, dehumanizing a great number of human beings in the process (Chattanooga, 2015). The dehumanization of immigrants has been shown to be a common strategy among the populists and alienating them by drawing a clear line between who is "us" and who is "them" (Boréus, 2020). To the people, this paints a picture of an “enemy” that needs to be combatted.

In relation and addition to this, American right-wing media outlets and politicians also have a long history of rhetorically blurring the distinction between what is called *administrative law* and *criminal law* (Bernat, 2019). In many cases a confusing rhetoric blurs the two different lines of law. What this means is that American right-wing politicians treat immigrants who seeks residence permit in an undocumented manner as violent offenders or terrorists by framing them as *illegals*, which makes immigrants look like hardened criminals. Such framings put immigration and immigrants alike in a very bad light and easily creates misconceptions. Consequently, many of American citizens perceive immigrants, and especially Latinos and followers of Islam, as a threat to public safety (Bernat, 2019). It is therefore easy to imagine that there are misconceptions about immigration roaming around.

Trump's statements could easily be argued to be ramblings of only one political leader, but it is not the case. Statements such as these do also come from a growing wave of anti-immigrant sentiments and a growing popularity of right-wing and radical Right political parties in Europe (Boréus, 2020). As earlier mentioned, European countries such as Germany have been the Good Samaritan and taken in a great number of the refugees that have been

arriving in Europe. Chancellor Angela Merkel announced in 2015 that she would take the controversial decision in relation to the migration crisis that occurred after the Arab Spring in 2011 to admit over a million refugees into the country (Kroet, 2016) – a decision that caused an outrage among much of the German public and led to a surge of support for the right-wing populist party Alternative for Germany (AfD) (Baume, 2017). With that said, policy issues related to immigration is not exclusive to Germany, but also in France, Sweden, Great Britain, Greece, and Italy where nationalistic groups and right-wing political parties are also on the rise.

In sum, the increasing number of migrants entering the industrialized West and the increase in xenophobia, prejudice, racism, and neglect against the foreign-born citizens seems to have led to a surge of right-wing political support as they are blaming immigration and the immigrants on a list of societal issues in essence of scapegoating (Booth, 2019; BBC News, 2019; BBC News; 2018b; Ford, 2021). Because of the perceived outgroup threat can be seen as a primary source of negative attitudes and emotions towards outgroups like immigrants such as refugees (Yitmen and Verkuyten, 2020; Stansfield and Stone, 2018), it is thus crucial to provide strong scientific evidence whether there is any truth to any of these perceptions and misconceptions. However, as mentioned in an earlier chapter the empirical literature on the immigration and crime nexus is not conclusive because it mainly focuses on the case of developed countries, excluding many developing countries where the majority of the world's refugee population live (UNHCR, 2020). This study will fill some of that gap. Moreover, this study will directly address the issue of whether or not countries with strong welfare states attract the worse immigrants. The section below will examine the issues further.

## Understanding People's Resilience to Immigration

Exploring and trying to better understand people's increasing hostility to immigration one might turn to social psychology theory for some deeper understanding. The social psychology theory Realistic Group Conflict Theory (RGCT) suggests that prejudice, neglect, and violence against the foreign-born part of the population is not something that is abnormal in human behavior, whenever there is a need for a scapegoat (Levine & Hog, 2010, p. 681). According to the theory, social groups have a tendency of creating friction between each other when they experience a competition over finite resources, resulting in intergroup stereotypes, antagonism, and sometimes (violent) conflicts. These frictions make it much harder to come

in terms with one another and cooperate on societal issues together, creating trust and a common identity with the “outgroup” (i.e social capital).

Thus, when new ethnic groups appear in greater numbers, members of the native groups often come up with prejudices towards them and posing them as a threat to either their personal economy, their nations institutions or their own personal security. Social rejection, racism and sometimes violence is not uncommon towards those who do not belong to the “ingroup”. As this may die out over time, SGCT suggests that it may also stay alive for a great amount of time if the “in-group” experience the “out-group” as a continuous threat, increasing cognitive biases, such as confirmation bias (Levine & Hog, 2010, p. 681). Fear towards immigration and the immigrants are now increasingly becoming part of many people's everyday lives. As Ruth Wodak (2015) describes, it seems that politics surrounding immigration has become "politics of fear", as right-wing populist politicians and citizens are aggressively connecting immigrants to societal issues such as crime, unemployment, and poverty which according to some is pure scapegoating from their part. The politics of fear is even more powerful when a one feel that the country's social institutions and economy are about to fail, making people more worried about the future. A great example of this is the economic situation of Greece following the 2008 finance crisis and the current negative attitude toward economic immigrants and Syrian refugees (Connor, 2020).

While it is hard to say for certain if the populists' claims about immigration and immigrants are something they inherently mean or if it is just a political tool for gaining more power (or both), the result is the same either way; an increasing part of the Western population now see immigration as a destructive force. Therefore, many voters now require a stricter and more restrictive immigration policy. But the majority of empirical research indicates that most of these concerns are misconceptions of reality. Most of them contradict close to all right-wing populist claims about immigration, particularly if one look at long-term effects. Firstly, many resilient to immigration may see the influx of migrants as an economic threat. One of the most common arguments are that high rate of immigration reduce employment among natives because immigrants steal jobs by accepting lower wages. This is also argued for negatively affecting the wages of the natives (Nowrasteh & Powell, 2021, p. 22). This attitude towards immigration tends to belong to areas where economic conditions are less prosperous (Wright & Esses, 2018). Most often, these are areas with lower GDP or a higher degree of unemployment. An example of this is when the GDP growth rate went down and unemployment went up in the southern state of Arizona in the U.S., the attitudes towards undocumented Mexicans became worse. (Diaz, Saenz, & Kwan, 2011).

According to the authors of *Wretched Refuse*, Nowrasteh and Powell clearly state that this is perhaps one of the greatest misconceptions about immigration because it contradicts what most economists know (Nowrasteh & Powell, 2021, p. 20). When economists measure what kind of impact an increased number of immigrants would have to the native-populations wages, they find no general decrease in their wages, *long term*. What seems to be right is that the *short-term* impact on natives' wages will be affected negatively before the country gets to adjust for the new workers, but when the country gets to adjust capital and other economic factors in their economy, the wages rebound rapidly as the economy adjust (Nowrasteh & Powell, 2021, p. 22). But much of the earlier studies done on wages are based on small immigration flows compared to a world with open borders, so what about a world with a massive immigration flow? In a 2013 study done by John Kennan, he created an index model "free immigration" but found relatively little impact on in native-born wages long term (Kennan, 2013; Nowrasteh & Powell, 2021, p. 27). The point is that the economic concern immigrants pose in regards of personal economy is in the long term misplaced in relation to job wages.

## The Immigration - Crime Relationship

According to empirical research, misconceptions towards immigration is not only limited to economic concerns but also whether immigrants are a major cause of violent crime. Some studies on the United States suggests that immigration pose a threat to others security in measurement of homicide rates. One element is how in context of neighborhoods where immigrants might settle may play an important role in their relationship with crime (Bircan & Hooghe, 2011; Reid et al. 2005; Wells, 2004). In United States particularly, a common perception is that areas immigrants tend to settle down in are more violent than others. This in turn is attributed to higher levels of poverty, ethnic heterogeneity, and larger groups of young men joining violent gangs (UNODC, 2019). The spatial segregation and socio-economic exclusion that are also typical characteristics of such neighborhoods makes them a poverty trap. This have in the literature about crime been shown to heavily correlate with high crime rates (UNODC, 2019). This hypothesis is also supported by research conducted in Belgium, which found that the level of unemployment at the societal level is a stronger predictor of crime than migration, that may suggest that ethnic composition at the neighborhood level insignificant (Bircan & Hooghe, 2011; UNODC, 2019a p. 50). In fact, some studies even suggests that neighborhoods with a high concentration of immigrants have lower crime-rates on violent

crime compared to neighborhoods with lower concentration of immigrants (Bui, 2009). Cities in the United States bordering Mexico such as El Paso, Texas and New Mexico are also considered the area with little crime - despite having a lot of immigrants (ibid.). Even northern cities like New York, which are also very multicultural, are seen as among the safest cities in the United States (Ibid.).

Also, longitudinal studies shows that migrants over a longitudinal time commit on average fewer crimes than native-born Americans in addition to have a negative effect on crime such as homicides (Adelman, 2017; UNODC, 2019, p. 49; Reid, 2017; 2005). Some of them even claim that international migration does not seem to increase rates of violent crime but actually helping to reduce it (UNODC, 2019; Adelman, 2017; Martinez, Stowell, & Lee, 2010; Vélez, 2009; Kubrin & Ousey, 2014). One explanation to why this might be the case is that the immigrants improve the criminal situation in the areas they settle down in by increasing labor market opportunities for both native- and foreign-born populations. Additionally, in general are they more willing to open ties with their neighbors and are less likely to end up looking for trouble with any legal system because of the fear of being deported. This have in several studies been proved to be a major benefactor in helping reducing rates of violent crime (UNODC, 2019; Adelman, 2017; Martinez, Stowell, & Lee, 2010; Vélez, 2009).

Also, in a recent report from the Migration Policy Institute (MPI) it is stated that the mass migration from Venezuela has little to no effect on violent crime on either Peru, Colombia or Chile; the three countries receiving the most Venezuelans after the economic collapse of the country that followed short time after the death of the former president Hugo Chávez (Bahar, Dooley & Selee, 2020). Since 2014, about 5.2 million Venezuelans have emigrated out of the country with most of them settling elsewhere in either Latin America or the Caribbean. This has raised concerns similar to in Europe after the 2015 Syrian refugee crisis, about how this will affect the receiving countries communities regarding crime-rates. If the claim of immigrants in general are a major cause of crime, a sudden large-scale movement involving millions of people in Latin America should correlate positively with crime in the any host country with the most receiving immigrants (Peru, Colombia and Chile). Yet there are not many studies conducted in relation to the mass-migration, analysis from the 2019 data suggest that the Venezuelan immigrants do not commit much crime. Rather, relative to the total population stock they are doing fewer crimes than the natives. The study from Migration Policy Institute (MPI) provides therefore strong evidence that the public perception in Peru, Colombia and Chile of Venezuelan immigrants is driving up the rates of violent crime in these countries are misplaced. In conclusion, in the case of Venezuelan migrants in Latin America the mass

immigration does present regional challenges, but not a major crime wave as many either predicted or were concerned about. Therefore, MPI recommend policy makers, in consideration of citizens security, to focus their attention to addressing criminal networks and strengthening institutions for the rule of law like some other studies do, instead of on restricting immigrants (Messner, Rosenfeld, & Karstedt, 2012; Roupakias & Dimou, 2021; Bahar, Dooley & Selee, 2020).

But some European studies have found a positive link between homicide rates and immigration (UNODC, 2019). Between 1990-2000 it was discovered an upward trend in the degree of imprisonment of foreigners and connected it to an overall increase in violent crime trends in Western Europe in that time-period (UNODC, 2019; Aebi, 2004). The increase in violent crime was hypothesized to be in relation to the spread of transnational and organized crime groups involved in drug- and human trafficking. In another study, a positive link came particularly apparent when focusing on second- and third-generation immigrants because of having difficulties with integration and assimilation (Belli and Parking, 2007; UNODC, 2019). This has helped politicians promoting restrictive immigration policies in many countries and fostered discrimination, social exclusion and marginalization against groups immigrants, which have been given as a possible explanation to the higher level of violence among immigrants (Belli and Parking, 2007; UNODC, 2019). And other studies point at the level of the country's preparedness and ability to integrate and assimilate their immigrants might be central to whether they turn to crime or not (Wortley, 2009), while other European studies seems to be pointing at high level of unemployment being the major causes for violent crime, rather than immigration in itself (Bircan & Hooghe, 2011; UNODC, 2019a p. 50). Lastly, a Nordic study comparing convicts from Denmark, Finland, Sweden and Norway showed that immigrants and people with two immigrant parents made up a larger proportion of all convicts in Sweden and Denmark, compared with Norway. While Finland, which has a significantly smaller immigrant population than the other Nordic countries, has a lower share. In this study, 13 per cent were immigrants and 1 per cent Norwegian-born with immigrant parents of all convicted in Norway in 2005 (Kardell and Carlsson, 2009).

In sum, despite all commentary on an alleged link between immigration and societal issues including the economy, crime and terrorism, empirical research is at most part suggesting that there is no correlation between them. But as mentioned earlier, much of the research focuses on specific areas, cities, or countries (Reid, Weiss, Adelman & Jaret, 2005). It is therefore worth considering that the variation between the results in different studies may be dependable on institutional differences between for example countries (Wortley, 2009).

But in general, homicide rates seem to be declining worldwide (Noel & de Soysa, 2020). Although this trend may refute simple notions that immigration does not lead to more murders worldwide due to a simultaneous increase in societal heterogeneity, de Soysa and Noel points out that there is still a need for more sophisticated modeling to isolate the effect of ethnic diversity on homicide (Noel & de Soysa, 2020).

## Theory

This chapter will discuss relevant theoretical approaches that tie immigration to the question of crime. Because theoretical literature on delinquent behavior feature many potential channels through which immigrants may cause more violent crimes in the recipient countries. American criminologist Rami R. Martinez once said that there are in theory not inconceivable that immigration may lead to more (violent) crime because many immigrants often have challenges with both acculturation and assimilation in the recipient countries (Martinez, 2000). At macro-level, immigration may cause a demographic transition like increasing the population that is more prerequisite to commit crime than other parts of the population. Among criminologists, larger groups of young males, particularly with low occupational skill and low educational attainment are more prone to end up in crime (Ferraro, 2015, p. 24; Ousey and Kubrin, 2018; UNODC, 2019, p. 9). Similarly, if family members among refugees who have previously been breadwinners are either dead or now have serious health problems due to armed conflicts, and with little or no extra social support from either state, friends or family, they may gravitate towards criminal actions and joining violent gangs as a survival strategy (Kayaoglu, 2021). Secondly, violent gangs may arise if there is an already intense competition for jobs where migrants settle. This can further lead to immigrants having to squeeze themselves into the labor market and further result in intergroup crime between them and natives (Messner and South, 1986). But often when criminologists are studying crime, they are dissecting the neighborhood's ecological characteristics to analyze community and neighborhood factors to look at how they may affect crime-rates. This is to better understand the hidden nature of what may cause crime to happen. This may also help understand why immigrants may be prone to cause higher crime-rates (Bernat, 2019). This is known as Social Disorganization Theory (SDT).

This chapter will address SDT and how that may be related to the immigration and crime relationship. The second that will be addressed is how Social Support Theory (SST) may

be connected to crime rates, and lastly, the third is how the Welfare Magnet Hypothesis (WMH) may be connected to the immigration – crime nexus. As mentioned in earlier chapters; could some states attract “bad” immigrants, causing crime?

## Social Disorganization Theory

SDT originated in the Chicago School by Clifford R. Shaw and Henry D. McKay, two forensic scientists from the University of Chicago in 1942. Shaw and McKay were among the first in the United States to choose to investigate what they perceived as a skewed distribution of crime in the American city of Chicago (Kubrin, 2010). Their research can be considered as a further development of Robert E. Park and Ernest W. Burgess research but while Park and Burges focused on exploring how major social changes over time may affect social life in different urban areas and neighborhoods in Chicago<sup>2</sup>, Shaw and McKay focused more on crime – as it is possible to see through Park and Burges characterization of different urban zones that there are neighborhoods that are more disorganized than others (Kubrin, 2010).

It was not until later when Shaw and McKay further developed the theory and focused on crime that it was discovered a connection between disorganized neighborhoods and higher crime-rates (Kubrin, 2010). It was posited that in urban communities where poverty and population growth went up, and society's racial and ethnic homogeneity declined, crime-rates would go up in areas with the most social disorganization. As this was also a time of increased immigration, it was assumed that the increase in crime was due to immigrants because many moved to the inner parts of the cities where crime increased (Bernat, 2019). In their book *Juvenile Delinquency and Urban Areas* from 1942, they were therefore interested in studying why different neighborhoods had different levels of crime and how the neighborhoods differed from each other, as well as mapping similarities between the neighborhoods (Kubrin, 2010). Further, they classified neighborhoods based on different levels of disorganization, measured from low to high. For example, social disorganization theory suggests that young people from neighborhoods with a *high* level of social disorganization are more likely to be recruited into subcultures that are open to (violent) criminal acts and participate in gang activities compared to young people living in communities with *low* level of social disorganization (Kubrin, 2010).

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<sup>2</sup> Such as major changes like urbanization, industrialization or deindustrialization and immigration may affect society. Known as Concentric Zone Theory, the Burgess model, or the CCD model (Kubrin, 2010)



In addition, the connection between social disorganization and crime is also seen to have something with what is called *informal social control*, which refers to the community's norms and ability to regulate itself (Kubrin, 2009, p. 227). This kind of control is an essential part of the theory's core, and communities with little or no informal social control shows to have much greater difficulty to effectively self-regulate the social organizational structure of the neighborhood than the ones that has (Rose & Clear, 2006, p. 443). The social control is much related to social capital – general trust among the people in a community, and without its people are most likely to look out for and care less about each other, causing crime and delinquent behavior to be spread more freely. Social disorganized neighborhoods are known of being with little governmental resources like policing, healthcare options, and educational opportunities, and are often associated with crime, poverty, ethnic heterogeneity, and an over-representation of young men (UNODC, 2019; Martinez, 2000). By simply growing up and living under such conditions can greatly increase the odds for ending up in criminal activities, joining violent gangs, and doing violent crime.

In contrast, neighborhoods that are seen as organized seem to be having (1) informal surveillance through residents observing and engaging during daily activities, (2) movement-governing rules that tells the residents which areas that are safe and which are unsafe, and (3) a direct intervention if strangers or residents do suspicious or unacceptable activities (Greenberg, Rohe & Williams, 1982, referred to in Kubrin, 2009, p. 227). This does also stand in relation to Robert Putnam's theories on social capital – general trust between neighbors in these communities (Putnam, 2007). In the end, social disorganization theory indicates that some neighborhoods that are socially disorganized experience more crime, while neighborhoods that are more socially organized have less crime because of higher level of *social control* and general trust.

In conclusion, Shaw & McKay located the importance of location when trying to understand crime (Kubrin, 2010). According to theory, the location or the social environment is at least as important as individual characteristics such as age, gender, and race. Social disorganization theory has continued to be a major explanation for crime among criminologists to this day. And unlike other and earlier theories on explanation of crime, it focuses on neighborhood's ecological characteristics rather than only the individuals' characteristics when trying to understand causes of crime (e.g., age, gender, or race). In other words, the theory does not focus on why the individual has a less or greater chance of committing criminal acts, but rather analyzing the neighborhoods' social environment. This includes poverty rates, poor

housing standards, unemployment rates, and levels of informal social controls, interpersonal trust, social ties, and more (Kubrin, 2010).

To summarize, a social disorganization causal model can be illustrated as follows:

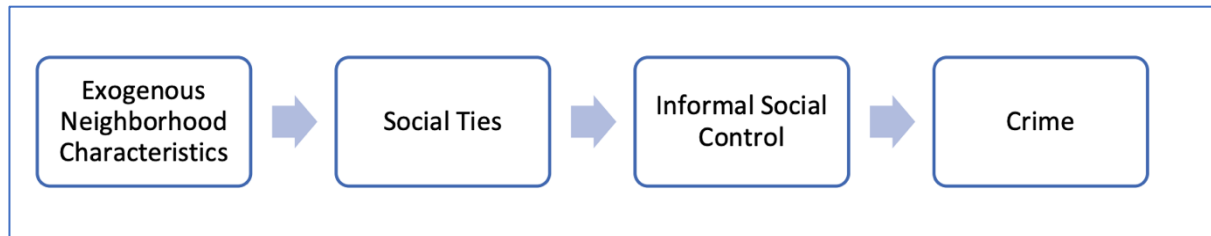


Figure 2: Source: Kubrin, 2019, p. 199)

Exogenous neighborhood characteristics affect the social ties in a given neighborhood. The social ties affect levels of informal social controls, which again affect crime rates either positive or negative dependent on the levels of informal social controls (weak or strong).

### Social Disorganization Theory and Immigration

The increase in international migrants during the last decades clearly marks something globally significant is in play, and social scientists are trying to figure out the effects that this migration may have on recipient countries (Ferraro, 2015 p. 24). There are two main explanations to how social disorganization theory and immigration can be related to crime.

One explanation is that immigrants like refugees are often poor and thus have a limited range of options of where to resettle. Many may only afford to live in cheaper accommodations that are placed in social disorganized neighborhoods. If not being able or want to move elsewhere where jobs are then many immigrants may end up in crime due to the low social and living standards that encourage criminality (Ferraro, 2015, p. 24; Ousey and Kubrin, 2018; UNODC, 2019; Martinez, 2000; Bircan & Hooghe, 2011; Reid et al. 2005). This is particularly unfortunate for the immigrant's youth as they are the ones that are most vulnerable to be recruited into violent gangs and other criminal networks (UNODC, 2019, p. 9; Martinez, 2002). Coupled with with low economic development and low social mobility immigrants moving to social disorganized neighborhoods may work as a poverty trap that may shape them into criminals, and thus crime rates go up nationally (de Soysa & Noel, 2020, p. 177). In other words, it

The second is that large numbers of immigrants with diverse cultural backgrounds and limited economic resources could weaken community cohesion. Racial and ethnic heterogeneity<sup>3</sup> caused by immigration may (additionally) *cause* social disorganization by making a homogeneous population more residentially/ social unstable by negatively affect the strength and dominance of informal social control, and over time increasing crime rates (Ferraro, 2015, p. 25; Ousey and Kubrin, 2009; Stowell et al. 2009). Reasons point to that the increase in heterogenic diversity may undermine ties between neighbors through cultural differences, language incompatibility, and racial discrimination based on the fact that some people prefer members of their own race to members of different races (Levine & Hog, 2010, p. 681; Wright & Esses, 2018; Kubrin, 2019). Because as Martinez wrote, many immigrants have problems with assimilating into the nation's urban life and accepting dominant norms and on agreeing to common values (Martinez, 2000). This may cause social instability as it affects the community's social capital, i.e general trust between one's neighbors. As general trust is important for the informal social control, immigrants lacking linguistic, cultural, ethnic, and historic commonalities with natives they may weaken that trust and thus erode community's social capital and its ability to fight crime through its informal social controls (Ferraro, 2015; Kubrin & Mioduszewski, 2019; Roh & Lee, 2012). This can over time make residents threat one another with indifference and looking less out for one another by not taking interest in neighbours' activities. If immigration is a cause of creating an environment wherein informal social control are more ineffective it can make residents rely more on the formal social controls such as policing, causing crime rates to increase (Kubrin, 2019; Ferraro, 2015, 26). There can of course be a mix of the two; immigration coupled with with low economic development, low social mobility and weakening community cohesion, social institutions and social control could increase crime rates.

In sum, ethno-linguistic and religious heterogeneity, poverty, high rates of unemployment, a lack of governmental resources and indicators of social disorganization have among criminologists have been good explanations to higher crime rates, including violent crimes like homicide. Social disorganization theory has thus good relevance to the study of immigration and crime relationship because it identifies immigration as a neighborhood

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<sup>3</sup> What the term *heterogeneity* is referring to are social, ethnic, and cultural variations within the population.

characteristic that are associated with crime. According to theory, because ethnic heterogeneity could have a negative effect on the social structure of neighborhood and disorganization theory therefore presupposes a positive relationship between immigration and crime (Bircan & Hooghe, 2011, p. 201). Thus, the first hypothesis is:

immigration and crime (Bircan & Hooghe, 2011, p. 201). Thus, the first hypothesis is:

**(1) Homicide rates will increase with a higher concentration of international migrants**

On the other hand, there are also a wide variety of theoretical literature that feature arguments that suggests just the opposite: that immigrants may lead to a reduction in crime. One of the most prominent arguments here is centered around the risk immigrants are putting themselves in if in fact they were to jeopardize their status. The fear and risk of being deported by turning criminal it is suggested might in fact cause immigrants to commit less crimes than natives in similar situations (Butcher and Piehl, 2007). A second argument that opposes social disorganization theory is that instead of turning into criminals in social disorganized neighborhoods they may rather revitalize the regions they resettle in through creating socio-economic contributions, by for example, creating new businesses and thereby creating new jobs, demand for new housing, paying in more taxes to city governments etc (Vélez, 2009; Lee & Martinez, 2002; Sampson, 2017; Kayaoglu, 2020). A number of studies conclude that immigration have no effect on crime, and others conclude with an inverse effect whereby immigration leading to less crime (Martinez and Stowell 2012; Wadsworth 2010; Crowley and Lichter 2009; Ousey and Kubrin 2009; Ousey and Lee 2007; Reid et al. 2005; Butcher and Piehl 1998). But it is important to take note on *how* some of the previous studies on immigration, crime and SDT have been modelled. As Ousey and Kubrin stated in their 2009 analysis of immigration and crime in American cities:

“[w]hile the logic of social disorganization theory, at least as traditionally conceptualized, has long provided a scientific basis for the expectation that immigration causes crime, empirical assessment of that hypothesis as well as other theories of the immigration-crime nexus has been limited” (Ousey & Kubrin, 2009, p. 465).

This thesis seeks to address that limitation by extending testing of SDT to not only outside of the U.S. but also in a much greater sample and in a more recent time period (Ousey and Kubrin,

2009; Ferraro, 2015, p. 26). Similar to Ferraro's study (2015), it also does so by having a longitudinal design which is important for identifying social disorganization, as it is a process that plays out over time. So, if immigration increases social disruption as many theories and the journalistic accounts of the problems of immigration suggest, then higher share of migrants in a society should predict higher crime.

## **Social Support Theory**

Before moving on to the third hypothesis, it is needed to address how social welfare support can be connected to crime rates in society. Social Support Theory (SST) was first introduced by Francis Cullen in his Presidential Address to the Academy of Criminal Justice Sciences in 1994 as a helpful "organizing concept of criminology" (Chouhy, 2019, p. 217). In its essence, social support theory seeks to explain that different kinds of crimes may be caused by a lack of social support, including violent crimes. In his article he defines social support as "the perceived or actual instrumental and/ or expressive provisions supplied by the community, social networks and confiding partners" (Cullen, 1994, p. 530). With that said, it shall not be seen as a "one and only" cause of, or abstinence from, crime – but in his opinion rather as a middle range theory that incorporated a new perspective that he thought to be missing in criminology. According do Cullen, criminologists had previously been overly focused on individual restraint, social control and punishment when it came to understanding and preventing crime – and not nearly focusing enough on the effect of human relationships such as human affection, love, and trust in daily interactions and what effect that may have delinquent behavior (Lilly, Cullen, & Ball, 2019, referred in Chouhy, 2019, p. 214).

Without any feeling of belonging and social support by people around them, individuals may easier fall out of society's norms and rule of law as they feel they are social "outcasts". Social support, in the processes of social control and criminal justice, is thus believed to contribute to social control and rehabilitation of individuals who have- or are about to fall out of society (Rudolph & Starke, 2020). Unlike many other theories that seek to explain the causes of crime (i.e.g. lack of social ties; stress; low self-control; learned deviant attitudes or behaviors; branding and stigma; social disorganization in society), SST focuses on how something positive can prevent or reduce the risk of crime. Social support can thus be conceptualized as social resources in which an individual may rely on when dealing with life problems, which in turn can be of utmost importance to the individual in times of need or crisis (ibid.).

But genuine support from family and friends may also according to Cullen be replaced to some extent by the state through social support provided by either welfare programs or help from the criminal justice system (Cullen, 1994; Chouhy, 2019, p. 228). Cullen explains that social support can be supported by not only friends and family, but also as an official and public entity such as welfare programs. He further explains that this may have both a direct and indirect effect on delinquency. As a direct effect, people experiencing social support may end up doing less crime, and as an indirect effect it may work as a buffer between between risk factors for delinquency and participation in criminal behavior. This gives social support important policy implications. In rich states such as Scandinavia, a number of welfare services that are offered can be well considered as social support. Welfare programs such as childcare, unemployment benefits and social benefits; health and care services, such as hospitals and nursing homes; educational institutions, such as schools and universities; parental leave and kindergartens – may all have a positive effect on preventing crime by simply alleviating (financial) strain, social status, and life satisfaction. Unemployment benefits being one of the most notable benefits as unemployment being a particular disruptive event as it represents a loss of income.

Social support theory is therefore not only limited to a micro- or individual-level understanding of crime, but it also seeks to explain differences in crime-rates at macro-level across ecological units such as countries and bigger communities (Chouhy, 2019, p. 228). It also seeks to put attention on how supportive systems and actions given by the state or otherwise can reduce crime and how it interacts with social control, learning, and strain processes in producing crime and delinquent behavior. SST is therefore believed to dampen both crime rates societal level as well as crime on individual-level (Chouhy, 2019, p. 214). According to Cullen, the theory of social support is underlying a number of other theories of crime and delinquency. But even though the services the state offers are neither the *only* nor even *the most important* source of people's social support, the social support provided by the state through for example welfare services can have a statistically negative effect on the population's delinquency and violent crimes across time and countries (Rudolph & Starke, 2020). In other words, supportive environments should have a statistically negative effect on violent crimes by “buffering” negative consequences of stress, little self-worth, unemployment, and other kinds of strains (Chouhy, 2019, p. 224).

## Earlier studies on the social support theory and crime

In relation to previous studies on the topic, Cecilia Chouhy writes in her chapter *Social Support and Crime* in *The Handbook on Crime and Deviance* (2019) that most of the previous research on social support has been focusing on individual-level component of the theory. However, there are also a number of studies that examine what effect inequality, public expenditure and social welfare can have on violent crime at macro-level, in which some also are cross-sectional (Rudolph & Starke, 2020; McCall & Brauer, 2014; Messner, Thome, & Rosenfeld, 2008; Pratt & Godsey, 2002; 2003; DeFronzo & Hannon, 1998). For example, Pratt and Godsey used in their 2002 study an index measure of GDP expenditure on health and education to assess country-level social support by using data from 64 countries (Chouhy, 2019, p. 228; Pratt & Godsey, 2002). In relation to violent crime, their results indicated that social support was negatively associated with homicide rates (ibid). In another study, McCall and Brauer wanted to explore if welfare support was related to homicide trends across European countries using a longitudinal decomposition design between 1994 and 2010 (McCall & Brauer, 2014). Their results suggested that even incremental, short-term changes in welfare support spending (spending more) by the state were associated with short term reductions in homicides within two to three years for the samples of European nations (ibid.). In light of social support theory, the second hypothesize is:

- (2) **Social support measured as welfare strength has a statistically negative effect on homicide rates**

## Welfare Magnet Hypothesis and crime

It is undoubtedly expensive to maintain a well-functioning social support through generous welfare programs. It is reported that in the last decades social programs have substantially increased in OECD countries (Giulietti, 2014, p. 2). Today, close to a quarter of these country's GDP is used on their welfare programs (ibid.). Additionally, the number of migrants migrating to industrialized countries have also greatly increased in recent decades. Could it then be possible that generous welfare systems attract a certain 'type' of immigrants that are a cause of more violent crime? The question is based on the Welfare Magnet Hypothesis and this section will begin with a short presentation of what the hypothesis is before moving on to how it may be related to crime-rates.

## What is the Welfare Magnet Hypothesis?

The Welfare Magnet Hypothesis was first developed by the economic professor George J. Borjas at the University of Chicago in his 1999 study *Immigration and Welfare Magnets*<sup>4</sup>. Borjas looked at how American states with good welfare benefits, such as California, had significantly more low-educated immigrants than neighboring states with fewer welfare benefits (Borjas, 1999). His quest was to examine whether level of welfare benefits within a state could deter international migrants' choice of state to resettle in within the United States. Based on the state's welfare benefits, he hypothesized that the migrants picked their state on the basis of income maximization. How he saw it, international migration differed from internal migration because people born and living in a particular state in the U.S. would find it too expensive to move across states just because other states had better welfare provisions than the state, they already lived in. In light of income maximization, it would not be a good enough reason or motivation to move (Borjas, 1999).

Supposing that the cost for international migrants to move to the host country is a “fixed cost” that is relatively high, and that they are a self-selected sample that has chosen to both move and bear these costs, they are more likely than natives to cluster in states with the best welfare (Borjas, 1999; Giulietti, 2014, p. 4). To Borjas, the cost of choosing one state after crossing the border will then be relatively small, and by that strategically pick the “right” state to settle in (Borjas, 1999). He therefore suggests that the international migrants with little or no education will ‘choose’ their state based on income maximization, and then benefit most from settling in states with the best welfare, and hence cluster in these states (Borjas, 1999). For migrants with higher education, the welfare provisions will be less attractive because the migrants themselves are most likely not to apply these provisions. In addition, welfare states require high taxes to be able to operate and migrants with higher education and skill levels may therefore be deterred by the taxes demanded by the state. In short, the hypothesis can be divided into two parts (Nannestad, 2007, p. 516): (1) Some migrants are attracted to strong welfare states because of their generous welfare system. (2) Generous welfare states attract international migrants that are more likely to use its provisions and deter migrants that are less likely to use them (Nannestad, 2007, p. 516). In other words, differences in the level of generosity or strength of the welfare systems in different states may therefore have a sorting effect on where migrants want to migrate.

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<sup>4</sup> t can be considered as a continuation of a 1996 study with Lynette Hilton (Borjas & Hilton, 1996).



But as Borjas himself also states, it is important to note that there are yet to be direct proof that the welfare magnet hypothesis is correct (Borjas, 1999). Because there could be a number of other factors that can have influenced the clustering of international migrants who are on welfare in California (Borjas, 1999, p. 620). It is also conceivable that international migrants' choice to move to California had little to do with welfare at all. Instead, the reason can be attributed to political decisions, the geographical location of California, herd effects (Epstein and Gang, 2004), social networks such as friends and relatives, ethnic communities in California, as well as other factors. Focusing on California's geographical location, California borders to Mexico and is therefore a popular destination for many Mexican immigrants. Since the state borders Mexico, it is likely that many (also) will move because of family who have already moved there and because of an ethnic network (Massey and España 1987, referred in Borjas, 1999).

### Earlier Studies on the Welfare State and Immigration

There is a large body of research on welfare migration, although with mixed results. In addition to Borjas studies on his hypothesis in the US there are also other studies that shows support to the hypothesis as well (Dodson, 2001; McKinnish, 2007; Levine and Zimmerman, 1995; Enchautegui, 1997). Levine and Zimmerman (1995) point out that welfare benefits have a small effect on the chance that female households (the recipient of welfare payments) choose to settle in the United States. Gelbach (2004) on the other hand, presents evidence of welfare immigration in 1980, but less so in 1990 in the United States. But it is important to point out that the US is geographically, historically, and institutionally different from European countries – although, there are studies that supports the hypothesis there as well (De Giorgi og Pellizzari, 2006; Razin & Wahba, 2015; Agersnap, Jensen & Kleven, 2020)

De Giorgi and Pellizzari (2006) did a cross-sectional study on Europe and arrived at that the level of generosity of welfare states effectively acts as a magnet that attracts migrants. In another of the European studies, the hypothesis was researched in the case of Denmark – one of the most prosperous welfare states in the world. By examining the effect of Danish welfare reforms towards immigrants outside the EU, they wanted to find out whether the reform affected the country's immigration (Agersnap, Jensen & Kleven, 2020). Based on a quasi-experimental research design and a danish welfare reform from 2002 that about halved the provisions for immigrants from outside the EU, and in which later got repealed and reintroduced again, they found sizable effects that the distribution reduction reduced the net

flow of immigrants by nearly 5,000 people per year. Also, when taken into account that the reform later got repealed, the effect got reversed almost by that number (Agersnap, Jensen & Kleven, 2020). In a third study, done by the two economists' professors Assaf Razin and Jackline Wahba, they investigated the effect of welfare generosity on immigration rates between skilled and unskilled migrants, and what role mobility restrictions affected this effect (Razin & Wahba, 2015). When utilizing for the labor movement within 14 EU countries together with Norway and Switzerland, they concluded that the magnet effect of welfare states under a free-migration policy attracted unskilled immigrants that were beneficiaries of the generous welfare state and deterring the skilled immigrants. When measuring with a restrictive immigration policy it got reversed, less unskilled- and more skilled immigrants (ibid.).

### “Welfare Magnets” and crime

In relation to crime, inspired by an unpublished<sup>5</sup> article about welfare magnets and crime in Norway written by Jorunn Kaasa, Marie Holm Slettebak, Indra de Soysa & Jan Ketil Roed in 2021 (Kaasa, Slettebak, de Soya, & Roed, 2021), if it is as the welfare magnet hypothesis claims that uneducated and low skilled migrants cluster in states with the most generous welfare programs it may also affect crime rates. Crime, (e.g homicides) might go up in generous welfare states as “bad” immigrants with low occupational skill and low educational attainment cluster here, stays unemployed, lives on welfare, and relocating into social disorganized neighborhoods also inhabited by poor natives. And due to the lower social- and economic standards in such neighbourhoods it can encourage criminality among immigrants, even on the national level. This can further lead to various types of group-conflicts driven by the ethnolinguistic, cultural, and religious differences between the immigrants and the natives living in these neighbourhoods (Levine & Hog, 2010; Kaasa et al. 2021, p. 6). And as mentioned in previous chapters, crime is heavily correlated to unemployment rates, and might causing “bad” unemployed immigrants to cause crime rates to increase. Accompanied with more unemployment and inequality, “bad” immigrants may also cause additional societal problems as under such conditions social trust and social capital may start to erode.

But, according to social support theory, high levels of welfare with its preventive effect on crime should then maybe provide social insurances for these migrants, preventing “welfare magnets” to be deviant. However, the crime-mitigating effects of those high social insurances can be offset by the quality of sorting if too many of the “bad” immigrants are concentrated in

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<sup>5</sup> Unpublished to this date: 16.04.21

just a few countries (Kaasa et al., 2021). And considering that crime rates are also decreasing in countries like the UK and US with much less generous welfare and unemployment benefits compared to the Scandinavian welfare states, perhaps it is not so obvious that social insurances provided by the state have the crime reducing effect in these countries as theory suggest (Kaasa et al., 2021). For example, on the OECD's "personal security index" is Sweden scoring lower than the UK. Perhaps can an "adverse" selection of migrant that are "welfare magnets" that intend to free-ride on the goodwill of others and stay unemployed explain some of this variance. If generous welfare states are attracting the so called "welfare magnets", this might be the case since it "lower" the quality of immigrants entering these countries, reducing the benefits of immigration (Milanovic, 2016; Borjas, 1999, Kaasa et al. 2021). So, in addition to the global sample, a sample of 23 rich industrialized countries with strong and generous welfare should then be a good sample to tell if welfare states are attracting the welfare magnets, causing higher crime rates. The third and last hypothesis is then:

**(3) Strong welfare states attract 'bad' immigrants, increasing crime.**

But, as social support theory suggest, countries with lower welfare strength can also be expected to experience higher homicide rates because the state will have less resources to take care of the less unfortunate in their society (e.g., immigrants such as refugees). If this is the case immigration may cause poverty may go up, institutional- and interpersonal trust may fall apart, and the feelings of insecurity may cause chaos, increasing homicide rates.

# Method and dataset

The main source of data used in this study is collected from the World Bank's World Development Indicators (WDI) which uses a database that uses standard ways for assessing data quality that are legitimized by internationally accepted guidelines, including the United Nations Fundamental Principles of Official Statistics (The World Bank, 2021). This section will begin with a short presentation of the data used in this thesis followed by a presentation of the dependent- and independent variables, and control variables. The thesis utilizes ordinary least square (OLS) regressions with a cross-sectional time series (TSCS) dataset and panel data models which are considered one of the best designs for studying causation next to purely random experiments (Stimson, 1985; Worrall, 2005, p. 372). It is also using a cross-national time series design and will measure homicide rates over a long(er) period of time (27 years). Previous cross-national studies on homicides rarely includes more than 60-80 countries and are often measured over shorter periods of time. This study examines the annual murder rate in 147 countries (populations with 500.00 or more) between 1990 and 2018 (27 years) which includes all types of governments reaching from democracies, autocracies, rich and poor, welfare states and developing countries. Also, all independent variables are lagged by one year to avoid simultaneity bias. The homicide rate is measured as intentional killings per 100,000 inhabitants and the models examine both fixed and random effects models, using the Hausman test to choose between the two.

# Variables description

This section will start with a brief presentation of all variables used in the OLS regressions. The survey uses a cross-sectional time series (TSCS) dataset and are divided into two separated tables. Table 1 will only focus on first hypothesis and the columns are differentiating between Newey West and Driscoll & Kraay standard errors. Table 2 will address both the second and third hypothesis but note that the third hypothesis are addressed through the interactive variable between welfare strength and immigration stock. This chapter starts with a presentation of the dependent variable for both tables, then all independent variables in table 1, and the added variables for table 2.

## Dependent Variable – Homicide rates

Both tables address the same dependent variable, homicide rates. Earlier studies on the immigration and crime relationship tends to focus on *violent crime*. This comes with good reason since data such as homicide data are much more reliable and available in comparison to other types of crime. It is a matter of counting bodies and is far less underreported compared to crimes like rape, property crimes, burglary, theft, and robberies (Malby, 2010; de Soysa, 2020b; Malby, 2010; Neumayer, 2005). Investigating the link between immigration and crime using homicide data should then be a reliable way of analyzing levels of crime in a society. The data is collected from the World Bank International (WDI) which collects data on homicides from the United Nations Office on Drugs and Crime (UNODC), the World Health Organization (WHO), INTEPROL, and national authorities, and are measured by per 100,000 of total population stock (World Bank, 2016). And even though that there always are uncertainties associated with data collection – even on homicides, it is considered as very reliable as all data WDI collects is taken from several sources and is widely used by other researchers. It covers first- and second-degree murder, manslaughter, and infanticide, but not killings caused by civil wars.

## Independent Variable and Control Variables – Table 1:

As mentioned, table 1 examines only the first hypothesis. The main independent variable is *Immigration stock*. It is measured as *total immigration stock measured in percentage of the total population stock* and is lagged by 1 year. The immigration data is also collected from WDI and includes both first- and second-generation immigrants (World Bank, 2020b). Their

data is collected through censuses and the estimates of the total immigration stock is taken from the data on the 'foreign-born' part of the population, including refugees. This applies to people who live in a country outside from the one they were born, and their children, but excludes temporary migrants like tourists and students. If the data on the foreign-born population is not available the data is instead estimated on the 'foreign' population that are nationals of a country other than the country in which they reside (World Bank, 2020b). Lastly, it is worth mentioning that some countries have a much higher number of immigrants than others. To address this and to avoid spuriousness it is utilized the logarithm of the immigration stock.

When it comes to control variables, there are five control variables that check for potential underlying confounders. They are also limited to five to not overfit the basic model. The variables have been selected from theoretical perspectives that have previously been used to explain cross-national differences in homicide rates (Roh, 2013). The variables are: Per capita income measured in US dollars (GDP), population size, V-Dems liberal democracy, ongoing civil war, and Years of peace since last war. These variables have been selected from earlier theoretical perspectives and research on homicide. All data is taken from WDI with the exception of *liberal democracy*, *ongoing war* and *years in peace* variables (Noel & Soysa, 2020). These are collected from the Varieties of Democracy Project (V-DEM) and Uppsala Conflict Data Project (UCDP).

Per capita gross domestic product (GDP) is a well-used metric that breaks down a country's economic output per person and is calculated by dividing the GDP of a country by its population. It is a good indicator of the wealth of a society, institutional development, and the available state capacity. The GDP-variable will therefore provide useful statistics for comparing wealth between sovereign states (Noel & de Soysa, 2020; Kesler, 2010; Roh, 2013). Also, income inequality has in earlier studies been identified as a key component explaining homicide rates (UNODC, 2019a). UNODC have earlier reported that higher gross domestic product in countries in both Europe and Asia has previously been shown to be among the possible reasons why the murder rate there is generally lower than in other regions such as Africa (UNODC, 2019a). Expectably, countries with lower GDP are expected to have higher homicide rates because the state will have less resources to put into public services like policing, education, and health care. If so, this may have a negative effect on institutional- and interpersonal trust because people experience insecurity through chaos, causing homicide rates to increase. The data is collected from the WDI online database and is measured in US dollars (World Bank, 2020b). Because countries are of different economies, and to avoid skewness and spuriousness, I have transformed the variable to the logarithm of GDP per capita.

The model is also controlled for population size, as an increase in human population either as a result of immigration or higher birth rates is expected to affect society's social infrastructure (World Bank, 2020b). Population size has also been widely used in earlier studies on crime and has shown to have a statistically significant and positive correlation with crime and homicide rates (Nolan, 2004; de Soysa, 2020; World Bank, 2020). This is much likely because larger populations are often more difficult when it comes to controlling crime. The population variable counts all people living within the country regardless of legal citizenship or not. Lastly, as population size between countries varies greatly, I have log transformed the variable to counteract skewness and spuriousness in my results (Noel & de Soysa, 2018; Noel & de Soysa, 2020)

There are also included a variable that measures the liberal democracy index in countries. Some studies have indicated that a country's homicide rate may be affected by the capacity and performance of the governing institutions (Karstedt, 2006; Lin, 2007; Sigman, 2015; UNODC, 2019). High level of democracy includes many indicators of equality such as access to civil rights, government services and political and economic resources, and an ineffective state that does not take good care of its citizens may easily cause more lethal violence (Sigman, 2015). Transition phases in countries going from being autocratic to newly democratized is also associated with more homicides. This is because the transition brings with it social and institutional changes and homicides rates are expected to rise during this transitional phase (Messner, Rosenfeld, & Karstedt, 2012). Although, previous studies have suggested that over time when such countries are starting to stabilize and eventually gets more industrialized, homicide rates are expected to decrease again (Neumayer, 2003). Newly democratized countries in Latin America are a good example of such countries. The variable scales between autocracies and democracies. The data is collected from Varieties of Democracy (V-DEM) and measures democracy according to different main types and dimensions of democracy which scales from autocracies to democracies and is done by a panel of experts on democracy (V-DEM, 2017).

Civil war causes social disorganization. It is a discrete variable in which an ongoing civil war takes the value of 1 if 25 battle deaths have occurred in a single year, and no ongoing war takes the value of 0. The data is collected from Uppsala Conflict Data Project (UCDP). No Western countries are suffering from any civil wars, but several developing countries are. Countries such as Syria still have an ongoing civil war and are logically expected to have high homicide rates. Because civil war takes many lives and many international migrants may have suffered greatly in these wars and are very likely traumatized, the civil war variable is expected

to have a strong positive effect on homicides. My dependent homicide-variable does not count for civil wars, and this is also one of the main reasons the civil war and years in peace variables are included in my model.

Lastly, a variable measuring *year in peace since the last war* starting in the year of 1946 and counts years up to 2016, are also included (Gleditsch, Wallensteen, Eriksson, Sollenberg, Strand, 2002).<sup>6</sup> Both the Civil war and years in peace variables have been used in previous studies on ethnic diversity and violent crime (Noel & de Soysa, 2020).

## Variables – Table 2

### Welfare Strength

Countries with weak welfare strength are expected to report higher homicide rates since the state will have less resources to take care of the less unfortunate in their society, like the refugees and the unemployed. If this is the case, poverty may go up as institutional- and interpersonal trust among citizens may fall apart because of fear and feelings of insecurity. The Welfare Strength variable is originally named “means-tested v. universalistic welfare policy” and is used to measure the strength / generosity of welfare. To best describe how this variable is created I will refer to the V-DEM codebook v.11, in which they write:

«A means-tested program targets poor, needy, or otherwise underprivileged constituents. Cash-transfer programs are normally means-tested. A universal (non-means tested) program potentially benefits everyone. This includes free education, national health care schemes, and retirement programs. Granted, some may benefit more than others from these programs (*e.g.*, when people with higher salaries get higher unemployment benefits). The key point is that practically everyone is a beneficiary, or potential beneficiary. The purpose of this question is not to gauge the size of the welfare state but rather its quality. So, your answer should be based on whatever programs exist» (V-DEM, 2021, p. 163).

The variable’s research question is: “How many welfare programs are means-tested and how many benefit all (or virtually all) members of the polity?» (V-DEM, 2021, p. 163). The variable

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<sup>6</sup> Civil war data are the ‘conflict incidence’ variable in the Uppsala Conflict Data Project’s civil war data. Peace years are calculated using the BTSCS command in STATA, which simply counts the years of peace since the last failure. See <http://www.pcr.uu.se/research/ucdp/> (accessed 27 April 2018)



is an ordinal variable, converted to interval by the measurement model, measured from 0-5 – in which 0 is no or extremely limited welfare state policies (Health, education, unemployment, and poverty programs) and 5 being universal welfare state policies for all citizens (V-DEM, 2021, p. 163). Only a small portion is means-tested (See more in V-DEM Codebook v11).<sup>7</sup>

### The Conditional Effect between Welfare Strength and Immigration Stock

According to criminologists, violent crimes are heavily correlated to unemployment rates, and if generous welfare states attract “bad” immigrants by working as a “welfare magnet” (Borjas, 1999), often categorized as young men that are low skilled and of low educational attainment, they are according to the welfare magnet hypothesis expected to migrate to nations with the best welfare. Here they wish to stay unemployed to live on welfare, while the “good” migrants that are well educated would rather migrate to nations with lower levels of welfare because of the much lower taxes. Then, the “bad” immigrants that are relocating in to these rich and prosperous welfare states will contribute to more social and economic inequality by being systematically placed in society’s lowest socio-economic social group by only living on welfare, forced to live in social disorganized neighborhoods due to cheaper housing, and thus be a cause to an increase in homicide rates (Borjas, 1999; 2015; Milanovic, 2016). The level of welfare strength may therefore be connected to the immigration and crime nexus since “bad” immigrants may not be so attracted to migrate to the states with lowest welfare benefit. If this is the case, one can expect that high level of welfare and high level of immigration in industrialized countries will increase homicide rates as “bad” immigrants are more likely to cluster here. To test this, table 2 are utilizing an interactive variable between the welfare strength variable and the immigration variable (welfare strength x Immigration stock). If the welfare magnet hypothesis is correct, one could expect that immigration in states with strong welfare are positively correlated with homicides.

### Time- and country fixed effects

The effects of immigration on all variables in this study have also been estimated using fixed-effects regressions. The advantage of this is that they control for unobserved heterogeneity. In other words, they control for countries individual time-invariant characteristics. Time fixed effects take into account all types of upward trends in the variables in addition to different types

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<sup>7</sup> Pemstein *et al.* (2021, *V-Dem Working Paper Series* 2021:21); *V-Dem Codebook* (see suggested citation at the top of this document).

of ‘shocks’ that can occur in a year - such as war and economic collapse (Noel & de Soysa, 2020). Country fixed effects on the other hand consider all fixed effects related to country-specific features such as culture, political system, religion, and unique history (Nowrasteh & Powell, 2021, p. 143). Because fixed factors can have an effect on the dependent variable, the effects ensure that the main index variables do not explain them at a local level. The fixed effects have been proven useful in several other time- and cross-national and cross-sectional studies done before (Rudolph & Starke, 2020; Soysa, 2020b; Nowrasteh & Powell, 2021, p. 123-158), and have shown to have changed both the effects and the significant level of variables (Neumayer, 2005). In table 1, the columns will differentiate between random effects and fixed effects. However, by ignoring relationships with predictors that do not change over time, fixed effects cannot give a *full* picture of the phenomenon of crime (Bell, Fairbrother, & Jones, 2019: 1058, referred in Starke, 2020, pp. 24). Starke (2020), Hoechle (2007) and Noel & de Soysa (2020) therefore suggests that in order to tackle common panel data estimation issues it is necessary to conduct fixed effects regressions with standard errors robust to heteroscedasticity, serial correlation, and cross-sectional dependence. This is addressed by applying Newey-West and Driscoll & Kraay standard errors.

## Newey-West and Driscoll & Kraay Standard Errors

### The Newey-West Standard Errors

The study utilizes an Ordinary Least Square (OLS) regression with standard errors robust to both heteroskedasticity and general forms of autocorrelation. This is done by estimating standard errors clustered on units (Kaasa, Slettebakken, de Soysa, Roed, 2021). Noel and de Soysa points out that among the biggest and most important challenges with aggregated data is time-series autocorrelation (Noel & de Soysa, 2020). It has therefore been performed a Wooldridge test to check for time-series autocorrelation. The test shows  $\rho = 0.2$  and indicates with that the data shows first-order autocorrelation. As this means that errors of the one-time period correlate with the errors of the consequent time period, the model need an approach trying to overcome this type of autocorrelation. One method is to apply the Newey-West standard error method. In earlier studies, the Newey-West method has proven to be robust in cases of both serial autocorrelation and heteroskedasticity (Noel & de Soysa, 2020; Gerring, 2012). Because this study applies time-series data it and that the Woolridge test shows first-order autocorrelation, it is fitting to apply this method.

## Driscoll-Kraay Standard Errors

But when using and modelling spatial data, measurements at one location can be influenced by the measurements of neighbouring locations. For example, the relationship between migration- and homicide rates is likely to be dependent on the country of concern and what countries surrounding it. Bordering countries and cooperation unions such as trade unions (like the UN) and military unions like NATO are likely to affect policy for all including- and surrounding states. This is called spatial autocorrelation or “spatial” dependence (also known as a neighbourhood effects). While the Newey-West standard error method shows robust to serial autocorrelation and heteroskedasticity, it does not consider *cross-sectional correlation* (Hoechle, 2007, p. 283). Daniel Hoechle states in his article on Robust Standard Errors for Panel Regressions that when working with either medium- or large scale micro-econometric panels (Large N’s) the *Driscoll and Kraay standard errors* is not only heteroskedasticity consistent, but also robust to general forms of cross-sectional and temporal dependence (Hoechle, 2007, p. 309-310). To why this is important to accord for, he writes:

«Cross-sectional dependence constitutes a problem for many (microeconomic) panel datasets, as it can arise even when the subjects are randomly sampled. The reasons for spatial correlation in the disturbances of panel models are manifold. Typically, it arises because social norms, psychological behavior patterns, and herd behavior cannot be quantitatively measured and thus enter panel regressions as unobserved common factors” (Hoechle, 2007, p. 310).

As Hoechle further notes, by using a method not robust to cross-sectional and temporal dependence it is assumed that the N’s (in this case countries) are entirely independent. For example, several European countries are fairly similar and connected through different kinds of unions like the European Union and NATO. The same goes for old Soviet countries that have had a common past through being members of the USSR and have still to this day many similarities as a result, such as common values, economies, politics and language<sup>8</sup>. And as just mentioned, this may bias the results. In relation to crime demographic characteristics, population density – more often than not – exhibit positive spatial autocorrelation (Ratcliffe, 2002). Methods that are robust to cross-sectional correlation is therefore commonly used. By

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<sup>8</sup> This is referring to the fact that USSR forced all countries within the union to learn Russian and many still learn and speak Russian as a second or first language to this day.

not modelling for such spatial effects occurring through spill over and diffusion of crime across the different countries in this study's model it may as in an earlier studies suggest bias the results (Kaasa et al., 2021, p. 10; Anselin, 1998, Ratcliff, 2002).

Therefore, to ensure that the statistical inference is valid, testing whether the residuals of a linear panel model are cross-sectionally dependent is important (Kaasa et al, 2021; Hoechle, 2007). Hoechle then suggests that statistical inference should be based on the Driscoll–Kraay estimator. The Driscoll–Kraay standard errors are well calibrated when the regression residuals are cross-sectionally dependent and has been used in earlier studies done on large populations and have been proved to be robust in cross-sectional analysis (Ratcliffe, 2002; Kaasa et al, 2021; Hoechle, 2007; Nowrasteh & Powell, 2021). In table 1, columns 1 and 2 will be with the Newey-West Method and column 3 and 4 with Driscoll-Kraay Standard Errors. As previously mentioned, table two will be entirely with Driscoll-Kraay Standard Errors. If the results show to be very different between the two standard errors, then that will tell us that the relationship between immigration and crime may be temporal and cross-sectionally dependent.

## Results and Analysis

Table 1 reports the results of the OLS regressions testing the first hypothesis; **Homicide rates will increase with a higher concentration of international migrants**. As previously mentioned, columns in table 1 differentiates between Newey West Standard Errors and Driscoll & Kraay Standard Errors in addition to random and fixed effects. Table 2 will test the second and third hypothesis: (2) **Social support measured as welfare strength has a statistically negative effect on homicide rates**, and (3) **Strong welfare states attract “bad” immigrants, increasing crime**. All columns in table 2 are with Driscoll & Kraay Standard Errors. Columns 1 and 2 are testing homicide rates with all 147 countries and differentiates between use of random- and fixed effects. Columns 3, 4 and 5 are all with fixed effects and includes the interaction variable welfare strength x immigration. Column 3 is with all 147 countries, column 4 with only Low Developed Countries (LDC), and column 5 with only industrialized countries (IDC).

## Results Table 1

	(1)	(2)	(3)	(4)
	Newey- West	Newey- West	Driscoll- Kraay	Driscoll- Kraay
Dependent variable = Homicide rate	Random	Fixed	Random	Fixed
Immigrant population stock % (log)	-0.13*** (0.03)	0.01 (0.04)	-0.02 (0.05)	0.01 (0.03)
GDP per capita (log)	-0.29*** (0.03)	-0.15** (0.07)	-0.26*** (0.06)	-0.15** (0.06)
Population size (log)	-0.08*** (0.02)	0.72*** (0.16)	0.15* (0.09)	0.72*** (0.14)
Liberal democracy (V-dem)	0.30** (0.13)	-0.08 (0.15)	-0.05 (0.07)	-0.08 (0.08)
Civil war ongoing	0.08 (0.10)	0.10*** (0.04)	0.10*** (0.03)	0.10*** (0.02)
Years of peace since last war	-0.01*** (0.00)	0.00* (0.00)	0.00 (0.00)	0.00*** (0.00)
Constant	5.26*** (0.40)	-9.48*** (2.82)	0.87 (1.54)	-9.47*** (2.43)
Observations	2,929	2,929	2,929	2,929
Number of countries	147	147	147	147

Standard errors in parentheses  
 \*\*\* p<0.01, \*\* p<0.05, \* p<0.1

**Results of table 1:** Random and Fixed effect regressions on the homicide rate in my global sample – differentiating between Newey-West Standard Errors and Driscoll & Kraay Standard Errors, between 1990-2016.

### Immigration and homicide rates

Table 1 examine the relationship between immigration and homicide rate between the period 1990-2017 in a global sample with 147 countries. In column 1 one can that see that when using Newey-West Standard Errors (NWSE) – random effects the immigration population stock variable shows a statistically significant but negative effect on homicide rates. This means that when only estimating for random effects and holding all variables in this model at their mean values, a standard deviation increase on the immigration population stock decreases the homicide rate by 5% of the standard deviation of the homicide rate. In real terms, column 1 shows that immigration may lower the homicide rate by 0.6 homicides per 100,000 population. But in column 2 with Newey West Standard Errors and time- and country fixed effects, the model no longer shows a statistically significant effect between immigration stock and

homicide rates. And as for column 3 and 4 with Driscoll & Kraay standard errors – random- and fixed effects, the coefficient are not showing any statistically significant results here either. In sum, the results in table 1 between immigration stock and homicide rates suggest that there is no robust statistically significant effect between the two when controlled for time- and country fixed effects, or with the Driscoll & Kraay standard errors. Only with Newey West – random effects.

What one might take from this is that the model shows no significant correlation between immigration population stock and homicide rates when accounting for time fixed effects, and spatial autocorrelation with Driscoll & Kraay Standard Errors. In other words, the results do not give much support to the first hypothesis: **Homicide rates will increase with a higher concentration of international migrants.** Nor do they fully support the view that immigration reduces crime as others have reported (Adelman, 2017; UNODC, 2019, p. 49; Reid, 2017; Reid et al. 2005; Martinez and Stowell 2012; Wadsworth 2010; Crowley and Lichter 2009; Ousey and Kubrin 2009; Ousey and Lee 2007; Butcher and Piehl 1998). Although, the results are not surprising since it does support results from previous research (Ferraro, 2015), who concluded with that high immigration had a no effect on crime rates. Explanations to this can be as others have suggested that both economic immigrants and refugees are likely to follow societies rules more carefully due to fear of getting deported or jeopardizing their resident status (Butcher and Piehl, 2007). A second argument, and in relation to social disorganization theory, is that instead of turning into criminals in social disorganized neighborhoods the immigrants may rather revitalize the communities they resettle in through creating socio-economic contributions by for example creating new businesses and thereby creating new jobs, filling much needed jobs positions, and housing vacancies that are not demanded by the native population, and paying taxes (Lee and Martinez, 2002; Sampson, 2017; Kayaoglu, 2020).

### Control variables

The control variables in table 1 and 2 have been previously tested in earlier studies and shows no surprising results. Starting at how income per capita (GDP) affects the homicide rate, the variable shows a statistically- significant and negative numbers in all columns. But notably, the value of the coefficient changes between random and fixed effects. In both columns, the variable is highly significant but shows a slightly lower coefficient with fixed effects than with random effects. This again indicates that fixed effects have an important impact on the

coefficient, and therefore also the results – just as Neumayer suggested, and that an economy’s level of GDP has a robust effect on homicide rates (Soysa, 2020b; Neumayer, 2005). Better the economy, the stronger is the negative effect on violent crime, possibly because higher GDP increase state capacity, shows institutional strength, interpersonal trust, and social capital and to some degree represent less unemployment, less chance for ending up in violent brawls, make individuals in less need of robberies, and in general having better living conditions. Economic inequality is a key concept in Marxist theory which argues that economic inequality leads to more tension and conflict in society because of the unfair distribution of resources (Roh, 2013). In other words, people having more money and better economic security can have a strong effect on violent crime like homicides

Unsurprisingly, the population size variable does also show statistically significant results. Estimated with the Newey West Standard Errors, both random and fixed effects are significant at the 0.01 level but show two different directions on Y. With Random effects the coefficient shows a negative relationship between population size and homicide rate, yet small. While with fixed effects the coefficient shows a statistically positive correlation (0.72). Thus, the result indicates that the fixed effects affect the results, and that population size has a statistically positive effect on the homicide rate when the fixed effects are taken into account. And in column 3 and 4 with the Driscoll & Kraay estimation, the coefficient only shows satisfactory statistically significant results (at least at 5% level) when calculated with fixed effects. This is also expected outcomes taken from other studies done previously (Soysa, 2020b; Neumayer, 2005). Similar to what previous studies on crime have suggested, population size plays an important role when trying to explain crime rates. This also makes sense in relation to the fact that it is harder to control crime, including homicides, in larger populations as it demands more policing and other kinds of societal organization preventing crime.

When it comes to the V-dem variable, the coefficient shows only statistically significant results with Newey West – random effects and is no longer significant with fixed effects. This indicates that when time and individual-specific effects are not estimated for, liberal democracies show a statistically significant and positive impact on homicide rates. A possible explanation to this may be that there is greater heterogeneity of outcomes on homicide rates between democracies captured by the fixed effects (country fixed) – for example homicide rates between the United States and Norway. In relation to the 2018 study about ethnic diversity and crime by Noel and de Soysa, their results showed similar results when it came to “level of” democracy and violent crimes after GDP was controlled for. As a reasoning behind this, they suggested that recent transformed autocracies or poor democracies lack administratively,

economic, and institutional capacity to fight lethal violence, like several countries in Latin America (Prillaman, 2003; Noel & de Soysa, 2020). The democratization of Latin America has previously been shown to have a statistically positive effect on the crime rate, including violent crime (Prillaman, 2003). The democratic states in Latin America are still relatively poorly established democracies with weak institutions and struggle with a lot of crime and violence.

The civil war variable is also highly statistically significant and has a positive effect on homicides. The only exception is with the Newey West estimation - random effects which is shows an insignificant coefficient. But the variable shows significant results on both columns under Driscoll & Kraay standard errors. Lastly, the ongoing peace by years variable shows no statistical effect measured up to two decimals. Yet very small, the results are surprising because you would normally guess that under peacetime homicide rates would go down when also accounting for “civil war ongoing”. Something may drive the counter intuitive result. It may be because of strong autocracies that never have had a civil war, such as North Korea and perhaps other repressive states might have higher homicide rates. Nevertheless, it may also mean that institutions strengthen after some civil wars. Therefore, the results of the control variables in table 1 are reasonable. It may also be because this is a global sample and that some democracies are going through an institutional transition for autocracy to democracy. Karstedt write that the transitional phase are somewhat chaotic as new institutions needs time to be integrated to society, and this makes violent crimes to go up (Karstedt, 2008). Good examples here might be several Latin-American countries, Liberia, Afghanistan etc.

## Results table 2

Table 2 addresses two things: how social support measured as welfare strength affect homicide rates; and what conditional effect between welfare strength and immigration stock have on homicide rates. All columns are also operating with Driscoll & Kraay Standard Errors and only column 1 are with random effects. The rest is with fixed effects. Columns 1 and 2 distinguish between random effects and fixed effects on the global sample without the interaction variable. That comes first in column 3. The columns also differentiate between what countries that are included in the regression: All 147 countries (Global sample), Least Developed Countries (LDC), and Industrialized Countries (Industrialized).



	(1)	(2)	(3)	(4)	(5)
	Random	Fixed	Fixed	Fixed	Fixed
VARIABLES	Global	Global	Global	LDCs	Industrialized
Welfare Strength	0.05* (0.03)	0.05* (0.03)	0.08* (0.04)	0.06 (0.04)	0.19 (0.15)
Immigrant population stock % (log)	-0.03 (0.05)	0.00 (0.03)	-0.01 (0.04)	0.00 (0.03)	0.32*** (0.10)
Welfare strength x Immigrant %			-0.02 (0.02)	-0.02 (0.02)	-0.12** (0.05)
GDP per capita (log)	-0.26*** (0.06)	-0.16** (0.06)	-0.26*** (0.06)	-0.25*** (0.07)	0.38 (0.35)
Population size (log)	0.14 (0.08)	0.70*** (0.14)	0.14 (0.08)	0.17** (0.06)	0.25 (0.15)
Liberal democracy (V-dem)	-0.10* (0.05)	-0.13 (0.08)	-0.10* (0.05)	-0.05 (0.06)	1.71 (1.29)
Civil war ongoing	0.10*** (0.04)	0.10*** (0.02)	0.10*** (0.03)	0.11*** (0.04)	-0.05 (0.11)
Years of peace since last war	0.00 (0.00)	0.00*** (0.00)	0.00 (0.00)	0.00 (0.00)	0.00 (0.00)
Constant	0.00 (0.00)	-9.12*** (2.48)	0.00 (0.00)	0.53 (1.27)	-10.37* (5.12)
Observations	2,929	2,929	2,929	2,337	592
Number of groups	147	147	147	124	23

Standard errors in parentheses

\*\*\* p<0.01, \*\* p<0.05, \* p<0.1

**Results of table 2:** Random and Fixed effect regressions on the homicide rate in my sample of global-, LDC- and industrialized countries with Driscoll & Kraay Standard Errors, between 1990-2016.

### Welfare strength and homicide rates

Welfare Strength variable is only statistically significant at a 10% level. At this significance value it shows to have a small positive effect on homicides rates with the global sample in column 1 and 2. Even though the significance level is not satisfactory at a 5% limit, what one can take out of this is that the results between welfare strength and homicide rates are positive, but statistically weak. This went against expectations as it does not support social support

theory (social protection). Because, according to social support theory one could have expected a statistically significant coefficient that shows a negative effect on the homicide variable since social support given through welfare should in theory help the less fortunate in society with housing and money to live a decent life, and prevent people from living under bad living conditions, reducing rates of violent crime. This would have been as McCall and Brauer found in their cross-national study on Europe (McCall & Brauer, 2014). But this may also be the issue here. Because McCall and Brauer only analyzed rich European countries, their results came out statistically negative – welfare spending have a reducing effect on homicide rates. Therefore, in a global sample where not only rich industrialized countries are included but also LDCs, the variable shows no longer a statistically negative effect between welfare strength and homicide rates, but in this case a positive effect (note: but with a weak significance level). In other words, the results in columns 1 and 2 does not support social protection covered by welfare within a global sample. In contradiction to McCall and Brauers study, the suggestion of social welfare support not impacting the level of lethal violence in society also confirms some other studies where virtually no relationship was found between several measures of welfare spending and homicide (Meloni, 2014; Worrall, 2005). In conclusion, within the global sample presented in model 1 and 2 the results do not give empirical support to the second hypothesis: **Social support measured as welfare strength has a statistically negative effect on homicide rates.**

### The Conditional Effect Between Welfare Strength and Immigration on Homicide Rates.

Focusing on column 3, 4 and 5, we can see the models' conditional effects of welfare strength and immigration stock on the homicide rate. The interaction variable shows no statistically significant correlation to homicide rates in either the global- or the LDC sample. The interaction variable only shows statistically significant findings within the industrialized countries, represented in column 5. The coefficient shows a statistically negative relationship and thus indicates that when both welfare strength and immigration is high, the homicide rate decreases. Another thing we can read out of this is that when immigrant stock is high and welfare strength are “zero”, high level of immigration associates with more homicides in the sample of industrialized countries (See margins plot in figure 3). The third hypothesis that **strong welfare states attract “bad” immigrants, increasing crime** cannot be supported by these results. In fact, the model suggests the opposite of that: high level of immigration in

strong Welfare States seems to have a statistical negative effect on homicide rates. The results are interesting, because it indicates that states with strong welfare should not be experiencing an increase in homicide rates because of immigration. But it is also not unsurprising because as discussed in relation to the relationship between the immigration stock- and homicide rate variable in table 1, most immigrants are likely to follow the nations rules and laws more assiduously due to their insecure resident status, but also because the social support provided by the state through its welfare programs makes them well looked after, making crime less of an option. All in all, this very interesting result found for the rich countries only suggests by implication that there is little support for the welfare magnet or social disorganization theories, but more support for the social protection theories.

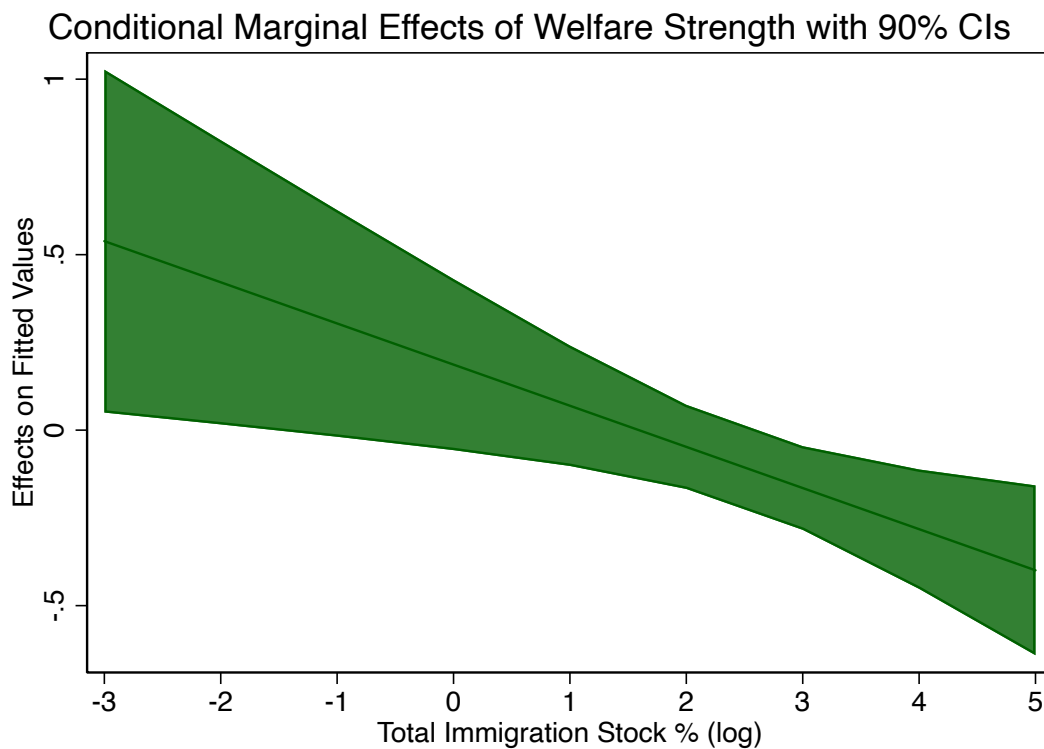


Figure 3: The conditional effects of immigration stock on homicide rate dependent on level of welfare strength for the 23 industrialized countries in column 5.

# Discussion

The discussion section starts with a summarization of the main results of table 1 and 2 and are then further discussed relation to the theory represented in earlier chapters. As for the relationship between immigration and homicide rates in the global samples in table 1 the model shows no significant results when accounting for fixed effects and spatial autocorrelation (see table 1). Unique culture and history show to have a strong influence on the results (The fixed effects). In theory, social disorganization theory suggests that immigrants can increase homicide rates. Particularly poor refugees that often arrive with little to no money, little education, and are because of that most likely to move to social disorganized neighborhoods because of the cheaper housing. And as previously mentioned, such neighborhoods are so called “poverty traps” as such neighborhoods often struggle with a range of societal issues such as low economic development, low social mobility, drugs, violence, and other kinds of crime. So again, in theory, if greater numbers of immigrants relocate in these neighborhoods it could eventually lead to higher rates of violent crime as they may be forced to criminal activities as a sort of survival tactic or as natural result of the social environment (e.g., joining violent gangs). The migrants could also be a cause to more homicides by function as a disruptive force that causes social disorganization by negatively affecting informal social control and social capital.

But the results in table 1 indicates that this is most likely not the case. It finds no statistically significant correlation between the total immigration stock variable and the homicide rate variable, and thus gives little support for the social disorganization theories in relation to immigration. One explanation, and as some literature also suggest, the fear and risk of being deported or jeopardizing their resident status makes them less likely breaking the law, particularly violent crimes such as homicide (Butcher and Piehl, 2007). Another explanation is that instead of turning into violent criminals in social disorganized neighborhoods or eroding informal social control and social capital in social organized neighborhoods the immigrants may rather revitalize the communities they relocate in through creating socio-economic contributions by for example creating new businesses and thereby creating new jobs, filling much needed jobs positions, and housing vacancies that are not demanded by the native population (Lee and Martinez, 2002; Sampson, 2017; Kayaoglu, 2020). In conclusion, receiving economic migrants and refugees may not be desirable for everyone, and there can be many personal reasons for that as discussed in the theory section, but the right-wing populist

claim that immigrants are a major cause for more violent crimes (e.g more homicide) *still* lacks solid empirical evidence as of the results represented in table 1. In other words, the first hypothesis (H1) **Homicide rates will increase with a higher concentration of international migrants** cannot be supported by these results.

Table 2 addressed the second and third hypothesis. In relation to the first of the two, the results show that within the global sample represented in column 1 and 2, the welfare strength variable is not statistically significant at a 5% level, only at 10%. However, the coefficient is positive, indicating that in a global sample including both LDCs and rich industrialized countries strong welfare seemingly increases homicide rates. Either way, statistically significant or not, the result does not support social protection caused by social welfare support. This went against theoretical expectations, because as theory on social support (like welfare provided by the state) suggested one could have expected a statistically negative effect on homicide, similar to what McCall and Brauer found in their cross-national study on Europe (McCall & Brauer, 2014). But as mentioned in the previous section, this might also be the issue here. Perhaps social support theory only shows a statistically negative effects on homicide rates within rich industrialized countries, like their sample of rich and industrialized European countries. Either way, the results in table 2 regarding the welfare strength and homicide rates represented in models 1 and 2 do not give empirical support to the second hypothesis: **Social support measured as welfare strength has a statistically negative effect on the homicide rates.**

The third hypothesis addresses the welfare magnet hypothesis and its relation to crime. Based on a “hunch” that dependent on welfare strength, so called “bad” international migrants are attracted the strong and generous welfare states, causing crime due to being a “moral hazard”. If that were to be the case, then one could expect a conditional statistically significant and positive effect between welfare strength and immigration stock on homicide rates. However, the interaction variable (welfare strength x immigration stock) shows no statistically significant correlation on homicide rates in either the global- or the LDC sample represented in table 2, column 3 and 4. It is only statistically significant within the industrialized countries represented in column 5. Only when estimating for the industrialized countries the coefficient shows a statistically significant value. The coefficient is negative, suggesting that when both welfare strength and immigration is high, the homicide rate decreases (see margin plot, figure 3). Another thing that one can read out of this is that when immigrant stock is high and welfare strength are “zero”, immigration correlates with more homicides (Also see figure 3). The results are interesting, because it indicates that states with strong welfare should not be

experiencing an increase in homicide rates because of immigration. High immigration and high level of welfare strength has a statistically negative effect on the homicide rate. But this is also not unsurprising because as discussed in relation to the relationship between the immigration stock- and homicide rate variable in table 1, immigrants are perhaps more likely to follow the nations rules and laws more assiduously due to their insecure resident status. But perhaps also because of the social support provided by the state through its welfare programs which makes them well looked after, making crime less of an option. All in all, it is an interesting result found for the rich countries and suggests by implication that there is little support for the welfare magnet or social disorganization theories, but rather more support for the social protection theories. In other words, the results in table 2 does not give support to the third hypothesis: **strong welfare states attract “bad” immigrants, increasing crime.** In fact, the model suggests the opposite of that: high level of immigration in strong Welfare States with generous welfare seems to have a statistical negative effect on homicide rates. In relation to right-wing populist belief that countries like Sweden and Germany, where both have strong and well-established welfare and receiving at an increasing rate more immigrants, now suffers from more violent crime because of their liberal immigration policies seems to be unfounded by the results represented in table 1 and 2. The models may not have tested the hypothesis on these two countries directly, but nothing in the results shows any indication that the two should be suffering from more violent crimes as a result of high immigration.

All in all, the results is consistent with much of the previous studies on the immigration and crime nexus, indicating that there is either a statistically negative or null effect between the immigration and homicide rates (Adelman, 2017; UNODC, 2019, p. 49; Reid, 2017; Reid et al. 2005; UNODC, 2019; Martinez, Stowell, & Lee, 2010; Vélez, 2009; Kubrin & Ousey, 2014; Noel & de Soysa, 2020; Bui, 2009; Bianchi, Buananno & Pinotti, 2012).

# Conclusion

Migration is a global phenomenon where international migrants travel far and wide looking for a better life outside of their country of origin, but not everyone is equally excited about this and are concerned about the international increase in migration. As immigration has become a controversial topic in both public and political discourses several nation-states have experienced a surge of right-wing support in recent decades because of controversies about how to handle immigration in the coming years. Right-wing populists claim that immigration is a major cause to crime (e.g homicides) in recipient countries and ask for stricter immigration policies. But is this claim about immigrants a misconception or a reflection of reality? This thesis seeks to address this question. The research question was: **Does international immigration increase homicide rates?** Ruth Wodak (2015) argued that the global debate about immigration is “politics of fear” where right-wing populists are drawing a clear line between immigration and societal issues, including crime (Boréus, 2020; Wodak, 2015). By addressing social disorganization theory that implies that immigration may cause more crime as theoretical background and utilizing a cross-national study using a global sample including 147 countries, the share of immigration stock is seemingly not correlated to higher homicide rates – which gives little support to the right-wing populist claim.

Within the global sample represented in model 1 and 2 in table 2, the results do neither give support to social protection theories like social support theory measured as welfare strength. This went against theoretical expectations, because as theory on social support (like welfare provided by the state) suggested that one could have expected a statistically negative effect on homicide rates, similar to what McCall and Brauer found in their cross-national study on Europe (McCall & Brauer, 2014). But as discussed in the previous section, this might also be the issue here. One explanation could be that social support theory only shows a statistically negative effects on homicide rates within rich industrialized countries, like McCall and Brauers sample of rich and industrialized European countries. But it is important to note that these results do not represent a disproof of social support theory in general. Clearly, social support does help a lot of people, but its effect on homicide rates in a global sample are by the results are positive at a 10% significance level. But the results do give support to social support theory in relation to the immigration – crime nexus:

Based on the Welfare State Hypothesis (Borjas, 1999), the study also addressed the question “welfare magnets” causing crime. This type of migrant is believed to be attracted

towards the strongest welfare states due to the generous welfare. In this thesis they are described as “bad” migrants. This was because these migrants are characterized as young males, low-skilled, and are more likely to stay unemployed and living on welfare. Among criminologists these characteristics are likely to cause more crime. But the results suggest that higher migration rates within stronger welfare states among the industrialized countries shows to statistically significant lower homicide rate, suggesting that higher welfare does not attract more problematic immigrants. This indicates that states with strong welfare should not expect an increase in homicide rates because of immigration. But this is also not unsurprising. Because as discussed in relation to the relationship between the immigration stock- and homicide rate variable in table 1, immigrants might be more likely to follow the nations rules and laws more assiduously due to their insecure resident status and fear of being deported. Also, because the social support provided by the state through its welfare programs makes them well looked after, it possibly makes crime less of an option. In conclusion, the result found for the rich countries only suggests by implication that there is little support for the welfare magnet or social disorganization theories, but more support for the social protection theories.

In conclusion, and in relation to the immigration – crime nexus and the research question: **Does international immigration increase homicide rates**, this study cannot give any empirical support to the right-wing populist claim that international migration is a major cause to crime (measured in homicides!) in recipient countries. Neither in a global sample or a limited sample of 23 rich industrialized countries. Although, it is worth mentioning that there are limitations in light of the data of such cross-national samples. A weak link that are worth mentioning in relation to this study is that picking homicide rates as a proxy for violent crime excludes other kinds of violent crimes like rape and different kinds of assaults. As the size of the migrant population grows, these kinds of violent crimes might go up with it for the same theoretical reasons represented in this thesis. Even though there are issues relating data collection and rapport errors like under reporting, such comparisons could be important additions to the empirical research on the immigration – crime nexus in future studies. But also, if the study only focused on a particular form of immigration, such as refugees from certain parts of the world, this could also affect the results. The study does also only focus on long term-effects of immigration on crime. Could it be that immigration leads to higher homicide rates in the short term, but that it changes over time as they are starting to get integrated in the form of an inverted U-shape? For this reason, one cannot conclude with the results represented in this thesis that immigration is not a major cause of ALL kinds of violent crime. On the other hand, the results say something about immigration and homicide rates at an international level



– long term, and are consistent with most previous studies (Adelman, 2017; UNODC, 2019, p. 49; Reid, 2017; Reid et al. 2005; UNODC, 2019; Martinez, Stowell, & Lee, 2010; Vélez, 2009; Kubrin & Ousey, 2014 Soysa, 2020a; Soysa; 2020b; Bui, 2009; Bianchi, Buananno & Pinotti, 2012). Lastly, the model has not differentiated between the different kinds of migrants like economic migrants and refugees. To further research on the immigration – crime nexus, it would have been interesting to select immigrants from certain regions to see if it changes the significance level. Because not all see all migrants the same. French people migrating to Germany might be looked at differently compared to refugees arriving from Syria or North Africa. Migrants from these areas are culturally different and might have experienced trauma following civil wars and refugee camps, causing more crime.

But despite the shortcomings and weaknesses of this study the results can still be considered as relevant. Not only from a theoretical perspective, but also from a political perspective with political implications. In relation to controlling crime in society, the results implies that one does not need to worry about immigrants causing more crime in the recipient countries. With that said, even though the suggest that higher migration rates within stronger welfare states among the industrialized countries shows to statistically significant lower homicide rate, one should be careful with big conclusion. However, the results suggest that decision-makers should at least consider expanding the welfare state in the light of crime prevention, just as Kaasa et al., concluded in their 2021 study on Norway (2021).

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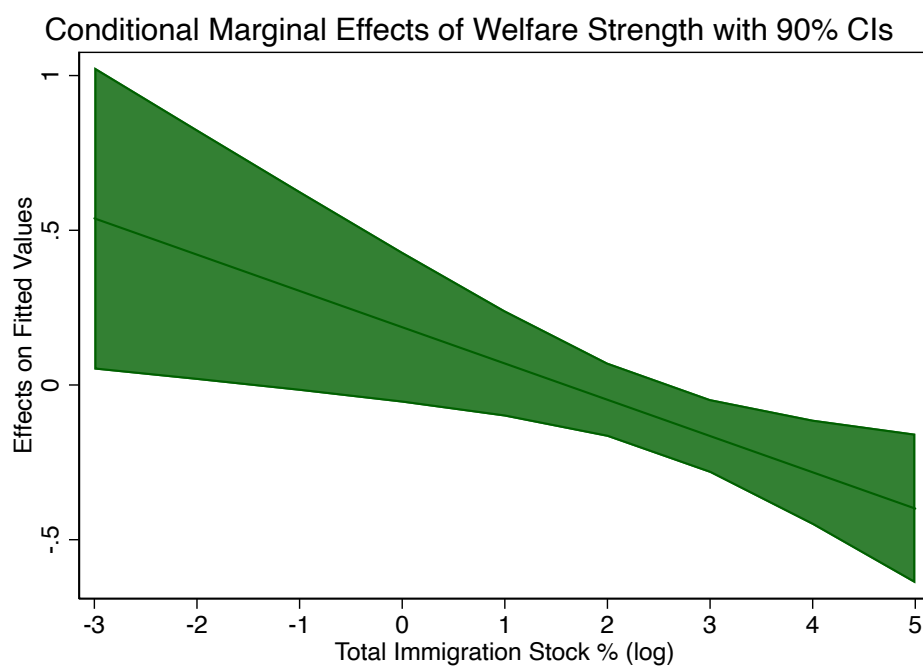
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# Appendix

**APPENDIX A: Descriptive Statistics on all variables included in the survey**

Variable	Obs	Mean	Std. Dev.	Min	Max
Homicide rate	4016	1.205	1.525	-4.605	4.954
Welfare Strength	9941	.578	1.176	-3.229	3.461
Immigrant population stock % (log)	5490	1.398	1.592	-3.424	4.482
GDP per capita (log)	9470	8.346	1.525	4.883	12.186
Population size (log)	12911	14.767	2.44	8.267	21.058
Liberal democracy (V-dem)	9834	.329	.275	.005	.892
Civil war ongoing	8762	.162	.368	0	1
Years of peace since last war	8762	19.96	18.669	0	71

**APPENDIX B: The conditional effects of immigration stock on homicide rate dependent on level of welfare strength for the 23 industrialized countries in column 5.**



**APPENDIX C. Table 1:** Random and Fixed effect regressions on the homicide rate in my global sample – differentiating between Newey-West Standard Errors and Driscoll & Kraay Standard Errors, between 1990-2016.

	(1) Newey- West Random	(2) Newey- West Fixed	(3) Driscoll- Kraay Random	(4) Driscoll- Kraay Fixed
Dependent variable = Homicide rate				
Immigrant population stock % (log)	-0.13*** (0.03)	0.01 (0.04)	-0.02 (0.05)	0.01 (0.03)
GDP per capita (log)	-0.29*** (0.03)	-0.15** (0.07)	-0.26*** (0.06)	-0.15** (0.06)
Population size (log)	-0.08*** (0.02)	0.72*** (0.16)	0.15* (0.09)	0.72*** (0.14)
Liberal democracy (V-dem)	0.30** (0.13)	-0.08 (0.15)	-0.05 (0.07)	-0.08 (0.08)
Civil war ongoing	0.08 (0.10)	0.10*** (0.04)	0.10*** (0.03)	0.10*** (0.02)
Years of peace since last war	-0.01*** (0.00)	0.00* (0.00)	0.00 (0.00)	0.00*** (0.00)
Constant	5.26*** (0.40)	-9.48*** (2.82)	0.87 (1.54)	-9.47*** (2.43)
Observations	2,929	2,929	2,929	2,929
Number of countries	147	147	147	147

Standard errors in parentheses  
 \*\*\* p<0.01, \*\* p<0.05, \* p<0.1

**APPENDIX D. Table 2:** Random and Fixed effect regressions on the homicide rate in my sample of global-, LDC- and industrialized countries with Driscoll & Kraay Standard Errors, between 1990-2016.

VARIABLES	(1) Random Global	(2) Fixed Global	(3) Fixed Global	(4) Fixed LDCs	(5) Fixed Industrialized
Welfare Strength	0.05* (0.03)	0.05* (0.03)	0.08* (0.04)	0.06 (0.04)	0.19 (0.15)
Immigrant population stock % (log)	-0.03 (0.05)	0.00 (0.03)	-0.01 (0.04)	0.00 (0.03)	0.32*** (0.10)
Welfare strength x Immigrant %			-0.02 (0.02)	-0.02 (0.02)	-0.12** (0.05)
GDP per capita (log)	-0.26*** (0.06)	-0.16** (0.06)	-0.26*** (0.06)	-0.25*** (0.07)	0.38 (0.35)
Population size (log)	0.14 (0.08)	0.70*** (0.14)	0.14 (0.08)	0.17** (0.06)	0.25 (0.15)
Liberal democracy (V-dem)	-0.10* (0.05)	-0.13 (0.08)	-0.10* (0.05)	-0.05 (0.06)	1.71 (1.29)
Civil war ongoing	0.10*** (0.04)	0.10*** (0.02)	0.10*** (0.03)	0.11*** (0.04)	-0.05 (0.11)
Years of peace since last war	0.00 (0.00)	0.00*** (0.00)	0.00 (0.00)	0.00 (0.00)	0.00 (0.00)
Constant	0.00 (0.00)	-9.12*** (2.48)	0.00 (0.00)	0.53 (1.27)	-10.37* (5.12)
Observations	2,929	2,929	2,929	2,337	592
Number of groups	147	147	147	124	23

Standard errors in parentheses

\*\*\* p<0.01, \*\* p<0.05, \* p<0.1

